Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 07-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 1
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 20 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): convex Slope: 20.0 % /
Subregion (LRR or MLRA): LRR T Lat.:	30° 25' 0.964" N Long.: 89° 37" 12.584" W Datum: NAD83
Soil Map Unit Name: EuB, Escambia loamy fine sand, 2 to 5 percent sle	
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation . , Soil . , or Hydrology . significant	ly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally p	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes ○ No ⑤	Ver No No
Wetland Hydrology Present? Yes O No	within a Wetland?
Remarks:	
Small incline above riparian drainage area in the NE portion of the A	OI near the fenceline.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15)	5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide 6	Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizosph	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduc	ced Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduc	ction 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 F	Remarks) Shallow Aquitard (D3)
Inundation Visible on Aeriai 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? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ⑥
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	or provious inspections), if availables
Describe Recorded Data (stream gauge, monitoring well, aeriai photo	s, previous inspections), if available.
Remarks:	
No hydrology indicators.	

Tree Stratum (Plot size: 30 m) Pinus elliottii	% Cove	e Rei.	.Strat. over	Indicator Status	Dominance Test worksheet:
rinus elilottai					Number of Dominant Species
			73.2%	FACW	That are OBL, FACW, or FAC:7 (A)
Quercus nigra	10		24.4%	FAC	Total Number of Dominant
Quercus falcata		Η	2.4%	FACU	Species Across All Strata: 7 (B)
	0	Ш.	0.0%		De contract described Contracts
5.		Щ	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
	. 0	Ш	0.0%		That Are Obl., FACW, OF FAC.
•	0		0.0%		Prevalence Index worksheet:
A			0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 20.5 20% of Total Cover: 8.2		= Tota	al Cove		OBL species $0 \times 1 = 0$
Sapling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species 101 x 2 =202
		V	E0.00/	FAC	V
Nyssa sylvatica Liquidambar styraciflua	. 13	_	50.0%	FAC	
The second secon			33.3%	. FAC	FACU spectes $\frac{1}{x} \times 4 = \frac{4}{x}$
Magnolia virginiana		Ц	16.7%	FACW	UPL species $0 \times 5 = 0$
		Ш_	0.0%		Column Totals: 152 (A) 356 (B)
	0	\sqcup_{-}	0.0%		December and ov = P/A = 2.243
	0		0.0%		Prevalence Index = B/A = 2.342
	0		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		D & Book Took for Monday book to Manufaction
50% of Total Cover: 15 20% of Total Cover: 6	30	- Tota	al Cove		1 - Rapid Test for Hydrophytic Vegetation
30% di l'Otal Cover. 15 20% di l'Otal Cover. 6	30	- 100	ai COACI		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 1
Ilex coriacea	50	Y	76.9%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra	5		7.7%	FACW	
Ilex vomitoria	10		15.4%	FAC	¹ Indicators of hydric soil and wetland hydrology must
	0		0.0%		be present, unless disturbed or problematic.
			0.0%	-	Definition of Vegetation Strata:
	0		0.0%		Tree - Woody plants, excluding woody vines,
POW (TIME) - 22 - 200 (TIME) - 42	g	•		1,2314	approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 32.5 20% of Total Cover: 13	65	= 10ta	al Cover		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m					
1 Arundinaria tecta	1	- J	9.1%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
		V	90.9%	FACW	than 3 in. (7.6 cm) DBH.
Ilex corlacea					thair o in. (1.0 only DD1).
			0.0%		
3	0_		0.0%		Sanling/Shrub - Woody plants, excluding vines, less
3. 4.	0_0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
3. 4.	0 0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
]. - - -	0 0		0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines,
3. 1. 3.	0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
3. 5. 5.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
3. 5. 5.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
3. 4. 5. 6. 7.	0 0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
3. 4. 5. 6.	0 0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
3. 4. 5. 6. 7.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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. 4. 5. 3. 7.	0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. 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. 4. 5. 6. 7. 8. 9. 0. 1. 2. 50% of Total Cover: 5.5 20% of Total Cover: 2.2	0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. 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. 4. 5. 6. 7. 8. 9. 1. 2. 50% of Total Cover: 5.5 20% of Total Cover: 2.2	0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. 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. 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	-	than 3 in. DBH and greater than 3.28 ft (1m) tall. 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. 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	-	than 3 in. DBH and greater than 3.28 ft (1m) tall. 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. 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	-	than 3 in. DBH and greater than 3.28 ft (1m) tall. 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. 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0 0 11		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	-	than 3 in. DBH and greater than 3.28 ft (1m) tall. 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. 4. 5. 6. 7. 8. 9. 9. 1. 2. 50% of Total Cover: 5.5 20% of Total Cover: 2.2 Voody Vine Stratum (Plot size:) Vitis rotundifolia	0 0 0 0 0 0 0 0 0 11		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	-	than 3 in. DBH and greater than 3.28 ft (1m) tall. 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. 4. 5. 6. 7. 8. 9. 0.	0 0 0 0 0 0 0 0 0 11		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FAC	than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.

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	iption: (De		the depth	needed to document the indicator or con	firm the	absence of indicato	rs.)
Depth		Matrix		Redox Features			
(inches) 0-4	10YR	(moist)	100	Color (moist) % Type 1	Loc2	Texture Loamy Sand	Remarks Fine grained
		3/2		777 77 a Para 757 77 a 47 What a 44 A			Fine Grained
4-12	10YR	5/4	100		-	Sandy Loam	Fine grained sands
12-20	10YR	5/6	100			Sandy Loam	rine granied sailus
Type: C=Cond Hydric Soil I		=Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grain	s ² Loca		
Histosol (A				Polyvalue Below Surface (S8) (LRR S	T 10		roblematic Hydric Soils ³ :
_ `	edon (AZ)					1 cm Muck (/	
Black Histi				☐ Thin Dark Surface (S9) (LRR S, T, U)		2 cm Muck (/	
_				Loamy Mucky Mineral (F1) (LRR O)		Reduced Ver	tic (F18) (outside MLRA 150A,B)
_	Sulfide (A4)			Loamy Gleyed Matrix (F2)		Piedmont Flo	odpłain Soils (F19) (LRR P, S, T)
	_ayers (A5)			Depleted Matrix (F3)		Anomalous B	right Loamy Soils (F20) (MLRA 153B)
Organic Bo	odies (A6) (L	.RR P, T, l	J)	Redox Dark Surface (F6)		Red Parent M	
5 cm Muck	ky Mineral (A	17) (LRR P	, T, U)	Depleted Dark Surface (F7)		=	Dark Surface (TF12)
Muck Pres	ence (A8) (L	.RR U)		Redox Depressions (F8)		_	n in Remarks)
1 cm Muck	(A9) (LRR I	P, T)		Marl (F10) (LRR U)			ii iii Remarks)
	Below Dark S		11)	Depleted Ochric (F11) (MLRA 151)			
	Surface (A1	_	,				
_	•	-	15041	Iron-Manganese Masses (F12) (LRR (J, P, 1)		
_	rie Redox (A		-	Umbric Surface (F13) (LRR P, T, U)			
	ck Mineral (S		, S)	Delta Ochric (F17) (MLRA 151)		3 _{Todien}	tors of hydrophytic vegetation and
Sandy Gley	yed Matrix (S	54)		Reduced Vertic (F18) (MLRA 150A, 1	50B)	weti	tors of hydrophytic vegetation and and and hydrology must be present,
Sandy Red	iox (S5)			Piedmont Floodplain Soils (F19) (MLR	A 149A)		lless disturbed or problematic.
Stripped M	latrix (S6)			Anomalous Bright Loamy Soils (F20)	MLRA 149	9A. 153C. 153D)	·
Dark Surfa	ce (S7) (LRF	R P, S, T, I	J)			,,	
Restrictive La	ver (if obse	erved):					
	yer (ii obbi						
Type:	ac):					Hydric Soil Presei	nt? Yes O No 💿
Depth (inch	es):			1. The second se		<u> </u>	
Remarks:							
Soil has dry cr	umbly, loa	my textu	re. No sat	uration.			

The state of the s	County: Waveland - Hancock Sampling Date: 07-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up- 2
Investigator(s): Lars Larson, Randy Ellis Sec	ction, Township, Range: \$ 20 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside Loca	I relief (concave, convex, none): convex Slope: 3.0 % / 1.7°
Subregion (LRR or MLRA): LRR T Lat.: 30°	24' 53.090" N Long.: 89° 36' 51.859" W Datum: NAD83
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent slopes	NWI classification: N/A
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 dis	turbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally proble	·
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	To the Samulad Aven
Hydric Soil Present? Yes O No	Is the Sampled Area
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
Remarks: Sideslope area within approximately 50 N-NE of Wet-2.	
Sidestope area within approximately 50 N-NC of weet-2.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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) (LRi	_ ' ' ' '
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres a	long Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	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 Remark	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 O No O Depth (inches):	
Water Table Present? Yes No O Depth (inches):	
	Wetland Hydrology Present? Yes ○ No •
(includes capillary fringe) Yes V No V Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

2. Liquidambar styraciflua 5 5 6 6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	75.0% 25.0% 0.0% 0.0% 0.0% 0.0% 70.0% 23.8% 4.8% 0.0% 0.0%	FACW FAC FACW FAC FACW	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A) Total Number of Dominant Species Across All Strata: 5 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
2. Liquidambar styracliflua 5 6 6 6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	25.0% 0.0% 0.0% 0.0% 0.0% 0.0% 71.4% 23.8% 4.8% 0.0%	FACW FAC	Total Number of Dominant Species Across All Strata: 5 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
3.	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 71.4% 23.8% 4.8% 0.0%	FACW	Species Across All Strata: 5 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
4. 0 0 0 0 0 0 0 0 0 0	0.0% 0.0% 0.0% 0.0% 71.4% 23.8% 4.8% 0.0%	FACW FAC	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
5. 0 0 0 0 0 0 0 0 0 0	0.0% 0.0% 0.0% 0.0% Total Cove 71.4% 23.8% 4.8% 0.0%	FACW FAC	That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
6. 0	0.0% 0.0% 0.0% Total Cove 71.4% ✓ 23.8% 4.8% 0.0%	FACW FAC	That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
7. 0	0.0% 0.0% Total Cove 71.4% 23.8% 4.8% 0.0%	FACW FAC	Prevalence Index worksheet:
30	0.0% Total Cove 71.4% 23.8% 4.8% 0.0%	FACW FAC	Total % Cover of Multiply by: OBL species 1 x 1 = 1 FACW species 107 x 2 = 214 FAC species 22 x 3 = 66
8. 0 0 50% of Total Cover: 10 20% of Total Cover: 4 20 = Sapling or Sapling/Shrub Stratum (Plot size: 30 m) 1. Pinus elilottil 30 9 2. Quercus nigra 10 9 3. Magnolia virginiana 2 10 9 5. 0 10 10 10 10 10 10 10 10 10 10 10 10 1	Total Cove ✓ 71.4% ✓ 23.8% ✓ 4.8% — 0.0%	FACW FAC	OBL species 1 x 1 = 1 FACW species 107 x 2 = 214 FAC species 22 x 3 = 66
Sapling or Sapling/Shrub Stratum (Plot size: 30 m) 1. Pinus elilottil 30 k 2. Quercus nigra 10 k 3. Magnolia virginiana 2 k 4. 0 5. 0 5. 0 6.	✓ 71,4% ✓ 23.8% 4.8% 0.0%	FACW FAC	OBL species 1 x 1 = 1 FACW species 107 x 2 = 214 FAC species 22 x 3 = 66
Sapling or Sapling/Shrub Stratum (Plot size: 30 m) 1. Pinus elilottil 30 k 2. Quercus nigra 10 k 3. Magnolia virginiana 2 k 4. 0 C 5. 0 C	✓ 71,4% ✓ 23.8% 4.8% 0.0%	FACW FAC	FACW species 107 x 2 = 214 FAC species 22 x 3 = 66
1. Pinus elitottii 30 2. Quercus nigra 10 3. Magnolia virginiana 2 4. 0 5. 0 6. 0	23.8% 4.8% 0.0%	FAC	FAC species <u>22</u> x 3 = <u>66</u>
2. Quercus nigra 10 3. Magnolia virginiana 2 4. 0 0 5. 0 0 6. 0 0	23.8% 4.8% 0.0%	FAC	
3. Magnolia virginiana 2	4.8% 0.0%		FACU species $0 \times 4 = 0$
4. 0 0 5. 0 0 3. 0 0	0.0%	FACW	
5. <u> </u>			UPL species $0 \times 5 = 0$
3. <u> </u>	0.0%		Column Totals: 130 (A) 281 (B)
3. <u> </u>			
	0.0%		Prevalence Index = B/A = 2-162
	0.0%		Hydrophytic Vegetation Indicators:
	0.0%	-	
			1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 21 20% of Total Cover: 8.4 42 =	Total Cove		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)			✓ 3 - Prevalence Index is ≤3.0 ¹
	76.9%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex glabra 10	15.4%	FACW	
			Indicators of hydric soil and wetland hydrology must
	7.7%	FAC	be present, unless disturbed or problematic.
4	0.0%		
50	0.0%		Definition of Vegetation Strata:
3	0.0%		Tree - Woody plants, excluding woody vines,
	Total Cove		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m			
1 Lycopodiella alopecuroides 1	100.0%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2.	0.0%		than 3 in. (7.6 cm) DBH.
3. 0	0.0%		
4. 0	0.0%	-	Sapling/Shrub - Woody plants, excluding vines, less
_ ``			than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0.0%		
6. <u>0</u> , L	0.0%		Shrub - Woody plants, excluding woody vines,
7	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8	0.0%_		
9.	0.0%		Herb - All herbaceous (non-woody) plants, including
0	0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
10	0.0%		3 ft (1 m) in height.
2. 0	0.0%	A. 14. 14. 1	
	Total Cover	-	Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m			
Vitis rotundifolia 2	100.0%	FAC.	
	0.0%		
3			
	」 (0.0%		Hydrophytic
5	0.0%		Vegetation
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = 1	Total Cover		Present? Yes No

_	•	

Depth	iption: (Descr	ibe to the d	lepth needed to document the indicator o	or confirm the	absence of indicators.)
		atrix	Redox Features	1	
(inches) 0-6	Color (mo	3/2 100	% Color (moist) % Typ	e Loc²	Texture Remarks Sandy Loam
			9 90 9 60 90 9790 1 42 20 482		A MARIE CONTRACTOR CON
6-24	10YR	5/6 100			Sandy Loam
		epletion. RM	=Reduced Matrix, CS=Covered or Coated Sand	d Grains ² Loca	tion: PL=Pore Lining. M=Matrix
lydric Soil I					Indicators for Problematic Hydric Solls ³ :
Histosol (A	•		Polyvalue Below Surface (S8) (1 cm Muck (A9) (LRR O)
_ ''	pedon (A2)		☐ Thin Dark Surface (S9) (LRR S,		2 cm Muck (A10) (LRR S)
Black Histi			Loamy Mucky Mineral (F1) (LRi	R O)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Matrix (F3)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)
_	odies (A6) (LRR		Redox Dark Surface (F6)		Red Parent Material (TF2)
5 cm Muck	ky Mineral (A7)	(LRR P, T, U	Depleted Dark Surface (F7)		☐ Very Shallow Dark Surface (TF12)
Muck Pres	ence (A8) (LRR	U)	Redox Depressions (F8)		Other (Explain in Remarks)
1 cm Mucl	k (A9) (LRR P, T)	☐ Marl (F10) (LRR U)		_
Depleted E	Below Dark Surf	ace (A11)	Depleted Ochric (F11) (MLRA 1	51)	
Thick Dark	Surface (A12)		☐ Iron-Manganese Masses (F12)	(LRR O, P, T)	
Coast Prair	rie Redox (A16)	(MLRA 150/	Umbric Surface (F13) (LRR P, 7	ັ, U)	
Sandy Muc	ck Mineral (S1)	(LRR O, S)	Delta Ochric (F17) (MLRA 151)		
	yed Matrix (S4)		Reduced Vertic (F18) (MLRA 15		³ Indicators of hydrophytic vegetation and
Sandy Red			☐ Piedmont Floodplain Soils (F19)		wetland hydrology must be present, unless disturbed or problematic.
Stripped M			Anomalous Bright Loamy Soils		
	ice (S7) (LRR P,	S T 11)	Allottalous Bright Loanly Sons ((1 20) (MERON 143	sa, 1550, 1550)
	ice (37) (LINK F,	3, 1, 0)			
	yer (if observ	ed):			
estrictive La					
estrictive La Type:	Depth (inches):				Hydric Soil Present? Yes O No 🏵
Туре:	(65)1			+	<u></u>
Type: Depth (inch					
Type: Depth (inch emarks:		ad.			
Type: Depth (inch emarks:	cators observe	ed.			
Type: Depth (inch emarks:		ed.			
Type: Depth (inch emarks:		ed.			
Type: Depth (inch emarks:		ed.			
Type: Depth (inch emarks:		ed.			
Type: Depth (inch emarks:		ed.			
Type: Depth (inch		ed.			
Type: Depth (inch		ed.			
Type: Depth (inch		ed.			
Type: Depth (inch		ed.			
Type: Depth (inch emarks:		ed.			
Type: Depth (inch emarks:		ed.			

Troject/ ofter resulting 2/200 / to a resulting substantial	City/County: Waveland - Hancock Sampling Date: 10-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 3A
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 20 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 25′ 1.581" N Long.: 89° 37′ 10.657" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
	6 0
Are climatic/hydrologic conditions on the site typical for this time of yea	(2. 11.) 5. [
	y disturbed? Are "Normal Circumstances" present? Yes No
	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Ye the Consided from
Hydric Soil Present? Yes O No	Is the Sampled Area Yes No No
Wetland Hydrology Present? Yes No No	within a Wetland?
Remarks:	00 to 200 courth of forcolling in NE part of AOI
Upland terrace approximately 50-60- feet frm wet transitional area 2	ou to 300 south or renceine in NE part of AOI
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide C	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosphe	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduct	ed Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduct	tion 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 R	emarks) 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):	
L Span (manas)	Wetland Hydrology Present? Yes O No 💿
Saturation Present? Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:
Remarks:	
No observed evidence of hydrology indicators.	
	j

(Disk size)		Rel.Strat.		Dominance Test worksheet:	
Tree Stratum (Plot size:	% Cover		Status	Number of Dominant Species	
1. Pinus elliottii	25	78.1%	FACW	That are OBL, FACW, or FAC: 4 (A)	
2		0.0%		Total Number of Dominant	
3. Nyssa sylvatica	5_	15.6%	FAC	Species Across All Strata: 4 (B)	
4 Magnolia grandiflora	2	6.3%	FAC		
5		0.0%	MD 4 MM M 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Percent of dominant Species That Are ORL FACW or FAC: 100.0% (A/B)	
6		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)	
7	0	0.0%		Prevalence Index worksheet:	
8.	0	0.0%		Total % Cover of: Multiply by:	
50% of Total Cover: 16 20% of Total Cover: 6.4	32	= Total Cov	er	OBL species 0 x 1 = 0	
	**	_ 10tal 001			
Sapling or Sapling/Shrub Stratum (Plot size:			=1.511		
1. Pinus elliottii		76.9%		FAC species $17 \times 3 = 51$	
Magnolia virginiana		12.8%	-	FACU species $\frac{2}{x}$ $4 = \frac{8}{x}$	
3. Nyssa sylvatica	2	5.1%	FAC	UPL species $0 \times 5 = 0$	
4. Quercus falcata	_1_	2.6%	FACU	Column Totals: 134 (A) 289 (B)	
5	1	2.6%		Drawnlance Taday D/A 2 157	
6	0	0.0%		Prevalence Index = B/A = 2.157	
7	0	0.0%	721 12	Hydrophytic Vegetation Indicators:	
8	0	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 19.5 20% of Total Cover: 7.8	39 :	= Total Cov	ar .		
for the state of t		. Juli COVI		✓ 2 - Dominance Test is > 50%	
Shrub Stratum (Plot size:)			13550	✓ 3 - Prevalence Index is ≤3.0 ¹	
1 Ilex coriacea	50	84.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Ilex vomitoria	5	8.5%	FAC		
3. Ilex opaca	3	5.1%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
4. Quercus falcata	-	1.7%	FACU	be present, unless disturbed or problematic.	
5.	0	0.0%		Definition of Vegetation Strata:	
6.	0	0.0%	-1.3	Tree - Woody plants, excluding woody vines,	
50% of Total Cover: 29.5 20% of Total Cover: 11.8	59	= Total Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
Herb Stratum (Plot size:)	-			(1.5 dily di larger in diameter di breadt holgin (bbit).	
	-	400.007	FACU	Sapling - Woody plants, excluding woody vines,	
1, Ilex coriacea		100.0%	FACW	approximately 20 ft (6 m) or more in height and less	
2.		0.0%		than 3 in. (7.6 cm) DBH.	
3	0	0.0%			
4	.0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.	
5	0	0.0%		than 5 in. DBH and greater than 3.20 it (1111) tail.	
6.	0	0.0%		Shrub - Woody plants, excluding woody vines,	
7.	0	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.	
8	0	0.0%			
9.		0.0%	• • • • • • • • • • • • • • • • • • • •	Herb - All herbaceous (non-woody) plants, including	
10,		0.0%		herbaceous vines, regardless of size, and woody	
		0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.	
11 12.			······································	water and are considered	
		6.0%		Woody vine - All woody vines, regardless of height.	
50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= Total Cove	ar l	Troody fillo 7 in moody fillod, regardless of fleight.	
Woody Vine Stratum (Plot size:)					
1.	0	0.0%			
2	0	0.0%			
	_	0.0%			
		0.0%			
-		_		Hydrophytic	
5	0	☐ 0.0%		Vegetation	
50% of Total Cover: 0 20% of Total Cover: 0	0 =	Total Cove	r	Present? Yes V NO V	
Remarks: (If observed, list morphological adaptations below).					
*Indicator suffix = National status or professional decision assigned because Re	egional status r	not defined by F	ws.		

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SOIL			Sampling Point: Up - 3A
Profile Descr	ription: (Describe to the depth	needed to document the indicator or confirm the	e absence of Indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist) %	Color (moist) % Type 1 Loc2	Texture Remarks
0-3	10YR 4/2		
3-10	10YR 5/3		
10-20	10YR 6/4		
10 20	10110 0,1		
		<u> </u>	
		A State	-
Type: C=Cond	rentration D=Depletion PM=Ped	uced Matrix, CS=Covered or Coated Sand Grains ² Loc	cation: PI =Pore Lining M=Matrix
Hydric Soil I		aced Platfix, CS-covered of Coaled Sain Grains - Loc	Indicators for Problematic Hydric Soils ³ :
Histosol (A		Polyvalue Below Surface (S8) (LRR S, T, U)	
_ `	pedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Black Histi		Loamy Mucky Mineral (F1) (LRR O)	2 cm Muck (A10) (LRR S)
_	Sulfide (A4)	Loamy Gleyed Matrix (F2)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Layers (A5)	Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	odies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	ky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Material (TF2)
	sence (A8) (LRR U)	Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12) ☐
_	k (A9) (LRR P, T)	Mari (F10) (LRR U)	Uther (Explain in Remarks)
	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
	Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
	rie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
_	ck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	
_ `	yed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Red		Piedmont Floodplain Soils (F19) (MLRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
Stripped M		Anomalous Bright Loamy Soils (F20) (MLRA 1-	
	ace (S7) (LRR P, S, T, U)	Midnigious bright Edainy Solis (120) (FIECA 1	T3A, 133C, 133D)
	(, (, ., ., .,		
	yer (if observed):		
Type:	una)ı		Hydric Soil Present? Yes No •
Depth (inch	les):		
Remarks:			
ight orange-	-brown mottling observed in 6	-20 inch intervals.	

B	City/County: Waveland	d - Hancock	Sampling Date:	10.04.16	
Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion		es 'N		10-Oct-16	
Applicant/Owner: NASA	State: N		Point: Up - 3B		
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Ra	ange: S 20 T	7s R 16		
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, co	onvex, none): concav	e Slope: 0	.0 % / 0.0°	
Subregion (LRR or MLRA): LRR T Lat:	30° 25' 1.450" N	Long.: 89° 37' 9.0	611" W Date	m: NAD83	
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes			sification: N/A		
	ar? Yes No				
Are climatic/hydrologic conditions on the site typical for this time of year		(21.110) 2.4	(6)	No O	
		"Normal Circumstances	present	NO C	
Are Vegetation . , Soil . , or Hydrology . naturally ;	problematic? (If n	needed, explain any ans	wers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locati	ons, transects, im	portant features,	etc.	
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled	i Area			
Hydric Soil Present? Yes No		Voc O No G	0)		
Wetland Hydrology Present? Yes O No	within a Wetla	nd?			
Remarks:					
Remarks.					
HYDROLOGY					
Wetland Hydrology Indicators:	-	Secondary Indi	icators (minimum of 2 req	uired)	
Primary Indicators (minimum of one required; check all that apply)			il Cracks (B6)	uned)	
☐ Surface Water (A1) ☐ Aquatic Fauna (B1			egetated Concave Surface	(B8)	
High Water Table (A2) Marl Deposits (B1.	•		Drainage Patterns (B10)		
Saturation (A3) Hydrogen Sulfide			Moss Trim Lines (B16)		
	heres along Living Roots (C3	_	Dry Season Water Table (C2)		
Sediment Deposits (B2)	ced Iron (C4)	Crayfish Bu	irrows (C8)		
☐ Drift Deposits (B3) ☐ Recent Iron Reduc	ction in Tilled Soils (C6)	Saturation \	Visible on Aerial Imagery	(C9)	
Algal Mat or Crust (B4)	e (C7)	Geomorphic	c Position (D2)		
☐ Iron Deposits (B5) ☐ Other (Explain in I	Remarks)	Shallow Aqu	uitard (D3)		
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	il Test (D5)		
Water-Stained Leaves (B9)		Sphagnum	moss (D8) (LRR T, U)		
Field Observations:			<u> </u>		
Surface Water Present? Yes No Depth (inches):					
Water Table Present? Yes No Depth (inches):			0 0	.	
Last the Breeds	Wetla	and Hydrology Present?	Yes 🔾 No 🖲	'	
	<u>'</u>				
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections)	i, if available:			
Remarks:					
				I	
				I	

ee Stratum (Plot size:)	% Cover		d.Strat. Cover	Indicator Status	Dominance Test worksheet:
Pinus elliottii	Y X	V	71.4%		Number of Dominant Species
	25			FACW	That are OBL, FACW, or FAC: 9 (A)
Magnolia virginiana	10		28.6%	FACW	Total Number of Dominant
	0	H	0.0%		Species Across All Strata: 9 (B)
		H,	0.0%		
***	0	Ш,	0.0%	• • •	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
		Ш	0.0%		That Are ODE, TACVY, OF TAC.
1	0		0.0%		Prevalence Index worksheet:
	0		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 17.5 20% of Total Cover: 7	35	= To	tal Cove	r	OBL species 7 x 1 = 7
pling or Sapling/Shrub Stratum (Plot size:					FACW species 79 x 2 =158
Name alliable	r	V	50.0%	FACW	FAC species 2 x 3 = 6
Transfilm and a second			30.0%	FACW	
Magnolla virginiana Nyssa sylvatica	2		20.0%	FAC	
				FAC	UPL species $0 \times 5 = 0$
		H	0.0%		Column Totals: 88 (A) 171 (B)
		Η.	0.0%		Prevalence Index = B/A = 1.943
		Щ.	0.0%	-	
		닏.	0.0%		Hydrophytic Vegetation Indicators:
	0	\sqcup	0.0%		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 5 20% of Total Cover: 2	10 :	= To	tal Cover	•	✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size:					✓ 3 - Prevalence Index is ≤3.0 ¹
	25	V	71.4%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Tiex coriacea Cyrilla racemiflora	-		28.6%	FACW	Problematic nytrophytic vegetation " (Explain)
			0.0%	TACW	¹ Indicators of hydric soil and wetland hydrology must
*·	-				be present, unless disturbed or problematic.
-		Η.	0.0%		Definition of Vacantains Streets
	<u>,</u> 0	۲,	0.0%	(*)	Definition of Vegetation Strata:
	0	Ц,	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
0% of Total Cover: 17.5 20% of Total Cover: 7 Prb Stratum (Plot size:)	35 =	= To	tal Cover		(7.6 cm) or larger in diameter at breast height (DBH).
Lycopodiella alopecuroides	5	V	71.4%	OBL	Sapling - Woody plants, excluding woody vines,
Woodwardia areolata		V	28.6%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			0.0%		than o iii (110 only 551).
	0	Ħ.	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
		Η-		-	than 3 in. DBH and greater than 3.28 ft (1m) tali.
		片	0.0%		
5	0	님-	0.0%		Shrub - Woody plants, excluding woody vines,
·		님.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
		닏.	0.0%		Herb - All herbaceous (non-woody) plants, including
	.0	Ц.	0.0%		herbaceous vines, regardless of size, and woody
	0		0.0%		plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
	0		0.0%		
% of Total Cover: 3.5 20% of Total Cover: 1.4	7 =	: Tot	tal Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size:)					
Smilax laurifolia	4		100.0%	EACW,	
		-		LWCAA	
E CONTRACTOR WAS A STATE OF THE		Η-	0.0%	-	
			0.0%		
		Ш.	0.0%		Hudranhutic
	0		0.0%		Hydrophytic Vegetation
	1 =	Tot	al Cover		Present? Yes No
% of Total Cover: 0.5 20% of Total Cover: 0.2					

Color (moist) % Color (moist) % Color (moist) % Type Loc Texture Remarks		ription: (Describe to	the dep th n	eeded to docume	nt the indi	icator or co	infirm the	absence of indicato	ors.)	
0-3 10YR 3/1 100 Sandy Loam	Depth	Matrix		F	tedox Feat					
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains To Reduced Very Sand Sand Sand Sand Sand Sand Sand Sand				Color (moist)	%	Type 1	Loc2		Remarks	
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains alocation: PL=Pore Lining. M=Matrix **Indicators for Problematic Hydric Soils**: Histosol (A1)	188 Tal. 11			10VD 7/3		-	M		Very fine grained	
Nydric Soil Indicators: Histosol (A1)	3-12	101K 3/2	- 33	10TK 7/3			14	Salluy Loalii		
Indicators: Histosol (A1)		0	-		30.7	=/==)),	*	
Addric Soil Indicators: Histosol (A1) Histosol (A2) Thin Dark Surface (S8) (LRR S, T, U) Histo Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histoc (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (A11) Depleted Orbric (F11) (MLRA 151) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR P, S) Delate Orbric (F13) (MLRA 150A) Sandy Muck Mineral (S1) (LRR P, S) Delate Orbric (F13) (MLRA 150B) Reduced Vertic (F18) (outside MLRA 150A,B) Reduced Vertic (F18) (outside MLRA 150A,B) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, F, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR P, F, T) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Park Surface (S7) (LRR P, S, T, U) Hydric Soil Present? Yes No		-						-		
Nydric Soil Indicators: Histosol (A1)										
Indicators: Histosol (A1)						7.0				
Indicators: Histosol (A1)	Type: C=Cond	centration. D≕Depletior	n. RM ≂Re duc	ed Matrix. CS=Cove	ered or Coat	ed Sand Gra	nins ² Loca	tion: PL=Pore Lining	. M=Matrix	
Histosol (A1)										
Black Histic (A3)	Histosol (A	A1)		Polyvalue B	elow Surfac	e (S8) (LRR	S, T, U)		-	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T)	Histic Epip	oedon (A2)		Thin Dark S	urface (S9)	(LRR S, T, U	J)	2 cm Muck	(A10) (LRR S)	
Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 1538) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Thick Dark Surface (A11) Depleted Below Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Deita Ochric (F17) (MLRA 150B) Reduced Vertic (F18) (MLRA 150B) Stratified Layers (A5) Depleted Matrix (S6) Depleted Dark Surface (F7) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Oth	_			Loamy Muc	ky Mineral (F1) (LRR O)		Reduced Ve	rtic (F18) (outside MLRA 150A,B)	
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) S cm Mucky Mineral (A7) (LRR P, T, U) Pepleted Dark Surface (F7) Depleted Dark Surface (F8) I cm Muck (A9) (LRR P, T) Redox Depressions (F8) Other (Explain in Remarks) I cm Muck (A9) (LRR P, T) Redox Depressions (F8) Other (Explain in Remarks) Thick Dark Surface (A11) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Hydrogen	Sulfide (A4)		Loamy Gley	ed Matrix (F	- 2)		Piedmont Fl	oodplain Soils (F19) (LRR P, S, T)	
S cm Mucky Mineral (A7) (LRR P, T, U)	Stratified I	Layers (A5)		Depleted M	atrix (F3)					
5 cm Mucky Mineral (A7) (LRR P, T, U)	Organic Bo	odies (A6) (LRR P, T, U))	Redox Dark	Surface (F6	ō)				
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Other (Explain in Remarks) In Muck (A9) (LRR P, T) Other (Explain in Remarks) In Muck (A9) (LRR P, T) Other (Explain in Remarks) In Muck (A15) In Other (Explain in Remarks) In Muck (A15) In Other (Explain in Remarks) In Muck (A15) In Other (Explain in Remarks) In Other (Explain in Remarks) In Muck (A15) In Other (Explain in Remarks) In Other	_ 5 cm Mucl	ky Mineral (A7) (LRR P,	, T, U)	Depleted Da	ark Surface	(F7)				
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Sestrictive Layer (if observed): Type: Depth (inches): Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic. Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Muck Pres	sence (A8) (LRR U)		Redox Depr	essions (F8)				
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Park Surface (S7) (LRR P, S, T, U) Depth (inches): Hydric Soil Present? Yes No	1 cm Muck	k (A9) (LRR P, T)			•	•		□ Other (Expe	all III Remarks/	
Thick Dark Surface (A12)	Depleted F	Below Dark Surface (A1	11)			MLRA 151)				
Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Park Surface (S7) (LRR P, S, T, U)	Thick Dark	k Surface (A12)					1 (), P. T)			
Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Participle Layer (if observed): Type: Depth (inches): Type: Depth (inches):	_	• •	(150A)							
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Park Surface (S7) (LRR P, S, T, U) Park Surface (S7) (LRR P, S, T, U) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_									
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_			_		•	1500)			
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_						-			
Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No									inless disturbed or problematic.	
estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No No			n	☐ Anomaious	Bright Loam	y 50115 (F20) (MLRA 145	3A, 153C, 153D)		
Type: Depth (inches): Hydric Soil Present? Yes No No	■ Dark Suna	ice (5/) (LKR P, 5, 1, 0	")							
Depth (inches): Hydric Soil Present? Yes No								•		
pepai (maisos).		yer (if observed):							0 0	
emarks:	estrictive La	nyer (if observed):						Hydric Soil Prese	ent? Yes 🖭 No 🔾	
	estrictive La				1.70					
	estrictive La Type: Depth (inch				1. p. b					
	estrictive La Type: Depth (inch					· · · · · · · · · · · · · · · · · · ·				
	estrictive La Type: Depth (inch									
	estrictive La Type: Depth (inch				- 17-18-					
	estrictive La Type: Depth (inch									
	estrictive La Type: Depth (inch				10.0					
	estrictive La Type: Depth (inch				- 44 t					
	estrictive La				- 44 t					
	estrictive La Type: Depth (inch									
	estrictive La Type: Depth (inch									
	estrictive La Type: Depth (inch									
	estrictive La Type: Depth (inch									

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	ity/County: Waveland - Hancock Sampling Date: 10-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 4
	Section, Township, Range: S 20 T 7s R 16 W
	ocal relief (concave, convex, none): Slope: 0.0 % / 0.0 °
And A MANUAL MANUAL THREE NO. 1 C. A. 1 C. A.	0° 25' 3.162" N Long.: 89° 36' 56.200" W Datum: NAD83
	NWI classification: N/A
Soil Map Unit Name: Atmore	
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology isignificantly of	Are normal entallistations present:
Are Vegetation . , Soil . , or Hydrology . naturally prol	blematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area
Hydric Soil Present? Yes ○ No ⑨	within a Wetland? Yes O No 💿
Wetland Hydrology Present? Yes ○ No No	withing wedgings
Remarks:	
Transitional area approximately 150-200 feet south of North fenceline.	Begin picking up Live Oaks and S. Red Oaks.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	
High Water Table (A2) Marl Deposits (B15) (
Saturation (A3) Hydrogen Sulfide Odd	
	es along 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)	· · · · · · · · · · · · · · · · · · ·
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?	Wetland Hydrology Present? Yes ○ No ④
(Interest of the control of the con	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	

ree Stratum (Plot size: 30 m)	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
Pinus elliottii		_		Number of Dominant Species
Ouercus falcata	10 2		FACW	That are OBL, FACW, or FAC: 4 (A)
0		15.4%	FACU	Total Number of Dominant
Quercus virginiana		□ 7.7%	FACU	Species Across All Strata: 4 (B)
	0	0.0%		
				Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
	0	0.0%		That Are ODL, TACW, OF TAC.
	.0	0.0%	15	Prevalence Index worksheet:
	0	0.0%		Total % Cover of: Multiply by
50% of Total Cover: 6.5 20% of Total Cover: 2.6	13	= Total Cove	r	OBL species 5 x 1 = 5
apling or Sapling/Shrub Stratum (Plot size: 30 m				FACW species 86 x 2 = 172
Prof (Id. A.) D		78.1%	FACW	
12 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				
Pinus palustris		15.6%	FACU	FACU species $10 \times 4 = 40$
Quercus virginiana		6.3%	FACU	UPL species 0 x 5 = 0
F-17-17 - 17-1	0	0.0%		Column Totals: 101 (A) 217 (B)
	0	0.0%		Brownlence Index — P/A — 2 140
in.	0	0.0%		Prevalence Index = B/A = 2.149
	D	0.0%		Hydrophytic Vegetation Indicators:
B NEW TO THE TOTAL THE TOTAL TO THE TOTAL TOTAL TO THE TO	0	0.0%	-0.00	✓ 1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 16 20% of Total Cover: 6.4	32 :	= Total Cove		
	- 54	- 10141 00141		2 - Dominance Test is > 50%
rrub Stratum (Plot size: 30 m)		_		✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	50	100.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
	0	0.0%		
	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1)	0	0.0%		Definition of Vegetation Strata:
	0	0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 25 20% of Total Cover: 10		= Total Cover		approximately 20 ft (6 m) or more in height and 3 in.
O/8 0; Total Cover. 23 20/8 01 Total Cover. 10	30	- Total Cover		(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)				
Lycopodiella alopecuroides	5	100.0%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
	0	0.0%		than 3 in. (7.6 cm) DBH.
	0	0.0%		
	0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
•		0.0%		
*	0			Shrub - Woody plants, excluding woody vines,
**********	0	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
· · · · · · · · · · · · · · · · · · ·		0.0%		Hoth All harbonous (non-woods) plants insteading
		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1 ·	0	0.0%		plants, except woody vines, less than approximately
	0	0.0%		3 ft (1 m) in height.
Walter and Control	0	0.0%		
0% of Total Cover: 2.5 20% of Total Cover: 1	5 =	Total Cover		Woody vine - All woody vines, regardless of height.
- · ·	-		- !	
oody Vine Stratum (Plot size: 30 m)				
Smilax laurifolia	_ 1	100.0%	FACW	
	0	0.0%		
	. 0	0.0%		
	0	0.0%		
	0	0.0%		Hydrophytic
	1 =	Total Cover		Vegetation Present? Yes No
0% of Total Cover: 0.5 20% of T ota l Cover: 0.2				

rofile Descr	ription: (Des	cribe to	the denth	needed to document the indi	ator or cor	ifirm the ab	sence of indicators.)	
		Matrix	Tio achei	Redox Feat				
Depth (inches)	Color (%	Color (moist) %	Type 1	Loc2	Texture	Remarks
0-4	10YR	3/3	100					
4-16	10YR	5/6	100					
. 20		3,0						
								-
ype: C=Con	centration. D	=Depletio	n. R M=R edu	uced Matrix, CS=Covered or Coate	ed Sand Grai	ns ² Loc atio	n: PL=Pore Lining, M=N	latrix
lydric Soil I				_			Indicators for Probl	ematic Hydric Soils ³ :
∐ Histosof (-			Polyvalue Below Surface	(S8) (LRR S	, T, U)	1 cm Muck (A9) (LRR O)
	pedon (A2)			Thin Dark Surface (S9)	LRR S, T, U	1	2 cm Muck (A10)	(LRR S)
_ Black Hist				Loamy Mucky Mineral (F	1) (LRR O)		Reduced Vertic (F	18) (outside MLRA 150A,B)
_	Sulfide (A4)			Loamy Gleyed Matrix (F	2)		Piedmont Floodpla	ain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)			Depleted Matrix (F3)				Loamy Soils (F20) (MLRA 153B)
Organic B	odies (A6) (LI	RR P, T, L	l)	Redox Dark Surface (F6)		Red Parent Materi	
5 cm Muc	ky Mineral (A	7) (LRR P	, T, U)	Depleted Dark Surface (F7)		☐ Very Shallow Dark	• •
Muck Pres	sence (A8) (Li	RR U)		Redox Depressions (F8)			Other (Explain in i	
1 cm Muc	k (A9) (LRR P	r, T)		Marl (F10) (LRR U)			C Odici (Explain III	(Cinario)
Depleted	Below Dark S	urface (A:	11)	Depleted Ochric (F11) (I	/LRA 151)			
Thick Darl	k Surface (A1:	2)		☐ Iron-Manganese Masses		O. P. T)		
_	irie Redox (A1	-	150A)	Umbric Surface (F13) (L		~ [.,.,.)		
_	ck Mineral (S:	, ,		Delta Ochric (F17) (MLR				
_	yed Matrix (S		, -,	_		EUD)	³ Indicators	of hydrophytic vegetation and
Sandy Rec		•,		Reduced Vertic (F18) (M				ydrology must be present,
7				Piedmont Floodplain Soi		-		disturbed or problematic.
- ''	/latrix (S6)	D.C.T.I	13	Anomalous Bright Loam	/ Solls (F20)	(MLKA 149A	, 153C, 153D)	
J Dark Suna	ace (S7) (LRR	P, S, 1, L	J)					
	yer (if obse	rved):						
Type:							Hydric Soil Present?	Yes O No 💿
Depth (inch	nes):						, and bod riescile	163 C 110 C
emarks:								

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Wavela	,, , , , , , ,	Sampling Date:	11-Oct-16
Applicant/Owner: NASA			7 W	
Investigator(s): Lars Larson, Randy Ellis	Section, Township,	A	T 7s R 16	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave,	convex, none): none	Slope: 2,	0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 42.587" N	Long.: 89° 36'	41.655" W Datur	n: NAD83
Soil Map Unit Name: PoB, Poarch fine sandy loam, 2 to 5% slopes		NWI d	assification: N/A	
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 💿 N	o (If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology significan	ntly disturbed? Are	e "Normal Circumstand	ces" present? Yes	No O
		needed, explain any a		
SUMMARY OF FINDINGS - Attach site map showing sa	ampling point loca	tions, transects, i	mportant features,	etc.
Hydrophytic Vegetation Present? Yes ⊙ No ○	Is the Sample	nd Area		
Hydric Soil Present? Yes O No	1	Vec O No	•	
Wetland Hydrology Present? Yes ○ No ⑤	within a Wet	land?	O	
Remarks:				
HYDROLOGY			_	
Wetland Hydrology Indicators:		Secondary In	ndicators (minimum of 2 requ	ired)
Primary Indicators (minimum of one required; check all that apply)		Surface !	Soil Cracks (B6)	
Surface Water (A1) Aquatic Fauna (B	-		Vegetated Concave Surface ((B8)
High Water Table (A2) Marl Deposits (B)			Patterns (B10)	
☐ Saturation (A3) ☐ Hydrogen Sulfide	* *		m Lines (B16)	
	heres along Living Roots (on Water Table (C2)	
Sediment Deposits (B2) Presence of Redu Result Visa Part	• •		Burrows (C8)	CO)
	uction in Tilled Soils (C6)	_	in Visible on Aerial Imagery (Cabic Resition (D2)	(9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surfac			ohic Position (D2) Aquitard (D3)	
☐ Iron Deposits (B5) ☐ Other (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks)		tral Test (D5)	
Water-Stained Leaves (B9)			m moss (D8) (LRR T, U)	
			III 111035 (DO) (ERK 1, 0)	
Field Observations: Surface Water Present? Yes No Depth (inches):				
0 0				
		tland Hydrology Presei	nt? Yes 🔾 No 💿	
Saturation Present? Yes No Depth (inches):				
Describe Recorded Data (stream gauge, monitoring well, aerial phote Remarks:	tos, previous inspection	is), if available:	9	
				-
				- 1
				I

Tree Stratum (Plot size: 30 m)	Absolute	e Re	el.Strat. Cover	Indicator Status	
1 Pinus elliottii	20	V	66,7%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2. Nyssa sylvatica	5		16.7%	FAC	The side obly Thorn, of their
O Outstand of the Control of the Con			16.7%	FAC	Total Number of Dominant
	0	H			Species Across All Strata: 3 (B)
	_	H.	0.0%	FACW	Percent of dominant Species
5			0.0%	- 100	That Are OBL, FACW, or FAC: 100.0% (A/B)
6.	_ 0	Ц	0.0%		111007110 002471710177 01 11101
7	0	Ц,	0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 15 20% of Total Cover: 6	30	= To	tal Cove		OBL species $0 \times 1 = 0$
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 105 x 2 = 210
		V	69.8%	FACW	FAC species 30 x 3 = 90
0 0				-	
		 -	18.6%	FAC	FACU species 0 \times 4 = 0
3. Magnolia virginiana			11.6%	FACW	UPL species $0 \times 5 =0$
4	0	Ш.	0.0%		Column Totals: 135 (A) 300 (B)
5	0	\square	0.0%		December 2 december 2 222
6	0		0.0%		Prevalence Index = B/A = 2.222
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		
					✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 21.5 20% of Total Cover: 8.6	43	= To	tal Cove	r !	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is \leq 3.0 1
1 Ilex coriacea	50	V	83.3%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex vomitoria	10		16.7%	FAC	
0			0.0%		¹ Indicators of hydric soil and wetland hydrology must
· ·		H			be present, unless disturbed or problematic.
4			0.0%		Definition of Manufaction Courts
5			0.0%		Definition of Vegetation Strata:
6	0	Ш,	0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 30 20% of Total Cover: 12 Herb Stratum (Plot size: 30 m))	60_	= Tol	tal Cove	'	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1	0		0.0%		Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2.	0		0.0%		than 3 in. (7.6 cm) DBH.
3.	0	$\overline{\Box}$	0.0%		than o kin (1.0 on) DDI ii
4.	0	Π.	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
		-			than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	\vdash	0.0%		
6,	0	Ц.	0.0%		Shrub - Woody plants, excluding woody vines,
7	0.	Щ"	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8,	0	\Box _=	0.0%		
9	0		0.0%		Herb - All herbaceous (non-woody) plants, including
10.,	0		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
11 12	0	Ξ.	0.0%		
		Ц.			Woody vine - All woody vines, regardless of height.
50% of Total Cover: 0 20% of Total Cover: 0	0 :	= Tot	al Cover	`	Woody Ville - All Woody Villes, regardless of Height.
Woody Vine Stratum (Plot size: 30 m				l.	
A british a british br	2		100.0%	FAC	
1. VIDS FORMATIONS 2			0.0%		
		=		-	
3		H-	0.0%		
4	00	\sqcup	0.0%		Undrophytic
5	0	\sqcup_{-}	0.0%		Hydrophytic Vegetation
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	= Tot	al Cover		Present? Yes No
Remarks: (If observed, list morphological adaptations below). Heavy pine litter very little herbaceous layer.					

SOIL								Sa	mpling Point	t: Up-5
Profile Desc	ription: (De:	scribe to	the dep th	needed to document	the indic	ator or co	nfirm the a	absence of indicato	ors.)	-
Depth		Matrix		Rec	iox Featu					
(inches)	Color (moist)_	%	Color (moist)	%	Type 1	Loc2	Texture		Remarks
0-6	10YR	3/3	100							1 2 41 1
6-16	10YR	5/4	100						some	mottling
-					-					, sound
		_	-				_	-		
				According to the second						
	ξ.,									
¹ Type: C=Con	centration. D	=Depletio	n. R M=R edu	uced Matrix, CS=Covere	d or Coate	d Sand Gra	ins ² Locat	tion: PL=Pore Lining.	. M=Matrix	
Hydric Soil 1				_				Indicators for I	Problematic	Hydric Soils ³ :
Histosol (•			Polyvalue Belo	w Surface	(S8) (LRR 9	S, T, U)	1 cm Muck (A9) (LRR O)	
	pedon (A2)			☐ Thin Dark Surf)	2 cm Muck ((A10) (LRR S)	
☐ Black Hist				Loamy Mucky				Reduced Ver	rtic (F18) (out	side MLRA 150A,B)
	Sulfide (A4)			Loamy Gleyed		2)		Piedmont Flo	oodplain Soils	(F19) (LRR P, S, T)
	Layers (A5)			Depleted Matri	• /					Soils (F20) (MLRA 153B)
	Bodies (A6) (Li			Redox Dark Su				Red Parent I	Material (TF2)	
	cky Mineral (A sence (A8) (Li	, ,	, 1, 0)	☐ Depleted Dark	•	-7)		└─ Very Shalfow	v Dark Surface	(TF12)
	:k (A9) (LRR F	-		Redox Depress				U Other (Expla	in in Remarks)
	Below Dark S		11)	☐ Marl (F10) (LR	-	4: D& 4E4\				
	k Surface (A1	•	11)	Depleted Ochr		-	0.0.70			
	irie Redox (Al	•	\ 150A)	☐ Iron-Manganes			0, P, 1)			
	ick Mineral (S:		-	Umbric Surface Delta Ochric (F						
_	yed Matrix (S		, 0,	Reduced Vertic		-	150B)			ohytic vegetation and
Sandy Re	-	7		☐ Piedmont Floor			•			/ must be present, d or problematic.
	Matrix (S6)							A, 153C, 153D)	mess discarde	a or problemate.
	ace (S7) (LRR	P, S, T, l	J)		J.1.C 200.11.7	505 (1.2.5)	(, 1000, 1000,		
Restrictive La	ayer (if obse	rved):								
Туре:							-			0 0
Depth (incl	hes):							Hydric Soil Prese	nt? Yes	○ No
Remarks:										
No strong hyd	dric indictors	. Some	dark oran	ge mottling in lower	interval o	of soil colu	mn.			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation Ci	ity/County: Waveland - Hancock Sampling Date: 11-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 6
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: 5 28 T 7 5 R 16 W
Landform (hillslope, terrace, etc.): Hillside Lo	ocal relief (concave, convex, none): CONVEX Slope: 3.0 % / 1.7°
	0° 24' 40.701" N Long.: 89° 36' 31.360" W Datum: NADB3
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
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	× 8 11 0
Are Vegetation , Soil , or Hydrology naturally pro	
SUMMARY OF FINDINGS - Attach site map showing same	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	To the Campled Area
Hydric Soil Present? Yes O No 💿	Is the Sampled Area Ves No No No
Wetland Hydrology Present? Yes O No •	within a Wetland? Yes VNO S
Remarks:	
Sideslope approximately 300 feet west of East Site Road (A. Jackson)	and 200-300 feet south of TS Creek.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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 Odd	or (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizosphere	es along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reductio	on in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C	(7) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Ren	narks) 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 O No O Depth (inches):	
Saturation Present? Ves No Penth (inches):	Wetland Hydrology Present? Yes ○ No •
(includes capillary filities)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	***
	,

Tree Stratum (Plot size: 30 m)	Absolute		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
		V			Number of Dominant Species
Pinus elilottii Quercus nigra	., 15 10	V		FACW	That are OBL, FACW, or FAC: 8 (A)
3. Nyssa sylvatica				FAC FAC	Total Number of Dominant
A Oueseus termon	2_		7.1%		Species Across All Strata: 8 (B)
5.		Н	3.6%	FACW	Percent of dominant Species
_	0	H	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6.			0.0%		
7.			0.0%		Prevalence Index worksheet:
8.	0	Щ	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 14 20% of Total Cover: 5.6	28	= Te	otal Cove	r	OBL species 0 x 1 = 0
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species $52 \times 2 = 104$
1 Pinus elliottii	15_	V	48.4%	FACW	FAC species 38 x 3 = 114
2. Quercus nigra		V	32.3%	FAC	FACU species $0 \times 4 = 0$
3. Nyssa sylvatica			16.1%	FAC	UPL species 0 x 5 = 0
4. Ilex opaca			3.2%	FAC	or a specific
5.	0		0.0%		Column Totals: 90 (A) 218 (B)
6.	0	\Box	0.0%		Prevalence Index = B/A = 2,422
7.	0		0.0%	_	Hydrophytic Vegetation Indicators:
٥	0		0.0%		
	-1.9 p				1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 15.5 20% of Total Cover: 6.2	31	= To	otal Cove	•	2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
1 Ilex coriacea	15	V	71.4%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex vomitoria	5	V	23.8%	FAC	
3. Persea borbonia	1		4.8%	FACW	¹ Indicators of hydric soil and wetland hydrology must
1	_	$\overline{\Box}$	0.0%		be present, unless disturbed or problematic.
5.	C		0.0%		Definition of Vegetation Strata:
6	0	\exists	0.0%	(Participant)	Tree - Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 10.5 20% of Total Cover: 4.2	21	= 10	otal Cover		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m)					
1 Arundinaria tecta	5	V	100.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2	0		0.0%		than 3 in, (7.6 cm) DBH.
3.	0		0.0%		, ,
4.	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
5.	0	\Box	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6	0	\Box	0.0%	-	
7		H	0.0%	-	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
		H	0.0%		approximately 5 to 20 ft (1 to 6 ftl) iff height.
8		二	0.0%		Herb - All herbaceous (non-woody) plants, including
9					herbaceous vines, regardless of size, and woody
10		1	0.0%		plants, except woody vines, less than approximately
11		님	0.0%		3 ft (1 m) in height.
12	0	Ц	0.0%		NAZ-akirida Allamada U. S. S.C.
50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= To	tal Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m					<u> </u>
1 Vitis rotundifolia	5	V	100.0%	FAC	
	4		0.0%		
2	n	\exists	0.0%	-	
		۲.			
4.		Η.	0.0%	-	Hydrophytic
5		L	0.0%		Vegetation
50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= To	tal Cover		Present? Yes No O
Remarks: (If observed, list morphological adaptations below).	_			•	
*Indicator suffix = National status or professional decision assigned because Re	ecional status r	not d	efined by FV	vs.	

COT	4

Sampling Point: Up - 6 Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) Color (moist) % Type Loc2 Texture Remarks 0-6 10YR 3/2 6-22 10YR 5/6 100 Sandy Loam ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: ☐ Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) ☐ Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Lavers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) ☐ Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (If observed): Type: Yes O No 💿 **Hydric Soil Present?** Depth (inches): Remarks: Soil becomes bright yellowish brown below 5 inches.

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hanco	- II Out 10
Applicant/Owner: NASA	State: MS	Sampling Point: Up - 7
Investigator(s): Lars Larson. Randy Ellis	Section, Township, Range: S	28 T 7s R 16W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, n	one): none
Subregion (LRR or MLRA): LRR T Lat:	30° 24' 46.148" N Long	3.: 89° 36' 26.206" W Datum : NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes		NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes No	(If no, explain in Remarks.)
		Circumstances" present? Yes No O
		explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, tr	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes No	You the Compiled Associ	
Hydric Soil Present? Yes No	Is the Sampled Area	Yes O No 💿
Wetland Hydrology Present? Yes ○ No •	within a Wetland?	res O NO O
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	•	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	• •	Moss Trim Lines (B16)
	neres along Living Roots (C3)	Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduc	• •	Crayfish Burrows (C8)
	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
	• •	Geomorphic Position (D2) Shallow Aquitard (D3)
☐ Iron Deposits (B5) ☐ Other (Explain in I ☐ Inundation Visible on Aerial Imagery (B7)	kemarks)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)
		Springfrum moss (DO) (LRC 1, O)
Field Observations: Surface Water Present? Yes No Depth (inches):		
Surface victor victoria.		
	Wetland Hydr	rology Present? Yes O No 💿
Saturation Present? Yes No Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), ir avail	able:

Tree Stratum (Plot size: 30 m	Absolute % Cover			Indicator Status	Dominance Test worksheet:				
, 1100,0110		_			Number of Dominant Species				
1. Pinus elliottii	30		35.7%	FACW	That are OBL, FACW, or FAC: 6 (A)				
2. Quercus nigra	5	-	4.3%	FAC	Total Number of Dominant				
3.	0	<u> </u>	0.0%		Species Across All Strata: 6 (B)				
4.	_ 0		0.0%						
5.	0		0.0%		Percent of dominant Species				
6.	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)				
7.	0		0.0%		Prevalence Index worksheet:				
8.	0		0.0%						
	-	= Total		-					
50% of Total Cover: 17.5 20% of Total Cover: 7		= rotai	Cover		, , , , , , , , , , , , , , , , , , ,				
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species $55 \times 2 = 110$				
1 Pinus elliottil	25	✓ 6.	2.5%	FACW	FAC species $70 \times 3 = 210$				
2. Acer rubrum	10	✓ 2.	5.0%	FAC	FACU species $2 \times 4 = 8$				
3. Quercus nigra	_	1	2.5%	FAC	UPL species 0 x 5 = 0				
4	0		0.0%						
E			0.0%		Column Totals: 127 (A) 328 (B)				
			0.0%	-	Prevalence Index = $B/A = 2.583$				
6		=			Hydrophytic Vegetation Indicators:				
/	0		0.0%		nyurophytic vegetation mulcators.				
8	0	0	0.0%	-	1 - Rapid Test for Hydrophytic Vegetation				
50% of Total Cover: 20 20% of Total Cover: 8	40 =	= Total	Cover		✓ 2 - Dominance Test is > 50%				
Shrub Stratum (Plot size: 30 m)	1				✓ 3 - Prevalence Index is ≤3.0 ¹				
	20		c 701	-10					
1 Morella cerifera	30		_	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)				
2. Acer rubrum	10			FAC					
3. Ilex vomitoria	. 5	1:	1.1%	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
4	0		0.0%		be present, unless disturbed or problematic.				
5.	0		0.0%		Definition of Vegetation Strata:				
6.	0		0.0%	-	Tree - Woody plants, excluding woody vines,				
50% of Total Cover: 22.5 20% of Total Cover: 9		= Total			approximately 20 ft (6 m) or more in height and 3 in.				
30% of Ibital Cover. 22.5 20% of Ibital Cover. 9	43	= rocar	Cover		(7.6 cm) or larger in diameter at breast height (DBH).				
Herb Stratum (Plot size: 30 m									
1 Eupatorium capillifolium	2	10	0.0%	FACU	Sapling - Woody plants, excluding woody vines,				
2.			0.0%	70	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.				
	-	=	0.0%		Than 6 in (1.6 din) DDI i.				
3	-				Sapling/Shrub - Woody plants, excluding vines, less				
4			.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.				
5,	0		0.0%		,				
6,	0		.0%		Shrub - Woody plants, excluding woody vines,				
7	0	LI0	.0%		approximately 3 to 20 ft (1 to 6 m) in height.				
8.	0	o.	0.0%						
9	0	□ 0.	.0%		Herb - All herbaceous (non-woody) plants, including				
10.	0	_ n	0.0%		herbaceous vines, regardless of size, and woody				
11			.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.				
11					o ic (1 iii) iii iioigiia				
12	0	LJ_0.	.0%		Woody vine - All woody vines, regardless of height.				
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	= Total	Cover		vyoddy ville - Ail woddy villes, regardless of fleight.				
Woody Vine Stratum (Plot size: 30 m									
Vitis rotundifolia	5	1 00	0.0%	FAC [
2			.0%						
3	0		.0%	-					
1.	0	٥.	.0%		15-d				
5.	0	0.	.0%		Hydrophytic Vegetation				
% of Total Cover: 2.5 20% of Total Cover: 1 5 = Total Cover					Present? Yes No				
Remarks: (If observed, list morphological adaptations below).									

SOIL Sampling Point: Up - 7 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (Inches) Color (moist) 0/p Loc2 Color (moist) % Type Texture Remarks 0-5 10YR 3/2 100 Mottling in lower horizon. 10YR 5-20 4/4 95 10YR Loamy Sand 6/6 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soll Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) ☐ 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) ☐ Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomaious Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) ☐ Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Hydric Soil Present? Yes 💿 No O Depth (inches): Remarks: there appears to be some silty clay below 16 inches. Some dark orange brown mottles and some rusty orange redox features in approximately 5% of the total matrix.

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date:	11-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 8	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 s R 1	6 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): convex Slope:	3.0 % / 1.7°
A seed 1. * * *** seeded - APT**-A		tum; NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A	Lann, I.V. II. O
Are climatic/hydrologic conditions on the site typical for this time of you	(● No ○
	The Hollies discullations probable.	9 NO C
	problematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations, transects, important features	s, etc.
Hydrophytic Vegetation Present? Yes ◎ No ○	Is the Sampled Area	
Hydric Soil Present? Yes ○ No ●	Von O No O	
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?	
Remarks:	·	
Sideslope within 30 to 40 feet of drainage way approximately 200 t	eet from Turtleskin Creek Bridge.	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 re	equired)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)	
Surface Water (A1)	13) Sparsely Vegetated Concave Surface	ce (B8)
High Water Table (A2) Marl Deposits (B:	.5) (LRR U) Drainage Patterns (B10)	
Saturation (A3) Hydrogen Sulfide	_ ` ` `	
	heres along Living Roots (C3)	
Sediment Deposits (B2)		
i — —	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery	y (C9)
Algal Mat or Crust (B4) Thin Muck Surface		
Iron Deposits (B5) Other (Explain in 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):		
	Wetland Hydrology Present? Yes O No	●
Saturation Present? (includes capillary fringe) Yes No Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
		ĺ

ree Stratum (Plot size: ,30 m)	% Cover		 Indicator Status 	Dominance Test worksheet:
				Number of Dominant Species
Plnus elliottii	10	55.69		That are OBL, FACW, or FAC: 7 (A)
Nyssa sylvatica	5	27.89		Total Number of Dominant
Quercus nigra	3	16.7%	*** · · · · ·	Species Across All Strata: 7 (B)
man a man a man	# 1 Marco 146	0.0%		
	0_	0.0%	a	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
T	0	0.0%	A 140	That are Obt, Facw, of Fac:
	0	0.0%		Prevalence Index worksheet:
	0	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 9 20% of Total Cover: 3.6	18	= Total Cov	er	OBL species $0 \times 1 = 0$
apling or Sapling/Shrub Stratum (Plot size: 30 m				FACW species 44 x 2 = 88
		✓ 55.6%	FAC	FAC species 28 x 3 = 84
		✓ 27.8%		
Model Live and the second control of the sec				FACU species 0 x 4 =0
Quercus texana	1	5.6%		UPL species $0 \times 5 = 0$
Quercus nigra	2	11.1%		Column Totals: 72 (A) 172 (B)
-	0	0.0%		Prevalence Index = B/A = 2.389
FIN	0	0.0%		
H V	. 0	0.0%		Hydrophytic Vegetation Indicators:
Tel	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 9 20% of Total Cover: 3.6	18	= Total Cov	er	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m		[4] = 1 and	54.504	✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea	20	71.4%		Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria	5	17.9%		
Cyrilla racemiflora	3	10.7%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0	0.0%		be present unless distance of problematic
	0	0.0%		Definition of Vegetation Strata:
. 50% of Total Cover: 14 20% of Total Cover: 5.6		0.0%		Tree - Woody plants, excluding woody vines,
		= Total Cov	/er	approximately 20 ft (6 m) or more in height and 3 in.
	28:			(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)		_		Sapling - Woody plants, excluding woody vines,
. Ilex corracea	5	71.4%	FACW	approximately 20 ft (6 m) or more in height and less
Morella cerifera		28.6%	FAC	than 3 in. (7.6 cm) DBH.
	0	0.0%		
	0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
).	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
-	0	0.0%		Ohank Maada alasta analadian mada isaa
· · · · · · · · · · · · · · · · · · ·		0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
	-	0.0%		approximately 5 to 25 ft (1 to 5 ft) in freigna
).		0.0%		Herb - All herbaceous (non-woody) plants, including
	_			herbaceous vines, regardless of size, and woody
	0	0.0%		plants, except woody vines, less than approximately
	0	0.0%	t-1	3 ft (1 m) in height.
	_ 0	0.0%		
0% of Total Cover: 3.5 20% of Total Cover: 1.4	7 =	= Total Cov	er	Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m				
Vitis rotundifolia	_ 1	100.09	FAC	
		0.0%	INC	
	_			
	0	0.0%		
		0.0%		Hydronhytic
	0	0.0%		Hydrophytic Vegetation
50% of Total Cover: 0.5 20% of Total Cover: 0.2		= Total Cov	er	Present? Yes No
1 Maria - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				

SOIL					Sampling Point: Up - 8
Profile Desci	ription: (Desc	cribe to	the depth	needed to document the Indicator or confirm	n the absence of indicators.)
Depth		Matrix_		Redox Features	
(inches)	Color (n	noist)	0/0	Color (moist) % Type 1 Lo	oc² Texture Remarks
0-4	10YR	4/2	100		
4-16	10YR	5/6	100		
	· · · ·				
_			k j. :		
-	-	_	_		
		Depletion	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains	² Location: PL=Pore Lining. M=Matrix
iydric Soli I					Indicators for Problematic Hydric Soils ³ :
☐ Histosol (-			Polyvalue Below Surface (S8) (LRR S, T, L	U)
→ · · ·	pedon (A2)			Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
_ Black Hist				Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
_ , _	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodpiain Soils (F19) (LRR P, S, T)
_	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	odies (A6) (LR		-	Redox Dark Surface (F6)	Red Parent Material (TF2)
5 cm Muc	ky Mineral (A7) (LRR P,	, T, U)	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
Muck Pres	sence (A8) (LR	RU)		Redox Depressions (F8)	Other (Explain in Remarks)
1 cm Muc	k (A9) (LRR P,	T)		Marl (F10) (LRR U)	
Depleted	Below Dark Su	rface (A1	11)	Depleted Ochric (F11) (MLRA 151)	
Thick Darl	k Surface (A12)		☐ Iron-Manganese Masses (F12) (LRR O, P,	, T)
Coast Prai	irie Redox (A16	5) (MLRA	150A)	Umbric Surface (F13) (LRR P, T, U)	•
Sandy Mu	ck Mineral (S1)) (LRR O	, S)	Delta Ochric (F17) (MLRA 151)	_
_	yed Matrix (S4			Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Red				Piedmont Floodplain Solls (F19) (MLRA 14	wedalid liyarology mast be present,
_ `	/latrix (S6)			Anomalous Bright Loamy Soils (F20) (MLR	-
	ace (S7) (LRR I	P, S, T, l	J)		0121314 -0004 -0007
			•		
	ayer (if obser	ved):			
Type:					Hydric Soil Present? Yes No 💿
Depth (inch	nes):				Tryancian 183 NO -
emarks:					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 11-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up -9
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 29.150" N Long.: 89° 36' 46.346" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of yea	ar? Yes No (If no, explain in Remarks.)
	tly disturbed? Are "Normal Circumstances" present? Yes No O
	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sar	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	T-41-6:1-11
Hydric Soil Present? Yes ○ No ●	Is the Sampled Area Within a Motional Yes No No No
Wetland Hydrology Present? Yes O No •	within a Wetland? Yes ONO O
Remarks:	
Sideslope of moving into land drainage feature that feeds and ephen	meral stream flowing into Turtleskin Creek.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1)	
High Water Table (A2) Marl Deposits (B15)	
Saturation (A3) Hydrogen Sulfide (
	heres along Living Roots (C3)
Sediment Deposits (B2) Presence of Reduc	\equiv \cdot
	ction In Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in R	
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 Denth (inches):	
Surface Witch Frederick	
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ④
Saturation Present? (Includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	
Rendra.	.0

0	
Magnolia virginiane	
3. Querous higher 4. Nysse sylvatics 5	(A)
4. Nysss sylvetica	
5	(B)
6.	
0	(A/B)
8. 0	
Solid of Total Cover: 16 20% of Total Cover: 6.4 32 = Total Cover	
1. Magnolia virgiplatina 20 \$\subseteq\$ 5.71.% FACW F	
1. Magnolia virginiana 2.	
2. Pinus elliotiti 30.	6
2. Pinus elliotiti 30.	1
Myssa syNetica	MA % "MA
Column Totals: 131 (A) 280	
0	
6. 0	
7. 0	
8.	
Solution Shrub Stratum Flot size: 30 m	
Shrub Stratum Plot size: 30 m 3 1 1 1 1 1 1 1 1 1)IS
1.	
2 Ilex vomitoria	
1 Indicators of hydric soil and wetland hydrole 0	Explain)
1	
1	
Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height are the plant approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more in height approximately 20 ft (6 m) or more	
### Stratum (Plot size: 30 m) 1. Arundinaria tecta	
Herb Stratum	
Herb Stratum	ind 3 in.
1. Arundinaria tecta 2.	ii (Don).
Arundinana tecta	ies,
3.	
4. 0	
5.	1
5.	
7.	
8.	s,
9.	
10.	
10.	
11.	
12.	Ī
50% of Total Cover: 1.5 20% of Total Cover: 0.6 3 = Total Cover Woody Vine - All woody Vines, regardless of homology Vine Stratum Plot size: 30 m	
Woody Vine Stratum (Plot size: 30 m) 1. Vitis rotundifolia 1	neight.
1	
2. 0 □ 0.0% 3. 0 □ 0.0% 4. 0 □ 0.0%	
3.	
0 □ 0.0%	
Liverantific	
5. O O O O O Vegetation	
50% of Total Cover: 0.5 20% of Total Cover: 0.2 1 = Total Cover Present? Yes No C	
Remarks: (If observed, list morphological adaptations below).	

SOIL Sampling Point: Up -9 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) Loc2 Texture Color (moist) Type Remarks 0-5 10YR 3/2 100 Loamy Sand 5-16 10YR 4/4 100 Loamy Sand ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) □ Very Shallow Dark Surface (TF12) ☐ Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (If observed): Туре: Yes 🔾 No 💿 Hydric Soil Present? Depth (inches):, Remarks: Sandy loam, fairly dry with crumbly texture. Uniform grayish yellow to brown below 4-inches.

Applicant/Owner: NASA Investigator(s): Lars Larson, Randv Ellis Sect Landform (hillslope, terrace, etc.): Terrace Local Subregion (LRR or MLRA): LRR T Lat.: 30° 2 Soil Map Unit Name: SaC, Saucier fine sandy loam, 5 to 8 percent slopes Are climatic/hydrologic conditions on the site typical for this time of year? Are Vegetation , Soil , or Hydrology significantly distributed.	NWI classification: N/A Yes No (If no, explain in Remarks.) urbed? Are "Normal Circumstances" present? Yes No ()
Are Vegetation , Soil , or Hydrology naturally problem SUMMARY OF FINDINGS - Attach site map showing sampling Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Wetland Hydrology Present? Remarks: Just off logging road-cut trail 30 feet approximately 500-feet south of railb	within a Wetland? Yes O No
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Presence of Reduced Iron Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9)	Moss Trim Lines (B16) Ing Living Roots (C3) In (C4) Tilled Soils (C6) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous present)	Wetland Hydrology Present? Yes O No No
Remarks:	

Tree Stratum (Plot size: 30 m)		-	pecies? .		Sampling Point: Up - 10
Turne Characteristic (Plot size: 30 m)		e R	el.Strat.		Dominance Test worksheet:
	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii Nyssa sylvatica	15	~		FACW	That are OBL, FACW, or FAC: 6 (A)
Nyssa syfvatica Quercus virginiana	5		17.9%	FAC	Total Number of Dominant
Quercus virginiana			17.9%	FACU	Species Across All Strata: 6 (B)
Quercus nigra	3,		10.7%	FAC	
	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
w	. 0		0.0%		That Are ODE, FACW, OF FAC.
	0		0.0%		Prevalence Index worksheet:
V <u>====================================</u>	0		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 14 20% of Total Cover: 5.6	28	= T	otal Cove	r	OBL species 0 x 1 = 0
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 40 x 2 = 80
Pinus elliottii	15	V	60.0%	FACW	FAC species 68 x 3 = 204
Quercus nigra		Y	40.0%	FAC	FACU species $5 \times 4 = 20$
	0		0.0%		UPL species $0 \times 5 = 0$
	0		0.0%		
	0		0.0%		Column Totals: 113 (A) 304 (B)
	0		0.0%		Prevalence Index = B/A = 2.690
	0	\Box	0,0%		Hydrophytic Vegetation Indicators:
K .	0	\exists	0.0%		
200 of Tabel Course 42.5		_			1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 12.5 20% of Total Cover: 5	25	= 10	otal Cove	r	✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex vomitoria	40	V	75.5%	FAC	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex coriacea	10		18.9%	FACW	
Quercus nigra	3		5.7%	FAC	¹ Indicators of hydric soil and wetland hydrology must
	0		0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
	0		0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 26.5 20% of Total Cover: 10.6	53	= Te	otal Cove		approximately 20 ft (6 m) or more in height and 3 in.
					(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m.,)					Sapling - Woody plants, excluding woody vines,
			0.0%		approximately 20 ft (6 m) or more in height and less
	0	1 4	0.0%		than 3 in. (7.6 cm) DBH.
		=	. 0.0 /0		
	0		0.0%		, ,
	0		-		Sapling/Shrub - Woody plants, excluding vines, less
· · · · · · · · · · · · · · · · · · ·	0		0.0%		, ,
,	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0		0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0		0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
	0 0		0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
	0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
	0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
o% of Total Cover: 0 20% of Total Cover: 0	0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
)% of Total Cover: 0 20% of Total Cover: 0 pody Vine Stratum (Plot size: 30 m)	0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
9% of Total Cover: 0 20% of Total Cover: 0 pody Vine Stratum (Plot size: 30 m) Vitis rotundifolia	0 0 0 0 0 0 0 0 0	V	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FAC	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
% of Total Cover: 0 20% of Total Cover: 0 cody Vine Stratum (Plot size: 30 m) Vitis rotundifolia Smilax rotundifolia	0 0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
9% of Total Cover: 0 20% of Total Cover: 0 cody Vine Stratum (Plot size: 30 m) Vitis rotundifolia Smilax rotundifolia	0 0 0 0 0 0 0 0 0 0 0	V	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FAC	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
0% of Total Cover: 0 20% of Total Cover: 0 cody Vine Stratum (Plot size: 30 m) Vitis rotundifolia Smilax rotundifolia	0 0 0 0 0 0 0 0 0 0 0	V	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FAC	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
0% of Total Cover: 0 20% of Total Cover: 0 cody Vine Stratum (Plot size: 30 m) Vitis rotundifolia Smilax rotundifolia	0 0 0 0 0 0 0 0 0 0 0	V	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	FAC	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.

TOTILE DESCRI	ption: (Des	cribe to	the depth i	needed to documen	t the indic	cator or co	nfirm the al	bsence of indicators.)	
Depth		Matrix	W	Re	dox Feat	ıres			
(inches)	Color (r		₩	Color (moist)	%	Type 1	Loc2	Texture	Remarks
0-5	10YR	4/2	100	THE .		·*			· # - V.
5-16	10YR	5/3	100			-			
Type: C=Conc		-Depletion	n. RM= Redu	ced Matrix, CS=Cover	ed or Coate	ed Sand Gra	ins ^z Locatio	on: PL=Pore Lining, M=	
Histosol (A				Polyvalue Be	low Eurface	(CO) (LDD (: T III		lematic Hydric Soils ³ :
Histic Epip	-							1 cm Muck (A9)	` '
Black Histi				Thin Dark Su Loamy Muck)	2 cm Muck (A10)	
	Sulfide (A4)			Loamy Gleye	•			_	F18) (outside MLRA 150A,B)
Stratified L				Depleted Mai		2)		_	lain Soils (F19) (LRR P, S, T)
_	dies (A6) (LF	RR P. T. U	1)	Redox Dark S		,		_	t Loamy Soils (F20) (MLRA 153B)
	y Mineral (A7		-	Depleted Dar				Red Parent Mater	• •
_	ence (A8) (LF		, - ,	Redox Depre		'''		Very Shallow Dar	
_	(A9) (LRR P			☐ Marl (F10) (L				U Other (Explain in	Remarks)
_	elow Dark Su	•	1)	Depleted Och		ΔΙ RΔ 151)			
_ `	Surface (A12	•	•	☐ Iron-Mangan			0 P T)		
	ie Redox (A1	•	150A)	Umbric Surfa			O, 1 , 1)		
_	k Mineral (S1			Delta Ochric					
_	ed Matrix (S		, -,	Reduced Verl		-	150B)	³ Indicators	of hydrophytic vegetation and
Sandy Red	_	•,		☐ Piedmont Flo			-		hydrology must be present, disturbed or problematic.
Stripped M								, 153C, 153D)	disturbed or problemade.
- ···	ce (S7) (LRR	P. S. T. U	מ	Anomalous D	rigine coairiy	30113 (1 20)	(HILLAN LTSA	(, 1550, 1550)	
		.,.,.,					1		
estrictive La Type:	yer (if obse	rved):	_						
Depth (inch	es):				_			Hydric Soil Present?	Yes O No 🖲
emarks:									

Trojecty ofter Man Stating, 1,100 Acte Wednie Demication	/County: Waveland - Hancock Sampling Date: 12-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 11
- 1 (1977) - 1 (1977)	ction, Township, Range: S 31 T 7 s R 16 W
Landform (hillslope, terrace, etc.): Hillside Local	Il relief (concave, convex, none): convex Slope: 3.0 % / 1.7
Subregion (LRR or MLRA): LRR T Lat.: 30° 2	24' 16.645" N Long.: 89° 37' 26.574" W Datum: NAD83
Soil Map Unit Name: PoB, Poarch fine sandy loam, 2 to 5% slopes	NWI classification: N/A
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 dist	iturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally problem	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	ing point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes ○ No ⑤	Vac O No 🔘
Wetland Hydrology Present? Yes O No	within a Wetland?
Remarks:	
On sideslope 30-feet up from bottom drainage area, approximately 150-fe	eet North of Turtleskin Creek
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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	
Saturation (A3) Hydrogen Sulfide Odor (C	• •
Water Marks (B1) Oxidized Rhizospheres al	
Sediment Deposits (B2) Presence of Reduced Iron	_ · · · · · · · · · · · · · · · · · · ·
☐ Drift Deposits (B3) ☐ Recent Iron Reduction in	
Algal Mat or Crust (B4)	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 No Depth (inches):	
Surface Wells 17 Country	
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ⊙
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
	·
Remarks:	

			ominant pecies? _		Sampling Point: Up - 11	
	Absolute		el.Strat.	Indicator	Dominance Test worksheet:	
ree Stratum (Plot size: 30 m)	% Cover		Cover	Status	Number of Dominant Species	
Pinus elliottii	5	V	20.0%	FACW	That are OBL, FACW, or FAC: 6 (A)	
Nyssa sylvatica	10	V	40.0%	FAC	Total Number of Dominant	
Magnolia virginiana		V	32.0%	FACW	Species Across All Strata: 6 (B)	
Quercus nigra	2		8.0%	FAC		
	0		0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)	
	0		0.0%		That Are OBL, FACW, or FAC: 100 0% (AVB)	
LWCC . B	0		0.0%		Prevalence Index worksheet:	
	0		0.0%		Total % Cover of: Multiply by:	
0% of Total Cover: 12.5 20% of Total Cover: 5	25	= Tc	tal Cove	•	OBL species 0 x 1 = 0	
apling or Sapling/Shrub Stratum (Plot size: 30 m	}				FACW species 49 x 2 = 98	
Nyssa sylvatica	10	V	55.6%	FAC	FAC species $31 \times 3 = 93$	
Magnolia virginiana	5_	\checkmark	27.8%	FACW	FACU species $1 \times 4 = 4$	
Quercus texana	1		5.6%	FACW	UPL species $0 \times 5 = 0$	
Quercus nigra	2		11.1%	FAC	Column Totals: 81 (A) 195 (B)	
	•		0.0%			
	^		0.0%		Prevalence Index = B/A = 2.407	
			0.0%		Hydrophytic Vegetation Indicators:	
to the same of the	0		0.0%		G Bould West for Understanding	
0% of Total Cover: 9 20% of Total Cover: 3.6		= To	tal Cove		1 - Rapid Test for Hydrophytic Vegetation	
					✓ 2 - Dominance Test is > 50%	
hrub Stratum (Plot size: 30 m	20		05 70/	5154	✓ 3 - Prevalence Index is ≤3.0 ¹	
Ilex coriacea	30	V	85.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
Ilex vomitoria	3	Η.	8.6%	FAC	¹ Indicators of hydric soll and wetland hydrology mus	
Ilex opaca			5.7%	FAC	be present, unless disturbed or problematic.	
	0	Щ	0.0%			
	0	\sqsubseteq	0.0%	. (*	Definition of Vegetation Strata:	
	0	\sqcup	0.0%	, .	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.	
0% of Total Cover: 17.5 20% of Total Cover: 7	35 :	= To	tal Cove	•	(7.6 cm) or larger in diameter at breast height (DBH).	
erb Stratum (Plot size: 30 m)						
, Pteridium aquilinum	1		100.0%	FACU	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
	0		0.0%		than 3 in. (7.6 cm) DBH.	
			0.0%		,	
			0.0%		Sapling/Shrub - Woody plants, excluding vines, less	
	0	$\overline{\Box}$	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.	
	3		0.0%			
	0	Η.	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
		1	0.0%		approximately o to 20 it (1 to 0 iii) iii lielgiit.	
	0		0.0%	_	Herb - All herbaceous (non-woody) plants, including	
	0	\equiv	0.0%		herbaceous vines, regardless of size, and woody	
			0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.	
		H			3 It (1 m) in neight.	
	0	щ,	0.0%		Woody vine - All woody vines, regardless of height.	
0% of Total Cover: 0.5 20% of Total Cover: 0.2	_1	= To	tal Cover	1	The state of the s	
oody Vine Stratum (Plot size: 30 m)		_				
Vitis rotundifolia	2	\sqsubseteq	100.0%	FAC		
	0		0.0%			
	0	\Box	0.0%			
704			0.0%		No de codo de la constante de	
	0				Hydrophytic	
	0		0.0%		Vocatation	
	, 0	 = To	0.0% tal Cover		Vegetation Present? Yes No	

rofile Desci					Sampling Point: Up - 11
	iption: (Des		the depth	needed to document the Indicator or confirm	the absence of indicators.)
Depth (inches)	Colou (Matrix	0/	Redox Features Color (moist) % Type 1 Loc	oc² Texture Remarks
(inches) 0-5	Color (1	3/3	%	Color (moist) % Type Loc	Learny Sand
5-16	10YR		100	——————————————————————————————————————	Loamy Sand
2-10	IVIK	5/6	100		Loanly Sand
Fype: C≃Cond		=Depletio	n. RM= R edu	ced Matrix, CS=Covered or Coated Sand Grains ²	² Location: PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils ³ :
Histosol (/	41)			Polyvalue Below Surface (S8) (LRR S, T, U	
Histic Epip	edon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Hist	ic (A3)			Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified !	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
Organic B	odies (A6) (Li	RR P, T, L	J)	Redox Dark Surface (F6)	Red Parent Material (TF2)
5 cm Muc	ky Mineral (A	7) (LRR P	, T, U)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
	ence (AB) (LI			Redox Depressions (F8)	Other (Explain in Remarks)
_	k (A9) (LRR P			Marl (F10) (LRR U)	
···	Beiow Dark S		11)	Depleted Ochric (F11) (MLRA 151)	
_	c Surface (A1	-		Iron-Manganese Masses (F12) (LRR O, P,	T)
_	rie Redox (A1		_	Umbric Surface (F13) (LRR P, T, U)	
_	ck Mineral (S:		, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
_	yed Matrix (S	4)		Reduced Vertic (F18) (MLRA 150A, 150B)	vetland hydrology must be present,
Sandy Red				Piedmont Floodplain Soils (F19) (MLRA 149	
Stripped M				Anomaious Bright Loamy Soils (F20) (MLR/	A 149A, 153C, 153D)
Dark Surfa	ice (S7) (LRR	P, S, T, l	J)		
	yer (if obse	rved):			
Type: Depth (inches):				Hydric Soil Present? Yes O No	
Deptil (litter	les)			7	
emarks:					

Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation , Soil , or Hydrology naturally ;	tly disturbed? Are "Normal Circumstances" present? Yes No No problematic? (If needed, explain any answers in Remarks.) Impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No No No No No No No No Remarks:	Is the Sampled Area within a Wetland? Yes O No O
HYDROLOGY	
Sediment Deposits (B2)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) Dry Season Water Table (C2) ced Iron (C4) Crayfish Burrows (C8) Ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) e (C7) Geomorphic Position (D2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photo	Wetland Hydrology Present? Yes ○ No ●
Remarks:	

Absolute % Cover 25 5 3 0 0	Re	75.8% 15.2% 9.1%	Indicator Status FACW FACW	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant
25 5 3 0		75.8% 15.2% 9.1%	FACW FACW	That are OBL, FACW, or FAC: 4 (A)
5 3 0 0		15.2% 9.1%	FACW	That are OBL, FACW, or FAC: 4 (A)
3 0 0		9.1%		Total Number of Dominant
0			FAC	
. 0	Ш,	0.55		Species Across All Strata: 4 (B)
		0.0%		
0	Ц.	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
-	Ш	0.0%		THACKIE ODL, TACW, OF TAC.
0		0.0%		Prevalence Index worksheet:
0		0.0%	N F 1000 T	Total % Cover of: Multiply by:
33	= To	tal Cove	•	OBL species 0 x 1 = 0
}				FACW species
30	V	71.4%	FACW	FAC species 19 x 3 = 57
10	V	23.8%	FAC	FACU species 0 $\times 4 = 0$
		4.8%	FAC	UPL species $0 \times 5 = 0$
0		0.0%		Column Totals: 129 (A) 277 (B)
0		0.0%		COTOMIC TOLETS ILD CO
0		0.0%		Prevalence Index = B/A = 2.147
0		0.0%		Hydrophytic Vegetation Indicators:
0		0.0%		David France - 12 december - 1
	 _ To			1 - Rapid Test for Hydrophytic Vegetation
72	_ 10	OF COACI		✓ 2 - Dominance Test is > 50%
				✓ 3 - Prevalence Index is ≤3.0 ¹
	Y .			Problematic Hydrophytic Vegetation ¹ (Explain)
3	Ц.	5.6%	FAC	1
1	Ш.	1.9%	FAC	¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
0	Ш,	0.0%		
0		0.0%		Definition of Vegetation Strata:
0	Щ	0.0%		Tree - Woody plants, excluding woody vines,
54 =	= To	tal Cover	•	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
				, ,
		0.0%		Sapling - Woody plants, excluding woody vines,
0	\Box			approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
	\exists			than 5 lit. (7.5 cm) DBH.
	\Box	_		Sapling/Shrub - Woody plants, excluding vines, less
	\Box			than 3 in. DBH and greater than 3.28 ft (1m) tall.
			.м.	
Ser or me	H		-	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
-	<u> </u>			approximately 5 to 20 ft (1 to 6 m) in neight.
	님.			Herb - All herbaceous (non-woody) plants, including
-	H			herbaceous vines, regardless of size, and woody
_	H			plants, except woody vines, less than approximately 3 ft (1 m) in height.
	H		4	o it (1 iii) iii noigiit
-	Ц.			Woody vine - All woody vines, regardless of height.
0 =	= Tol	taı Çover		
				
0		0.0%		
0		0.0%		
0		0.0%		
0		0.0%		
0		0.0%		Hydrophytic Vegetation
0 =	= Tot	tal Cover		Present? Yes No
	30 10 2 0 0 0 0 0 0 42 50 3 1 0 0 0 0 0 54 8 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30	30	30

Color (moist) % Color (moist) % Type Loc2 Texture Remarks Loamy Sand Loamy	Depth	ription: (De	Matrix		Re	dox Featu				
Coamy Sand Coamy Sand Coam		Color		. %				Loc2	Texture	Remarks
This Dark Surface (SB) (LRR S, T, U) Black Histic Epipedon (A2) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Corganic Bodies (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Som Mucky Mineral (A7) (LRR P, T, U) Mark (F10) (LRR U) Redox Depressions (F8) I Loamly Salid Redissiblity some REDOx below PL=Pore Lining. M=Matrix Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 4: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 4: Indicators for Problemati	-									
Histosol (A1) Histo Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Tom Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Tom Muck (A9) (LRR O) 1 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	5-16	10YR	4/3	97	10YR 6/8	3	. С	М	Loamy Sand	appears to be mottles, rossibly some REDOX below
Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)	ydric Soil I Histic Epip Histic Epip Black Hist Hydrogen Stratified I Organic B 5 cm Muci Muck Pres 1 cm Muci Depleted I Thick Dark	indicators: A1) pedon (A2) ic (A3) Sulfide (A4) Layers (A5) odies (A6) (L ky Mineral (A sence (A8) (L k (A9) (LRR (A9) k (A9) (LRR (A9) k Surface (A1 irie Redox (A	.RR P, T, U ./7) (LRR P, .RR U) P, T) Surface (A1 .l2)	.) .T, U) .1)	Polyvalue Bek Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres Marl (F10) (LF Depleted Ochr Iron-Mangane	ow Surface face (S9) (Mineral (F Matrix (F2 ix (F3) urface (F6) Surface (F8) RR U) ic (F11) (M se Masses	(S8) (LRR LRR S, T, L 1) (LRR O) :) =7) ILRA 151) (F12) (LRR	S, T, U))	Indicators for P 1 cm Muck (/ 2 cm Muck (/ Reduced Verl Pledmont Flo Anomalous B Red Parent M Very Shallow	M=Matrix roblematic Hydric Soils ³ : A9) (LRR O) A10) (LRR S) dic (F18) (outside MLRA 150A,B) odplain Soils (F19) (LRR P, S, T) right Loamy Soils (F20) (MLRA 153B) faterial (TF2) Dark Surface (TF12)
		yer (if obs	erved):							
estrictive Layer (if observed):		nes):							Hydric Soil Preser	nt? Yes 🏵 No 🔾
Type:						in the lo	war nartia	n of the so	oil profile, but has t	ne appearance of a sandy redox

Traject, Start Starting 1/2007 at C Produits Sources	ounty: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 14
Investigator(s): Lars Larson, Randy Ellis Section	on, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace Local re	elief (concave, convex, none): _none
Subregion (LRR or MLRA): LRR T Lat.: 30° 24	1 10.337" N Long.: 89° 37' 1.097" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
	(a) 11- (a) 11- (b)
Are Vegetation , Soil , or Hydrology significantly disturbed. Are Vegetation , Soil , or Hydrology naturally problem.	Ale Hornia chedinocolices presenti
SUMMARY OF FINDINGS - Attach site map showing sampling	
Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Yes ○ No ⑥	Is the Sampled Area Ves O No No No No No No No No
Wetland Hydrology Present? Yes O No •	within a Wetland? Yes O NO O
Remarks: Terrace Upland area approximately 400 feet North of logging road in centra transition out of slightly wetter area to the south.	Il portion of AOI south of TS Creek. Small patch area that appears to
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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	
Water Marks (B1) Oxidized Rhizospheres alor	
Sediment Deposits (B2) Presence of Reduced Iron	
Drift Deposits (B3) Recent Iron Reduction in T Algal Mat or Crust (B4) Thin Muck Surface (C7)	Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
	Spriagram moss (po) (ERC 1, 0)
Field Observations: Surface Water Present? Yes No Depth (inches):	
	Wetland Hydrology Present? Yes O No 💿
Saturation Present? Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previ	ious inspections), if available:
Remarks:	
Remarks:	

		Domina		Sampling Point: Up - 14
	Absolute	_ Species Rel.Stra		Dominance Test worksheet:
ree Stratum (Plot size: 30 m	% Cove			Number of Dominant Species
Pinus elliottii	10	✓ 66.7	% FACW	That are OBL, FACW, or FAC: 9 (A)
Magnolia grandiflora	3	✓ 20.0	% FAC	
Magnolia virginiana	2	13.3	% FACW	Total Number of Dominant Species Across All Strata: 9 (B)
		0.0	V ₀	Species Across Air Strate.
		0.0	%	Percent of dominant Species
		0.0		That Are OBL, FACW, or FAC: 100.0% (A/B)
	40	0.0		Prevalence Index worksheet:
		0.0	- Jr	
ON of Tabal Courses 7.5 200% of Tabal Courses 2	0			Total % Cover of: Multiply by: OBL species 0 x 1 = 0
0% of Total Cover: 7.5 20% of Total Cover: 3		= Total Co	ver	-
apling or Sapling/Shrub Stratum (Plot size: 30 m				FACW species 77 x 2 = 154
Pinus elliottii		50.0	% FACW	FAC species $19 \times 3 = 57$
Quercus falcata	1	☐, _ 5.0°		FACU species $\frac{1}{x}$ $x = 4$
Acer rubrum	5	25.0	% FAC	UPL species $0 \times 5 = 0$
Liquidambar styraciflua	4	20.0	% FAC	Column Totals: 97 (A) 215 (B)
	_	0.0	/ o	
		0.0	/6	Prevalence Index = B/A = 2.216
	1.0	0.0	V ₀	Hydrophytic Vegetation Indicators:
	0	0.0	/6	1 - Danid Took for Undershydda Vonetaliau
0% of Total Cover: 10 20% of Total Cover: 4		= Total Co	ver	1 - Rapid Test for Hydrophytic Vegetation
9 5 - 39		. Jour of		✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m)				✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea		66.7		Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria	5	11.1	% FAC	
Ilex glabra	10	22.2	% FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0	0.09	6	be present, unless distailed of problematic
	0	0.09	6	Definition of Vegetation Strata:
	0	0.09	6	Tree - Woody plants, excluding woody vines,
0% of Total Cover: 22.5 20% of Total Cover: 9	45	= Total Co	ver	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)				
Ilex glabra	10	66.7	% FACW	Sapling - Woody plants, excluding woody vines
Ilex coriacea	5	33.3		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
V	0	0.09		than 5 in. (7.6 din) DBH.
	0	0.09		Sapling/Shrub - Woody plants, excluding vines, less
•			4	than 3 in. DBH and greater than 3.28 ft (1m) tall.
-		0.09		
	0_	0.09		Shrub - Woody plants, excluding woody vines,
		0.09		approximately 3 to 20 ft (1 to 6 m) in height.
	0.	0.09		Herb All barbaneous (non-use de Anlanda (note de la de-
The state of the s	0	0.09	6	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0	0.09	6	plants, except woody vines, less than approximately
	0,	0.09	6.,	3 ft (1 m) in height.
	0	0.09	6	
0% of Total Cover: 7.5 20% of Total Cover: 3	15	= Total Co	ver	Woody vine - All woody vines, regardless of height.
(Plat rize: 20 m				
oody Vine Stratum (Plot size: 30 m)	-	[]	0/ 546	
Smilax rotundifolia	2		% FAC	
		0.09	v .,	
		0.0%		
	0	0.0%	6	Mudaabada
	0	0.09	6	Hydrophytic
			r .	Vegetation Present? Yes

0-5 5-18		Matrix		Redox Features			
0-5	Color (0/0	Color (moist) % Type 1	Loc2	Texture	Remarks
5-18	10YR	3/2	100			Sandy Loam	7337111
	10YR	5/6	100			Sandy Loam	
ype: C=Concen	tration. D:	=Depletion	n. RM= R edu	iced Matrix, CS=Covered or Coated Sand Grains	s ² Locai	tion: PL=Pore Lining. M=	Matrix
iydric Soil Indi	icators:			-		Indicators for Pro	olematic Hydric Solls ³ :
Histosol (A1) Histic Epipedo Black Histic (Hydrogen Sul Stratified Layo Organic Bodie 5 cm Mucky N Muck Presenc 1 cm Muck (A Depieted Belo Thick Dark Su Coast Prairie Sandy Muck N Sandy Gleyed Sandy Redox Stripped Matr	on (A2) A3) Ifide (A4) ers (A5) es (A6) (Li Mineral (A: ce (A8) (Li A9) (LRR P ow Dark Si urface (A1: Redox (A1 Mineral (S: I Matrix (S	7) (LRR P, RR U) P, T) urface (A1 2) 16) (MLRA 1) (LRR O,	, T, U) (1) (150 A)	Polyvalue Below Surface (S8) (LRR S, Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 15 Piedmont Floodplain Soils (F19) (MLRA Anomalous Bright Loamy Soils (F20) (I	, P, T) 0B) \(\) 149A)	Piedmont Floodp Anomalous Brigh Red Parent Mate Very Shallow Da Other (Explain in) (LRR S) (F18) (outside MLRA 150A,B) (F18) (outside MLRA 150A,B) (Dain Soils (F19) (LRR P, S, T) (TL Loamy Soils (F20) (MLRA 153B) (F1al (TF2) (TK Surface (TF12)
Dark Surface	r (if obse		')			Hydric Soil Present?	Yes ○ No [®]
Depth (inches) Remarks:				4-5 incher bsg. No moisture or hydric in			Tes ○ NO ◎

Project/Site: NASA - Stennis; 1.100 Acre Wedland Delineatiion	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 16
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 28 T 7s R 16 W
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope: 0.0 % / 0.0
Lanca . N	m, m;
	N/4
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	
Are Vegetation , Soil , or Hydrology signif	ficantly disturbed? Are "Normal Circumstances" present? Yes 🍑 No 🔾
Are Vegetation, Soil, or Hydrology natura	rally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	T-11-61-11
Hydric Soil Present? Yes No No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes V No 9
Remarks:	
	he East Side of the AOI. Drinking Water Well (broken - flowing water) feeds a man
made pond and then downslope into a natural wetland.	te East side of the Aos. Difficilly Water Well (Stoken - nowing Water) recess a man
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required: check all that ap	
☐ Surface Water (A1) ☐ Aquatic Faun	
High Water Table (A2) Marl Deposits	ts (B15) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Su	ulfide Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhiz	izospheres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	Reduced Iron (C4) Crayfish Burrows (C8)
Drift Deposits (B3)	Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Surface (C7) Geomorphic Position (D2)
l 👝	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:	
Surface Water Present? Yes No Depth (inch	nes):
Water Table Present? Yes No Depth (inch	
Saturation Present? (includes capillary fringe) Yes No Depth (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial p	
bestilbe recorded bata (stream gauge, monitoring well, activity	proces, previous inspections), il available.
Remarks:	

_	(Plet size: 20 mg	Absolute			Indicator	Dominance Test worksheet:
	ee Stratum (Plot size: 30 m)	% Cover	V	Cover	Status	Number of Dominant Species
1.	Pinus eliottii	<u>10</u>	V	38.5% 38.5%	FAC	That are OBL, FACW, or FAC: 8_ (A)
					FAC	Total Number of Dominant
}. 	Quercus nigra			19.2%		Species Across All Strata: 8 (B)
	Quercus virginiana			3.8%	FACU	Percent of dominant Species
•		•				That Are OBL, FACW, or FAC: 100.0% (A/B)
				0.0%		
	1., up 1000 A		님	0.0%		Prevalence Index worksheet:
		. 0	Ш,	0.0%		Total % Cover of: Multiply by:
50	% of Total Cover: 13 20% of Total Cover: 5.2	26	= To	tal Cove	r	OBL species 0 x 1 = 0
Sa	pling or Sapling/Shrub Stratum (Piot size: 30 m)				FACW species <u>17</u> x 2 = 34
	Pinus elliottil	5	V	25.0%	FACW	FAC species 63 x 3 = 189
	Pinus taeda	3		15.0%	FAC	FACU species $1 \times 4 = 4$
	Quercus nigra	10	V	50.0%	FAC	UPL species $0 \times 5 = 0$
	Quercus virginiana	0		0.0%	FACU	Column Totals: 81 (A) 227 (B)
	Magnolia virginlana	2		10.0%	FACW	
				0.0%		Prevalence Index = B/A = 2 802
				0.0%	-	Hydrophytic Vegetation Indicators:
		•		0.0%		D d D il Park St. I belleville at the state of the state
	% of Total Cover: 10 20% of Total Cover: 4		_ =	tal Cove		1 - Rapid Test for Hydrophytic Vegetation
		ZU	10	LAI COVE		✓ 2 - Dominance Test is > 50%
Sh	rub Stratum (Plot size: 30 m)		_			✓ 3 - Prevalence Index is ≤3.0 ¹
	Ilex vomitoria	20	✓.	80.0%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
	Ilex opaca	5	V	20.0%	FAC	
. :		0		0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	N . # 1 5	0		0.0%		be present, unless disturbed of problematic.
				0.0%		Definition of Vegetation Strata:
		0		0.0%	. /	Tree - Woody plants, excluding woody vines,
	% of Total Cover: 12.5 20% of Total Cover: 5	25	= To	tal Cove	•	approximately 20 ft (6 m) or more in height and 3 in.
						(7.6 cm) or larger in diameter at breast height (DBH).
	b Stratum (Plot size: 30 m					Sapling - Woody plants, excluding woody vines,
	Ilex vomitoria		V.	100.0%	FAC	approximately 20 ft (6 m) or more in height and less
2.		0	Ц,	0.0%		than 3 in. (7.6 cm) DBH.
3.		0	Ш,	0.0%		
4.	.# **.	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5.	100	0		0.0%		dian 3 in. DDH and greater than 3.20 it (111) toil.
6.	A	0		0.0%		Shrub - Woody plants, excluding woody vines,
7.	· · · · · · · · · · · · · · · · · · ·	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
				0.0%		
	- 1,			0.0%		Herb - All herbaceous (non-woody) plants, including
				0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
1.		0		0.0%	-	3 ft (1 m) in height.
2.		0	\Box	0.0%		
	% of Total Cover: 2.5 20% of Total Cover: 1		- To	tal Cover		Woody vine - All woody vines, regardless of height.
			- 10	tai Covei		
	ody Vine Stratum (Plot size: 30 m		_			
	Vitis rotundifolia	5	Y	100.0%	FAC	
		. 0	\square	0.0%		
		0		0.0%		
		0		0.0%		
		0_		0.0%		Hydrophytic Vegetation
	% of Total Cover: 2.5 20% of Total Cover: 1	5, , =	= To	tal Cover		Present? Yes No
50					I	

SOIL						Sampling Point: Up - 16		
Profile Desci	ription: (De	scribe to	the depth	needed to document the indicator or	confirm the	absence of indicators.)		
Depth		Matrix		Redox Features		_		
(inches)	Color (moist)	%	Color (moist) % Type	1 Loc2	Texture Remarks		
0-5	10YR	3/3	100			Loamy Sand		
5-16	10YR	5/6	100			Loamy Sand		
	-				4			
•			-					
	•	•		A A T COMMON AS		λ		
1 Type: C=Cone	centration. D:	=Depletio	n. RM=Redu	iced Matrix, CS=Covered or Coated Sand	Grains ² Loca	ation: PL=Pore Lining, M=Matrix		
Hydric Soil I	indicators:		-	<u> </u>		Indicators for Problematic Hydric Soils ³ :		
Histosol (A1)			Polyvalue Below Surface (S8) (Li	RR S, T, U)	1 cm Muck (A9) (LRR O)		
Histic Epip	pedon (A2)			☐ Thin Dark Surface (S9) (LRR S, 1	-, U)	2 cm Muck (A10) (LRR S)		
Black Hist	ic (A3)			Loamy Mucky Mineral (F1) (LRR	0)	Reduced Vertic (F18) (outside MLRA 150A,B)		
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)		
Stratified	Layers (A5)			Depleted Matrix (F3)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
_	odies (A6) (L			Redox Dark Surface (F6)		Red Parent Material (TF2)		
5 cm Mucky Mineral (A7) (LRR P, T, U)				Depleted Dark Surface (F7)		☐ Very Shallow Dark Surface (TF12)		
Muck Presence (A8) (LRR U)				Redox Depressions (F8)		Other (Explain in Remarks)		
1 cm Muc	k (A9) (LRR F	P, T)		Marl (F10) (LRR U)		• • •		
	Below Dark S	•	11)	Depleted Ochric (F11) (MLRA 15	1)			
	k Surface (A1			Iron-Manganese Masses (F12) (I	RR O, P, T)			
	irie Redox (A:		-	Umbric Surface (F13) (i_RR P, T,	U)			
	ck Mineral (S		, S)	Delta Ochric (F17) (MLRA 151)		³ Indicators of hydrophytic vegetation and		
	yed Matrix (S	34)		Reduced Vertic (F18) (MLRA 150	A, 150B)	wetland hydrology must be present,		
Sandy Red				Piedmont Floodplain Soils (F19)		unless disturbed or problematic.		
_	/atrix (S6)			Anomalous Bright Loamy Soils (F	20) (MLRA 14	19A, 153C, 153D)		
☐ Dark Surfa	ace (S7) (LRR	P, S, T, I	J)					
Restrictive La	ayer (if obse	erved):						
Туре:				-		Hydric Soil Present? Yes No 💿		
Depth (incl	nes):	•		· · · · · · · · · · · · · · · · · · ·		Tyune son Pleache: 165 O NO O		
Remarks:								
No hydric indi	icators.							

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 17
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 33 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): none Slope: 1.0 % / 0.6°
- Manager Mr 146 - F	
1 12 1 mm / 1 12 1 mm	30 23 11/20 11
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	· · · · · · · · · · · · · · · · · · ·
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation , Soll , or Hydrology significant	ntly disturbed? Are "Normal Circumstances" present? Yes No No
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (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 No O	Is the Sampled Area
Hydric Soil Present? Yes O No	Vac O No 💿
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
lack of hydrology. Soils still show signs of REDOX and mottling.	Vet-17. This is on the side of a drained wetland. This area is dryer because of a
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	_
Surface Water (A1) Aquatic Fauna (B	
High Water Table (A2) Marl Deposits (B1	
Saturation (A3) Hydrogen Sulfide	
	pheres along Living Roots (C3)
Sediment Deposits (B2) Presence of Redu	
	uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
Iron Deposits (B5) Uther (Explain In	
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):	
Surface Water Hesselft	
	: Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial phot	tos, previous inspections), if available:
Demodes	
Remarks:	la, disela es a
some light redoximorphic features in lower portion of test hole. No h	nyarology.

Species? Absolute Rel.Strat. Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: 30 m) Cover Status % Cover Number of Dominant Species 10 ~ Quercus nigra 50.0% FAC That are OBL, FACW, or FAC: 8 (A) 5 V Pinus elliottil 25.0% **FACW** Total Number of Dominant Nyssa sylvatica 3 15.0% FAC Species Across All Strata: 8 (B) 4. Liquidambar styraclflua 1 5.0% FAC Percent of dominant Species 5. 5.0% 100.0% (A/B) That Are OBL, FACW, or FAC: ___0 6. 0.0% 0 0.0% 7. Prevalence Index worksheet: ____0 8. _____ Total % Cover of Multiply by: 50% of Total Cover: 10 20% of Total Cover: 4 0 x 1 = 20 = Total Cover OBL species 0 32 16 x 2 = Sapling or Sapling/Shrub Stratum (Plot size: 30 m FACW species 60 x 3 = 180 1 Pinus elliottii 3 12.5% FACW FAC species 2 Liquidambar styraciflua 5 ~ 20.8% $4 \times 4 = 16$ FAC FACU species 3. Quercus nigra 10 0 x 5 = 0 41.7% FAC UPL species Magnolia grandiflora 1 4.2% FAC Column Totals: 80 (A) 228 ____5 **V** 20.8% FAC Myssa sylvatica Prevalence Index = B/A = 2.850 0.0% 6. Hydrophytic Vegetation Indicators: 7. 0 0.0% ___0 0.0% 8. __ 1 - Rapid Test for Hydrophytic Vegetation 50% of Total Cover: 12 20% of Total Cover: 4.8 24 = Total Cover ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤3.0 ¹ Shrub Stratum (Plot size: 30 m) 1 Ilex vomitoria ☐ Problematic Hydrophytic Vegetation ¹ (Explain) 10 71.4% FAC Ilex corlacea 1 7.1% **FACW** ¹ Indicators of hydric soil and wetland hydrology must 3. Magnolla virginiana 2 14.3% FACW be present, unless disturbed or problematic. Morella cerifera 4. 1 7.1% FAC Definition of Vegetation Strata: ___0 5. 0.0% 0_ Tree - Woody plants, excluding woody vines, 0.0% approximately 20 ft (6 m) or more in height and 3 in. 50% of Total Cover: 7 20% of Total Cover: 2.8 = Total Cover 14 (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum (Plot size: , 30 m) Sapling - Woody plants, excluding woody vines, 1. Arundinaria tecta 5 **Y** 26.3% **FACW** approximately 20 ft (6 m) or more in height and less 2. Lygodium japonicum 10 52.6% FAC than 3 in. (7.6 cm) DBH. 1 3. Pteridium aquilinum 5.3% **FACU** Sapling/Shrub - Woody plants, excluding vines, less 3 4. Eupatorium capilifolium 15.8% **FACU** than 3 in. DBH and greater than 3.28 ft (1m) tall. 5._ 0.0% 6._____0 0.0% Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 0.0% Herb - All herbaceous (non-woody) plants, including 0.0% herbaceous vines, regardless of size, and woody 0 10. 0.0% plants, except woody vines, less than approximately 3 ft (1 m) in height. 11. 0.0% 12. 0.0% Woody vine - All woody vines, regardless of height. 20% of Total Cover: 3.8 19 50% of Total Cover: 9.5 = Total Cover Woody Vine Stratum (Plot size: 30 m Vitis rotundifolia 75.0% FAC 2 Rubus argutus 1 25.0% 0 3. = 0.0% ____0 4. 0.0% Hydrophytic ...0 5. Vegetation Yes ● No ○ Present? 2 20% of Total Cover: 0.8 = Total Cover 50% of Total Cover: Remarks: (If observed, list morphological adaptations below). *Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Dominant

Profile Descr	iption: (De:	scribe to	the depth	needed to d	ocument	the indic	cator or co	onfirm the	absence of indicato	rs.)		
Depth	,. · · · · · · · · · · · · · · · · · · ·	Matrix			Re	dox Featı						
(Inches) Color (moist) %		Color (moist)	%	Type 1	Loc2	Texture	Remarks				
and the second s			100				-					
3-8	10YR	4/2	100						Loamy Sand			
8-16 10Y		4/3	90	10YR	5/6	10	Ç	M	Loamy Sand	rusty brown mottling/red in lower section of test		
										·•		
Type: C=Cond		=Depletio	n. RM≂Redu	iced Matrix, C	S=Covere	ed or Coate	ed Sand Gr	ains ^z Loca	tion: PL=Pore Lining.	M=Matrix Problematic Hydric Soils ³ :		
Histosol (Poly	value Belo	ow Surface	(S8) (LRR	S, T, U)	1 cm Muck (
Histic Epip	edon (A2)			Thin	Dark Sur	face (S9) ((LRR S, T, I	U)	2 cm Muck (
Black Histi	c (A3)			Loar	ny Mucky	Mineral (F	1) (LRR 0))	_ `	tic (F18) (outside MLRA 150A,B)		
Hydrogen	Sulfide (A4)			Loar	ny Gleyed	l Matrix (F2	2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)			
_	ayers (A5)			Dep	leted Matr	ix (F3)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	odies (A6) (L		•	_		urface (F6)			Red Parent Material (TF2)			
5 cm Mucl	`		Surface (•		☐ Very Shallow Dark Surface (TF12)						
Muck Pres			sions (F8)			Other (Expla	in in Remarks)					
	k (A9) (LRR F		445		(F10) (LF	-						
	Below Dark S		11)				MLRA 151)					
_	Surface (A1		1.4504)	_	-		(F12) (LRI					
	rie Redox (A:						RR P, T, U))				
	k Mineral (S), 5)		•	F17) (MLR	-		³ Indicators of hydrophytic vegetation and			
_	yed Matrix (S	4)					ILRA 150A,	-	wetland hydrology must be present,			
Sandy Rec						•		LRA 149A)				
Stripped M Dark Surfa	iaurix (S6) ice (S7) (LRR	P, S, T,	J)	∐ Anoi	malous Br	ight Loamy	y Soils (F20)) (MLRA 149	9A, 153C, 153D)			
lestrictive La	yer (if obse	erved):								·		
Type:						-			Hydric Soil Prese	nt? Yes O No 🖲		
Depth (inch	es):			v		_			-	100 0 110 0		
Remarks:												
egin to have	some mott	ling in lo	wer portio	n of test pit	(>12-in	ches) as	clay conte	ent begins	to increase.			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation Applicant/Owner: NASA Investigator(s): Lars Larson, Randy Ellis Landform (hillslope, terrace, etc.): Hillside Subregion (LRR or MLRA): LRR T Lat.: Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	City/County: Waveland - Hancock Sampling Point: Up - 18 Section, Township, Range: \$ 29 T 7 s R 16 W Local relief (concave, convex, none): \$ Slope: 1.0 % / 0.6 ° 30° 24' 45.183" N Long.: 89° 37' 38.549" W Datum: NAD83 NWI classification: N/A
Are Vegetation , Soil , or Hydrology naturally SUMMARY OF FINDINGS - Attach site map showing sa Hydrophytic Vegetation Present? Yes No	ear? Yes No (If no, explain in Remarks.) Itly disturbed? Are "Normal Circumstances" present? Yes No problematic? (If needed, explain any answers in Remarks.) Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Remarks: Hillslope approximately 30 to 40 feet up from draiange way (ephem	within a Wetland? Yes O No 💿
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Aquatic Fauna (B1) High Water Table (A2) Marl Deposits (B1) Saturation (A3) Hydrogen Sulfide Water Marks (B1) Oxidized Rhizosph Sediment Deposits (B2) Presence of Redu	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) heres along Living Roots (C3) Dry Season Water Table (C2) Ided Iron (C4) Crayfish Burrows (C8) Juction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Concludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photosecond ph	Wetland Hydrology Present? Yes ○ No ④

% Cove	· ·	62.5%	Status	Number of Dominant Species
	Y			
			FACW	That are OBL, FACW, or FAC: 6 (A)
5	Z _	31.3%	FAC	Total Number of Dominant
1		6.3%	FACU	Species Across All Strata: 6 (B)
	H			Percent of dominant Species
	H-			That Are OBL, FACW, or FAC: 100.0% (A/B)
	Н.		· · · · · · · · · · · · · · · · · · ·	2-1-2-1-2
		-		Prevalence Index worksheet:
	Ш,	0.0%		Total % Cover of: Multiply by:
16	= Tot	tal Cove	r	OBL species 0 x 1 = 0
)				FACW species $74 \times 2 = 148$
10	✓	55.6%	FACW	FAC species $20 \times 3 = 60$
5	V	27.8%	FAC	FACU species $1 \times 4 = 4$
	\square	11.1%	FACW	UPL species $0 \times 5 = 0$
		5.6%	FAC	Column Totals: 95 (A) 212 (B)
0		0.0%		
0		0.0%		Prevalence Index = B/A = 2.232
0		0.0%		Hydrophytic Vegetation Indicators:
0		0.0%		1 - Danid Test for Hudronhybia Vasstation
18	= Tot	al Cove		☐ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50%
				✓ 2 - Dominance Test is > 50% ✓ 3 - Prevalence Index is ≤3.0 ¹
40	. #	04.60/	FACILI	l —
			-	Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
-	Η.			be present, unless disturbed or problematic.
1	Η-			Definition of Managerian Chapter.
	H-		FACW	Definition of Vegetation Strata:
	-			Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
49	= Tot	al Cove	•	(7.6 cm) or larger in diameter at breast height (DBH).
10	V	90.9%	FACW	Sapling - Woody plants, excluding woody vines,
		9.1%	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
0		0.0%		
0				Sapling/Shrub - Woody plants, excluding vines, less
				than 3 in. DBH and greater than 3.28 ft (1m) tall.
_	Π.	•		
			-	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
				approximation, one are never to a my mining the
				Herb - All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
	<u> </u>		-	plants, except woody vines, less than approximately 3 ft (1 m) in height.
	H-		===	o a (1 m) in noight
	-			Woody vine - All woody vines, regardless of height.
11	= rot	ai Cover		. ,
	_		ļ	·
11		100.0%	FAC	
0	L. Com	0.0%	11 5,000	
0		0.0%		
		0.0%		
0		0.0%		Hydrophytic Vegetation
1	= Tot	al Cover		Present? Yes No
	0 0 0 0 0 16) 10 5 2 1 0 0 0 0 18 49 10 1 0 49 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0

	., (00	Matrix			dox Features		absence of indicators	~,			
Depth (inches)	Color	moist)	0/0	Color (moist)	% Ty	ne 1 Loc²	Texture	Remarks			
0-4	10YR	4/2	100	45.0. (11)013()	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Loamy Sand	recently Re			
4-16	10YR	5/6	100				Loamy Sand				
Hydric Soil In Histosof (A Histic Epip Black Histi Hydrogen	ndicators: A1) edon (A2)		n. RM=Redu	Polyvalue Bek	ow Surface (S8) face (S9) (LRR S Mineral (F1) (LF Matrix (F2)	(LRR S, T, U) 5, T, U)	1 cm Muck (AS 2 cm Muck (AS Reduced Vertice Piedmont Floor	oblematic Hydric Soils ³ : 9) (LRR O)			
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12)			, T, U)		Surface (F7) sions (F8)		Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
Coast Prairie Redox (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)		Umbric Surfac Delta Ochric (I Reduced Verti Piedmont Floo	e (F13) (LRR P, F17) (MLRA 151 c (F18) (MLRA 1 dplain Soils (F19	T, U)) 50A, 150B))) (MLRA 149A)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. 49A, 153C, 153D)						
estrictive La	yer (if obse	erved):									
	es):						Hydric Soil Present	? Yes O No 👁			
Remarks:											

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 18-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 19
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 42.673" N Long.: 89° 37' 2.692" W Datum: NAD83
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent sl	lopes NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 📵 No 🔾 (If no, explain in Remarks.)
	tly disturbed? Are "Normal Circumstances" present? Yes No O
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (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 No O	To the Compled Aven
Hydric Soil Present? Yes O No	Is the Sampled Area Within a Workland? Yes O No No
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
Remarks:	
Sideslope of natural ridge leading up to railspur 70 to 80-feet to nor	rth.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	13) Sparsely Vegetated Concave Surface (B8)
☐ High Water Table (A2) ☐ Marl Deposits (B1	L5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizosph	heres along Living Roots (C3)
Sediment Deposits (B2)	iced Iron (C4) Crayfish: Burrows (C8)
Drift Deposits (B3)	rction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	e (C7) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in I	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):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	
	ļ
.73	

Tree Stratum (Plot size: 30 m	Absolute % Cover	Rei.Strat. Cover	Indicator Status	Dominance Test worksheet:
1700 02.02.01				Number of Dominant Species
1. Nyssa sylvatica	2	15.4%	FAC	That are OBL, FACW, or FAC: 6 (A)
2. Pinus elliottii	10	76.9%	FACW	Total Number of Dominant
3 Quercus nigra	1	7.7%	FAC	Species Across All Strata: 6 (B)
4	. 0 .	0.0%	W	
5	0	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6	0	0.0%		Inat are OBL, racw, or rac:
7	^	0.0%		Prevalence Index worksheet:
8.	0	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 6.5 20% of Total Cover: 2.6	13 :	= Total Cover		OBL species $0 \times 1 = 0$
Sapling or Sapling/Shrub Stratum (Plot size: 30 m				FACW species $41 \times 2 = 82$
		75.0%	E4.0144	
1. Pinus elliottii	15		FACW	FAC species 39 x 3 = 117
2. Nyssa sylvatica		10.0%	FAC	FACU species $0 \times 4 = 0$
3. Acer rubrum		10.0%	FAC	UPL species $0 \times 5 = 0$
4 Magnolia virginiana		5.0%	FACW	Column Totals: 80 (A) 199 (B)
5.	0	C.0%		
6	0	0.0%		Prevalence Index = B/A = 2.487
7		0.0%		Hydrophytic Vegetation Indicators:
8.	0	C.0%		4 Basid Task for Understation
50% of Total Cover: 10 20% of Total Cover: 4		= Total Cover		1 - Rapid Test for Hydrophytic Vegetation
		- Iotai cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)		_		✓ 3 - Prevalence Index is ≤3.0 ¹
1. Ilex corlaces	5	16.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex vomitoria	20	€ 66.7%	FAC	
3. Morella cerifera	5	16.7%	FAC	¹ Indicators of hydric soil and wetland hydrology must
4	0	0.0%		be present, unless disturbed or problematic.
5.	0	0.0%		Definition of Vegetation Strata:
6.	0	0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 15 20% of Total Cover: 6		"11 MAN S		approximately 20 ft (6 m) or more in height and 3 in.
		- TOLAI COVEI		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m				
1 Arundinaria tecta	10	✓ 100.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2.	0	0.0%		than 3 in. (7.6 cm) DBH.
3.	0	0.0%		
4		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
5.	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6				
7	0	0.0%		Shrub - Woody plants, excluding woody vines,
7	- 0_	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8.		0.0%		Herb - All herbaceous (non-woody) plants, including
9	0	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
10	0	0.0%		plants, except woody vines, less than approximately
11,	0	0.0%	in the last	3 ft (1 m) in height.
12.	0	0.0%		
50% of Total Cover: 5 20% of Total Cover: 2	10 =	: Total Cover		Woody vine - All woody vines, regardless of height.
			1	
Woody Vine Stratum (Plot size: 30 m			}	
1. Rubus argutus	-	28.6%	- 'M	
2. Vitts rotundifolia	5	71.4%	FAC	
3	0	0.0%		
4	0	0.0%		
5	o l	0.0%		Hydrophytic Vegetation
50% of Total Cover: 3.5 20% of Total Cover: 1.4	7 =	Total Cover		Present? Yes No
20% of Total Cover. 3.5 20% of Total Cover. 1.4		TOTAL COVER		
Remarks: (If observed, list morphological adaptations below).				
*Indicator suffix = National status or professional decision assigned because Re	gional status n	ot defined by FW	s.	

SOIL Sampling Point: Up - 19 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) **Redox Features** Matrix Depth (inches) Color (moist) % Color (moist) 9/0 Type 1 Loc2 Remarks 10YR 100 0 - 44/2 10YR 4-16 5/4 100 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) ☐ Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Materia! (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, じ) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) ☐ Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Туре: **Hydric Soil Present?** Yes O No 💿 Depth (inches): Remarks:

Applicant/Owner: NASA Investigator(s): Lars Larson. Randy Ellis	
Are Vegetation , Soil , or Hydrology significantly of Are Vegetation , Soil , or Hydrology naturally prot	blematic? (If needed, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: This is a broad flat just south of railroad spur 150 feet.	Is the Sampled Area within a Wetland? Yes O No
HYDROLOGY	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	or (C1)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Cincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, large research to the provided research to the present of the present	Wetland Hydrology Present? Yes ○ No ④ previous inspections), if available:

			ominant pecies? _		Sampling Point: Up - 20
(0)		R	el.Strat.		Dominance Test worksheet:
ee Stratum (Plot size: 30 m)	% Cove		Cover	Status	Number of Dominant Species
Magnolia virginiana	10	V	83.3%	FACW	That are OBL, FACW, or FAC: 3 (A)
Nyssa sylvatica	1_		8,3%	FAC	Total Number of Dominant
Quercus nigra	1		8.3%	FAC	Species Across All Strata:3 (B)
	0		0.0%_		
The control of the co	_ 0		0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100-0% (A/B
	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B
	0		0.0%		Prevalence Index worksheet:
C	0		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 6 20% of Total Cover: 2.4	12	= To	otal Cove		OBL species 2 x 1 = 2
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species
Pinus elliottii	5	V	83.3%	FACW	FAC species 3 x 3 = 9
Quercus nigra			16.7%	FAC	FACU species 0 x 4 = 0
	_	\Box	0.0%		
-		$\overline{\Box}$	0.0%		
			0.0%		Column Totals: 82 (A) 165 (B)
	~ -		0.0%		Prevalence Index = B/A = 2.012
		H			Hydrophytic Vegetation Indicators:
	0	出	0.0%		
		Ш.	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 3 20% of Total Cover: 1.2	6	= To	otal Cover	•	✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea	50	V	82.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra	4.0		16.4%	FACW	
Vaccinium elliottii	1		1.6%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
			0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
	0	$\overline{\Box}$	0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 30.5 20% of Total Cover: 12.2	61	= Tr	tal Cover		approximately 20 ft (6 m) or more in height and 3 in.
					(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)					Sapling - Woody plants, excluding woody vines,
, Sabal minor	1_	Щ	33.3%	FACW	approximately 20 ft (6 m) or more in height and less
Lycopodiella alopecuroides	2	\square	66.7%	OBL	than 3 in. (7.6 cm) DBH.
	0	\sqcup	0.0%		
**	0	\Box	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
-	Ŏ	\square	0.0%		than 3 in. DDH and greater than 3.20 it (111) tall.
Caaua_a	0		0.0%		Shrub - Woody plants, excluding woody vines,
The state of the s	0	\square	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
As I was known as the second of the second o		\Box	0.0%		
	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0		0.0%		plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
•	0		0.0%		
0% of Total Cover: 1.5 20% of Total Cover: 0.6	3 =	= To	tal Cover		Woody vine - All woody vines, regardless of height.
		-			
oody Vine Stratum (Plot size: 30 m	•		0.004	ŀ	
	_ 0		0.0%	-	
		片	0.0%		
		H	0.0%		
			0.0%		The description of the later
		一"			Hydrophytic
0% of Total Cover: 0 20% of Total Cover: 0	0		0.0%		Hydrophytic Vegetation Present? Yes No

	^	
-		

SOIL									Sampling Pol	nt: Up - 20	
Profile Desci	iption: (De:	scribe to	the depth	needed to d	locument	t the indi	cator or co	onfirm the	absence of indicators.)		
Depth Matrix					. Re	dox Feat	ures				
(inches)	Color (moist) %			Color (moist)	%	Type ¹	Loc2	Texture Remarks		
0-5	10YR 3/2		100						Loamy Sand		
5-12	10YR	4/3	100						Loamy Sand		
12-20	10YR	5/4	90	10YR	6/6	10	c	M	Loamy Sand		
	-									· · ·	
			_	=							
Type: C=Con	centration. D	=Depletio	n. RM=Redu	ced Matrix, (S=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=Matrix		
Hydric Soil I	ndicators:								Indicators for Problemati	c Hydric Soils ³ :	
Histosol (/	A1)			Poly	value Bel	ow Surfac	e (\$8) (LRR	S, T, U)	☐ 1 cm Muck (A9) (LRR O)	1	
Histic Epip	edon (A2)			Thir	n Dark Sui	face (S9)	(LRR S, T, l	J)	2 cm Muck (A10) (LRR S	5)	
Błack Hist	ic (A3)			Loa	my Mucky	Mineral (F1) (LRR 0)	i	Reduced Vertic (F18) (o	•	
Hydrogen	Sulfide (A4)			☐ Loa	my Gleve	d Matrix (F	·2)		Piedmont Floodplain Soi		
Stratified	Layers (A5)			_	leted Mat		-			/ Soils (F20) (MLRA 153B)	
Organic B	odies (A6) (L	RR P, T, U	J)			urface (F6	i)		Red Parent Material (TF		
	ky Mineral (A		-	_		k Surface	-		_ `	•	
_	ence (A8) (L		, -, •,	`		ssions (F8)	• /		☐ Very Shallow Dark Surface (TF12)		
_	k (A9) (LRR F	-		_	•		,		Other (Explain in Remarks)		
_			111		l (F10) (LI						
_ `	Below Dark S	_	11)				(MLRA 151)				
_	Surface (A1	•		_	_		s (F12) (LRF				
_	rie Redox (A		_	Uml	oric Surfac	ce (F13) (i	LRR P, T, U)	ı			
Sandy Mu	ck Mineral (\$	1) (LRR O	, S)	Delt	a Ochric (F17) (MLF	₹A 151)		3- 11 - 61 -	1	
Sandy Gle	yed Matrix (S	54)		Red	uced Vert	ic (F18) (M	MLRA 150A,	150B)	Indicators of hydrolo	ophytic vegetation and gy must be present,	
Sandy Red	fox (S5)			☐ Pied	mont Floo	odplain So	ils (F19) (MI	LRA 149A)		ed or problematic.	
Stripped N	latrix (S6)			_		•			19A, 153C, 153D)		
_	ice (S7) (LRF	R P, S, T, U	J)				, (, (, , _, , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,		
			•								
estrictive La	yer (if obse	erved):	-								
Type:											
Depth (inch	es).								Hydric Soil Present? Ye	s ● No O	
	ics)			7 7 7 7					-		
lemarks:											
ome mottlin	g and small	l redox c	oncentration	ons below 1	0-12 inc	hes.					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 18	3-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 21	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W	
	Local relief (concave, convex, none): undulating Slope: 2.0 %	/ 1,1°
(* 8 , * 15 , a.c. winds with the fact of	30° 24' 24.404" N Long.: 89° 37' 15.745" W Datum:	
Soil Map Unit Name: PoB, Poarch fine sandy loam, 2 to 5% slopes	NWI classification: N/A	
Are climatic/hydrologic conditions on the site typical for this time of yea		
	(a) may explain in realization,	0
	roblematic? (If needed, explain any answers in Remarks.)	•
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	mpling point locations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes No	To the Country Anna	
Hydric Soil Present? Yes No O	Is the Sampled Area Watten a Wattend 2 Yes No No	
Wetland Hydrology Present? Yes ○ No ●	within a Welland?	
Remarks: Hillslope just up from Plot Wet 21 approximately 50 to 60-feet.		
Thistope just up from Flot Tet 21 approximately 55 to 65 feet		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)	115-1
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)	
☐ Surface Water (A1) ☐ Aquatic Fauna (B13	3) Sparsely Vegetated Concave Surface (B8)	
High Water Table (A2) Marl Deposits (B15)) (LRR U) Drainage Patterns (B10)	
Saturation (A3) Hydrogen Sulfide C	Odor (C1) Moss Trim Lines (B16)	
☐ Water Marks (B1) ☐ Oxidized Rhizosphe	eres along Living Roots (C3) Dry Season Water Table (C2)	
Sediment Deposits (B2)	ed Iron (C4) Crayfish Burrows (C8)	
☐ Drift Deposits (B3) ☐ Recent Iron Reduct	tion 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 Re	emarks) Shallow Aquitard (D3)	i
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 O Depth (inches):		
Water Table Present? Yes No Depth (inches):		
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No •	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos	s. previous inspections), if available:	
best be resolved batta (stream gauge, montesting real, desiral process	y provides inspectation, in evaluation	
Decorder		
Remarks:		

			ninant cies? _		Sampling Point: Up - 21
(Diet size) 20 es	Absolute	Rel.	Strat.	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m) Plnus elliottii	% Cover		over	Status	Number of Dominant Species
Pinus elliottii	101	Y	96.2%	FACW	That are OBL, FACW, or FAC: 3 (A)
Magnolia virginiana	_ 3	H-	2,9%	FACW	Total Number of Dominant
Quercus nigra		H.	1.0%	FAC	Species Across All Strata: 3 (B)
		H-	0.0%		Percent of dominant Species
			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
Mr. May 1 v. 1	0	H-	0.0%		
**************************************		片	0.0%		Prevalence Index worksheet:
	.0	-	0.0%		Total % Cover of Multiply by:
60% of Total Cover: 52.5 20% of Total Cover: 21	105 =	= Tota	al Cove	•	OBL species 3 x 1 = 3
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species $161 \times 2 = 322$
Pinus elliottii		~	83.3%	FACW	FAC species $11 \times 3 = 33$
Magnolia virginiana	1_	Ш_	16.7%	FACW _	FACU species $0 \times 4 = 0$
			0.0%		UPL species $0 \times 5 = 0$
			0.0%		Column Totals: 175 (A) 358 (B)
	0		0.0%		
	0		0.0%		Prevalence Index = B/A = 2.046
	0		0.0%		Hydrophytic Vegetation Indicators:
11			0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 3 20% of Total Cover: 1.2	6 =	= Tota	i Cove		✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Ylan andran	50	V	83.3%	FACW	
Ilex conacea	10		16.7%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
			0.0%	FAC	¹ Indicators of hydric soil and wetland hydrology must
					be present, unless disturbed or problematic.
-	O		0.0%	E	Definition of Vegetation Strata:
		<u> </u>	0.0%	-	_
	0	-	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 30 20% of Total Cover: 12	60 =	= Tota	il Cover		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m)					
_ Lycopodiella alopecuroides	2		66.7%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Woodwardia areolata	1		33.3%	OBL	than 3 in. (7.6 cm) DBH.
	0		0.0%		
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0		0.0%		Shrub - Woody plants, excluding woody vines,
	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
			0.0%		
),	o l		0.0%		Herb - All herbaceous (non-woody) plants, including
•	o l		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
	0		0.0%		
60% of Total Cover: 1.5 20% of Total Cover: 0.6		_	Cover		Woody vine - All woody vines, regardless of height.
	-				
/oody Vine Stratum (Plot size: 30 m)	, [00.001	FAC:11	·
Smilax laurifolia	_ 1		00.0%	FACW	
1.*	- <u>0</u> l		0.0%		
	O [-	0.0%		
	0 [R	0.0%		Hydrophytic
			0.0%	,,	Vegetation
	1 =	Total	l Cover		Present? Yes No U

SOIL									Sampling Point: Up - 21		
Profile Desc	ription: (De:	scribe to	the depth	needed to	documen	t the ind	icator or co	onfirm the	absence of indicators.)		
Depth		Matrix			Re	dox Feat	tures				
(inches)	Color (moist)_	0/0	Color	(moist)	%	Type 1	Loc2	Texture Remarks		
0-3	10YR	3/2	100								
3-15	10YR	5/3	98	10YR	6/6	2	С	М	Sandy Loam		
*					. М				2) 		
			E (NK 10404 M-		0				mai: Marma - da cost lato (P		
					_						
		h :				B.,1 6 *-					
						-					
¹ Type: C=Con	centration. D	=Depletion	n. RM=Red	uced Matrix,	CS=Cover	ed or Coat	ted Sand Gra	ains ² Loca	ation: PL=Pore Lining. M=Matrix		
Hydric Soil 1									Indicators for Problematic Hydric Soils ³ :		
Histosol (•				-		ce (S8) (LRR		1 cm Muck (A9) (LRR O)		
	pedon (A2)			∐ Th	in Dark Su	rface (S9)	(LRR S, T, U	١)	2 cm Muck (A10) (LRR S)		
Black Hist				Lo.	amy Muck	/ Mineral ((F1) (LRR 0)		Reduced Vertic (F18) (outside MLRA 150A,B)		
_ ′ ~	Sulfide (A4)			Lo.	amy Gleye	d Matrix (I	F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)		
	Layers (A5)		_		pleted Mai	` '			Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	odies (A6) (L		-		dox Dark S		-		Red Parent Material (TF2)		
	ky Mineral (A		, T, U)		pleted Dar		` .		Very Shallow Dark Surface (TF12)		
	sence (A8) (L	•			dox Depre	-	3)		Other (Explain in Remarks)		
	k (A9) (LRR P			_	л (F10) (L						
	Below Dark S	•	.1)				(MLRA 151)				
	k Surface (A1	-	1504\				s (F12) (LRF				
	irie Redox (A1		-				LRR P, T, U)				
	ick Mineral (S		, 5)		ta Ochric				³ Indicators of hydrophytic vegetation and		
Sandy Red	yed Matrix (S	(1)					MLRA 150A,		wetland hydrology must be present,		
	dox (33) Matrix (S6)					•	oils (F19) (Mi		unless disturbed or problematic.		
_	ace (S7) (LRR	DSTI	r\	An	omalous B	right Loan	ny Soils (F20) (MLRA 14)	9A, 153C, 153D)		
Dark Surie	ace (37) (LRN	r, 5, 1, 0	"								
								<u>-</u>			
Restrictive La	ayer (if obse	rved):						}			
Type:									Hydric Soil Present? Yes No		
Depth (incl	nes);								nyunc soit Present: Yes No		
Remarks:											
loamy sand to	sandy loan	л									

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 18-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 22
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): Slope: 2.0 % / 1.1°
The second secon	
• 1	21 2303 1 1
Soil Map Unit Name: EuB, Escambia loamy fine sand, 2 to 5 percent sk	
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation . , Soil . , or Hydrology . significant	ly disturbed? Are "Normal Circumstances" present? Yes 🍥 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes ○ No •	Vac () No (0)
Wetland Hydrology Present? Yes ○ No ●	within a Wedland?
Remarks:	
900 feet (+/-) east of Up - 21.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required: check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide (Odor (C1) Moss Trim Lines (B16)
	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
☐ Iron Deposits (B5) ☐ Other (Explain in F	
☐ 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):	
Darridge Video Frederic	· · · · · · · · · · · · · · · · · · ·
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ●
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
,	
Damadra	
Remarks:	
Side slope 60-feet (+/-) up from bottom drain area and riparian buffe	ar zone on North side of Turtle Skin Creek.
	İ
İ	

Species? Absolute Rel.Strat. Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: 30 m ___) % Cover Cover Status Number of Dominant Species 1. Pinus elliottii 10 FACW 33.3% That are OBL, FACW, or FAC: 5 (A) 2 Magnolia virginiana 15 50.0% **FACW** Total Number of Dominant 3. Nyssa sylvatica 5 16.7% Species Across All Strata: 5 (B) 4. 0_ 0.0% Percent of dominant Species 5. 0 0.0% 100.0% (A/B) That Are OBL, FACW, or FAC: 6. 0 0.0%0 7. 0.0% Prevalence Index worksheet: 0 ... Total % Cover of: Multiply bv: 50% of Total Cover: 15 20% of Total Cover: 6 30 = **Total Cover** OBL species $3 \times 1 = 3$ 160 Sapling or Sapling/Shrub Stratum (Plot size: 30 m) FACW species __80 x 2 = Pinus elliottii 13 x 3 = **V** 5 27.8% FACW FAC species 2. Magnolia virginiana 10 ~ <u>0</u> x4= 55.6% **FACW** FACU species Nyssa sylvatica 0 x 5 = 16.7% 0 4. 0.0% (B) Column Totals: 96 (A) 202 5. ______0_ 0.0% Prevalence Index = B/A = 2,104 6. 0 0.0% Hydrophytic Vegetation Indicators: 7. 0___ 0.0% 8. _ 0 0.0% ✓ 1 - Rapid Test for Hydrophytic Vegetation 50% of Total Cover: 9 20% of Total Cover: 3.6 18 = Total Cover 2 - Dominance Test is > 50% Shrub Stratum (Plot size: 30 m) 3 - Prevalence Index Is ≤3.0 ¹ 1 Ilex coriacea 40 88.9% FACW Problematic Hydrophytic Vegetation ¹ (Explain) Ilex opaca 5 11.1% 1 Indicators of hydric soil and wetland hydrology must 3. __ _____0 0.0% be present, unless disturbed or problematic. 4. _____0 **Definition of Vegetation Strata:** 5. 0 0.0% 6. 0 0.0% Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. 50% of Total Cover: 22.5 20% of Total Cover: 9 45 = Total Cover (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum (Plot size: 30 m) Sapling - Woody plants, excluding woody vines, 1 Sarracenia alabamensis 66.7% approximately 20 ft (6 m) or more in height and less 2. Lycopodiella alopecuroides 1 33.3% than 3 in. (7.6 cm) DBH. 0.0% 4. ______0 Sapling/Shrub - Woody plants, excluding vines, less 0.0% than 3 in. DBH and greater than 3.28 ft (1m) tall. 0 0.0% 0.0% Shrub - Woody plants, excluding woody vines, ____0 approximately 3 to 20 ft (1 to 6 m) in height. 0.0% 0 0.0% Herb - All herbaceous (non-woody) plants, including ____0 0.0% herbaceous vines, regardless of size, and woody ____0 10. 0.0% plants, except woody vines, less than approximately 11.__ _____0 0.0% 3 ft (1 m) in height. 12. 0 0.0% Woody vine - All woody vines, regardless of height. 50% of Total Cover: 1.5 20% of Total Cover: 0.6 3 = Total Cover Woody Vine Stratum (Plot size: 30 m Smilax laurifolia 0 0.0% 0 2. 0.0% 3. 0.0%0 4. 0.0% Hydrophytic ___0 5. Vegetation Yes 💿 No O 20% of Total Cover: 0 0 = Total Cover Present? 50% of Total Cover: 0 Remarks: (If observed, list morphological adaptations below). transitional area just up from obvious wetland boundary. Gallberry understrory thickens appreciably within 30 feet of this plot. *Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Up - 22

Sampling Point:

COTI				
	~	~	-	

OIL						Sampling Point: Up - 22
Profile Descr	iption: (Des	cribe to	the depth	needed to document the indicator or confir	rm the a	absence of Indicators.)
Depth		Matrix		Redox Features		2
(inches)	Color (ı	moist)	0/0	1	Loc2	Texture Remarks
0-4	10YR	3/2	100			Loamy Sand
4-16	10YR	5/4	100			Loamy Sand
· - ·		·:·•			-	
Гуре: C=Cond	centration. D=	=Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains	² Locat	ation: PL=Pore Lining, M=Matrix
lydric Soil I	ndicators:					Indicators for Problematic Hydric Soils ³ :
Histosol (A	A1)			Polyvalue Below Surface (S8) (LRR S, T	T, U)	1 cm Muck (A9) (LRR O)
Histic Epip	edon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)		2 cm Muck (A10) (LRR S)
Black Histi	ic (A3)			Loamy Mucky Mineral (F1) (LRR O)		Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)
_	Layers (A5)			Depleted Matrix (F3)		
	odies (A6) (LF	RR P. T. I	J)	Redox Dark Surface (F6)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	ky Mineral (A		•			Red Parent Material (TF2)
	ence (A8) (LF		, , , ,	Depleted Dark Surface (F7)		☐ Very Shallow Dark Surface (TF12)
_		-		Redox Depressions (F8)		Other (Explain in Remarks)
_	k (A9) (LRR P			Marl (F10) (LRR U)		
_ `	Below Dark Su	-	11)	Depleted Ochric (F11) (MLRA 151)		
_	Surface (A12	-		Iron-Manganese Masses (F12) (LRR O,	P, T)	
Coast Prai	rie Redox (A1	.6) (MLRA	150A)	Umbric Surface (F13) (LRR P, T, U)		
Sandy Muc	k Mineral (S1	l) (LRR O	, S)	Delta Ochric (F17) (MLRA 151)		-
_	yed Matrix (S			Reduced Vertic (F18) (MLRA 150A, 150)B)	³ Indicators of hydrophytic vegetation and
Sandy Red	lox (S5)			Piedmont Floodplain Soils (F19) (MLRA	-	wetland hydrology must be present, unless disturbed or problematic.
Stripped M				Anomalous Bright Loamy Soils (F20) (M		-
_	ice (S7) (LRR	P, S, T, U	J)	Milotifalous Bright Loainy Sois (120) (Pr	ILNA 172	7N, 133C, 133O)
estrictive La	yer (if obse	rved):		 		
Type:	iyei (ii obse	i veuj.				
						Hydric Soil Present? Yes O No 💿
Depth (inch	es):			and grade and an expension of		
emarks:						

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 23
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
	Local relief (concave, convex, none): rolling Slope: 3.0 % / 1.7°
A 11 manuary 100 mans	NADO2
	30° 24' 25.737" N Long.: 89° 37' 21.949" W Datum: NAD83
Soil Map Unit Name: EuB, Escambia loamy fine sand, 2 to 5 percent slo	
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation . , Soll . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, explain any answers in Remarks.)
	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Yes ○ No ⑥	Is the Sampled Area Yes ○ No ●
Wetland Hydrology Present? Yes No	within a Wetland? Yes O No O
Remarks:	silenus accord road . Mostorn AOT
Area along drainage way (North to south) on the west side of the ra	nispui accesss road - Western Aor.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	A second
Surface Water (A1) Aquatic Fauna (B1	
High Water Table (A2) Marl Deposits (B19)	5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide (Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosph	neres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4) Crayfish Burrows (C8)
Drift Deposits (B3)	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	e (C7) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F	Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (87)	✓ 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? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ⊙
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	
Describe Recorded Data (Stream gauge, monitoring wen, aeriai priote	os, previous inspections), ii available.
Remarks:	

		_	ominant pecies? .		Sampling Point: Up - 23
471.1.2	Absolute	R	el.Strat.		Dominance Test worksheet:
ree Stratum (Plot size: 30 m)	% Cover		Cover	Status	Number of Dominant Species
Pinus elliottii	5	Y	22.7%	FACW	That are OBL, FACW, or FAC: 7 (A)
Pinus taeda	5	V	22.7%	FAC	Total Number of Dominant
Acer rubrum	2		9.1%	FAC	Species Across All Strata: 9 (B)
Quercus falcata	10	V	45.5%	FACU	
			0.0%		Percent of dominant Species That Are OBJ FACW or FAC: 77.8% (A/B)
	0		0.0%		That Are OBL, FACW, or FAC: 17.8% (A/B)
	0		0.0%		Prevalence Index worksheet:
	. 0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 11 20% of Total Cover: 4.4	22	= To	otal Cove	г	OBL species $0 \times 1 = 0$
)				FACW species 25 x 2 =50
Quercus nigra		V	93.8%	FAC	FAC species 84 x 3 = 252
Quercus muehlenbergli	1		6.3%	UPL	FACU species
	_	\Box	0.0%		
	0		0.0%		
			0.0%		Column Totals: 122 (A) 355 (B)
			0.0%		Prevalence Index = B/A = 2.910
			0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		
200/ - 17-1-16		_		-	1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 8 20% of Total Cover: 3.2	16	= To	tal Cove	r	2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex vomitoria	25	✓	55.6%	FAC	Problematic Hydrophytic Vegetation ¹ (Explaîn)
Ilex coriacea	15	✓	33.3%	FACW	
Ouercus nigra	5		11.1%	FAC	¹ Indicators of hydric soil and wetland hydrology mus
	0		0.0%		be present, unless disturbed or problematic.
	0		0.0%		Definition of Vegetation Strata:
	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 22.5 20% of Total Cover: 9	45	= To	tal Cove	r	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m)					
, Quercus falcata	2	V	28.6%	FACU	Sapling - Woody plants, excluding woody vines,
Z Ilex coriacea	5		71,4%	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
aren corrected	0	ň	0.0%		t than 5 life (7.5 GH) BBH.
	0	П	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
•	0	H	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
		H			
	0	\exists	0.0%	, quare 5 100 1000	Shrub - Woody plants, excluding woody vines,
A		=	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
	# / A	Η.	0.0%	-	Herb - All herbaceous (non-woody) plants, including
				-	herbaceous vines, regardless of size, and woody
Tr.		H	0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
			0.0%		orctin) in neight
	0	Ψ,	0.0%		Woody vine - All woody vines, regardless of height.
		= To	tal Cove	r	Trooty this the rooty thisa, legandess of floight
50% of Total Cover: 3.5 20% of Total Cover: 1.4	7 :				
0% of Total Cover: 3.5 20% of Total Cover: 1.4	7 :				
0% of Total Cover: 3.5 20% of Total Cover: 1.4	7 =	V	93.8%	FAC	
0% of Total Cover: 3.5 20% of Total Cover: 1.4 Coody Vine Stratum (Plot size: 30 m)			93.8% 3.1%	FAC FAC	
0% of Total Cover: 3.5 20% of Total Cover: 1.4 cody Vine Stratum (Plot size: 30 m) Smllax rotundifolia	30		_ , w		
0% of Total Cover: 3.5 20% of Total Cover: 1.4 Coody Vine Stratum (Plot size: 30 m) Smilax rotundifolia Vitis rotundifolia	30		3.1%	FAC	
0% of Total Cover: 3.5 20% of Total Cover: 1.4 foody Vine Stratum (Plot size: 30 m) Smllax rotundifolia Vitis rotundifolia	30 1 1		3.1%	FAC	Hydrophytic
Voody Vine Stratum (Plot size: 30 m) Smllax rotundifolia Vitis rotundifolia	30 1 1 0		3.1% 3.1% 0.0%	FAC FAC	Hydrophytic Vegetation Present? Yes No

SOIL					Sampling Point: UD - 23
Profile Descr	ription: (Des	scribe to	the depth	needed to document the indicator or confirm	the absence of indicators.)
Depth		Matrix		Redox Features	
(inches) 0-5	Color (moist) 4/2	100	Color (moist) % Type 1 Loc	c2 Texture Remarks Loamy Sand
5-16	10YR	6/4	100		Loamy Sand
V - 1			-	100	—— N
	-				
• •	+		-		100 pt 100 pt 1 V 1
	y and the second				
	-	=Depletio	n. RM≃Redu	ced Matrix, CS=Covered or Coated Sand Grains 2	
Hydric Soil I Histosol (A				Data who below 600 to 500 to 50 T to	Indicators for Problematic Hydric Soils ³ :
_ `	nedon (AZ)			Polyvalue Below Surface (S8) (LRR S, T, U)	
Black Hist				☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR Q)	2 cm Muck (A10) (LRR S)
_	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Reduced Vertic (F18) (outside MLRA 150A,B)
_	Layers (A5)			Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	odies (A6) (L	RR P. T. L	j)	Redox Dark Surface (F6)	□ Anomalous Bright Loamy Solls (F20) (MLRA 153B) □ Red Parent Material (TF2)
	ky Mineral (A		•	Depleted Dark Surface (F7)	
	sence (A8) (LI		, , ,	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
_	k (A9) (LRR P	-		Mari (F10) (LRR U)	Other (Explain in Remarks)
Depleted I	Below Dark S	urface (A.	1)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark	k Surface (A1	2)		☐ Iron-Manganese Masses (F12) (LRR O, P, 7	T)
Coast Prai	irie Redox (A1	L6) (MLRA	150A)	Umbric Surface (F13) (LRR P, T, U)	•
Sandy Mu	ck Mineral (S	1) (LRR O	, S)	Delta Ochric (F17) (MLRA 151)	
Sandy Gle	yed Matrix (S	(4)		Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
☐ Sandy Red	dox (S5)			Piedmont Floodplain Soils (F19) (MLRA 149	wedand nydrology indic be presency
Stripped M	1atrix (S6)			Anomalous Bright Loamy Soils (F20) (MLRA	A 149A, 153C, 153D)
☐ Dark Surfa	ece (S7) (LRR	P, S, T, l	J)		
Restrictive La	ever (if obse	erved):			
Type:		,			
Depth (inch	nes):				Hydric Soil Present? Yes ○ No ⑥
Remarks:		•			
No hydric indi	cators obse	rved.			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hand	Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Up - 24
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range:	S 29 T 7s R 16W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex,	none): Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	•	ng.: 89° 37' 22.840" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	30 24 33.340 N	NWI classification: N/A
	ar? Yes • No •	
Are climatic/hydrologic conditions on the site typical for this time of ye		(If no, explain in Remarks.)
		al Circumstances" present? Yes Ves No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed	, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes ⊙ No ○	Is the Sampled Area	
Hydric Soil Present? Yes ● No ○		Yes ○ No ●
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?	
Remarks: Transitional area 400-500 feet west of access orad in old Ammuniti borderline wet/up and no significant hydrological indicators are presented.		lance of hydrophytic vegetation, BUT, soils are
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B.	•	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1		Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	• •	Moss Trim Lines (B16)
	eres along Living Roots (C3)	☐ Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Redu	• •	Crayfish Burrows (C8)
	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	e (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):	Wetland Hy	drology Present? Yes O No 🗨
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wettaliu ny	arology Present: 165 C 140 C
Remarks: No significant hydrology indicators in soil or area except for FAC Neuequipment usage in the past.		

Perus electricity Security	Tree Stratum (Plot size: 30 m)	Absolute	e R	pecies? _ el.Strat. Cover	Indicator Status	Dominance Test worksheet:
2 Pinus teacle		4	_		24.373.4	
0		-	=			That are OBL, FACW, or FAC:
3		*****	V		FAC	Total Number of Dominant
5	3	0	Ш	0.0%		
6	4	0		0.0%		
6	5	0		0.0%		
7.				0.0%		That Are OBL, FACW, or FAC:
8	7	0		0.0%		Prevalence Index worksheet
Soly of Total Cover 5 20% of Total Cover 2 10 = Total Cover 5 Saplino of Sapling (Shrind) Stratum (Plot size: 30 m) 7,14% FACW 0	· · · · ·		г ж.	and the second		
Septima or Septima (Plot size: 30 m)			_			
1. Pinus elliottii	50% of Total Cover: 5 20% of Total Cover: 2	10	= To	otal Cove		
2	Sapling or Sapling/Shrub Stratum (Plot size: 30 m)				mental and
2	1 Pinus elliottii	. 5	V	71,4%	FACW	FAC species $4 \times 3 = 12$
3.	O Marine No activities as		V	28.6%	FACW	FACIL Species 0 x 4 = 0
1.				0.0%		
5.6			\exists	· · · · · · ·		4-0
0			H		_	Column Totals: 83 (A) 168 (B)
Down Down					_	Prevalence Index = B/A = 2.024
8	б	. 0				·
Solid Cover 3.5 20% of Total Cover 1.4 7 = Total Cover		0	Ш	0.0%		Hydrophytic Vegetation Indicators:
Solve of Total Cover: 3.5 20% of Total Cover: 1.4 7 = Total Cover 1.4 7 = Total Cover 1.4 7 = Total Cover 1.4 7 = Total Cover 1.4 7 = Total Cover 1.4 7 = Total Cover 1.4 7 = Total Cover 1.4 3 - Prevalence Index is ≤3.0 ¹ 1.4 1.	8	0		0.0%		1 - Panid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 m) 1.	50% of Total Cover: 3.5 20% of Total Cover: 1.4	7	= T¢	otal Cover		
1. Ilex corlaces 2. Ilex glabra 3. 0			,	0.01 0010		II
2. Nex glabra 3.	Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
3.	1. Ilex corlacea	50	✓	83.3%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
4.	2. Ilex glabra	10		16.7%	FACW	
4.	3.	0		0.0%		
5.	4	0	$\overline{\Box}$	0.0%		be present, unless disturbed or problematic.
6.	_ 3		П		_	Definition of Vegetation Strata:
approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum (Plot size: 30 m) 1. Lycopodiella alopecuroides 2 50.0% OBL 2. Andropogon glomeratus 2 50.0% FACW 3. 0 0.0% 4. 0 0.0% 5. 0 0.0% 5. 0 0.0% 6. 0 0.0% 7. 0 0.0% 8. 0 0.0% 8. 0 0.0% 8. 0 0.0% 9. 0.0% 10. 0.0% 11. 0 0.0% 11. 0 0.0% 12. 0 0.0% 13. 0 0.0% 14. 0 0.0% 15. 0 0.0% 16. 0 0.0% 17. 0 0.0% 18. 0 0.0% 19. 0 0.0% 19. 0 0.0% 10. 0 0.0% 11. 0 0.0% 11. 0 0.0% 11. 0 0.0% 12. 0 0.0% 13. 0 0.0% 14. 0 0.0% 15. 0 0.0% 16. 0 0.0% 17. 0 0.0% 18. 0 0.0% 19. 0 0.0% 19. 0 0.0% 10. 0 0.0% 10. 0 0.0% 11. 0 0.0% 11. 0 0.0% 12. 0 0.0% 13. 0 0.0% 14. 0 0.0% 15. 0 0.0% 16. 0 0.0% 17. 0 0.0% 18. 0 0.0% 19. 0 0.0%			H			_
No. Comparison	0	Щ	0.0%			
1. Lycopodiella alopecuroides 2. Andropogon glomeratus 2. So.0% OBL 2. Andropogon glomeratus 3.	50% of Total Cover: 30 20% of Total Cover: 12	60	= To	otal Cover	1	
1. Lycopodiella alopecuroides 2. Andropogon glomeratus 2. So.0% OBL 2. Andropogon glomeratus 3.	Herh Stratum (Plot size: 30 m					
2		7		E0 004	OBI	
3.			\vdash			
4.					FACW	than 3 in. (7.6 cm) DBH.
5.		0	Щ	0.0%		
6	4.	0. ,	\square	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
7.	5	0		0.0%		than 3 in. Don and greater than 3.20 it (1111) tall.
7.	6.	0		0.0%		Shruh Moody plants, evaluding woody since
8.		0	\square			
9.	8	ຄ	\Box			
10.	•	L.	\exists			Herb - All herbaceous (non-woody) plants, including
11.				· -		herbaceous vines, regardless of size, and woody
12.			\vdash			
50% of Total Cover: 2 20% of Total Cover: 0.8 4 = Total Cover Woody Vine Stratum (Plot size: 30 m 1. Smilax rotundifolia 2 100.0% FAC 2. 0 0.0% 3. 0 0.0% 4. 0 0.0% 5. 0 0.0% 5. 0 0.0% 5. 0 0.0% 5. 0 0.0% 5. 0 0.0% 5. 0 0.0% 5. 0 0.0% 6. 0 0.0%		0	Ш	0.0%		3 ft (1 m) in height.
Woody Vine Stratum (Plot size: 30 m) 1. Smilax rotundifolia 2	12	0		0.0%		
Woody Vine Stratum (Plot size: 30 m) 1. Smilax rotundifolia 2	50% of Total Cover: 2 20% of Total Cover: 0.8	4	= To	tal Cover		Woody vine - All woody vines, regardless of height,
1. Smilax rotundifolia 2.						
2.					<u> </u>	
3.		2	Ц,	100.0%	FAC	
3.	2	0		0.0%		
4				0.0%		
5. O O O.0% Hydrophytic Vegetation Present? Yes No O		0	\Box	0.0%		
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover Present? Yes No			\Box			Hydrophytic
50% bi Total Cover. 1 20% bi Total Cover. 0.4 2 = Total Cover			Ш.			
Remarks: (If observed, list morphological adaptations below).	50% of Total Cover: 1 20% of Total Cover: 0.4	2 :	= To	tal Cover		Present? ICS C NO C
remains. (a abserved, list morphological adaptadons below).	Demarks: (If observed, list morphological adaptations below)					
	kemarks: (1r observed, list morphological adaptations below).					

SOIL									Sampling Point: Up - 24
Profile Descr	ription: (Der	scribe to	the depth	needed to	documer	nt the indi	cator or c	onfirm the	absence of indicators.)
Depth		Matrix				edox Feat	ures		
(Inches)	Color (ı	moist)_	%	Color	(moist)	%	Type ¹	Loc2	Texture Remarks
0-5	10YR	3/2	100			y			Loamy Sand
5-15	10YR	4/3	99	10YR	6/8	1	С.	М	Loarny Sand
					and w				
	**************************************	4 at 1 Mais, Ser	a . r		-	-			
						-			
					_				****
¹ Type: C=Cond	centration. D:	=Depletio	n. RM=Redu	iced Matrix,	, CS=Cover	red or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=Matrix
Hydric Soll I	ndicators:								Indicators for Problematic Hydric Soils ³ :
Histosol (A	A1)			Pe	olyvalue Be	elow Surface	e (S8) (LRF	≀ S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epip	pedon (A2)			_		urface (S9) (2 cm Muck (A10) (LRR S)
Black Histl	ic (A3)					cy Mineral (F			Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)					ed Matrix (F.			Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)				epleted Mat		-,		Anomalous Bright Loamy Soils (F20) (MLRA 153B)
Organic Bo	odies (A6) (Li	RR P, T, l	J)			Surface (F6)	ı)		Red Parent Material (TF2)
5 cm Mucl	ky Minerai (A	7) (LRR P	, Τ, IJ)			rk Surface (•		Very Shallow Dark Surface (TF12)
Muck Pres	sence (A8) (LF	RR U)			•	essions (F8)			Other (Explain in Remarks)
1 cm Mucl	k (A9) (LRR P	², T)			ari (F10) (L	. ,			□ Оптет (Ехрівін її кентаткъ)
Depleted F	Below Dark St	urface (A	11)			hric (F11) (I	MLRA 151)	i	
Thick Dark	k Surface (A12	.2)	•	_		nese Masses			
Coast Prair	irie Redox (A1	16) (MLR#	4 150A)			ace (F13) (L			
	ck Mineral (S1					(F17) (MLR		i	_
Sandy Gle	yed Matrix (S	4)				rtic (F18) (M		. 150B)	³ Indicators of hydrophytic vegetation and
Sandy Red						oodplain Soil		-	wetland hydrology must be present, unless disturbed or problematic.
Stripped M	łatrix (S6)							-	9A, 153C, 153D)
Dark Surfa	ace (S7) (LRR	. P, S, T, I	٦)				, ,	/ · ·	, ,
Restrictive La									
	iyer (ii ouse	rveu):							
Type:									Hydric Soil Present? Yes No
Depth (inch	es):	1.7		. K	7.				
Remarks:									

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 25
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): undulating Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 38.668" N Long.: 89° 37' 31.839" W Datum: NAD83
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes 🏵 No 🔾
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 naturally I	problematic? (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 ● No ○	Is the Sampled Area
Hydric Soil Present? Yes O No	V () N- (0)
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
Remarks: Upland plot approximatley 50-60 feet up from lower riparian drainage	ge area.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	,,,,
☐ High Water Table (A2) ☐ Marl Deposits (B1	
Saturation (A3) Hydrogen Sulfide	
	heres along Living Roots (C3) Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Presence of Reduction ☐ Drift Deposits (B3) ☐ Recent Iron Reduction	
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in I	
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):	A
Saturation Precent?	Wetland Hydrology Present? Yes ○ No ●
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	
	j
	TV

Tree Stratum (Plot size: 30 m)			.Strat.	Indicator Status	Dominance Test worksheet:
	% Cover			,	Number of Dominant Species
1. Pinus elilottii	10		55.6%	FACW	That are OBL, FACW, or FAC: 7 (A)
2. Nvssa sylvatica	3	-	16.7%	FAC	Total Number of Dominant
Magnolia virginiana		✓.	27.8%	FACW	Species Across All Strata: 7 (B)
4	_ 0		0.0%		
5	0	Ш,	0.0%		Percent of dominant Species That Are OBL_EACW_or_EAC: 100.0% (A/B)
6	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7.	0		0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 9 20% of Total Cover: 3.6	18 :	= Tota	al Cove		OBL species 0 x 1 = 0
					FACW species 83 x 2 = 166
Sapling or Sapling/Shrub Stratum (Plot size: 30 m			4= =0.		
1. Nyssa sylvatica	10	1	45.5%	FAC	FAC species $25 \times 3 = 75$
2. Pinus elliottii		⊻_	45.5%	FACW	FACU species $0 \times 4 = 0$
3. Quercus nigra	2 .	□	9.1%	FAC	UPL species $0 \times 5 = 0$
4. ,	0	ш_	0.0%		Column Totals: 108 (A) 241 (B)
5	0		0.0%		
6.	0		0.0%		Prevalence Index = B/A = 2.231
7.	•		0.0%		Hydrophytic Vegetation Indicators:
8.	0		0.0%		
	200				1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 11 20% of Total Cover: 4.4	22	= 100	al Cove		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m					\checkmark 3 - Prevalence Index is ≤3.0 ¹
1 Ilex cortacea	40	~	81.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Magnolia grandiflora	1		2.0%	FAC	
3. Ilex vomitoria	. 5		10.2%	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Ilex glabra	3	$\overline{\Box}$	6.1%	FACW	be present, unless disturbed or problematic.
		$\overline{\Box}$	0.0%		Definition of Vegetation Strata:
5 6	0	<u></u> ⊢	0.0%		Tree - Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 24.5 20% of Total Cover: 9.8	49 =	= Tota	al Cove		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m					
1. Ilex corlacea	10	✓	66.7%	FACW	Sapling - Woody plants, excluding woody vines,
O zlava alakas			33.3%	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
2		$\overline{\Box}$	0.0%		than 5 th. (7.5 only DDI).
		Π-		-	Sapling/Shrub - Woody plants, excluding vines, less
4		H	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	片-	0.0%		•
<u>6.</u>	. 0	H-	0.0%		Shrub - Woody plants, excluding woody vines,
7		⊒;_	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8.	0 .	□,_	0.0%		
9,	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
10	0		0.0%		plants, except woody vines, less than approximately
11,	0		0.0%		3 ft (1 m) in height.
12.	0		0.0%		
50% of Total Cover: 7.5 20% of Total Cover: 3	-		al Cover		Woody vine - All woody vines, regardless of height.
	1.5	- 1000	AI COVE	ļ	
Woody Vine Stratum (Plot size: 30 m		_		-	
Vitis rotundifolia	3	∐_:	75.0%	FAC	
Smilax rotundifolia	1		25.0%	FAC	
3.			0.0%		
			0.0%		
5.	0		0.0%	* .	Hydrophytic
	-	-			Vegetation Present? Yes No ○
50% of Total Cover: 2 20% of Total Cover: 0.8	4 =	= rota	l Cover		resent:
Remarks: (If observed, list morphological adaptations below).					

Sampling Point: Up - 25 Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) % % Type Loc2 Remarks 0-5 10YR 4/2 100 5-16 10YR 5/4 100 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Solls³: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes 🔾 No 💿 Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 26
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
	Local relief (concave, convex, none): undulating Slope: 3.0 % / 1.7°
Landform (hillslope, terrace, etc.): Hillside	
	30° 24' 34.961" N Long.: 89° 37' 43.663" W Datum: NAD83
Soil Map Unit Name: SaC, Sauder fine sandy loam, 5 to 8 percent slop	
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🔲 significant	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soll . , or Hydrology . naturally	problematic? (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 No	To the Convoled Supp
Hydric Soil Present? Yes No No	Is the Sampled Area Yes No No Vertical Authority Services Ser
Wetland Hydrology Present? Yes ○ No •	within a Wetland?
Remarks:	
Area is just inside railbed approximately 200-250-feet, in western-ne	orthern portion of AOT.
The is just his de full bed approximately 200 250 feet in western in	ordin portion of real
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1) Aquatic Fauna (B)	
High Water Table (A2) Marl Deposits (B1 Saturation (A3) Hydrogen Sulfide	
	ineres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Redu	
	uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5) ☐ Other (Explain in I ☐ 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):	
0 6	
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No •
Saturation Present? Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	
Training)	

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

Dominant Species? .

ator Dominance Test worksheet:
Number of Dominant Species
That are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant
Species Across All Strata: 8 (B)
Percent of dominant Species That Are OBL_FACW, or FAC: 75.0% (A/B)
That Are OBL, FACW, or FAC:75.0% (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species 0 x 1 = 0
FACW species <u>78</u> x 2 = 156
FAC species $17 \times 3 = 51$
FACU species $9 \times 4 = 36$
UPL species 0 x 5 = 0
Column Totals: 104 (A) 243 (B)
Prevalence Index = B/A = 2.337
Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
✓ 2 - Dominance Test is > 50%
3 - Prevalence Index is ≤3.0 ¹
Problematic Hydrophytic Vegetation ¹ (Explain)
= 1 to discount of the state of
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Definition of Vegetation Strata:
Tree - Woody plants, excluding woody vines,
approximately 20 ft (6 m) or more in height and 3 in.
(7.6 cm) or larger in diameter at breast height (DBH).
Sapling - Woody plants, excluding woody vines,
approximately 20 ft (6 m) or more in height and less
than 3 in. (7.6 cm) DBH.
Sapling/Shrub - Woody plants, excluding vines, less
than 3 in. DBH and greater than 3.28 ft (1m) tall.
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.
Mondaying Allymadayings resembles of beight
Woody vine - All woody vines, regardless of height.
w -
-
Hydrophytic
Vegetation V
Present? Yes No

~	$\overline{}$	-	

SOIL					Sampling Point: Up - 26
Profile Desci	ription: (Descr	ibe to	the depth r	needed to document the indicator or confirm the	e absence of indicators.)
Depth	М	atrix		Redox Features	
(inches)	Color (mo	ist)	0/1	Color (moist) % Type 1 Loc2	Texture Remarks
0-5	10YR	4/2	100		Sandy Loam
5-15	10YR	5/4	100		Loamy Sand
				· · ·	1 PURA DEL . ACCESO
¹Type: C=Con	centration. D=D	epletio	n. RM≕Reduc	ed Matrix, CS=Covered or Coated Sand Grains 2Lo	cation: PL=Pore Lining. M=Matrix
Hydric Soil I	indicators:			· · · · · · · · · · · · · · · · · · ·	Indicators for Problematic Hydric Soils 3:
Histosol (A	A1)			Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epip	pedon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
☐ Black Hist	ic (A3)			Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
Organic B	odies (A6) (LRR	P, T, L	J)	Redox Dark Surface (F6)	Red Parent Material (TF2)
5 cm Muç	ky Mineral (A7)	(LRR P	, Τ, ህ)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
Muck Pres	sence (A8) (LRR	U)		Redox Depressions (F8)	Other (Explain in Remarks)
1 cm Muc	k (A9) (LRR P, T)		☐ Marl (F10) (LRR U)	Collet (Explain in Remarks)
Depleted	Below Dark Surf	ace (A	11)	Depleted Ochric (F11) (MLRA 151)	
Thick Darl	k Surface (A12)			☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Prai	irie Redox (A16)	(MLRA	150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Mu	ck Mineral (S1)	(LRR O), S)	Delta Ochric (F17) (MLRA 151)	_
Sandy Gle	yed Matrix (\$4)			Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
☐ Sandy Red	dox (S5)			Piedmont Floodplain Soils (F19) (MLRA 149A	wetland hydrology must be present,) unless disturbed or problematic.
☐ Stripped N	4atrix (S6)			Anomalous Bright Loamy Soils (F20) (MLRA 1	
Dark Surfa	ace (S7) (LRR P,	S, T, U	J)	_ , , , ,	, , ,
D1-1-1 (-	// // · · · · · · · · · · · · · · · · ·	_ 48 -			
	ayer (if observ	eu):			
Type:					Hydric Soil Present? Yes No
Depth (inch	ies):				
Remarks:					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hanco	ck Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Up - 27
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S	707.
	•	provinces of the first terms of
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, r	
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 26.719" N Long	3.: 89° 37′ 36.739" W Datum: NAD83
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes		NWI dassification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 💿 No 🔾	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significant	tly disturbed? Are "Normal	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally		explain any answers in Remarks.)
	`	•
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, to	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes No No	Is the Sampled Area	
Hydric Soil Present? Yes O No	•	Yes ○ No ⑨
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?	100
Remarks:		
Plot is in area west of RR Spur about 400 to 500 feet in NW area of	AOI.	
'		
HYDROLOGY		
Wetland Hydrology Indicators:	-	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B:		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1	5) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	Odor (C1)	Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosph	neres along Living Roots (C3)	Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4)	Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Redu	ction 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 O Depth (inches):		
Water Table Present? Yes No Depth (inches):		
Saturation Present?	Wetland Hydi	rology Present? Yes 🔾 No 🖲
(includes Capillary Hillye)		
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if avail	able:
Remarks:		

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

Dominant Species? .

	Absolute	Rel.Strat.	Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 30 m)	% Cover		Status	Number of Dominant Species
Pinus elliottii	10	41.7%	FACW	That are OBL, FACW, or FAC: 7 (A)
Pinus taeda	5	20.8%	FAC	Total Number of Dominant
Nyssa sylvatica		20.8%	FAC	Species Across All Strata: 7 (B)
Liquidambar styraciflua		12.5%	FAC	Barrant of descious Succious
Quercus falcata		4.2%	FACU	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
-		0.0%		Triatria del Triatri
	0	□ 0.0%		Prevalence Index worksheet:
	0	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 12 20% of Total Cover: 4.8	24	= Total Cove		OBL species $0 \times 1 = 0$
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)			FACW species $72 \times 2 = 144$
Pinus elliottii	25	✓ 62.5%	FACW	FAC species 46 x 3 = 138
Pinus taeda	5	12.5%	FAC	FACU species $\frac{1}{x} \times 4 = \frac{4}{x}$
Liquidamber styraciflua		12.5%	FAC	UPL species $0 \times 5 = 0$
Magnolia virginiana		5.0%	FACW	
Nyssa sylvatica		7.5%	FAC	Column Totals: 119 (A) 286 (B)
		0.0%		Prevalence Index = B/A = 2.403
		0.0%		Hydrophytic Vegetation Indicators:
		0.0%		
			-	1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 20 20% of Total Cover: 8	40 :	= Total Cove		2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)				✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	35	74.5%	FACW	Problematic Hydrophytic Vegetation 1 (Explain)
Ilex vomitoria	10	✓ 21.3%	FAC	
Acer rubrum	2	4.3%	FAC	Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
	9125	0.0%		Definition of Vegetation Strata:
	0	0.0%	F/4 V 1 1	Tree - Woody plants, excluding woody vines,
50% of Total Cover: 23.5 20% of Total Cover: 9.4	47 :	= Total Cove		approximately 20 ft (6 m) or more in height and 3 in.
				(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m)				Sapling - Woody plants, excluding woody vines
1 _ Lygodium japonicum		100.0%	FAC	approximately 20 ft (6 m) or more in height and less
2		0.0%		than 3 in. (7.6 cm) DBH.
3	0	0.0%		One line (Oberta - Minado alenta - maladian adena - fasa
4	0	0,0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	0.0%		alan o in Don and ground than o.20 it (111) tain
3	0	0.0%		Shrub - Woody plants, excluding woody vines,
7	. 0	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
3	0	0.0%		
9	0	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
).	0	0.0%		plants, except woody vines, less than approximately
1,	. 0	0.0%		3 ft (1 m) in height.
2	0	0.0%		
50% of Total Cover: 2.5 20% of Total Cover: 1	 5 =	= Total Cover		Woody vine - All woody vines, regardless of height.
		·	j	
Voody Vine Stratum (Plot size: 30 m				-
Vitis rotundifolia		100.0%	rAC	
		0.0%		
		0.0%		
	0	0.0%		Norden and Andrea
	0	0.0%		Hydrophytic Vegetation Present? Yes No

SOIL									Samp	ling Point: Up - 27	
Profile Descri	iption: (De:	scribe to	the depth	needed to d	ocumen	t the indic	cator or co	nfirm the a	absence of indicators.)	
Depth		Matrix		7.01	Re	dox Feat	ures				
(inches)	Color (moist)_	%	Color (r	noist)_	%	Type 1	Loc2	Texture	Remarks	
0-4	10YR	3/2	100								
4-16	10YR	6/4	100								
6 mm mm.						-			(**9-11		
					_	-		_			
-							-				_
4.4										y	
¹ Type: C=Conc	entration. D	=Depletio	n. RM=Redu	ced Matrix, C	S=Covere	ed or Coate	ed Sand Gra	ins ² Locat	tion: PL=Pore Lining. M	=Matrix	
Hydric Soil II				_					Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A	-						(S8) (LRR :		1 cm Muck (A9)	(LRR O)	
Histic Epip				_			(LRR S, T, U	1)	2 cm Muck (A10)) (LRR S)	
Black Histi				_		•	F1) (LRR O)		Reduced Vertic	(F18) (outside MLRA 150A,B)	
	Sulfide (A4)					d Matrix (F.	2)		Piedmont Flood	plain Soils (F19) (LRR P, S, T)	
_	ayers (A5)				eted Mat				Anomalous Brig	ht Loamy Soils (F20) (MLRA 153B)	
	dies (A6) (L		•			urface (F6	•		Red Parent Mat	erial (TF2)	
_	y Mineral (A		, I, U)			k Surface (Very Shallow Da	ark Surface (TF12)	
_	ence (A8) (Li : (A9) (LRR F	•			•	ssions (F8)			Uther (Explain i	n Remarks)	
	selow Dark S	•	(1)	_	(F10) (LI	•	MI DA 454)				
	Surface (A1	-	11)				MLRA 151)	0.0.7			
	ie Redox (A:	•	1504)		-		(F12) (LRR	.U, P, 1)			
	k Mineral (S						.RR P, T, U)				
	ed Matrix (S		, 5,	_		(F17) (MLR	121) 12RA 150A, 1	1E0B)		s of hydrophytic vegetation and	
Sandy Gley		7.13		_			icka 1304, is (F19) (ML			I hydrology must be present, ss disturbed or problematic.	
Stripped M				_				•	9A, 153C, 153D)	is disturbed or problemade.	
	ce (S7) (LRR	P. S. T. I	וו	Alloi	IIGIUUS LII	igne Loann	y 30115 (1 20)	(I-IDO 143	,,, 1550, 1550)		
			•								
Restrictive La	yer (if obse	erved):									
Type:									Hydric Soil Present?	? Yes ○ No •	
	es):					-			Tryanc oon Fresents		
Remarks:											

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up -28
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
	30° 24' 33.408" N Long.: 89° 37' 40.343" W Datum: NAD83
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	ear? Yes 💿 No 🔾 (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes No
	problematic? (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 No	Is the Sampled Area
Hydric Soil Present? Yes O No	within a Washanda Yes O No ®
Wetland Hydrology Present? Yes ○ No •	within a Wetland?
Remarks:	
Terrace area located in NW part of AOI. Site is near an ephemeral of	channel that displays evidence of hydric soils.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1) Aquatic Fauna (B1	
High Water Table (A2) Marl Deposits (B1)	
Saturation (A3) Hydrogen Sulfide	
	heres along Living Roots (C3)
Sediment Deposits (B2)	
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in F	
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 ●
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
, , , , , , , , , , , , , , , , , , , ,	
Remarks:	

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

Dominant

1. Pinus allitutis	Tree Stratum (Plot size: 30 m	Absolute % Cover	R	pecies? . el.Strat. Cover	Indicator Status	
2. Myses spheliker 4.	1 Pinus elliottii	15	V	78.9%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
	2 Nyssa sylvatica	3		15.8%	FAC	
4. 0		1		5.3%	FAC	
5		0		0.0%		Species Across Air Strate.
6		0	$\overline{\Box}$	0.0%		Percent of dominant Species
7. 0			\Box	**** · * · · ·		That Are OBL, FACW, or FAC: 100.0% (A/B)
8.	7		\Box			Prevalence Index worksheet
Sopking or Saether/Shrink Stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 2 Magnella stratum Plot size: 30 m 1 Magnell		0				
Septima or Sanking / Shrub Stratum (Piot size: 30 m 1 Pinus ellicital 5 \$			 = Tr	•	r	
1. Pinus ellottii 2. Perspola vigrilatan 3. 3	4.00	12		3001 0010	•	
Magnolla virginiana		!	.0	F0 00/	-1.CM	
3. Liquidamber styreoffies 2.	O M		$\overline{}$		и ра	
4.						
0 0.0% Prevalence Index = B/A = 2.178					FAC	
6.						Column Totals: 101 (A) 220 (B)
Note	· ·					Prevalence Index = B/A = 2.178
8						
Solid Cover Solid Cover		-	H			Hydrophytic vegetation indicators:
Shrub Stratum (Piot size: 30 m) 1.	8.	0	\Box	0.0%		1 - Rapid Test for Hydrophytic Vegetation
1. Ilex coritaces 2. Ilex vomitoria 3. 10	50% of Total Cover: 5 20% of Total Cover: 2	10 :	= To	otal Cove	r	✓ 2 - Dominance Test is > 50%
2. Ilex vomitoria 3.	Shrub Stratum (Piot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 1
2. Ilex vomitoria 3.	1 Ilex corlacea	60	V	85.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
4.	2. Ilex vomitoria			14.3%	FAC	
4.	3.	0		0.0%		
5.		0		0.0%		be present, unless disturbed or problematic.
6.				0.0%		Definition of Vegetation Strata:
approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum			\Box			Tree - Woody plants, excluding woody vines,
Herb Stratum (Plot size: 33)		70	= To		200	approximately 20 ft (6 m) or more in height and 3 in.
1.	Hart Stratum (Plot size: 33	, ·				(7.6 cm) of larger in diameter at bleast neight (DBH).
2.				0.004		Sapling - Woody plants, excluding woody vines,
3.			Η.			
4.			Η.			than 3 in. (7.6 cm) DBH.
5.	3.					Canling/Charle Mandy plants avaluding vince loop
6.	4		片			
7.	5		Ц,			, ,
8.			닖.		-	
9		0	H	-		approximately 3 to 20 ft (1 to 6 m) in height.
10.		0	Η,			Herb - All herbaceous (non-woods) plents, including
10.			Щ.			
12.			닏.			plants, except woody vines, less than approximately
50% of Total Cover: 0 20% of Total Cover: 0 0 = Total Cover Woody Vine Stratum (Plot size: 30 m)		0	Ц.	0.0%	→ v.·	3 ft (1 m) in height.
Woody Vine Stratum (Plot size: 30 m) 2 100.0% FAC 2. 0 0.0% 3. 0 0.0% 4. 0 0.0% 50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover	12	0	Ш,	0.0%		
1. Vitis rotundifolia 2.	50% of Total Cover: 0 20% of Total Cover: 0	0 =	= To	tal Cover		Woody vine - All woody vines, regardless of height.
1. Vitis rotundifolia 2.	Woody Vine Stratum (Plot size: 30 m				ļ	
2	4 Land I am II am	2		100.0%	FAC	
3.		0		0.0%		
4.		0		0.0%		
5. O O.0% Hydrophytic Vegetation Present? Yes No O		0		0.0%		
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover Present? Yes No \(\cappa\)		0		0.0%	5675-0101	
Remarks: (If observed, list morphological adaptations below).		2 =	To	tal Cover	. ,,.,.	
	Remarks: (If observed, list morphological adaptations below).					
	*Indicator cuffix — National status or professional decision assigned because P.	:		-E4 b FV	uc	

Depth		eriba ta	the don't	needed to	log me-	the indi-	cator or o	onfirm the	absence of indicators.)			
Debth		Matrix	ше аерш	needed to		dox Feati		Summing file	absence of indicators.)			
(inches)	Color (ı		%	Color (moist)	%	Texture	Remarks				
0-5	10YR	4/2	100				Type *	Loc ²	Loamy Sand			
5-16	10YR	5/4	95	10YR	7/6	5	С	PL	Loamy Sand			
				20111				-	to and	· · · · · · · ·		
							-					
. a	1 B. 19.7 W				-	-			1 (00000			
		_										
	-					-	-					
	-				-							
		=Depletio	n. RM=Redi	uced Matrix,	CS=Covere	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=1	-		
ydric Soil II									Indicators for Prob	lematic Hydric Soils ³ :		
☐ Histosol (A	•			_	•		(S8) (LRR		1 cm Muck (A9) (LRR O)			
_i Histic Epip				_			(LRR S, T,	•	2 cm Muck (A10)	(LRR S)		
_ Black Histic	Sulfide (A4)			_			1) (LRR 0)	ř		F18) (outside MLRA 150A,B)		
_						d Matrix (F.	2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)			
_	ayers (A5)	20 D T I	D.	_	oleted Mat				Anomalous Bright	: Loamy Soils (F20) (MLRA 153B)		
-	odies (A6) (LF		-			urface (F6	•		Red Parent Mater	` '		
_	ky Minerai (A) ence (A8) (LF		, 1, 0)			c Surface (Very Shallow Dar			
	c (A9) (LRR P				•	ssions (F8)			Other (Explain in	Remarks)		
_	Below Dark Si	·	11)		d (F10) (LI							
-	Surface (A12		11)	_ `			MLRA 151) ; (F12) (LRI	0 0 0 70				
_	ie Redox (A1		A 150A)	_	-		RR P, T, U)					
_	k Mineral (S1		-	_		F17) (MLR		,				
	ed Matrix (S		, -,				ILRA 150A,	150B)	³ Indicators	of hydrophytic vegetation and		
Sandy Red		-,						LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.			
Stripped M									9A, 153C, 153D)	distance of photochiana		
	ce (S7) (LRR	P. S. T. U	U)		indiod3 Di	igite Ecolin	y 50115 (1 2 c	,, (11210121	37, 1330, 1330)			
_	(/ (,									
								1				
estrictive La	yer (If obse	rved):										
Type:						-			Hydric Soil Present?	Yes O No 💿		
Depth (inch	es):,					_			nyunc son Present:	165 0 100		
emarks:												

pplicant/Jowner: NASA State: MS Sampling Point: Up - 29 westigator(s): Lars Larson, Randy Ellis Section, Township, Range: \$ 31
andform (hillslope, terrace, etc.): Hillside
Lat.: 30° 24' 24.071" N Long.: 89° 37' 49.856" W Datum: NAD83
in Map Unit Name: ScD, Saucier-Susquehanna complex, 5 to 12 percent slopes
re climatic/hydrologic conditions on the site typical for this time of year? Are Vegetation
Are Vegetation
Are Vegetation
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wo Wetland Hydrology Present? Yes No Wo Wetland Hydrology Present? Yes No Wo Wetland Hydrology Present? Yes No Wo Wetland Hydrology Present? Yes No Wo Wetland Hydrology Present? Yes No Wo Wetland Hydrology Indicators: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Thin Muck Surface (C7) Algal Mat or Crust (B4) Thin Muck Surface (C7) Sedimont Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)
Hydrophytic Vegetation Present? Yes No So No So Within a Wetland? Yes No So Within a Wetland? Yes No So No So Within a Wetland? Yes No So No So Within a Wetland? Yes No So No
Hydric Soil Present? Wetland Hydrology Present? Remarks: Hillslope approximately 60-feet south off E-W Property line fenceline in Western part of the AOI. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) High Water Table (A2) Saturation (A3) Water Warks (B1) Sediment Deposits (B1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Sediment Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Signal Mat or Crust (B4) Thin Muck Surface (C7) Sphagnum moss (D8) (LRR T) Shallow Aquikard (D3) Shallow Aquikard (D3) Shallow Aquikard (D3) Shallow Aquikard (D3) Sphagnum moss (D8) (LRR T, U) Sphagnum moss (D8) (LRR T, U) Shallow Aquikard (D3) Shallow Aquikard (D3) Sphagnum moss (D8) (LRR T, U)
Hydric Soil Present? Wetland Hydrology Present? Yes No No No Within a Wetland? Wetland Hydrology Present? Remarks: Hillslope approximately 60-feet south of E-W Property line fenceline in Western part of the AOI. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Sphagnum moss (D8) (LRR T, U) Water-Stained Leaves (B9) Wetland Hydrology Present? No No No No No No No No No N
Wetland Hydrology Present? Yes No Within a Wetland? Remarks: Hillslope approximately 60-feet south off E-W Property line fenceline in Western part of the AOI. ### PROLOGY ### Wetland Hydrology Indicators:
Remarks: Hillslope approximately 60-feet south ofr E-W Property line fenceline in Western part of the AOI. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 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) 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) Iron Deposits (B5) Other (Explain In Remarks) Sphagnum moss (D8) (LRR T, U)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of 2 required) 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) Water Marks (B1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) Inon Deposits (B5) Water-Stained Leaves (B9) Water-Stained Leaves (B9) Wetland Hydrology Indicators: Secondary Indicators (minimum of 2 required) Secondary Indicators (minimum of 2 required) Secondary Indicators (minimum of 2 required) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) FAC-Neutral Test (D5) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 along 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)
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Other (Explain In Remarks) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
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 along 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) Water-Stained Leaves (B9)
High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Iron Deposits (B5) Other (Explain In Remarks) Marl Deposits (B10) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Iron Deposits (B5) Other (Explain In Remarks) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Saturation (A3)
Water Marks (B1)
Sediment Deposits (B2) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
□ 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)
Algal Mat or Crust (B4) Iron Deposits (B5) Other (Explain In Remarks) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Thin Muck Surface (C7) Other (Explain In Remarks) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
□ 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)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Sphagnum moss (D8) (LRR T, U)
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? (includes capillary fringe) Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches):
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
3-3-,,,,,,
Remarks:
j
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VEGETATION (Five/Four Strata) - Use scientific names of plants,

Dominant
Species?

(Blot size) 20)		Rel.Stra		
e Stratum (Plot size: 30 m)	% Cove		. 47	Number of Dominant Species
Pinus elliottii	10	50.0		That are OBL, FACW, or FAC: 5 (A)
Quercus nigra	5	25.0	% FAC	Total Number of Dominant
Acer rubrum	2	10.0	% FAC	Species Across All Strata: 5 (B)
Magnolla grandiflora	. 1	5.09	% FAC	
	2	10.0	% FAC	Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)
	. 0	0.0	%	That Are OBL, FACW, or FAC: 100.0% (A/B)
		0.0	%	Prevalence Index worksheet:
	0	0.09	/ ₀	Total % Cover of:Multiply by:
% of Total Cover: 10 20% of Total Cover: 4	20	= Total Co	ver	OBL species $0 \times 1 = 0$
				FACW species 50 x 2 = 100
oling or Sapling/Shrub Stratum (Plot size: 30 m		□ 43.5	0/ 54/04/	
Pinus elliottii		12,5		
Quercus nigra		62.5		FACU species $1 \times 4 = 4$
Magnolia virginiana	3	18.8		UPL species $0 \times 5 = 0$
Acer rubrum	1	6.39	% FAC	Column Totals: 82 (A) 197 (B)
	0	0.09	%	
TO THE STATE OF TH	0	0.09	%	Prevalence Index = B/A = 2.402
	0	0.09	%	Hydrophytic Vegetation Indicators:
		0.09	/ ₀	D d Parid Tark for Hardward and Manageria
% of Total Cover: 8 20% of Total Cover: 3.2	_	= Total Co	war	1 - Rapid Test for Hydrophytic Vegetation
	10	- Iotai Co	ACI	✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m)		_		✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	30	✓ 81.1	% FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria	5	13.5	% FAC	
Quercus nigra	2	5.49	6 FAC	¹ Indicators of hydric soil and wetland hydrology must
	0	0.09	6	be present, unless disturbed or problematic.
		0.09	/n	Definition of Vegetation Strata:
	0	0.09		Tree - Woody plants, excluding woody vines,
% of Total Cover: 18.5 20% of Total Cover: 7.4	_			approximately 20 ft (6 m) or more in height and 3 in.
	37	= Total Co	ver	(7.6 cm) or larger in diameter at breast height (DBH).
b Stratum (Plot size: 30 m				
Arundinaria tecta	5	83.3	% FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Toxicodendron quercifolia		16.7	% FACU	than 3 in. (7.6 cm) DBH.
		0.09	6	
	^	0.09		Sapling/Shrub - Woody plants, excluding vines, less
	0	0.09		than 3 in. DBH and greater than 3.28 ft (1m) tall.
		F-17	.2116	
	0	0.09		Shrub - Woody plants, excluding woody vines,
*******		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
	0	0.09		Lione All horbonous (now
.a. (€	0	0.09	6	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0 .	0.09	6	plants, except woody vines, less than approximately
	0	0.0%	6	3 ft (1 m) in height.
	0	0.0%	6	
% of Total Cover: 3 20% of Total Cover: 1.2		= Total Co	- 0	Woody vine - All woody vines, regardless of height.
		1000100	7-01	
ody Vine Stratum (Plot size: 30 m				
Vitis rotundifolia		33.39	% FAC	
Smilax rotundifolia		66.79	% FAC	
	0	0.0%	6	
	0	0.0%	6	
	0	0.0%		Hydrophytic
		= Total Co		Vegetation Present? Yes No No
6 of Total Cover: 1.5 20% of Total Cover: 0.6	3 =			

CO	TI
~11	

Sampling Point: Up - 29 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) % Type 1 Loc2 Texture Remarks 0-5 10YR 3/2 100 Loamy Sand 5-16 10YR 5/4 100 Loamy Sand ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) ☐ 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) ☐ Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) ☐ Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. ☐ Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Yes 🔾 No 💿 **Hydric Soil Present?** Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 21-Oct-16 State: MS Sampling Point: Up - 30
Applicant/Owner: NASA	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 31 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): undulating Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat,:	30° 24' 21.456" N Long.: 89° 37' 40.757" W Datum: NAD83
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
	ntly disturbed? Are "Normal Circumstances" present? Yes No
	problematic? (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 ● No ○	Is the Sampled Area
Hydric Soil Present? Yes O No	Van O No ®
Wetland Hydrology Present? Yes ○ No •	within a Wetland?
Remarks: Terrace/slight hillside area just above riparian buffer along north sid	de of Turtle Skin Creek West of rail spur 300 feet (+/-).
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B:	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1	
Saturation (A3) Hydrogen Sulfide	
<u> </u>	heres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Redu	
	uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks) Shallow Aquitard (D3) 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):	Wetland Hydrology Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	tos, previous inspections), if available:
Remarks:	
Kendika	

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

				minant		Sampling Point: Up - 30		
		Absolute	Re	ecles? . LStrat.	Indicator	Dominance Test worksheet:		
Tree !	Stratum (Plot size: 30 m	% Cover		Cover	Status	Number of Dominant Species		
Pi	nus elliottii	10	V	47.6%	FACW	That are OBL, FACW, or FAC: 8 (A)		
M	agnolia virginiana	5	V	23.8%	FACW			
	cer rubrum	3		14.3%	FAC	Total Number of Dominant Species Across All Strata: 8 (B)		
	uercus nigra	2		9.5%	FAC	Species Actions All Seedle.		
Q:	agnolia grandiflora	1		4.8%	FAC	Percent of dominant Species		
		•		0.0%	-	That Are OBL, FACW, or FAC: 100.0% (A/B)		
				0.0%		Prevalence Index worksheet:		
	1. 1. mar. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	0	\Box	0.0%	W	Total % Cover of: Multiply by:		
	of Total Cover: 10.5 20% of Total Cover: 4.2		 = To	tal Cove		OBL species 1 x 1 = 1		
	· · · · · · · · · · · · · · · · · · ·			COTC.	•	FACW species 38 x 2 = .76		
	ng or Sapling/Shrub Stratum (Plot size: 30 m	-		74 404	FACIAL			
	nus elliottii		✓.	21.4%	FACW			
man * v	Jercus nigra		ዾ.	35.7%	FAC	FACU species 0 x 4 = 0		
	yssa sylvatica		V.	21.4%	FAC	UPL species $0 \times 5 = 0$		
-	er rubrum		Η.	14.3%	FAC	Column Totals: 68 (A) 164 (B)		
Ile	ex opaca		\Box	7.1%	FAC	Prevalence Index = B/A = 2.412		
-		Ó		0.0%				
_		0		0.0%		Hydrophytic Vegetation Indicators:		
	to the country of the Country of the	- 0	҆҅҆҆҆⊔,	0.0%		1 - Rapid Test for Hydrophytic Vegetation		
	of Total Cover: 7 20% of Total Cover: 2.8		= To	tal Cove	r	✓ 2 - Dominance Test is > 50%		
hrub	Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 1		
- 1	ex coriacea	15	V	60.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
	x opaca			8.0%	FAC			
•	x vomitoria		V	20.0%	FAC	¹ Indicators of hydric soil and wetland hydrology mus		
	rilla racemifiora	3		12.0%	FACW	be present, unless disturbed or problematic.		
			П	C.0%		Definition of Vegetation Strata:		
	-		H	0.0%		Tree - Woody plants, excluding woody vines,		
50% (of Total Cover: 12.5 20% of Total Cover: 5	0 25:	 = To:	tal Cove	r	approximately 20 ft (6 m) or more in height and 3 in.		
						(7.6 cm) or larger in diameter at breast height (DBH).		
	Stratum (Plot size: 30 m)					Sapling - Woody plants, excluding woody vines,		
	podwardia areolata		H	33.3%	CBL	approximately 20 ft (6 m) or more in height and less		
_	x coriacea	2	Ц.	66.7%	FACW	than 3 in. (7.6 cm) DBH.		
3		0	Ц,	0.0%				
٠		0	Ц.	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.		
j		0	Ш	0.0%		That of the post of the state o		
3		0	\sqsubseteq	0.0%		Shrub - Woody plants, excluding woody vines,		
7	N.W	C	Ш.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.		
3		0		0.0%				
	A Marion	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody		
	#10-0-	0		0.0%		plants, except woody vines, less than approximately		
		0		0.0%	NI.	3 ft (1 m) in height.		
2		0		0.0%				
	of Total Cover: 1.5 20% of Total Cover: 0.6	3 =	= Tol	tal Cover		Woody vine - All woody vines, regardless of height.		
/ood	y Vine Stratum (Plot size: 30 m)							
	is rotundifolla	5	V	100.0%	FAC			
	o records on a		\Box	0.0%	#			
			\Box	0.0%				
				0.0%				
		0	H.	0.0%	-	Hydrophytic		
	STANDON OF THE STANDON	-	<u>Ч,</u>			Vegetation Present? Yes No		
11% C	f Total Cover: 2.5 20% of Total Cover: 1	5 =	= Tol	tal Cover		ricoditi		

SOIL			Sampling Point: Up - 30
Profile Description: (Describe to	the depth r	eeded to document the Indicator or confirm the	absence of indicators.)
Denth Matrix		Redox Features	
(inches) Color (moist)	. %	Color (moist) % Type 1 Loc2	Texture Remarks
0-6 10YR 3/2	100		Sandy Loam
6-16 10YR 5/4	100		Loamy Sand
			• •
The state of the s		- 1 1 1 max	
			1.1
1 Type C Congentration D-Danktier	DM-Dodu	ted Matrix, CS=Covered or Coated Sand Grains 2Loc	rations OL - Para Lining M-Matrix
Hydric Soil Indicators:	i. RM=Reduc	Led Matrix, CS=Covered or Coated Saint Grants -Loc	
Histosol (A1)		Debardus Balani Surface (CO) (LBB C T LI)	Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Black Histic (A3)		☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Stratified Layers (A5)		Loamy Gleyed Matrix (F2)	☐ Piedmont Floodpiain Soils (F19) (LRR P, S, T)
Organic Bodies (A6) (LRR P, T, U	`	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P,	-	Redox Dark Surface (F6) Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	1, 0,	Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12) ☐
1 cm Muck (A9) (LRR P, T)		Mari (F10) (LRR U)	Uther (Explain In Remarks)
Depleted Below Dark Surface (A1	1)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12)	-,	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Prairie Redox (A16) (MLRA	150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Muck Mineral (S1) (LRR O,		Delta Ochric (F17) (MLRA 151)	
Sandy Gleyed Matrix (\$4)	-,	Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Redox (S5)		Piedmont Floodpiain Soils (F19) (MLRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
Stripped Matrix (S6)		Anomalous Bright Loamy Soils (F20) (MLRA 14	
Dark Surface (S7) (LRR P, S, T, U)	Anomalous Bright Zourny Sous (1 20) (Fill of 1	1974 2000, 2000,
	•		
		<u></u>	·
Restrictive Layer (if observed):			
Type:			Hydric Soil Present? Yes O No 💿
Depth (inches):		parties to	Hydric son Frescher 165 C 140 C
Remarks:			
No hydric indicators.			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Wave	land - Hancock	Sampling Date:	21-Oct-16
Applicant/Owner: NASA	State:	MS Sampli	ng Point: Up - 31	
Investigator(s): Lars Larson, Randy Ellis	Section, Township,	, Range: S 31	T 7s R	16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave	, convex, none):	Slope:	0.0 % / 0.0°
in the state of th	•	-	22 E20# W/ P	Patum: NAD83
	30° 24' 1.397" N		· · · · · · · · · · · · · · · · ·	etalli. Wisso
Soil Map Unit Name: PoB, Poarch fine sandy loam, 2 to 5% slopes	ear? Yes 💿		assification: N/A	
Are climatic/hydrologic conditions on the site typical for this time of ye		(in in Remarks.)	● No ○
Are Vegetation . , Soil . , or Hydrology . significan	tly disturbed? A	re "Normal Circumstanc	es" present? Yes	⊕ No ∪
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (1	If needed, explain any a	nswers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sa	ampling point loc	ations, transects, i	mportant featur	es, etc.
Hydrophytic Vegetation Present? Yes No	Is the Samp	ileri Area		
Hydric Soil Present? Yes O No		Vec O No	•	
Wetland Hydrology Present? Yes O No	within a We	tland?	•	
Remarks:		-		
	.			
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Ir	dicators (minimum of 2	required)
Primary Indicators (minimum of one required; check all that apply)		Surface 9	Soil Cracks (B6)	*
Surface Water (A1)	13)	☐ Sparsely	Vegetated Concave Sur	face (B8)
High Water Table (A2) Marl Deposits (B1	15) (LRR U)	Drainage	Patterns (B10)	
Saturation (A3) Hydrogen Sulfide			n Lines (B16)	
	heres along Living Roots		on Water Table (C2)	
Sediment Deposits (B2)			Burrows (C8)	
	uction in Tilled Soils (C6)		n Visible on Aerial Imag	ery (C9)
Algal Mat or Crust (B4)	, ,		hic Position (D2)	
Iron Deposits (B5) Other (Explain in	Remarks)	_	Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)		_	tral Test (D5)	
		Spnagnui	m moss (D8) (LRR T, U)	· <u> </u>
Field Observations: Surface Water Present? Yes No Depth (inches):				
0 0				
	· We	etland Hydrology Presen	nt? Yes O No	
(includes capillary fringe) Yes V No V Deput (inches):			_	
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspectio	ns), if available:		
			10	
Remarks:		-		
No strong evidence of hydrology.				

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

Dominant
Species?

Tree Stratum (Plot size: 30 m) % Cover Cover Status Number of Dominant Species 1. Pinus elliotthi 20 ✓ 66.7% FAC That are OBL, FACW, or FAC: 5 5 2. Pinus taeda 5 16.7% FAC Total Number of Dominant Species That are OBL, FACW, or FAC: 5 5 4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 5.	
2. Pinus taeda 5 16,7% FAC Total Number of Dominant Species Across All Strata: 5 3. Magnolia grandiflora 2 6,7% FAC Total Number of Dominant Species Across All Strata: 5 4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 6. 0 0.0% Prevalence Index worksheet: 7. 0 0.0% Total % Cover of: Multiply by:	(B) (A/B)
3. Magnolia grandiflora 2 6.7% FAC Total Number of Dominant Species Across All Strata: 5 4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% Total Number of Dominant Species Across All Strata: 5 6. 0 0.0% Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% Total Are OBL, FACW, or FAC: 100.0% 7. 0 0.0% Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by:	(A/B)
4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 5. 0 0.0% That Are OBL, FACW, or FAC: 100.0% 7. 0 0.0% Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by:	(A/B)
5. 0 0.0% Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 7. 0 0.0% Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by:	
6. 0 □ 0.0% That Are OBL, FACW, or FAC: 100.0% 7. 0 □ 0.0% Prevalence Index worksheet: 8. 0 □ 0.0% Total % Cover of: Multiply by:	
6. 0 □ 0.0% Prevalence Index worksheet: 8. 0 □ 0.0% Total % Cover of: Multiply by:	
800.0%Total % Cover of:Multiply by:	12
800.0%Total % Cover of:Multiply by:	15
Sapling or Sapling/Shrub Stratum (Plot size: 30 m) FACW species 40 x 2 = 80	
1 Pinus elliottil 15 ▼ 65.2% FACW FAC species 35 x 3 = 105	
UPL Species	
4	(B)
5. 0 \square 0.0% Prevalence Index = B/A = 2.467	
6. 0 0.0%	
7. 0 0 0.0% Hydrophytic Vegetation Indicators:	
8. 0 0 0.0% 1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 11.5 20% of Total Cover: 4.6 23 = Total Cover ✓ 2 - Dominance Test is > 50%	
1. Morella cerifera15 💆 75.0% FAC Problematic Hydrophytic Vegetation 1 (Ex	(plain)
2. Ilex coriacea 5 25.0% FACW	
3. 0 0 0.0% Indicators of hydric soil and wetland hydrolipe present, unless disturbed or problematic.	ygy must
40 🗆 0.0%	
5 Definition of Vegetation Strata:	
6. 0 0.0% Tree - Woody plants, excluding woody vines,	
50% of Total Cover: 10 20% of Total Cover: 4 20 = Total Cover approximately 20 ft (6 m) or more in height an (7.6 cm) or larger in diameter at breast height	
Herb Stratum (Plot size: _30 m)	(DDII).
— Sanling - Woody plants, evoluding woody vine	s,
approximately 20 ft (6 m) or more in height an	
20 than 3 in. (7.6 cm) DBH.	
30 □ 0.0%	
4. 0 0.0% Sapling/Shrub - Woody plants, excluding vines than 3 in. DBH and greater than 3.28 ft (1m) to	
5. 0 0.0% mail 3 iii. DBH and greater mail 3.26 it (m) to	111.
6 Shrub - Woody plants, excluding woody vines,	
7 0 0.0% approximately 3 to 20 ft (1 to 6 m) in height.	
8 0 □ 0.0%	
O Herb - All herbaceous (non-woody) plants, inc	
10. 0 0.0% herbaceous vines, regardless of size, and wood plants, except woody vines, less than approximately the control of t	
11. 0 0 0.0% steept woody vines, less than approximate of the control of the cont	latery
12. 0 0.0%	
Meady sine All woods since regardless of h	eiaht
50% of Total Cover: 0 20% of Total Cover: 0 0 = Total Cover	
Woody Vine Stratum (Piot size: 30 m	
1 Smilax rotundifolia 2 100.0% FAC	
2. 0 0.0%	
3. 0 0.0%	
4. 0 0.0%	
5. 0 0.0% Hydrophytic	
Veg (A) No (A)	
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover Present? Tes No	
Remarks: (If observed, list morphological adaptations below). Heavey pine layer on ground. Not much of a herbaceous layer.	
*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.	

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SOIL						Sampling	g Point: Up - 31
Profile Descr	ription: (Describe to	the depth	needed to document the inc	dicator or co	nfirm the	absence of indicators.)	
Depth	Matrix		Redox Fea	itures			
(inches)	Color (moist)	%	Color (moist) %	Type 1	Loc2	Texture	Remarks
0-5	10YR 4/2	100				Loamy Sand	
5-16	10YR 6/3	100				Loamy Sand	
						1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	
		-		*** a ** :=	·10.0	_	
¹ Type: C=Con	centration. D=Depletion	on. RM=Redu	ced Matrix, CS=Covered or Co	ated Sand Gra	ins ² Loca	ition: PL≃Pore Lining. M=Ma	atrix
Hydric Soil I	indicators:					Indicators for Proble	ematic Hydric Soils ³ :
Histosol (A	A1)		Polyvalue Below Surfa	ice (S8) (LRR 9	S, T, U)	1 cm Muck (A9) (Li	RR O)
Histic Epip	oedon (A2)		☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (I	
Black Hist	ic (A3)		Loamy Mucky Mineral	(F1) (LRR O)			8) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix	(F2)			in Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)		Depleted Matrix (F3)				Loamy Soils (F20) (MLRA 153B)
Organic B	odies (A6) (LRR P, T,	U)	Redox Dark Surface (I	- 6)		Red Parent Materia	
5 cm Muc	ky Mineral (A7) (LRR	P, T, U)	Depleted Dark Surface	e (F7)		Very Shallow Dark	` '
Muck Pres	sence (A8) (LRR U)		Redox Depressions (F	8)		Other (Explain in R	
1 cm Muc	k (A9) (LRR P, T)		Marl (F10) (LRR U)				,
Depleted I	Below Dark Surface (A	A11)	Depleted Ochric (F11)	(MLRA 151)			
Thick Dark	k Surface (A12)		☐ Iron-Manganese Mass	es (F12) (LRR	O, P, T)		
	irie Redox (A16) (MLR	-	Umbric Surface (F13)	(LRR P, T, U)			
Sandy Mu	ck Mineral (S1) (LRR (O, S)	Delta Ochric (F17) (MI	LRA 151)		3.	
Sandy Gle	yed Matrix (S4)		Reduced Vertic (F18)	(MLRA 150A, :	150B)	"Indicators of wetland by	f hydrophytic vegetation and drology must be present,
Sandy Red	dox (S5)		Piedmont Floodplain S	oils (F19) (ML	RA 149A)		disturbed or problematic.
Stripped M	fatrix (S6)		Anomalous Bright Loa	my Soils (F20)	(MLRA 149	9A, 153C, 153D)	
Dark Surfa	ace (S7) (LRR P, S, T,	U)					
Restrictive La	yer (if observed):						
Type:							0 0
Depth (inch	nes):					Hydric Soil Present?	Yes ○ No •
Remarks:							

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 21-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 32
Investigator(s): Lars Larson, Randv Ellis	Section, Township, Range: S 31 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): undulating Slope: 2.0 % / 1.1°
	30° 23′ 56.796" N Long.: 89° 37′ 24.843" W Datum: NAD83
was a second control of the second control o	1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent slo	
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation , Soil , or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes 🍑 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Table Complet Assa
Hydric Soil Present? Yes ○ No ●	Is the Sampled Area
Wetland Hydrology Present? Yes O No	within a Wetland?
Remarks: This location is approximately 600 feet south of the logging road the this area.	rough center of AOI. This is part of a N-S transect to identify wet-up boundary in
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	3) Sparsely Vegetated Concave Surface (B8)
☐ High Water Table (A2) ☐ Marl Deposits (B15	5) (LRR U) Drainage Patterns (B10)
Saturation (A3)	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosphe	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduc	tion 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 R	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 O No O Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ⊙
Describe Recorded Data (stream gauge, monitoring well, aerial photo	
Barrada	
Remarks:	

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

Dominant
Species?

Tree Stratum (Plot size: 30 m)	Absolute % Cover		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii	15	V	62.5%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
2. Pinus taeda	2		8.3%	FAC	That are OBL, FACW, or FAC: 5 (A)
3 Magnolia grandiflora	5		20.8%	FAC	Total Number of Dominant
4 (1			8.3%	FAC	Species Across All Strata: 5 (B)
The State of the Company of the Comp		\Box	0.0%	TAC	Percent of dominant Species
^		H	0.0%	-	That Are OBL, FACW, or FAC: 100.0% (A/B)
0		1			
· -		H,	0.0%		Prevalence Index worksheet:
3.	0	ш,	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 12 20% of Total Cover: 4.8	.	= T0	tal Cove	T .	OBL species 1 x 1 = 1
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)	_			FACW species 90 x 2 = 180
Pinus elliottii	15	₩.	45.5%	FACW	FAC species 19 x 3 =57
Quercus nigra	1	Ш,	3.0%	FAC	FACU species $1 \times 4 = 4$
Nyssa sylvatica			6.1%	FAC	UPL species $0 \times 5 = 0$
1 Magnolia virginlana	10	✓.	30.3%	FACW	Column Totals: 111 (A) 242 (B)
5. Liquidambar styracifiua	5	\Box	15.2%	FAC	
3	0		0.0%		Prevalence Index = B/A = 2.180
7.	0		0.0%		Hydrophytic Vegetation Indicators:
3	0_		0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 16.5 20% of Total Cover: 6.6	33	= To	tal Cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)	-		40.004	F4.044	✓ 3 - Prevalence Index is ≤3.0 ¹
Vaccinium elliottii	2.30.01		10.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Ilex corlacea		\mathbf{V}	80.0%	FACW	1 Yadisəbəsə əf budula qall and urabland budanlarıy sarab
] Ilex glabra	5		10.0%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must
	0	Ц,	0.0%		
5.	0	Ц	0.0%		Definition of Vegetation Strata:
3	0	Ш	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 25 20% of Total Cover: 10	50	= To	tal Cove		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m					
1 . Lycopodiella alopecuroides	- i-		50.0%	OBL	Sapling - Woody plants, excluding woody vines,
2. Pteridium aquilinum		Ħ.	50.0%	FACU	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3.	0	H	0.0%	17100	than 3 lif. (7.3 diff) BBH.
			0.0%		Sapling/Shrub - Woody plants, excluding vines, less
4 5.	0	H	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6	0	Η.	0.0%		
O(H	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7		H	0.0%	-	approximately 3 to 20 it (1 to 6 iii) in height.
8.		片.			Herb - All herbaceous (non-woody) plants, including
9			0.0%		herbaceous vines, regardless of size, and woody
0		H	0.0%		plants, except woody vines, less than approximately
1		H	0.0%		3 ft (1 m) in height.
2	0	Ц.	0.0%		Woody vine - All woody vines, regardless of height.
50% of Total Cover: 1 20% of Total Cover: 0.4	2 :	= To	tal Cover	1	vvoody vine - All woody vines, regardless of fielght.
Woody Vine Stratum (Plot size: 30 m				l	
Vitis rotundifolia	2		100.0%	FAC	
The second secon			0.0%		
3.	_		0.0%		
		Ē.	0.0%		
	0		0.0%		Hydrophytic
			tal Cover		Vegetation Present? Yes ● No ○
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =				

rofile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.) Description: (Inches) Matrix Redox Features New York Loc2 Texture Remarks	SOIL								Sampling	g Point: Up - 32
Color (moist) %% Color (moist) %% Tyne Loc2 Tarkture Remarks	Profile Descr	iption: (De	scribe to	the depth	needed to document	the indicate	or or co	nfirm the a	absence of indicators.)	
0-5 10/18 3/2 100 Loamy Sand 12-22 10/18 5/3 100 Loamy Sand 12-22 10/18 5/3 100 Loamy Sand Loamy S			Matrix		Re					
12-22					Color (moist)	% "	Type *	Loc2		Remarks
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix Nydric Soil Indicators: Histos (A1)	5		3/2						Loamy Sand	
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Your Coal Indicators:	5-12	10YR	4/3	100	u				Loamy Sand	
Histosol (A1)	12-22	10YR	5/3	100			-	_	Loamy Sand	
Histosol (A1)							N 30 W A.MUM		7-J ₁ , 12-1	
Histosol (A1)										
Histosol (A1)			=Depletio	n. RM= R edu	ced Matrix, CS=Covere	ed or Coated S	Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=Ma	ıtrix
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydric Soil Present? Yes	ydric Soll I	ndicators:							Indicators for Proble	matic Hydric Soils ³ :
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F6) Thin Dark Surface (F6) Depleted Bork Surface (F7) Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Cher (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A11) Thick Dark Surface (A12) Jinon-Manganese Masses (F12) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150B) Reduced Vertic (F18) (MLRA 150B) Type: Depleted Bokin Dark Surface (F13) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Present: Hydric Soil Present? Yes No ®	☐ Histosol (A)	41)			Polyvalue Beld	ow Surface (St	8) (LRR S	S, T, U)	☐ 1 cm Muck (A9) (LF	RR O)
Black Histic (A3)					Thin Dark Sur	face (S9) (LRF	R S, T, U))	_	
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Presence (A8) (LRR P, T, U) Depleted Dark Surface (F6) Redox Dark Surface (F7) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR 0, S) Sandy Muck Mineral (S1) (LRR 0, S) Sandy Redox (S5) Depleted Ochric (F13) (MLRA 150A) Depleted Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Delta Ochric (F17) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Ochric (F18) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F10) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F10) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F10) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F10) (MLRA 149A) Depleted Ochric (F10) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F10) (MLRA 149A) Depleted Ochric (F10) (MLRA 149A) Depleted Ochric (F10) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Ochric (F10) (MLRA 149A) Depleted Ochric (F10) (MLRA 150A) Depleted Ochric	Black Hist	ic (A3)			Loamy Mucky	Mineral (F1)	(LRR O)			
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) S cm Mucky Mineral (A7) (LRR P, T, U) Depleted Below Dark Surface (F6) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Depleted Below Dark Surface (TF12) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Selow Order (F17) (MLRA 150A) Sandy Redox (S5) Depleted Selow Preirie Redox (A16) Redox Dark Surface (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Jamin (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Depleted Ochric (F13) (LRR O, P, T) Umbric Surface (F13) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Sendy Redox (S5) Peidmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Proceedings of the Soil Present? Person No Person No	Hydrogen	Sulfide (A4)			Loamy Gleyed	Matrix (F2)				, ,
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Mari (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Pears Anomalous Present Material (TF2) Very Shallow Dark Surface (F12) Very Shallow Dark Surface (TF12) Very	Stratified I	Layers (A5)							_	
□ 5 cm Mucky Mineral (A7) (LRR P, T, U) □ Depleted Dark Surface (F7) □ Muck Presence (A8) (LRR U) □ Redox Depressions (F8) □ 1 cm Muck (A9) (LRR P, T) □ Mari (F10) (LRR U) □ Depleted Below Dark Surface (A11) □ Depleted Ochric (F11) (MLRA 151) □ Thick Dark Surface (A12) □ Iron-Manganese Masses (F12) (LRR O, P, T) □ Coast Prairie Redox (A16) (MLRA 150A) □ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ Dark Surface (S7) (LRR P, S, T, U) □ Delta Ochric (F18) (MLRA 149A) □ Reduced Vertic (F18) (M	Organic Bo	odies (A6) (Li	RR P, T, L	J)						
Muck Presence (A8) (LRR U)	5 cm Mucl	ky Mineral (A	7) (LRR P	, T, U)						• •
1 cm Muck (A9) (LRR P, T)	_	-								• •
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic. Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Anomalous Bright Coard Present? Yes No October 100 (MLRA 149A) Present? Yes No October 100 (MLRA 149A) Present? Yes No October 100 (MLRA 149A) Present? Yes No October 100 (MLRA 149A) Present? Yes No October 100 (MLRA 149A)	_		•		_				U Other (Explain in Re	emarks)
Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Deita Ochric (F13) (LRR P, T, U) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Permarks: Hydric Soil Present? Yes No Anomalous Bright Loamy Soils (F20) (MLRA 149A) Hydric Soil Present? Yes No Permarks:	_			11)	_	=	A 451			
Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	٠ -		•	11)			-			
Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Simpled Matrix (S6) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_	•	-	4504)				O, P, T)		
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Particitive Layer (if observed): Type: Depth (inches): Type: Depth (inches):	_	-		-	Umbric Surfac	e (F13) (LRR I	P, T, U)			
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) **Strictive Layer (if observed): Type: Depth (inches): Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No emarks:	_			, S)	Delta Ochric (F17) (MLRA 1	51)		3 _{Indicators of}	f hydrophytic vacatation and
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No @ Bemarks:	_		4)		Reduced Verti	c (F18) (MLRA	4 150A, 1	150B)	wetfand hy	drology must be present.
Dark Surface (S7) (LRR P, S, T, U) **strictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present? Yes No ** **Present	Sandy Red	lox (S5)			Piedmont Floo	dplain Soils (F	-19) (MLF	RA 149A)		
estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Stripped M	latrix (\$6)			Anomalous Br	ight Loamy So	ils (F20)	(MLRA 149	A, 153C, 153D)	
Type: Depth (inches): Pemarks: Hydric Soil Present? Yes No No	Dark Surfa	ice (S7) (LRR	P, S, T, l	٦)						
Type: Depth (inches): Pemarks: Hydric Soil Present? Yes No No	estrictive La	ver (if obse	erved):							
Depth (inches):		., 6. (0000								
emarks:		ne).						i	Hydric Soil Present?	Yes O No 💿
		les):	- K			NO.			<u> </u>	
lk of the soil profile has a chroma > 2. Not by much.										
	lk of the so	il profile has	s a chror	na > 2. N	ot by much.					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Han	cock Sampling Date: 21-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Up - 33
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range:	S 32 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex	, none): undulating Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat.:	30° 23' 58,665" N Lo	ng.: 89° 37′ 9.508″ W Datum: NAD83
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent sl		NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year		(If no, explain in Remarks.)
		al Circumstances" present? Yes No
		l, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	•	
Hydrophytic Vegetation Present? Yes ● No ○		
Hydric Soil Present? Yes O No •	Is the Sampled Area	
Wetland Hydrology Present? Yes O No	within a Wetland?	Yes O No 💿
Remarks:		
Approximately 80-feet north of Wet 33.		
, , , , , , , , , , , , , , , , , , , ,		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required: check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	•	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	• • •	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide		Moss Trim Lines (B16)
	eres along Living Roots (C3)	Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Presence of Reduction Recent Iron	ction in Tilled Soils (C6)	☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface		Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	chang	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes No Depth (inches):	1.0	
Water Table Present? Yes O No O Depth (inches):		
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hy	drology Present? Yes O No 💿
(includes capillary fringe) Les No Deput (Includes). Describe Recorded Data (stream gauge, monitoring well, aerial photo	on provious inspections) if nu	alabla
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if av	allable:
Remarks:		
		į
		İ
I .		ľ

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

Dominant
Species?

(Plateiner 20 m.		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 m)	% Cover		Status	Number of Dominant Species
1. Pinus elliottii	.,	54.1%	FACW	That are OBL, FACW, or FAC: 7 (A)
2. Quercus nigra		27.0%	FAC	Total Number of Dominant
3. Nyssa sylvatica		13.5%	FAC	Species Across All Strata: 7 (B)
4 Magnolia virginiana	_	5.4%	FACW	Percent of dominant Species
5.		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6.		0.0%		
<u></u>	0	0.0%	<i>a</i>	Prevalence Index worksheet:
8	0	□ 0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 18.5 20% of Total Cover: 7.4	37 =	= Total Cove	•	OBL species 2 x 1 = 2
Sapling or Sapling/Shrub Stratum , (Plot size: 30 m				FACW species 92 x 2 = 184 _
1. Pinus elliottii	-	✓ 58.8%	FACW	FAC species $20 \times 3 = 60$
2. Nyssa sylvatica	5	29.4%	FAC	FACU species 0 \times 4 = 0
3. Magnolia virginiana	2	11.8%	FACW	UPL species $0 \times 5 = 0$
4.	.0	0.0%		Column Totals: 114 (A) 246 (B)
5	0	0.0%		
6.	0	0.0%		Prevalence Index = B/A = 2.158
7	0	0.0%		Hydrophytic Vegetation Indicators:
8 <u>_</u>	<u> </u>	0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 8.5 20% of Total Cover: 3.4	17 =	= Total Cove		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m				✓ 3 - Prevalence Index is ≤3.0 ¹
1 Ilex coriacea	40	✓ 75.5%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
A. N. def.	40	18.9%	FACW	Problematic nyurophytic vegetation - (Explain)
	3	5.7%	FACW	¹ Indicators of hydric soll and wetland hydrology must
V	0	0.0%	LACAA	be present, unless disturbed or problematic.
4				Definition of Vegetation Strata:
5		0.0%		_
6.	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 26.5 20% of Total Cover: 10.6	53 =	= Total Cover		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m				
1, Ilex corlacea	5	✓ 71.4%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2. Lycopodielia alopecuroides	2	28.6%	OBL	than 3 in. (7.6 cm) DBH.
3	0	0.0%		
4.	_ 0 _	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
5.	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6.	0	0.0%		Shrub - Woody plants, excluding woody vines,
7.	0	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8.		0.0%		
9,		0.0%		Herb - All herbaceous (non-woody) plants, including
10		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
11	C	0.0%		3 ft (1 m) in height.
12	0	0.0%		
50% of Total Cover: 3.5 20% of Total Cover: 1.4	7 =	: Total Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m		0.0%		
1	0			
2.		0.0%		
3	0	0.0%		
4		□, 0.0%	***	Hydrophytic
5	0i	0.0%		Vegetation V (a) No (
50% of Total Cover: 0 20% of Total Cover: 0	0 =	Total Cover		Present? Yes No O
Remarks: (If observed, list morphological adaptations below).				
*Indicator suffix = National status or professional decision assigned because Re	ecional status n	not defined by FV	IS.	

SOIL					Sampling Point: Up - 33
Profile Descr	iption: (Des	cribe to	the depth	needed to document the indicator or conf	firm the absence of Indicators.)
Depth		Matrix		Redox Features	
(inches)	Color (moist)	0/0	Color (moist) % Type 1	Loc ² Texture Remarks
0-4	10YR	3/2	100		
4-16	10YR	5/4	100		
7.11					
					10. No. 10.47 to asset
		-			
Type: C=Cond	centration. D=	=Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains	ns ² Location: PL=Pore Lining, M=Matrix
lydric Soil I	ndicators:				Indicators for Problematic Hydric Soils ³ :
Histosol (/	A1)			Polyvalue Below Surface (S8) (LRR S,	
Histic Epip	oedon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)	
Black Histi	ic (A3)			Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified I	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
_	odies (A6) (LI	RR P. T. L	J)	Redox Dark Surface (F6)	
	ky Mineral (A		-	Depleted Dark Surface (F7)	Red Parent Material (TF2)
_	ence (A8) (Li		, ., -,	Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12)
_	k (A9) (LRR P	,		Mart (F10) (LRR U)	Other (Explain in Remarks)
_	Below Dark S		(1)		
	Surface (A1)	-	,	Depleted Ochric (F11) (MLRA 151)	0.5.73
_	rie Redox (A1		15041	☐ Iron-Manganese Masses (F12) (LRR O	J, P, T)
				Umbric Surface (F13) (LRR P, T, U)	
_	ck Mineral (S:		, 5)	☐ Delta Ochric (F17) (MLRA 151)	3Indicators of hydrophytic vegetation and
_	yed Matrix (S	4)		Reduced Vertic (F18) (MLRA 150A, 15	wetland hydrology must be present,
_ Sandy Rec	• .			Piedmont Floodplain Soils (F19) (MLR/	· ·
Stripped M		D C T 1		Anomalous Bright Loamy Soils (F20) ((MLRA 149A, 153C, 153D)
_ Dark Surfa	ice (S7) (LRR	P, S, !, U	J)		
estrictive La	yer (if obse	rved):			
Type:	iyer (ii obbe	. reaji			
Depth (inch	ne).				Hydric Soil Present? Yes O No 💿
	lesj:		, , ,	10 . • 1 . 2 . 1 . 1 . 2 . 1 . 1 . 1 . 1 . 1 .	
emarks:					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 34
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
A MANY I MANNEY V	30° 24′ 3.767" N Long.: 89° 37′ 1.217" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
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	y disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pr	•
SUMMARY OF FINDINGS - Attach site map showing san	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes O No 💿	Is the Sampled Area thin > Walland 2 Yes ○ No ●
Wetland Hydrology Present? Yes ○ No ●	within a Wetland? Yes O NO O
Remarks: Transitional area back to an Upland. 100-feet (+/-) from Wet-34.	
Transitional area back to an opiand. 100-leet (+7-7 non wet-54.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required: check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Fauna (B13	
High Water Table (A2) Marl Deposits (B15)) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide O	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosphel	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ed Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reducti	tion 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 Re	emarks) 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? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s. previous inspections), if available:
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Remarks:	
Remarks:	

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

Dominant
Species?

Tree Stratum (Plot size: 30 m			l.Strat.	Indicator	Dominance Test worksheet:
	% Cover	-		Status	Number of Dominant Species
Pinus elliottii	20		54.1%	FACW	That are OBL, FACW, or FAC: 6 (A)
Pinus tzeda	10		27.0%	FAC	Total Number of Dominant
Magnolia virginiana	5,	Ц_	13.5%	FACW	Species Across All Strata: 6 (B)
Liquidambar styraciffua	2	\sqcup_{-}	5.4%	FAC .	
	0	Щ	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
w sp.	0		0.0%		That are Obl., FACVV, OF FAC:
	0		0.0%		Prevalence Index worksheet:
E	0		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= Tot	tal Cove	r	OBL species $0 \times 1 = 0$
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species74
N	19/45	V	68.2%	FACW	
	The second second	V		an principle delication in the	
Pinus taeda			22.7%	FAC	FACU species $0 \times 4 = 0$
Magnolia virginiana	2	Щ.	9.1%	FACW	UPL species $0 \times 5 = 0$
	0	Ц.	0.0%		Column Totals: 110 (A) 256 (B)
J	0		0.0%		Drouglance Indox — P/A 2 227
of Years Face to Temporary (Control of the Control	0		0.0%		Prevalence Index = B/A = 2 327
	0		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		1 - Danid Test for Hydrophytic Venetation
0% of Total Cover: 11 20% of Total Cover: 4.4	22 :	= Tot	al Cove	r	1 - Rapid Test for Hydrophytic Vegetation
					✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea	30	~	71.4%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex opaca	.5		11.9%	FAC	
Vaccinium elliottii	2		4.8%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
Morella cerifera	5		11.9%	FAC	be present, unless disturbed or problematic.
	0		0.0%		Definition of Vegetation Strata:
	0	Π,	0.0%	. *	Tree - Woody plants, excluding woody vines,
0% of Total Cover: 21 20% of Total Cover: 8.4 erb Stratum (Plot size: 30 m) Lygodlum japonicum			al Cove		(7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines,
1	0		0.0%		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
	0	$\overline{\Box}$	0.0%		than one (7.5 only 55)
		<u> </u>	0.0%	-	Sapling/Shrub - Woody plants, excluding vines, less
·		Η-			than 3 in. DBH and greater than 3.28 ft (1m) tall.
•		H-	0.0%		
T		H-	0.0%		Shrub - Woody plants, excluding woody vines,
· · · · · · · · · · · · · · · · · · ·		<u> </u>	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
· · · · · · · · · · · · · · · · · · ·		H=	0.0%		Horb. All horbonous from woods A starts. (astronomy
	0	\sqcup	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0		0.0%		plants, except woody vines, less than approximately
	.0		0.0%		3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= Tota	al Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m		_		-	
Vitis rotundifolia	3	1.000	75.0%		
Smilax rotundifolia	1 ,		25.0%	FAC	
	0		0.0%		
	0		0.0%		
·	0		0.0%	4. 4	Hydrophytic
		T	al Cover	-	Vegetation Present? Yes No
0% of Total Cover: 2 20% of Total Cover: 0.8	4 =				

SOIL					Sampling Point: Up - 34
Profile Desc	ription: (De	scribe to	the depth	needed to document the indicator or confirm t	the absence of indicators.)
Depth		Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type 1 Loc	² Texture Remarks
0-5	10YR	6/2	100		Loamy Sand
5-15	10YR	5/6	100		Loamy Sand
-					
34					
	-	_		- WE Y AND MAKE BY OF B	and the second s
-					
		, v			
1.T. may C. Com	androkina D	Daulatia	- DM Dad	Makin Co. County on Control County 21	and D. D. Contining M. Makin
Hydric Soil		=Debledo	n. RM=Reut	ced Matrix, CS=Covered or Coated Sand Grains ² L	
Histosol (Debauta Balance (CO) (LDD C T II)	Indicators for Problematic Hydric Solls ³ :
	pedon (A2)			Polyvalue Below Surface (S8) (LRR S, T, U)	
				☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Hist				Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
_	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
_	Bodies (A6) (L		-	Redox Dark Surface (F6)	Red Parent Material (TF2)
	ky Mineral (A		, T, U)	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
	sence (A8) (L	•		Redox Depressions (F8)	Other (Explain in Remarks)
_	:k (A9) (LRR F			Mari (F10) (LRR U)	
	Below Dark S	-	(1)	Depleted Ochric (F11) (MLRA 151)	
	k Surface (A1	•		Iron-Manganese Masses (F12) (LRR O, P, T	¯)
_	irie Redox (A:			Umbric Surface (F13) (LRR P, T, U)	
_	ıck Mineral (S		, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
_	yed Matrix (S	4)		Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
Sandy Re				Piedmont Floodplain Soils (F19) (MLRA 149	
_	Matrix (S6)			Anomalous Bright Loamy Soils (F20) (MLRA	(14 9A , 153C, 153D)
Dark Surf	ace (S7) (LRR	. P, S, T, L	J)		
Restrictive L	aver (if obse	erved):			
Type:	ayer (ii obec	. reaj.			
	hes):				Hydric Soil Present? Yes O No 💿
	iica).			erren et grante et	
Remarks:					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 35
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 3.834" N Long.: 89° 36' 56.966" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significant	ntly disturbed? Are "Normal Circumstances" present? Yes No O
Are Vegetation, Soil, or Hydrology naturally	problematic? (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 No No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Transitional area back into an Upland - approximately 100 feet north	Is the Sampled Area within a Wetland? Yes O No th of Wet-35.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1) Aquatic Fauna (B:	
High Water Table (A2) Marl Deposits (B1	
☐ Saturation (A3) ☐ Hydrogen Sulfide	
	wheres along Living Roots (C3) Dry Season Water Table (C2)
	uced Iron (C4) Crayfish Burrows (C8) uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	, , ,
☐ Iron Deposits (B5) ☐ Other (Explain in	
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 O No O Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? (includes capillary frings) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No •
Describe Recorded Data (stream gauge, monitoring well, aerial photo	
Describe Recorded Data (Scream gauge, monitoring well, aerial prior	.us, previous inspections), it available.
Remarks:	

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

Dominant

			ominant Species? _		Sampling Point: Up - 35
(5)	Absolute	∍ R	tel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 m)	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii	10	V		FACW	That are OBL, FACW, or FAC: 5 (A)
Magnolia virginiana	5	✓.		FACW	Total Number of Dominant
Liquidambar styracifiua	<u> </u>		6.3%	FAC	Species Across All Strata: 5 (B)
			0.0%		Descent of deminant Charles
-71			0.0%	_	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
• 1	0	Н	0.0%		· · · · · · · · · · · · · · · · · · ·
			0.0%		Prevalence Index worksheet:
	_ , . 0 _		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 8 20% of Total Cover: 3.2		= T	otal Cove		OBL species 1 x 1 =1
Sapling or Sapling/Shrub Stratum (Plot size: 30 m		_			FACW species 95 x 2 = 190
Pinus elliottii		V	78.1%	FACW	FAC species $\frac{4}{}$ x 3 = $\frac{12}{}$
Magnolla virginiana		Ш	15.6%	FACW	FACU species $0 \times 4 = 0$
Liquidambar styraciflua	2		6.3%	FAC	UPL species $0 \times 5 = 0$
· //	0	\sqcup	0.0%		Column Totals: 100 (A) 203 (B)
	0		0.0%		Prevalence Index = B/A = 2.030
W. #*	0		0.0%		<u> </u>
	0		0.0%		Hydrophytic Vegetation Indicators:
1917	. 0		0.0%_		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 16 20% of Total Cover: 6.4	32	= T	otal Cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	40	V	80.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra	10	V	20.0%	FACW	
	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
		\Box	0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
	0	H	0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 25 20% of Total Cover: 10	1, 1, M. V				approximately 20 ft (6 m) or more in height and 3 in.
I will a second	50	= 10	otal Cover	'	(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: _30 m)					Carlina Manda data analudina washinina
Lycopodiella alopecuroides	1		100.0%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
	0		0.0%		than 3 in. (7.6 cm) DBH.
·	0		0.0%		
			0.0%		Sapling/Shrub - Woody plants, excluding vines, less
No Aller				_	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
· · · · · · · · · · · · · · · · · · ·	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
т Суд «	0 0		0.0% 0.0%		
	0 0 0 0		0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines,
	0 0 0 0 0		0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
5. 7. 8.	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
1. 5. 5. 7. 3. 9.	0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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
1. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
5. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
6	0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
5. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
6	0 0 0 0 0 0 0 0 0 0 1 =		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
4. 5. 6. 7. 8. 9. 9. 90% of Total Cover: 0.5 20% of Total Cover: 0.2 Voody Vine Stratum (Plot size: 30 m) Smilax rotundifolia	0 0 0 0 0 0 0 0 0 1 =		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.
4	0 0 0 0 0 0 0 0 0 0 1 =		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. 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.

-	-	

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators-) Depth Mitrik (Insheb) Color (noish) % Colo	SOIL					Sampling Point: Up - 35
Depth	Profile Descr	iption: (Desc	ribe to	the depth	needed to document the indicator or confirm the	absence of indicators.)
Color (molet)						
0-4 10YR 3/2 100 Loamy Sand 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Plank Surface (\$8) (LRR S, T, U)				%		Texture Remarks
1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains 2 Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators:	0-4	10YR	3/2	100		Loamy Sand
1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains 2 Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators:	4-15	10YR	5/4	100	* · ^ * . ·	Loamy Sand
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Coasy Prairie Redox (A1) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Stripped Matrix (S4) Sandy Reduced (S5) Sandy Redox (S5) Deltad More (F13) (LRR P, T, U) Coast Stripped Matrix (S6) Deltad More (F13) (LRR P, S, T, U) Deltad Orbit (F13) (LRR P, T, U) Deltad Orbit (F13) (LRR P, T, U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR P, S, T, U) Sandy Redox (S5) Deltad Orbit (F13) (LRR P, T, U) Sandy Redox (S5) Deltad Orbit (F13) (LRR P, T, U) Deltad Orbit (F13) (LRR P, T, U) Sandy Redox (S5) Delta Orbit (F15) (MLRA 150A) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Sirface (F13) (LRR P, T, U) Deltad Orbit (F13) (MLRA 150A) Sandy Redox (S5) Delta Orbit (F16) (MLRA 150A) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Redox Dark Sirface (A12) Type: Depth (inches): Hydric Soil Present? Yes No Hydric Soils Trainer (A2) Hydric Soil Present? Yes No Hydric Soils Trainer (A2) Hydric Soil Present?			-7'			
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Histosol (A1)	1 Type: C=Cond	centration. D=I	Depletion	n. RM= R edu	aced Matrix, CS=Covered or Coated Sand Grains 2Loc	ation: PL=Pore Lining. M=Matrix
Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Mari (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Delta Ochric (F17) (MLRA 150B) Mari (F10) (LRR U) Polyvalue Below Surface (S8) (LRR O, P, T) Depleted Dark Surface (F12) (LRR O, P, T) Umbric Surface (F12) (LRR O, P, T) Depleta Ochric (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No I cm Muck (A9) (LRR O,) 1 cm Muck (A10) (LRR S) Reduced Vertic (F18) (LRR O,) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)	Hydric Soil I	ndicators:				Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2)	Histosol (A	A1)			Polyvalue Below Surface (S8) (LRR S, T, U)	
Black Histic (A3)	Histic Epip	edon (A2)				
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Red Parent Material (TF2) Depleted Dark Surface (F7) Wery Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Delta Ochric (F17) (MLRA 150A) Sandy Redox (S5) Delta Ochric (F19) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No ●	Black Histi	ic (A3)			_	
Stratified Layers (A5)	Hydrogen	Sulfide (A4)				
Organic Bodies (A6) (LRR P, T, U)	= ' -					
□ 5 cm Mucky Mineral (A7) (LRR P, T, U) □ Depleted Dark Surface (F7) □ Very Shallow Dark Surface (TF12) □ Muck Presence (A8) (LRR U) □ Redox Depressions (F8) □ Other (Explain in Remarks) □ 1 cm Muck (A9) (LRR P, T) □ Marl (F10) (LRR U) □ Depleted Below Dark Surface (A11) □ Depleted Dehric (F11) (MLRA 151) □ Thick Dark Surface (A12) □ Iron-Manganese Masses (F12) (LRR O, P, T) □ Coast Prairie Redox (A16) (MLRA 150A) □ Umbric Surface (F13) (LRR P, T, U) □ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ unless disturbed or problematic. □ Stripped Matrix (S6) □ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) □ Dark Surface (S7) (LRR P, S, T, U) □ Restrictive Layer (if observed): Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ●			R P. T. U	n		_
Muck Presence (A8) (LRR U)	<u> </u>	,		-		
□ 1 cm Muck (A9) (LRR P, T) □ Marl (F10) (LRR U) □ Depleted Below Dark Surface (A11) □ Depleted Ochric (F11) (MLRA 151) □ Thick Dark Surface (A12) □ Iron-Manganese Masses (F12) (LRR O, P, T) □ Coast Prairie Redox (A16) (MLRA 150A) □ Umbric Surface (F13) (LRR P, T, U) □ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Wetland hydrology must be present, unless disturbed or problematic. □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ unless disturbed or problematic. □ Stripped Matrix (S6) □ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) □ Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): □ Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ●				., -,		
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Depleted Ochric (F13) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Depleted Ochric (F13) (LRR O, P, T) Depleted Ochric (F14) (MLRA 151) Tron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F15) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F18) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses						U Other (Explain in Remarks)
Thick Dark Surface (A12)				11)		
Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No				/		
□ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ unless disturbed or problematic. □ Stripped Matrix (S6) □ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) □ Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): □ Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ●		-		1504)		
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No No Hydric Soil Present?	_	• •		, 3)		³ Indicators of hydrophytic vegetation and
Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No •			,			wetland hydrology must be present,
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes O No						
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes O No No				15	Anomalous Bright Loamy Soils (F20) (MLRA 14	19A, 153C, 153D)
Type: Depth (inches): Hydric Soil Present? Yes O No No	□ Dark Surra	ice (S/) (LKK i	, S, I, L	<i>')</i>		
Type: Depth (inches): Hydric Soil Present? Yes O No No						
Type: Depth (inches): Hydric Soil Present? Yes O No No	Restrictive La	ver (if ohser	ved):			
Depth (inches): Hydric Soil Present? Yes No No		., (
		vec).				Hydric Soil Present? Yes O No 💿
Remarks:		res).,		110	V 1	
	Remarks:					
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Troject of the Country 2/200 has received believed	City/County: Waveland - Hancock Sampling Date: 24-Oct-16 State: MS Sampling Point: Up = 36
Applicant/Owner: NASA	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
· · · · · · · · · · · · · · · · · · ·	30° 24′ 4.173" N Long.: 89° 36′ 44.961" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation \square , Soil \square , or Hydrology \square significant	ly disturbed? Are "Normal Circumstances" present? Yes . No .
Are Vegetation . , Soil . , or Hydrology . naturally p	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No No	Vac O No 🔘
Wetland Hydrology Present? Yes O No	within a Wedland?
Remarks: Upland Area approximately 100 feet west of access road along easte	ern side of AOI.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide C	_
	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4) Crayfish Burrows (C8)
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algai Mat or Crust (B4)	
☐ Iron Deposits (B5) ☐ Other (Explain in R	·
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? fincludes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ⑥
(includes capillary fringe) Tes No Deput (incles). Describe Recorded Data (stream gauge, monitoring well, aerial photo:	s previous inspections), if available:
beschibe recorded batta (steam gauge, monitoring went across process	oy provided inspectionary in available.
I Daniel I I I I I I I I I I I I I I I I I I I	
Remarks:	

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

Tree Stratum (Plot size: 30 m)	Absolute % Cover	R	el.Strat. Cover	Indicator Status	Dominance Test worksheet:		
1. Pinus elliottii	20	V	69.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)		
2. Magnolia virginiana	5		17.2%	FACW	, , , , , , , , , , , , , , , , , , , ,		
3 Liquidambar styraciflua	3		10.3%	FAC	Total Number of Dominant		
4 Mees eduction		\Box	3.4%	FAC	Species Across All Strata: 7 (B)		
A CONTRACT OF THE CONTRACT OF		H	(management)	- FAC	Percent of dominant Species		
5		\vdash	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)		
6.	0,.,	Ш	0.0%		11.001.00 00.001		
7	0	Ш	0.0%		Prevalence Index worksheet:		
8	0		0.0%		Total % Cover of: Multiply by:		
50% of Total Cover: 14.5 20% of Total Cover: 5.8	29 :	= T	otal Cove	r	OBL species $0 \times 1 = 0$		
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species 91 x 2 = 182		
	/	. 0	E0 00/	ELOW			
1. Pinus elliottii	10	V		FACW	FAC species 13 x 3 = 39		
Magnolia virginiana		V	29.4%	FACW	FACU species $0 \times 4 = 0$		
3. Liquidambar styraciflua	2		11.8%	FAC	UPL species $0 \times 5 = 0$		
4.	0		0.0%		Column Totals: 104 (A) 221 (B)		
5.	0		0.0%				
6.	0	П	0.0%		Prevalence Index = $B/A = 2.125$		
7.	0	$\vec{\Box}$	0.0%		Hydrophytic Vegetation Indicators:		
8.		\exists	0.0%				
O	. <u>0</u>	Ш	. 0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation		
50% of Total Cover: 8.5 20% of Total Cover: 3.4	17 :	= To	otal Cove	r	✓ 2 - Dominance Test is > 50%		
Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 1		
1 Ilex corlacea	15	V	41.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
11					Problematic Hydrophytic Vegetation * (Explain)		
	15		-	FACW			
3. Ilex vomitoria	. 5	\square	13.9%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
4 Cyrilla racemiflora	1		2.8%	FACW			
5	0		0.0%		Definition of Vegetation Strata:		
6.	0		0.0%	•	Tree - Woody plants, excluding woody vines,		
50% of Total Cover: 18 20% of Total Cover: 7.2	36 =	= Total Cover		-	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
Herb Stratum (Plot size: 30 m)					(115 only of larger in grantered at a case height (25) ye		
					Sapling - Woody plants, excluding woody vines,		
1. Ilex coriacea		V	50.0%	FACW	approximately 20 ft (6 m) or more in height and less		
2. Ilex glabra	10	V	50.0%	FACW	than 3 in. (7.6 cm) DBH.		
3	0	\Box	0.0%				
4.	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less		
5.	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.		
6	0	\Box	0.0%				
7		Η.			Shrub - Woody plants, excluding woody vines,		
7		吕.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.		
8		닏	0.0%		Harb All barbagage (see weeds) cleents 2 - 1 - 12 - 12		
9,	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody		
10	0		0.0%		plants, except woody vines, less than approximately		
11,	0		0.0%		3 ft (1 m) in height.		
12.	0	\Box	0.0%		. ,		
•		Ξ.			Woody vine - All woody vines, regardless of height.		
50% of Total Cover: 10 20% of Total Cover: 4	20 =	= To	tal Cover	`	Troody time 1 di troody times, regulated of meight.		
Woody Vine Stratum (Plot size: 30 m)				ļ			
1. Smilax rotundifolia	2		100.0%	FAC			
2	0		0.0%				
	_						
3		뭐.	0.0%				
4		닏.	0.0%		Hydrophytic		
5	0	Ш,	0.0%		Vegetation		
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	2 = Total Cover			Present? Yes No O		
Remarks: (If observed, list morphological adaptations below).							
*Indicator suffix = National status or professional decision assigned because Re	egional status n	ot d	efined by FV	VS.			

rofile Descri	ption: (Desc	ribe to th	ne d ept h	needed to documen	the indic	ator or co	nfirm the al	bsence of indicators.)	
Depth .		latrix		Re	dox Featu	res				
(inches)	Color (m		%	Color (moist)	%	Type 1	Loc2	Texture	Remarks	
0-4	10YR	4/2	100	e e						
4-15	10YR	5/6	100				_			
		, m , m ,	- 						-	
		Depletion.	RM=Redu	ced Matrix, CS=Cover	ed or Coate	d Sand Gra	ins ² Locati	on: PL=Pore Lining, M		
H ydric Soil In Histosol (A						(60) (100		_	oblematic Hydric Soils ³ :	
Histic Epipe	•			Polyvalue Bel				1 cm Muck (A9	, , ,	
Black Histic				Thin Dark Su)	2 cm Muck (A1		
Hydrogen S				Loamy Mucky	-			Reduced Vertic (F18) (outside MLRA 150A,B)		
Stratified L				Loamy Gleyer	-	;)		Piedmont Floodplain Soils (F19) (LRR P, S, T)		
	dies (A6) (LRF	P T III		Depleted Mat				Anomalous Bright Loamy Scils (F20) (MLRA 153B)		
_			- 115	Redox Dark S				Red Parent Material (TF2)		
5 cm Mucky Minera! (A7) (LRR P, T, U) Muck Presence (A8) (LRR U)				Depleted Dark		-7)		Very Shallow Dark Surface (TF12)		
I cm Muck (A9) (LRR 0)			Redox Depres				Other (Explain in Remarks)			
_	elow Dark Sur		١	☐ Marl (F10) (L	•					
_			,	Depleted Och						
_	Surface (A12)		F0.43	Iron-Mangane			O, P, T)			
_	e Redox (A16			Umbric Surfac						
	k Mineral (S1)		6)	Delta Ochric (3 _{Indicato}	rs of hydrophytic vegetation and	
	ed Matrix (S4))		Reduced Vert	c (F18) (MI	LRA 150A,	150B)	wetlan	d hydrology must be present,	
_ Sandy Redo				Piedmont Floo	dplain Soils	s (F19) (ML	RA 149A)	unle	ss disturbed or problematic.	
Stripped Ma				Anomalous Br	ight Loamy	Soils (F20)	(MLRA 149A	, 153C, 153D)		
」 Dark Surfac	:e (S7) (LRR P	, S, T, U)								
estrictive Lay	er (if observ	ved):			2					
Depth (inche	es):							Hydric Soil Present	? Yes O No 💿	
emarks:										

Applicant/Owner: NASA Investigator(s): Lars Larson, Randy Ellis Sect	NWI classification: N/A Yes No (If no, explain in Remarks.)
Are Vegetation . , Soll . , or Hydrology . naturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks:	Is the Sampled Area within a Wetland? Yes O No
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Moss Trim Lines (B16) Ong Living Roots (C3) Ory Season Water Table (C2) Orayfish Burrows (C8) Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous presents)	Wetland Hydrology Present? Yes ○ No ④
Remarks:	

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

Dominant

		6	pecies? .		Sampling Point: Up - 37		
(Diet -i Do	Absolute	e R	el.Strat.	Indicator	Dominance Test worksheet:		
ree Stratum (Plot size: 30 m)	% Cove	_	Cover	Status	Number of Dominant Species		
Pinus elliottii	10	~		FACW	That are OBL, FACW, or FAC: 3 (A)		
Quercus nigra	2		15.4%	FAC	Total Number of Dominant		
Quercus faicata	1		7.7%	FACU	Species Across All Strata: 3 (B)		
	0		0.0%				
	0		0.0%	of managed by	Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)		
· A'	0		0.0%	a	That Are OBL, FACW, or FAC: 100.0% (A/B)		
ALCO TANAN	0		0.0%	· · · · · · · · · · · · · · · · · · ·	Prevalence Index worksheet:		
	0		0.0%		Total % Cover of: Multiply by:		
60% of Total Cover: 6.5 20% of Total Cover: 2.6	13	= To	otal Cove	Г	OBL species 1 x 1 = 1		
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species 91 x 2 = 182		
Pinus elliottii		~	83.3%	FACW	FAC species 4 x 3 = 12		
Nyssa sylvatica		П	16.7%	FAC	FACU species 1 x 4 = 4		
		\exists	0.0%	1770			
			0.0%		UPL species $0 \times 5 = 0$		
	0	H			Column Totals: 97 (A) 199 (B)		
			0.0%		Prevalence Index = B/A = 2.052		
	0		0.0%		Hydrophytic Vegetation Indicators:		
	. 0		0.0%		invarophytic vegetation indicators:		
4	. 0	Ш	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation		
0% of Total Cover: 6 20% of To tal Cover: 2.4	12	= To	otal Cove		✓ 2 - Dominance Test is > 50%		
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹		
Ilex corfacea	70	v	100.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
	•		0.0%				
	_	\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must		
	0	\exists	0.0%		be present, unless disturbed or problematic.		
- 10		=		12.110.00	Definition of Vegetation Strata:		
	0	₩,	0.0%	· -	_		
	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3		
50% of Total Cover: 35 20% of Total Cover: 14	70	70 = Total Cover			(7.6 cm) or larger in diameter at breast height (DBH).		
erb Stratum (Plot size: 30 m)							
, Lycopodiella alopecuroides	1		50,0%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less		
Arundinaria tecta	1		50.0%	FACW	than 3 in. (7.6 cm) DBH.		
	0		0.0%				
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less		
	0	\Box	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.		
		\Box	C.0%				
	0	Η.	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.		
	0		0.0%	r	approximatory o to 20 it () to o my in neight.		
C. B. B			0.0%	· · · · · · · · · · · · · · · · · · ·	Herb - All herbaceous (non-woody) plants, including		
	0		0.0%	- A	herbaceous vines, regardless of size, and woody		
· · · · · · · · · · · · · · · · · · ·					plants, except woody vines, less than approximately		
	-	Η,	0.0%		3 ft (1 m) in height,		
	0_	ш	0.0%		Woody ving - All woody vince recordings of height		
0% of Total Cover: 1 20% of Total Cover: 0.4	2 =	= To	tal Cover	i	Woody vine - All woody vines, regardless of height.		
oody Vine Stratum (Plot size: 30 m							
	0		0.0%				
	0		0.0%				
	0		0.0%				
	-		0.0%				
	0	\Box	0.0%		Hydrophytic		
OV 55 110					Vegetation		
COV of Table Courses On 2007 of Table Courses	50% of Total Cover: 0 20% of Total Cover: 0 0 = T				Present? Yes No		

Profile Descr	iption: (De		the depth i	needed to document the indicato		absence of indicators.)	
Depth Matrix			Redox Feature	5 1	_	_	
(inches)		(moist)	100	Color (moist) %	Type Loc2	Texture	Remarks
0-6	10YR	4/2	100			Loamy Sand	
6-16	10YR	5/4	100			Loamy Sand	· ***
						Ř	
Type: C=Cond	centration. D	=Depletio	 n. RM≃Redu	ced Matrix, CS=Covered or Coated S	Sand Grains ² Loca	tion: PL=Pore Lining. M=	Matrix
Hydric Soil I						Indicators for Pro	blematic Hydric Soils ³ :
Histosol (/	41)			Polyvalue Below Surface (St	8) (LRR S, T, U)	1 cm Muck (A9)	(LRR O)
Histic Epip	edon (A2)			Thin Dark Surface (S9) (LRF	R S, T, U)	2 cm Muck (A10	
Black Histi	ic (A3)			Loamy Mucky Mineral (F1) ((LRR O)		(F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)			plain Soils (F19) (LRR P, S, T)
Stratified I	Layers (A5)			Depleted Matrix (F3)			nt Loamy Soils (F20) (MLRA 153B)
_	odies (A6) (L	RR P, T, L	J)	Redox Dark Surface (F6)		Red Parent Mate	
5 cm Mucl	ky Mineral (A	47) (LRR P	, T, U)	Depleted Dark Surface (F7)			rk Surface (TF12)
	ence (A8) (L			Redox Depressions (F8)		_ '	
_	k (A9) (LRR			Mari (F10) (LRR U)		Other (Explain in	n Remarks)
-	Below Dark S		11)	Depleted Ochric (F11) (MLR	A 1E1)		
	Surface (At	-	,	☐ Iron-Manganese Masses (F1	•		
_	rie Redox (A	-	1504)		• • • • •		
_	ck Mineral (S		•	Umbric Surface (F13) (LRR I			
_ `			, 3)	Delta Ochric (F17) (MLRA 1	·	³ Indicators	of hydrophytic vegetation and
_	yed Matrix (S	54)		Reduced Vertic (F18) (MLRA	•	wetland	hydrology must be present,
Sandy Red				Piedmont Floodplain Soils (F			s disturbed or problematic.
Stripped MDark Surfa	latrix (S6) Ice (S7) (LRF	R P, S, T, U	J)	Anomalous Bright Loamy So	ils (F20) (MLRA 149	9 A, 153C, 153D)	
						· ·-·	
testrictive La	yer (if obs	erved):					
Type:						Hydric Soil Present?	Yes O No 💿
Depth (inch	es):					Trydric Soit Fresche:	165 C NO C
Remarks:							

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 38
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 s R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): undulating Slope: 1.0 % / 0.6°
A TOTAL OF THE PARTY OF THE PAR	30° 23' 52.876" N Long.: 89° 37' 1.236" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI dassification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 🏵 No 🔾 (If no, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes No
	problematic? (If needed, explain any answers in Remarks.)
	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes O No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes O No 🏵
Remarks: Terrace (slight slope) approximately 130 feet up from main drainage	e way near Wet 37.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Mari Deposits (B1)	(5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizosph	heres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	= ····, ····
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algai Mat or Crust (B4)	e (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in F	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 ⑤ Depth (Inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No •
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	

	Absolute	_ Specie Rel.Sti		Dominance Test worksheet:
Tree Stratum (Plot size: 30 m)	% Cover	Cove	er Status	Number of Dominant Species
1 Pinus elliottii	15	✓ 60.	.0% FACW	That are OBL, FACW, or FAC: 5 (A)
2. Nyssa sylvatica	3	12.	.0% FAC	
3. Quercus virginiana		✓ 20.	.0% FACU	Total Number of Dominant Species Across All Strata: 6 (B)
4. Quercus falcata		4.0	0% FACU	Species Actions All Stitutes
5 Quercus nigra		4.0	D% FAC	Percent of dominant Species
6.		0.0	0%	That Are OBL, FACW, or FAC: 83.3% (A/B)
7.			0%	Prevalence Index worksheet:
8.	0		0%	Total % Cover ofMultiply by:
50% of Total Cover: 12.5 20% of Total Cover: 5		= Total C		OBL species 3 x 1 = 3
		- Iotai C	SOVEI	
Sapling or Sapling/Shrub Stratum (Plot size: 30 m				FACW species 61 x 2 = 122
1. Pinus elliottii		_	.3% FACW	FAC species 19 x 3 = 57
2. Nyssa sylvatica			.8%FAC	FACU species 9 x 4 =36
3. Liquidambar styracifiua	5.	31.	.3% FAC	UPL species $0 \times 5 = 0$
4 Quercus virginiana		12.	.5% FACU	Column Totals: 92 (A) 218 (B)
5. Quercus falcata	_ 1		3% FACU	Prevalence Index = B/A = 2.370
6	0	0.0	0%	
7	0	0.0	0%	Hydrophytic Vegetation Indicators:
8	_ 0	0.0	0%	1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 8 20% of Total Cover: 3.2	16 :	= Total C	Cover	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m				✓ 3 - Prevalence Index is ≤3.0 ¹
	30	✓ 68.	30/ EACW	
1. Ilex corlacea	30		2% FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex glabra			7% FACW	² Indicators of hydric soil and wetland hydrology must
3. Quercus nigra	3		B% FAC	be present, unless disturbed or problematic.
4. Magnolla virginiana			3% FACW	D. C. C. C. C. C. C. C. C. C. C. C. C. C.
5	0	=	0%	Definition of Vegetation Strata:
6	0	☐ _ 0.0	0%	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 22 20% of Total Cover: 8.8		= Total C	Cover	(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m)				
1, Lycopodiella alopecuroides	3	100.	.0% OBL	Sapling - Woody plants, excluding woody vines,
2.		0.0		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3.	0)%	dian o in. (7.0 oin) DDN.
4.	0		0%	Sapling/Shrub - Woody plants, excluding vines, less
5.	0	0.0		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6				
V ₁ ,	- 0	0.0		Shrub - Woody plants, excluding woody vines,
7	- 0 -	0.0		approximately 3 to 20 ft (1 to 6 m) in height.
8	0	0.0		Herb - All herbaceous (non-woody) plants, including
9		0.0		herbaceous vines, regardless of size, and woody
10	_ 0_	0.0		plants, except woody vines, less than approximately
11	0	0.0)%	3 ft (1 m) in height.
12.	0	0.0	1%	Manda de la companya della companya della companya della companya de la companya della companya
50% of Total Cover: 1.5 20% of Total Cover: 0.6	3 =	= Total C	over	Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m				
1 Vitts rotundifolia	3	75.0	0% FAC	
2. Smilax rotundifolia		25.0	- r 3	
3.	_	0.0		
	-	0.0		
4 5	0	□ 0.0 □ 0.0	¥ · · · · · · · · · · · · · · · · · · ·	 Hydrophytic
		,		Vegetation V (a) W (b)
50% of Total Cover: 2 20% of Total Cover: 0.8	4 =	: Total C	over	Present? Yes S NO C
Remarks: (If observed, list morphological adaptations below).				
*Indicator ruffix — National ctabus or reofaccional decision accioned because De	حجاسات الممانية	ant dafinad	har EMC	

SOIL							Samplin	g Point: Up - 38	
Profile Descri	iption: (Des	cribe to	the depth	needed to document the	indicator or cor	nfirm the a	bsence of Indicators.)		
Depth Matrix			Redox	Features					
(inches)	Color (ı	moist)	. %	Color (moist)	% Type 1	Loc2	Texture	Remarks	
0-4	10YR	4/2	100	and the second second second					
4-16	10YR	5/6	100						
							4-		
									_
ç					a se			H - 11-	
v									-
400						(c)			
								,	
1Type: C=Conc	entration. D=	=Depletio	n. RM ≂R edi	iced Matrix, CS=Covered or	Coated Sand Grai	ns ² Locatio	on: PL=Pore Lining, M=Ma	atrix	
Hydric Soil Ir							Indicators for Proble		
Histosol (A				Polyvalue Below Su	urface (SR) (LRR 9	S. T. 11)		<u>-</u>	
Histic Epip	•			☐ Thin Dark Surface			☐ 1 cm Muck (A9) (LI☐ 2 cm Muck (A10) (I		
Black Histic				Loamy Mucky Mine		,		.8) (outside MLRA 150A,B)	
Hydrogen :	Sulfide (A4)			Loamy Gleyed Mat				in Soils (F19) (LRR P, S, T)	
Stratified L	ayers (A5)			Depleted Matrix (F.	` '			Loamy Soils (F20) (MLRA 153B)	
Organic Bo	odies (A6) (LF	RR P, T, L	J)	Redox Dark Surface			Red Parent Materia	, , , , , ,	
5 cm Muck	y Mineral (A	7) (LRR P	, T, U)	Depleted Dark Surl			Very Shallow Dark	• •	
Muck Prese	ence (A8) (LF	RR U)		Redox Depressions			Other (Explain in R		
1 cm Muck	(A9) (LRR P	, T)		Marl (F10) (LRR U)	•		Other (Explain in it	emarka)	
Depleted B	Below Dark St	urface (A:	l1)	Depleted Ochric (F	11) (MLRA 151)				
☐ Thick Dark	Surface (A12	2)		☐ Iron-Manganese M	asses (F12) (LRR	O, P, T)			
Coast Prair	ie Redox (A1	.6) (MLRA	150A)	Umbric Surface (F1	13) (LRR P, T, U)				
Sandy Muc	k Mineral (S1	E) (LRR O	, S)	Delta Ochric (F17)	(MLRA 151)		7		
Sandy Gley	ed Matrix (S	4)		Reduced Vertic (F1	.8) (MLRA 150A, 1	L50B)		f hydrophytic vegetation and drology must be present,	
Sandy Red	ox (S5)			Piedmont Floodpla	in Soils (F19) (MLI	RA 149A)		disturbed or problematic.	
Stripped M	atrix (S6)			Anomalous Bright L	Loamy Soils (F20)	(MLRA 149A	A, 153C, 153D)		
Dark Surface	ce (S7) (LRR	P, S, T, U	J)						
Restrictive La	ver (if obse	med).							
Type:	yei (ii obse	i vooj.							
Depth (inche	ac).						Hydric Soil Present?	Yes 🔾 No 💿	
									_
Remarks:									

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Da	ate: 24-Oct-16		
Applicant/Owner: NASA	State: MS Sampling Point: Up - 39	9		
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 s	R 16 W		
Landform (hillslope, terrace, etc.): Hillside	.ocal relief (concave, convex, none): undulating Slope:	2.0 % / 1.1°		
Subregion (LRR or MLRA): LRR T Lat.:	30° 23' 48.113" N Long.: 89° 37' 7.209" W	Datum: NAD83		
Soil Map Unit Name: PoB, Poarch fine sandy loam, 2 to 5% slopes	NWI classification: N/A	1		
Are climatic/hydrologic conditions on the site typical for this time of yea		_		
Are Vegetation . , Soil . , or Hydrology . significantl	disturbed? Are "Normal Circumstances" present?	res ● No ○		
Are Vegetation , Soil , or Hydrology naturally p	oblematic? (If needed, explain any answers in Remark	(s.)		
SUMMARY OF FINDINGS - Attach site map showing sar	ppling point locations, transects, important feat	ures, etc.		
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area			
Hydric Soil Present? Yes ○ No ⑥	Van O Na 📵			
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?			
Remarks:		- -		
Plot is 100 feet east - NE of plot Wet - 19 on slight ridge above wetland	nd drainage way			
FIGURE 100 real case. The or place real as on origin rings above from	no dramage way.			
HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (minimum o	of 2 required)		
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Aquatic Fauna (B1:	_	Surface (B8)		
High Water Table (A2) Marl Deposits (B15	<u> </u>			
Saturation (A3) Hydrogen Sulfide C	<u> </u>			
Water Marks (B1) Oxidized Rhizosphe	res along Living Roots (C3) Dry Season Water Table (C2)	ı		
Sediment Deposits (B2)	d Iron (C4) Crayfish Burrows (C8)			
☐ Drift Deposits (B3) ☐ Recent Iron Reduc	on in Tilled Soils (C6) Saturation Visible on Aerial In	nagery (C9)		
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	(C7) Geomorphic Position (D2)			
☐ Iron Deposits (B5) ☐ Other (Explain in R	marks) Shallow Aquitard (D3)			
☐ Inundation Visible on Aerial Imagery (B7)	✓ FAC-Neutral Test (D5)	FAC-Neutral Test (D5)		
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T	, υ)		
Field Observations:				
Surface Water Present? Yes O No O Depth (inches):	TW.			
Water Table Present? Yes No Depth (inches):		<u> </u>		
Saturation Procent?	Wetland Hydrology Present? Yes	No 💿		
(moreov supmer) imiguy				
Describe Recorded Data (stream gauge, monitoring well, aerial photo	, previous inspections), if available:			
Remarks:				
		i		

Tree Stratum (Plot size: 30 m	Absolute % Cover			icator atus	Dominance Test worksheet:	
Pinus elliottii					Number of Dominant Species	
r detroide it so revolencer	5	_			That are OBL, FACW, or FAC: 11 (A)	
Pinus taeda	5	31.			Total Number of Dominant	
Nyssa sylvatica		☐ 18.			Species Across All Strata:11(B)	
Quercus nigra	2	12.	5% FAC	-		
Quercus falcata	1_	6.3	% FAC	CU	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)	
:P. #	0	0.0)%		That are OBL, FACW, OF FAC.	
	0	0.0)%		Prevalence Index worksheet:	
	0	0.0)%		Total % Cover of: Multiply by:	
50% of Total Cover: 8 20% of Total Cover: 3.2	16 :	= Total C	over		OBL species $0 \times 1 = 0$	
apling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species 65 x 2 = 130_	
Pinus taeda		▼ 50,	D% FAC	.	FAC species 43 x 3 = 129	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5			-		
		30.			FACU species $1 \times 4 = 4$	
Magnolla virginiana		20.		W	UPL species 0 x 5 = 0	
		U_0.0			Column Totals: 109 (A) 263 (B)	
-		0.0	1%		Prevalence Index = B/A = 2.413	
	. 0	0.0	1%			
	Ó	0.0	%		Hydrophytic Vegetation Indicators:	
and the second s	0	0.0	9%		1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 5 20% of Tot al Cover: 2		= Total C	over			
					✓ 2 - Dominance Test is > 50%	
hrub Stratum (Plot size: 30 m					3 - Prevalence Index is ≤3.0 ¹	
Ilex coriacea		4.4	% FAC	.w	Problematic Hydrophytic Vegetation 1 (Explain)	
Ilex glabra	40	58.	B% FAC	W_		
Ilex vomitoria	20	29.	4% FAC	:	Indicators of hydric soil and wetland hydrology must	
Vaccinium elliottii	5	7.4	% FAC	w	be present, unless disturbed or problematic.	
	^	0.0	%		Definition of Vegetation Strata:	
	0	0.0		-	Tree - Woody plants, excluding woody vines,	
50% of Total Cover: 34 20% of Total Cover: 13.6	68 =	= Total C		*2 2*	approximately 20 ft (6 m) or more in height and 3 in.	
		- Ioui c	OTC!		(7.6 cm) or larger in diameter at breast height (DBH).	
lerb Stratum (Plot size: 30 m)						
1. Ilex glabra	5	✓ 50.0	% FAC	w	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
2 Ilex corlacea		✓ 50.0	% FAC	w	than 3 in. (7.6 cm) DBH.	
	0	0,0	%		,	
·	0	0.0		-	Sapling/Shrub - Woody plants, excluding vines, less	
······································	0	0.0		_	than 3 in. DBH and greater than 3.28 ft (1m) tall.	
	0	0.0		- way 2>	Shrub - Woody plants, excluding woody vines,	
7		∐. 0.0		-	approximately 3 to 20 ft (1 to 6 m) in height.	
3	_ 0	0.0		, Tues	Horb All horhopopy (see week) plants including	
)	0		%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody	
),	0	0,0	%		plants, except woody vines, less than approximately	
:	0	0.0	%		3 ft (1 m) in height.	
	0	0.0	%			
60% of Total Cover: 5 20% of Total Cover: 2		= Total C			Woody vine - All woody vines, regardless of height.	
	10	. Juli C			-	
Voody Vine Stratum (Plot size: 30 m				ŀ		
Smilax rotundifolia	3	60.0	% FAC			
Vitis rotundifolia	2	40.0	% _ FAC			
	Q	0.0	%			
	-	0.0	%	200		
	0	0.0			Hydrophytic	
		: Total C			Vegetation Present? Yes No ○	
50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	Total C			FIGNELLY 100 - NV -	

SOIL					Sampling Point: Up - 39
Profile Desc	ription: (Des	cribe to	the depth	needed to document the indicator or confirm the	e absence of indicators.)
Depth	., , ,	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) , , % , Type 1 Loc2	Texture Remarks
0-5	10YR	3/2	100		
5-16	10YR	5/6	100		
			1 14		
		_			·
-		_			
			-		
					· · · · · · · · · · · · · · · · · · ·
¹Tyne: C=Con	ncentration. De	=Depletic	n. RM=Redi	ced Matrix, CS=Covered or Coated Sand Grains ² Loc	ration: PI =Pore Lining, M=Matrix
Hydric Soil		Боргоск		Section of Country Country (1997)	Indicators for Problematic Hydric Soils ³ :
Histosol ((A1)			Polyvalue Below Surface (S8) (LRR S, T, U)	
	ipedon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Black Hist				Loamy Mucky Mineral (F1) (LRR O)	2 cm Muck (A10) (LRR S)
	1 Sulfide (A4)			Loamy Gleyed Matrix (F2)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Layers (A5)			Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
_	Bodies (A6) (LF	RR P, T, I	U)	Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	cky Mineral (A		•	Depleted Dark Surface (F7)	Red Parent Material (TF2)
	sence (A8) (LF		, , ,	Redox Depressions (F8)	Very Shallow Dark Surface (TF12) Street (Street Street
1 cm Muc	ck (A9) (LRR P	, T)		Mari (F10) (LRR U)	Uther (Explain in Remarks)
	Below Dark Si		11)	Depleted Ochric (F11) (MLRA 151)	
☐ Thick Dar	k Surface (A1	2)		Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Pra	irie Redox (A1	.6) (MLR/	4 150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Mu	ıck Mineral (S1	L) (LRR C), S)	Deita Ochric (F17) (MLRA 151)	
	eyed Matrix (S			Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Re	dox (S5)			Piedmont Floodplain Soils (F19) (MLRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
Stripped I	Matrix (S6)			Anomalous Bright Loamy Soils (F20) (MLRA 14	-
☐ Dark Surf	ace (S7) (LRR	P, S, T,	U)		,,
Restrictive L	aver (if obse	rvad):			
Type:	ayer (III obse	iveu).			
Depth (incl	hes).	_ ~	-, -, -, -		Hydric Soil Present? Yes No 💿
	1103).		4.*	,	
Remarks:					
No hydric ind	icators obse	rvea.			
				*:	

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 40
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7s R 16 W
	Local relief (concave, convex, none): none Slope: 2.0 % / 1.1°
	30° 23′ 42.761" N Long.: 89° 36′ 50.066" W Datum: NAD83
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent slo	
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation . , Soil . , or Hydrology . significantl	ly disturbed? Are "Normal Circumstances" present? Yes No No
Are Vegetation, Soil, or Hydrology naturally p.	roblematic? (If needed, explain any answers in Remarks.)
	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes ○ No ●	Is the Sampled Area
1 1 2 - 1 1 1 1 - 1 1 1 1 1 1 1 1 1 1 1	within a Wetland? Yes ○ No
Wetland Hydrology Present? Yes ○ No ●	
Remarks: Side slope - step up edge approximtely 25-30 feet of wet drainage a	rea - ephemeral drain.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15)	
High Water Table (A2) Saturation (A3) Hydrogen Sulfide C	
Sediment Deposits (B2) Presence of Reduct	
Iron Deposits (B5) Uther (Explain in R	<u> </u>
Water-Stained Leaves (B9)	FAC-Neutral Test (D5)
	☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes No Depth (inches):	
Carrace visite Flacing	
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No ⊙
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	wedand hydrology Present? Tes C No C
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:
Remarks:	
Remarks:	

			ominant pecies? .		Sampling Point: Up - 40	
	Absolute	e R	el.Strat.	Indicator	Dominance Test worksheet:	
ree Stratum (Plot size: 30 m_)	% Cove		Cover	Status	Number of Dominant Species	
Quercus nigra	25	V	67.6%	FAC	That are OBL, FACW, or FAC: 8 (A)	
Acer rubrum	2	Ш	5,4%	FAC	Total Number of Dominant	
Nyssa sylvatica	10	✓	27.0%	FAC	Species Across All Strata: 8 (B)	
	0		0.0%			
P Taka 1	0		0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B)	
	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)	
W	0		0.0%		Prevalence Index worksheet:	
	0		0.0%		Total % Cover of: Multiply by:	
60% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= T	otal Cove	•	OBL species 0 x 1 = 0	
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 8 x 2 = 16	
Quercus nigra	20	V	54.1%	FAC	FAC species 95 x 3 = 285	
Uquidambar styraciflua	40	V	27.0%	FAC	FACU species $0 \times 4 = 0$	
Acer rubrum	5		13.5%	FAC	UPL species $0 \times 5 = 0$	
Nyssa sylvatica	2	\Box	5.4%	FAC		
	0		0.0%		Column Totals: 103 (A) 301 (B)	
	_		0,0%		Prevalence Index = B/A = 2.922	
		H	0,0%		Hydrophytic Vegetation Indicators:	
				-		
	_	Ш	0.0%	-	1 - Rapid Test for Hydrophytic Vegetation	
0% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= To	otal Cove		✓ 2 - Dominance Test is > 50%	
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹	
Quercus nigra	5	V	25.0%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)	
Ilex vomitoria	10	V	50.0%	FAC		
Ilex opaca	2		10.0%	FAC	¹ Indicators of hydric soil and wetland hydrology mus	
Vaccinium elliottil	3	$\overline{\Box}$	15,0%	FACW	be present, unless disturbed or problematic.	
			0.0%		Definition of Vegetation Strata:	
	0	H			Tree - Woody plants, excluding woody vines,	
00 (T.1.10)		_	0.0%	-	approximately 20 ft (6 m) or more in height and 3 in.	
60% of Total Cover: 10 20% of Total Cover: 4	20	20 = Total Cove		ir.	(7.6 cm) or larger in diameter at breast height (DBH).	
erb Stratum (Plot size: 30 m						
_ Arundinaria tecta	. 5	V	71.4%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
Rubus argutus	_	V	28.6%	FAC	than 3 in. (7.6 cm) DBH.	
,	0		0.0%		,	
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less	
- · · · · · · · · · · · · · · · · · · ·	0		0.0%	A STATE OF THE STA	than 3 in. DBH and greater than 3.28 ft (1m) tall.	
		$\overline{\Box}$	0.0%	1.4		
		H	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
		\Box		W . IN 12 1880 1 W	approximately 3 to 20 it (1 to 0 iii) iii height.	
		H.	0.0%		Herb - All herbaceous (non-woody) plants, including	
To the second se		믐	0.0%		herbaceous vines, regardless of size, and woody	
		님	0.0%		plants, except woody vines, less than approximately	
	<u>0</u>	\sqsubseteq	0.0%	• 1	3 ft (1 m) in height.	
	0_	Ц,	0.0%			
0% of Total Cover: 3.5 20% of Total Cover: 1.4	7=	= To	tal Cover		Woody vine - All woody vines, regardless of height.	
/oody Vine Stratum (Plot size: 30 m				Ĺ		
Vitis rotundifolia	2		100.0%	FAC		
			0.0%			
4	0	\Box	0.0%			
	0	\Box	0.0%			
	0	\Box		me v	Hydrophytic	
			0.0%		Vegetation	
io% of Total Cover: 1 20% of Total Cover: 0.4		100	tal Cover		Present? Yes No	

Profile Description: (Describe to the depth	needed to document the indicator or confirm the	absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist)%Type ¹ Loc ²	Texture Remarks
0-6 10YR 4/2 100		Loamy Sand
6-16 10YR 5/3 100		Loamy Sand
	,,,,,	, , , , , , , , , , , , , , , , , , , ,
		**
		The state of the s
	· w.	, Ar
	ced Matrix, CS=Covered or Coated Sand Grains 2Loca	ation: PL=Pore Lining. M=Matrix
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Red Parent Material (TF2)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
Muck Presence (A8) (LRR U)	Redox Depressions (F8)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR P, T)	Mari (F10) (LRR U)	
Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Prairie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Muck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present.
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 149A)	unless disturbed or problematic.
Stripped Matrix (S6)	Anomalous Bright Loamy Solls (F20) (MLRA 14	9A, 153C, 153D)
Dark Surface (S7) (LRR P. S, T, U)		
Restrictive Layer (if observed):		
Type:		1.4.2.2.12
Depth (inches):		Hydric Soil Present? Yes O No 🖲
Remarks:		

Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes Are climatic/hydrologic conditions on the site typical for this time of years. Are Vegetation , Soil , or Hydrology , significant.	tly disturbed? Are "Normal Circumstances" present? Yes No
· - · - · · · · · · · · · · · · · · · ·	problematic? (If needed, explain any answers in Remarks.) ampling point locations, transects, important features, etc. Is the Sampled Area within a Wetland? Yes No No No
Sediment Deposits (B2)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) heres along Living Roots (C3) Dry Season Water Table (C2) Ided Iron (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) e (C7) Geomorphic Position (D2)
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): Describe Recorded Data (stream gauge, monitoring well, aerial photo Remarks:	Wetland Hydrology Present? Yes ○ No •

Tree Stratum (Plot size: 30 m)	Absolute % Cover			Indicator Status	Dominance Test worksheet:
			***	1 72	Number of Dominant Species
Pinus elliottii	10		.7%	FACW	That are OBL, FACW, or FAC: 8 (A)
Magnolia virginiana	_	=	.2%	FACW	Total Number of Dominant
Nyssa sylvatica			.8%	FAC	Species Across All Strata: 8 (B)
Acer rubrum		=	3%	FAC	Percent of dominant Species
		=-	.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
			.0%		
· 5-44. * 1-7-4.	0	0.	.0%		Prevalence Index worksheet:
	0	0.	.0%		Total % Cover of: Multiply by:
50% of Total Cover: 12 20% of Total Cover: 4.8	24	= Total (Cover		OBL species 1 x 1 = 1
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species
Pinus elliottii	10	√ 45	.5%	FACW	FAC species 28 x 3 = 84
Magnolia virginiana	5	✓ 22	7%	FACW _	FACU species $0 \times 4 = 0$
Liquidambar styraciflua	3	13	.6%	FAC	UPL species $0 \times 5 = 0$
Acer rubrum	2	□ 9.	1%	FAC	Column Totals: 103 (A) 233 (B)
Nyssa sylvatica		9.	1%	FAC	CO 14MM 10 24 13 1 200 (10 22 23
		□ 0.	0%		Prevalence Index = B/A = 2.262
		=	0%		Hydrophytic Vegetation Indicators:
			0%		
* · · · · · · · · · · · · · · · · · · ·		= Total (1 - Rapid Test for Hydrophytic Vegetation
	:	- rotart	cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex glabra		54.	.1%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex corlacea	. 5		.5%	FACW	
Ilex vomitoria	1.0	√ 27,	.0%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Persea palustris	. 2	☐ 5.4	4%	FACW	be present, unless disturbed of problematic.
•	0	0.0	0%		Definition of Vegetation Strata:
	0	o.	0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 18.5 20% of Total Cover: 7.4		= Total Cover			approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m					(, 10 0.11) 0. 123 0. 111 2121110101 21 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
4	15	✓ 93.	.8%	FACW	Sapling - Woody plants, excluding woody vines,
1 , Arundinana tecta 2 , Lycopodiella alopecuroides	1		3%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
		=	_	OBL.	man 3 m. (7.6 cm) DBH.
4			0%		Sapling/Shrub - Woody plants, excluding vines, less
4			0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0,		0%		-
6,			0%		Shrub - Woody plants, excluding woody vines,
7,	0		0%		approximately 3 to 20 ft (1 to 6 m) in height.
8	0		0%		Herb - All herbaceous (non-woody) plants, including
9,	C		0%		herbaceous vines, regardless of size, and woody
0	0	0.0	0%		plants, except woody vines, less than approximately
1,	0	0.0	0%		3 ft (1 m) in height.
2	0	0.0	0%		[
50% of Total Cover: 8 20% of Total Cover: 3.2	16 =	Total C	Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m					
Smilax rotundifolia	2	50	.0%	FAC	·
Vitts rotundifolia				FAC	
	2		.0% 0%	1,40	
3	0		. ••		
			0%		Hydrophytic
	0	0.0	0%	-	Vegetation Veg (A) No (C)
50% of Total Cover: 2 20% of Total Cover: 0.8					Present? Yes V NO V

_	\sim τ	
•		

SOIL					Sampling Point: U	p - 41
Profile Descr	iption: (De	scribe to	the depth	needed to document the indicator or confir	n the absence of indicators.)	
Depth		Matrix		Redox Features		
(inches)	Color (moist)	0/0	Color (moist) % Type 1	oc² Texture Rema	rks
0-5	10YR	3/2	100			
5-15	10YR	5/4	100			
C.				W		
F		12 *				
					- N	
VA.			a			
1		- L.		1444	2	
		=Debietto	n. RM=Redu	iced Matrix, CS=Covered or Coated Sand Grains	² Location: PL=Pore Lining, M=Matrix	
Hydric Soil I					Indicators for Problematic Hydric	: Soils ³ ;
Histosol (A	•			Polyvalue Below Surface (S8) (LRR S, T	U) 1 cm Muck (A9) (LRR O)	
F**	edon (A2)			Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)	
☐ Black Histi				Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside ML	.RA 150A,B)
_	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F	20) (MLRA 153B)
_	odies (A6) (L		•	Redox Dark Surface (F6)	Red Parent Material (TF2)	
	ky Mineral (A	-	, T, U)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12))
(mm)	ence (A8) (LI			Redox Depressions (F8)	Other (Explain in Remarks)	
	k (A9) (LRR P			☐ Marl (F10) (LRR U)	0.0	
	Below Dark S	-	(1)	Depleted Ochric (F11) (MLRA 151)		
	Surface (A1	-		☐ Iron-Manganese Masses (F12) (LRR O,	, T)	
_	rie Redox (Al		-	Umbric Surface (F13) (LRR P, T, U)		
	ck Mineral (S		, S)	Delta Ochric (F17) (MLRA 151)	3 To disente un of his disente stin s	ocetatics and
	yed Matrix (S	4)		Reduced Vertic (F18) (MLRA 150A, 150) ³ Indicators of hydrophytic v wetland hydrology must l	
Sandy Red				Piedmont Floodplain Soils (F19) (MLRA		
Stripped M				Anomalous Bright Loamy Soils (F20) (M	RA 149A, 153C, 153D)	
☐ Dark Surfa	ice (S7) (LRR	P, S, T, (J)			
Restrictive La	ver (if obse	rved):				
Type:	7/17/					
	es):				Hydric Soil Present? Yes	No 💿
Remarks:						
No hydric indi	cators					

Transfer of the state of the st	City/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 42
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR T Lat:	30° 23' 44.711" N Long.: 89° 37' 11.723" W Datum: NAD83
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of yea	
Are Vegetation \square , Soil \square , or Hydrology \square significant	ly disturbed? Are "Normal Circumstances" present? Yes 🍥 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing same	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	To the Complet Associate
Hydric Soil Present? Yes O No	Is the Sampled Area
Wetland Hydrology Present? Yes ○ No ●	within a Wedand?
Remarks: NO Wet 42	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13	
High Water Table (A2) Marl Deposits (B15	
Saturation (A3) Hydrogen Sulfide C	
	eres along Living Roots (C3) Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Presence of Reduct ☐ Drift Deposits (B3) ☐ Recent Iron Reduct	
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in R	
☐ 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):	_
	Wetland Hydrology Present? Yes ○ No ④
(includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos	sy previous inspections y in available.

/Plot size: 20		e Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: _30 m) Pinus elliottii	% Cove		Status	Number of Dominant Species
	15	✓ 40.5% ✓ 27.0%	FACW	That are OBL, FACW, or FAC: 7 (A)
Nyssa sylvatica Quercus nigra	10		FAC	Total Number of Dominant
Quercus nigra	5	13.5%	FAC	Species Across All Strata: 7 (B)
Magnolia grandiflora		5.4%	FAC	Percent of dominant Species
Pinus taeda	5	13.5%	FAC	That Are OBL, FACW, or FAC: 100.0% (A/B)
ш		0.0%		
10 to 10 to	O	0.0%		Prevalence Index worksheet:
	. 0	0.0%_		Total % Cover of: Multiply by:
0% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= Total Cove	•	OBL species 0 x 1 = 0
apling or Sapling/Shrub Stratum (Plot size: 30 m	}}			FACW species 92 x 2 = 184
Pinus elliottii	10	✓ 41.7%	FACW	FAC species 42 x 3 = 126
Nyssa sylvatica	7_	✓ 29.2%	FAC	FACU species $0 \times 4 = 0$
Magnolia virginiana	5	✓ 20.8%	FACW	UPL species 0 x 5 = 0
Acer rubrum		8.3%	FAC	Column Totals: 134 (A) 310 (B)
	0	0.0%		19.00
	0	0.0%		Prevalence Index = B/A = 2.313
	0	0.0%		Hydrophytic Vegetation Indicators:
	0	0.0%		
60% of Total Cover: 12 20% of Total Cover: 4.8		= Total Cover		1 - Rapid Test for Hydrophytic Vegetation
C a	24	- TOTAL COVE		2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m.)				3 - Prevalence Index is ≤3.0 ¹
1(ex coriacea	50	83.3%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria	10	16.7%	FAC	
	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	. 0	0.0%		be present, unless disturbed or problematic.
	0	0.0%		Definition of Vegetation Strata:
	0	0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 30 20% of Total Cover: 12 erb Stratum (Plot size: 30 m) . Ilex corlacea . Arundinaria tecta	10	■ Total Cover 83.3% 16.7%	FACW FACW	(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.
	0	0.0%		
	0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	0.0%	_	Oberto 18/2 advantante avaluation considerate
Maria de la compania del compania del compania de la compania del la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania della 0	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
The state of the s		0.0%		approximately a to 20 K (* to 0 K) in the grid
V		0.0%	De e Sel V	Herb - All herbaceous (non-woody) plants, including
· ·		0.0%		herbaceous vines, regardless of size, and woody
•		0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
				o it (1 m) it neight.
	0_	0.0%		Woody vine - All woody vines, regardless of height.
0% of Total Cover: 6 20% of Total Cover: 2.4	12	= Total Cover	ĺ	Troomy file All troomy files, regardless of height,
oody Vine Stratum (Plot size: 30 m				
Vitis rotundifolia	1	100.0%	FAC	
8,70 / W		0.0%		
		0.0%		
		0.0%		
		0.0%		Hydrophytic
	_			Vegetation
0% of Total Cover: 0.5 20% of Total Cover: 0.2		= Total Cover		Present? Yes No

_		_	_
•	n	т	

SOIL					Sampling Point: Up - 42
Profile Desc	ription: (De	scribe to	the depth	needed to document the Indicator or confirm the	e absence of indicators.)
Depth		Matrix		Redox Features	
(Inches)	Color (moist)	0/6	Color (moist) % Type 1 Loc2	Texture Remarks
0-5	10YR	3/2	100		
5-15	10YR	5/3	100		
	*	•			
			_	. *	
	-		-		TOTAL TOTAL OF EXPENSES AS 1 SANT 1,2
				21.5	
					- **
-	-	-	. •		
1 Timos C—Con	accetentina D	- Donlatio	a DM_Bad	and Matrix CC Covered by Control Sand Craims 21 on	who we have being his Mahin.
Hydric Soil		=Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains ² Loc	-
Histosol (Deliver by Deliver Guide or (CO) (LDD G. T. 10)	Indicators for Problematic Hydric Soils ³ :
	(A1) ipedoπ (A2)			Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
				Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black His				Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)			Loamy Gieyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
_	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	Bodies (A6) (L		•	Redox Dark Surface (F6)	Red Parent Material (TF2)
$\overline{}$	cky Mineral (A		, T, U)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
_	sence (A8) (Li			Redox Depressions (F8)	Other (Explain in Remarks)
	ck (A9) (LRR P			Marl (F10) (LRR U)	
	Below Dark S	•	11)	Depleted Ochric (F11) (MLRA 151)	
	rk Surface (A1	•		☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
	airie Redox (A			Umbric Surface (F13) (LRR P, T, U)	
_	uck Mineral (S		, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
	eyed Matrix (S	4)		Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
Sandy Re	edox (S5)			Piedmont Floodplain Soils (F19) (MLRA 149A)	
	Matrix (S6)			Anomalous Bright Loamy Soils (F20) (MLRA 14)	49A, 153C, 153D)
Dark Surf	face (S7) (LRR	P, S, T, L	J)		
Restrictive L	ayer (if obse	:rved):			
Type:					
	:hes):				Hydric Soil Present? Yes O No 💿
Remarks:	- ,				
Soil chroma a	annoare to b	a hordari	lino 2 – 2		
SOII CHIOINA A	appears to b	e Doruei:	me 2 - 3.		

Project/Site: NASA - Stennis; 1.100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 43
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside Subregion (LRR or MLRA): LRR T Lat.:	Local relief (concave, convex, none): Slope: 1.0 % / 0.6° 30° 23' 51.321" N Long.: 89° 37' 18.476" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are Vegetation , Soil , or Hydrology naturally p	ear? Yes No (If no, explain in Remarks.) tly disturbed? Are "Normal Circumstances" present? Yes No problematic? (If needed, explain any answers in Remarks.) ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Plot is about 75 feet south-southeast of Wet-43 on side slope just up	Is the Sampled Area within a Wetland? Yes No In from the drainage area
HYDROLOGY	p nom the trainings area.
Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Trin Muck Surface Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) heres along Living Roots (C3) Dry Season Water Table (C2) Crayfish Burrows (C8) Iction in Tilled Soils (C6) E (C7) Remarks) Saturation Visible on Aerial Imagery (C9) E (C7) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U) Wetland Hydrology Present? Yes No
Remarks:	

Tree Stratum (Plot size: 30 m	Absolute % Cover		l.Strat. Cover	Indicator Status	Dominance Test worksheet:
Pinus elliottii	10		66.7%	FACW	Number of Dominant Species
Magnolia virginiana	3		20.0%	FACW	That are OBL, FACW, or FAC: 7 (A)
Nyssa sylvatica	0		0.0%		Total Number of Dominant
		H	•	FAC	Species Across All Strata: , , (B)
Pinus taeda	2	Η.	13.3%	FAC	Percent of dominant Species
	0_		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
		\sqcup	0.0%	-7	
The company of the contract of	0		0.0%	-	Prevalence Index worksheet:
	0	L.,	0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 7.5 20% of Total Cover: 3	15	= To	tal Cove	г	OBL species <u>1</u> x 1 = <u>1</u>
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 94 x 2 = 188_
Pinus elliottil	15	V	68,2%	FACW	FAC species 11 x 3 = 33
Magnolla virginiana		V	22.7%	FACW	FACU species $0 \times 4 = 0$
Magnolia grandiflora			4.5%	FAC	UPL species 0 x 5 = 0
Liquidambar styraciflua			4.5%	FAC	
	_	\Box	0.0%	1710	Column Totals: 106 (A) 222 (B)
		\Box	0.0%		Prevalence Index = B/A = 2.094
		\exists	0.0%	_	Hydrophytic Vegetation Indicators:
	0 .	Ш.	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 11 20% of Total Cover: 4.4	22	= Tol	tal Cove	г	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corfacea	10	V	21.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra		V	65.2%	FACW	
Liquidambar styraciflua	5	$\overline{\Box}$	10.9%	FAC	¹ Indicators of hydric soil and wetland hydrology mus
Bours askutt	-	$\overline{\Box}$	2.2%	FACW	be present, unless disturbed or problematic.
Persea palustris		_		TACT	Definition of Vegetation Strata:
-	0	H=	0.0%		Tree - Woody plants, excluding woody vines,
	0	Ш_	0.0%	-	approximately 20 ft (6 m) or more in height and 3 in.
60% of Total Cover: 23 20% of Total Cover: 9.2	46	= Tol	al Cove	r	(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m					
Lycopodiella alopecuroides	- 1		4.8%	OBL	Sapling - Woody plants, excluding woody vines,
. Ilex glabra		V	95.2%	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
	0	\Box	0.0%		dianonii (1.0 oni) ppii
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
To National Marketine and Williams					than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0		0.0%		
·	0	Η-	0.0%		Shrub - Woody plants, excluding woody vines,
•	. 0_	Η	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
		<u> </u>	0.0%		Horb. All horbanous (non-used) A - Is-4s in the life
· · · · · · · · · · · · · · · · · · ·		<u> </u>	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
4			0,0%		plants, except woody vines, less than approximately
<u> </u>			0.0%	6.1	3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 10.5 20% of Total Cover: 4.2	21 =	= Tot	al Cover		Woody vine - All woody vines, regardless of height.
(oody Vine Stratum (Plot size: 30 m			E0 6		
Smilax rotundifolia	1	H.	50.0%	FAC	
Vitis rotundifolia		Ц.		FAC	
	0	∐.	0.0%		
	0	<u> </u>	0.0%		No described to
	0		0.0%		Hydrophytic Vegetation
		T-4	al Cover		Present? Yes No O
0% of Total Cover: 1 20% of Total Cover: 0.4	2 =	= OT	OI CHAC:		

SOIL Sampling Point: Up - 43 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) % Color (moist) Loc2 **Texture** Remarks 0-4 10YR 100 4-15 3/2 Loamy Sand 10YR 100 Loamy Sand 4-15 5/3 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soll Indicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) ☐ Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) ☐ Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (\$7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Yes 🔾 No 💿 **Hydric Soil Present?** Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	ity/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 44
	Section, Township, Range: S 37 T 7s R 16 W
	ocal relief (concave, convex, none): none Slope: 1.0 % / 0.6°
	0° 23' 47.297" N Long.: 89° 37' 20.892" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation . , Soil . , or Hydrology . significantly	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally pro	
SUMMARY OF FINDINGS - Attach site map showing sam	(2. datasa, sapana anj anatona antana,
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes ○ No ⑥	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes O No 🏵
Remarks:	NA - autica - af the averall AOT
Transect between Northwest-Southeast trending site road within the S	w portion of the overall AO1.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (86)
Surface Water (A1) Aquatic Fauna (B13)	
High Water Table (A2) Marl Deposits (B15)	
☐ Saturation (A3) ☐ Hydrogen Sulfide Odi	= • • • • •
	es along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	
☐ Drift Deposits (B3) ☐ Recent Iron Reduction	
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C	
☐ Iron Deposits (B5) ☐ Other (Explain in Ren	
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 O No O Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes O No 💿
(- Control of the Cont
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	
	i

Tree Stratum (Plot size: _30 m)	% Cove		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii	20	V	51.3%	FACW	Number of Dominant Species That are ORL FACAL or FAC. 7 (A)
	5		12.8%	FAC	That are OBL, FACW, or FAC:7 (A)
41					Total Number of Dominant
	10		25.6%	FACW	Species Across Ali Strata: 7 (B)
4 Magnolia grandiflora			7.7%	FAC	Percent of dominant Species
Nyssa sylvatica		Η.	2.6%	FAC	That Are OBL, FACW, or FAC: 100.0% (A/B)
5			0.0%		
7.	0	Щ,	0.0%		Prevalence Index worksheet:
3.	0	Щ	0.0%	2	Total % Cover of: Multiply by:
50% of Total Cover: 19.5 20% of Total Cover: 7.8	39	= To	otal Cove	r	OBL species 0 x 1 = 0
Saping or Sapling/Shrub Stratum (Plot size: 30 m	}				FACW species 83 x 2 = 166
Pinus elliottii	15	V	62.5%	FACW	FAC species $25 \times 3 = 75$
2 Magnolia virginiana	5		20.8%	FACW	FACU species $0 \times 4 = 0$.
3. Liquidambar styraciflua	3		12.5%	FAC	
		Ξ,	4.2%	FAC	ort species X 3 =
	-			FAC	Column Totals: 108 (A) 241 (B)
5.			0.0%		Prevalence Index = B/A = 2.231
)			0.0%		
7	0	\square	0.0%		Hydrophytic Vegetation Indicators:
3. , , , , , , ,	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 12 20% of Total Cover: 4.8	24	= To	tal Cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
	20		F2 60/	F45341	
Ilex coriacea	20		52.6%		Problematic Hydrophytic Vegetation 1 (Explain)
2 Ilex vomitoria		✓.	26.3%	FAC	
Vaccinium elliottii		\sqcup	13,2%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
. Ilex glabra	3	Ц,	7.9%	FACW	<u></u>
)	0		0.0%		Definition of Vegetation Strata:
3.			0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 19 20% of Total Cover: 7.6 Herb Stratum (Plot size: 30 m)	38	= To	tal Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Ilex glabra	5	V	100.0%	FACIN	Sapling - Woody plants, excluding woody vines,
			0.0%	1 MCAA	approximately 20 ft (6 m) or more in height and less
2.	•				than 3 in. (7.6 cm) DBH.
3	0		0.0%		Carling/Claude Mande and disputer than Jaco
4	0	Ш.	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	Ш.	0.0%		and one por and ground mar 5.25 it (m) tun.
6.	0		0.0%		Shrub - Woody plants, excluding woody vines,
7,	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8	0		0.0%		
9. ,	0		0.0%		Herb - All herbaceous (non-woody) plants, including
0	0		0.0%		herbaceous vines, regardless of size, and woody
1.	0	$\overline{\Box}$	0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
2.		H		-	on the management
- 9.9.1.1	0,	<u>.</u>	0.0%		Woody vine - All woody vines, regardless of height.
50% of Total Cover: 2.5 20% of Total Cover: 1 Woody Vine Stratum (Plot size: 30 m)	5:	- 10	tai Cover		
	2	П	100.0%	FAC	
•	-	\vdash	0.0%		
To many restriction of the contract of the con		님.			
			0.0%		
			0.0%		Hydrophytic
	<u>0</u>		0.0%		Hydrophytic Vegetation
50% of Total Cover: 1 20% of Total Cover: 0.4	2 :	= Tot	tal Cover		Present? Yes No O

S 1	

SOIL				Sampling Point: Up - 44
Profile Desc	ription: (Describe to	the depth	needed to document the indicator or confirm	n the absence of indicators.)
Depth	Matrix		Redox Features	
(inches)	Color (moist)	0/0	Color (moist) % Type 1 L	oc² Texture Remarks
0-5	10YR 4/2	100		Loamy Sand
5-16	10YR 5/3	100		Loamy Sand
•		-		
	.* 6			
			-	
¹ Type: C=Con	centration. D=Depletic	on. RM= R edu	ced Matrix, CS=Covered or Coated Sand Grains	² Location: PL=Pore Lining. M=Matrix
Hydric Soil 1	Indicators:			Indicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Below Surface (S8) (LRR S, T,	
Histic Epi	pedon (A2)		☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Hist	tic (A3)		Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)		Depleted Matrix (F3)	_
	Bodies (A6) (LRR P, T,	U)	Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	ky Mineral (A7) (LRR I	•	Depleted Dark Surface (F7)	Red Parent Material (TF2)
	sence (A8) (LRR U)	, -, -,	Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12) ☐ Transport of the Property of the Proper
_	k (A9) (LRR P, T)		Marl (F10) (LRR U)	Other (Explain in Remarks)
	Below Dark Surface (A	(11)	Depleted Ochric (F11) (MLRA 151)	
_ :	k Surface (A12)	,	☐ Iron-Manganese Masses (F12) (LRR O, P.	T)
	irie Redox (A16) (MLR	A 150A)	Umbric Surface (F13) (LRR P, T, U)	, 1)
	ick Mineral (S1) (LRR (•		
	eyed Matrix (S4)	J, J)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
Sandy Re			Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
	Matrix (S6)		Piedmont Floodplain Soils (F19) (MLRA 14	·
	ace (S7) (LRR P, S, T,	IIV	Anomalous Bright Loamy Soils (F20) (MLI	RA 149 A, 153C, 153U)
Dark Surie	ace (57) (BREF, 5, 1,	u)		
				
Restrictive La	ayer (if observed):			
Type:			?	Market Call Bureauth Van Co. Mar (6)
Depth (incl	hes):			Hydric Soil Present? Yes No 💿
Remarks:				

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland -	- Hancock Sampling Date: 25-Oct-	-16
Applicant/Owner: NASA	State: MS	Sampling Point: Up - 45	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Ran	nge: 5 37 T 7s R 16W	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, con	The contract of the contract o	o 6°
	, ,		
10 M 1 T 1 M 1 M 1	30° 23' 44.917" N	6 1 1 30 10 10 10 1 1 1 1 1 1 1 1 1 1 1 1	
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	<u> </u>	NWI classification: N/A	
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 💿 No 🤇	(
Are Vegetation . , Soli . , or Hydrology . significant	tly disturbed? Are "N	lormal Circumstances" present? Yes 🍳 No 🔾	
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (If ne	eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locatio	ons, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes No O	7-W-6I-4	1	
Hydric Soil Present? Yes ○ No •	Is the Sampled A	area da Yes ○ No ●	
Wetland Hydrology Present? Yes ○ No ●	within a Wetland	d? Tes > No S	
Remarks:	<u></u>		
plot is near disturbed area previously impacted by (apparently) hear	vv equipment use.		
, , , , , , , , , , , , , , , , , , , ,	.,		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)	
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1) Aquatic Fauna (B1	13)	☐ Sparsely Vegetated Concave Surface (B8)	
☐ High Water Table (A2) ☐ Marl Deposits (B1	5) (LRR U)	☐ Drainage Patterns (B10)	
Saturation (A3) Hydrogen Sulfide	Odor (C1)	Moss Trim Lines (B16)	
Water Marks (B1) Oxidized Rhizosph	eres along Living Roots (C3)	Dry Season Water Table (C2)	
Sediment Deposits (82)	ced Iron (C4)	Crayfish Burrows (C8)	
Drift Deposits (B3)	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4) Thin Muck Surface	e (C7)	Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Other (Explain In I	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 O No O Depth (inches):			
Water Table Present? Yes O No O Depth (inches):			
Saturation Present? (includes capillary frince) Yes No Depth (inches):		d Hydrology Present? Yes 🔾 No 🍑	
Describe Recorded Data (stream gauge, monitoring well, aerial photo		if availables	
bescribe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), i	it available:	
Remarks:			
			i
			- 1

	ee Stratum (Plot size: 30 m)	Absolute % Cover		el.Strat. Cover	Indicator Status	Dominance Test worksheet:		
	ree Stratum (Plot size: 30 m)	18	V			Number of Dominant Species		
1.	A TO THE SECOND	. 15		55.6%	FACW	That are OBL, FACW, or FAC:5(A)		
2.	Nyssa sylvatica	5	H	18.5%	FAC	Total Number of Dominant		
3.	Magnolla virginiana	. 5	님	18.5%	FACW	Species Across All Strata: 5 (B)		
4.	Magnolia grandiflora	<u>2</u>	Η,	7.4%	FAC	Pargent of deminant Charles		
5.			님	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)		
6.	W-114		Щ,	0.0%		That it is a second of the sec		
7.	The second secon	0_	Щ	0.0%		Prevalence Index worksheet:		
8.		0	Ш,	0.0%		Total % Cover of: Multiply by:		
5	0% of Total Cover: 13.5 20% of Total Cover: 5.4	27 =	= To	otal Cove	r	OBL species $1 \times 1 = 1$		
Sē	pling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 59 x 2 = 118		
1.	Pinus elliottii	10	V	52.6%	FACW	FAC species 24 x 3 = 72		
2.	Nyssa sylvatica	5	V	26.3%	FAC	FACU species $0 \times 4 = 0$		
3.	Magnolia virginiana			15.8%	FACW	UPL species $0 \times 5 = 0$		
4.	Liquidambar styraciflua			5.3%	FAC	(0)		
5.		0	\Box	0.0%		Column Totals: 84 (A) 191 (B)		
6.		0		0.0%		Prevalence Index = $B/A = 2.274$		
7.			\Box	0.0%		Hydrophytic Vegetation Indicators:		
8.		0		0.0%				
			ш,	-		1 - Rapid Test for Hydrophytic Vegetation		
50	0% of Total Cover: 9.5 20% of Total Cover: 3.8	19 =	= То	tal Cove	r	✓ 2 - Dominance Test Is > 50%		
Sh	rub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹		
1.	Ilex coriacea	15	V	42.9%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
2.	Ilex glabra	10	V	28.6%	FACW			
3.	Ilex vomitoria			14.3%	FAC	¹ Indicators of hydric soil and wetland hydrology must		
4.	Ilex opaca	2		5.7%	FAC	be present, unless disturbed or problematic.		
5.	Liquidambar styracifiua	3	Π.	8.6%	FAC	Definition of Vegetation Strata:		
6.		0	\exists	0.0%	N. S. S. S. S. S. S. S. S. S. S. S. S. S.	Tree - Woody plants, excluding woody vines,		
	0% of Total Cover: 17.5 20% of Total Cover: 7	* • * *	 - To	tal Cove	i Is	approximately 20 ft (6 m) or more in height and 3 in.		
			- 10	COTE		(7.6 cm) or larger in diameter at breast height (DBH).		
He	erb Stratum (Plot size: 30 m)					Sapling - Woody plants, excluding woody vines,		
1	Hypericum cistifolium	1	Ω,	50.0%	FACW	approximately 20 ft (6 m) or more in height and less		
2	Lycopodiella alopecuroides	1		50.0%	OBL	than 3 in. (7.6 cm) DBH.		
3		0		0.0%				
4	V	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less		
5		0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.		
6	•	0		0.0%		Shrub - Woody plants, excluding woody vines,		
7		0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.		
		0		0.0%				
9		0		0.0%		Herb - All herbaceous (non-woody) plants, including		
		-		0.0%		herbaceous vines, regardless of size, and woody		
11.		0		0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.		
12.		0	Н	0.0%	-	o it (1 til) it. Holgita		
		-			-	Woody vine - All woody vines, regardless of height.		
	% of Total Cover: 1 20% of Total Cover: 0.4	=	: To	tal Cover	·	Troody tillo , in troody tillog rogardioco or no.g.iii		
Wo	oody Vine Stratum (Plot size: 30 m				ļ			
1.	Vitis rotundifolia	1		100.0%	FAC			
2.	······································	0		0.0%				
 3.		0		0.0%				
4.		0		0.0%				
т. 5.		0		0.0%		Hydrophytic		
	W of Total Course O.S. 2007 of Total Course O.3		T-4	-,-,	,	Vegetation Present? Yes No		
50	% of Total Cover: 0.5 20% of Total Cover: 0.2		10	tal Cover				
	arks: (If observed, list morphological adaptations below). Cator suffix = National status or professional decision assigned because Re		_ 4 _ 4	Sand by Si	ue.			

SOIL			Sampling Point: Up - 45
Profile Desc	ription: (Describe to the dep	oth needed to document the indicator or confirm the	e absence of Indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist) %	Color (moist) % Type 1 Loc2	Texture Remarks
0 - 5	10YR 4/2 100		Loamy Sand
5-15	10YR 5/4 100		Loamy Sand
		X 1	
	ON 13 WOW NOT A STREET, SALES		Son. : Smearace
ψ. •			
**			
			7.1
	assistant D. Daulatian DM D	Andread Matter, CC, Council of Control Control Control	antino. Di Dave lisian M Matrix
Type: C=Con Hydric Soil 1		deduced Matrix, CS=Covered or Coated Sand Grains 2Loc	
Histosol (Dolatelus Bolow Strface (SS) (LDD C. T. II)	Indicators for Problematic Hydric Solis ³ :
	pedon (A2)	☐ Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Black Hist	· · ·	☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
_		Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	lodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Red Parent Material (TF2)
5 cm Muc	ky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
Muck Pres	sence (A8) (LRR U)	Redox Depressions (F8)	Other (Explain in Remarks)
1 cm Muc	k (A9) (LRR P, T)	Mari (F10) (LRR U)	
Depleted	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dari	k Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P, T)	
_	irie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
_	ick Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	
	eyed Matrix (S4)		³ Indicators of hydrophytic vegetation and
	• •	Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
Sandy Red	• •	Piedmont Floodplain Soils (F19) (MLRA 149A)	•
	Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA 14	49A, 153C, 153D)
Dark Surfi	ace (S7) (LRR P, S, T, U)		
			1
	ayer (if observed):		
Type:	- · · · · · · · · · · · · · · · · · · ·		Hydric Soil Present? Yes No
Depth (incl	nes):	н	Hydric Soil Present? Yes No 💿
Remarks:			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hanco	ock Sampling Date: 26-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Up - 47
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, n	Control of the contro

tick to the second of the seco		J.: 89° 37′ 44.011″ W Datum: NAD83
Soil Map Unit Name: EuB, Escambia loamy fine sand, 2 to 5 percent s		NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes No O	(If no, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal	Circumstances" present? Yes ● No ○
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (If needed, o	explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, t	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes No		******
Hydric Soil Present? Yes O No •	Is the Sampled Area	Yes ○ No ⑨
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?	res o no o
Remarks:		
Sideslope approximately 60–70 feet up from Wet - 47.		
HYDROLOGY	· ·····	
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B.	13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1	5) (LRR U)	☐ Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	Odor (C1)	Moss Trim Lines (B16)
	neres along Living Roots (C3)	Dry Season Water Table (C2)
Sediment Deposits (B2)	· ·	Crayfish Burrows (C8)
	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	• •	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in	Remarks)	Shallow Aquitard (D3)
☐ 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):		
	0.00	
Water Table Present? Yes No Depth (inches):		rology Present? Yes O No 💿
Saturation Present? Yes No Depth (inches):	Wedana nya	ology Fiesence Fes O No O
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if avail	able:
Remarks:	<u> </u>	

Tree Stratum (Plot size: 30 m)	Absolute		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
		V			Number of Dominant Species
Pinus elliottii Nyssa sylvatica	10 5	V	31.3%	FACW	That are OBL, FACW, or FAC: 8 (A)
2 Magnalia grandiflora			6.3%	FAC	Total Number of Dominant
A 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	•		0.0%	FAC	Species Across All Strata: 8 (B)
-	,	H	0.0%	1414 9941 1	Percent of dominant Species
<u> </u>	-	H			That Are OBL, FACW, or FAC: 100.0% (A/B)
5.	•		0.0%	Charles IV	
(· · · · · · · · · · · · · · · · · · ·			0.0%		Prevalence Index worksheet:
3.	_ 0	Ш,	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 8 20% of Total Cover: 3.2		= Tc	otal Cove	r	OBL species 0 x 1 = 0 FACW species 28 x 2 = 56
Sapling or Sapling/Shrub Stratum (Plot size: 30 m			7.404	F1.00.11	
Pinus elliottii	<u> </u>		7.1%	FACW	FAC species
Nyssa sylvatica				FAC	FACU species $0 \times 4 = 0$
3 Ilex opaca			35.7%	FAC	UPL species 0 x 5 = 0
Magnolia grandiflora		V	35.7%	FAC	Column Totals: 104 (A) 284 (B)
	0	Н,	0.0%		Prevalence Index = B/A = 2.731
·	0		0.0%		<u> </u>
	0	Щ	0.0%		Hydrophytic Vegetation Indicators:
****	- 0	\square	0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 7 20% of Total Cover: 2.8	14:	= To	otal Cove	r	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					☑ 3 - Prevalence Index is ≤3.0 ¹
Ilex vomitoria	50	✔,	79.4%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex coriacea	10		15.9%	FACW	
3. Vaccinium elliottii	2		3.2%	FACW	Indicators of hydric soil and wetland hydrology must
Quercus nigra	1		1.6%	FAC	be present, unless disturbed or problematic.
5.	0		0.0%		Definition of Vegetation Strata:
5.	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 31.5 20% of Total Cover: 12.6	63 :	- To	tal Cove		approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 m					(7.6 cm) or larger in diameter at breast height (DBH).
	le i	V	100 001	E4.0011	Sapling - Woody plants, excluding woody vines,
1, Ilex corlacea			100.0%	FACW	approximately 20 ft (6 m) or more in height and less
2.			0.0%		than 3 in. (7.6 cm) DBH.
3	<u></u>	Η.	0.0%		Continui/Charle 18/22 de alordo escaledino vinos loss
4		H	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	H	0.0%		3 (,
6	0	H	0.0%		Shrub - Woody plants, excluding woody vines,
7		H	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8			0.0%		Harb All harbanania (san umadis) elegate includio
9.			0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
0		Ц.	0.0%		plants, except woody vines, less than approximately
1	0	Ш.	0.0%		3 ft (1 m) in height.
2	0	\Box	0.0%		
50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= To	tal Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m				Ĺ	
Lygodium japonicum	5	✓.	83.3%	FAC	
Vitis rotundifolia	1		16.7%	FAC	
			0.0%		
			0.0%		
	0		0.0%		Hydrophytic
		= Tot	tal Cover		Vegetation Present? Yes No ○
50% of Total Cover: 3 20% of Total Cover: 1.2	D =				

OIL			Sampling Point: Up - 47
rofile Descr	iption: (Describe to the	depth needed to document the indicator or confirm the	e absence of indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist)	% Color (moist) % Type ¹ Loc²	Texture Remarks
0-5	10YR 4/2 10		
5-15	10YR 6/4 10	0	
			Total
		. I BERE . CR PROCESS DRIFT TO A 1 F.	
	,		
		W 1.	·
ne. C=Con	rentration, D=Cenletion, RN	=Reduced Matrix, CS=Covered or Coated Sand Grains ² Loc	ration' PI =Pore Lining M≂Matrix
ydric Soil I		The state of the s	
Histosol (/		Polyvalue Below Surface (S8) (LRR S, T, U)	Indicators for Problematic Hydric Soils ³ :
	pedon (A2)	☐ Thin Dark Surface (S9) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Black Histi		Loamy Mucky Mineral (F1) (LRR O)	2 cm Muck (A10) (LRR S)
	Sulfide (A4)	Loamy Gleyed Matrix (F2)	Reduced Vertic (F18) (outside MLRA 150A,B)
_	Layers (A5)	Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	odies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	ky Mineral (A7) (LRR P, T, L	• •	Red Parent Material (TF2)
	ence (A8) (LRR U)	Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12) ☐ Transport of the Property of the Proper
	k (A9) (LRR P, T)	Marl (F10) (LRR U)	Other (Explain in Remarks)
1	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
	Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
	rie Redox (A16) (MLRA 150		
	ck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	
,	yed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Red		Piedmont Floodplain Soils (F19) (MLRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
Stripped M	latrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA 14	
Dark Surfa	ice (S7) (LRR P, S, T, U)		,,
	yer (if observed):		
Type:	- 1	VI	Hydric Soil Present? Yes No No
Depth (inch	es):		Hydric soil Present! Yes O NO O
marks:			

Are Vegetation , Soil , or Hydrology naturally p	City/County: Waveland - Hancock Sampling Date: 26-Oct-16 State: MS Sampling Point: Up - 48 Section, Township, Range: S 20 T 7 s R 16 W Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 ° 30° 25' 1.579" N Long.: 89° 37' 6.912" W Datum: NAD83 NWI classification: N/A var? Yes No (If no, explain in Remarks.) tly disturbed? Are "Normal Circumstances" present? Yes No problematic? (If needed, explain any answers in Remarks.) tmpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No Remarks:	Is the Sampled Area within a Wetland? Yes No No
Sediment Deposits (B2)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) Dry Season Water Table (C2) Code Iron (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) E (C7) Geomorphic Position (D2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photo	Wetland Hydrology Present? Yes ○ No ④

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

Species? Absolute Rel.Strat. Indicator Tree Stratum (Plot size: 30 m) % Cover Cover Status Number of Dominant Species 1 Pinus elliottii 15 **V** 75.0% FACW That are OBL, FACW, or FAC: 6 (A) ____5 Magnolia virginiana 25.0% Total Number of Dominant 3. 0 0.0% (B) Species Across All Strata: 6 0 0.0% Percent of dominant Species 5. _________ 0.0% 100.0% (A/B) That Are OBL, FACW, or FAC: 6. ______0 0.0% 7. Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by: 50% of Total Cover: 10 20% of Total Cover: 4 20 $0 \times 1 = 0$ = Total Cover OBL species FACW species _110 x 2 = Sapling or Sapling/Shrub Stratum (Plot size: 30 m Pinus elilottii 10 10 x 3 = FAC species 2. Magnolla virginiana 10 $0 \times 4 = 0$ 50.0% FACW FACU species 3. 0 0.0% 0. x 5 = 0 UPL species 0 Column Totals: 120 (A) 5. 0 0.0% Prevalence Index = B/A = 2-083 6. 0 0.0% Hydrophytic Vegetation Indicators: 0 0.0% 8. 0 ✓ 1 - Rapid Test for Hydrophytic Vegetation 50% of Total Cover: 10 20% of Total Cover: 4 20 = Total Cover ✓ 2 - Dominance Test is > 50% Shrub Stratum (Plot size: 30 m) 3 - Prevalence Index is ≤3.0 ¹ 1 Ilex corlacea 60 85.7% FACW Problematic Hydrophytic Vegetation ¹ (Explain) 2. Ilex vomitoria 10 14.3% ¹ Indicators of hydric soil and wetland hydrology must 3. _____ 0 0.0% be present, unless disturbed or problematic. 4. 0 0.0% 5. Definition of Vegetation Strata: 0.0% ___0 6. 0 Tree - Woody plants, excluding woody vines, 0.0% approximately 20 ft (6 m) or more in height and 3 in. 50% of Total Cover: 35 20% of Total Cover: 14 70 = Total Cover (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum (Plot size: 30 m) Sapling - Woody plants, excluding woody vines, 10 ✓ 100.0% FACW approximately 20 ft (6 m) or more in height and less 0 0.0% than 3 in. (7.6 cm) DBH. 0 0.0% Sapling/Shrub - Woody plants, excluding vines, less 0 0.0% than 3 in. DBH and greater than 3.28 ft (1m) tall. 0.0% 0.0% Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 8.______0 0.0% Herb - All herbaceous (non-woody) plants, including 9. _______ 0.0% herbaceous vines, regardless of size, and woody 10. _____0 plants, except woody vines, less than approximately 3 ft (1 m) in height, 11.__ 0.0% 0 12. 0.0% 0 Woody vine - All woody vines, regardless of height. 50% of Total Cover: 2 10 = Total Cover Woody Vine Stratum (Plot size: 30 m 0 3. _______ 0.0% 4. __ Hydrophytic _____0 0.0% Vegetation Yes

No Present? 50% of Total Cover: 0 20% of Total Cover: 0 0 = **Total Cover** Remarks: (If observed, list morphological adaptations below). *Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Domlnant

Up - 48

Sampling Point:

~	•	

DIL									Sampling Point: Up - 48
rofile Desc	ription: (De:	scribe to	the depth	needed to doci	ıment ti	he Indic	ator or co	onfirm the	absence of indicators.)
Depth		Matrix		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Redo	x Featu			
(inches)	Color (moist) %			Color (moi	st)	.%	Type 1	Loc2	Texture Remarks
0-3	10YR	3/2	100						Loamy Sand
3-11	10YR	4/2	99	10YR	6/6	1	С	М	Loamy Sand
11-20	10YR	5/3	99	10YR	6/6	1	С	М	Loamy Sand
	- A4000. TODA - 400		k (&	Maria . per	con. compar 3:	: 80004 1841'4	x + 1.5		C S Sand
			_						
	centration. D	=Depletio	n. RM=Redi	uced Matrix, CS=0	Covered o	or Coate	d Sand Gr	ains ²Loca	ation: PL=Pore Lining. M=Matrix Indicators for Problematic Hydric Soils ³ :
Histosol (Polyvali	ie Below	Surface	(S8) (LRR	S. T. U)	
,	pedon (A2)			•			LRR S, T, I		☐ 1 cm Muck (A9) (LRR O) ☐ 2 cm Muck (A10) (LRR S)
Black His							1) (LRR 0)		Reduced Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)				Gleyed M				Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)				d Matrix	-	•		
	Rodies (A6) (L	RR P, T, L	J)		Dark Surfi				☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B) ☐ Red Parent Material (TF2)
5 cm Muc	cky Mineral (A	7) (LRR P	, T, U)		d Dark S	• •			_
	sence (A8) (L				Depressio		,		Usery Shallow Dark Surface (TF12)
	k (A9) (LRR F			_	(LRR	. ,			Uther (Explain in Remarks)
	Below Dark S		11)				ILRA 151)		
•	k Surface (A1	•	,				(F12) (LRF	7.00	
	•	•	150A)		_				
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)									
Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)						³ Indicators of hydrophytic vegetation and			
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)						wetland hydrology must be present,			
✓ Sandy Redox (S5)						unless disturbed or problematic.			
		. D. C. T. I	15	Anomale	ous Brigh	it Loamy	Soils (F20) (MLRA 149	9A, 153C, 153D)
Dark Surt	ace (S7) (LRR	(P, S, 1, t	J)						
strictive L Type:	ayer (if obse	erved):							
	hes):								Hydric Soil Present? Yes No
marks:	nes):				*				
	redox preser	nt below	10-inches	. Low chroma	soil (<2	!), but b	egins to	brighten sl	lightly with depth.

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 26-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 49
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 20 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
	30° 25' 1.706" N Long.: 89° 37' 1.780" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	
	tly disturbed? Are "Normal Circumstances" present? Yes No O
	problematic? (If needed, explain any answers in Remarks.)
	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No Remarks: East to west Transect point approximately 500-600 feet south of account in the south of account in the south of account in the south of account in the south of account in the south of account in the south in the s	Is the Sampled Area within a Wetland? Yes No ccess path along northeast property fenceline.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Trin Muck Surface Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) Drees along Living Roots (C3) Dry Season Water Table (C2) Ced Iron (C4) Crayfish Burrows (C8) Ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) e (C7) Geomorphic Position (D2)
Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): No Depth (inches): Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	Wetland Hydrology Present? Yes No No
Remarks:	

			ominant pecles? _		Sampling Point: Up - 49
10t-12t-12a	Absolute	R	el.Strat.	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m)	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii	15	V	65.2%	FACW	That are OBL, FACW, or FAC: 6 (A)
Magnolia virginiana	5	V	21.7%	FACW	Total Number of Dominant
Acer rubrum	2_	Ш	8.7%	FAC	Species Across All Strata: 6 (B)
Quercus nigra	. 1		4.3%	FAC	Barret of devisions Charles
		Ц	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
TWO MENTS			0.0%		That the Gold (Monty of Monty)
	0	Ш	0.0%		Prevalence Index worksheet:
	0	Ш	0.0%		Total % Cover of Multiply by:
60% of Total Cover: 11.5 20% of Total Cover: 4.6	23	= To	otal Cove	r	OBL species 0 x 1 = 0
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 91 x 2 = 182
Pinus elliottii	5		18.5%	FACW	FAC species 20 x 3 = 60
Magnolia virginiana	10	V	37.0%	FACW	FACU species $0 \times 4 = 0$
Acer rubrum	_	V	25.9%	FAC	UPL species $0 \times 5 = 0$
Quercus nigra			18.5%	FAC	Column Totals: 111 (A) 242 (B)
	0		0.0%		
*	0		0.0%		Prevalence Index = B/A = 2.180
	^		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%	×1>	A Bould Took for Understanding
50% of Total Cover: 13.5 20% of Total Cover: 5.4		- Te	tal Cove	,	1 - Rapid Test for Hydrophytic Vegetation
	-2/	10	ocai corci	•	✓ 2 - Dominance Test Is > 50%
hrub Stratum (Plot size: 30 m	-227				✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea		Y	90.9%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria			9.1%	FAC	1
	0		0.0%		¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
	0	Щ	0.0%		<u> </u>
	0	\sqcup	0.0%		Definition of Vegetation Strata:
			0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 27.5 20% of Total Cover: 11	55	= To	tal Cove	r	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m)					
, Ilex coriacea	5	\checkmark	100.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
	0		0.0%		than 3 in. (7.6 cm) DBH.
	0		0.0%		, ,
	0		0.0%		Sapiing/Shrub - Woody plants, excluding vines, less
· · · · · · · · · · · · · · · · · · ·	0		0.0%	•	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	\Box	0.0%		Charle Woody plants evaluating woody vines
No. 17 and 18 an	0		0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
			0.0%		
).			0.0%		Herb - All herbaceous (non-woody) plants, including
	_		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
	0	$\overline{\Box}$	0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
**************************************	0		0.0%	-	· · · · · · · · · · · · · · · · · ·
60% of Total Cover: 2.5 20% of Total Cover: 1	-	_ To	tal Cover		Woody vine - All woody vines, regardless of height.
	3	- 10	ai Cuver		
oody Vine Stratum (Piot size: 30 m					
	_ 1	닏.	100.0%	FACW	
<u> </u>		닏.	0.0%		
Smilax iaurifolia	•	\square	0.0%		
	0			,	r i i i i i i i i i i i i i i i i i i i
	0		0.0%		Hadronbatic
Smilax laurifolia			0.0%		Hydrophytic Vegetation Present? Yes No

Sampling Point: Up - 49 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) Loc2 Color (moist) % **Texture** Remarks 0-3 10YR 3/2 100 Loamy Sand 3-12 10YR 4/2 99 10YR D М Loamy Sand 6/2 12-20 10YR 5/3 99 10YR 6/2 1 D М Loamy Sand ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location; PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleved Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, ✓ Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Hydric Soil Present? Yes ● No ○ Depth (inches): Remarks: Very sandy - loamy soil, dry, crumbly texture - seems to have good draining capacity. Some slight evidence of redox, but not much.

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 26-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 50
Investigator(s): Lars Larson. Randy Ellis	Section, Township, Range: S 21 T 7 s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 59.955" N Long.: 89° 36' 38.830" W Datum: NAD83
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes No (If no, explain in Remarks.)
	tly disturbed? Are "Normal Circumstances" present? Yes No
	problematic? (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 No No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks:	Is the Sampled Area within a Wetland? Yes No chanell/drainage cut that was made apparently to drain/convey surface water
away (to the south) from the upland flat for logging puporses. HYDROLOGY	and the state of t
Sediment Deposits (B2)	Drainage Patterns (B10) Odor (C1) Moss Trim Lines (B16) Dry Season Water Table (C2) ced Iron (C4) Crayfish Burrows (C8) ction in Tilled Soils (C6) E (C7) Remarks) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnurn moss (D8) (LRR T, U) Wetland Hydrology Present? Yes No
Remarks:	

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

Dominant Sampling Point: Up - 50

т.	ee Stratum (Plot size: 30 m)	Absolute % Cover	Re	pecies? _ el.Strat. Cover	Indicator Status	Dominance Test worksheet:	
1.	Pinus elliottii	20	V	74.1%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)	
ı. 2.	No.			11.1%	FAC	That are OBL, FACW, or FAC:	
z. 3.	Manage Ma		Η,	7.4%	FACW	Total Number of Dominant	
٥. 4.	Bosses and advantage and		\exists	7.4%	FACU	Species Across All Strata: 7 (B)	
4. 5.	Quercus virginiana	0	Η.	0.0%	TACO	Percent of dominant Species	
5. 6.			一	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)	
о. 7.	•	1.00	\exists	0.0%	34	Barrelous Valence Hebret	
7. 8.	Control of the contro	0		0.0%		Prevalence Index worksheet:	
	0% of Total Cover: 13.5 20% of Total Cover: 5.4	-	, 	tal Cove		Total % Cover of: Multiply by: OBL species 0 x 1 = 0	
			= 10	Ital Cove			
	pling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species $50 \times 2 = 100$	
1.	Pinus elliottii		님	13.3%	FACW	FAC species $42 \times 3 = 126$	
2.	Magnolla virginiana		⊌.	33.3%	FACW	FACU species $\frac{2}{x}$ $x = \frac{8}{x}$	
3.	Nyssa sylvatica		✓	33.3%	FAC	UPL species $0 \times 5 = 0$	
4.	Quercus nigra	3	✓.	20.0%	FAC	Column Totals: 94 (A) 234 (B)	
5.	* ·			0.0%		Prevalence Index = B/A = 2.489	
3.				0.0%		Hydrophytic Vegetation Indicators:	
7.			Η.	0.0%		nydrophytic vegetation indicators:	
3.		0	Ш.	0.0%		1 - Rapid Test for Hydrophytic Vegetation	
50	% of Total Cover: 7.5 20% of Total Cover: 3	15 :	= To	tal Cove	•	✓ 2 - Dominance Test is > 50%	
Sh	rub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹	
1.	Ilex vomitoria	30	V	73.2%	FAC	Problematic Hydrophytic Vegetation 1 (Explain)	
2.	Ilex corlacea		V	24.4%	FACW		
3.	Ilex cassine	1		2.4%	FACW	¹ Indicators of hydric soil and wetland hydrology must	
4.	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			0.0%		be present, unless disturbed or problematic.	
5.	· · · · · · · · · · · · · · · · · · ·	C	П ["]	0.0%	. ,	Definition of Vegetation Strata:	
3.	· · · · · · · · · · · · · · · · · · ·	0	\Box	0.0%		Tree - Woody plants, excluding woody vines,	
50	% of Total Cover: 20.5 20% of Total Cover: 8.2	41 =	= To	tal Cover	14	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
He	rb Stratum (Plot size: 30 m)					Continue Manager and a supplication considers and	
	Ilex corlacea	10	✓	100.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
2.		0	\Box_{i}	0.0%		than 3 in. (7.6 cm) DBH.	
3.		0		0.0%			
4.	2 14 Mer. 215 - 21	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less	
5.		0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.	
6.	er . 19. arr	0		0.0%		Shrub - Woody plants, excluding woody vines,	
7.		C		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.	
	ANNEL ANNUALISM THERE I ALIGNES SANDARS SHARLES	0		0.0%			
9.		C		0.0%		Herb - All herbaceous (non-woody) plants, including	
0.		0		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately	
11.		0		0.0%		3 ft (1 m) in height.	
2.		0		0.0%			
	% of Total Cover: 5 20% of Total Cover: 2	10 =	= Tot	tal Cover		Woody vine - All woody vines, regardless of height.	
w	ody Vine Stratum (Plot size: 30 m						
	Smilax rotundifolia	1		100.0%	EAC		
			긁.	0.0%	IAC		
			H				
			H	0.0%			
		0		0.0%		Hydrophytic	
5				0.0%		Vegetation	
50% of Total Cover: 0.5 20% of Total Cover: 0.2		<u>i</u> =	i = Total Cover			Present? Yes No O	
	arks: (If observed, list morphological adaptations below). ry pine layer.						

OIL					Sampling Point: Up - 50
rofile Desci	iption: (Des	cribe to	the depth	needed to document the indicator or confirm t	he absence of indicators.)
Depth		Matrix		. Redox Features	NE .
(inches)	Çolor (ı	molst)_	%	Color (moist) % Type ¹ Loc ²	² Texture Remarks
0-4	10YR	5/2	100	v	Loamy Sand
4-16	10YR	5/6	100		Loamy Sand
				1 C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
					- 15
			.,		4.9
ype: C=Con	centration. D=	-Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains 2Lo	ocation: PL=Pore Lining. M=Matrix
ydric Soil I				_	Indicators for Problematic Hydric Soils ³ :
Histosol (/	-			Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
_	edon (A2)			Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Hist				Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
-	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
-	_ayers (A5)		IN.	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
_	odies (A6) (LF			Redox Dark Surface (F6)	Red Parent Material (TF2)
_	cy Mineral (A7		, 1, 0)	Depleted Dark Surface (F7)	☐ Very Shaliow Dark Surface (TF12)
	ence (A8) (LF < (A9) (LRR P			Redox Depressions (F8)	Other (Explain in Remarks)
-	Below Dark Si	-	111	☐ Mari (F10) (LRR U)	
, ,	Surface (A12	•	11)	Depleted Ochric (F11) (MLRA 151)	
-	rie Redox (A1	•	1504)	☐ Iron-Manganese Masses (F12) (LRR O, P, T))
-	ck Mineral (S1		-	Umbric Surface (F13) (LRR P, T, U)	
	yed Matrix (S		, 5)	☐ Delta Ochric (F17) (MLRA 151) ☐ Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Rec		.,		wetland hydrology must be present,	
Stripped M	• •			☐ Piedmont Floodplain Soils (F19) (MLRA 149A☐ Anomalous Bright Loamy Soils (F20) (MLRA	•
- ''	ce (S7) (LRR	P, S, T, L	J)	- Thomasos Bright Lourny Sous (120) (Fibrat	11374 1330, 1330)
strictive I s	yer (if obse	rved):			
Type:	iyer (ii obse	veuj.			
Depth (inch	es):				Hydric Soil Present? Yes O No 💿
marks:				· · · · · · · · · · · · · · · · · · ·	
marks.					

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	y: Waveland - Hancock Sampling Date: 26-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 51
Investigator(s): Lars Larson, Randy Ellis Section,	Township, Range: \$ 21 T 7s R 16 W
Landform (hillstope, terrace, etc.): Terrace Local relief	(concave, convex, none): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.: 30° 25′ 2.	**************************************
Soil Map Unit Name: EsA, Escambia loam, 0 to 2 percent slopes	NWI classification: N/A
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	l? 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 p	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	the Sampled Area
Hydric Soil Present? Yes O No 💿	Ven () No ()
Wetland Hydrology Present? Yes O No wi	thin a Wedland? 185 ONO O
Remarks:	
This plot is approximately 50-feet to the west of an man-made logging drain in	the NE part of the AOI. There is hydrophytic vegetation, some low
chroma soil colors but NO evidence of hydrology except for the application of the	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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 along Li	` '
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled	_ , , ,
Algal Mat or Crust (B4)	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:	spingfiam mass (55) (Eax 1, 5)
Surface Water Present? Yes No Depth (inches):	
Surface vides (1656)	
o opar (manes)	Wetland Hydrology Present? Yes ○ No ④
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	The state of the s
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	inspections), if available:
Damasilas	
Remarks:	
	1
	I

VEGETATION	(Five/Four Strata) -	Use scientific names of plants.
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Pinus elliottil Nyssa sylvatica Magnolla virginiana	% Cove 25 10 3		7.0	Indicator Status FACW FAC	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)
Pinus elliottil Nyssa sylvatica Magnolia virginiana	25 10 3 0	V	65.8%	FACW	
Nyssa sylvatica Magnolia virginiana	10 3 0	=	7.0	·	
Nyssa sylvatica Magnolia virginiana	3	✓	26.3%	EAC	
Magnolia virginiana	3			FAC	
	0		7.9%	FACW	Total Number of Dominant
				THON	Species Across All Strata: 6 (B)
·			_ 0.0%	_	Porcent of deminant Charles
	0	Ц	0.0%	-	Percent of dominant Species That Are OBL, FACW, or FAC: 100 0% (A/B)
			0.0%	r	mac Arc obly FACW, of FAC.
	0		0.0%		Prevalence Index worksheet:
	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 19 20% of Total Cover: 7.6	30	- T	otal Cove		OBL species 1 x 1 = 1
4.555.4		- ''	otal Cove		
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	}}	_			FACW species 101 x 2 = 202
Pinus elliottii	2		16.7%	FACW	FAC species $15 \times 3 = 45$
Nyssa sylvatica	5	V	41.7%	FAC	FACU species $0 \times 4 = 0$
Magnolia virginiana		V	41.7%	FACW	UPL species $0 \times 5 = 0$
	0	$\overline{\Box}$	0.0%		
		\equiv			Column Totals: 117 (A) 248 (B)
		1	0.0%		Prevalence Index = B/A = 2.120
		\perp	0.0%		
	0		0.0%		Hydrophytic Vegetation Indicators:
w	0		0.0%		D 4 Banks Ba
	12	- T-	otal Cover		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 6 20% of Total Cover: 2.4	12	= 10	otai Covei		✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	50	V	82.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
21 1-1 -			16.4%	FACW	
					¹ Indicators of hydric soil and wetland hydrology must
Persea palustris			1.6%	FACW	be present, unless disturbed or problematic.
	0	Ш	0.0%		
	C		0.0%		Definition of Vegetation Strata:
	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 30.5 20% of Total Cover: 12.2	61	_ 7	otal Cover		approximately 20 ft (6 m) or more in height and 3 in.
	01	- 10	Juli Cover		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m					
Lycopodiella alopecuroides	14		16.7%	OBL	Sapling - Woody plants, excluding woody vines,
		✓	83.3%	FACW	approximately 20 ft (6 m) or more in height and less
` 				LHCAA	than 3 in. (7.6 cm) DBH.
·		\square	0.0%		
	0	\square	0.0%	P	Sapling/Shrub - Woody plants, excluding vines, less
	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	\Box	0.0%		Charle Marcal attacks and Park and Second
		\Box	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
The among the Contract of the		H			approximately 5 to 20 it (1 to 6 m) in neight.
-		Н	0.0%	. 55.0	Hank All hanks are a factor of A starter that at a
For the control of th	0	Ш,	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardiess of size, and woody
·	0		0.0%		plants, except woody vines, less than approximately
•	0		0.0%		3 ft (1 m) in height.
•	0	\Box	0.0%	Ja. 7	3
		Ч,		_	Woody vine - All woody vines, regardless of height,
60% of Total Cover: 3 20% of Total Cover: 1.2	6	= To	tal Cover		vvoody vine - All woody vines, regardless of neight.
(Plot size: 30 m					
Smilax rotundifolia	0		ען מען	EAC	
Simax roundina		Η.	0.0%	FAC	
	. 0	\Box	0.0%		
	О		0.0%		
	0	\Box	0.0%		
	D	\Box	0.0%		Hydrophytic
	_	Ч.			Vegetation Present? Yes ● No ○
0% of Total Cover: 0 20% of Total Cover: 0	0 :	= To	tal Cover	İ	Present? Yes Vio U
	100000				
marks: (If observed, list morphological adaptations below).					

OIL					Sampling Point:	Up - 51
Profile Descr	iption: (Des	scribe to	the depth	needed to document the indicator or confir	m the absence of indicators.)	
Depth		Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type 1	oc² Texture F	Remarks
0-4	10YR	3/2	100			
4-11	10YR	4/2	100			
11-20	10YR	5/4	100			
				1 L and 1 Land L		- 1994 Maria
					# · · · · · ·	
	-		•			
Type: C=Cond	centration. D	 =Depletio	n. RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains	² Location: PL=Pore Lining, M=Matrix	
Hydric Soll I		- ор осио			Indicators for Problematic H	 tvdric Soils ³ :
Histosol (/	A1)			Polyvalue Below Surface (S8) (LRR S, T,		,,
Histic Epip	edon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)	
Black Hist	ic (A3)			Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outsi	ide MI DA 150A R\
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (I	
_	Layers (A5)			Depleted Matrix (F3)	Anomalous Bright Loamy Sc	
Organic B	odies (A6) (LI	RR P, T, L	J)	Redox Dark Surface (F6)	Red Parent Material (TF2)	(מככנ אאטויין) (טג ו) מונ
5 cm Muc	ky Mineral (A:	7) (LRR P	, T, U)	Depleted Dark Surface (F7)	Very Shallow Dark Surface	CTC12)
Muck Pres	ence (A8) (Li	RR U)	-	Redox Depressions (F8)	r=,	
1 cm Mucl	k (A9) (LRR P	ν, Τ)		Marl (F10) (LRR U)	Uther (Explain in Remarks)	
Depleted B	Below Dark Si	urface (A:	11)	Depleted Ochric (F11) (MLRA 151)		
_	Surface (A1)	-	•	Iron-Manganese Masses (F12) (LRR O,) T)	
-	rle Redox (A1	-	150A)	Umbric Surface (F13) (LRR P, T, U)	, 17	
_	ck Mineral (Si			Delta Ochric (F17) (MLRA 151)		
_	yed Matrix (S		, 0,		3Indicators of hydropi	nytic vegetation and
Sandy Rec	-	19		Reduced Vertic (F18) (MLRA 150A, 150B	" wetland hydrology i	must be present,
Stripped M				Piedmont Floodplain Soils (F19) (MLRA:	•	or problematic.
	ice (\$7) (LRR	DCTI	1)	Anomalous Bright Loamy Soils (F20) (Mi	KA 149A, 153C, 153D)	
Dark Surio	ice (37) (Likk		•)			
estrictive La	ver (if ohse	erved):				
Type:	iyei (ii obse	i veu).				
	es):				Hydric Soll Present? Yes	○ No
Remarks:	, , , , , , ,					
oil chroma be	egins to cha	ange to a	ligh ter 3-4	4 below 11-12 inches.		
			•			

Project (Site: NACA - Stoonie: 1 100 Agra Wolland Polinertiian	City/County: Waveland - Hancock Sampling Date: 26-Oct-16
Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	State: MS Sampling Point: Up - 52
Applicant/Owner: NASA	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 21 T 7 s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T La	at.: 30° 25′ 2.571" N Long.: 89° 36′ 31.359" W Datum: NAD83
Soil Map Unit Name: HIA, Harleston fine sandy loam, 0 to 2 percen	nt slopes NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signific	icantly disturbed? Are "Normal Circumstances" present? Yes No
	•
Are regetation	ally 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 O	
Hydric Soil Present? Yes O No 🏵	Is the Sampled Area
Wetland Hydrology Present? Yes O No •	within a Wetland? Yes ○ No ④
Remarks:	OT Alson N.C. francos
Upland area approximately 300-feet south of fence line in NE A0	.OI, Along N-5 transect,
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that app	ply) Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna	a (B13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits	G (B15) (LRR U) Drainage Patterns (B10)
	fide Odor (C1) Moss Trim Lines (B16)
_	ospheres along Living Roots (C3)
	Reduced Iron (C4) Crayfish Burrows (C8)
	Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	
Water-Stained Leaves (B9)	FAC-Neutral Test (D5)
<u> </u>	Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes No Depth (inche	es):
0 0	
	es): Wetland Hydrology Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Yes No Depth (inche	es):
Describe Recorded Data (stream gauge, monitoring well, aerial pl	hotos, previous inspections), if available:
Remarks:	
Technological Control of the Control	
	İ

VEGETATION	(Five/Four	Strata) -	Use scientific names of	plants.
	•	-		Dominant

		Dominant Species?		Sampling Point: Up - 52
		Rel.Strat.	Indicator	Dominance Test worksheet:
ee Stratum (Plot size: 30 m)	% Cover		Status	Number of Dominant Species
Pinus elliottii		60.0%	FACW	That are OBL, FACW, or FAC:7 (A)
Magnolia virginiana		20.0%	FACW	Total Number of Dominant
Quercus nigra	2	8.0%	FAC	Species Across All Strata: 7 (B)
Magnolia grandiflora		12.0%	FAC	Barrent of descious Consider
	0	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
	0.	0.0%		That Aic obly FACH, of FACI
N.W. A. S. W. S.	0	0.0%		Prevalence Index worksheet:
	0	0.0%		Total % Cover of: Multiply by:
% of Total Cover: 12.5 20% of Total Cover: 5	25 =	= Total Cover		OBL species 0 x 1 = 0
pling or Sapling/Shrub Stratum (Plot size: 30 m)			FACW species83 x 2 =166
Pinus elliottii	3	✓ 25.0%	FACW	FAC species $14 \times 3 = 42$
Magnolia virginiana		✓ 41.7%	FACW	FACU species $0 \times 4 = 0$
Quercus nigra		✓ 25.0%	FAC	UPL species $0 \times 5 = 0$
Ilex opaca		8.3%	FAC	Column Totals: 97 (A) 208 (B)
		0.0%		Column locals: 97 (A) 208
		0.0%		Prevalence Index = B/A = 2.144
	0	0.0%		Hydrophytic Vegetation Indicators:
	0	0.0%		
W of Total Covery E 200 of Tatal Covery 5	-			1 - Rapid Test for Hydrophytic Vegetation
1% of Total Cover: 6 20% of Total Cover: 2.4	12 =	= Total Cover		2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m)		_		✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	50	✓ 92.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria	3	5.6%	FAC	
Ilex opaca	1	1.9%	FAC	Indicators of hydric soil and wetland hydrology must
	O O	0.0%		be present, unless disturbed or problematic.
	0	0.0%		Definition of Vegetation Strata:
	0	0.0%	F. 4.1	Tree - Woody plants, excluding woody vines,
% of Total Cover: 27 20% of Total Cover: 10.8	54 =	Total Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
rb Stratum (Piot size: 30 m)				Carline Marach alama analysina washinda
Ilex corlacea	5	100.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
	0	0.0%		than 3 in. (7.6 cm) DBH.
	0	0.0%		
	0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail.
	0 1	0.0%		Chrish Mandy planta avaluating wands vince
	0	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
	0	0.0%		
	0	0.0%		Herb - All herbaceous (non-woody) plants, including
	0	0.0%	-	herbaceous vines, regardless of size, and woody
	-	0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
	0 [o. (. m) in noight
		0.0%		Woody vine - All woody vines, regardless of height.
% of Total Cover: 2.5 20% of Total Cover: 1	5 =	: Total Cover		,,
ody Vine Stratum (Plot size: 30 m				
Vitis rotundifolia	1 [100.0%	FAC	
	0 [0.0%		
	<u> </u>	0.0%		
	0 [0.0%		
	0	0.0%		Hydrophytic
		- W 17 1.1		Vegetation Present? Yes No
% of Total Cover: 0.5 20% of Total Cover: 0.2	1 -	Total Cover		Present? Yes 🔍 NO 🔾

SOIL				Sampling Point: Up - 52
Profile Desc	cription: (Describe	to the depth	needed to document the indicator or confirm the	absence of indicators.)
Depth	Matri	х	Redox Features	9
(inches)	Color (moist)	%	Color (moist) % Type 1 Loc2	Texture Remarks
0-5	10YR 4/2	100		
5-16	10YR 5/6	100		25.00
				e =
g.,mag * .	fit nixemen			
				4/3
				-
Ç.				-
¹ Type: C=Cor	ncentration. D=Deple	tion. RM= Red u	ced Matrix, CS=Covered or Coated Sand Grains 2Loca	ation: PL=Pore Lining. M=Matrix
Hydric Soil	Indicators:			Indicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epi	ipedon (A2)		Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black His	stic (A3)		Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	
	Layers (A5)		Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Bodies (A6) (LRR P, T	. u)	Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
_	cky Mineral (A7) (LRF		Depleted Dark Surface (F7)	Red Parent Material (TF2)
	esence (A8) (LRR U)	.,,,,,,,	Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T)			Other (Explain in Remarks)
	Below Dark Surface	/A11\	Mari (F10) (LRR U)	
		(AII)	Depleted Ochric (F11) (MLRA 151)	
	rk Surface (A12)	D4 4504)	Iron-Manganese Masses (F12) (LRR O, P, T)	
	airie Redox (A16) (ML		Umbric Surface (F13) (LRR P, T, U)	
	uck Mineral (S1) (LRR	(O, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
	eyed Matrix (S4)		Reduced Vertic (F18) (MLRA 150A, 150B)	wetiand hydrology must be present,
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 149A)	unless disturbed or problematic.
	Matrix (S6)		Anomalous Bright Loamy Soils (F20) (MLRA 14	9A, 153C, 153D)
☐ Dark Surf	face (S7) (LRR P, S, T	-, u)		
Restrictive I	ayer (if observed):			
Type:	ayer (ii observed)i			
	-hael			Hydric Soil Present? Yes No No
Depth (inc	nes);		7	
Remarks:				
N				

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion City/County: Waveland - Hand	ock Sampling Date: 31-Oct-16
	Sampling Point: Up - 53
Investigator(s): Lars Larson, Randy Ellis Section, Township, Range: S	
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex,	none): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.: 30° 25′ 2.412" N Lon	g.: 89° 36' 15.101" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year?	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Norma	I Circumstances" present? Yes ● No ○
	explain any answers in Remarks.)
(
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, t	ransects, important reatures, etc.
Hydrophytic Vegetation Present? Yes No No Is the Sampled Area	
Hydric Soil Present? Yes No No	Yes ○ No ⑨
Wetland Hydrology Present? Yes O No O within a Wetland?	100 - 110 -
Remarks:	
Upland transect approximately 150-feet east of Wet - 53 to the south of the access road in the NE	AOI.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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)	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)
	Shallow Aquitard (D3)
☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
☐ Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Fleld Observations:	Springfram moss (50) (Erry 1, 0)
Surface Water Present? Yes No Depth (inches):	
Software Proceeds Wetland Hyd	rology Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Yes No Depth (Inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	ilable:
Remarks:	
remarks.	
	i

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

Dominant

		Dominant		Sampling Point: Up - 53
	Absolute	_ Species? _ Rel.Strat.	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m.)	% Cover	Cover	Status	Number of Dominant Species
Pinus elliottii	10	76.9%	FACW	That are OBL, FACW, or FAC: 4 (A)
Magnolia virginiana	2	15.4%	FACW	
Nyssa sylvatica		7.7%	FAC	Total Number of Dominant Species Across All Strata: 4 (B)
W 14 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.0%		Species Across All Salata.
The state of the s		0.0%		Percent of dominant Species
10.00 Marie Marie (Marie 10.00)		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
	^	0.0%	~	Prevalence Index worksheet:
<u> </u>	0	0.0%		
	-	. ,	_	Total % Cover of: Multiply by:
0% of Total Cover: 6.5 20% of Total Cover: 2.6		= Total Cover		OBL species $0 \times 1 = 0$
pling or Sapling/Shrub Stratum (Plot size: 30 m		_		FACW species 122 x 2 = 244
Pinus elliottii		71.4%	FACW	FAC species 4 x 3 = 12
Magnolia virginiana	- 5	17.9%	FACW	FACU species $0 \times 4 = 0$
Nyssa sylvatica	3	10.7%	FAC	UPL species $0 \times 5 = 0$
		0.0%		Column Totals: 126_ (A) 256 (B)
		0.0%		
	0	0.0%		Prevalence Index = B/A = 2.032
		0.0%		Hydrophytic Vegetation Indicators:
	0	0.0%		_
	C		-	✓ 1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 14 20% of Total Cover: 5.6	28 =	= Total Cover		✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m)				✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	75	1 00.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
	0	0.0%		
•		0.0%		¹ Indicators of hydric soil and wetland hydrology musi
	_	0.0%		be present, unless disturbed or problematic.
				Definition of Vegetation Strata:
		0.0%		_
	0	0.0%	_	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
0% of Total Cover: 37.5 20% of Total Cover: 15	75 =	Total Cover		(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m				
Ilex coriacea	10	✓ 100.0%	FACW	Sapling - Woody plants, excluding woody vines,
	0	0.0%		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
		0.0%		than o in. (1.5 only 55) i.
	0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
to the second se			_	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	0.0%		
	_0	0.0%		Shrub - Woody plants, excluding woody vines,
	0!	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
· · · · · · · · · · · · · · · · · · ·	0		•	Clark All harters on Congress A Starte Service
CONTRACTOR OF THE STREET	0	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0[0.0%		plants, except woody vines, less than approximately
-	0 [0.0%		3 ft (1 m) in height.
	0 [0.0%		
0% of Total Cover: 5 20% of Total Cover: 2	10 =	Total Cover		Woody vine - All woody vines, regardless of height.
pody Vine Stratum (Plot size: 30 m				-
, · •··	0	0.0%	*10 *10 *10	
· · · · · · · · · · · · · · · · · · ·	0	0.0%		
· · · · · · · · · · · · · · · · · · ·	0	0.0%		
3	0	0.0%		
3				Librarium ninariim
3	_ 0 [0.0%		Hydrophytic
0% of Total Cover: 0 20% of Total Cover: 0	0[0.0%		Vegetation Present? Yes No

Sampling Point: Up - 53

Color (moist)	(Inches) Color (moist) 96 Color (moist) 95 Loarny Sand 4-16 10YR 4/1 100 4-16 10YR 5/2 98 10YR 7/2 20 C M Loarny Sand Committed Solit Indicators: Histore Diplection (A2) This Dark Surface (S8) (LRR S, T, U) 1 Cam Muck (A3) (LRR O) Histic Epipedon (A2) This Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR O) Hydrogen Sulfide (A4) Loarny Mudy Mineral (F1) (LRR O) Hydrogen Sulfide (A9) Corporate (A8) (LRR P, T, U) Depleted Matrix (F3) Standiffed Layers (A5) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Maria (F10) (LRR D) Depleted Bleow Dark Surface (A11) Depleted Orthic (F11) (MLRA 151) Thick Dark Surface (A12) Tron-Manganese Masses (F12) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR A, S) Depleted Matrix (F3) Depleted Dark Surface (F12) (MLRA 149A) Sandy Muck Mineral (S1) (LRR A, S) Depleted Orthic (F11) (MLRA 151) Thick Dark Surface (A12) Depleted Orthic (F11) (MLRA 151) Sandy Redox (S5) Delta Orthic (F13) (LRR A, F, T, U) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Striptic Layers (A5) (LRR P, S, T, U) Stratifications of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Dark Surface (F7) (MLRA 149A, 153C, 153D)	Depth	Matrix		Redo	x Features	v,====		
0-4 10YR 4/1 100 4-16 10YR 5/2 98 10YR 7/2 20 C M Loamy Sand Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Countration.	0-4 10YR 4/1 100		moist)	%	Color (moist)	% Type 1	Loc2	Texture	Remarks
Type: C-Concentration. D-Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Polymatic Soil Indicators:	Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains **Polyric Soff Indicators:	0-4 10YR	4/1	100				Loamy Sand	
Notice Soil Indicators: Histosol (A1)	Indicators: Histosol (A1)	4-16 10YR	5/2	98	10YR 7/2	20 C	. М	Loamy Sand	
Stratified Layers (A5) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Redox (S5) Depleted Dark Surface (F13) (LRR A 150A) Sandy Redox (S5) Delta Ochric (F17) (MLRA 151) Thick Dark Surface (A12) Depleted Ochric (F17) (MLRA 151) Thick Dark Surface (A12) Depleted Matrix (S4) Reduced Vertic (F18) (MLRA 150A) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pastrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) S cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Wery Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A11) Depleted Delow Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3)		. RM=Reduc	Polyvalue Below Thin Dark Surfac	Surface (S8) (LRF ce (S9) (LRR S, T, ineral (F1) (LRR O	S, T, U) U)	Indicators for Probl 1 cm Muck (A9) (2 cm Muck (A10) Reduced Vertic (F	ematic Hydric Soils ³ : LRR O) (LRR S) 18) (outside MLRA 150A,B)
Type:	Type: Depth (inches): Hydric Soil Present? Yes No Cemarks:	Stratified Layers (A5) Organic Bodies (A6) (L 5 cm Mucky Mineral (A Muck Presence (A8) (L 1 cm Muck (A9) (LRR I Depleted Below Dark S Thick Dark Surface (A1 Coast Prairie Redox (A Sandy Muck Mineral (S Sandy Gleyed Matrix (S Sandy Redox (S5) Stripped Matrix (S6)	RR P, T, U) (7) (LRR P, T RR U) (7) (TRR U) (7) (Surface (A11 (2) (16) (MLRA : (11) (LRR O, 1	T, U) 1) 150A) S)	Depleted Matrix I Redox Dark Surfa Depleted Dark Si Redox Depressio Marl (F10) (LRR Depleted Ochric Iron-Manganese Umbric Surface (Delta Ochric (F17 Reduced Vertic (I) Piedmont Floodp	(F3) face (F6) urface (F7) ons (F8) U) (F11) (MLRA 151) Masses (F12) (LR (F13) (LRR P, T, U 7) (MLRA 151) (F18) (MLRA 150A dain Soils (F19) (M	150B) LRA 149A)	Anomalous Bright Red Parent Materi Very Shallow Dark Other (Explain in	Loamy Soils (F20) (MLRA 1538) al (TF2) s Surface (TF12) Remarks) of hydrophytic vegetation and hydrology must be present,
anarks.		estrictive Layer (if obse Type: Depth (inches):	erved):			i		Hydric Soil Present?	Yes No

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 13
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace Subregion (LRR or MLRA): LRR T Lat.:	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 ° 30° 24' 8.736" N Long.: 89° 37' 10.576" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye Are Vegetation , Soil , or Hydrology significant Are Vegetation , Soil , or Hydrology naturally p	
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No Remarks:	Is the Sampled Area within a Wetland? Yes No No
HYDROLOGY	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Triin Muck Surface Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Depth (inches):	Drainage Patterns (B10) Odor (C1) Odor (C1) Odor (C1) Odor (C1) Odor (C1) Odor (C1) Odor (C1) Odor (C1) Odor (C1) Odor (C2) Odor (C2) Odor (C3) Odor (C4) Odor (C4) Odor (C4) Odor (C4) Odor (C2) Od
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), ir available:

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

Dominant Species?

Tree Stratum (Plot size: 30 m)	Absolute % Cover	Rel.	Strat.	Indicator Status	Dominance Test worksheet:
Bot III and		F==	71,4%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)
Quercus virginiana	15 5		23.8%	FACU	That are OBL, FACW, or FAC: 6 (A)
Ottorous plans	1	=-	4.8%	FAC	Total Number of Dominant
Coercus riigia	-		0.0%	, 1710	Species Across All Strata: 7 (B)
	-		0.0%		Percent of dominant Species
		- P 1.	0.0%		That Are OBL, FACW, or FAC: 85 7% (A/B)
			0.0%		Prevalence Index worksheet:
	0		0.0%		
:0% of Total Cover: 10.5 20% of Total Cover: 4.2	,	le se	l Cove		
apling or Sapling/Shrub Stratum (Plot size: 30 m		= TOC	ii Cove		OBL species 0 x 1 = 0 FACW species 52 x 2 = 104
Pinus elliottii	5	V	20.0%	FACW	FAC species 27 x 3 = 81
Quercus nigra	15	V	60.0%	FAC	FACU species $\frac{8}{32}$ x 4 = $\frac{32}{32}$
Quercus virginiana	-		12.0%	FACU	UPL species $0 \times 5 = 0$
Magnolia virginiana		$\overline{}$	8.0%	FACW	ore species
	0		0.0%		Column Totals: 87 (A) 217 (B)
			0.0%	===	Prevalence Index = $B/A = 2.494$
**********			0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%	***	
0% of Total Cover: 12.5 20% of Total Cover: 5			l Cove		□ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m	35		74 404	EACH	✓ 3 - Prevalence Index is ≤3.0 ¹
	**	=-	71.4%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex vomitoria		-	28.6%	FAC	1
	0	Ц.	0.0%		¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
		2.00	C.0%		<u> </u>
-	0	\Box _	0.0%	I - N	Definition of Vegetation Strata:
***	0		0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 17.5 20% of Total Cover: 7	35 =	= Tota	l Cove		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 33)					(10 011) 01 1419-111 - 1411-111 - 1 - 1 - 1 - 1 - 1 - 1
. Ilex coriacea	5	V 1	ሰበ ሰበሬ	FACW	Sapling - Woody plants, excluding woody vines,
	0		0.0%	IACII	approximately 20 ft (6 m) or more in height and less
•				-	than 3 in. (7.6 cm) DBH.
3	0	=	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
·	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	<u> </u>	0.0%		, , , , , , , , , , , , , , , , ,
5.	0	Ц	0.0%		Shrub - Woody plants, excluding woody vines,
7 No. 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
3	0	Ц.,	0.0%		
)	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
),	0		0.0%		plants, except woody vines, less than approximately
	0_		0.0%		3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= Tota	l Cover		Woody vine - All woody vines, regardless of height.
/oody Vine Stratum (Plot size: _30 m)					
Smilax rotundifolia	1	1	00.0%	FAC	
			0.0%	n da ka	
		\neg	0.0%		
			0.0%		
24					Hydrophytic
	0		0.0% I Cover		Vegetation Present? Yes No
50% of Total Cover: 0.5 20% of Total Cover: 0.2					

Sampling Point: Up - 13

SOIL				Sampling Point: Up - 13
Profile Descr	ription: (Describ	e to the depth :	needed to document the indicator or confirm th	e absence of indicators.)
Depth	Mat	rix	Redox Features	2
(inches)	Color (mois	t) %	Color (moist) % Type 1 Loc2	Texture Remarks
0-5	10YR 3,	/2 100		Loamy Sand
5-18	10YR 5,	/4 100		Loamy Sand

				- 3 1
	-	ь	%A 47-1.5 F 4	1 F A
1Type: C=Cond	centration D=Den	lation RM=Redu	ted Matrix, CS=Covered or Coated Sand Grains 2Lo	cation: PI =Pore Lining M=Matrix
Hydric Soll I		ictioni iti i i i ictioni	and reduced Sand Grains Ed	Indicators for Problematic Hydric Soils ³ :
Histosol (/	A1)		Polyvalue Below Surface (S8) (LRR S, T, U)	
	pedon (A2)		☐ Thin Dark Surface (S9) (LRR S, T, U)	 ☐ 1 cm Muck (A9) (LRR O) ☐ 2 cm Muck (A10) (LRR S)
Black Hist			Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Suifide (A4)		Loamy Gleyed Matrix (F2)	
Stratified (Layers (A5)		Depleted Matrix (F3)	☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
	odies (A6) (LRR P,	T, U)	Redox Dark Surface (F6)	☐ Anomaious Bright Loamy Solls (F20) (MLRA 153B) ☐ Red Parent Material (TF2)
	ky Mineral (A7) (Li		Depleted Dark Surface (F7)	` '
	sence (A8) (LRR U)		Redox Depressions (F8)	☐ Very Shallow Dark Surface (TF12) ☐ Other (Surface (F. Ramardus))
1 cm Muci	k (A9) (LRR P, T)		Mari (F10) (LRR U)	Other (Explain in Remarks)
Depleted I	Below Dark Surface	e (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark	k Surface (A12)		☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Pral	rie Redox (A16) (N	4LRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Mu	ck Mineral (S1) (LF	RR O, S)	Delta Ochric (F17) (MLRA 151)	
Sandy Gle	yed Matrix (S4)		Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Rec	dox (S5)		Piedmont Floodplain Solls (F19) (MLRA 149A)	wetland hydrology must be present,) unless disturbed or problematic.
Stripped M	Matrix (S6)		Anomalous Bright Loamy Soils (F20) (MLRA 1	
Dark Surfa	ace (S7) (LRR P, S,	T, U)	_ , , , ,	•
Restrictive La	yer (if observed):		
Туре:		•		
• • • • • • • • • • • • • • • • • • • •	nes):		Partice Part Porter Will	Hydric Soil Present? Yes O No 💿
Remarks:			· · · · · · · · · · · · · · · · · · ·	
Kemarks.				

Troject/ State 14 CAT Scalins/ 1/100 Fore Tradaila Sciincación	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 15
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0,0 % / 0,0 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 19.571" N Long.: 89° 36' 50.740" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation . , Soil . , or Hydrology . significant	ly disturbed? Are "Normal Circumstances" present? Yes 🍥 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No	Is the Sampled Area
Hydric Soil Present? Yes O No	Ver () No (i)
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
Remarks: Lower end of up-wet transition line approximately 700 feet south of THYDROLOGY	Turtleskin Creek. Roughly 1,200 feet north of logging road.
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13	,
High Water Table (A2) Marl Deposits (B15	
Saturation (A3) Hydrogen Sulfide C	
☐ Water Marks (B1) ☐ Oxidized Rhizosphe ☐ Sediment Deposits (B2) ☐ Presence of Reduction	eres along Living Roots (C3) Dry Season Water Table (C2)
	ed Iron (C4)
Algal Mat or Crust (B4) Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in R	
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 O No O Depth (inches):	
Water Table Present? Yes No Depth (inches):	
	Wetland Hydrology Present? Yes ○ No
(includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	
	İ

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

15 2 5 1 0	Re	pecies? el.Strat. Cover 65.2% 8.7% 21.7% 4.3%	Indicator Status FACW FACW FAC	Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant (A)
15 2 5 1		65.2% 8.7% 21.7%	FACW FACW	That are OBL, FACW, or FAC: 6 (A) Total Number of Dominant
2 5 1 0		8.7% 21.7%	FACW	That are OBL, FACW, or FAC: 6 (A) Total Number of Dominant
5 1 0		21.7%	111 F 2 1	
1			FAC	
0_		4 20/		Species Across All Strata: 6 (B)
		4.370	FACW	(6)
		0.0%		Percent of dominant Species
D		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
0		0.0%		Prevalence Index worksheet:
	\Box	0.0%	0.*	Total % Cover of: Multiply by:
	= To	• • • • • • • • • • • • • • • • • • • •		OBL species $0 \times 1 = 0$
-	- 10	tai corci		
				· · · · · · · · · · · · · · · · · · ·
				FAC species 12 x 3 = 36
	님			FACU species $0 \times 4 = 0$
2	닏.	7.1%	FAC	UPL species 0 x 5 = 0
1	Ц.,	3.6%	FACW	Column Totals: 107 (A) 226 (B)
0		0.0%		Prevalence Index = B/A = 2.112
0		0.0%		·
0		0.0%		Hydrophytic Vegetation Indicators:
0		0.0%	0	1 - Rapid Test for Hydrophytic Vegetation
	= To	tal Cover		✓ 2 - Domínance Test is > 50%
	. 4			✓ 3 - Prevalence Index is ≤3.0 ¹
	Y			Problematic Hydrophytic Vegetation ¹ (Explain)
-	Ц,	2-1	FAC	4
10	✓_	21.7%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		2.2%	FACW	
0 [0.0%		Definition of Vegetation Strata:
0		0.0%		Tree - Woody plants, excluding woody vines,
46 =	= To	tal Cover		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,
	ዾ.		FACW	approximately 20 ft (6 m) or more in height and less
0 [Ц.	0.0%		than 3 in. (7.6 cm) DBH.
0		0.0%		
0 [0.0%		Sapling/Shrub - Woody plants, excluding vines, less
0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
0		0.0%	Termer'	Shrub - Woody plants, excluding woody vines,
0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
0 [0.0%		
0 [0.0%	- 4.1	Herb - All herbaceous (non-woody) plants, including
	$\overline{\Box}$			herbaceous vines, regardless of size, and woody
				plants, except woody vines, less than approximately 3 ft (1 m) in height.
				V. C. Try III Toligina
		***	-	Woody vine - All woody vines, regardless of height.
10 =	· Tot	al Cover		Troody tale 7 in troody value, regardless of fieldith
			,	
0 [0.0%	FAC	
0		0.0%		
	=-			
			-	Hydrophytic
<u>U</u> L	-			Vegetation Present? Yes No
0 =	: Tot			Present? Yes V No V
	20 5 2 1 0 0 0 0 28 = 30 5 10 1 0 0 0 0 0 0 0 0 0 0 0 0 0	23 = To 20	23 = Total Cover 20	23 = Total Cover 20

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Loc2 Color (moist) Color (moist) % Type Texture Remarks 0-4 10YR 3/2 100 Loamy Sand 4-16 10YR 5/4 100 Loamy Sand ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) ☐ Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): **Hydric Soil Present?** Yes O No 💿 Depth (inches): Remarks:

Sampling Point:

Up - 15

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation Cit	ty/County: Waveland - Hancock Sampling Date: 07-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 1
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 20 T 7s R 16 W
	cal relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.: 30	9° 25' 1.091" N Long.: 89° 37' 13.129" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: PFO 1/4 C
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 d	listurbed? Are "Normal Circumstances" present? Yes 💿 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally prob	olematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area
Hydric Soil Present? Yes No O	Von (a) No (
Wetland Hydrology Present? Yes No	within a Wetland?
Remarks: Low drainage area approximately 60 feet from a topographic rise that to	ransitions up toward Upland Plot #1.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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	
	s along Living Roots (C3)
Sediment Deposits (B2) Presence of Reduced 1	
Drift Deposits (B3) Recent Iron Reduction	
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7 ☐ Iron Deposits (B5) ☐ Other (Explain in Rem.	
☐ Iron Deposits (B5) ☐ Other (Explain in Rem. ☐ Inundation Visible on Aerial Imagery (B7)	arks) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)	
	☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes No Depth (inches):	
Total Control of the	Wetland Hydrology Present? Yes ◎ No ○
Saturation Present? Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	
No strong primary hydrology indicators, but it is clear that this is drainag next to Turtleskin Creek below.	ge area that conveys water from the hillslope above to the riparian buffer
	ı

VEGETATION (Five/Four Strata) -	Use scientific names of plants.
, ,	Dominant

			ominant pecies? .		Sampling Point: Wet - 1
/No.	Absolute	R	el.Strat.	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m)	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii	- 5	V	23.8%	FACW	That are OBL, FACW, or FAC: 9 (A)
Magnolia virginiana	10	V	47,6%	FACW	Total Number of Dominant
Nyssa sylvatica	5	V	23,8%	FAC	Species Across All Strata: 9 (B)
Taxodium ascendens	. 1		4.8%	OBL	Barrant of the class LG active
	0_		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
	0	\vdash	0.0%	**	
WW (^.		닏	0.0%		Prevalence Index worksheet:
	0	Ш	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 10.5 20% of Total Cover: 4.2	21	= To	otal Cove	r	OBL species 9 x 1 = 9
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species 63 x 2 = 126
Magnolia virginiana	15	V	50.0%	FACW	FAC species 19 x 3 = 57
Nyssa sylvatica	10	~	33.3%	FAC	FACU species $0 \times 4 = 0$
Cyrilla racemiflora	3 .	Ш	10.0%	FACW	UPL species $0 \times 5 = 0$
Acer rubrum	2	Ш	6.7%	FAC	Column Totals: 91 (A) 192 (B)
	0		0.0%		
Y	0		0.0%		
1=1/4	0		0.0%		Hydrophytic Vegetation Indicators:
BY A COMPANY OF THE PARTY OF TH	0		0.0%	× - ×	1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 15 20% of Total Cover: 6	30	= Tc	tal Cove	r	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Cyrilla racemiflora	10	~	31.3%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex coriacea	15	V	46.9%	FACW	- Problematic Hydrophytic Vegetation - (Explain)
Ilex glabra			15.6%	FACW	¹ Indicators of hydric soil and wetland hydrology must
Acer rubrum		\Box	6.3%	FAC	be present, unless disturbed or problematic.
Freed Francisco	0		0.0%	TAC.	Definition of Vegetation Strata:
	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 16 20% of Total Cover: 6.4		— Та	tal Cove		approximately 20 ft (6 m) or more in height and 3 in.
***************************************	JZ .		cai corci		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m					Sapling - Woody plants, excluding woody vines,
. Woodwardia areolata		V	62.5%	OBL	approximately 20 ft (6 m) or more in height and less
Woodwardia virginica	3	V,	37.5%	OBL	than 3 in. (7.6 cm) DBH.
	0		0.0%		
· · · · · · · · · · · · · · · · · · ·	. 0	\sqcup	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	Ш.	0.0%		than 5 m. DDH and greater than 5.20 ft (1m) tall.
Name of the Print	0	\square	0.0%		Shrub - Woody plants, excluding woody vines,
•	0	Ц.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
· · · · · · · · · · · · · · · · · · ·	0	\square	0.0%	* * * ·	II
	0	\square	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0		0.0%		plants, except woody vines, less than approximately
	0 _		0.0%		3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 4 20% of Total Cover: 1.6	8 =	= To	tal Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m)				l	
	0		0.0%		
	0		0.0%	,	
THE CONTRACT OF THE	0		0.0%	-	
	-	\Box	0.0%		
	0		0.0%		Hydrophytic
			n. far	CAT .	Vegetation Present? Yes No
60% of Total Cover: 0 20% of Total Cover: 0	0 =	= IO	tal Cover		

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.) Depth	OIL									Sampling Point: Wet - 1
Color (moist) 96 Type: Color (moist) 96 Type: Loary Sand 3-16 10YR 3/2 95 10YR 7/2 5 C M Sandy Loam Type: Co-Concentration, Do-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains ** Location: PL-Pore Lining, M-Matrix Hydric Soil Indicators: Type: Co-Concentration, Do-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains ** Location: PL-Pore Lining, M-Matrix Hydric Soil Indicators: Type: Co-Concentration, Do-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains ** Location: PL-Pore Lining, M-Matrix Hydric Soils*: Tipe: Co-Concentration, Do-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains ** Location: PL-Pore Lining, M-Matrix Hydric Soils*: Tipe: Co-Concentration, Do-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains ** Location: PL-Pore Lining, M-Matrix Hydric Soils*: Tipe: Co-Concentration, Do-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains ** Location: PL-Pore Lining, M-Matrix Hydrix H	Profile Desc	ription: (De	scribe to	the depth	needed to d	locument	t the ind	licator or co	onfirm the	absence of indicators.)
3 10YR 3/2 3-16 10YR 5/2 95 10YR 7/2 5 C M Sandy Loam Type: C~Concentration. D~Depletion. RM~Reduced Matrix, CS~Covered or Coated Sand Grains *Location: PL~Pore Lining. M~Matrix Hydric Soil Indicators: Histosol (A1)	Depth	1	Matrix			Re	dox Fea	tures		41
Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Sand Grains Type: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Topeletion. PL-Pore Lining. M=Matrix Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 3: Indicators for Problematic Hydric Soils 5: Reduced Vertix (F18) (IRR O) Reduced Vertix (F18) (IRR O) Reduced Vertix (F18) (IRR O) Reduced Matrix (F2) Reduced Vertix (F18) (IRR O, P, T) Reduced Vertix (F18) (IRR O, P, T) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Reduced Vertix (F18) (IRR O, S) Re				%	Color (moist)	. %	Type	_ Loc2	
Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Polyvalue Below Surface (S8) (LRR S, T, U)	0-3	10YR	3/2							Loamy Sand
Hydric Soil Indicators: Histosol (A1)	3-16	10YR	5/2	95	10YR	7/2	5	С	М	Sandy Loam
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Histosol (A3) Loamy Mucky Mineral (F1) (LRR O) Loamy Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Red James Muck Presence (A8) (LRR P, T, U) Depleted Below Dark Surface (A12) Thin Dark Surface (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B) Reduced Vertic (F18) (outside MLRA 150A, B) Pledmont Floodplain Soils (F19) (LRR P, F, T) Reduced Vertic (F18) (outside MLRA 150A, B) Pledmont Floodplain Soils (F19) (LRR P, F, T) Reduced Vertic (F18) (IRR P, F, T) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Reduced Vertic (F18) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Delia Ochric (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F10) (MLRA 149A, 153C, 153D) Destrictive Layer (If observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No O										
Indicators: Histosol (A1)										
Histosol (A1)	· :		=Depletio	n. RM=Redu	iced Matrix, (CS=Covere	ed or Coa	ted Sand Gr	ains ² Loca	<u> </u>
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 1538) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Red Parent Material (TF2) Stratified Layers (A5) Redox Dark Surface (F6) Red Parent Material (TF2) Stratified Layers (A8) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Delta Ochric (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F13) (LRR P, T, U) Sandy Redox (S5) Delta Ochric (F18) (MLRA 150A, 150B) Very Shallow Dark Surface (F12) Stripped Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Very Shallow Dark Surface (F12) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Sestrictive Layer (If observed): Type:					Poly	walue Bek	nw Surfac	ce (SR) (I RR	S. T. U)	
Black Histic (A3)	_ `	-								
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 1538) Redox Dark Surface (F6) Red Parent Material (TF2) S cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Wery Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No										
Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 1538) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) S cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Wery Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Umbric Surface (F13) (LRR O, P, T) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No										
Organic Bodies (A6) (LRR P, T, U)					,		-	,		_
S cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Depleted Dark Surface (F8) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR 0, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (F12) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			RR P. T. I	U)				·e)		
Muck Presence (A8) (LRR U)				-			-	-		
1 cm Muck (A9) (LRR P, T)				, 1, 0)						
Depleted Below Dark Surface (A11) □ Depleted Ochric (F11) (MLRA 151) □ Thick Dark Surface (A12) □ Coast Prairie Redox (A16) (MLRA 150A) □ Umbric Surface (F13) (LRR P, T, U) □ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Sandy Redox (S5) □ Pledmont Floodplain Soils (F19) (MLRA 149A) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR P, S, T, U) □ Delta Ochric (F11) (MLRA 151) □ Sandy Muck Mineral (S1) (LRR O, P, T) □ Delta Ochric (F13) (LRR P, T, U) □ Delta Ochric (F13) (LRR P, T, U) □ Delta Ochric (F17) (MLRA 151) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Reduced Vertic (F18) (MLRA 149A) □ Reduced Vertic (F18) (MLRA 149A) □ Umbric Surface (S7) (MLRA 149A) □ Vertical Time Time Time Time Time Time Time Time			-		_		•	5)		Other (Explain in Remarks)
Thick Dark Surface (A12)	_			11)			-			
Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_ `		-	11)						
Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR P, S, T, U) □ Dark Surface (S7) (LRR P, S, T, U) □ Depth (inches): □ Depth (inches): □ Delta Ochric (F17) (MLRA 151) □ Reduced Vertic (F18) (MLRA 150B) □ Reduced Vertic (F18) (MLRA 150B) □ Reduced Vertic (F18) (MLRA 149A) □ Reduced Vertic (F18) (MLRA 149A) □ Number of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of the present of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, value of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	_		-			-			,	
Sandy Gleyed Matrix (S4) ☐ Reduced Vertic (F18) (MLRA 150A, 150B) ☐ Sandy Redox (S5) ☐ Pledmont Floodplain Soils (F19) (MLRA 149A) ☐ Stripped Matrix (S6) ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) ☐ Dark Surface (S7) (LRR P, S, T, U) ☐ Cestrictive Layer (if observed): Type: ☐ Depth (inches): ☐ Hydric Soil Present? Yes ● No ☐		•		-					1	
Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No				1, 5)				•		³ Indicators of hydrophytic venetation and
Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Depth (inches):					-	wetfand hydrology must be present,				
Dark Surface (S7) (LRR P, S, T, U) Destrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No No									-	
Type: Depth (inches): No O Remarks:					☐ Ano	malous Br	ight Loan	ny Soils (F20) (MLRA 14	19A, 153C, 153D)
Type:	Dark Surfi	ace (S/) (LRR	(P, S, 1, 1	J)						
Depth (inches): Hydric Soil Present? Yes No O	lestrictive L	yer (if obse	erved):							
Remarks:	Type:						_ ;			# # # # # # # # # # # # # # # # # # #
	Depth (incl	nes):		,	12.00	22. 6				Hydric Soil Present? Yes W No U
ripped depleted matrix lower in soil column > 4 inches with some small redox concentrations.	Remarks:									
	ripped depl	eted matrix	lower in	soil colum	n > 4 inche	s with so	me sma	all redox co	ncentratio	ons.

Project / Cites NACA - Stannics 1 100 Acre Watland Delinastion	City/County: Waveland - Han	cock Sampling Date: 07-Oct-16
Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	State: MS	Sampling Point: Wet - 2
Applicant/Owner: NASA		
Investigator(s): Lars Larson, Randy Ellis		5 20 T 7s R 16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex,	
	_30° 24' 53.385" N Lo	
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	4	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Norm	al Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally	problematic? (If needed	l, explain any answers in Remarks.)
		•
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	7-11-0	
Hydric Soil Present? Yes No O	Is the Sampled Area	Yes No
Wetland Hydrology Present? Yes No	within a Wetland?	ies © NO C
Remarks:		
Reflans.		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B	•	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B:		✓ Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide		✓ Moss Trim Lines (B16)
	heres along Living Roots (C3)	Dry Season Water Table (C2)
Sediment Deposits (B2)		✓ Crayfish Burrows (C8)
	uction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	· ·	✓ 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):	Matland Hy	rdrology Present? Yes No
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	12	urology Present: 165 C No C
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if av	ailable:
Remarks:		
	- C 11	
Saturation begins to develop around 10 to 12 inches below ground	surrace. However, numerous o	other hydology indicators are evident.

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

6	•			ninant		Sampling Point: Wet - 2
Magnolla virginina	3	Absolute			Indicator	Dominance Test worksheet:
Magnolle virginiane	Tree Stratum (Plot size: 30 m	% Cover	_ C	over	Status	Number of Dominant Species
Menuse ellicities	1 Magnolia virginiana	15	☑	48.4%	FACW	That are OBL, FACW, or FAC: 8 (A)
Second content Seco	2. Nyssa sylvatica	10	✓ _	32.3%	FAC	Total Name of Descious
1	3. Pinus elliottii	5		16.1%	FACW	
0	1. Taxodium ascendens	1		3.2%	OBL	
0	j	0		0.0%		
3. 0 □ 0.0% Total Cover 15.5 20% of Total Cover 6.2 31 □ Total Cover 15.5 20% of Total Cover 6.2 31 □ Total Cover 15.5 20% of Total Cover 25 25 25.5% FACW FAC	S	0		0.0%		That Are OBL, FACW, or FAC:
Sop Fortal Cover: 15.5 20% of Total Cover: 6.2 31 = Total Cover 5.5 20% of Total Cover: 15.5 20% of Total Cover: 10 23.8% FACW FACW Species 85 x 2 FACW Species 85 x 2 FACW Species 85 x 2 FACW Species 85 x 2 FACW Species 85 x 3 FACW Species 85 x 3 FACW Species 85 x 4 FACW Specie	7.	0		0.0%		Prevalence Index worksheet:
Saping of Saping Saping of Saping Sa	3	0		0.0%		Total % Cover of Multiply by:
Magnolia virginiana	50% of Total Cover: 15.5 20% of Total Cover: 6.2		= Tota	al Cover	•	
Magnolia virginiana	Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1				
Pinus elliottii			~	59.5%	FACW	
Nyssa sylvatica	Diagradiatti	10	400		,	
Acer rubrum	N					
0	Actor mulmum		Ħ.			
	P.	^			IAC	Column Totals: 114 (A) 249 (B)
1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 5.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 3 - Prevalence Index is ≤ 3.0 1 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Indicators: 1 - Rapid			H-			Prevalence Index = B/A = 2.184
1 - Rapid Test for Hydrophytic Vege 1 - Rapid Test for Hydrophytic Vege 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 ¹ Problematic Hydrophytic Vegetation Magnolia virginiana		-	=			Hydrophytic Vegetation Indicators:
20			H-			
Shrub Stratum (Plot size: 30 m)			ш			1 - Rapid Test for Hydrophytic Vegetation
Cyrtlla raceniflora	50% of Total Cover: 21 20% of Total Cover: 8.4	42 =	= Tota	al Cover		✓ 2 - Dominance Test is > 50%
Magnolia virginiana	Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Magnolia virginiana	Cyrilla racemiflora	20	V	71.4%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Acer rubrum				17.9%	FACW	
be present, unless disturbed or problem O		_		10.7%	FAC	¹ Indicators of hydric soil and wetland hydrology must
Definition of Vegetation Strata: Tree - Woody plants, excluding woody wapproximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) or larger in diameter at breast (7.6 cm) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding woody approximately 20 ft (6 m) or more in help than 3 in. (7.6 cm) DBH. Sapling - Woody plants, excluding than 3 in. (7.6 cm) DBH. Sapling - Woody p				0.0%		be present, unless disturbed or problematic.
0			\Box	0.0%		Definition of Vegetation Strata:
Solution Solution		0				Tree - Woody plants, excluding woody vines,
No call plants 1		28 =	= Tota			approximately 20 ft (6 m) or more in height and 3 in.
1. Arundinaria tecta						(7.6 cm) or larger in diameter at breast height (DBH).
Antoniana secta 5						Sapling - Woody plants, excluding woody vines
3.						approximately 20 ft (6 m) or more in height and less
4.					OBL	than 3 in. (7.6 cm) DBH.
5.		-	⊔_	0.0%		
6. 0	4	0	<u></u> .			
7		0	<u></u>	0.0%	r	than 5 iit. BBT and greater than 5.25 it (111) tail.
8. 0 0.0% 9. 0 0.0% 0.0% 1. 0 0.0% 1. 0 0.0% 2. 0 0.0% 2. 0 0.0% 50% of Total Cover: 4 20% of Total Cover: 1.6 8 = Total Cover Vitis rotundifolia 5 100.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 Herb - All herbaceous (non-woody) plant herbaceous vines, regardless of size, an plants, except woody vines, less than ap 3 ft (1 m) in height. Woody Vine Stratum (Plot size: 30 m) Vitis rotundifolia 5 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 Hydrophytic Vegetation		0	<u>. </u>	0.0%		Shrub - Woody plants, excluding woody vines,
8. 0 0.0% 9. 0 0.0% 0.0% 1. 0 0.0% 1. 0 0.0% 2. 0 0.0% 2. 0 0.0% 50% of Total Cover: 4 20% of Total Cover: 1.6 8 = Total Cover Vitis rotundifolia 5 100.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 Herb - All herbaceous (non-woody) plant herbaceous vines, regardless of size, an plants, except woody vines, less than ap 3 ft (1 m) in height. Woody Vine Stratum (Plot size: 30 m) Vitis rotundifolia 5 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 Hydrophytic Vegetation	7	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
herbaceous vines, regardless of size, an plants, except woody vines, less than ap 3 ft (1 m) in height. 2. 0 0.0% 50% of Total Cover: 4 20% of Total Cover: 1.6 8 = Total Cover Woody Vine Stratum (Plot size: 30 m) Vitis rotundifolia 5 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 0.0% Hydrophytic Vegetation	0	0		0.0%		
1. 0 0.0% plants, except woody vines, less than ap 3 ft (1 m) in height. 2. 0 0.0% 50% of Total Cover: 1.6 8 = Total Cover Voody Vine Stratum (Plot size: 30 m) Vitis rotundifolia 5 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 Hydrophytic Vegetation	7	0	Ш_	0.0%		Herb - All herbaceous (non-woody) plants, including
1.	0		Ц_	0.0%		plants, except woody vines, less than approximately
2.	1	0_		0.0%		
Woody Vine Stratum (Plot size: 30 m) Vitis rotundifolia 5 ✓ 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% Vegetation Vegetation	2.			0.0%		
Vitis rotundifolia 5 ✓ 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0%	50% of Total Cover: 4 20% of Total Cover: 1.6	8 =	Tota	l Cover		Woody vine - All woody vines, regardless of height.
Vitis rotundifolia 5 ✓ 100.0% FAC 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0% 0 0.0%	Woody Vine Stratum (Plot size: 30 m					
. 0 0.0% 0 0.0% 0 0.0% Hydrophytic Vegetation		5 ,	V 1	00.0%	FAC	
. 0 0.0% 0 0.0% Hydrophytic Vegetation					: ^	
0 0.0% Hydrophytic Vegetation						
O 0.0% Hydrophytic Vegetation						
Vegetation Veg						Hydrophytic
50% of Total Cover: 2.5 20% of Total Cover: 1 5 - Total Cover Present? 1 5 NO C			.~		**************************************	Vegetation No. 11-
Solid I deli cover.	50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	Tota	l Cover		Present? 15 0 NO 0
emarks: (If observed, list morphological adaptations below).						

									Sa	mpling Point: Wet - 2
rofile Desc	ription: (Des	cribe to	the depth	needed to docu	ment	the indi	cator or co	onfirm the	absence of indicato	ors.)
Depth	y	Matrix		,	Re	dox Feat				
(inches)	Color (noist)	%	Color (moi	st)_	%	Type 1	. Loc2	Texture	Remarks
0-4	10YR	3/1	100							
4-20	10YR	4/2	95	10YR	6/2	5	D	М	Sandy Loam	Very fine granied
									-	
	- T: '0'						2F -		120	
									1.0	
					и г					
·	ncentration. Da	-Depletio	л. RM=Redu	ced Matrix, CS=0	 Covere	d or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining.	. M=Matrix Problematic Hydric Soils 3:
Histosol (☐ Polyvali	e Bek	w Surface	(S8) (LRR	S. T. ID	_	-
	ipedon (A2)			_ ·			(JB) (LKK (LRR S, T, I			(A9) (LRR O)
Black His				_		• • •	:1) (LRR O)	•		(A10) (LRR S)
	n Sulfide (A4)				-	_				rtic (F18) (outside MLRA 150A,B)
-	Layers (A5)					Matrix (F.	4)			oodplain Soils (F19) (LRR P, S, T)
		ND T .	n	Deplete					Anomalous I	Bright Loamy Soils (F20) (MLRA 153B)
	Bodies (A6) (LI		-	_		urface (F6			Red Parent I	Material (TF2)
	cky Mineral (A		, T, U)	☐ Deplete	d Dark	Surface (F7)		Very Shallov	v Dark Surface (TF12)
Muck Pre	sence (A8) (Li	RU)		Redox [epres	sions (F8)			Other (Expla	ain in Remarks)
1 cm Mue	ck (A9) (LRR P	, T)		Marl (F1	0) (LF	IR U)				•
Depleted	Below Dark St	ırtace (A.	11)	Deplete	d Ochi	ic (F11) (I	MLRA 151)			
Thick Dar	rk Surface (A1	2)					(F12) (LRF	(O, P, T)		
Coast Pra	irie Redox (A1	6) (MLRA	150A)				RR P, T, U)			
	uck Mineral (51			_		-17) (MLR				
	eyed Matrix (S		, -,	_	-			1500)	³ Indica	ators of hydrophytic vegetation and
Sandy Re		77		_			LRA 150A,	-	wet	land hydrology must be present,
						•	s (F19) (M	•		nless disturbed or problematic.
	Matrix (S6)		15	Anomak	ous Bri	ght Loamy	/ Soils (F20) (MLRA 14	9A, 153C, 153D)	
Dark Sum	face (S7) (LRR	P, 5, 1, l	J)							
strictive L	ayer (if obse	rved):								
Type:						-				
Depth (Inc	hes):								Hydric Soll Prese	ent? Yes 🖲 No 🔾
marks:				· · · · · · · · · · · · · · · · · ·						
							,		Balan Karan Kalan B	
letions in	lower soil co	olumn ap	ppear to be	scattered thro	ugho	ut the pr	imary ma	rıx. Very	light, but not domii	nant.

Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded Are climatic/hydrologic conditions on the site typical for this time of year		1.1°
	problematic? (If needed, explain any answers in Remarks.) Impling point locations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes No No Wetland Hydrology Present? Yes No Remarks:	Is the Sampled Area within a Wetland? Yes No	
HYDROLOGY Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Aquatic Fauna (B1 High Water Table (A2) Marl Deposits (B1! ✓ Saturation (A3) Hydrogen Sulfide Water Marks (B1) Oxidized Rhizosph Sediment Deposits (B2) Presence of Reduc	Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (B8) Image	
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) Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photo	Wetland Hydrology Present? Yes No	
Remarks:		

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

Dominant Sampling Point Species?	: Wet - 5
Absolute Rel.Strat. Indicator Dominance Test worksheet:	
Tree Stratum (Plot size: 30 m) % Cover Cover Status Number of Dominant Species	
Magnolia virginiana 15 45.5% FACW That are OBL, FACW, or FAC:	9 (A)
Nyssa sylvatica 15 🗸 45.5% FAC Total Number of Dominant	
Quercus nigra 3 9.1% FAC Species Across All Strata:	9 (B)
0 0.0%	
0 0.0% Percent of dominant Species	100 0% (A/B
0 0.0% That Are OBL, FACW, or FAC:	, 100 0 70 (79)
0 0.0% Prevalence Index worksheet:	
	ultiply by:
	1 = 10
apling or Sapling/Shrub Stratum (Plot size: 30 m) FACW species 78 x	
M	
Outstand Stem	
The special of the sp	
Orthographics	5 = 0
Cyrilla racemiflora 3 7.9% FACW Column Totals: 126 (A) 280 (B)
0 0.0% Prevalence Index = B/A =	2.222
0 0,0%	
0 0.0% Hydrophytic Vegetation Indicato	rs:
0 0.0% 1 - Rapid Test for Hydrophy	tic Vegetation
60% of Total Cover: 19 20% of Total Cover: 7.6 38 = Total Cover	- %
hrub Stratum (Plot size: 30 m)	
39-24-0 - 2-32: 10/3/ 2007 - 2002 1 A part 1 a annual 1	getation - (explain)
·····································	etland hydrology mus
be present, unless disturbed or a	
0 0.0%	-4
0 0.0% Definition of Vegetation Str	
0 0.0% Tree - Woody plants, excluding approximately 20 ft (6 m) or mor	
50% of Total Cover: 17.5 20% of Total Cover: 7 35 = Total Cover (7.6 cm) or larger in diameter at	
lerb Stratum (Plot size: 30 m	
Arundinaria tecta 5 33.3% FACW Sapling - Woody plants, excluding	
approximately 20 ft (6 m) or mor word with a second and the second approximately 20 ft (6 m) or mor than 3 in. (7.6 cm) DBH.	e in neight and less
C	
o l o ook I Saplind/Shrub - Woody plants e	xcluding vines, less
than 3 in. DBH and greater than	3.28 ft (1m) tall.
Striub - vvoody plants, excluding	
, and a second s	ı) iii neignt.
0 0.0% Herb - All herbaceous (non-wood	iv) plants including
herbaceous vines, regardless of	
0 0.0% plants, except woody vines, less	than approximately
0 0.0% 3 ft (1 m) in height.	
0 0.0%	
50% of Total Cover: 7.5 20% of Total Cover: 3 15 = Total Cover Woody vine - All woody vines, re	gardless of height.
/oody Vine Stratum (Plot size: 30 m	
Vitis rotundifolia 5 100.0% FAC	
0 0.0%	
0 0.0%	
Hudranhutic	
Vegetation Vegetation)
0% of Total Cover: 2.5 20% of Total Cover: 1 5 = Total Cover Present? Yes No	
0,0%	Vegetation

New York New York		iption: (De:	scribe to	the depth	needed to	document	t the indic	cator or c	onfirm the	absence of indicators.)	
(Inches) Color (moist)	Depth		Matrix			Re					
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ype: C=Concentration. D=Depletion. RM=Reduced Verity (Fig. 1)	(inches)	Color (moist)	%	Color	moist)	%	Type 1	Loc2	Texture	Remarks
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Variet Soil Indicators:	0-5	10YR	3/1	95	10YR	6/6	.5	C	М	Sandy Loam	
ydric Soil Indicators: Histosoi (A1)	5-22	10YR	3/2	90	10YR	6/2	10	D	M	Sandy Loam	
ydric Soil Indicators: Histosoi (A1)			_			-	-				
ydric Soil Indicators: Histosoi (A1)										*-	
ydric Soil Indicators: Histosoi (A1)								-			
Histosol (A1)	Type: C=Con	centration. D	=Depletior	 . RM=Redu	uced Matrix, (CS=Covere	 ed or Coate	ed Sand Gr	ains ² Loca	ntion: PL=Pore Lining. M=	-Matrix
Histosof (A1)	ydric Soil I	ndicators:								Indicators for Pro	blematic Hydric Soils ³ :
Histic Epipedon (A2)	Histosol (41)			Pol	yvalue Bel	ow Surface	(S8) (LRR	(S, T, U)		•
Black Histic (A3)	Histic Epip	edon (A2)			☐ Thì	n Dark Sur	face (S9) ((LRR S, T,	υ)	_ ` `	• •
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Organic Bodiles (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodiles (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodiles (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150A) Derived Matrix (S4) Redox Dark Surface (F13) Redox Derressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Redox Dark Surface (S1) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) Redox Dark Surface (S1) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR P, S, T, U) Sandy Muck Mineral (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Sandy Muck Mineral (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, S, T, U) Thick Dark Surface (S1) (LRR P, T, U) Thick Dark Surface (S1) (LRR P, T, U) Thick Dark Surface (S1) (LRR P, T, U) Thick Dark Surface (S1) (LRR P, T, U) Thick Dark Surface (S1) (LRR P, T, U) Thick Dark Surface (S1)	Black Hist	ic (A3)			Loa	my Mucky	Mineral (F	1) (LRR O)	_ `	, ,
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Sc m Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) I cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Muck Mineral (S1) (LRR Q, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Depleted Chric (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Hydrogen	Sulfide (A4)			Loa	my Gleyed	d Matrix (F	2)			
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) S cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Delta Ochric (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Stratified	Layers (A5)			☐ Deg	oleted Mat	rix (F3)			_	
S cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type:	Organic B	odies (A6) (L	RR P, T, U)	Rec	lox Dark S	urface (F6))			
Muck Presence (A8) (LRR U)] 5 cm Muc	ky Mineral (A	7) (LRR P,	T, U)	☐ Dep	oleted Darl	c Surface (I	F7)			• •
1 cm Muck (A9) (LRR P, T)	Muck Pres	ence (A8) (L	rr u)		Rec	lox Depres	sions (F8)	_			• •
Thick Dark Surface (A12)	1 cm Muc	k (A9) (LRR F	r, T)		☐ Mai	l (F10) (LF	RR U)			C Odiei (Explair ii	i Nemana)
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Depleted I	Below Dark S	urface (A1	1)	☐ Dep	leted Och	ric (F11) (N	MLRA 151)			
Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Thick Dark	Surface (A1	2)		☐ Iron	-Mangane	se Masses	(F12) (LRI	R O, P, T)		
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Coast Prai	rie Redox (A:	l6) (MLRA	150A)	Um Um	bric Surfac	:e (F13) (Ц	RR P, T, U))		
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Solls (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Sandy Mu	ck Mineral (S	1) (LRR O,	S)	☐ Deli	ta Ochric (F17) (MLR	A 151)		-	
Sandy Redox (55)	Sandy Gle	yed Matrix (S	4)						150B)		
Stripped Matrix (S6) Anomalous Bright Loamy Solls (F20) (MLRA 149A, 153C, 153D) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Sandy Rec	lox (S5)						•	-		
Dark Surface (S7) (LRR P, S, T, U) strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No C	Stripped N	latrix (S6)					•				o distallated of problemated
strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No C			P. S. T. U	1)		indicas bi	ignic Louini,	9 50.15 (1 20	// (FICION 2).	574 1550, 1550)	
Type: Depth (inches): Hydric Soil Present? Yes No O emarks:											
Depth (inches): Hydric Soil Present? Yes No O		yer (if obse	rved):								
emarks:		ac).								Hydric Soil Present?	Yes No
			······································				-3				
otchy areas with lighter coloring that appear stripped of darker organic material.											
	otchy area:	s with lighte	er coloring	g that app	ear strippe	d of dark	er organi	c materia	l.		

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 11-Oct-16
	State: MS Sampling Point: Wet- 6
Applicant/Owner: NASA	and the second s
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 28 T 7s R 16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): undulating Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR T Lat:	30° 24' 40.727" N Long.: 89° 36' 31.790" W Datum: NAD83
Soil Map Unit Name: Atmore	NWI dassification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes No (If no, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)
	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No O	Is the Sampled Area Yes No
Wetland Hydrology Present? Yes No ○	within a Wetland? Tes NO
Remarks:	
Low bottom-draiange area approximately 60-70 feet from UP-6 wthi	in riparian flood plain of Turtieskin Creek.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	
High Water Table (A2) Marl Deposits (B15)	
Saturation (A3) Hydrogen Sulfide (
	neres along Living Roots (C3)
Sediment Deposits (B2) Presence of Reduc	
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface ☐ Iron Deposits (B5) ☐ Other (Explain in R	
iron Deposits (B5) Unundation Visible on Aerial Imagery (B7) Other (Explain in F	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
	□ Sphaghuil Hoss (bb) (ERT, b)
Field Observations: Surface Water Present? Yes No Depth (inches):	
- · · · · · · · · · · · · · · · · · · ·	
	Wetland Hydrology Present? Yes No
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	
Drainage patterns, low bottom area with numerous buttressed trees.	

VEGETATION	(Five/Four	Strata) -	Use	scientific	names o	f plants.
	-	-				Dominant

		Dominant Species? _		Sampling Point: Wet- 6	
(Plat stars 20	Absolut	te Rel.Strat.	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 m)	% Cov		Status	Number of Dominant Species	
Nyssa sylvatica	15	55.6%	FAC	That are OBL, FACW, or FAC: 8 (A)	
Quercus nigra	10	✓ 37.0%	FAC	Total Number of Dominant	
Pinus elliottii	2	7.4%	FACW	Species Across All Strata: 8 (B)	
	.0	0.0%	Depotes to the desire to		
	0	0.0%		Percent of dominant Species That Are ORL FACW or FAC: 100.0% (A/B	
		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B	
	0	0.0%	2-00-0	Prevalence Index worksheet:	
	0	0.0%		Total % Cover of: Multiply by:	
50% of Total Cover: 13.5 20% of Total Cover:		= Total Cover	•	OBL species 12 x 1 = 12	
apling or Sapling/Shrub Stratum (Plot size: 30				FACW species 22 x 2 = 44	
Nyssa sylvatica	40	✓ 50.0%	FAC	FAC species 45 x 3 = 135	
Quercus nigra	_	✓ 25.0%	FAC	FACU species $0 \times 4 = 0$	
	3	15.0%	FACW	1 1000000	
A4		10.0%	FACW	1. 1 species	
			INCVV	Column Totals: 79 (A) 191 (B)	
		0.0%		Prevalence Index = B/A = 2.418	
- W W				Hydrophytic Vegetation Indicators:	
		0.0%		manophysic regention multators:	
		0.0%		1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 10 20% of Total Cover:	4 20	= Total Cover	•	✓ 2 - Dominance Test is > 50%	
ihrub Stratum (Plot size: 30 m)				✓ 3 - Prevalence Index is ≤3.0 ¹	
Magnolia virginiana	10	✓ 58.8%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
Acer rubrum		₹ 29.4%	FAC	Problematic regulation (Explain)	
BM		11,8%	FACW	¹ Indicators of hydric soil and wetland hydrology mus	
· . m · rac · . · . AP W	-		LACV	be present, unless disturbed or problematic.	
		0.0%	e - • • •	Definition of Vegetation Strate:	
	0	U0.0%_		Definition of Vegetation Strata:	
		□ 0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.	
60% of Total Cover: 8.5 20% of Total Cover:	3.4 17	= Total Cover		(7.6 cm) or larger in diameter at breast height (DBH).	
lerb Stratum (Plot size: 30 m)				Carlina Washington and Alexander	
Woodwardia areolata	10	66.7%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
2. Arundinaria tecta	3	✓ 20.0%	FACW	than 3 in. (7.6 cm) DBH.	
3. Woodwardia virginica	2	13,3%	OBL		
	0	0.0%		Sapling/Shrub - Woody plants, excluding vines, less	
).	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.	
	0	0.0%	-		
5	:0	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
7 	0	0.0%		approximately o to 20 it (1 to 0 iii) iii iioigite.	
3				Herb - All herbaceous (non-woody) plants, including	
		0.0%		herbaceous vines, regardless of size, and woody	
·		0.0%		plants, except woody vines, less than approximately	
	0_	□ 0.0%		3 ft (1 m) in height.	
2	0	0.0%		Manager and Allers and	
50% of Total Cover: 7.5 20% of Total Cover:	3 15	= Total Cover		Woody vine - All woody vines, regardless of height.	
Voody Vine Stratum (Plot size: 30 m			ļ		
	0	0.0%			
· · · · · · · · · · · · · · · · · · ·	0	0.0%			
	0	0.0%			
	0	0.0%			
	0	0.0%		Hydrophytic	
		= Total Cover	e	Vegetation Present? Yes No ○	
50% of Total Cover: 0 20% of Total Cover:					

Profile Becci									Samplir	ig Point: Wet-6	
, Torne Descri	iption: (Des		the depth	needed to do				onfirm the	absence of indicators.)		
Depth	Matrix				Redox Features						
(inches)	Color (1		0/0	Color (n	olst)	%	Type *	Loc2	Texture	Remarks	
0-5	10YR	3/1	100					_		14 118	
5-16	10YR	3/2	90	10YR	7/2	10	. C	M	Sandy Loam		
	-				-						
							-			v. x	
Pa.											
Гуре: C=Conc	entration. D	=Depletion	n. RM=Redu	ced Matrix, CS	=Covere	d or Coate	d Sand Gra	ains ² Loca	tion: PL=Pore Lining. M=M	latrix	
lydric Soil Ia	ndicators:								Indicators for Probl	ematic Hydric Soils ³ :	
Histosol (A	•			Polyv	alue Belo	ow Surface	(S8) (LRR	S, T, U)	☐ 1 cm Muck (A9) (I	_RR O)	
Histic Epip						face (S9) (I		-	2 cm Muck (A10)		
Black Histic				Loam	y Mucky	Mineral (F	l) (LRR O)		Reduced Vertic (F	18) (outside MLRA 150A,B)	
	Sulfide (A4)			Loam	y Gleyed	l Matrix (F2)		Piedmont Floodpla	ain Soils (F19) (LRR P, S, T)	
Stratified L				Deple	ted Matr	tx (F3)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	odies (A6) (LF		-	Redo	CDark S	urface (F6)			Red Parent Material (TF2)		
_	cy Mineral (A)		, T, U)	Deple	ted Dark	Surface (F	7)		Very Shallow Dark Surface (TF12)		
	ence (A8) (LF			Redo	Depres	sions (F8)			Other (Explain in F	Remarks)	
_	(A9) (LRR P			Marl	(F10) (LF	RR U)				•	
-	Below Dark St	-	11)	Deple	ted Ochr	ric (F11) (M	ILRA 151)				
	Surface (A1	•		Iron-	Mangane	se Masses	(F12) (LRF	R O, P, T)			
_	ie Redox (A1			Umbr	ic Surfac	e (F13) (LF	R P, T, U)				
_ `	k Mineral (\$1		, S)	☐ Delta	Ochric (I	F17) (MLRA	151)		37		
_	ed Matrix (S	4)		Redu	ed Vertl	c (F18) (MI	RA 150A,	150B)	-indicators o wetland h	of hydrophytic vegetation and ydrology must be present,	
J Sandy Red Sandy				Piedn	ont Floo	dplain Solls	(F19) (M	LRA 149A)		disturbed or problematic.	
Stripped M				Anor	alous Bri	ight Loamy	Soils (F20) (MLRA 149	9 A, 153C, 153D)		
	ce (S7) (LRR	P, S, T, U	J)								
□ Dark Surface											
」 Dark Surfa											
	ver (if obse	rved):									
estrictive La	yer (if obse	rved):									
estrictive La		rved):	Trace	47.00		-			Hydric Soil Present?	Yes ● No ○	
estrictive La Type: Depth (inch		rved):	Tra .						Hydric Soil Present?	Yes ● No ○	
estrictive La Type: Depth (inch		rved):		V					Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):	ne see			4			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):		- V		<u>-</u>			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				<u>.</u>			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes [●] No [○]	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes ● No ○	
estrictive La		rved):				-			Hydric Soil Present?	Yes ● No ○	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	
estrictive La Type: Depth (inch		rved):				-			Hydric Soil Present?	Yes No	

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 11-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 7
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 28 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat:	30° 24' 46.797" N Long.: 89° 36' 26.603" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation . , Soil . , or Hydrology . significant	tly 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 sa	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No No Wetland Hydrology Present? Yes No No Remarks:	Is the Sampled Area within a Wetland? Yes No O
	oly disturbed with a mix of vegetative species just north of heavy pine overstory.
HYDROLOGY	
Sediment Deposits (B2) □ Drift Deposits (B3) □ Algal Mat or Crust (B4) □ Iron Deposits (B5) □ Inundation Visible on Aerial Imagery (B7) ■ Water-Stained Leaves (B9) Field Observations:	Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1)
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Yes No Depth (inches): Depth (inches): No Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Wetland Hydrology Present? Yes ⊚ No ○
Remarks:	

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

Dominant

Tree Stratum (Plot size: 30 m)	Absolute % Cove	e Re	ecies? el.Strat. Cover	Indicator Status	Dominance Test worksheet:
Pinus elliottii	10	V	52,6%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 10 (A)
Nyssa sylvatica	5		26,3%	FAC	THE GIC OBLY FROM OF THE CAN
Ourselle - Inc.			15.8%	FAC	Total Number of Dominant
Marine Provident from		⊢			Species Across All Strata: 10 (B)
Magnolia virginiana		H-	5.3%	FACW	Percent of dominant Species
	. 0	Н.	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
	0	Щ.	0.0%		That the obly the ty of the
FILEN No. 2	. 0	Ш	0.0%		Prevalence Index worksheet:
• • •	.0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 9.5 20% of Total Cover: 3.8	19	= To	tal Cove	г	OBL species 7 x 1 = 7
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species 29 x 2 = 58
Dinue alliatti	10	V	FF 60/	EACW	
Manada	-		55,6%	FACW	
Magnolia virginiana		✓.	27.8%	FACW	FACU species $0 \times 4 = 0$
Acer rubrum	. 3	Щ.	16.7%	FAC	UPL species $0 \times 5 = 0$
Elign common Munico Heal on V	. 0		0.0%		Column Totals: 80 (A) 197 (B)
	0		0.0%		
	. 0		0.0%		Prevalence Index = B/A = 2.463
•	0		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%	500 C 1000	
THE RESERVE THE PROPERTY OF THE PARTY OF THE			,		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 9 20% of Total Cover: 3.6	18	= To	tal Cove	r	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Morella cerifera	10	V	40.0%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
Acer rubrum	7	V	28.0%	FAC	
Nyssa sylvatica	5	V	20.0%	FAC	¹ Indicators of hydric soil and wetland hydrology must
			12.0%	FACW	be present, unless disturbed or problematic.
*		=		PACW	Definition of Vegetation Strata
	0	-	0.0%		Definition of Vegetation Strata:
	. 0	\square	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 12.5 20% of Total Cover: 5 lerb Stratum (Plot size: 30 m)	25	= Toi	tal Cove		(7.6 cm) or larger in diameter at breast height (DBH),
1 Woodwardia areolata	5	V	71,4%	OBL	Sapling - Woody plants, excluding woody vines,
2 Woodwardia virginica		V	28.6%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3.	0		0.0%		and to the (7.5 only BB).
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
4		H			than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0		0.0%		
6.	0	H-	0.0%		Shrub - Woody plants, excluding woody vines,
7	0	Ц.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8 , ,	0	$\sqcup_{\underline{}}$	0.0%		
9.,, ,	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
0	0		0.0%		plants, except woody vines, less than approximately
1,0	0		0.0%		3 ft (1 m) in height.
2.	0	Π,	0.0%		
50% of Total Cover: 3.5 20% of Total Cover: 1.4		= Tot	al Cove		Woody vine - All woody vines, regardless of height.
Voody Vine Stratum (Plot size: 30 m					
Vitis rotundifolia	10	✓	90.9%	FAC	
Rubus argutus	1		9.1%	FAC	
	0		0.0%		
	0	\Box	0.0%		
		□ .		-	Hydrophytic
50% of Total Cover: 5.5 20% of Total Cover: 2.2	0	 Tot=	0.0% al Cover	dev.	Vegetation Present? Yes No O

Sampling Point: Wet - 7

COL	
SI H	

Denth Matrix	incomed to detailed the indicator of committee the	absence of Indicators.)
pepui	Redox Features	
(inches) Color (moist) % 0-6 10YR 3/1 100	Color (moist) % Type 1 Loc2	Texture Remarks
6-16 10YR 4/2 90	10YR 7/2 10 D M	Loamy Sand
₩ #:		20 20 20 20 20 20 20 20 20 20 20 20 20 2

¹ Type: C=Concentration. D=Depletion. RM=Re	duced Matrix, CS=Covered or Coated Sand Grains 2Loca	ation: PL=Pore Lining, M=Matrix
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epipedon (A2)	☐ Thin Dark Surface (S9) (LRR S, T, U)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR O)	2 cm Muck (A10) (LRR S)
☐ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Reduced Vertic (F18) (outside MLRA 150A,B)
Stratified Layers (A5)	Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Organic Bodies (A6) (LRR P, T, U)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Redox Dark Surface (F6)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Depleted Dark Surface (F7)	└── Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Redox Depressions (F8)	Other (Explain in Remarks)
	☐ Marl (F10) (LRR U)	
Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
☐ Thick Dark Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Prairie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Muck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 149A)	unless disturbed or problematic.
Stripped Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA 14	ł9A, 153C, 153D)
☐ Dark Surface (S7) (LRR P, \$, T, U)		
Restrictive Layer (if observed):		_
	ļ	
Type:		
Type:		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
7,		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No No
Depth (inches):		Hydric Soil Present? Yes No No
Depth (inches):		Hydric Soil Present? Yes No No
Depth (inches):		Hydric Soil Present? Yes No No

Sampling Point: Wet - 7

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 11-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 8
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 28 T 7s R 16 W
Landform (hillslope, terrace, etc.):	ocal relief (concave, convex, none): Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat: 3	80° 24′ 39.246" N Long.: 89° 36′ 46.299" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PFO 1/4 C
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	· · · ·
Are Vegetation , Soil , or Hydrology naturally pro	The factor of th
SUMMARY OF FINDINGS - Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No No No Wetland Hydrology Present? Yes No No No No No No No No No No No No No	Is the Sampled Area within a Wetland? Yes No
Remarks: Low drainage area.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
☐ Sediment Deposits (B2) ☐ Presence of Reduced	(LRR U)
Remarks:	

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

Dominant

			ominant pecies? .		Sampling Point: Wet - 8
(0)	Absolute	e Re	el.Strat.	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii	10	V	50.0%	FACW	That are OBL, FACW, or FAC: 9 (A)
Nyssa aquatica	. 5	V	25.0%	OBL	Total Number of Dominant
Quercus virginiana	. 5	V	25.0%	FACU	Species Across All Strata: 10 (B)
	0		0.0%		
	0		0.0%		Percent of dominant Species
***			0.0%		That Are OBL, FACW, or FAC: 90.0% (A/B)
	0		0.0%		Prevalence Index worksheet:
	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 10 20% of Total Cover: 4	20	= To	tal Cove	Г	OBL species 28 x 1 = 28
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species68 x 2 =136
Liquidambar styraciflua	5	V	35.7%	FAC	FAC species 19 x 3 = 57
Dinus alliatti	765	V	35.7%	FACW	
Output to the later	-	Ĭ,	14.3%	FACU	
		H	THE PARTY OF THE		ore species
* * * * * * * * * * * * * * * * * * *			14.3%	FAC	Column Totals: 122 (A) 249 (B)
		H	0.0%		Prevalence Index = B/A = 2.041
· · · · · · · · · · · · · · · · · · ·		Π,	0.0%		***************************************
		Щ	0.0%		Hydrophytic Vegetation Indicators:
	0	Ш,	0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 7 20% of Total Cover: 2.8	14	= To	tal Cove	r	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Cyrilla racemifiora	15	V	28.8%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
"ma 's & (2 / 3 m)	1.00	V	48.1%	FACW	Froblematic Hydrophysic regetation - (Explain)
* · · · · · · · · · · · · · · · · · · ·	-		19.2%	FAC	¹ Indicators of hydric soil and wetland hydrology must
					be present, unless disturbed or problematic.
			3.8%	FAC	Definition of Vegetation Strata
		님	0.0%		Definition of Vegetation Strata:
	. 0	LJ.	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 26 20% of Total Cover: 10.4	52	= To	tal Cove		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m)					
Woodwardia virginica	10	V	27.8%	OBL	Sapling - Woody plants, excluding woody vines,
2. Woodwardia areolata	-	V	27.8%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3. Arundinaria tecta	8	V	22.2%	FACW	
, Hypericum cistifolium	_		13.9%	FACW	Sapling/Shrub - Woody plants, excluding vines, less
, Dichanthelium scabriusculum	3	П	8.3%	OBL	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0		0.0%	ODL	
*		H	0.0%		Shrub - Woody plants, excluding woody vines,
The second secon					approximately 3 to 20 ft (1 to 6 m) in height.
c		Η.	0.0%		Herb - All herbaceous (non-woody) plants, including
Mariana sa sa sa sa sa sa sa sa sa sa sa sa sa	0	H	0.0%		herbaceous vines, regardless of size, and woody
			0.0%		plants, except woody vines, less than approximately
Ç			0.0%		3 ft (1 m) in height.
	0	Ш,	0.0%	-	Minaka da Allaga da da da da da da da da da da da da da
50% of Total Cover: 18 20% of Total Cover: 7.2	36	= To	tal Cover		Woody vine - All woody vines, regardless of height.
Voody Vine Stratum (Plot size:)				ĺ	
	0		0.0%		
	W W.	\Box	0.0%	011-11-0	
	-	\Box	0.0%		
	•	7	0.0%		
}		H		COSC VANCO CONTRACT	Hydrophytic
		1 1	0.0%		
	0	-	tal Cover		Vegetation Present? Yes No

SOIL					Sampling	g Point: Wet - 8	
Profile Desci	ription: (Describe to	the depth	needed to document the indicator or confirm	m the absen	nce of indicators.)	···································	
Depth	Matrix		Redox Features		_		
(inches)	Color (moist)	%	1	Loc2	Texture	Remarks	
0-7	10YR 2/1	90		Cla	y Loam		
7-16	10YR 4/1	80	10YR 3/1 20				
							_
							
¹ Type: C=Con	centration. D=Depletion	. RM=Red	uced Matrix, CS=Covered or Coated Sand Grains	² Location:	PL=Pore Lining. M=Ma	atrix	
Hydric Soil I	Indicators:			I	ndicators for Proble	ematic Hydric Soils ³ :	
Histosol (A1)		Polyvalue Below Surface (S8) (LRR S, T,		1 cm Muck (A9) (L	<u>-</u>	
Histic Epip	pedon (A2)		☐ Thin Dark Surface (S9) (LRR S, T, U)		2 cm Muck (A10) (-	
☐ Black Hist	ic (A3)		Loamy Mucky Mineral (F1) (LRR O)	,		L8) (outside MLRA 150A,B)	
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix (F2)		_		
	Layers (A5)		Depleted Matrix (F3)	L	_	in Soils (F19) (LRR P, S, T)	
	odies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	L		Loamy Soils (F20) (MLRA 153B)	
	ky Mineral (A7) (LRR P,	•	Depleted Dark Surface (F7)	L	Red Parent Materia	* *	
	sence (A8) (LRR U)	1,0,	_ ' ' '	L	Very Shallow Dark	• •	
_	* (A9) (LRR P, T)		Redox Depressions (F8)	L	_ Other (Explain in R	lemarks)	
		43	☐ Marl (F10) (LRR U)				
	Below Dark Surface (A1	1)	Depleted Ochric (F11) (MLRA 151)				
	k Surface (A12)		☐ Iron-Manganese Masses (F12) (LRR O, P	P, T)			
	irie Redox (A16) (MLRA		Umbric Surface (F13) (LRR P, T, U)				
_	ck Mineral (S1) (LRR O,	S)	Delta Ochric (F17) (MLRA 151)		3	er i i i i i i i i i i i i i i i i i i i	
Sandy Gle	yed Matrix (S4)		Reduced Vertic (F18) (MLRA 150A, 150B	3)	Indicators of wetland hy	f hydrophytic vegetation and /drology must be present,	
Sandy Red	dox (S5)		Piedmont Floodplain Soils (F19) (MLRA 1-	149A)		disturbed or problematic.	
Stripped N	Matrix (S6)		Anomalous Bright Loamy Soils (F20) (ML	LRA 149A, 15	3C, 153D)		
Dark Surfa	ace (S7) (LRR P, S, T, U)					
			·				
Restrictive La	ayer (if observed):						
Туре:					4-1- C-11 D12	v @ v O	
Depth (inch	nes):			Нус	dric Soil Present?	Yes No O	
Remarks:							
							- 1

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland	- Hancock Sampling Dat	e: 11-Oct-16
Applicant/Owner: NASA	State: M	S Sampling Point: Wet - 9	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Ra	inge: 5 28 T 7s	R 16 W
Landform (hillslope, terrace, etc.):	Local relief (concave, co	onvex, none): Slope:	0.0 % / 0.0°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24′ 29.150" N	Long.: 89° 36′ 46.346″ W	Datum: NADB3
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent sl	1. 1. 4	NWI classification: PFO	
Are climatic/hydrologic conditions on the site typical for this time of ye	(2)		-4 1, -1,
		(21 113) 334 1131 1131 1131 1131	es 💿 No 🔾
		Home of carried process	
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (If no	eeded, explain any answers in Remarks	.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point location	ons, transects, important featu	res, etc.
Hydrophytic Vegetation Present? Yes No No	Is the Sampled	Area	
Hydric Soil Present? Yes No	within a Wetlar	nda Yes ● No ○	
Wetland Hydrology Present? Yes ● No ○	Within a Wetai		
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of	2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soll Cracks (B6)	
Surface Water (A1) Aquatic Fauna (B:	-	Sparsely Vegetated Concave S	urface (B8)
High Water Table (A2) Mari Deposits (B1		Drainage Patterns (B10)	
Saturation (A3) Hydrogen Sulfide	• •	☐ Moss Trim Lines (B16)	
	neres along Living Roots (C3)	= ' ' '	
Sediment Deposits (B2) Presence of Redu		Crayfish Burrows (C8)	
. , ,	ction in Tilled Soils (C6)	Saturation Visible on Aerial Ima	agery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	• •	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):			
	-		
	Wetla	nd Hydrology Present? Yes 🂿 1	No O
Saturation Present? Yes No Depth (inches):			
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections),	, if available:	
Remarks:			
Ì			

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

Dominant
Species?

Tree Stratum (Plot size: 30 m)	Absolut % Cove		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1100 00.000					Number of Dominant Species
1 Magnolia virginiana	25		62.5%	FACW	That are OBL, FACW, or FAC: 10 (A)
2. Pinus elliottii	10	V		FACW	Total Number of Dominant
Nyssa sylvatica	5		12.5%	FAC	Species Across All Strata: 11 (B)
		Щ	0.0%	- c assess ms	
j	0	Ш	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 90.9% (A/B)
, <u>, , , , , ,</u>	0		0.0%		That Are Obl., TACW, OF IAC.
1.	0		0.0%		Prevalence Index worksheet:
3.	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 20 20% of Total Cover: 8	40	= To	otal Cove	r	OBL species 52 x 1 = 52
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species 115 x 2 = 230
4 Manually administration	20	¥	44,4%	FACW	FAC species 26 x 3 = 78
• • • • • • • • • • • • • • • • • • • •		V	33.3%		
The second control of the second control of				FACW	FACU species $\underline{5}$ x 4 = $\underline{20}$
Morella cerifera	. 10	V		FAC .	UPL species $0 \times 5 = 0$
	0		0.0%		Column Totals: 198 (A) 380 (B)
	0	L.	0.0%		Prevalence Index = B/A = 1.919
• • • • • • • • • • • • • • • • • • •	0		0.0%	1 0	, , , , , , , , , , , , , , , , , , , ,
	0		0.0%		Hydrophytic Vegetation Indicators:
3.	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 22.5 20% of Total Cover: 9	45	- T	otal Cove		
	-3	- 10	COTE		2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)		_			✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea	20_	~	43.5%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilla racemiflora	15	V	32.6%	FACW	
Ilex vomitoria	10	V	21.7%	FAC	¹ Indicators of hydric soil and wetland hydrology must
Morella cerifera	1		2,2%	FAC	be present, unless disturbed or problematic.
	0		0.0%	12.5 41	Definition of Vegetation Strata:
	0	$\overline{\Box}$	0.0%	-	Tree - Woody plants, excluding woody vines,
50% of Total Cover: 23 20% of Total Cover: 9.2		= Total Cover			approximately 20 ft (6 m) or more in height and 3 in.
	46	= 10	cai cove	·	(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m)					
1. Dichanthelium scabriusculum	50	V	87.7%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2. Hypericum cistifolium			8.8%	FACW	than 3 in. (7.6 cm) DBH.
3. Eriocaulon decangulare	2		3.5%	OBL	, =,
1		\Box	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
4	•	Ξ	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	<u> </u>			
O	0	Η.	0.0%	-	Shrub - Woody plants, excluding woody vines,
7		님.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8		닏.	0.0%	v (//.	Harb All hash again from the state to be state -
9,,,	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
0	0		0.0%		plants, except woody vines, less than approximately
1	0		0.0%		3 ft (1 m) in height.
2.	0		0.0%	1	
50% of Total Cover: 28.5 20% of Total Cover: 11.4		= Ta	tal Cove		Woody vine - All woody vines, regardless of height.
	3/	- 10	rai covei		
Woody Vine Stratum (Plot size:				-	
Smilax laurifolia	5	V	50.0%	FACW	
Rubus trivialis	5	V	50.0%	FACU	
	0		0.0%		
	0		0.0%		
	0		0.0%		Hydrophytic
	-				Vegetation Present? Yes No
50% of Total Cover: 5 20% of T otal Cover : 2	10	- To	tal Cover		

Sampling Point: Wet - 9

Sampling Point: Wet - 9 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix **Redox Features** Depth (inches) Color (moist) Color (moist) 0-5 10YR 3/1 90 10YR 2/1 10 10YR 5-18 3/2 80 10YR 2/1 20 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: Histosof (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (∴RR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) 3 Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Yes 💿 No O **Hydric Soil Present?** Depth (inches): Remarks: Stripped/depleted matrix below 5 inches

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation City/	County: Waveland - Hancock Sampling Date: 12-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet -10
Investigator(s): Lars Larson, Randy Ellis Sec	ction, Township, Range: S 31 T 7s R 16 W
Landform (hillslope, terrace, etc.): Swale Loca	I relief (concave, convex, none): concave Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat.: 30°	24' 8.987" N Long.: 89° 37' 35.144" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: PFO 1/4 C
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 dis	turbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally proble	matic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampli	
Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Yes No O	Is the Sampled Area
Wetland Hydrology Present? Yes No No	within a Wetland?
Remarks: Natural drain to ephemeral stream approximatly 30-40 feet west of access	s path.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	
Water Marks (B1) Oxidized Rhizospheres a	
Sediment Deposits (B2) Sediment Deposits (B2) Presence of Reduced Iro	
Drift Deposits (B3) Recent Iron Reduction in	
Algal Mat or Crust (B4) 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 No Depth (inches):	
Water Table Present? Yes ○ No ● Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	9 Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
besone recorded basis (or carri gauge, monitoring well, delias proces, pre	Tious inspections, in available.
Remarks:	
	°
1	
I .	

v	FGFTATION	(Five/Four	Strata) -	Use scientific nam	es of pl	ants.
-	FREINITON	I FIVE/1 OUI	Juara -	And adjoint life life life.	C3 O1 P1	UIII 63.

		Domin Specie			Sampling Point: Wet -10
4-1	Absolute	Rel.St	rat. Inc	dicator	Dominance Test worksheet:
Free Stratum (Plot size: 30 m	% Cover			tatus	Number of Dominant Species
Magnolia virginiana	5	16	.7% FA	CW	That are OBL, FACW, or FAC: 9 (A)
Pinus eliiottii	10	✓ 33	.3% FA	CW	Total Number of Dominant
Nyssa sylvatica	15	✓ 50	.0% FA	C .	Species Across All Strata: 9 (B)
The state of the s	0	0.	0%		
	. 0	□ 0.	0%		Percent of dominant Species That Are ORL FACW or FAC: 100.0% (A/B)
•	0	□ o.	0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
		□ 0.	0%		Prevalence Index worksheet:
	0	□ 0.	0%		Total % Cover of: Multiply by:
50% of Total Cover: 15 20% of Total	Cover: 6 30 =	= Total (Cover		OBL species 6 x 1 = 6
Sapling or Sapling/Shrub Stratum (Plot si	ze: 30 m)				FACW species 52 x 2 =104
Magnolia virginiana	10	✓ 37.	.0% FA	CW	FAC species 32 x 3 = 96
Nyssa sylvatica	10	✓ 37.	.0% FA	C	FACU species $0 \times 4 = 0$
	5	18.	5% FA	CW	UPL species $0 \times 5 = 0$
60	2	7.		CW	
			0%		Column Totals: 90 (A) 206 (B)
	4		0%		Prevalence Index = B/A = 2.289
			2%		Hydrophytic Vegetation Indicators:
-	0)%)%		
. 47 ***					1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 13.5 20% of Total	Cover: 5.4 27 =	Total (cover		✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Magnolia virginiana	5	√ 22.	7% FA	CW	Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilla racemiflora	10	✓ 45.	5% FA	CW	·
Manually and from		√ 22.	7% FA	C	¹ Indicators of hydric soil and wetland hydrology must
	2	9.	L% FA	C	be present, unless disturbed or problematic.
	c l)%	ī.	Definition of Vegetation Strata:
2	0	=)%	_	Tree - Woody plants, excluding woody vines,
.0% of Total Cover: 11 20% of Total				_	approximately 20 ft (6 m) or more in height and 3 in.
	Cover: 4.4 22 =	: Total C	.over		(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)					
Woodwardia areolata	5	✓ 62.	5% OB	L	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Hypericum cistifolium	2	✓ 25.	0% FA	CW	than 3 in. (7.6 cm) DBH.
Osmunda regalis	1	12.	5% OB	L	, , , , , , , , , , , , , , , , , , , ,
	0 [0.0	1%		Sapling/Shrub - Woody plants, excluding vines, less
	0 [0.0		-	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0 [0.0		- v ·	
<u>`</u>	0 1	0.0			Shrub - Woody plants, excluding woody vines,
**************************************		_			approximately 3 to 20 ft (1 to 6 m) in height.
				· ·-	Herb - All herbaceous (non-woody) plants, including
Po		0.0		×	herbaceous vines, regardless of size, and woody
-		0.0	%	_	plants, except woody vines, less than approximately
		0.0	%	-	3 ft (1 m) in height.
· <u>G</u>	0_[0.0	% .		
0% of Total Cover: 4 20% of Total	Cover: 1.6 8 =	Total C	over		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m)				
Smilax laurifolia	3	100.	0% FAC	w	
		0.0	%		
	0	0.0		_	
		0,0			
	n			V	Hydrophytic
		7 00	0/2		
	o [0.0			Vegetation Present? Yes No

OIL								Sa	ampling Point:	Wet -10
Profile Desc	ription: (De:	scribe to	the depth	needed to documen	it the Indi	cator or c	onfirm the	absence of indicate	ors.)	
Depth		Matrix		Re	edox Feat	ures				
(inches)	Color (moist)	.%	Color (moist)	%	Type 1	Loc2	Texture	Re	marks
0-4	10YR	3/1	100		-			Muck		
4-16	10YR	3/2	100		5	D	M	Muck	wet-sat	urated 8-9-inches
/pe: C=Con	centration. D	=Depletio	on. R M=Red u	ced Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ^z Loca	ntion: PL=Pore Lining	j. M=Matrix	
<u>-</u>	indicators:							Indicators for	Problematic Hye	dric Soils ³ :
J Histosol (.	•			Polyvalue Be	low Surface	e (\$8) (LRR	S, T, U)	1 cm Muck	(A9) (LRR O)	
	pedon (A2)			Thin Dark Su	rface (S9)	(LRR 5, T, I	U)	r—	(A10) (LRR 5)	
Black Hist				Loamy Muck	y Mineral (F	F1) (LRR O)	1		ertic (F18) (outside	MLRA 150A,B)
	Sulfide (A4)			Loamy Gleye	d Matrix (F	72)		_	loodplain Soils (F1	
	Layers (A5)			Depleted Mai	trix (F3)			Anomalous	Bright Loamy Soil	s (F20) (MLRA 153B)
_	odies (A6) (Li			Redox Dark S	Surface (F6	5)		_	Material (TF2)	
5 cm Muc	ky Mineral (A	.7) (LRR P	', T, U)	Depleted Dar	k Surface ((F7)		☐ Very Shallov	w Dark Surface (11	F12)
	sence (A8) (LI			Redox Depre	ssions (F8))		Other (Expl	ain in Remarks)	
1 cm Muc	ik (A9) (LRR P	', T)		☐ Marl (F10) (L	.RR U)				•	
Depleted	Below Dark S	urface (A	11)	Depleted Och	ıric (F11) (I	MLRA 151)				
Thick Dari	k Surface (A1	2)		☐ Iron-Mangan	ese Masses	s (F12) (LRF	R O, P, T)			
Coast Prai	irie Redox (A1	16) (MLRA	4 150A)	Umbric Surfa	ce (F13) (L	RR P, T, U)	1			
Sandy Mu	ck Mineral (S	1) (LRR O), S)	Delta Ochric	(F17) (MLR	RA 151)		3		
Sandy Gle	yed Matrix (S	4)		Reduced Vert	tic (F18) (M	1LRA 150A,	150B)	Indic wet	ators of hydrophyl tland hydrology mi	tic vegetation and ust be present.
Sandy Red	dox (S5)			Piedmont Flo	odplain Soi	ils (F19) (M	LRA 149A)		inless disturbed of	
Stripped N	4atrix (S6)			Anomalous B	right Loam	y Soils (F20) (MLRA 14	9A, 153C, 153D)		
Dark Surfa	ace (S7) (LRR	. P, S, T, l	J)							
etrictiva I :	ayer (if obse									
Type:	ayer (ii obac	aveay.								
Depth (inch	nes):							Hydric Soil Prese	ent? Yes 💿	No O
marks:	,				Name of				_	
		-:I C				e -L			-94	:_
ck to sand vel sample		neral. S	olia aank g	ray to brown all the	e way to t	oase or sn	ovei. Muci	k at top with more	sitty clay mater	iai toward base of
ver sample	-1									

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland							
Applicant/Owner: NASA	State: M							
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: 5 31 T 7 s R 16 W							
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °							
Subregion (LRR or MLRA): LRR T Lat:	30° 24′ 16.775" N	Long.: 89° 37′ 26.844″ W Datum: NAD83						
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes		NWI classification: PFO 1/4 C						
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No	(
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 significant	tly disturbed? Are "	'Normal Circumstances" present? Yes No						
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If n	eeded, explain any answers in Remarks.)						
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locati	ons, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No O	T- 4b- 6							
Hydric Soil Present? Yes No O	Is the Sampled	Area Yes No						
Wetland Hydrology Present? Yes No O	within a Wetlar	nd? Yes © NO C						
Remarks:								
Bottom riparian floodplain area approximately 40 feet from Up-11.								
bottom riparian noodplain area approximately no recembin op 11.								
HYDROLOGY		· · · · · · · · · · · · · · · · · · ·						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)						
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Aquatic Fauna (B1	13)	Sparsely Vegetated Concave Surface (B8)						
High Water Table (A2) Marl Deposits (B1	.5) (LRR U)	✓ Drainage Patterns (B10)						
Saturation (A3) Hydrogen Sulfide	Odor (C1)	✓ Moss Trim Lines (B16)						
☐ Water Marks (B1) ✓ Oxidized Rhizosph	neres along Living Roots (C3)) Dry Season Water Table (C2)						
Sediment Deposits (B2)	ced Iron (C4)	Crayfish Burrows (C8)						
☐ Drift Deposits (B3) ☐ Recent Iron Redu	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)						
Algal Mat or Crust (B4)	a (C7)	Geomorphic Position (D2)						
☐ Iron Deposits (B5) ☐ Other (Explain in I	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):		6 0						
Saturation Present? (includes capillary fringe) Yes No Depth (inches):		nd Hydrology Present? Yes 🏵 No 🗅						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	** * * * *	if available						
Describe Recorded Data (stream gauge, monitoring well, aerial prior	os, previous irispecuoris)	, ii avallable.						
Remarks:								

/EGETATION (Five/Four Strata) -	Use scientific names of plants.
•	Dominant

			ominant		Sampling Point: Wet - 11
	Absolut	e R	ipecies? .el.Strat.	Indicator	Dominance Test worksheet:
ee Stratum (Plot size: 30 m	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii	10	V	47.6%	FACW	That are OBL, FACW, or FAC:10(A)
Magnolia virginiana	. 7	V	33.3%	FACW	
Nyssa sylvatica	3		14.3%	FAC	Total Number of Dominant Species Across All Strata: 10 (B)
Liquidambar styraciflua	1		4.8%	FAC	
	_		0.0%		Percent of dominant Species
	0		0.0%	,	That Are OBL, FACW, or FAC: 100.0% (A/B)
	0	\Box	0.0%		Prevalence Index worksheet:
7 W.A	0	\Box	0.0%		
0% of Total Cover: 10.5 20% of Tot al Cover: 4.2	-	_ T	otal Cove		Total % Cover of: Multiply by: OBL species 13 x 1 = 13
	21	= 10	otal Cove		
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species 88 x 2 = 176
Pinus elliottii	2		9.1%	FACW	FAC species 14 x 3 = 42
Magnolia virginiana	5	Y	22.7%	FACW	FACU species $0 \times 4 = 0$
Liquidambar styraciflua	5	V	22.7%	FAC .	UPL species $0 \times 5 = 0$
Cyrilla racemiflora	10	V	45.5%	FACW	Column Totals: 115 (A) 231 (B)
	0		0.0%		
	_ 0		0.0%		Prevalence Index = B/A = 2 009
			0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		
					1 - Rapid Test for Hydrophytic Vegetation
	. 22	= 10	otal Cove		✓ 2 - Dominance Test Is > 50%
hrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	20	V	40.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilla racemiflora	30	V	60.0%	FACW	
			0.0%		¹ Indicators of hydric soil and wetland hydrology mus
			0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
	0	\Box	0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 25 20% of Total Cover: 10	50	= To	otal Cove		approximately 20 ft (6 m) or more in height and 3 in.
10.00 - 10.00					(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)		_			Sapling - Woody plants, excluding woody vines,
Hypericum distifolium		\Box	18.8%	FACW	approximately 20 ft (6 m) or more in height and less
Woodwardia areolata	- 8	V	50.0%	OBL	than 3 in. (7.6 cm) DBH.
. Woodwardia virginica	5	✓	31.3%	OBL	
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0		0.0%		Shrub - Woody plants, excluding woody vines,
The second of th			0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
· · · · · · · · · · · · · · · · · · ·	0		0.0%		1 1
	0		0.0%	III. TORIC ORTO A	Herb - All herbaceous (non-woody) plants, including
		H			herbaceous vines, regardless of size, and woody
•	0		0.0%		plants, except woody vines, less than approximately
			0.0%	a is	3 ft (1 m) in height.
****	0	Щ	0.0%		Moody vina All woody vinas manufless of balakt
0% of Total Cover: 8 20% of Total Cover: 3.2	16	= To	tal Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m				l	
Vitis rotundifolia	5	V	83.3%	FAC	
Smilax laurifolia	1		16.7%	FACW	
1 (100 - 100)	0		0.0%		
			0.0%		
		\exists			Hydrophytic
		Ц,			Vegetation Var (a) Na (
0% of Total Cover: 3 20% of Total Cover: 1,2	6	= To	tai Cover		Present? 165 W NO C
	6	, = To	0.0% tal Cover		

Profile Desci	ription: (De	scribe to	the depth	needed to	documen	t the indi	cator or co	onfirm the	absence of indicators.)	·
Depth	0.75-0	Matrix			Re	dox Feat			-	
(inches)		(moist)	%	Color	(moist)	%	Typę ¹	. Loc2	Texture	Remarks
0-4	10YR	3/1	100			-			Sandy Loam	
4-16	10YR	4/2	90	10YR	6/2	10	D	М	Loamy Sand	
_					. –				, para 2012, para 1, 1 12	.32
	x, w						-	•	7	
	_					-				
=-=-										
¹ Type: C=Con	centration. D	=Depletio	n. RM= Red u	iced Matrix,	CS=Covere	ed or Coate	ed Sand Gra	ains ² Loca	ation: PL=Pore Lining. M=	Matrix
Hydric Soil I	ndicators:								Indicators for Prob	elematic Hydric Soils ³ :
Histosof (A	A1)			🗹 Pol	yvalue Bek	ow Surface	(S8) (LRR	S, T, U)	1 cm Muck (A9)	•
Histic Epip	oedon (A2)			Thi	n Dark Sur	face (S9)	(LRR \$, T, L	J)	2 cm Muck (A10)	
Black Hist	ic (A3)			Loa	my Mucky	Mineral (F	1) (LRR O)			F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)				ımy Gleyed					lain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)			_	pleted Mat	•	•			t Loamy Soils (F20) (MLRA 153B)
	odies (A6) (L	RR P, T, L	J)		ox Dark S)			
	ky Mineral (A				oleted Darl				Red Parent Mate	• •
	sence (A8) (L			_	fox Depres	7	· -		·	k Surface (TF12)
	k (A9) (LRR I	•		_	rl (F10) (Li	• •			Other (Explain in	Remarks)
	Below Dark S		11)				MLRA 151)			
	k Surface (A1	•	,					. O 7 T		
	rie Redox (A		1504)		_		(F12) (LRF			
	ck Mineral (S		-	_			RR P, T, U)			
	yed Matrix (S		, 3)		ta Ochric (-		³ Indicators	of hydrophytic vegetation and
Sandy Rec		77)		_			ILRA 150A,	-	wetland	hydrology must be present,
				_			ls (F19) (MI	=		s disturbed or problematic.
Stripped M				∐ And	malous Br	ight Loam	y Soils (F20) (MLRA 14	9A, 153C, 153D)	
☐ Dank Surfa	ice (S7) (LRF	(P, S, 1, C	J)							
Restrictive La	yer (if obs	erved):								
Type:						_0		i		
Depth (inch	ies):	.,,,,							Hydric Soil Present?	Yes 💿 No 🔾
Remarks:		, ,						!		
Kemarks,										

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation City/County: Waveland	- Hancock Sampling Date: 12-Oct-16
Applicant/Owner: NASA State: M	41. No
Investigator(s): Lars Larson, Randy Ellis Section, Township, Ra	unge: \$ 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, co	
	I was an all
1. 7	
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: PSS
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "	Normal Circumstances" present? Yes 🌘 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally problematic? (If no	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	Area
Hydric Soil Present? Yes No	Vac (R) No (
Wetland Hydrology Present? Yes No Within a Wetlan	nd? 165 5 186 5
Remarks: This plot is within a Palustrine Scrub-Shrub habitat (low area) roughlyt 200 feet north of old	E-W logging road in middle of AOI.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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)	
Sediment Deposits (B2) Presence of Reduced Iron (C4) Recent iron Reduction in Tilled Sails (C6)	✓ Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algai Mat or Crust (B4) ☐ Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
	✓ Geomorphic Position (D2) 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 O No O Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Wetla	nd Hydrology Present? Yes 💿 No 🔾
(includes capitally fittinge)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections),	, if available:
Remarks:	100
Area is dry - normal for this time of year. This is a low flat area that appears to drain north the that flows down slope (north) toward Turtleskin Creek riparian buffer.	nrough culver under logging road into ephemeral drain
9	

/EGETATION (Five/Four Strata) -	-	Use scientific names of plants.
•		Dominant

			ominant pecies? .		Sampling Point: Wet - 12	
(Diot size: 20 as	Absolute	Re	el.Strat.	Indicator	Dominance Test worksheet:	
ree Stratum (Plot size: 30 m)	% Cover		Cover	Status	Number of Dominant Species	
Pinus elliottii	10	V	40.0%	FACW	That are OBL, FACW, or FAC: 7 (A)	
Nyssa sylvatica	15	V	60.0%	FAC	Total Number of Dominant	
to the section of the	0	닏.	0,0%		Species Across All Strata: 7 (B)	
15 KV 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			0.0%		Barrant of desirant Consis	
a** ** •* **	0	\sqcup	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)	
	0	\sqsubseteq	0.0%		That rice obe, there of the	
1.4444. 1	0		0.0%		Prevalence Index worksheet:	
	0	\square	0.0%		Total % Cover of: Multiply by:	
60% of Total Cover: 12.5 20% of Total Cover: 5	25	= To	tal Cove	г	OBL species 45 x 1 = 45	
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species48 x 2 =96	
Pinus elliottii	5		14.3%	FACW	FAC species 30 x 3 = 90	
Nyssa sylvatica		V	42.9%	FAC	FACU species $0 \times 4 = 0$	
Magnolia virginiana	4.0	V	28.6%	FACW	UPL species $0 \times 5 = 0$	
Cyrilla racemiflora			14.3%	FACW		
	-		0.0%	-	Column Totals: 123 (A) 231 (B)	
			0.0%		Prevalence Index = B/A = 1.878	
		F	0.0%		Hydrophytic Vegetation Indicators:	
			0.0%			
	-				1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 17.5 20% of Total Cover: 7	35	= To	tal Cover		2 - Dominance Test is > 50%	
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹	
Cyrilla racemifiora	10	V,	55.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
Ilex corlacea	5	V	27.8%	FACW		
Magnolia virginiana	3		16.7%	FACW	¹ Indicators of hydric soil and wetland hydrology mus	
	0		0.0%		be present, unless disturbed or problematic.	
	0		0.0%		Definition of Vegetation Strata:	
***************************************	0		0.0%		Tree - Woody plants, excluding woody vines,	
50% of Total Cover: 9 20% of Total Cover: 3.6	18 =	= To	tal Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
lerb Stratum (Plot size: 30 m					Company of the good to manufactor of an anadem trought (BBH)	
, Lycopodiella alopecuroides	40	V	88.9%	OBL	Sapling - Woody plants, excluding woody vines,	
Sarracenia alata	_		11.1%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
			0.0%	ODL		
	0	Η.	0.0%		Sapling/Shrub - Woody plants, excluding vines, less	
* ···					than 3 in. DBH and greater than 3.28 ft (1m) tall.	
	0	<u>-</u>	0.0%			
V. w.	0	H	0.0%		Shrub - Woody plants, excluding woody vines,	
A		吕-	0.0%	-	approximately 3 to 20 ft (1 to 6 m) in height.	
N. Branches		님	0.0%		Herb - All herbaceous (non-woody) plants, including	
	_ 0	H	0.0%		herbaceous vines, regardless of size, and woody	
	0	\sqsubseteq	0.0%		plants, except woody vines, less than approximately	
	0	ᆜ_	0.0%		3 ft (1 m) in height.	
			0.0%			
0% of Total Cover: 22.5 20% of Total Cover: 9	45 =	= Tot	tal Cover		Woody vine - All woody vines, regardless of height.	
(Plot size: 30 m						
	0		0.0%	[
		<u> </u>	0.0%	-		
	0	\exists	0.0%	I. Av.		
			0.0%			
, and the state of	0	H			Hydrophytic	
		_	0.0%		Vegetation Present? Yes No	
50% of Total Cover: 0 20% of Total Cover: 0	0 =		al Cover			

COTI	

OIL			Sampling Point: Wet - 12
rofile Desci	ription: (Describe to the de	pth needed to document the indicator or confirm th	e absence of indicators.)
Depth Matrix		Redox Features	•
(inches)	Color (moist) %	Color (moist) % Type 1 Loc2	Texture Remarks
0-4	10YR 3/1 100		Loamy Sand
4-16	10YR 3/2 90	10YR 7/2 10 D M	Loamy Sand Very`fine grained
		Reduced Matrix, CS=Covered or Coated Sand Grains ² Lou	
ydric Soil I] Histosol (#			Indicators for Problematic Hydric Soils ³ :
_ `	•	Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
_	pedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
☐ Black Histi		Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	odies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Red Parent Material (TF2)
-	ky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
-	sence (A8) (LRR U)	Redox Depressions (F8)	Other (Explain in Remarks)
_	k (A9) (LRR P, T)	Marl (F10) (LRR U)	•
Depleted I	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark	k Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Prai	rie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Mur	ck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	2
Sandy Gle	yed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Rec	iox (S5)	Piedmont Floodplain Soils (F19) (MLRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
Stripped M		Anomaious Bright Loamy Soils (F20) (MLRA 1	
Dark Surfa	ace (S7) (LRR P, S, T, U)		, , ,
estrictive La	ayer (if observed):		
Type:			Hydric Soil Present? Yes No
Depth (inch	nes):		Hydric Soil Present? Yes W No
emarks:			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation City/Cou	unty: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 13
Investigator(s): Lars Larson, Randy Ellis Section	n, Township, Range: 5 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Terrace Local rel	lief (concave, convex, none): Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.: 30° 24'	7.308" N Long.: 89° 37' 9.843" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PSS 1/4
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	ped? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally problemat	
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	Is the Sampled Area
Hydric Soil Present? Yes No No	Vec (No (
Wetland Hydrology Present? Yes No O	within a Wetland?
Hydrology is marginal We are in a dry period last measurable precipitact HYDROLOGY	ion has been approximately 2 weeks ago,
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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)	<u> </u>
☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizospheres along	Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	(4) Crayfish Burrows (C8)
Drift Deposits (B3)	ed Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	✓ 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):	
1 , ,	
Water Table Present? Yes ○ No Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches):	Wedalid Hydrology Present: 165 0 186 0
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	us inspections), if available:
Remarks:	
Very little evidence of hydrology.	
,	i
^	

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

Dominant
Species?

	% Cover	Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
Pinus elliottii (Plot size: 30 m)			•	Number of Dominant Species
100000000000000000000000000000000000000	10	83.3%	FACW	That are OBL, FACW, or FAC: 7 (A)
Magnolja virginlana	2	16.7%	FACW	Total Number of Dominant
	0	0.0%		Species Across All Strata: 7 (B)
		0.0%	_	Percent of dominant Species
		0.0%	-	That Are OBL, FACW, or FAC: 100.0% (A/B)
	0	0.0%		Trial rice obly trial is a second of the sec
	0			Prevalence Index worksheet:
	0_	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 6 20% of Total Cover: 2.4	12 :	= Total Cove		OBL species 3 x 1 = 3
apling or Sapling/Shrub Stratum (Plot size: 30 m)			FACW species 96 x 2 = 192
Pinus elliottii	15	✓ 44.1%	FACW	FAC species 13 x 3 = 39
Magnolla virginiana	10	₹ 29.4%	FACW	FACU species $0 \times 4 = 0$
Liquidambar styraciflua	_	14.7%	FAC	UPL species $0 \times 5 = 0$
Persea palustris		2.9%	FACW	
Nyssa sylvatica		8.8%	FAC	Column Totals: 112 (A) 234 (B)
		0.0%	, -4, -7	Prevalence Index = 8/A = 2.089
		0.0%		Hydrophytic Vegetation Indicators:
		0.0%		
	0			✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 17 20% of Total Cover: 6.8	34	= Total Cove		✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m)				✓ 3 - Prevalence Index is ≤3.0 1
Ilex coriacea	50	96.2%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Acer rubrum		3.8%	FAC	
· · · · · · · · · · · · · · · · · · ·	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
16.	0	0.0%	_,	be present, unless disturbed or problematic.
		0.0%		Definition of Vegetation Strata:
	0	0.0%	ris to	Tree - Woody plants, excluding woody vines,
50V of Tabel Course 25 20V of Tabel Course 40.4				approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 26 20% of Total Cover: 10.4	52	= Total Cover		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: 30 m)				
Hypericum cistifolium	2	✓ 20.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Eriocaulon decangulare		✓ 30.0%	OBL	than 3 in. (7.6 cm) DBH.
Andropogon glomeratus	_	✓ 50.0%	FACW	
		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
* * * * * * * *	0	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	0.0%	p	
To # 1	-	0.0%	-	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7				approximately 5 to 20 ft (1 to 6 ft) in height.
		0.0%_		Herb - All herbaceous (non-woody) plants, including
·		0.0%		herbaceous vines, regardless of size, and woody
		0.0%		plants, except woody vines, less than approximately
Ç.	0	0.0%		3 ft (1 m) in height.
		0.0%		
0% of Total Cover: 5 20% of Total Cover: 2	10 =	Total Cover		Woody vine - All woody vines, regardless of height.
/oody Vine Stratum (Plot size: 30 m				
	3	75.0%	FAC	
Continue la continue		25.0%	1 1 1 1	
	-	_	FACW	
		0.0%		
	0	0.0%		Hydrophytic
Tw.	0	0.0%		Vegetation Present? Yes No
0% of Total Cover: 2 20% of Total Cover: 0.8				Present? Yes No O

SOIL									Sampli	ng Point:	Wet - 13
rofile Descr	iption: (Des	scribe to	the depth r	eeded to	document	t the indic	ator or co	onfirm the a	absence of indicators.)		
Depth	7 1 %	Matrix			Re	dox Featu	ıres		41		
(inches)	Color (%	Color	(moist)	%	Type ¹	Loc2	Texture	Rem	arks
0-4	10YR	3/1	100						Sandy Loam		
4-16	10YR	3/2	90	10YR	7/2	10	D	M	Loamy Sand		
					_						
	1915					-					
					-						
									-		
ype: C=Cond lydric Soil I		=Depletio	n. RM≃Reduc	ed Matrix,	CS=Covere	d or Coate	d Sand Gra	ains ² Locat	tion: PL=Pore Lining. M=N Indicators for Probl		ric Soils ³ :
Histosol (/	41)			Po	lyvalue Bek	ow Surface	(S8) (LRR	S, T, U)	1 cm Muck (A9) (LRR O)	
` ` `	edon (A2)			Th	in Dark Sur	face (S9) (LRR S, T, I	J)	2 cm Muck (A10)		
Black Histi	ic (A3)			☐ Lo	amy Mucky	Mineral (F	1) (LRR O)		Reduced Vertic (F		MLRA 150A.B)
Hydrogen	Sulfide (A4)			☐ Lo	amy Gleyed	Matrix (F2	2)		Piedmont Floodpla		
Stratified I	Layers (A5)			□ De	pleted Mat	rix (F3)					
Organic B	odies (A6) (LI	RR P, T, L	J)	Redox Dark Surface (F6) Depleted Dark Surface (F7)					Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)		
5 cm Muc	ky Minera! (A:	7) (LRR P	, T, U)								
Muck Pres	ence (A8) (Li	RR U)			dox Depres		•		Other (Explain in)		
1 cm Mucl	k (A9) (LRR P	, T)		_	เส (F10) (LF	• • •			L Outer (Explain in I	xemanks)	
-	Below Dark S		(1)		pleted Och	-	/LRA 151\				
Thick Dark	c Surface (A1)	2)	•		n-Mangane		-	2 O P T)			
_	rie Redox (A1	-	150A)		ibric Surfac						
1	ck Mineral (Si		•		lta Ochric (i						
	yed Matrix (S		, -,		-			1 EOD)	³ Indicators	of hydrophytic	vegetation and
Sandy Rec		'/			duced Verti		-	-	wetland h	ydrology mus	t be present,
Stripped M					dmont Floo			•		disturbed or p	problematic,
_	ice (S7) (LRR	P, S, T, U	l)	LJ AN	oniaious br	ignt Loainy	' 3011S (F20) (MLRA 149	9A, 153C, 153D)		
			-								
	yer (if obse	rvea):									
Type:						_			Hydric Soil Present?	Yes 💿	No O
Depth (inch	es):				7				riyane son r resene.		NO U
emarks:											

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 14
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
PRESCRIPTION FOR THE MARKET	30° 24' 9.792" N Long.: 89° 37' 1.854" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PSS 1/4
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes No O
	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes O No	Voc O No (P)
Wetland Hydrology Present? Yes No O	within a Wetland?
Remarks:	
Slightly lower wetter area approximatley 70 feet south of Up - 14. G	Gradual transitional area back toward west.
angua, to to the opposition of	
HYDROLOGY	M= 40
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required: check all that apply)	☐ Surface Soil Cracks (B6)
Surface Water (A1)	13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	5) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide (Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☑ Oxidized Rhizospho	neres along Living Roots (C3)
Sediment Deposits (B2)	ced Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduc	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	e (C7) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in R	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 O No O Depth (Inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ◎ No ○
(includes capillary fringe) Pes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photo	
beside recorded bata (stream gauge, montering real, serial prote	sy provides inspections, it availables
Remarks:	

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

Dominant

			ominant pecies? .		Sampling Point: Wet - 14
1-1	Absolut	e R	el.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 m)	% Cove	_	Cover	Status	Number of Dominant Species
Pinus elliottil Magnolia virginiana	10	~		FACW	That are OBL, FACW, or FAC: 6 (A)
Magnolia virginiana Nyssa sylvatica	7	V	30.4%	FACW	Takel Number of Demisers
Nyssa sylvatica	5	✓	21.7%	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
Liquidambar styraciflua	4		4.3%	FAC	
	0		0.0%		Percent of dominant Species
			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
	0		0.0%	11.24	Prevalence Index worksheet:
	0		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 11.5 20% of Total Cover: 4.6	23	= T	otal Cove		OBL species 3 x 1 = 3
apling or Sapling/Shrub Stratum (Plot size: 30 m		Ī			FACW species 114 x 2 = 228
		V	76 001	FACILI	
Magnolla virginiana				FACW	FAC species $7 \times 3 = 21$
Pinus elliottii		Н	19.2%	FACW	FACU species $0 \times 4 = 0$
Liquidambar styraciflua		H	3.8%	FAC	UPL species $0 \times 5 = 0$
		Н	0.0%		Column Totals: 124 (A) 252 (B)
	0		0.0%	F	Prevalence Index = B/A = 2.032
The state of the second	0		0.0%		
	0		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 13 20% of Total Cover: 5.2	26	= T	otal Cove	r	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m					
The contract					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea		V		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra		\vdash	16.7%	FACW	1
T. 17			0.0%		¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
The state of the s	0	Ш	0.0%		be present anicos aistarbea or prosicilation
	.0		0.0%		Definition of Vegetation Strata:
	. 0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 30 20% of Total Cover: 12		= Total C		ver	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m)					(10 dily of larger in diameter at Diedet Height (2017).
. Hypericum cistifolium	10	V	76.9%	FACW	Sapling - Woody plants, excluding woody vines,
Eriocaulon decangulare			15.4%	OBL	approximately 20 ft (6 m) or more in height and less
		Н		OBL	than 3 in. (7.6 cm) DBH.
Lycopodiella alopecuroides			7.7%	, OBL	Sapling/Shrub - Woody plants, excluding vines, less
Communication Action Action Communication Co		H	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
			0.0%		• • • • • • • • • • • • • • • • • • • •
Value of the state	0	님	0.0%		Shrub - Woody plants, excluding woody vines,
No. 10 Merch and Advanced to the Committee of the Committ	0	\Box	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
	0	\square	0.0%		
No aware waren ara e e e e e e e e e e e e e e e e e e	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
**************************************			0.0%		plants, except woody vines, less than approximately
•	0		0.0%		3 ft (1 m) in height.
	0		0.0%	,,,	
0% of Total Cover: 6.5 20% of Total Cover: 2.6	13 :	= To	tal Cover		Woody vine - All woody vines, regardless of height.
				l	
cody Ming Physics (Plot size: 30 m	_		100 001		
4 4. 11. 4	2	님	100.0%	FACW	
Smilax laurifolia		\square	0.0%		
Smílax laurifolia				- 1	
Smílax laurifolia	0		0.0%		
Smílax laurifolia			0.0%		Wadanahada
Smilax laurifolia	0			1	Hydrophytic Vegetation Present? Yes No

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Sampling Point: Wet - 14 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.) Matrix **Redox Features** Depth Loc2 (inches) Color (moist) % Color (moist) 9/0 Type 1 Texture Remarks 0-4 10YR 100 3/2 Loamy Sand 10YR 4/2 95 4-16 10YR Loamy Sand 5/6 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix Hydric Soll Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Lavers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) ☐ Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes O No 💿 Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Har	ncock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 15
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range:	S 29 T 7s R 16W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex	(none): none Slope: 0.0 % / 0.0°
Subregion (LRR or MLRA): LRR T Lat:	30° 24'18.728" N Lo	ong.: 89° 36' 51.786" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes		NWI classification: PSS 1/4
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 🏵 No 🔾	(If no, explain in Remarks.)
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 significan	tly disturbed? Are "Norm	nal Circumstances" present? Yes   No
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 naturally	problematic? (If needed	d, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No O	Is the Sampled Area	
Hydric Soil Present? Yes  No O	· ·	Yes ● No ○
Wetland Hydrology Present? Yes   No	within a Wetland?	163 0 100 0
Remarks:		
Saturated soils do not exist, nor does the presence of any other str	ong hydrology indicators, but i	t has not rained in over 2 weeks.
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B	13)	☐ Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1	.5) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	• •	Moss Trim Lines (B16)
	heres along Living Roots (C3)	Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Presence of Redu	, ,	Crayfish Burrows (C8)
	iction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	• •	✓ Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks)	Shailow Aquitard (D3)
Water-Stained Leaves (B9)		✓ FAC-Neutral Test (D5)
		Sphagnum moss (D8) (LRR T, U)
Field Observations:  Surface Water Present? Yes No Depth (inches):	1	
bopai (manos)	Wetland Hy	/drology Present? Yes   No
Saturation Present? Yes No Depth (inches):		allology reserve.
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if av	railable:
Remarks:		
1		

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

Dominant

Tree	Stratum (Plot size: 30 m )	Absolute % Cover	R	pecies? . el.Strat. Cover	Indicator Status	
1. F	Pinus elliottii	10	V	35.7%	FACW	Number of Dominant Species That are OBL, FACW, or FAC:  (A)
400	Magnolla virginiana	15	7	53.6%	FACW	That are obt., I Acw, or I Ac.
	three who was	_				Total Number of Dominant
	Nyssa sylvatica	-	$\vdash$	10.7%	FAC	Species Across All Strata: 6 (B)
4		0_	Ц	0.0%		
5		Ō	Ш	0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6.		0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7				0.0%		Prevalence Index worksheet:
8.		0		0.0%		
	(-, 10					Total % Cover of Multiply by:
50%	of Total Cover: 14 20% of Total Cover: 5.6	28	= T0	otal Cove	Г	OBL species 6 x 1 = 6
Sapl	ing or Sapling/Shrub Stratum (Plot size: 30 m	)				FACW species 84 x 2 =168
1. P	Pinus elliottii	3		13.0%	FACW	FAC species $10 \times 3 = 30$
2. M	Magnolia virginiana	15	$\checkmark$	65.2%	FACW	FACU species $0 \times 4 = 0$
-	han abata	-		21.7%	FAC	0 0
	· · · · · · · · · · · · · · · · · · ·	_			. IAC	UPL species $0 \times 5 = 0$
4	¥*		=	0.0%	_	Column Totals: 100 (A) 204 (B)
			Щ	0.0%		Provolence Index - R/A - 2 040
				0.0%		Prevalence Index = B/A = 2.040
7.	-	0		0.0%		Hydrophytic Vegetation Indicators:
8.		0	$\Box$	0.0%		
						1 - Rapid Test for Hydrophytic Vegetation
50%	of Total Cover: 11.5 20% of Total Cover: 4.6	23	= To	tal Cove	r	✓ 2 - Dominance Test is > 50%
Shru	<b>b Stratum</b> (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 1
	lex coriacea	40	<b>V</b>	95.2%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
	1 Date -	2	Ξ.	4.8%	h	Problematic nytrophytic vegetation - (Explain)
	ex opaca		吕.		FAC	1 Tudiostore of budge only and mathematical budge from any state
	*1 * 8		Ц.	0.0%		³ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		0	Ш,	0.0%		De present annual annual and presidente
5				0.0%		Definition of Vegetation Strata:
6.		0		0.0%		Tree - Woody plants, excluding woody vines,
	of Total Cover: 21 20% of Total Cover: 8.4  Stratum (Plot size: 30 m)	42 =	= To	tal Cove		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH),
		-	<b>V</b>	02.20	ODI	Sapling - Woody plants, excluding woody vines,
-				83.3%	OBL.	approximately 20 ft (6 m) or more in height and less
,	/oodwardia areolata	1	Ц.	16.7%	OBL	than 3 in. (7.6 cm) DBH.
3		0	Щ	0.0%		
4.	er Janiani, en 1811, fin, er	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
5.		0	Π.	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6		0	Π,	0.0%		
7			Η.	-		Shrub - Woody plants, excluding woody vines,
	And with the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same		片.	0.0%	*	approximately 3 to 20 ft (1 to 6 m) in height.
		0	Ц,	0.0%		
9	7 B WY 7 Y W	0		0.0%		Herb - All herbaceous (non-woody) plants, including
10.		0		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
11		0	$\Box$	0.0%	7	3 ft (1 m) in height,
2.						,,g
			ш_	0.0%		Woody vine - All woody vines, regardless of height.
50%	of Total Cover: 3 20% of Total Cover: 1.2	6 =	To	tal Cover		vyoddy virie - Air woody viries, regardless of rieight.
Wood	ly Vine Stratum (Plot size: 30 m				Į	
	nilax laurifolia	1		100.0%	FACW	
_	ATT OF			0.0%	12.10 T	
		1	Η.			
			Щ-	0.0%		
		0_		0.0%		that auto to
5		0	<u> </u>	0.0%		Vegetation
50%	of Total Cover: 0.5 20% of Total Cover: 0.2	1 =	Tol	tal Cover		Present? Yes  No  No
4 5		0	<u> </u>	0.0%		Hydrophytic Vegetation Present?  Yes  No

Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Color   Matrix   Col
0-4 10YR 3/2 100
4-12
12-20   10YR   4/3   95   10YR   6/6   5   C   M   Loamy Sand
yye: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains      York
Histosol (A1)
ydric Soil Indicators:    Histosol (A1)
ydric Soil Indicators:    Histosol (A1)
Histosol (A1)
Type:
emarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 16
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 28 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): none Slope: 1.0 % / 0.6°
# 1, % V P# 1	30° 24' 11.612" N Long.: 89° 36' 43.600" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of ye	0 0
	A TOTAL PLANTS
	problematic? (If needed, explain any answers in Remarks.) Impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No No No No No No No No No No No No	Is the Sampled Area within a Wetland? Yes No
Wet area ner former home/settlement - drainage swale/gentle slope HYDROLOGY	ed terrain going back to main wetland area to the west.
Wetland Hydrology Indicators:	Consider Valleting (-later of 2 months d)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Primary Indicators (minimum of one required; check all that apply)  Aquatic Fauna (B1)  Marl Deposits (B1)  Hydrogen Sulfide  Oxidized Rhizosph  Presence of Reductions	Sparsely Vegetated Concave Surface (B8)  5) (LRR U)  Odor (C1)  Moss Trim Lines (B16)  Dry Season Water Table (C2)  ced Iron (C4)  Ction in Tilled Soils (C6)  E (C7)  Remarks)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Sphagnum moss (D8) (LRR T, U)  Wetland Hydrology Present?  Yes  No
Remarks:	

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

Dominant
Species?

Tree Stratum (Plot size: 30 m )	Absolute % Cover	Rel.Strat	. Indicator Status	Dominance Test worksheet:
•	•	_		Number of Dominant Species
• 4	10	20.89		That are OBL, FACW, or FAC:10(A)
Nyssa biflora Magnolia virginiana	20	41.79		Total Number of Dominant
	15	31.39		Species Across All Strata: 10 (B)
Quercus nigra		6.3%		Percent of dominant Species
		U 0.0%		That Are OBL, FACW, or FAC: 100 0% (A/B)
·	7.00	0.0%		
w		0.0%		Prevalence Index worksheet:
197	.0	□ c.0%		Total % Cover of Multiply by:
50% of Total Cover: 24 20% of Total Cover: 9.6	48	= Total Cov	ег	OBL species $41 \times 1 = 41$
apling or Sapling/Shrub Stratum (Plot size: 30 m	)			FACW species <u>66</u> x 2 = 132
Nyssa biflora	15	62.5%	OBL	FAC species 19 x 3 = 57
Magnolia virginiana	5	20.89	FACW	FACU species $0 \times 4 = 0$
Pinus elliottii	3	12.5%	FACW	UPL species $0 \times 5 = 0$
Cyrilla racemiflora	1	4.2%	FACW	Column Totals: 126 (A) 230 (B)
	0	0.0%		
	. 0	0.0%		Prevalence Index = B/A = 1 825
	0	0.0%		Hydrophytic Vegetation Indicators:
AND THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF TH	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 12 20% of Total Cover: 4.8	24	= Total Cov	er	✓ 2 - Dominance Test is > 50%
				l <u> </u>
hrub Stratum (Plot size: 30 m )  Morella cerifera	15	₹ EE CO	EAC	✓ 3 - Prevalence Index is ≤3.0 ¹
		55.6%		Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilla racemiflora	10	37.0%	Approximation of the second	1 Tudiantana of hudula and anathrod hudunfama
Magnolla virginiana	2	7.4%	FACW	¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
		0.0%		Deficial and Alfanoration Charles
	0	0.0%		Definition of Vegetation Strata:
	0	□ 0.0% □ 0.0%		Tree - Woody plants, excluding woody vines,
	0	0.0%		_
50% of Total Cover: 13.5 20% of Total Cover: 5.4	0	□ 0.0% □ 0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
60% of Total Cover: 13.5 20% of Total Cover: 5.4  erb Stratum (Plot size: 30 m )	0 0 27 :	□ 0.0% □ 0.0%	er	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,
o% of Total Cover: 13.5 20% of Total Cover: 5.4  erb Stratum (Plot size: 30 m )  Mikania scandens	0 0 27 :	0.0% 0.0% Total Cov	er 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
60% of Total Cover: 13.5 20% of Total Cover: 5.4  erb Stratum (Plot size: 30 m )  Mikania scandens  Typha latifolia	0 0 27 :	○ 0.0% ○ 0.0% ■ Total Cov  ✓ 47.6% ✓ 23.8%	FACW 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,
erb Stratum (Plot size: 30 m )  Mikania scandens  Typha latifolia	0 0 27 =	□ 0.0% □ 0.0% = Total Cov □ 47.6% □ 23.8% □ 14.3%	FACW OBL 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
erb Stratum (Plot size: 30 m ) Mikania scandens Typha latifolia Centella erecta Juncus validus	0 0 27 =	○ 0.0% ○ 0.0% ■ Total Cov ○ 47.6% ○ 23.8% ○ 14.3% ○ 9.5%	FACW OBL FACW 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.
60% of Total Cover: 13.5 20% of Total Cover: 5.4  lerb Stratum (Plot size: 30 m )    Mikania scandens   Typha latifolia   Centella erecta   Juncus validus   Woodwardia areolata	0 0 27 =	○ 0.0% ○ 0.0% ■ Total Cov ○ 47.6% ○ 23.8% ○ 14.3% ○ 9.5% ○ 4.8%	FACW OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
60% of Total Cover: 13.5 20% of Total Cover: 5.4  lerb Stratum (Plot size: 30 m )  Mikania scandens  2. Typha latifolia  3. Centella erecta  1. Juncus validus  5. Woodwardia areolata	0 0 27 =	0.0% 0.0% Total Cov  47.6% 23.8% 14.3% 9.5% 4.8% 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines,
erb Stratum (Plot size: 30 m ) Mikania scandens Typha latifolia Centella erecta Juncus validus Woodwardia areolata	0 0 27 =	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 4.8% □ 0.0% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
erb Stratum (Plot size: 30 m ) Mikania scandens Typha latifolia Centella erecta Juncus validus Woodwardia areolata	0 0 27 =	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 4.8% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines,
erb Stratum (Plot size: 30 m ) Mikania scandens Typha latifolia Centella erecta Juncus validus Woodwardia areolata	0 0 27 = 10 5 3 2 1 0 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 4.8% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
erb Stratum (Plot size: 30 m ) Mikania scandens Typha latifolia Centella erecta Juncus validus Woodwardia areolata	0 0 27 10 5 3 2 1 0 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 4.8% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
so% of Total Cover: 13.5 20% of Total Cover: 5.4  lerb Stratum (Plot size: 30 m )    Mikania scandens   Typha latifolia   Centella erecta   Juncus validus   Woodwardia areolata	0 0 27 =	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
50% of Total Cover: 13.5 20% of Total Cover: 5.4  lerb Stratum (Plot size: 30 m )  Mikania scandens  Typha latifolia  Centella erecta  Juncus validus  Woodwardia areolata	10 5 3 2 1 0 0 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 13.5 20% of Total Cover: 5.4  lerb Stratum (Plot size: 30 m)  1. Mikania scandens  2. Typha latifolia  3. Centella erecta  4. Juncus validus  5. Woodwardia areolata  3.  6.  8.  9.  10.  10.5 20% of Total Cover: 4.2	10 5 3 2 1 0 0 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
60% of Total Cover: 13.5 20% of Total Cover: 5.4  lerb Stratum (Plot size: 30 m)  Mikania scandens  Typha latifolia  Centella erecta  Juncus validus  Woodwardia areolata	10 5 3 2 1 0 0 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
erb Stratum (Plot size: 30 m. )  Mikania scandens  Typha latifolia Centella erecta Juncus validus Woodwardia areolata  0% of Total Cover: 10.5 20% of Total Cover: 4.2	0 0 27 = 10 5 3 2 1 0 0 0 0 0 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
erb Stratum (Plot size: 30 m. )  Mikania scandens  Typha latifolia Centella erecta Juncus validus Woodwardia areolata  0% of Total Cover: 10.5 20% of Total Cover: 4.2	0 0 27 = 10 5 3 2 1 0 0 0 0 0 0 21 =	0.0%   0.0%   47.6%   23.8%   14.3%   9.5%   4.8%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
erb Stratum (Plot size: 30 m. )  Mikania scandens Typha latifolia Centella erecta Juncus validus Woodwardia areolata  0% of Total Cover: 10.5 20% of Total Cover: 4.2  cody Vine Stratum (Plot size: 30 m. )  Smilax laurifolia	0 0 27 = 10 5 3 2 1 0 0 0 0 0 0 21 = 5	0.0% 0.0% Total Cov  47.6% 23.8% 14.3% 9.5% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Total Cov	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
erb Stratum (Plot size: 30 m )  Mikania scandens Typha latifolia Centella erecta Juncus validus Woodwardia areolata  0% of Total Cover: 10.5 20% of Total Cover: 4.2  Coody Vine Stratum (Plot size: 30 m ) Smilax laurifolia Vitis rotundifolia	0 0 27 = 10 5 3 2 1 0 0 0 0 0 0 0 21 = 5 1 0	□ 0.0% □ 0.0% □ 10tal Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 10.0% □ 10.0% □ 10.7% □ 16.7%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 13.5 20% of Total Cover: 5.4  Ierb Stratum (Plot size: 30 m )  Mikania scandens  Typha latifolia  Centella erecta  Juncus validus  Woodwardia areolata  Moodwardia areolata	0 0 27 = 10 5 3 2 1 0 0 0 0 0 0 0 21 = 5 1 0	□ 0.0% □ 0.0% ■ Total Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 16.7% □ 0.0%	FACW OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 13.5 20% of Total Cover: 5.4  Iterb Stratum (Plot size: 30 m. )  1. Mikania scandens 2. Typha latifolia 3. Centella erecta 4. Juncus validus 5. Woodwardia areolata 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 27 = 10 5 = 3 2 = 1 0 = 0 0 = 0 0 = 0 0 = 0 0 = 1 = 5 1 = 0 0 = 0	□ 0.0% □ 0.0% □ 10tal Cov □ 47.6% □ 23.8% □ 14.3% □ 9.5% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW OBL FACW OBL OBL FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.

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<b>~</b> 1.	

SOIL						Sampling Point: Wet - 16
Profile Descr	ription: (Desc	ribe to	the depth	needed to document the Indicator or confirm	m the a	absence of Indicators.)
Depth		Matrix		Redox Features		
(inches)	Color (m	oist)	%	Color (moist) % Type 1 L	LOC2	Texture Pemarks
0-3	10YR	2/1	100			Muck
3-16	10YR	3/1	100			
						-
				AME TO AME OF THE CONTROL OF LEASENING		No. 1988 - No. 1987 - O. Tambari Markal Bala (1984) (1984) - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 - 1985 -
					_	
-						* *
¹ Type: C=Cond	centration. D=1	Depletio	n. RM=Redu	iced Matrix, CS=Covered or Coated Sand Grains	² Locati	ation: PL=Pore Lining, M=Matrix
Hydric Soil I	indicators:					Indicators for Problematic Hydric Soits ³ :
Histosof (#	A1)			Polyvalue Below Surface (S8) (LRR S, T,	. U)	1 cm Muck (A9) (LRR O)
	oedon (A2)			☐ Thin Dark Surface (S9) (LRR S, T, U)		2 cm Muck (A10) (LRR S)
Black Histi	ic (A3)			Loamy Mucky Mineral (F1) (LRR O)		Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)			Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)			Depleted Matrix (F3)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	odies (A6) (LRI		•	Redox Dark Surface (F6)		Red Parent Material (TF2)
	ky Mineral (A7)		, T, U)	Depleted Dark Surface (F7)		☐ Very Shallow Dark Surface (TF12)
_	sence (A8) (LRI			Redox Depressions (F8)		Other (Explain in Remarks)
	k (A9) (LRR P,	•		Marl (F10) (LRR U)		
	Below Dark Sur		11)	Depleted Ochric (F11) (MLRA 151)		
	k Surface (A12)			☐ Iron-Manganese Masses (F12) (LRR O, P	P, T)	
	irie Redox (A16		•	Umbric Surface (F13) (LRR P, T, U)		
_	ck Mineral (S1)		), S)	Delta Ochric (F17) (MLRA 151)		³ Indicators of hydrophytic vegetation and
· ·	yed Matrix (S4)	)		Reduced Vertic (F18) (MLRA 150A, 150B)		wetland hydrology must be present,
Sandy Rec				☐ Piedmont Floodplain Soils (F19) (MLRA 1	-	unless disturbed or problematic.
	4atrix (S6) ace (S7) (LRR P	e T !	n	Anomalous Bright Loamy Soils (F20) (ML	_RA 149/	9A, 153C, 153D)
□ Daik Sulla	2CE (37) (LKK P	, 5, 1, (	J)			
Restrictive La	yer (if obser	ved):				
Type:						
Depth (inch	nes):	·		, , , , , , , , , , , , , , , , , , ,		Hydric Soil Present? Yes   No
Remarks:						

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 14-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 17
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 33 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 23' 45.027" N Long.: 89° 36' 40.425" W Datum: NAD83
Y 19 2 19 19 19 19 19 19 19 19 19 19 19 19 19	
Soil Map Unit Name: Su, Smithton fine sande loam frequently flooded	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes O No 🌀
Are Vegetation . , Soil . , or Hydrology . naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area
Hydric Soil Present? Yes ● No ○	Von (®) No ()
Wetland Hydrology Present? Yes  No	within a Wetland?
Remarks:	
Area represents a DRY Wetland - Water table has been pulled down	most likely by construction of man-made ditch to east and south of location.
Classic wetland features (vegetation, moss trim lines, geomoriphic p	postions, but soils are DRY - barely sufficient chromat qualify as wetland.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Fauna (B:	13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1	5) (LRR U)
Saturation (A3) Hydrogen Sulfide	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosph	neres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4)
Drift Deposits (B3)	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	e (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 O No O Depth (inches):	
Water Table Present? Yes No   Depth (inches):	
Saturation Present?  (includes capillary fringe)  Yes No Depth (inches):	Wetland Hydrology Present? Yes ◎ No ○
Describe Recorded Data (stream gauge, monitoring well, aerial photo	or provious increations) if availables
bescribe Recorded Data (Stream gauge, Monitoring Well, acrial prior	s, previous inspections), ii available.
<u> </u>	
Remarks:	
	s silvicutural land clearing. Man made ditch has pulled down water table
apparently.	
	1

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

Tree Stratum (Plot size: 30 m )  1. Nyssa sylvatica 2. Quercus nigra 3. Magnolia virginiana	Absolute % Cover 15	R	<b>Cover</b> 57.7%	Indicator Status FAC	Dominance Test worksheet:  Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)
Nyssa sylvatica     Quercus nigra	15	_	57.7%		1 =
2. Quercus nigra				FAC	I that are OBL, FACW, or FAC: 7 (A)
O Managha days t				F = A	
5 Flagnona vaginiona	~	$\vdash$	19.2%	FAC	Total Number of Dominant
4 House Second and a Children		Н	19.2%	FACW	Species Across All Strata: 7 (B)
** *** *** **** **** **** **** **** ****		님	3.8%	OBL	Dorgont of developer Curries
5			0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6.	0	님	0.0%		11101110 0000 111011
7			0.0%		Prevalence Index worksheet:
8		Ш	0.0%	· ·	Total % Cover of Multiply by:
50% of Total Cover: 13 20% of Total Cover: 5.2	26 :	= Te	otal Cove	r	OBL species 3 x 1 = 3
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	_}}				FACW species 33 x 2 = 66
1 Nyssa sylvatica		V	55.6%	FAC	FAC species $49 \times 3 = 147$
2 Quercus nigra	5	~	27.8%	FAC	FACU species $0 \times 4 = 0$
3 Cyrilla racemiflora	2		11.1%	FACW	UPL species $0 \times 5 = 0$
1. Liquidambar styraciflua	1		5.6%	FAC	4.0
5	0		0.0%		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
5	4		0.0%		Prevalence Index = B/A = 2.541
7.			0.0%		Hydrophytic Vegetation Indicators:
3			0.0%		Da Bartigrando Da La Caración
50% of Total Cover: 9 20% of Total Cover: 3.6	18 =	- Te	otal Cover		1 - Rapid Test for Hydrophytic Vegetation
	10		Adi Covei		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m )					✓ 3 - Prevalence Index is ≤3.0 ¹
Cyrilla racemiflora	-		55.6%	FACW	Problematic Hydrophytic Vegetation 1 (Explain)
Quercus nigra	407	V,	27.8%	FAC	
Liquidambar styraciflua		$\sqcup$	16.7%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		$\square$	0.0%		be present unless distained of problematic
5.	0	Ω,	0.0%	r v	Definition of Vegetation Strata:
)	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 9 20% of Total Cover: 3.6	18 =	То	tal Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m )					( to only a langua in alamotor at all boot hought (DDI )).
1 . Arundinaria tecta	15	<b>V</b>	88.2%	FACW	Sapling - Woody plants, excluding woody vines,
2 Woodwardia areolata		<u> </u>	11.8%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3,		=	0.0%	ODL	than Sign (7.0 GH) DBH,
4		=	0.0%	. ''	Sapling/Shrub - Woody plants, excluding vines, less
5.	0 [	7	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
c		Ξ':			
7		۲.	0.0%		Shrub - Woody plants, excluding woody vines,
8	0 [	Ϊ-	-		approximately 3 to 20 ft (1 to 6 m) in height.
		Ξ.	0.0%		Herb - All herbaceous (non-woody) plants, including
9	0 L		0.0%		herbaceous vines, regardless of size, and woody
0	0 [	Η.	0.0%		plants, except woody vines, less than approximately
1		-	0.0%		3 ft (1 m) in height.
2.	Ó		0.0%		Manda vine All vine di vine
50% of Total Cover: 8.5 20% of Total Cover: 3.4	17=	Tot	tal Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m				L	
Rubus argutus	5	1	83.3%	FAC	
Smilax laurifolia	1		MM	FACW	
	0		0.0%		
	0		0.0%		
	0	7	0.0%	. ,	Hydrophytic
					Vegetation Present? Yes  No  No
50% of Total Cover: 3 20% of Total Cover: 1.2	6 =	rot	al Cover		rioseni i i i i i i i i i i i i i i i i i i

~	-	P.O	
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rofile Desci			Sampling Point: , Wet - 17
		needed to document the indicator or confirm the	absence of Indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist) %	Color (moist) % Type 1 Loc2	Texture Remarks
0-6	10YR 4/2 100		Silt Loam
6-16	10YR 6/3 100		
			-
- Arm	e i i in me de pre-upage	Milk to a common disk by the	
, A.A.		, k	<u> </u>
-			• em tur
		ced Matrix, CS=Covered or Coated Sand Grains 2Loca	ation: PL=Pore Lining. M=Matrix
lydric Soil I		_	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (/	•	Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
	pedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Histi		Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
_ ` *	Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
_	Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
	odies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Red Parent Material (TF2)
_	ky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (TF12)
_	sence (A8) (LRR U)	Redox Depressions (F8)	Other (Explain in Remarks)
_	k (A9) (LRR P, T)	Mari (F10) (LRR U)	,
·	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
_	k Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P, T)	
_	rie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
	ck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
Sandy Glev	yed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
Cond. Dod		Piedmont Floodplain Soils (F19) (MLRA 149A)	unless disturbed or problematic.
Sandy Red	Ambrine (CC)	Anomalous Bright Loamy Soils (F20) (MLRA 14	9A, 153C, 153D)
Stripped M	· · ·		
Stripped M	Aatrix (S6) Ace (S7) (LRR P, S, T, U)		
Stripped M Dark Surfa	ace (S7) (LRR P, S, T, U)		
Stripped M Dark Surfa	· · ·		
Stripped M Dark Surfa Dark Surfa  estrictive La Type:	ace (S7) (LRR P, S, T, U)  ayer (if observed):		Muduis Cail Duracenta V
Stripped M Dark Surfa	ace (S7) (LRR P, S, T, U)  ayer (if observed):		Hydric Soil Present? Yes  No
Stripped M Dark Surfa  estrictive La Type: Depth (inch	ace (S7) (LRR P, S, T, U)  ayer (if observed):		Hydric Soil Present? Yes   No
Stripped M Dark Surfa  Park Surfa  Estrictive La  Type: Depth (inch emarks: il matrices a	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to an what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to an what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  strictive La Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typiclaly seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to an what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typiclaly seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  Park Surfa  Park Surfa  Type: Depth (inch emarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typiclaly seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks: il matrices a	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch temarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch temarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch temarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to an what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch emarks: ii matrices a	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to an what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch temarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to an what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather
Stripped M Dark Surfa  estrictive La Type: Depth (inch temarks:	ace (S7) (LRR P, S, T, U)  ayer (if observed):  aes):  appear to have (at one time) b	een sufficiently stripped of organic matter due to nan what are typicialy seen in a wetland but lowe	o wet weather drainage through area, but dry weather

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 18-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 18
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
	Local relief (concave, convex, none): none Slope: 0,0 % / 0,0 °
SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND THE SECTION AND TH	
Subregion (LRR or MLRA): LRR T Lat.:	30° 24′ 45.183" N Long.: 89° 37′ 38.549" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI dassification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation 🗌 , Soil 🗍 , or Hydrology 🗌 significant	ly disturbed? Are "Normal Circumstances" present? Yes 💿 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No	To the Complet Aven
Hydric Soil Present? Yes  No	Is the Sampled Area
Wetland Hydrology Present? Yes  No	within a Wetland? Tes S NO C
Remarks:	
Low drainage area approximately 50 feet east of Up - 18.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1)	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	5) (LRR U)    Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide (	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosphe	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	red Iron (C4)
✓ Drift Deposits (B3)	tion 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 R	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 O No O Depth (inches):	
Saturation Present?  (includes capillary fringe)  Yes No Depth (inches):	Wetland Hydrology Present? Yes   No ○
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
	, , , , , , , , , , , , , , , , , , ,
Remarks:	
Kanara	
	i

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

Dominant

		Domina Species		Sampling Point: Wet - 18
	Absolute	Rel.Stra	rt. Indicato	Dominance Test worksheet:
ree Stratum (Plot size: 30 m )	% Cover			Number of Dominant Species
Nyssa biflora	15	65.2	% OBL	That are OBL, FACW, or FAC: 7 (A)
Nyssa sylvatica	5	21.7	% FAC	Total Number of Dominant
Pinus elliottii	2	8.79	% FACW	Species Across All Strata: 7 (B)
Cyrilla racemiflora	11	4.3	% FACW	
2 0	0	0.0	<b>%</b>	Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B
<u> </u>		0.0	<b>%</b>	That Are OBL, FACW, or FAC: 100 0% (A/B
	0	0.0	%	Prevalence Index worksheet:
	0	0,0	Vo	Total % Cover of Multiply by:
0% of Total Cover: 11.5 20% of Total Cover: 4.6	23	= Total Co	ver	OBL species 42 x 1 = 42
apling or Sapling/Shrub Stratum (Plot size: 30 m	)			FACW species37 x 2 =74
Nyssa biflora	15	53.6	% OBL	FAC species 6 x 3 = 18
Cyrilla racemifiora	10	<b>✓</b> 35.7	% FACW	FACU species0 _ x 4 =0
Disus allotti	3	10.7		
	0	0.09		
FX': "- X' - X' - X' - X' - X' - X' - X' - X	0	0.09		Column Totals: 85 (A) 134 (B)
		0.09	L	Prevalence Index = B/A = 1.576
	_			Hydrophytic Vegetation Indicators:
		0.09		
results with the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	0	0.09		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 14 20% of Total Cover: 5.6	28 =	= Total Co	ver	✓ 2 - Dominance Test is > 50%
rrub Stratum (Plot size: 30 m				✓ 3 - Prevalence Index is ≤3.0 ¹
Cyrilla racemiflora	10	€ 62.5	% FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Persea palustris	3	18.8	% FACW	
Ilex glabra		12.5		¹ Indicators of hydric soil and wetland hydrology mus
Tless annum		6.39		be present, unless disturbed or problematic.
		0.09	.,	Definition of Vegetation Strata:
	0	0.09	****	Tree - Woody plants, excluding woody vines,
00/-fT-1-10	-American's	1		approximately 20 ft (6 m) or more in height and 3 in.
0% of Total Cover: 8 20% of Total Cover: 3.2	16 =	= Total Co	ver	(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m )				Confirm Minardy alone
. Woodwardia areolata	10	58.8	% OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Arundinaria tecta	5	29.49	% FACW	than 3 in. (7.6 cm) DBH.
Sarracenia fiava	2	11.89	% OBL	
	0	0.09	6	Sapling/Shrub - Woody plants, excluding vines, less
	0	0.09	6	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	0.0%	-	Charle Manderalanda avaluation consideration
en en en en en en en en en en en en en e	0	0.09		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
	0	0.0%		The second of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
	0	0.09		Herb - All herbaceous (non-woody) plants, including
		0.09		herbaceous vines, regardless of size, and woody
				plants, except woody vines, less than approximately 3 ft (1 m) in height.
		0,0%		o k ( r ti) in neight.
	0	0.09		Woody vine - All woody vines, regardless of height,
0% of Total Cover: 8.5 20% of Total Cover: 3.4	17 =	: Total Co	ver	1100My vino - 7 ili violody vines, regardiess of fieldlif.
oody Vine Stratum (Plot size: 30 m				
Smilax laurifolia	1 [	100.0	% FACW	
11 A.A. 1 X	0	0.0%	1	
	0 [	0.0%		
		0.0%	,	
		0.0%		Hydrophytic
	0 [			
0% of Total Cover: 0.5 20% of Total Cover: 0.2		Total Co	/er	Vegetation Present?  Yes  No

CO	¥	п
30	1	L

Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Color (molst)   Ye   Ye   Ye   Ye   Ye   Ye   Ye   Y	OIL									Samp	ling Point: Wet - 18
moles) Color (molst)	rofile Descr	iption: (De	scribe to	the depth	needed to d	locumen	t the Indi	cator or c	onfirm the	absence of indicators.	)
0-4 10YR 3/1 90 10YR 7/2 10 D M Loarny Sand 4-20 10YR 3/2 85 10YR 7/2 20 D M Sandy Loarn  De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains    Total Sandy Loarn  Description	Depth		Matrix			Re	dox Feat	ures			
Dee: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains **Location: PL=Pore Lining. M=Matrix Airis Soll Indicators:    Histosol (A1)	(inches)			/ *							Remarks
De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains    **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils **Indicators for Problematic Hydric Soils Present**  Indicators for Problematic Hydric Soils For Problematic Hydric Soils Present**  Indicators for Problematic Hyd	0-4	10YR	3/1	90	10YR		10	D	М	Loamy Sand	
### Additional Control of Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soil Present? ### Indicators for Problematic Hydric Soil Present? ### Indicators for Problematic Hydric Soils Fresent Hydric Soil Present? ### Indicators for Problematic Hydric Soil Present? ### Indicators for Problematic Hydric Soil Present? #### Indicators for Problematic Hydric Hydric Hydric Soil Present? #### Indicators for Problematic Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hyd	4-20	10YR	3/2	. 85	10YR	7/2	20	D	. <u>M</u>	Sandy Loam	
### Additional Control of Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soils ### Indicators for Problematic Hydric Soil Present? ### Indicators for Problematic Hydric Soil Present? ### Indicators for Problematic Hydric Soils Fresent Hydric Soil Present? ### Indicators for Problematic Hydric Soil Present? ### Indicators for Problematic Hydric Soil Present? #### Indicators for Problematic Hydric Hydric Hydric Soil Present? #### Indicators for Problematic Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hydric Hyd		-	-			_	- <b></b>	-		-	
Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Loamy Mucky Mineral (F1) (LRR O)  Hodged Sulfide (A4)  Cran Mucky Mineral (A7)  Loamy Gleyed Matrix (F2)  Depleted Below Surface (F3)  Loamy Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Mucky Mineral (F1)  Tom Muck (A9)  Loamy Gleyed Matrix (F2)  Depleted Metrix (F3)  Depleted Metrix (F3)  Reduced Dark Surface (F6)  Red Parent Material (TF2)  Tom Mucky Mineral (A7)  Redox Depressions (F8)  Depleted Below Dark Surface (F7)  Wery Shallow Dark Surface (TF12)  Wery Shallow Dark Surface (TF12)  Tom Muck (A9)  Loamy Muck (A9)  Loamy Muck (A9)  Loamy Muck (A9)  Loamy Muck (A9)  Loamy Muck (R1)  Reduced Dark (F2)  Tom Muck (R2)  Tom Mucky Mineral (F18)  Tom Mucky Mineral (F18)  Tom Mucky Mineral (F18)  Tom Mucky Mineral (F18)  Tom Mucky Mineral (F18)  Tom Muck (A9)  Loamy Gleyed Matrix (F18)  Reduced Vertic (F18)  Tom Mucky Mineral (F18)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Mucky Mineral (F19)  Tom Muck (A9)  Tom Muck (A19)  Tom Muck (A19)  Tom Muck (A19)  Tom Muck (A19)  Tom Muck (		er ·		624							
Histosol (A1)			=Depletio	n. RM=Redu	ıced Matrix, C	S=Covere	ed or Coate	ed Sand Gr	ains ² Loca	<del> </del>	·
Histic Epipedon (A2)    Thin Dark Surface (S9) (LRR S, T, U)					_					Indicators for Pro	blematic Hydric Soils ³ :
Black Histic (A3)		•								1 cm Muck (A9)	) (LRR O)
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Stratified Layers (A5)  Depleted Matrix (F3)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F7)  Muck Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Mark (F10) (LRR U)  Depleted Dark Surface (F7)  Mark (F10) (LRR U)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Redox (S5)  Sandy Redox (S5)  Stripped Matrix (S4)  Sardy Redox (S5)  Stripped Matrix (S4)  Dark Surface (S7) (LRR P, S, T, U)   Trictive Layer (if observed):  Type:  Depth (inches):  Mark (F2)  Piedmont Floodplain Soils (F19) (LRR V, S)  Redox Dark Surface (F10)  Redox Dark Surface (F7)  Piedmont Floodplain Soils (F19) (MLRA 151)  Piedmont Floodplain Soils (F19) (MLRA 151)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Sandy Redox (S5)  Dark Surface (A12)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)   **Trictive Layer (if observed):  Type:  Depth (inches):  Mark (F2)  Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)  Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)										2 cm Muck (A10	D) (LRR \$)
Stratified Layers (A5)  Depleted Matrix (F3)  Anomalous Bright Loamy Solls (F3) (MLRA 153B)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Scm Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Wery Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U)  Redox Depressions (F8)  Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T)  Marl (F10) (LRR U)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Stripped Matrix (S6)  Delta Ochric (F17) (MLRA 150A, 150B)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)   Trictive Layer (if observed):  Type:  Depth (inches):  The Manganese Masses (F12) (LRR O, S)  Anomalous Bright Loamy Solls (F20) (MLRA 149A, 153C, 153D)  Hydric Soil Present?  Yes  No  No  No  No  No  No  No  No  No  N		-			∐ Loa	my Mucky	Mineral (F	F1) (LRR O	)	Reduced Vertic	(F18) (outside MLRA 150A,B)
Stratified Layers (A5)					Loa	my Gleye	d Matrix (F	2)		Piedmont Flood	plain Soils (F19) (LRR P, S, T)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2)  5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  **Trictive Layer (if observed):**  Type:  Depth (inches):  Marl (F10) (LRR U)  Depleted Dark Surface (F7)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark Surface (TF12)  Very Shallow Dark S	Stratified L	Layers (A5)			☐ Dep	leted Mat	rix (F3)				
5 cm Mucky Mineral (A7) (LRR P, T, U)  Muck Presence (A8) (LRR U)  1 cm Muck (A9) (LRR P, T)  Depleted Dark Surface (F7)  Marl (F10) (LRR U)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Dark Surface (S7) (LRR P, S, T, U)  Trictive Layer (if observed):  Type:  Depth (Inches):  marks:  Depth dark Surface (A7)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)	Organic Bo	odies (A6) (L	.RR P, T, U	J)	Red	ox Dark S	urface (F6	)			, , , , ,
Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetiand hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Prictive Layer (if observed):  Type:  Depth (inches): Hydric Soil Present? Yes No	5 cm Muci	ky Mineral (A	7) (LRR P	, T, U)	☐ Dep	leted Dari	k Surface (	(F7)			
1 cm Muck (A9) (LRR P, T)	Muck Pres	ence (A8) (L	RR U)				•				• •
Depleted Below Dark Surface (A11)  Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Dark Surface (S7) (LRR P, S, T, U)   **Trictive Layer (if observed):  Type:  Depth (inches):  Depth (inches):  Hydric Soil Present? Yes No										Other (Explain I	n Kemarks)
Thick Dark Surface (A12)    Iron-Manganese Masses (F12) (LRR O, P, T)   Coast Prairie Redox (A16) (MLRA 150A)   Umbric Surface (F13) (LRR P, T, U)   Sandy Muck Mineral (S1) (LRR O, S)   Delta Ochric (F17) (MLRA 151)   Reduced Vertic (F18) (MLRA 150A, 150B)   Sandy Redox (S5)   Piedmont Floodplain Soils (F19) (MLRA 149A)   United Surface (S7) (LRR P, S, T, U)   Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)   Coast Prairie Redox (A16) (MLRA 150A)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)   Iron-Manganese Masses (F12) (LRR P, T, U)				11)	_		•	MI DA 151\			
Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)   **Trictive Layer (if observed):  Type:  Depth (inches):  Mark Soil Present?  Person No  Hydric Soil Present?  Person No  Hydric Soil Present?  Person No  Hydric Soil Present?  Person No  No  No  No  No  No  No  No  No  No	•		•	,	_ `			-			
Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)   Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Prictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No		•	•	1 1 50 4 3		_					
Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)   Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Arictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No		_		_					)		
Sandy Redox (S5)   Piedmont Floodplain Soils (F19) (MLRA 149A)   wetland hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6)   Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  trictive Layer (if observed):  Type:   Depth (inches):   Hydric Soil Present? Yes   No   One of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of th		-		), S)	Delt	a Ochric (	(F17) (MLR	IA 151)		3 _{Tadicato}	o of hydrophytic vocatotion and
Sandy Redox (S5)			54)		Red	uced Vert	ic (F18) (M	1LRA 150A,	150B)	wetland	i hydrology must be present.
Dark Surface (S7) (LRR P, S, T, U)  trictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No O	Sandy Red	lox (S5)			Pied	mont Floo	odplain Soi	ls (F19) (M	LRA 149A)		
trictive Layer (if observed):  Type: Depth (inches): Hydric Soil Present? Yes No O	Stripped M	latrix (S6)			Ano	malous Br	ight Loam	y Soils (F20	) (MLRA 149	<b>9A,</b> 153C, 153D)	
Type:	Dark Surfa	ice (S7) (LRF	R P, S, T, I	U)							
Depth (inches): Hydric Soil Present? Yes No Conarks:	trictive La	yer (if obse	erved):								<u> </u>
narks:	Type:		_,				_		İ		
	Depth (inch	es):								Hydric Soil Present?	Yes ● No U
				· /					-		
eted - stripped matrix in lower portion of sample. Redox concentrations also enountered.			Star San Laure		-£1-	D - d				_	
	etea - stri	ipped matri	iix in iow	er portion	or sample.	Redox c	oncentra	tions also	enountere	α.	

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 18-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet -19
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently floode	
Are climatic/hydrologic conditions on the site typical for this time of y	
Are Vegetation , Soil , or Hydrology significan	intly disturbed? Are "Normal Circumstances" present? Yes O No 📵
Are Vegetation , Soil , or Hydrology naturally	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing s	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No O	Is the Sampled Area
Hydric Soil Present? Yes  No O	Is the sampled Area  Yes  No
Wetland Hydrology Present? Yes  No O	within a Wetland?
Remarks:	een altered and water connection apparently disrupted, but not enough to keep it
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply	) Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Fauna (E	B13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B	B15) (LRR U) ✓ Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	le Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) ☐ Oxidized Rhizosp	pheres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	duced Iron (C4)
☐ Drift Deposits (B3) ☐ Recent Iron Red	duction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	ace (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in	n 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 O No O Depth (inches)	
Saturation Present?  (includes capillary fringe)  Yes No Depth (Inches)	Wetland Hydrology Present? Yes  No O
Describe Recorded Data (stream gauge, monitoring well, aerial pho	
Remarks:	
	· · · · · · · · · · · · · · · · · · ·

<b>VEGETATION</b>	(Five/Four	Strata)	_	Use scientific names of	plants.
	-	_			Dominant

and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	0 0 0 0 20 =	Re	50.0% 50.0% 25.0% 15.0% 10.0% 0.0% 0.0%	Indicator Status FACW OBL FACW FAC	Number of Dominant Species That are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  8 (B)
Magnolia virginiana Nyssa bifiora Pinus elliottii Acer rubrum  0% of Total Cover: 10 20% of Total Cover: 4  ppling or Sapling/Shrub Stratum (Plot size: 30 m  Magnolia virginiana Nyssa bifiora	10 5 3 2 0 0 0 20 =	<b>V</b> ,	50.0% 25.0% 15.0% 10.0% 0.0%	FACW OBL FACW	That are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  8 (B)
Nyssa biflora Pinus elliottii Acer rubrum  0% of Total Cover: 10 20% of Total Cover: 4  Inpling or Sapling/Shrub Stratum (Plot size: 30 m  Magnolia virginiana  Nyssa biflora	5 3 2 0 0 0 0 20 =		25.0% 15.0% 10.0% 0.0%	OBL FACW	That are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  8 (B)
Pinus elliottii Acer rubrum  0% of Total Cover: 10 20% of Total Cover: 4  Ipling or Sapling/Shrub Stratum (Plot size: 30 m  Magnolia virginiana  Nyssa biflora	3 2 0 0 0 0 20 =		15.0% 10.0% 0.0% 0.0%	FACW	Species Across All Strata: 8 (B)
Acer rubrum  0% of Total Cover: 10 20% of Total Cover: 4  pling or Sapling/Shrub Stratum (Plot size: 30) m  Magnolia virginiana  Nyssa biflora	2 0 0 0 0 20 =		10.0% 0.0% 0.0%	( ) (M	Species Across All Strata: 8 (B)
0% of Total Cover: 10 20% of Total Cover: 4  pling or Sapling/Shrub Stratum (Plot size: 30 m  Magnolia virginiana  Nyssa biflora	0 0 0 0 20 =		0.0%	FAC	Powert of devices 12
0% of Total Cover: 10 20% of Total Cover: 4  pling or Sapling/Shrub Stratum (Plot size: 30 m )  Magnolia virginiana  Nyssa biflora	0 0 0 20 =		0.0%		Demonstrate demonstrate (CC)
0% of Total Cover: 10 20% of Total Cover: 4  pling or Sapling/Shrub Stratum (Plot size: 30 m )  Magnolia virginiana  Nyssa biflora	0 0 20 =				Percent of dominant Species
0% of Total Cover: 10 20% of Total Cover: 4  pling or Sapling/Shrub Stratum (Plot size: 30 m )  Magnolia virginiana  Nyssa biflora	0 0 20 =		0.0%		That Are OBL, FACW, or FAC: 100 0% (A/B
0% of Total Cover: 10 20% of Total Cover: 4  pling or Sapling/Shrub Stratum (Plot size: 30 m )  Magnolia virginiana  Nyssa biflora	0 _20 =				Prevalence Index worksheet:
pling or Sapling/Shrub Stratum (Plot size: 30 m ) Magnolia virginiana Nyssa biflora	20 =	-,	0.0%		Total % Cover of: Multiply by:
pling or Sapling/Shrub Stratum (Plot size: 30 m ) Magnolia virginiana Nyssa biflora	)	= To	tal Cove		OBL species 40 x 1 = 40
Magnolia virginiana Nyssa biflora					FACW species 69 x Z = 138
Nyssa biflora	10	<b>V</b>	40.0%	FACW	FAC species 2 x 3 = 6
23, O ^T mann's page of a sequence special of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state o	40		40.0%	OBL	FACU species 0 x 4 = 0
Cyrina raccimilara			20.0%	FACW	
	^		•	INCAA	and a property of the second
F	_	Η.	0.0%		Column Totals: 111 (A) 184 (B)
			0.0%		Prevalence Index = B/A = 1.658
		닏.	0.0%		· · · · · · · · · · · · · · · · · · ·
1	Ö	Ц.	0.0%		Hydrophytic Vegetation Indicators:
	0	Щ	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 12.5 20% of Total Cover: 5	25 =	= To	tal Cover		✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Cyrilla racemiflora	25	<b>V</b>	67.6%	FACW	
Manuelle desiries			•		Problematic Hydrophytic Vegetation ¹ (Explain)
		₩,	27.0%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
Ilex coriacea		님-	5.4%	FACW	be present, unless disturbed or problematic.
	0	Ц.	0.0%		
	0	$\sqcup_{A}$	0.0%	-	Definition of Vegetation Strata:
	0	Ш,	0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 18.5 20% of Total Cover: 7.4	37 =	= Tol	tal Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
rb Stratum (Plot size: 30 m					
Woodwardia virginica	20	V	71.4%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Woodwardia areolata	5		17.9%	OBL	than 3 in. (7.6 cm) DBH.
Arundinaria tecta	3		10.7%	FACW	
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	-	Η-			
Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Construction of the Constr		Ц.	0.0%		Shrub - Woody plants, excluding woody vines,
m	0	Η-	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
	0	<u>ا</u> .	0.0%		Horb. All borbacous (non-used) A - I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I - I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I - I I I I I I I I I I I I I I I I I I I I I I - I I I I I I I I I I I - I I I I I I I I I I I - I I I I I I I I I I I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I - I -
	<u>0</u> į		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
Control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro	0		0.0%		plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
	0		0.0%		
% of Total Cover: 14 20% of Total Cover: 5.6	28 =	Tot	al Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m					
Smilax laurifolia	1 [		100.0%	FACW	
	0	一,	0.0%		
	0 [	_	0.0%		
		-			
	.0 [	-	0.0%	1, 2, AM	Hydrophytic
	0 [		0.0%		Vegetation V (A) N (C)
% of Total Cover: 0.5 20% of Total Cover: 0.2	1 =	Tot	al Cover		Present? Yes © No U

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Depth   Matrix   Color (moist)   9%   Color (moist)   9%   Type   10%   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Loam   Sandy Redox (As) (IRR P, T, U)   Sandy Muck Mineral (A7) (IRR P, T, U)   Sandy Muck Mineral (A7) (IRR P, T, U)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Gleyed Matrix (A1)   Sandy Redox (A1) (IRR D)   Sandy Redox (A1) (IRR D)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   Sandy Redox (S5)   San	Color (moist)	SOIL		Sampling Point: Wet -19
Color (moist)	Color (moist)	Profile Description: (Describe to the d	epth needed to document the Indicator or confirm the	e absence of Indicators.)
Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Col	Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Col	Depth Matrix	Redox Features	_
0-6 10YR 3/1 100  6-16 10YR 3/2 90 10YR 6/2 10 D M Sandy Loam    Polyve; C - Concentration, D = Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains	0-6 10YR 3/1 100  6-16 10YR 3/2 90 10YR 6/2 10 D M Sandy Loam    Polyve; C - Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains 2-Location: PL = Pore Lining, M = Matrix   Polyvalue Below Surface (S9) (LRR S, T, U)		Color (moist) % Type 1 Loc2	Texture Remarks
Type: C-Concentration. D-Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2-Location: PL=Pore Lining. M=Matrix  **Hoffic Soil Indicators:**    Histosoi (A1)	Type: C-Concentration. D-Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains      Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Plactor   Pl	0-6 10YR 3/1 100		Sandy Loam
Indicators:   Histosol (A1)   Polyvalue Below Surface (S8) (LRR S, T, U)   1 cm Muck (A9) (LRR O)   1 tm Muck (A9) (LRR O)   2 cm Muck (A10) (LRR S)   2 cm Muck (A10) (LRR S)   3 cm Mucky Mineral (F1) (LRR O)   Reduced Vertic (F18) (outside MLRA 150A,B)   Hydrogen Sulfide (A4)   Loamy Gleyed Matrix (F2)   Piedmont Floodplain Soils (F19) (LRR P, S, T)   Redox Dark Surface (F6)   Red Vertic (F18) (outside MLRA 150A,B)   Hydrogen Sulfide Layers (A5)   Depleted Matrix (F2)   Piedmont Floodplain Soils (F19) (LRR P, S, T)   Redox Dark Surface (F6)   Red Vertic (F18) (LRR P, S, T)   Redox Dark Surface (F6)   Red Vertic (F18) (LRR P, S, T)   Redox Dark Surface (F7)   Redox Dark Surface (F7)   Very Shallow Dark Surface (F2) (MLRA 153B)   Other (Explain in Remarks)   1 cm Muck (A9) (LRR P, T)   Marl (F10) (LRR U)   Depleted Ochric (F11) (MLRA 151)   Depleted Below Dark Surface (A12)   Iron-Manganese Masses (F12) (LRR O, P, T)   Depleted Ochric (F13) (LRR P, T, U)   Sandy Gleyed Matrix (S4)   Reduced Vertic (F18) (MLRA 150A)   Sandy Redox (S5)   Piedmont Floodplain Soils (F19) (MLRA 151)   Reduced Vertic (F18) (MLRA 150A, 150B)   Vertical Properties of Problematic Problematic.   Stripped Matrix (S6)   Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)   Strictive Layer (if observed):  Type:   Depth (inches):   Hydric Soil Present? Yes No	Histosol (A1)	6-16 10YR 3/2 90	10YR 6/2 10 D M	Sandy Loam
ydric Soil Indicators:    Histosol (A1)	ydric Soil Indicators:    Histosol (A1)			
ydric Soil Indicators:    Histosol (A1)	ydric Soil Indicators:    Histosol (A1)	unou CConcentration DDepletion IIIM	Deduced Matrix: CC_Covered as Cented Sand Carine 21 au	entions DI Dave Lising M. Metric
Histosol (A1)	Histosol (A1)	· · · · · · · · · · · · · · · · · · ·	-reduced Matrix, CS=Covered or Coated Sand Grains -Loc	
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  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)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U)  Redox Depressions (F8)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Thick Dark Surface (A11)  Depleted Delow Dark Surface (A11)  Depleted Delow Dark Surface (A12)  Iron-Manganese Masses (F12) (LRR O, P, T)  Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Delta Ochric (F17) (MLRA 150A, 150B)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Pledmont Floodplain Soils (F20) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Present?  Yes  No  No	Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  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)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Thick Dark Surface (A11)  Depleted Delow Dark Surface (A11)  Depleted Delow Dark Surface (A12)  Iron-Manganese Masses (F12) (LRR O, P, T)  Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Delta Ochric (F17) (MLRA 150A, 150B)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Pledmont Floodplain Soils (F20) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Present?  Hydric Soil Present?  Yes  No	Histic Epipedon (A2)		1 cm Muck (A9) (LRR O)
Stratified Layers (A5)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Muck Presence (A8) (LRR U)  Redox Depressions (F8)  Other (Explain in Remarks)  Other (Explain in Remarks)  Thick Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F3)  Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, T, U)  Pestrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  No	Stratified Layers (A5)    Depleted Matrix (F3)	_ ' '	Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Stratified Layers (A5)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Depleted Dark Surface (F7)  Muck Presence (A8) (LRR P, T, U)  Depleted Dark Surface (F7)  Mark (F10) (LRR U)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Derived Matrix (S6)  Dark Surface (S7) (LRR P, T, U)  Pedmont Floodplain Soils (F20) (MLRA 149A)  Derived Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Petmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Redox Derived Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Petmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Petmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)	Stratified Layers (A5)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Depleted Dark Surface (F7)  Muck Presence (A8) (LRR P, T, U)  Depleted Dark Surface (F7)  Mark (F10) (LRR U)  Depleted Below Dark Surface (F7)  Depleted Below Dark Surface (F7)  Depleted Below Dark Surface (TF12)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Defla Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	· · ·	Loamy Gleyed Matrix (F2)	
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TT2)  5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2)  5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Stratified Layers (A5)	✓ Depleted Matrix (F3)	
S cm Mucky Mineral (A7) (LRR P, T, U)	S cm Mucky Mineral (A7) (LRR P, T, U)	Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	
Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  **Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 15DA) Umbric Surface (F13) (LRR P, T, U)  Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be present, unless disturbed or problematic.  Stripped Matrix (S6) Pledmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  **Strictive Layer (if observed):  Type:  Depth (inches): Hydric Soil Present? Yes No	5 cm Mucky Mineral (A7) (LRR P, T, U	Depleted Dark Surface (F7)	
1 cm Muck (A9) (LRR P, T)	1 cm Muck (A9) (LRR P, T)	Muck Presence (A8) (LRR U)	Redox Depressions (F8)	= ' ' '
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Delta Ochric (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)  strictive Layer (if observed): Type: Depth (inches):  Hydric Soil Present? Yes No	Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)  strictive Layer (if observed): Type: Depth (inches):  Hydric Soil Present? Yes No	1 cm Muck (A9) (LRR P, T)	Marl (F10) (LRR U)	Otier (Explain III: Remarks)
Thick Dark Surface (A12)  Tron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 15DA)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Thick Dark Surface (A12)  Tron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 15DA)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Depleted Below Dark Surface (A11)		
Coast Prairie Redox (A16) (MLRA 15DA)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (F13) (LRR P, T, U)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes  No	Coast Prairie Redox (A16) (MLRA 15DA)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Delta Ochric (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Diedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes  No	Thick Dark Surface (A12)		
Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes  No	Coast Prairie Redox (A16) (MLRA 150A		
Sandy Gleyed Matrix (S4) Sandy Redox (S5)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Seriopped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Reduced Vertic (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 149A)  Pledmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	•		
Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Piedmont Floodplain Soils (F19) (MLRA 149A)  unless disturbed or problematic.  Weedand hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No	Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Piedmont Floodplain Soils (F19) (MLRA 149A)  unless disturbed or problematic.  Wethat hydrotogy must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No			
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<b>-</b>		wetland hydrology must be present,
Dark Surface (S7) (LRR P, S, T, U)  **strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  No	Dark Surface (S7) (LRR P, S, T, U)  **strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  No	_	_	<u>.</u>
Type:  Depth (inches):  Hydric Soil Present? Yes  No  No	Type:	- '' ' '	Anomalous Bright Loamy Soils (F20) (MLRA 14	49A, 153C, 153D)
Type:  Depth (inches):  Hydric Soil Present? Yes  No  No	Type:  Depth (inches):  Hydric Soil Present? Yes  No  No			
Depth (inches): Hydric Soil Present? Yes  No O	Depth (inches): Hydric Soil Present? Yes  No	estrictive Layer (if observed):		
Septi (inclus)	Septi (inclus)	Туре:		
		Depth (inches):		Hydric Soil Present? Yes   No
omarke:	GIIGINS.			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 18-Oct-16					
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 21					
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W					
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): Slope: 2,0 % / 1,1 °					
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 24.006" N Long.: 89° 37' 15.980" W Datum: NAD83					
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded						
Are climatic/hydrologic conditions on the site typical for this time of year						
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes   No					
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes  No	Table Consoled Aven					
Hydric Soil Present? Yes   No	Is the Sampled Area					
Wetland Hydrology Present? Yes  No O	within a Wetland? Yes S No					
	<del>-                                    </del>					
Remarks:	ional area from unland to rinarian buffer above TC Creek to the couth					
Just downslope from railspur in North/NW part of AOI. Nice transition	ional area from upland to riparian buffer above TS Creek to the south.					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)					
Primary Indicators (minimum of one required; check all that apply)						
Surface Water (A1) Aquatic Fauna (B1						
High Water Table (A2) Marl Deposits (B19)						
Saturation (A3) Hydrogen Sulfide (						
☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Dry Season Water Table (C2)						
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)						
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)  Algal Mat or Crust (B4)  Thin Muck Surface						
☐ Iron Deposits (B5) ☐ Other (Explain in F☐ 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):						
, , ,	He control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the con					
Water Table Present? Yes No Depth (inches):						
Saturation Present?  Gincludes capillary fringe)  Yes No Depth (inches):						
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo	os previous inspections) if available:					
Describe Recorded Data (stream gauge, monitoring well, aeriai priote	os, previous inspections), it available.					
Remarks:						

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

		Species? _		Sampling Point: Wet - 21
/DI-A	Absolute	e Rel.Strat.		Dominance Test worksheet:
ree Stratum (Plot size: 30 m )	% Cove		Status	Number of Dominant Species
Pinus elliottii	, 5	16.1%	FACW	That are OBL, FACW, or FAC: 10 (A)
Nyssa sylvatica	10_	32.3%	FAC	Total Number of Demisses
Magnolia virginiana	15	✓ 48.4%	FACW	Total Number of Domínant Species Across All Strata: 10 (B)
Taxodium ascendens	1	3.2%	OBL	
	0	0.0%		Percent of dominant Species
	. 0	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
	0	0.0%		Prevalence Index worksheet:
	D	0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 15.5 20% of Total Cover: 6.2	31	= Total Cove	r	OBL species 25 x 1 = 25
apling or Sapling/Shrub Stratum (Plot size: 30 m				FACW species
Taxodium ascendens		3.8%	OBL	FAC species 22 x 3 = 66
Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manager Manage		✓ 38.5%	FACW	
Cyrilla racemiflora	10	✓ 38.5%	FACW	
Acor submin	-			ore species
en en en en en en en en en en en en en e	•	19.2%	FAC	Column Totals: 117 (A) 231 (B)
				Prevalence Index = B/A = 1.974
		0.0%	_	Hydrophytic Vegetation Indicators:
		0.0%		Tryalophydd Yegetation Indicatol3;
THE PROPERTY OF THE PROPERTY OF		0.0%	-	1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 13 20% of Total Cover: 5.2	26	= Total Cove	r	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m )				✓ 3 - Prevalence Index is ≤3.0 1
Magnolla virginiana	10	<b>✓</b> 33.3%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Acer rubrum		16.7%	FAC	— (Jackson)
Cyrilla racemifiora	5	16.7%	FACW	¹ Indicators of hydric soil and wetland hydrology must
Ilex coriacea		✓ 33.3%	FACW	be present, unless disturbed or problematic.
<b>▼. ^</b>	0	0.0%		Definition of Vegetation Strata:
			-	
	0	0.00%		l Tree - Woody plants, eycluding woody vines
50% of Total Cover: 15 20% of Total Cover: 5	0 30	= Total Cover		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 15 20% of Total Cover: 6		= Total Cover	r	
erb Stratum (Plot size: 30 m )	30	= Total Cover	··	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m )	30	= Total Cover	OBL	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,
erb Stratum (Plot size: 30 m) Woodwardia areolata Woodwardia virginica	30 5	= Total Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica	30 5	= Total Cover	OBL	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
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica Comunda regalis	30 5 15	= Total Cover  21.7%  65.2%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica Cosmunda regalis Sarracenia alabamensis	5 15 2	= Total Cover  ✓ 21.7%  ✓ 65.2%  ■ 8.7%	OBL OBL	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.
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica Cosmunda regalis Sarracenia alabamensis	30 5 15 2 1	■ Total Cover  21.7%  65.2%  8.7%  4.3%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica Cosmunda regalis Sarracenia alabamensis	5 15 2 1	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less
erb Stratum (Plot size: 30 m )  Woodwardia areolata  Woodwardia virginica  Cosmunda regalis  Sarracenia alabamensis	30 5 15 2 1 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines,
erb Stratum (Plot size: 30 m )  Woodwardia areolata  Woodwardia virginica  Osmunda regalis  Sarracenia alabamensis	30 5 15 2 1 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb - All herbaceous (non-woody) plants, including
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica Cosmunda regalis Sarracenia alabamensis	30 5 15 2 1 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
erb Stratum (Plot size: 30 m ) Woodwardia areolata Woodwardia virginica Cosmunda regalis Sarracenia alabamensis	30 5 15 2 1 0 0 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb - All herbaceous (non-woody) plants, including
erb Stratum (Plot size: 30 m )  Woodwardia areolata  Woodwardia virginica  Comunda regalis  Sarracenia alabamensis	30 5 15 2 1 0 0 0 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
erb Stratum (Plot size: 30 m )  Woodwardia areolata  Woodwardia virginica  Cosmunda regalis  Sarracenia alabamensis	30 5 15 2 1 0 0 0 0 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
erb Stratum (Plot size: 30 m )  Woodwardia areolata  Woodwardia virginica  Comunda regalis  Sarracenia alabamensis	30 5 15 2 1 0 0 0 0 0 0	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
erb Stratum (Plot size: 30 m )  Woodwardia areolata  Woodwardia virginica  Osmunda regalis  Sarracenia alabamensis  30% of Total Cover: 11.5 20% of Total Cover: 4.6  coody Vine Stratum (Plot size: 30 m )	30 5 15 2 1 0 0 0 0 0 0 0 0 0 2 3 4 5 6 7 9 9 9 9 9 9 9 9 9 9 9 9 9	■ Total Cover  21.7% 65.2% 8.7% 4.3% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
woodwardia areolata  Woodwardia virginica  Osmunda regalis  Sarracenia alabamensis  3% of Total Cover: 11.5 20% of Total Cover: 4.6  oody Vine Stratum (Plot size: 30 m )  Vitts rotundifolia	30 5 15 2 1 0 0 0 0 0 0 0 23	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  □ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
woodwardia areolata  Woodwardia virginica  Osmunda regalis  Sarracenia alabamensis  2% of Tota! Cover: 11.5 20% of Total Cover: 4.6  coody Vine Stratum (Plot size: 30 m )	30 5 15 2 1 0 0 0 0 0 0 0 23	■ Total Cover  21.7% 65.2% 8.7% 4.3% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
woodwardia areolata  Woodwardia virginica  Osmunda regalis  Sarracenia alabamensis  2% of Total Cover: 11.5 20% of Total Cover: 4.6  oody Vine Stratum (Piot size: 30 m )  Vitis rotundifolia	30 5 15 2 1 0 0 0 0 0 0 0 23	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  □ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
woodwardia areolata  Woodwardia virginica Cosmunda regalis Sarracenia alabamensis  0% of Total Cover: 11.5 20% of Total Cover: 4.6  coody Vine Stratum (Plot size: 30 m )  Vitis rotundifolia Smilax laurifolia	30 5 15 2 1 0 0 0 0 0 0 0 23	■ Total Cover  21.7% 65.2% 8.7% 4.3% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0%	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
erb Stratum (Plot size: 30 m)  . Woodwardia areolata  ? Woodwardia virginica  3. Osmunda regalis  . Sarracenia alabamensis	30 5 15 2 1 0 0 0 0 0 0 0 23	■ Total Cover  21.7% 65.2% 8.7% 4.3% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0% ■ 0.0%	OBL OBL OBL	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
lerb Stratum (Plot size: 30 m)   Woodwardia areolata   Woodwardia virginica   Osmunda regalis   Sarracenia alabamensis   Sarracenia alabamensis   Owners	30 5 15 2 1 0 0 0 0 0 0 0 23	■ Total Cover  21.7%  65.2%  8.7%  4.3%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  ■ 0.0%  ■ 0.0%  ■ 1.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%  ■ 0.0%	OBL OBL OBL FAC FACW	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.

SOIL									Sampli	ing Point: Wet - 21
Profile Desc	ription: (De:	scribe to	the depth	needed to	documen	t the ind	icator or co	onfirm the	absence of indicators.)	
Depth		Matrix			Re	edox Feat	tures	2 4		
(inches)	Color (	moist)_	%	Color	(moist)	%	Type 1	Loc2	Texture	Remarks
. 0-5	10YR	3/1	100						Fine Loamy Sand	.,
5-16	10YR	3/2	95	10YR	7/2	5	D	М	Loamy Sand	
		-	-	_	•	-		-		-
					-		LT. 400.			
· · ·					1					
Type: C=Con Hydric Soil 1		=Depletio	n. RM=Redu	iced Matrix,	CS=Cover	ed or Coat	ted Sand Gra	ains ²Loça	ation: PL=Pore Lining. M=1	Matrix Jematic Hydric Soils ³ :
Histosol (	(A1)			☐ Po	lyvalue Be	low Surfac	e (S8) (LRR	S. T. U)	1 cm Muck (A9) (	
	pedon (A2)			_	•		(LRR S, T, l		2 cm Muck (A10)	
Black Hist				_			(F1) (LRR O)	•		
	Sulfide (A4)				amy Gleye				`	F18) (outside MLRA 150A,B)
_	Layers (A5)				pleted Mai				_	lain Soils (F19) (LRR P, S, T)
	Bodies (A6) (L	RR P. T. I	D	_	dox Dark S	` '	E)		_	t Loamy Soils (F20) (MLRA 153B)
	ky Mineral (A				pleted Dar	•	•		Red Parent Mater	• •
	sence (A8) (L		, ,, 0,	_	dox Depre				☐ Very Shallow Dari	
	:k (A9) (LRR F	,		_	•	•	)		Other (Explain in	Remarks)
	Below Dark S		11)		ırl (F10) (L	-	(84538.454)			
	k Surface (A1		11)		-		(MLRA 151)			
_	_	•	1504\		_		s (F12) (LRF			
_	irie Redox (A:		•				LRR P, T, U)			
_	ıck Mineral (S		, 5)		ita Ochric				3 _{Indicators}	of hydrophytic vegetation and
	eyed Matrix (S	4)					MLRA 150A,		wetland l	hydrology must be present,
Sandy Re	•			L. Pie	dmont Flo	odplain So	ils (F19) (MI	_RA 149A)	unless	disturbed or problematic.
	Matrix (S6)			∟ An	omalous B	right Loam	ıy Soils (F20	) (MLRA 149	9A, 153C, 153D)	
Dark Surfa	ace (S7) (LRR	P, S, T, I	J)							
estrictive Li	ayer (if obse	erved):							1	
Type:	· ·	-						ľ		
Depth (incl	hes):					_			Hydric Soil Present?	Yes 🏵 No 🔾
	100)	· · ·								
lemarks:										

Traject state that the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of	ity/County: Waveland - Hancock Sampling Date: 18-Oct-16					
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 22					
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W					
Landform (hillslope, terrace, etc.): Terrace Lo	ocal relief (concave, convex, none): concave Slope: 0.0 % / 0.0 °					
Subregion (LRR or MLRA): LRR T Lat: 30	0° 24' 28.866" N Long.: 89° 37' 9.203" W Datum: NAD83					
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PFO 1/4 C					
Are climatic/hydrologic conditions on the site typical for this time of year?						
Are Vegetation . , Soil . , or Hydrology . significantly of	disturbed? Are "Normal Circumstances" present? Yes   No					
Are Vegetation . , Soil . , or Hydrology . naturally prol	blematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS - Attach site map showing samp	pling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area					
Hydric Soil Present? Yes   No	Vac (R) No (					
Wetland Hydrology Present? Yes No No	within a Wetland?					
Remarks:						
Bottom Area within riparian buffer zone approximately 50 feet south of	f Up-22.					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)					
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Aquatic Fauna (B13)	<u> </u>					
High Water Table (A2) Marl Deposits (B15) (						
Saturation (A3) Hydrogen Sulfide Odd						
Water Marks (B1)						
Sediment Deposits (B2)  Presence of Reduced						
☐ Drift Deposits (B3) ☐ Recent Iron Reduction						
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C						
Iron Deposits (B5) Uther (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:  Surface Water Present?  Yes No Depth (inches):						
Salitate viates i laborei						
Water Table Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes  No					
Saturation Present? (includes capillary fringe) Yes No  Depth (inches):	wetland hydrology Present? 165 © 140 ©					
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:					
	·					
Remarks:						
Refligits.						
Î						
	•					

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

Dominant
Species?

1. Pinus elliottii 2. Nyssa biflora 3. Magnolla virginiana 4. Acer campestre 5. Taxodium ascendens 6. 7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottii 2. Magnolla virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	10 2 1 0 0 0 28 =		17.9% 35.7% 35.7% 7.1% 3.6% 0.0% 0.0% 5.3% 52.6% 36.8% 5.3%	FACW FACW	Number of Dominant Species That are OBL, FACW, or FAC:  9 (A)  Total Number of Dominant Species Across All Strata:  9 (B)  Percent of dominant Species That Are OBL, FACW, or FAC:  100.0% (A/B)  Prevalence Index worksheet:  Total % Cover of:  Multiply by:  OBL species 41 x 1 = 41  FACW species 54 x 2 = 108  FAC species 0 x 3 = 0	
2. Nyssa biflora 3. Magnolla virginiana 4. Acer campestre 5. Taxodium ascendens 6. 7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottil 2. Magnolla virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	10 10 2 1 0 0 0 28 =	✓	35.7% 35.7% 7.1% 3.6% 0.0% 0.0% 0.0% al Cover 5.3% 52.6% 36.8%	OBL FACW UPL OBL FACW FACW	Total Number of Dominant Species Across All Strata:  Percent of dominant Species That Are OBL, FACW, or FAC:  100.0% (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 41 x 1 = 41  FACW species 54 x 2 = 108	
3. Magnolla virginiana 4. Acer campestre 5. Taxodium ascendens 6. 7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottil 2. Magnolla virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	10 2 1 0 0 0 28 =	✓	35.7% 7.1% 3.6% 0.0% 0.0% 0.0% 5.3% 52.6% 36.8%	FACW FACW	Species Across All Strata: 9 (B)  Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 41 x 1 = 41  FACW species 54 x 2 = 108	
4. Acer campestre 5. Taxodium ascendens 6. 7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottil 2. Magnolla virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	2 1 0 0 0 28 = 1 10 7 1 0 0		7.1% 3.6% 0.0% 0.0% 0.0% al Cover 5.3% 52.6% 36.8%	UPL OBL FACW	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 41 x 1 = 41  FACW species 54 x 2 = 108	
5. Taxodium ascendens 6. 7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottil 2. Magnolia virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	1 0 0 0 0 28 = 1 10 7 1 0 0 0		3.6% 0.0% 0.0% 0.0% <b>al Cover</b> 5.3% 52.6% 36.8%	OBL FACW	That Are OBL, FACW, or FAC: 100.0% (A/B)  Prevalence Index worksheet:	
6. 7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottil 2. Magnolia virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	0 0 0 28 = 1 10 7 1 0		0.0% 0.0% 0.0% <b>cal Cover</b> 5.3% 52.6% 36.8%	FACW FACW	That Are OBL, FACW, or FAC: 100.0% (A/B)  Prevalence Index worksheet:	
7. 8. 50% of Total Cover: 14 20% of Total Cover: 5.6 Sapling or Sapling/Shrub Stratum (Plot size: 30 m ) 1. Pinus elliottil 2. Magnolla virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	0 0 28 = 1 10 7 1 0		0.0% 0.0% <b>al Cover</b> 5.3% 52.6% 36.8%	FACW FACW	Total % Cover of: Multiply by:  OBL species 41 x 1 = 41  FACW species 54 x 2 = 108	
8. 50% of Total Cover: 14 20% of Total Cover: 5.6  Sapling or Sapling/Shrub Stratum (Plot size: 30 m )  1. Pinus elliottil  2. Magnolla virginiana  3. Nyssa biffora  4. Taxodlum ascendens  5. 6.  7.	0 28 = 1 10 7 1 0		0.0% <b>cal Cover</b> 5.3%  52.6%  36.8%	FACW FACW	Total % Cover of: Multiply by:  OBL species 41 x 1 = 41  FACW species 54 x 2 = 108	
50% of Total Cover: 14 20% of Total Cover: 5.6  Sapling or Sapling/Shrub Stratum (Plot size: 30 m )  1. Pinus elliottil  2. Magnolla virginiana  3. Nyssa biffora  4. Taxodlum ascendens  5. 6. 7.	28 = 1 10 7 1 0 0		5.3% 52.6% 36.8%	FACW FACW	OBL species 41 x 1 = 41  FACW species 54 x 2 = 108	
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)  1. Pinus elliottil  2. Magnolla virginiana  3. Nyssa biflora  4. Taxodium ascendens  5. 6. 7.	1 10 7 1 0		5.3% 52.6% 36.8%	FACW FACW	FACW species 54 x 2 = 108	
1. Pinus elliottil 2. Magnolla virginiana 3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	7 1 0 0		52.6% 36.8%	FACW		
2. Magnolia virginiana 3. Nyssa biffora 4. Taxodium ascendens 5. 6.	7 1 0 0		52.6% 36.8%	FACW	IEAC energies () v = ()	
3. Nyssa biflora 4. Taxodium ascendens 5. 6. 7.	7 1 0		36.8%			
4. Taxodium ascendens 5. 6.	0 0				FACU species $0 \times 4 = 0$	
5	0		5.3%	OBL	UPL species $\frac{2}{x}$ x 5 = $\frac{10}{x}$	
6	0	Ц_		OBL	Column Totals: 97 (A) 159 (B)	
7			0.0%		Prevalence Index = B/A = 1 639	
- 4	0	Ш.,	0.0%			
			C.0%		Hydrophytic Vegetation Indicators:	
8	0	Ш_	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 9.5 20% of Total Cover: 3.8	19 =	= Tota	al Cover		✓ 2 - Dominance Test is > 50%	
Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹	
	15	<b>V</b>	57.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
			38.5%	FACW		
3. Persea palustris			3.8%	FACW	¹ Indicators of hydric soil and wetland hydrology must	
		<u> </u>	0.0%	171011	be present, unless disturbed or problematic.	
5.	0		0.0%		Definition of Vegetation Strata:	
6.	0	۳.	0.0%	r	Tree - Woody plants, excluding woody vines,	
	-	Tota	al Cover		approximately 20 ft (6 m) or more in height and 3 in.	
2 22 104	20 -	· IOLE	al Corci		(7.6 cm) or larger in diameter at breast height (DBH).	
Herb Stratum (Plot size: 30 m		_			Sapling - Woody plants, excluding woody vines,	
		1000	31.8%	OBĹ	approximately 20 ft (6 m) or more in height and less	
T 1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			45.5%	OBL	than 3 in. (7.6 cm) DBH.	
	5	<b>~</b> _:	22.7%	OBL		
	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
5	0		0.0%			
	0	⊒	0.0%			
	0 [	4	0.0%			
	0 [		0.0%			
9		⊒	0.0%		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.	
10	0 [		0.0%			
l1	0		0.0%			
10	0		0.0%			
50% of Total Cover: 11 20% of Total Cover: 4.4 2	22 =	Tota	al Cover		Woody vine - All woody vines, regardless of height.	
Woody Vine Stratum (Plot size: 30 m						
	2 [	٦,	100.0%	FACW/		
	0		0.0%	i ACM		
	0 [		0.0%			
	0 F	_	0.0%			
1 · you		-	0.0%		Hydrophytic	
	0 L	Division			Vegetation Present?  Yes  No	
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	Tota	il Cover			
Remarks: (If observed, list morphological adaptations below).						

SOIL Sampling Point: Wet - 22 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) % Type Loc2 Texture Remarks Loamy Sand 0-4 10YR 100 3/1 4-16 10YR 3/2 90 10YR Loamy Sand 7/2 ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) ☐ Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) ☐ Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) ☐ Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Yes 

No **Hydric Soil Present?** Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 23
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): concave Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 25.915" N Long.: 89° 37' 21.222" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of year	
	A control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control of control o
	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sai	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes   No	To bba Compled Aven
Hydric Soil Present? Yes   No	Is the Sampled Area  Yes No
Wetland Hydrology Present? Yes  No	within a Wedand?
Remarks;	
Lower drain area approximately 50-50-feet east of Up-23	
tower aram area approximately 50 50 rect cast of op 25	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	
High Water Table (A2)  Marl Deposits (B15)	
Saturation (A3) Hydrogen Sulfide (	
	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduc	
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in R	_ ' ' '
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	Springfrum moss (bo) (Elect 17 6)
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
	Wetland Hydrology Present? Yes   No
(includes capillary fringe) Yes No Depth (inches):	· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	
Depletions observed in 4-16 inch interval. Some (very little) oxidized	root channels).
	ł

			ominant pecies? .		Sampling Point: Wet - 23
Tree Stratum (Plot size: 30 m )	Absolute	e R	el.Strat. Cover	Indicator Status	Dominance Test worksheet:
Too bell blank	-				Number of Dominant Species
Nyssa sylvatica	10	<b>V</b>	37.0%	FAC	That are OBL, FACW, or FAC: 10 (A)
Magnolia virginiana		V	55.6%	FACW	Total Number of Dominant
Liquidambar styraciflua	2		7.4%	FAC	Species Across All Strata: 10 (B)
	. 0		0.0%		Daniel of designat Cassian
	0 .	Щ	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
		$\sqcup$	0.0%		That is a second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second
	. 0	$\square$	0.0%	**************************************	Prevalence Index worksheet:
	.0		0.0%		Total % Cover of; Multiply by:
50% of Total Cover: 13.5 20% of Total Cover: 5.4	27	≃ To	tal Cove	г	OBL species 3 x 1 = 3
apling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species $67 \times 2 = 134$
Magnolia virginiana	15	<b>V</b>	41.7%	FACW	FAC species 32 x 3 = 96
Nyssa sylvatica	10	V	27.8%	FAC	FACU species $0 \times 4 = 0$
Pinus elliottii	X - X		2.8%	FACW	Trico openius
Cyrilla racemifiora			27.8%	FACW	
			0.0%	IACV	Column Totals: 102 (A) 233 (B)
		1			Prevalence Index = B/A = 2.284
		吕	0.0%	3/4-1	Hydrophytic Vegetation Indicators:
		끔	0.0%		,
TO THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF	0	Ш	0.0%	-	1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 18 20% of Total Cover: 7.2	. 36	= To	tal Cove	•	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m )					✓ 3 - Prevalence Index is ≤3.0 ¹
Cyrilla racemiflora	15	V	50.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Morella cerifera	40		33.3%	FAC	
Tless codeses	- 5		16.7%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
nex conacea		Ξ.	0.0%	TACW	be present, unless disturbed or problematic.
1 a	0				Definition of Vegetation Strate
	0	H	0.0%		Definition of Vegetation Strata:
	. 0	Ш,	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 15 20% of Total Cover: 6	30	= To	tal Cove		(7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m )					
, Helianthus angustifolius	3	V	37.5%	FACW	Sapling - Woody plants, excluding woody vines,
Eriocaulon decangulare	1		12.5%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Hypericum cistifolium		<b>V</b>	25.0%	FACW	, a.a., o, ( o, 22
Woodwardia areolata	2	<u></u>	25.0%	OBL	Sapling/Shrub - Woody plants, excluding vines, less
	0		0.0%	ODE	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	Π.		-	
		Η.	0.0%		Shrub - Woody plants, excluding woody vines,
Pro Marine Company Company Company		Η.			approximately 3 to 20 ft (1 to 6 m) in height.
No. of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the con	0	H	0.0%		Herb - All herbaceous (non-woody) plants, including
** *** *** *** *** *** *** *** *** ***		H	0.0%		herbaceous vines, regardless of size, and woody
C-1		$\square$	0.0%		plants, except woody vines, less than approximately
Q44.07	0,		0.0%		3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 4 20% of Total Cover: 1.6	8 :	= To	tal Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m					
Smilax laurifolia	1		100.0%	FACW	
Simox localions		Η"	0.0%	W	
		$\exists$		· · · · ·	
		$\exists$	0,0%		
	(1)	ш,	0.0%		Hydrophytic
•	0		_		
:0% of Total Cover: 0.5 20% of Total Cover: 0.2	0	$\square_{\cdot \cdot}$	0.0%		Vegetation Present? Yes  No

SOIL									Sam	pling Point: Wet - 23	Fiction -
Profile Descr	ription: (De:	scribe to	the depth	needed to	documer	nt the Indi	icator or c	onfirm the	absence of indicators	:-)	
Depth	400	Matrix			Re	edox Feat	tures		in se		
(inches)	Color (		<b>%</b>		(moist)	%	Type ¹		Texture	Remarks	
0-5	10YR	3/2	95	10YR	6/2	5	D	_ M	Loamy Sand		<b>.</b>
5-16	10YR	4/2	90	10YR	6/2	10	D	М	Loamy Sand	· · · · ·	
	C			0							
-			· · ·				. q:	A 400 MAY 10 1 -			
example 1	-				7				-		
	-	-		-				-	-		
	-			e .							
	t etten D	مناوات -	Dt4-Bod		Coun	1 - Cont	1210	21 og			
		=Depletio	n. RM=Keu	aced Matrix,	CS=Cover	ed or coate	ed Sano G	ains -Loca	ation: PL=Pore Lining. M		
Hydric Soil I  Histosol (/				□ pc	1 - Non De	Confine	(20) (10)			oblematic Hydric Soils ³ :	
	pedon (A2)						ce (S8) (LRR		1 cm Muck (A9		
Black Histi							(LRR S, T,		2 cm Muck (A1	• • •	
	tic (A3) 1 Sulfide (A4)						(F1) (LRR 0)	)	_	c (F18) (outside MLRA 150A,B)	
	Layers (A5)					ed Matrix (F	<i>;</i> -2)			dplain Soils (F19) (LRR P, S, T)	•
		22 D T /	· n		epleted Mat					ght Loamy Soils (F20) (MLRA 1	.53B)
	Bodies (A6) (Li Sky Mineral (A		•			Surface (F6	-		Red Parent Ma	` '	
	cky Mineral (A. seace (AR) (LE		, 1, 0)		•	ırk Surface (			_ `	Dark Surface (TF12)	
	sence (A8) (LF -k (A9) (LDD D	-		_	•	essions (F8)	)		Other (Explain	in Remarks)	
l —	:k (A9) (LRR P Below Dark Si		443	_	ari (F10) (L		2224454				
· ·	Below Dark Si k Surface (A1:		11)		•		(MLRA 151)	-			
	irie Redox (A1	-	* 1504)		_		es (F12) (LR				
_	-		-				(LRR P, T, U)	)			
_	ıck Mineral (S: eyed Matrix (S		, 5)			(F17) (MLR		1500)	³ Indicato	ors of hydrophytic vegetation as	nd
Sandy Gle		<del>/1</del> )		_			MLRA 150A,		wetian	nd hydrology must be present,	-
	oox (S5) Matrix (S6)					•	oils (F19) (M	•		ess disturbed or problematic.	
	Matrix (S6) ace (S7) (LRR	10 G T.1	r IX	∟J Anu	omaious o	right Loam	ıy Solis (r∠ı	J) (MLKA 14	49A, 153C, 153D)		
L Daik Suite	3CE (37) (Live	(P, 5, 1, .	J)								
Restrictive La	ayer (if obse	arved):						!			
Type:								!	To the Cilibration		
Depth (inch	nes):			1.1.					Hydric Soil Present	? Yes <b>® N</b> o ○	
Remarks:											

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 25
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): none Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 38.761" N Long.: 89° 37' 32.356" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	
Are climatic/hydrologic conditions on the site typical for this time of year	y 0 0
	itly disturbed? Are "Normal Circumstances" present? Yes No O
	problematic? (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 No No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No No Remarks:  drainage slough approximately 250 feet south of Turtleskin Creek as	Is the Sampled Area within a Wetland? Yes No Caccess road. This is a south to north drainage feature feeding TS creek.
HYDROLOGY	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of 2 required)  Surface Soil Cracks (B6)
□ Surface Water (A1)         □ Aquatic Fauna (B1           □ High Water Table (A2)         □ Mar! Deposits (B1           □ Saturation (A3)         □ Hydrogen Sulfide	Sparsely Vegetated Concave Surface (B8)  15) (LRR U)  Drainage Patterns (B10)
Sediment Deposits (B2)	
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface	
Iron Deposits (B5) Other (Explain in F 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?  Water Table Present?  Yes No Depth (inches):  Ves No Depth (inches):  Saturation Present?  Yes No Depth (inches):  Depth (inches):	Wetland Hydrology Present? Yes  No O
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	

Tree Stratum (Plot size: 30 m	Absolute % Cover		Indicator Status	Dominance Test worksheet:
				Number of Dominant Species
1 Pinus elliottii	p	83.3%		That are OBL, FACW, or FAC: 7 (A)
2. Magnolia virginiana	1	16.7%	FACW	Total Number of Dominant
3.	0	0.0%		Species Across All Strata: 7 (B)
4	0	0.0%		Percent of deminant Species
5		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6	0	0.0%		That is a supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supplied to the supp
7.	0	0.0%		Prevalence Index worksheet:
8	, _0	0.0%		Total % Cover of: Multiply by
50% of Total Cover: 3 20% of Total Cover: 1.2	6 =	= Total Cov	er	OBL species 8 x 1 = 8
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1			FACW species 90 x 2 = 180
1. Pinus elliottii	15	€ 60.0%	FACW	FAC species $3 \times 3 = 9$
2. Magnolla virginiana		<b>✓</b> 40.0%	FACW	FACU species $0 \times 4 = 0$
3.	-	0.0%	7	
		0.0%		
4 5.	0	0.0%		Column Totals: 101 (A) 197 (B)
	0	0.0%		Prevalence Index = B/A = 1.950
6.				Hydrophytic Vegetation Indicators:
7.	0	0.0%	-	lles and session conseques
8	0	□ 0.0%	· · · · · · · · · · · · · · · · · · ·	✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 12.5 20% of Total Cover: 5	25 =	= Total Cove	er	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m. )				✓ 3 - Prevalence Index is ≤3.0 ¹
1 Magnolia virginiana	30	✓ 69.8%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex corlacea		<b>✓</b> 23.3%	and the property of the same of	
3. Liquidambar styraciflua	2	4.7%	FAC	¹ Indicators of hydric soil and wetland hydrology must
4 4		2,3%	FAC	be present, unless disturbed or problematic.
			TAC.	Definition of Vegetation Strata:
5		0.0%	- 45	_
6	0	□ 0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 21.5 20% of Total Cover: 8.6	43 =	Total Cove	er .	(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m				
1. Arundinaria tecta	15	60.0%	FACW	Sapling - Woody plants, excluding woody vines,
2. Scirpus atrocinctus		8.0%	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3, Woodwardia areolata		20.0%	OBL	tian o in. (7.0 cm) DBM.
4. Osmunda regalis	1	4.0%	OBL	Sapling/Shrub - Woody plants, excluding vines, less
5. Juncus polycephalos	2			than 3 in. DBH and greater than 3.28 ft (1m) tall.
6.		8.0%	OBL	
T 1/	0	0.0%		Shrub - Woody plants, excluding woody vines,
7	0	0.0%	·	approximately 3 to 20 ft (1 to 6 m) in height.
8		0.0%	m p = 0 m	Herb - All herbaceous (non-woody) plants, including
9	0	0.0%		herbaceous vines, regardless of size, and woody
10	0	0.0%		plants, except woody vines, less than approximately
11	0	0.0%		3 ft (1 m) in height.
12	0	0.0%		
50% of Total Cover: 12.5 20% of Total Cover: 5	25 =	Total Cove	r	Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m )				
1 Smilax laurifolia	- I	100.004	EACW.	
	2 l		FACW	
2	г	0.0%		
3		0.0%		
1		0.0%_	, ri maser	Hudranintic
5	0 _	0.0%		Hydrophytic Vegetation
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	<b>Total Cove</b>	r	Present? Yes No O
	***		i	
Remarks: (If observed, list morphological adaptations below).				

SOIL									Sam	pling Point: y	Vet - 25
Profile Descr	ription: (De	scribe to	the depth	needed to	documen	t the inc	licator or c	onfirm the	absence of indicators	i.)	
Depth		Matrix			Re	edox Fea					
(inches)	Color	moist)_	%	Color	(moist)	9/n	, Type ¹	Loc2	Texture	Rema	ırks
0-4	10YR	3/2	97	10YR	7/2	3	D	M	Loamy Sand		
4-16	10YR	4/2	95	10YR	7/2	5	D	М	Loamy Sand		
								<b>4</b>	· · · · · · · · · · · · · · · · · · ·		
		130	fe								
			_,	м	-	-	Bac . v	-	*		
			<b></b>								
										•	
Type: C=Cond	centration. D	=Depletio	n. RM= <b>Red</b> u	ced Matrix,	CS=Cover	ed or Coa	ited Sand Gr	ains ² Locat	tion: PL=Pore Lining, M	=Matrix	`
Hydric Soil I	ndicators:								Indicators for Pro	oblematic Hydric	Soils ³ :
Histosol (A	•			☐ Pol	yvalue Bel	low Surfa	ce (S8) (LRR	S, T, U)	1 cm Muck (A9	-	
	edon (A2)			☐ Thi	n Dark Su	rface (S9)	(LRR S, T,	U)	2 cm Muck (A1		
Black Histi				Loa	my Mucky	/ Mineral	(F1) (LRR 0)	)	<del></del>	: (F18) (outside MI	LRA 150A.B)
	Sulfide (A4)			Loa	ımy Gleye	d Matrix (	F2)			dplain Soils (F19) (	
Stratified L	_ayers (A5)			De _l	oleted Mat	nix (F3)				ght Loamy Soils (F.	
	odies (A6) (Li		•	Red	lox Dark S	Surface (F	6)		Red Parent Ma		20) (112141 1535)
5 cm Muck	cy Mineral (A	7) (LRR P,	, T, U)	☐ Dep	oleted Dari	k Surface	(F7)			ark Surface (TF12)	١
Muck Prese	ence (A8) (Li	RR U)		☐ Red	lox Depres	ssions (F8	3)		Other (Explain	•	,
1 cm Muck	( (A9) (LRR P	, T)		Mai	1 (F10) (LI	RR U)				iii Reiliaiks)	
Depleted B	Below Dark Si	urface (A1	11)				(MLRA 151)				
Thick Dark	Surface (A1	2)		☐ Iron	1-Mangane	ese Masse	s (F12) (LRI	R O, P, T)			
Coast Prair	rie Redox (A1	.6) (MLRA	\ 150A)				LRR P, T, U)				
Sandy Muc	k Mineral (\$1	l) (LRR O,	, S)		ta Ochric (				_		
Sandy Gley	ed Matrix (S	4)					MLRA 150A,	150B)	³ Indicato	rs of hydrophytic v	egetation and
Sandy Red	ox (S5)						oiis (F19) (M			d hydrology must l ss disturbed or pro	
Stripped M	atrix (S6)					-			A, 153C, 153D)		
Dark Surfac	ce (S7) (LRR	P, S, T, U	J)			_	. `				
lestrictive La	yer (if obse	rved):		•		•					
Туре:											
Depth (inche	es):								Hydric Soil Present?	? Yes 💿	No O
Remarks:									<del></del>		
Carron Car											

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hand			
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 26		
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range:	<b>5</b> 29 <b>T</b> 7s <b>R</b> 16 W		
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex,	none): flat Slope: 0.0 % / 0.0 °		
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 34.974" N Lor	ng.: 89° 37′ 44.173" W Datum: NAD83		
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes		NWI classification: PFO 1/4 C		
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 💿 No 🔾	(If no, explain in Remarks.)		
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 significan	tly disturbed? Are "Norm	al 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 sa	impling point locations,	transects, important features, etc.		
Hydrophytic Vegetation Present? Yes  No O	To the Conveled Aven			
Hydric Soil Present? Yes  No  No	Is the Sampled Area	Yes   No		
Wetland Hydrology Present? Yes  No  No	within a Wetland?	res 9 NO 0		
Remarks: Lower end of drain approximately 300 to 400 feet East of Railspur i	n Northern part of AOI.			
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)		
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)		
Surface Water (A1) Aquatic Fauna (B	•	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)		✓ Drainage Patterns (B10)  Magn Trim Lines (B16)		
	heres along Living Roots (C3)			
Sediment Deposits (B2)  Presence of Redu		Crayfish Burrows (C8)		
	action in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Thin Muck Surface		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 O No Depth (Inches):		0 0		
Saturation Present?  (includes capillary frince)  Yes No Depth (inches):	Wetland Hy	drology Present? Yes 💿 No 🔾		
Describe Recorded Data (stream gauge, monitoring well, aerial phot		allahler		
Describe Recorded Data (stream gauge, monitoring well, aeriai prioc	os, previous inspections), ii avi	aliable,		
Remarks:				

Tree Stratum (Plot size: 30 m )	Absolute % Cover	R	pecies? . el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii	5	<b>V</b>		073/4-7	Number of Dominant Species
***	-		22.7%	FACW	That are OBL, FACW, or FAC: 8 (A)
2. Magnolia virginiana	10		45.5%	FACW	Total Number of Dominant
3. Liriodendron tulipifera	2		9.1%	FACU	Species Across All Strata: 8 (B)
4 Nyssa sylvatica	, 5	<b>Y</b>	22.7%	FAC	B
5	0	$\square$	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6.	0		0.0%	114.	That Are Obl., FACW, OF FAC.
7.	0		0.0%		Prevalence Index worksheet:
8	D		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 11 20% of Total Cover: 4.4	22	= Tc	tal Cove		OBL species 3 x 1 = 3
Sapling or Sapling/Shrub Stratum (Plot size: 30 m.					FACW species 65 x 2 = 130
		<b>V</b>	FO 00/	FAC	
1 Nyssa sylvatica	10	=	50.0%		
2. Magnolia virginiana	1.00	~	25.0%	FACW	FACU species $\frac{2}{3} \times 4 = \frac{8}{3}$
3. Pinus efliottii		님	10.0%	FACW	UPL species $0 \times 5 = 0$
4.	3	$\sqsubseteq$	15.0%		Column Totals: 91 (A) 204 (B)
5	0	Ш	0.0%		Browniance Index - R/A - 3 242
6.	0		0.0%		Prevalence Index = B/A = 2.242
7.	0		0.0%		Hydrophytic Vegetation Indicators:
8.	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 10 20% of Total Cover: 4	20 :	= To	tal Cove		
					✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m )		_			✓ 3 - Prevalence Index is ≤3.0 ¹
1 Ilex corlacea	20		55.6%	FACW	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
2. Cyrilla racemiflora	10	◩.	27.8%	FACW	
3. Ilex vomitoria	1	$\square_{\underline{A}}$	2.8%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Ilex opaca	5		13.9%	FAC	be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 18 20% of Total Cover: 7.2		= To	tal Cove		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m					, ,
	10	<b>✓</b>	71.4%	FACW	Sapling - Woody plants, excluding woody vines,
0.0			14.3%	OBL	approximately 20 ft (6 m) or more in height and less
0.01		Η.			than 3 in. (7.6 cm) DBH.
3. Scirpus atrocinctus		۲.	7.1%	FACW	Sauline (Shark Mandy alasta avaluding vince loss
4. Woodwardia virginica	_ 1	Ų.	7.1%	OBL	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3,28 ft (1m) tall.
5	0	∟ِ	0.0%		man o m. por man grouter than o.co m ( m., tam
6	0		0.0%		Shrub - Woody plants, excluding woody vines,
7	0_		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8.	0		0.0%		
9.,	0		0.0%		Herb - All herbaceous (non-woody) plants, including
10,	0		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
11.	0	$\Box$	0.0%		3 ft (1 m) in height.
12.	0	_ 	0.0%	· £ 1#	
	-	ر درجو	tal Cover		Woody vine - All woody vines, regardless of height.
	14 =	- 10	Lai Cover		, , , , , , , , , , , , , , , , , , , ,
Woody Vine Stratum (Plot size: 30 m					
1 Smilax laurifolia	2		100.0%	FACW	
2.	0		0.0%		
3.	0		0.0%	-	
4.	0		0.0%		
5	0	$\Box$	0.0%		Hydrophytic
		—. -			Vegetation Present?  Yes  No  No
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	= Tol	tal Cover		Liebelle: 188 - 118 -
50% of Total Cover: 1 20% of Total Cover: 0.4  Remarks: (If observed, list morphological adaptations below).	2 =	= Tof	tal Cover		Present? Yes ♥ No ○

_	_	- 1	

Color ( 10YR 10YR	Matrix moist) 5/2 6/2	<b>%</b> 100	Color (mo		lox Featu %	res 1			
10YR	5/2		Color (mo	oist)	0/n				
		100				Type ¹	Loc2	Texture	Remarks
10YR	6/2							Loamy Sand	ac 121
	- 0/2	95	10YR	7/2	5	D	М	Loamy Sand	
						- m Vox		· American III.	
						=			
ntration. D	=Depletio	n. R <b>M≕Re</b> di		 Covere	f or Coate	 d Sand Gra	ins 2loca	tion: Pl=Pore Lining. M=	Matrix
dicators:									blematic Hydric Soils ³ :
don (A2) (A3) ulfide (A4) yers (A5) lies (A6) (L Mineral (A nce (A8) (L (A9) (LRR R low Dark S Surface (A1 & Redox (A Mineral (S	7) (LRR P RR U) P, T) Surface (A: 2) 16) (MLR ^A 1) (LRR O	, T, U) 11) A 150A)	Thin D Loamy Loamy Deplete Redox Deplete Redox Deplete Iron-M Umbric Redox	ark Surf Mucky Gleyed ed Matri Dark Su ed Dark Depress (10) (LR ed Ochr anganes (Surface Ochric (Fed Vertic	ace (S9) (I Mineral (F. Matrix (F2 x (F3) urface (F6) Surface (F6) Surface (F8) R U) uc (F11) (M se Masses e (F13) (LF (17) (MLRA c (F18) (MI	LRR S, T, L 1) (LRR O) 1) (F7) (F12) (LRR RR P, T, U) A 151) LRA 150A,	(O, P, ⊤) 1508)	Piedmont Flood Anomalous Brigi Red Parent Mate Very Shallow Da Other (Explain in	o) (LRR S) (F18) (outside MLRA 150A,B) plain Soils (F19) (LRR P, S, T) ht Loamy Soils (F20) (MLRA 153B) erial (TF2) ark Surface (TF12)
e (S7) (LRF		) (r	Anoma	ious Bri	gnt Loamy	Soils (F20)	) (MLRA 14	94, 153C, 153U)  Hydric Soil Present?	Yes   ● No ○
5):					-			Tryana don't repond	163 0 110 0
	Ilicators: ) don (A2) (A3) ulfide (A4) yers (A5) lies (A6) (L Mineral (A nce (A8) (L CA9) (LRR F low Dark S Gurface (A1 e Redox (A Mineral (S od Matrix (S ox (S5) trix (S6) e (S7) (LRR	dicators: ) don (A2) (A3) ulfide (A4) yers (A5) lies (A6) (LRR P, T, L Mineral (A7) (LRR P nce (A8) (LRR U) (A9) (LRR P, T) low Dark Surface (A: Surface (A12) e Redox (A16) (MLRA Mineral (S1) (LRR O dd Matrix (S4) x (S5) trix (S6) e (S7) (LRR P, S, T, L er (if observed):	dicators: ) don (A2) (A3) uifide (A4) yers (A5) lies (A6) (LRR P, T, U) Mineral (A7) (LRR P, T, U) nce (A8) (LRR U) (A9) (LRR P, T) low Dark Surface (A11) Surface (A12) Redox (A16) (MLRA 150A) Mineral (S1) (LRR O, S) di Matrix (S4) x (S5) Ltix (S6) e (S7) (LRR P, S, T, U)  er (if observed):	Polyva	Polyvalue Belo   Con (A2)   Thin Dark Surf (A3)   Loamy Mucky   Loamy Mucky   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   Loamy Gleyed   L	Polyvalue Below Surface (S9) (In Case)   Polyvalue Below Surface (S9) (In Case)   Thin Dark Surface (S9) (In Case)   Loamy Mucky Mineral (Fase)   Loamy Mucky Mineral (Fase)   Loamy Gleyed Matrix (F3)   Polyted Matrix (F3)   Polyted Matrix (F3)   Polyted Matrix (F3)   Polyted Matrix (F3)   Polyted Dark Surface (F6)   Polyted Dark Surface (F6)   Polyted Dark Surface (F8)   Polyted Dark Surface (F8)   Polyted Dark Surface (F8)   Polyted Dark Surface (F8)   Polyted Dark Surface (F8)   Polyted Dark Surface (F8)   Polyted Dark Surface (F8)   Polyted Dark Surface (F11) (Matrix (F11) (Matrix (F11) (Matrix (F11) (Matrix (F12) (Matrix (F13) (Matrix (F13) (Matrix (F13) (Matrix (F14) (Matrix (F14) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix (F15) (Matrix 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Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 19-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 27
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 1.0 % / 0.6°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 26.188" N Long.: 89° 37' 37.076" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th
Are climatic/hydrologic conditions on the site typical for this time of yer	
	tly disturbed? Are "Normal Circumstances" present? Yes  No O
	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No O	
Hydric Soil Present? Yes  No O	Is the Sampled Area  Yes  No  No
Wetland Hydrology Present? Yes  No	within a Wetland? Yes © NO C
Remarks:	
Head of drainage feature about 50 feet west - northwest of Up-27.	
Treat of dialitings relative about 50 feet west more west of 50 27.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Mari Deposits (B1	5) (LRR U)
Saturation (A3) Hydrogen Sulfide	Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Cxidized Rhizosph	neres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4)
Drift Deposits (B3)	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
☐ Iron Deposits (B5) ☐ Other (Explain in F	
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 O No O Depth (inches):	
Saturation Present?  (Includes confilms frings)  Yes No Depth (inches):	Wetland Hydrology Present? Yes ◎ No ○
(Includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo	
beschibe Recorded Data (Stream gauge, monitoring well, acrial prior	ss, previous inspections), in available.
Remarks:	
Fairly dry soil conditions given time of year. No strong redoximorphic	c features noted in soil profile, but surface hydrological indicators are present.
İ	

(Diet size) 20 1	Absolute	Rel.Stra		Dominance Test worksheet:
	% Cover		- A:	Number of Dominant Species
Magnolla virginiana Nyssa sylvatica	10	40.0		That are OBL, FACW, or FAC: 9 (A)
Nyssa sylvatica	10	40.0		Total Number of Dominant
Pinus elliottii	5	20.0		Species Across All Strata: 9 (B)
Li-	0_	0.09		December of development Consider
	<u>o</u>	0.09		Percent of dominant Species That Are OBL, FACW, or FAC: 100,0% (A/B)
		0.09	6	Tridefile OBL, Tricti, of Tric.
	. 0	0.09	<u> </u>	Prevalence Index worksheet:
	0	0.09	<b>6</b>	Total % Cover of: Multiply by:
0% of Total Cover: 12.5 20% of Total Cover: 5	25	= Total Co	ver	OBL species 2 x 1 = 2
pling or Sapling/Shrub Stratum (Plot size: 30 m.,	)			FACW species $101 \times 2 = 202$
Magnolia virginiana	15	₹ 46.9	% FACW	FAC species $19 \times 3 = 57$
Cyrilla racemiflora	10	31.3	% FACW	FACU species $0 \times 4 = 0$
Nyssa sylvatica		15.6	% FAC	UPL species $0 \times 5 = 0$
Ager rubrum	2	6.39		-
	0	0.09		Column Totals: 122 (A) 261 (B)
	^	0.09		Prevalence Index = B/A = 2.139
	0	0.09		Hydrophytic Vegetation Indicators:
• *	0	0.09		
		-		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 16 20% of Total Cover: 6.4	32	= Total Co	ver	☑ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m				3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	30	52.69	% FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilia racemifiora	_ 15	<b>✓</b> 26.3°	% FACW	
Magnolia virginiana	10	17.59	% FACW	¹ Indicators of hydric soil and wetland hydrology must
Ilex opaca	2	3.5%	6 FAC	be present, unless disturbed or problematic.
		0.09	6	Definition of Vegetation Strata:
	0	0.09		Tree - Woody plants, excluding woody vines,
erb Stratum (Plot size: 30 m ) Arundinaria tecta Woodwardia areolata	5_2	✓ 71.4° ✓ 28.6°		(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.
	0	0.0%	6	
	0	0.09	ó	Sapling/Shrub - Woody plants, excluding vines, less
		0.09	6	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	0.0%	6	Shrub - Woody plants, excluding woody vines,
A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA	0	0.09	6	approximately 3 to 20 ft (1 to 6 m) in height.
		0.0%	o	
	0	0.0%	6	Herb - All herbaceous (non-woody) plants, including
	0	0.0%	, 0	herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
	0	0.0%	0	3 ft (1 m) in height,
	0	0.0%	,	
0% of Total Cover: 3.5 20% of Total Cover: 1.4		= Total Co		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m )				
Smilax laurifolia	1	100.0	% FACW	
or mak nativona	0	0.0%	w w	
	0	0.0%		
		0.0%	10-A	
	0			Hydrophytic
	. 0	0.0%		Vegetation Present? Yes  No  No
0% of Total Cover: 0.5 20% of Total Cover: 0.2		= Total Co		

Profile Descr	iption: (De	scribe to	the depth	needed to documen	t the indi	cator or co	nfirm the	absence of indicators.)	
Depth		Matrix			dox Feat	ures			
(inches)		moist)_	%_	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
0-5	10YR	5/1	100	4 5 M				Loamy Sand	
5-16	10YR	. , 5/2	95	10YR 7/2	5	C	M	Loamy Sand	
¹Type: C=Cond	centration. D	=Depletio	n. RM= <b>R</b> edu	iced Matrix, CS=Cover	ed or Coate	ed Sand Gra	ins ² Loca	ition: PL≕Pore Lining. M⇒N	natrix
Hydric Soil I								Indicators for Probl	lematic Hydric Soils ³ :
Black Histi Hydrogen Stratified ! Organic Bo 5 cm Mucl Muck Pres 1 cm Mucl Depleted B Thick Dark Coast Prai Sandy Muc Sandy Gle Sandy Rec Stripped M	pedon (A2) ic (A3) Sulfide (A4) Layers (A5) odies (A6) (L ky Mineral (A ence (A8) (L k (A9) (LRR I Below Dark S k Surface (A) rie Redox (A ck Mineral (S yyed Matrix (S	RR P, T, U 17) (LRR P RR U) P, T) Surface (A: 12) 16) (MLRA 51) (LRR O	, T, U) 11) A 150A) , S)	Polyvalue Bel Thin Dark Sur Loamy Mucky Loamy Gleyer Depleted Mat Redox Dark S Depleted Dar Redox Depre: Marl (F10) (L Depleted Och Iron-Mangane Umbric Surfar Delta Ochric ( Reduced Vert Piedmont Flor Anomalous Bi	rface (S9) (  Mineral (F  Mineral (F  Matrix (F3)  Mineral (F6)  K Surface (F6)  K Surface (F8)  KR U)  Mic (F11) (I)  Mic (F13) (L  Mic (F18) (MLR  Mic (F18) (Modplain Sol	(LRR S, T, U F1) (LRR O) 2) ) F7) MLRA 151) 6 (F12) (LRR RR P, T, U) 14 151) MLRA 150A, Is (F19) (ML	150B) RA 149A)	Piedmont Floodpl Anomalous Bright Red Parent Mater Very Shallow Darl Other (Explain in	(LRR S)  18) (outside MLRA 150A,B)  ain Soils (F19) (LRR P, S, T)  Loamy Soils (F20) (MLRA 153B)  ial (TF2)  k Surface (TF12)
Restrictive La	yer (if obs	erved):				<u> </u>	Ï		
Type:			-					Hydric Soil Present?	Yes   No
Depth (inch Remarks:	nes):								100

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hand	cock Sampling Date: 21-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 29
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: 9	5 31 T 7s R 16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex,	none): none
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 23.925" N Lor	ng.: 89° 37' 49.957" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded		NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of year		(If no, explain in Remarks.)
		al Circumstances" present? Yes   No
		explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No O	Is the Sampled Area	-
Hydric Soil Present? Yes   No		Yes   No
Wetland Hydrology Present? Yes ● No ○	within a Wetland?	
Remarks:		· · · · · · · · · · · · · · · · · · ·
Lower bottom area just up from UP - 20 approximately 50 feet.		
20 approximatory of room		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Fauna (B1	3)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B19)	5) (LRR U)	✓ Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide (	• •	Moss Trim Lines (B16)
	eres along Living Roots (C3)	Dry Season Water Table (C2)
Sediment Deposits (B2)	• •	Crayfish Burrows (C8)
	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	, ,	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F☐ Inundation Visible on Aerial Imagery (B7)	(emarks)	☐ Shallow Aquitard (D3)  ✓ FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)
· · · · · · · · · · · · · · · · · · ·		Spriagrium moss (D8) (LRR 1, 0)
Field Observations:  Surface Water Present?  Yes No Depth (inches):		
Salidad Material Control		
	Wetland Hy	drology Present? Yes 💿 No 🔾
Saturation Present? (Includes capillary fringe)  Yes No Depth (Inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if ava	ailable:
		İ
Remarks:		
Lower area within a drain with plenty of secondary hydrological indic	ators.	
		İ
I		l

Tree Stratum (Plot size: 30 m )	Absolute	R	pecies? . el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii				•	Number of Dominant Species
1			11.1%	FACW	That are OBL, FACW, or FAC: 9 (A)
2. Magnolia virginlana	10	<b>V</b>	55.6%	FACW	Total Number of Dominant
3. Acer rubrum	5	V	27,8%	FAC	Species Across All Strata: 9 (B)
4. Nyssa bifiora			5.6%	OBL	Dougant of douglocat Consist
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6	0	Ш	0.0%		That Are obt., TACW, of TAC.
7.	0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 9 20% of Total Cover: 3.6	18	= To	otal Cove	r	OBL species 13 x 1 = 13
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species $55 \times 2 = 110$
4 Magnelia virginiana	-		18.5%	FACW	FAC species $15 \times 3 = 45$
O Samu mahamana	10	$\mathbf{V}$	37.0%	FAC	
0 0 11 15			37.0%	FACW	
4 Bhasa Million				44.1 <b>4</b> 17	UPL species $0 \times 5 = 0$
4 Nyssa biflora			7.4%	OBL	Column Totals: 83 (A) 168 (B)
5.	0	님	0.0%	-	Prevalence Index = B/A = 2.024
6	0		0.0%	-	, , , , , , , , , , , , , , , , , , , ,
1	0		0.0%		Hydrophytic Vegetation Indicators:
8.		Ш,	0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 13.5 20% of Total Cover: 5.4	27 :	= To	otal Cove	r	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m )					✓ 3 - Prevalence Index is ≤3.0 ¹
1 Magnolia virginiana	5	V	20.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
11 . T. M. MAN, T. M. W.	10	V	40.0%	FACW	L Problematic rightophytic regeration - (Explain)
A	-		40.0%		¹ Indicators of hydric soil and wetland hydrology must
3. Ilex corlacea		<b>X</b>	****	FACW	be present, unless disturbed or problematic.
4.		H	0.0%		Definition of Variation Strate.
5	0	H	0.0%	· (%).	Definition of Vegetation Strata:
6	0	Ш,	0.0%	ar	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 12.5 20% of Total Cover: 5	25	= To	otal Cove	г	(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m )					
1. Woodwardia areolata	5	V	41.7%	OBL	Sapling - Woody plants, excluding woody vines
2. Osmunda regalis	_	<u>_</u>	25.0%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3. Arundinaria tecta	2		16.7%	FACW	than 5 m. (7.6 am) BBH.
A Bit I at the second second		П	16.7%	OBL	Sapling/Shrub - Woody plants, excluding vines, less
	0	H	0.0%	UBL	than 3 in. DBH and greater than 3.28 ft (1m) tall.
5		Η,			
6	. 0	Η.	0.0%		Shrub - Woody plants, excluding woody vines,
7		片.	0.0%	,,	approximately 3 to 20 ft (1 to 6 m) in height.
8	_ 0	片	0.0%		Herb - All herbaceous (non-woody) plants, including
9	0	닏	0.0%		herbaceous vines, regardless of size, and woody
10		Ц.	0.0%		plants, except woody vines, less than approximately
11	0	Щ	0.0%	<b>,</b>	3 ft (1 m) in height.
12	0		0.0%		
50% of Total Cover: 6 20% of Total Cover: 2.4	12 =	= To	tal Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m					
1. Smilax laurifolia	1		100.0%	EACA!	
		۳.		I ACVV	
2	-		0.0%		
3		님	0.0%		
4.			0.0%		Hydrophytic
5	0	Ц.	0.0%		Vegetation Var (a) No (b)
50% of Total Cover: 0.5 20% of Total Cover: 0.2	1 =	То	<b>tal Cove</b> r		Present? Yes  No
Remarks: (If observed, list morphological adaptations below).					
- (- ++++ marking gradies additional policy)					
*Indicator suffix = National status or professional decision assigned because Re	gional status r	ot de	efined by FV	vs.	

rı	

	.heioir (DE		are acput					,, UIÇ	absence of indicators.)	
Depth (inches)	Caland	Matrix	0/	Colon (one		edox Featu %	res Type 1	1 2	Texture	Remarks
(inches) 0-4	10YR	'moist) 3/2	<b>%</b> 95	Color (mo	7/2	5	D	Loc ² _	Loamy Sand	Remarks
									••	
4-16	10YR	4/2	90	10YR	7/2	10	D	М	Loamy Sand	
								_	passar la	-
										<i>y</i>
	centration. D Indicators:	=Depletio	n. RM=Redu	iced Matrix, CS=	-Covere	ed or Coate	ed Sand Gra	ains ² Loca	tion: PL=Pore Lining. M=	Matrix lematic Hydric Soils ³ :
Black Hist Hydrogen Stratified	pedon (A2) ic (A3) Sulfide (A4) Layers (A5)			☐ Thin D☐ Loamy☐ Loamy☐ Deplet	ark Sui Mucky Gleyed ed Mat	low Surface rface (S9) ( y Mineral (F d Matrix (F2 rix (F3)	(LRR S, T, U (1) (LRR O) (2)	J)	Piedmont Floodp	
5 cm Muc	odies (A6) (L ky Mineral (A sence (A8) (L	7) (LRR P	-	Deplet	ed Darl	Surface (F6) k Surface (1 ssions (F8)			Red Parent Mate Very Shallow Dar Other (Explain in	k Surface (TF12)
1 cm Muc Depleted Thick Dar Coast Pra	k (A9) (LRR I Below Dark S k Surface (A1 irie Redox (A ck Mineral (S	P, T) Surface (A: .2) 16) (MLRA	150A)	☐ Marl (F☐ Deplet)☐ Iron-M☐ Umbric	10) (Li ed Och langane Surfac	RR U) nric (F11) (M ese Masses ce (F13) (Li	(F12) (LRI RR P, T, U)		L Joues (Expension	Notified that
Sandy Gle Sandy Red Stripped N	yed Matrix (S dox (S5)	54)		Reduce	ed Vert	(F17) (MLR) ic (F18) (M odplain Soil right Loamy	LRA 150A, s (F19) (M	LRA 149A)	wetland	of hydrophytic vegetation and hydrology must be present, a disturbed or problematic.
strictive L	yer (if obse	erved):								
Type:	vae).					-			Hydric Soil Present?	Yes   ● No □
Depth (inclemarks:	ies):				., .					
letions thr	oughout so	il profile.								

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - H		
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 30	l
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range	e: 5 31 T7s R	16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, conve	ex, none): none Slope:	0.0 % / 0.0°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 20.526" N	Long.: 89° 37' 41.438" W	Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	J W	NWI classification: PFO 1	1/4 C
Are climatic/hydrologic conditions on the site typical for this time of ye		_	
		(21 112) 234214111111111111111111111111111111111	s   No
		indi on cambanaco present.	
Are Vegetation, Soil, or Hydrology naturally   SUMMARY OF FINDINGS - Attach site map showing sa	•	led, explain any answers in Remarks.)	
	Inipinig point locations		
Hydrophytic Vegetation Present? Yes   ● No ○	Is the Sampled Are	ea	
Hydric Soil Present? Yes   No	within a Wetland?	Yes  No	
Wetland Hydrology Present? Yes ● No ○	WILLIAM AACTONIA		
Remarks:			
Lower portion of riparian flood zone within 100 feet north of Turtle	skin Creek.		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2	2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1) Aquatic Fauna (B	13)	Sparsely Vegetated Concave Su	rface (B8)
High Water Table (A2) Marl Deposits (B1	.5) (LRR U)	✓ Drainage Patterns (B10)	
Saturation (A3) Hydrogen Sulfide		Moss Trim Lines (B16)	
	heres along Living Roots (C3)	Dry Season Water Table (C2)	
Sediment Deposits (B2)		✓ Crayfish Burrows (C8)	
	uction in Tilled Soils (C6)	Saturation Visible on Aerial Imag	gery (C9)
☐ Algal Mat or Crust (84) ☐ Thin Muck Surfac		✓ Geomorphic Position (D2)	
Iron Deposits (B5) Other (Explain in	Remarks)		
☐ Inundation Visible on Aerial Imagery (B7)  ✓ Water-Stained Leaves (B9)			IN.
		Sphagnum moss (D8) (LRR T, U	"
Field Observations:  Surface Water Present? Yes No Depth (Inches):			
Salidad Vales Freedom	-		
Water Table Present? Yes O No O Depth (inches):	Wetland	Hydrology Present? Yes ● No	o
Saturation Present? Yes No Depth (inches):		,	
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if	available:	
Remarks:		<del></del> -	
Komano.			
			1

_	ee Stratum (Plot size: 30 m)	Absolute % Cover		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
. Ir. 1.	Pinus eliottii	% Cover		13.3%	FACW	Number of Dominant Species
2.	Nyssa biflora	8		53.3%	OBL	That are OBL, FACW, or FAC: 8 (A)
3.	Magnolia virginiana	5		33.3%	FACW	Total Number of Dominant
,. ŀ.		0		0.0%	171019	Species Across All Strata: 8 (B)
			H	0.0%		Percent of dominant Species
			H	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
-		0	H	0.0%		Prevalence Index worksheet:
			H	0.0%		
						Total % Cover of: Multiply by:
	% of Total Cover: 7.5 20% of Total Cover: 3  pling or Sapling/Shrub Stratum (Plot size: 30 m.		= 10	otal Cove	ŗ	OBL species 16 x 1 = 16  FACW species 54 x 2 = 108
	Pinus elliottii	•		14.3%	FACW	FAC species $12 \times 3 = 36$
	Nyssa biflora		V	35.7%	OBL	FACU species $0 \times 4 = 0$
	Acer rubrum		V	35.7%	FAC	UPL species 0 x 5 = 0
	Cyrilla racemifiora			14.3%	FACW	Column Totals: 82 (A) 160 (B)
				0.0%		02 , 00
		^		0.0%		Prevalence Index = B/A = 1 951
				0.0%		Hydrophytic Vegetation Indicators:
		0		0.0%	(# ·)•	1 - Rapid Test for Hydrophytic Vegetation
	% of Total Cover: 7 20% of Total Cover: 2.8	14 :	To	tal Cove		✓ 2 - Dominance Test is > 50%
Sh	rub Stratum (Plot size: 30 m	-				✓ 3 - Prevalence Index is ≤3.0 ¹
- 4 1	Pinus elliottii	5		11.9%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
	Cyrilla racemiflora		 <b>V</b>	47.6%	FACW	
	Magnolia virginiana	************	<u> </u>	23.8%	FACW	¹ Indicators of hydric soil and wetland hydrology must
	Acer rubrum	5	$\overline{\Box}$	11.9%	FAC	be present, unless disturbed or problematic.
	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	_	$\Box$	4.8%	FAC	Definition of Vegetation Strata:
	Morella Ceritera	0	Ħ,	0.0%	17.0	Tree - Woody plants, excluding woody vines,
	% of Total Cover: 21 20% of Total Cover: 8.4		 = To	tal Cover		approximately 20 ft (6 m) or more in height and 3 in.
	b Stratum (Plot size: 30 m )	72	- 10	COTCI		(7.6 cm) or larger in diameter at breast height (DBH).
	Andropogon glomeratus	3	V	27.3%	FACW	Sapling - Woody plants, excluding woody vines,
	Arundinaria tecta		<b>✓</b>	45.5%	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
	141	2		18.2%	OBL	than o in. (7.0 oin) DDI i.
~ .	Scirpus expansus	1	$\Box$	9.1%	OBL	Sapling/Shrub - Woody plants, excluding vines, less
5.		0		0.0%	, ODE	than 3 in. DBH and greater than 3.28 ft (1m) tall.
6.		0	Н	0.0%	* * * * * * * * * * * * * * * * * * * *	
7.	N. Ed. Co. C. Mark		H.	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
_			Ξ,	0.0%		approximatory of to 20 ft (1 to 0 m) in neight.
			<u> </u>	0.0%	9-25	Herb - All herbaceous (non-woody) plants, including
	•.,	0		0.0%		herbaceous vines, regardless of size, and woody
U. 1	7					plants, except woody vines, less than approximately 3 ft (1 m) in height.
1.		00	Η.	0.0%		o k ( i m) in neight.
Z. -		0	Ц.	0.0%		Woody vine - All woody vines, regardless of height.
50	% of Total Cover: 5.5 20% of Total Cover: 2.2	=	To	tal Cover		Troony vine 7 il woody vines, regardless of height.
-	ody Vine Stratum (Plot size: 30 m		_		}	
		0	닠.	0.0%	-	
	· · · ·		Ц.	0.0%		
			Ц.	0.0%		
1		0	Ц.	0.0%		Undranhatia
		0		0.0%		Hydrophytic Vegetation
50	6 of Total Cover: 0 20% of Total Cover: 0	, O =	Tot	tal Cover		Present? Yes No U
	% of Total Cover: 0 20% of Total Cover: 0  rks: (If observed, list morphological adaptations below).		Tol			Vegetation N= (A) N= (

Depth		Matrix			Re	dox Featı	ıres		s
(inches)	Color (	moist)	0/0	Color (m	oist)	%	Type 1	Locz	Texture Remarks
0-4	10YR	3/1	100		.w				
4-14	10YR	4/2	98	10YR	7/2	2	D	М	Silty Clay Loam
14-24	10YR	5/2	95	10YR	7/2	5	D	М	Silty Clay Loam
		N.	1 5						
				, w					
				C .* 76 F		_		_	
Type: C=Conc	entration. D	=Depletio	n. R <b>M=R</b> edu	iced Matrix, CS	=Covere	d or Coate	d Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=Matrix
lydric Soil Ir	ndicators:								Indicators for Problematic Hydric Soils ³ :
Histosol (A	•			Polyva	alue Belo	ow Surface	(S8) (LRR	S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epip				Thin C	Dark Sur	face (S9) (	LRR S, T,	J)	2 cm Muck (A10) (LRR S)
Black Histic	• •			Loamy	y Mucky	Mineral (F	1) (LRR 0)	)	Reduced Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)			Loamy	y Gleyed	l Matrix (F	2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified L	ayers (A5)			Deple	ted Mat	rix (F3)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)
Organic Bo	dies (A6) (L	RR P, T, U	1)	Redox	Dark S	urface (F6)	<b>)</b>		Red Parent Material (TF2)
5 cm Muck	y Mineral (A	7) (LRR P,	T, U)			Surface (i			Very Shallow Dark Surface (TF12)
_	ence (A8) (LI					sions (F8)	-		Other (Explain in Remarks)
_	(A9) (LRR P			-	F10) (LF				Court (Explain in Kellans)
_	elow Dark S		11)	_		ric (F11) (!	/LRA 151)		
_	Surface (A1	-	-,			se Masses		2 O P T\	
=	ie Redox (Al		150A)			e (F13) (∐			
=	k Mineral (S		-	_				ı	
	ik milierar (5.	I) (LKK U	, 3)	Delta	OCHING (	F17) (MLR	W TOT)		7
_	and Manager (C	43				(-40) (0)		45003	Indicators of hydrophytic vegetation and
Sandy Gley	ved Matrix (S	4)				ic (F18) (M		-	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gley Sandy Red	ox (S5)	4)		Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetiand hydrology must be present, unless disturbed or problematic.
Sandy Gley Sandy Red Stripped M	ox (S5) atrix (S6)			Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present,
Sandy Gley Sandy Red Stripped M	ox (S5)		J)	Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetiand hydrology must be present, unless disturbed or problematic.
Sandy Gley Sandy Red Stripped M Dark Surface	ox (S5) atrix (S6) ce (S7) (LRR	.P, S, T, U	J)	Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetiand hydrology must be present, unless disturbed or problematic.
Sandy Gley Sandy Red Stripped M Dark Surface	ox (S5) atrix (S6) ce (S7) (LRR	.P, S, T, U	J) 	Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfar  estrictive La Type:	ox (S5) atrix (S6) ce (S7) (LRR yer (if obse	.P, S, T, U	J) 	Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
Sandy Gley Sandy Red Stripped M Dark Surface  estrictive La Type: Depth (Inche	ox (S5) atrix (S6) ce (S7) (LRR yer (if obse	.P, S, T, U	J)	Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface  estrictive Lar Type: Depth (Inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface  estrictive Lar Type: Depth (Inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface estrictive Lar Type: Depth (inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface estrictive Lar Type: Depth (inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface  estrictive Lar Type: Depth (Inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfar  estrictive Lar Type: Depth (Incheemarks:	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface  estrictive Lar Type: Depth (Inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surface  estrictive Lar  Type: Depth (Inche) Demarks:	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfactive La Type: Depth (inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfact  Restrictive Lar Type: Depth (inche) Remarks:	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfact  Restrictive Lar Type: Depth (inche) Remarks:	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfar  testrictive Lar	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfact  Restrictive Lar Type: Depth (inche) Remarks:	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfact  Sestrictive Lar Type: Depth (inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfactive La Type: Depth (inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
Sandy Gley Sandy Red Stripped M Dark Surfactive La Type: Depth (inche)	ox (S5) atrix (S6) ce (S7) (LRR  yer (if obse	P, S, T, U		☐ Piedm	ont Floo	dplain Soil	s (F19) (M	LRA 149A)	wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County:         Waveland - Hancock         Sampling Date:         21-Oct-16           State:         MS         Sampling Point:         Wet - 31
Applicant/Owner: NASA	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 24′ 0.830" N Long.: 89° 37′ 22.350" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	
Are Vegetation . , Soil . , or Hydrology . significant	ntly disturbed? Are "Normal Circumstances" present? Yes 🏵 No 🔾
	problematic? (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  No	Is the Sampled Area
Hydric Soil Present? Yes ● No ○	Ves (9) No ()
Wetland Hydrology Present? Yes  No	within a Wetland?
Remarks:	
Wet plot approximately 500 feet south of E-W Logging Road throug	gh center portion of AOI.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1) Aquatic Fauna (B3	
High Water Table (A2) Marl Deposits (B1	
Saturation (A3) Hydrogen Sulfide	
	pheres along Living Roots (C3) Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Presence of Redu	
☐ Drift Deposits (B3) ☐ Recent Iron Redu	uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	ce (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 O No O Depth (inches):	
Water Table Present? Yes O No O Depth (inches):	
Saturation Present?  (includes capillary fringe)  Yes No Depth (inches):	Wetland Hydrology Present? Yes ⊙ No ○
(includes capillary fillinge)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	tos, previous inspections), if available:
Remarks:	
No strong primary hydrology indicators present except for some min	nor occurrences of oxidized root channels.
(0)	

Tree Stratum (Plot size: 30 m )	Absolute % Cover		.Strat.	Indicator Status	Dominance Test worksheet:
Name of the Mills					Number of Dominant Species
Nyssa sylvatica	15 3		75.0% 15.0%	FACW	That are OBL, FACW, or FAC: 6 (A)
Magnolia virginiana		H-	10.0%	FACW	Total Number of Dominant
Magnolia Virginiana	.2	#	0.0%	FACW	Species Across All Strata: 6 (B)
	-	Η.		-	Percent of dominant Species
		Η.	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
		Η-	0.0%		
		Η.	0.0%		Prevalence Index worksheet:
· 1	. 0	□,_	0.0%		Total % Cover of Multiply by:
50% of Total Cover: 10 20% of Total Cover: 4	20 :	= Tot	al Cove	•	OBL species 20 x 1 = 20
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	_1	_			FACW species94
Pinus elliottii	15_	✓	55,6%	FACW	FAC species $10 \times 3 = 30$
Magnolia virginiana	10	<b>Y</b> ,_	37.0%	FACW	FACU species $0 \times 4 = 0$
Nyssa sylvatica	2		7.4%	FAC	UPL species $0 \times 5 = 0$
	0		0.0%		Column Totals: 124 (A) 238 (B)
	0		0.0%		
·			0.0%		Prevalence Index = B/A = 1.919
			0.0%		Hydrophytic Vegetation Indicators:
	0_		0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 13.5 20% of Total Cover: 5.4	27 :	= Tot	al Cove		✓ 2 - Dominance Test is > 50%
					✓ 2 - Dominance Test is > 50%  ✓ 3 - Prevalence Index is ≤3.0 ¹
hrub Stratum (Plot size: 30 m., )  Ilex corlacea	40	<b>V</b>	72.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
i par i production de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la compa					Problematic Hydrophytic Vegetation * (Explain)
Ilex glabra Ilex vomitoria	_	-	18.2%	FACW	¹ Indicators of hydric soil and wetland hydrology must
1911		H-	9.1%	FAC	be present, unless disturbed or problematic.
			0.0%		Definition of Management Chapter
		<u>H</u> -	0.0%		Definition of Vegetation Strata:
	0	□.	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 27.5 20% of Total Cover: 11  lerb Stratum (Plot size: 30 m )	55_ =	= Tot	al Cover	'	(7.6 cm) or larger in diameter at breast height (DBH).
Lycopodiella alopecuroides	15	<b>✓</b>	75.0%	OBL	Sapling - Woody plants, excluding woody vines,
2. Dichanthelium scabriusculum			25.0%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
	0	Ē.	0.0%		than 6 m. (7.5 cm) BBC.
,	0	<u> </u>	0.0%	_	Sapling/Shrub - Woody plants, excluding vines, less
5.	0	<u> </u>	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
5.	0	Η.	0.0%		
The same are a second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the second to the s		H-	0.0%	pastar, co. uman	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7	~	_		·	approximately 5 to 20 tt (1 to 6 m) in height.
3	0	Ц.	0.0%		Herb - All herbaceous (non-woody) plants, including
9	0	_	0.0%		herbaceous vines, regardless of size, and woody
)	0	=	0.0%		plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
2	0	Ц_	0.0%		Woody vine - All woody vines, regardless of height.
50% of Total Cover: 10 20% of Total Cover: 4	20 =	= Tota	al Cover		vyoddy virie - Ali woody viries, regardiess of fielgrit.
Voody Vine Stratum (Plot size: 30 m				ĺ	
Smilax laurifolia	2		100.0%	FACW	
* · · · · · · · · · · · · · · · · · · ·	0		0.0%		
· · · · · · · · · · · · · · · · · · ·			0.0%		
			0.0%		
			0.0%		Hydrophytic
	n		VIV /4		Vegetation
50% of Total Cover: 1 20% of Total Cover: 0.4	0	- 7-	al Cover		Present? Yes • No O

totile nesci	ription: (De:	scribe to	the <b>dep</b> th	needed to o	locument	the indic	cator or c	onfirm the a	absence of indicators.	)	
Depth Matrix				Re	dox Feati	ures					
(inches)	Color (		%	Color (		%	Type 1		Texture	Remarks	
0-4	10YR	3/2	97	10YR	6/2	.3	. D	M	Loamy Sand		
	10YR	4/2	95	10YR	6/2	5	D	. M	Loamy Sand		
				<b>W</b>	r.						
					-					- 24475	
* * 1					A -		7				
							-	_			
		_		,- v .	_	- 1			-	100	
							-10-10-		Nico Di Bono Linio M	Makin	
	centration. D	=Depletio	n. RM≃Redu	ced Matrix, (	S=Covere	ed or Coate	ed Sand Gr	ains ² Loca	tion: PL≂Pore Lining. M:		
ydric Soil I							(00) (I DD			blematic Hydric Solis ³ :	
J Histosol (/	A1) Dedon (A2)				•		(S8) (LRR		1 cm Muck (A9)	• •	
_ ⊓istic epip _ Black Histi							(LRR S, T, I	•	2 cm Muck (A1	• • •	
_	Sulfide (A4)			_		Matrix (F	F1) (LRR 0)	,	_	(F18) (outside MLRA 150A,B)	
	Layers (A5)				my Gieyed oleted Mat	•	2)			plain Soils (F19) (LRR P, S, T)	
_	odies (A6) (L	RRPTI	n	'		urface (F6	,		Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	ky Mineral (A		-			c Surface (10	•		Red Parent Mat		
_	sence (A8) (L		, ., .,	`		sions (F8)			<ul><li>✓ Very Shallow Dark Surface (TF12)</li><li>✓ Other (Explain in Remarks)</li></ul>		
-	k (A9) (LRR F				1 (F10) (LI						
	Below Dark S	-	11)				MLRA 151)				
Thick Darl	k Surface (A1	2)					(F12) (LR				
Coast Prai	irie Redox (A:	16) (MLRA	A 150A)		_		RR P, T, U				
] Sandy Mu	ck Mineral (S	1) (LRR C	), S)	☐ Delt	ta Ochric (	F17) (MLR	A 151)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
] Sandy Gle	yed Matrix (S	64)		Red	luced Verti	ic (F18) (M	1LRA 150A,	150B)			
Sandy Rec	dox (S5)			Pied	lmont Floo	odplain Sol	ls (F19) (M	ILRA 149A)		ss disturbed or problematic.	
Stripped M	/latrix (S6)			☐ And	malous Br	ight Loam	y Soils (F20	) (MLRA 149	9A, 153C, 153D)		
Dark Surfa	ace (S7) (LRR	P, S, T, I	U)								
strictive La	yer (if obse	erved):	_					1			
Туре:						_				0 0	
Depth (inch	nes):					·M			Hydric Soil Present?	Yes 🏵 No 🔾	
emarks:										<del> </del>	

Tregos, State Treated Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential Sentential	City/County: Waveland - Hancock Sampling Date: 21-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 32
Investigator(s): Lars Larson, Randv Ellis	Section, Township, Range: S 31 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 1.0 % / 0.6°
the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	30° 23' 58.663" N <b>Long.:</b> 89° 37' 27.288" W <b>Datum:</b> NAD83
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent slop	0 0
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation , Soll , or Hydrology significantly	ly disturbed? Are "Normal Circumstances" present? Yes 💿 No 🔾
Are Vegetation , Soll , or Hydrology naturally pr	roblematic? (If needed, explain any answers In Remarks.)
	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area
Hydric Soil Present? Yes ● No ○	Vec ( No (
Wetland Hydrology Present? Yes ● No ○	within a Wedland?
Remarks: Approximately 300 feet south of wet 31 - transitional area closer to r  HYDROLOGY	main logging road.
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	
High Water Table (A2) Marl Deposits (B15)	= ' ' '
Saturation (A3) Hydrogen Sulfide Oc	
☐ Water Marks (B1) ☑ Oxidized Rhizospher	eres along Living Roots (C3) Dry Season Water Table (C2)
☐ Sediment Deposits (B2) ☐ Presence of Reduce	ed Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduction	tion 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 Re	· · · · · · · · · · · · · · · · · · ·
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):	Nan (A) Na (
Saturation Present?  (includes capillary fringe)  Yes No   Depth (inches):	Wetland Hydrology Present? Yes   ● No   ○
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos	s. previous inspections), if available:
bedding recorded batta (at all a galley) memory and	of profitods
Remarks:	
slight evidence of oxidized root channels on living roots	
1	

	% Cover	Re	Cover	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: 30 m )		$\overline{}$			Number of Dominant Species
Nyssa sylvatica Magnolia virginiana	20	<b>∨</b>	57.1% 28.6%	FAC	That are OBL, FACW, or FAC: 8 (A)
	10 5				Total Number of Dominant
		H	14.3%	FACW	Species Across All Strata: 8 (B)
		H	0.0%		Percent of dominant Species
•		Η-	0.0%	انجوسا	That Are OBL, FACW, or FAC: 100.0% (A/B)
		Η-	0.0%		
	0	Н-	0,0%	_	Prevalence Index worksheet:
	0	Ш_	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 17.5 20% of Total Cover: 7	35	= Tot	tal Cove	•	OBL species 20 x 1 = 20
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	}				FACW species 87 x 2 = 174
Nyssa sylvatica	15	<b>V</b>	40.5%	FAC	FAC species 37 x 3 = 111
Magnolia virginiana	20	<b>V</b>	54.1%	FACW	FACU species $0 \times 4 = 0$
Pinus elliottii			5.4%	FACW	UPL species $0 \times 5 = 0$
1 1	•	$\overline{\Box}$	0.0%	.,	
		$\Box$	0.0%		Column Totals: 144 (A) 305 (B)
		$\Box$	0.0%		Prevalence Index = B/A = 2.118
- ·		_	0.0%		Hydrophytic Vegetation Indicators:
		H.			
	0		0.0%	-	1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= Tot	al Cove	•	✓ 2 - Dominance Test Is > 50%
Shrub Stratum (Plot size: 30 m )					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea	30	<b>~</b>	63.8%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra	10	<b>V</b>	21.3%	FACW	
There are made and a	2	-	4.3%	FAC	¹ Indicators of hydric soil and wetland hydrology must
		$\overline{\Box}$	10.6%	FACW	be present, unless disturbed or problematic.
Magnolia virginiana			A 010 70	111011	
			0.006		Definition of Vegetation Strata:
	. 0		0.0%		Definition of Vegetation Strata:
	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 23.5 20% of Total Cover: 9.4	0				Tree - Woody plants, excluding woody vines,
50% of Total Cover: 23.5 20% of Total Cover: 9.4    Stratum (Plot size: 30 m )	0 0 47	_	0.0%	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,
50% of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides	0 0 47	✓_	0.0% al Cover	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
erb Stratum (Plot size: _30 m)  Lycopodiella alopecuroides  Sarracenia alabamensis	0 0 47 15 5	_	0.0% cal Cover 68.2% 22.7%	OBL 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,
0% of Total Cover: 23.5 20% of Total Cover: 9.4  erb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  Sarracenia alabamensis  Hypericum cistifolium	0 0 47 15 5 2	✓_	0.0% <b>cal Cover</b> 68.2% 22.7% 9.1%	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.
io% of Total Cover: 23.5 20% of Total Cover: 9.4  erb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  Sarracenia alabamensis  Hypericum cistifolium	0 0 47 15 5 2	✓_	0.0% cal Cover 68.2% 22.7% 9.1% 0.0%	OBL 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
so% of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  2 Sarracenia alabamensis  3 Hypericum cistifolium	0 0 47 15 5 2 0	✓_	0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less
erb Stratum (Plot size: 30 m ) Lycopodiella alopecuroides Sarracenia alabamensis Hypericum cistifolium	0 0 47 15 5 2 0 0	✓_	0.0% <b>al Covei</b> 68.2% 22.7% 9.1% 0.0% 0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines,
so% of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  Sarracenia alabamensis  Hypericum cistifolium	0 0 47 15 5 2 0 0	✓_	0.0%  al Covei  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
so% of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  2. Sarracenía alabamensis  3. Hypericum cistifolium  4. 5. 5. 6. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	0 0 47 15 5 2 0 0	✓_	0.0% cal Cover 68.2% 22.7% 9.1% 0.0% 0.0% 0.0% 0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
50% of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  1 Lycopodiella alopecuroides  2 Sarracenia alabamensis  3 Hypericum cistifolium  4.  5.  6.	0 0 47 15 5 2 0 0	✓_	0.0%  al Covei  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb - All herbaceous (non-woody) plants, including
solveria cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  1 Lycopodiella alopecuroides 2 Sarracenia alabamensis 3 Hypericum cistifolium 4. 5. 6. 7. 8.	0 0 47 15 5 2 0 0	✓_	0.0% cal Cover 68.2% 22.7% 9.1% 0.0% 0.0% 0.0% 0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
solvers of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  1. Lycopodiella alopecuroides 2. Sarracenia alabamensis 3. Hypericum cistifolium 4	0 0 47 15 5 2 0 0 0 0	✓_	0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
solveria cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  1. Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4	0 0 47 15 5 2 0 0 0 0	✓_	0.0%  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 23.5 20% of Total Cover: 9.4  Serb Stratum (Plot size: 30 m )  1. Lycopodiella alopecuroides 2. Sarracenia alabamensis 3. Hypericum cistifolium 4. 5. 6. 7. 8. 9. 1.	0 0 47 15 5 2 0 0 0 0 0		0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
ierb Stratum (Plot size: 30 m )  1. Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4. 5. 6. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 47 15 5 2 0 0 0 0 0		0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 23.5 20% of Total Cover: 9.4  Ierb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4. 5. 5. 6. 7. 8. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 47 15 5 2 0 0 0 0 0 0	☑	0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  al Cover	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 23.5 20% of Total Cover: 9.4  Ierb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4. 5. 5. 5. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 47 15 5 2 0 0 0 0 0 0 0	☑	0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  al Cover	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 23.5 20% of Total Cover: 9.4  lerb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4. 5. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 47 15 5 2 0 0 0 0 0 0 0 22	☑	0.0% cal Cover 68.2% 22.7% 9.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 23.5 20% of Total Cover: 9.4  Ierb Stratum (Plot size: 30 m ) Lycopodiella alopecuroides 2. Sarracenia alabamensis 3. Hypericum cistifolium 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 47 15 5 2 0 0 0 0 0 0 0 0 0 22	☑	0.0% cal Cover 68.2% 9.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
So% of Total Cover: 23.5 20% of Total Cover: 9.4  Ierb Stratum (Plot size: 30 m )  Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4. 5. 5. 5. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 47 15 5 2 0 0 0 0 0 0 0 22	☑	0.0% cal Cover 68.2% 22.7% 9.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
Solve of Total Cover: 23.5 20% of Total Cover: 9.4  Herb Stratum (Plot size: 30 m. )  1. Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4.  5.  6.  7.  8.  9.  0.  1.  2.  50% of Total Cover: 11 20% of Total Cover: 4.4  Woody Vine Stratum (Plot size: 30 m. )  Smilax laurifolia	0 0 47 15 5 2 0 0 0 0 0 0 0 0 0 22	☑	0.0% cal Cover 68.2% 9.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
Solve of Total Cover: 23.5 20% of Total Cover: 9.4  Herb Stratum (Plot size: 30 m )  1. Lycopodiella alopecuroides  2. Sarracenia alabamensis  3. Hypericum cistifolium  4.  5.  6.  7.  8  9.  0.  1.  2.  50% of Total Cover: 11 20% of Total Cover: 4.4  Woody Vine Stratum (Plot size: 30 m )  Smilax laurifolia	0 0 47 15 5 2 0 0 0 0 0 0 0 0 22	✓	0.0%  cal Cover  68.2%  22.7%  9.1%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	OBL OBL 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.

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	iption: (Describe to	the depth	needed to docum	ent the indi	cator or c	onfirm the	absence of indicators.)		
Depth	Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc2	Texture Remarks		
0-5	10YR 3/2	98	10YR 6/	2 2	., C	M	Sandy Loam		
5-16	10YR 4/2	95	10YR 6/2	2 5	С	М	Sandy Loam		
		-							
	-wp		· · · · · · · · · · · · · · · · · · ·						
-	K F	•			-				
		-							
ype: C=Conc	entration. D=Depletio	n. RM=Redu	iced Matrix, CS=Cov	ered or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Linlng, M=Matrix		
lydric Soil Ir	ndicators:						Indicators for Problematic Hydric Soils ³ :		
Histosol (A	<b>(1)</b>		Polyvalue	Below Surface	e (S8) (LRR	(S, T, U)	1 cm Muck (A9) (LRR O)		
Histic Epip	edon (A2)		Thin Dark	Surface (S9)	(LRR S, T,	U)	2 cm Muck (A10) (LRR S)		
Black Histic			Loamy Mu	cky Mineral (i	F1) (LRR O	)	Reduced Vertic (F18) (outside MLRA 150A,B)		
_ ′ ′	Sulfide (A4)		Loamy Gle	yed Matrix (F	2)		Piedmont Floodplain Soils (F19) (LRR P, S, T)		
	ayers (A5)		Depleted N	. ,			Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	odies (A6) (LRR P, T, U	-	_	k Surface (F6			Red Parent Material (TF2)		
_	cy Mineral (A7) (LRR P	, T, U)	= .	ark Surface (			Very Shallow Dark Surface (TF12)		
_	ence (A8) (LRR U)			ressions (F8)	)		Other (Explain in Remarks)		
_	(A9) (LRR P, T)	440	☐ Marl (F10)						
	Below Dark Surface (A Surface (A12)	11)	·	Ochric (F11) (					
	rie Redox (A16) (MLRA	A 150A)	_	anese Masses					
_	:k Mineral (S1) (LRR C			rface (F13) (L ic (F17) (MLF		,			
_	ved Matrix (S4)	, 5)	_	ertic (F18) (N		150B)	³ Indicators of hydrophytic vegetation and		
Sandy Red			_	Roodplain Soi			wetland hydrology must be present, unless disturbed or problematic.		
Stripped M				·=·			19A, 153C, 153D)		
	ce (S7) (LRR P, S, T,	U)		, bright 200i	,	-, (			
	. ,								
					-		· · · · · · · · · · · · · · · · · · ·		
estrictive La	yer (if observed):								
Type:				_			Hydric Soil Present? Yes • No		
Depth (inch	es):						Hydric Sou Present: 168 @ NO C		
Remarks:									

Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded  Are climatic/hydrologic conditions on the site typical for this time of year  Are Vegetation , Soil , or Hydrology significant	
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks:  Transect #2 +/- 1000 feet south of logging road in central part of A	Is the Sampled Area within a Wetland? Yes No O
Sediment Deposits (B2)	Sparsely Vegetated Concave Surface (B8)    Sparsely Vegetated Concave Surface (B8)   Sparsely Vegetated Concave Surface (B8)   Sparsely Vegetated Concave Surface (B8)   Drainage Patterns (B10)   Moss Trim Lines (B16)   Dry Season Water Table (C2)   Reced Iron (C4)   Crayfish Burrows (C8)   Saturation Visible on Aerial Imagery (C9)   Geomorphic Position (D2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photo Remarks:	Wetland Hydrology Present? Yes No O

	% Cover	Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:			
Tree Stratum (Plot size: 30 m ) Pinus elliottii	5 5	14.3%	FACW	Number of Dominant Species That are ORL FACW or FAC: 7 (A)			
Nyssa biflora	5 20	✓ 57.1%	OBL	That are OBL, FACW, or FAC:7 (A)			
Taxodium ascendens				Total Number of Dominant			
Magnolla virginiana	5	14.3%	OBL	Species Across Ali Strata: 7 (B)			
	5	14.3%	FACW	Percent of dominant Species			
		0.0%	-	That Are OBL, FACW, or FAC: 100.0% (A/B)			
F		0.0%					
, .v.,	0	0.0%		Prevalence Index worksheet:			
212	, O	□ 0.0%	KLA IN IME N. J	Total % Cover of: Multiply by:			
50% of Total Cover: 17.5 20% of Total Cover: 7	35	= Total Cove	er	OBL species 51 x 1 = 51			
apling or Sapling/Shrub Stratum _ (Plot size: 30 m	)			FACW species $74 \times 2 = 148$			
Nyssa biflora	20	✓ 58.8%	OBL	FAC species $0 \times 3 = 0$			
Magnolia virginiana	10	29.4%	FACW _	FACU species $0 \times 4 = 0$			
Pinus elliottii	. 3	8.8%	FACW	UPL species $0 \times 5 = 0$			
Taxodium ascendens		2.9%	OBL	Column Totals: 125 (A) 199 (B)			
		0.0%		COTAMIN TOCATO			
		0.0%		Prevalence Index = B/A = 1 592			
		0.0%	* # 14 * V	Hydrophytic Vegetation Indicators:			
	0	0.0%	7. W 41				
ON of Total Covers 17 20% of Total Covers 6.9				✓ 1 - Rapid Test for Hydrophytic Vegetation			
0% of Total Cover: 17 20% of Total Cover: 6.8	34 =	= Total Cove	:r	2 - Dominance Test is > 50%			
hrub Stratum (Plot size: 30 m. )		_		✓ 3 - Prevalence Index is ≤3.0 ¹			
Magnolia virginiana	15_	50.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
Cyrilla racemiflora	10	✓ 33.3%	FACW				
Ilex corlacea	5	16.7%	FACW	¹ Indicators of hydric soil and wetland hydrology mus			
	0	0.0%		be present, unless disturbed or problematic.			
	•	0.0%	-10	Definition of Vegetation Strata:			
1.W. W. V. V. V. V. V. V. V. V. V. V. V. V. V.	0	0.0%		Tree - Woody plants, excluding woody vines,			
				(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			
erb Stratum (Plot size:) . Arundinaria tecta	20	* Total Cove	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5	<ul><li>✓ 80.0%</li><li>✓ 20.0%</li></ul>		Sapling - Woody plants, excluding woody vines,			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5 0	<ul><li>✓ 80.0%</li><li>✓ 20.0%</li><li>✓ 0.0%</li></ul>	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.			
erb Stratum (Plot size:, ) Arundinaria tecta Woodwardia virginica	20 5 0	✓ 80.0% ✓ 20.0% □ 0.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less			
erb Stratum (Plot size:) . Arundinaria tecta . Woodwardia virginica	20 5 0 0	▼ 80.0% ▼ 20.0% □ 0.0% □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.			
erb Stratum (Plot size:)  Arundinaria tecta  Woodwardia virginica  .	20 5 0 0	▼ 80.0% ▼ 20.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines,			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5 0 0 0 0	<ul> <li>✓ 80.0%</li> <li>✓ 20.0%</li> <li>□ 0.0%</li> <li>□ 0.0%</li> <li>□ 0.0%</li> <li>□ 0.0%</li> <li>□ 0.0%</li> </ul>	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5 0 0 0 0	▼ 80.0% ▼ 20.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5 0 0 0 0	▼ 80.0% ▼ 20.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines,			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5 0 0 0 0 0 0	▼ 80.0% ▼ 20.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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			
erb Stratum (Plot size:) . Arundinaria tecta . Woodwardia virginica .	20 5 0 0 0 0 0 0 0	▼ 80.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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			
erb Stratum (Plot size:) . Arundinaria tecta . Woodwardia virginica .	20 5 0 0 0 0 0 0 0	▼ 80.0% ▼ 20.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0% □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica	20 5 0 0 0 0 0 0 0	▼ 80.0%	FACW OBL	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica  0% of Total Cover: 12.5 20% of Total Cover: 5	20 5 0 0 0 0 0 0 0	▼ 80.0%  ▼ 20.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%	FACW OBL	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
erb Stratum (Plot size:) Arundinaria tecta Woodwardia virginica  0% of Total Cover: 12.5 20% of Total Cover: 5  coody Vine Stratum (Plot size: 30 m	20 5 0 0 0 0 0 0 0 0 0	▼ 80.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
Plot size:	20 5 0 0 0 0 0 0 0 25 =	▼ 80.0%	FACW OBL	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
Arundinaria tecta  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  ""  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  ""  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Woodwardia virginica  """  Wood	20 5 0 0 0 0 0 0 0 0 0 25 =	▼ 80.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
Arundinaria tecta  Woodwardia virginica  0% of Total Cover: 12.5 20% of Total Cover: 5  oody Vine Stratum (Plot size: 30 m  Smilax laurifolia	20 5 0 0 0 0 0 0 0 0 0 0 0 1 0 0	▼ 80.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
erb Stratum (Plot size:)  Arundinaria tecta  Woodwardia virginica  Woodwardia virginica  Lack Stratum (Plot size: 30 m)  Smilax laurifolia	20 5 0 0 0 0 0 0 0 0 0 0 0 0 0	▼ 80.0%  ▼ 20.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%	FACW	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.			
2. Woodwardia virginica 3	20 5 0 0 0 0 0 0 0 0 0 0 0 0 0	▼ 80.0%  ▼ 20.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%  □ 0.0%	FACW OBL	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/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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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SOIL									Sampling Point: Wet	- 33
Profile Descr	iption: (Des	cribe to	the depth	needed to	document	the indic	cator or co	onfirm the	absence of indicators.)	
		Matrix				dox Feati				
Depth (inches)	Color (r		0/0	Color	(moist)	%	Type 1	Loc2	Texture Remarks	
0-4	10YR	3/1	100						Sandy Clay Loam	
4-16	10YR	3/2	95	10YR	5/6	5	С	M	Silty Clay Loam	
110	20110		. 17	10110					//	
						TN			0	A. 4
		Ka Brans I								
							Water State			
-					-					
	,, ., ., .				-					
¹ Type: C=Cond	centration. D=	=Depletio	n. RM=Redu	ced Matrix,	CS=Covere	d or Coate	ed Sand Gr	ains ²Loca	ation: PL=Pore Lining. M=Matrix	
Hydric Soil I	ndicators:			_			-		Indicators for Problematic Hydric So	ils ³ :
Histosol (A	A1)			<b>✓</b> Po	lyvalue Beld	ow Surface	e (S8) (LRR	s. T. U)	1 cm Muck (A9) (LRR O)	
	edon (A2)			_	in Dark Sur				2 cm Muck (A10) (LRR S)	
Black Histi				_	amy Mucky		•	-		150A B\
_	Sulfide (A4)				amy Gleyeo			<b>'</b>	Reduced Vertic (F18) (outside MLRA	
	Layers (A5)				pleted Mati	•	_)		Piedmont Floodplain Soils (F19) (LRR	
	odies (A6) (LF	RPTI	n		dox Dark S		,		Anomalous Bright Loamy Soils (F20)	(MLKA 153D)
	ky Mineral (A			_	pleted Dark	•	•		Red Parent Material (TF2)	
	sence (A8) (LF		, 1, 0)	_			-		☐ Very Shallow Dark Surface (TF12)	
	k (A9) (LRR P			_	dox Depres				Other (Explain in Remarks)	
	Below Dark Si		11\		irl (F10) (LF	-				
		-	11)		pleted Och					
=	s Surface (A12	•	1504	_	n-Mangane					
	rie Redox (A1			_	nbric Surfac			)		
	ck Mineral (S1		), 5)		Ita Ochric (				³ Indicators of hydrophytic vege	etation and
	yed Matrix (S	4)		_	duced Verti				wetland hydrology must be p	oresent,
☐ Sandy Red					dmont Floo	•			unless disturbed or proble	matic.
☐ Stripped M				L An	omalous Br	ight Loam	y Soils (F20	) (MLRA 149	9 <b>A,</b> 153C, 153D)	
☐ Dark Surfa	ice (S7) (LRR	P, S, T, 0	J)							
Restrictive La	war (if ahra	= med\1								
	iyei (ii obse	iveu).								
Type:						-			Hydric Soil Present? Yes 💿 No	0
	es):	· w	· · <u> </u>							
Remarks:										

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 34
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat:	30° 24' 2.713" N Long.: 89° 37' 1.660" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	The transfer of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract o
Are climatic/hydrologic conditions on the site typical for this time of year	
Are Vegetation, Soll, or Hydrology significant	tly disturbed? Are "Normal Circumstances" present? Yes 🍥 No 🔾
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area
Hydric Soil Present? Yes   No	Vec (i) No (i)
Wetland Hydrology Present? Yes  No  No	within a Wetland?
Remarks:	<u> </u>
Flat area that transitions from distinct upland to a wetland within 10	no-feet.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
☐ Surface Water (A1) ☐ Aquatic Fauna (B1	
High Water Table (A2) Marl Deposits (B1	_
Saturation (A3) Hydrogen Sulfide	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☑ Oxidized Rhizosph	neres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4)
Drift Deposits (B3)	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	e (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
Annual Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), ii avaliable.
Remarks:	

Tree Stratum (Plot size: 30 m )  1 Pinus elliottii  2 Magnolia virginiana	% Cover		over		
		F77		Status	Number of Dominant Species
7 Magnalia singiniana	.30	1000	75.0%	FACW	That are OBL, FACW, or FAC: 7 (A)
	10	<b>V</b>	25.0%	FACW	Total Number of Dominant
3	0	Щ.	0.0%		Species Across All Strata: ,
4	0	Ш,	0.0%		
5	0	$\square_{-}$	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6.	0 _		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7.			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of Multiply by:
50% of Total Cover: 20 20% of Total Cover: 8	40 :	= Tot	al Cove		OBL species 5 x 1 = 5
Sapling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species 121 x 2 = 242
4 Pr	45	<b>V</b>	75.0%	FACW	FAC species $0 \times 3 = 0$
			25.0%	FACW	
				FACIN	
3		H-	0.0%	_	UPL species $0 \times 5 = 0$
1.	0	=	0.0%		Column Totals: 126 (A) 247 (B)
5		Щ-	0.0%		Prevalence Index = B/A = 1.960
3	0	Щ.	0.0%		
7.	0	$\sqcup$ _	0.0%		Hydrophytic Vegetation Indicators:
3	0_	$\square_{-}$	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 10 20% of Total Cover: 4	20	= Tot	al Cove		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
	60	<b>V</b>	100.0%	EACW	
1	5- a mm			PACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2.	. 0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
3	0	=	0.0%	-	be present, unless disturbed or problematic.
4	. 0		0.0%		
5.	_0	Ш.	0.0%	100	Definition of Vegetation Strata:
3	0		0.0%	.1.4	Tree - Woody plants, excluding woody vines,
50% of Total Cover: 30 20% of Total Cover: 12	60 =	= Tota	al Cover		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: _30 m)					(1.5 only of larger in diameter at product hoight (25).y.
	3	<b>V</b>	CO 00/	ODI	Sapling - Woody plants, excluding woody vines,
1. Sarracenia alabamensis			60.0%	OBL	approximately 20 ft (6 m) or more in height and less
2 Lycopodiella alopecuroides		<b>Y</b> _	40.0%	OBL	than 3 in. (7.6 cm) DBH.
3	0	ᆜ~	0.0%		Continue (Charles Manda alanta esselvations vince Long
4		-	0.0%		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	Ц.	0.0%		alan o ili boli ana giorio, man oleo il (my ilin
6	. 0		0.0%		Shrub - Woody plants, excluding woody vines,
7	0_	□	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8.			0.0%		
9.			0.0%		Herb - All herbaceous (non-woody) plants, including
0			0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
1	0		0.0%		3 ft (1 m) in height.
2.	0		0.0%		<del>-</del>
50% of Total Cover: 2.5 20% of Total Cover: 1	5 =	Tet	ai Cover		Woody vine - All woody vines, regardless of height.
	3 =	- 1002	a, cover		
Woody Vine Stratum (Plot size: 30 m					
Smilax laurifolia	11		100.0%	FACW	
	0		0.0%		
),	0		0.0%		
			0.0%		
	0		0.0%		Hydrophytic
50% of Total Cover: 0.5 20% of Total Cover: 0.2			w.		Vegetation Present?  Yes  No  No
	1 =	= IOta	al Cover		1 Torontal

SOIL									Sampling	Point: Wet - 34
Profile Descri	iption: (De:	scribe to	the depth	needed to d	ocument	the indi	cator or co	onfirm the	absence of indicators.)	
Depth	. , .	Matrix		,	Re	dox Feat	ures			
(inches)	Color (	moist)	0/0	Color (r	noist)_	%	Type 1	Loc2	Texture	Remarks
0-3	10YR	3/2	100						Silt Loam	to the true that we have the
3-16	10YR	4/2	97	10YR	6/6	3	. C	М	Silt Loam	
								:*		
4										
						-		-		
		_	-	_						***
¹ Type: C=Conc	entration. D	=Depletio	n. RM=Redi	uced Matrix, C	S=Covere	ed or Coat	ed Sand Gra	ains ² Loca	ation: PL=Pore Lining. M=Mat	trix
Hydric Soil Ir	ndicators:			· · ·		-			Indicators for Problem	matic Hydric Soils ³ :
Histosol (A	1)			Poly	value Bel	ow Surface	e (S8) (LRR	S, T, U)	1 cm Muck (A9) (LR	
Histic Epipe	edon (A2)			Thin	Dark Sur	face (S9)	(LRR S, T, I	J)	2 cm Muck (A10) (L	•
Black Histic	c (A3)			Loar	ny Mucky	Mineral (i	F1) (LRR 0)	)		3) (outside MLRA 150A,B)
Hydrogen :	Sulfide (A4)			Loar	ny Gleyed	d Matrix (F	2)		Piedmont Floodplain	Soils (F19) (LRR P, S, T)
i	ayers (A5)			Depl	leted Mat	rix (F3)			Anomalous Bright Lo	camy Soils (F20) (MLRA 153B)
	odies (A6) (L			Redo	ox Dark S	urface (F6	5)		Red Parent Material	(TF2)
_	y Mineral (A		', Τ, ປ)	Depl	eted Darl	k Surface (	(F7)		Very Shallow Dark S	Surface (TF12)
	ence (A8) (L	_			•	sions (F8)	)		Other (Explain in Re	:marks)
_	(A9) (LRR F		445	_	(F10) (LI					
_ :	Selow Dark S		11)				MLRA 151)			
	: Surface (A1 rie Redox (A1	-	1 (EOA)		_		s (F12) (LRF			
_	k Mineral (S		-				.RR P, T, U)	)		
	ed Matrix (S		, 3)			F17) (MLF	(A 151) /ILRA 150A,	1500)	³ Indicators of	hydrophytic vegetation and
Sandy Gley  Sandy Red		, ,					ils (F19) (M			drology must be present, sturbed or problematic.
Stripped Mi				_		•			9A, 153C, 153D)	starbed or problemate.
	ce (S7) (LRR	P, S, T, I	U)		naioas bi	igitt Louin	, 5015 (120	,, (11210121	,, q 1550, 1550,	
			•							
Restrictive La	yer (if obse	erved):								
Type:						-,			Unadaia Cail Bassanta	Yes   No
Depth (inch	es):								Hydric Soil Present?	res ⊕ No ∪
Remarks:										

Project/Site: NASA - Stennis, 1,100 Acre Wetland Delineatiion	City/County: Waveland - Har	ncock Sampling Date: 24	-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 35	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range:	<b>S</b> 29 <b>T</b> 7 <b>S R</b> 16 W	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex	, none): none Slope: 0.0 %	/ 0.0°
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 3.049" N Lo	ong.: 89° 36′ 57.357" W Datum: N	NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded		NWI dassification: PFO 1/4 C	
Are climatic/hydrologic conditions on the site typical for this time of ye		(If no, explain in Remarks.)  al Circumstances" present? Yes   No	. 0
		nal Circumstances" present? Yes Ves No d, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sa	•		
Hydrophytic Vegetation Present? Yes  No			
Hydric Soil Present? Yes  No	Is the Sampled Area		
Wetland Hydrology Present? Yes No	within a Wetland?	Yes   No	
			_
Remarks: Transitional zone into wet area after heavy pine overstory back to ti	he north - Smalll drain near th	is plot	
Transitional zone into wet area after nearly pine overstory back to the	le floren. Smalli draim near tri	iis pioti	
HYDROLOGY		·	
		· ·	
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)	-
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1) Aquatic Fauna (B: High Water Table (A2) Mar! Deposits (B1	•	☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)	
High Water Table (A2)  Mar! Deposits (B1  Saturation (A3)  Hydrogen Sulfide		✓ Drainage Patterns (B10)  ✓ Moss Trim Lines (B16)	
	neres along Living Roots (C3)	Dry Season Water Table (C2)	
Sediment Deposits (B2)  Presence of Redu		Crayfish Burrows (C8)	
	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Other (Explain in	, ,	Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7)	<b>-</b>	FAC-Neutral Test (D5)	
Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)	
Field Observations:			
Surface Water Present? Yes O No O Depth (inches):			
Water Table Present? Yes O No O Depth (inches):			
	Wetland Hy	ydrology Present? Yes 💿 No 🔾	
(Includes capillary fringe) Yes Vivo Depth (Inches):			
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if av	vailable:	
Remarks:			

Number of Diminist Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Species   Spec	(Plot size: 20 m	Absolute % Cover	Rel	.Strat. over	Indicator Status	Dominance Test worksheet:
2	Tree Stratum (Plot size: 30 m )					
Secondary decides						That are OBL, FACW, or FAC: 8 (A)
4. Tracedum ascendens 2		-		-		Total Number of Dominant
5. Acer rubrum 6.			Ц.,		M 1 2	
5. Acer unbrum 6.		2	Ш_	6.1%	OBL	
6.	5. Acer rubrum	$\frac{1}{2}$	Ш,_	3.0%	FAC_	
8.	6.	0		0.0%		That Are Obl., FACW, OF FAC.
Soliting of Sapiling / Shrub Stratum	7.	0		0.0%		Prevalence Index worksheet:
Sapiling or Sapiling / Shrub Stratum	8.	0		0.0%		Total % Cover of: Multiply by:
Sapiling or Sapiling / Shrub Stratum		33	= Tot	al Cove		
Pinus elliottii		1				
Magnolia virginiana		_,		40.00/	F46344	
0				· ·		3
1			<b>Y</b>		FACW	The species and the second
0		0	Ц_	0.0%		UPL species $0 \times 5 = 0$
0		0		0.0%		Column Totals: 146 (A) 256 (B)
0	5	0		0.0%		
3	6	0		0.0%		rievalence tridex = D/A = 1/33
3.   0   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%   0.0%	7	0		0.0%		Hydrophytic Vegetation Indicators:
50% of Total Cover: 12.5  20% of Total Cover: 5  25  = Total Cover   12.5  20% of Total Cover: 5  25  = Total Cover   12.5  20% of Total Cover: 5  25  = Total Cover   12.5  20% of Total Cover: 5  25  = Total Cover   12.5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of Total Cover: 5  20% of				0.0%		1 - Panid Tost for Hydronhytic Vanctation
Shrub Stratum   (Plot size: 30 m   )	50% of Total Cover: 12.5 20% of Total Cover: 5	25	= Tota	al Cove		
Illex corlaces	The last	23	- 101	ui corci		
Magnolia virginians			_			✓ 3 - Prevalence Index is ≤3.0 ¹
3. Gyrills racemiflora  10		. — — —	<b>_</b> _	56.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Gyrills racemiflora  10	2. Magnolia virginiana	. 10	Ш_	18.9%	FACW	
Persea palustris		10		18.9%	FACW	
Definition of Vegetation Strata:   Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	1 Persea palustris	3		5.7%	FACW	pe present, unless disturbed or problematic.
3.		0		0.0%		Definition of Vegetation Strata:
Sow of Total Cover: 26.5 20% of Total Cover: 10.6 53 = Total Cover (7.6 cm) 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) 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) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and is approximately 20 ft (6 m) or more in height and is in. (7.6 cm) or more in height and is in. (7.6 cm) or more in height and is approximately 20 ft (6 m) or more in height and is in. (7.6 cm) or more in height and is approximately 20 ft (6 m) or more in height and is approximately 20 ft (6 m) or more in height and is approximately 20 ft (6 m) or more in height and is approximately 20 ft (6 m) or more in height and is approximately 20 ft (6 m) or more in height and is approximately 20 ft (6 m) or more in height and is approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7.6 cm) or more in height and less than 3 in. (7				0.0%		Tree - Woody plants, excluding woody vines, .
Herb Stratum (Plot size: 30 m		53 :	= Tota	al Cover	e e e e e e e e e e e e e e e e e e e	
1. Woodwardia areolata 2. Lycopodiella alopecuroides 3.						(7.6 cm) or larger in diameter at breast height (DBH).
1. Woodwards areolates 2. Lycopodicila alopecuroides 10	Herb Stratum (Plot size: 30 m)					Sanling Woody plants, evaluding woody vines
2. Lycopodiella alopecuroides 3.	1 . Woodwardia areolata	15	<b>~</b>	60.0%	OBL	
4.	2. Lycopodiella alopecuroides	10	<b>V</b> _	40.0%	OBL	
5.	3.	0		0.0%		
5.	4.	0		0.0%		
6.				0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
7	6			0.0%		Church Weeds plants evaluating woods since
8	7	0	<u> </u>			
9.					~	approximately of to 20 KeV. to o my in noight
herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  2.					ben 7 30	Herb - All herbaceous (non-woody) plants, including
1.						herbaceous vines, regardless of size, and woody
2.	IU					plants, except woody vines, less than approximately
Some of Total Cover:   12.5   20% of Total Cover:   5   25   = Total Cover   Woody Vine - All woody vines, regardless of height.	11					Sit (1 III) III neight.
Smilax laurifolia   10	2	0	Ш	0.0%		Manada vina Allamanda vinas varandlass of boight
Smilax laurifolia	50% of Total Cover: 12.5 20% of Total Cover: 5	25 =	= Tota	al Cover		vvoody vine - All woody vines, regardless of neight.
Smilax laurifolia	Woody Vine Stratum (Plot size: 30 m					
0		10	<b>V</b> 1	.00.0%	FACW [	
0		.* Na				
0 □ 0.0% 0 □ 0.0% Hydrophytic Vegetation Present? Yes No ○			-		-	
50% of Total Cover: 5 20% of Total Cover: 2 10 = Total Cover Present? Yes No			<u> </u>			
50% of Total Cover: 5 20% of Total Cover: 2 10 = Total Cover Present? Yes No		-		-	_	Hydrophytic
50% of Total Cover: 5 20% of Total Cover. 2 10 = Total Cover		0		0.0%		Vegetation V (A) N- (C)
lemarks: (If observed, list morphological adaptations below).	50% of Total Cover: 5 20% of Total Cover: 2	10 =	= Tota	ıl Cover		Present? TES © NO C
emarks: (Ir observed, list morphological adaptations below).	Table 175 - Land Bat annual Later and Later and American below					
	emarks: (1r observed, list morphological adaptations below).					

Depth -		Matrix		F	ledox Featı				
(inches)	Color (		0/0	Color (moist)	%	Type 1	Loc2	Texture	Remarks
0-4	10YR	3/2						Silt Loam	
4-16	10YR	4/2	98	10YR 6/2	20	D	M	Silt Loam	
								10   V 10	
ype: C=Conc	entration. D	 =Depletio	n. RM <b>≕R</b> educ	ced Matrix, CS=Cove	ered or Coate	d Sand Gra	, ins ²Loca	tion: PL=Pore Lining, M=N	fatrix
lydric Soil In	dicators:							Indicators for Probl	ematic Hydric Soils ³ :
Histosol (A Histic Epipe Black Histic Hydrogen S Stratified La Organic Bo 5 cm Muck Muck Prese 1 cm Muck Depleted Ba Thick Dark Coast Prairi Sandy Muci Sandy Gley Sandy Redo Stripped Ma Dark Surface	edon (A2) c (A3) Sulfide (A4) ayers (A5) dies (A6) (L y Mineral (A ence (A8) (L (A9) (LRR I elow Dark S Surface (A1 le Redox (A k Mineral (S ed Matrix (S ox (S5) atrix (S6)	7) (LRR P, RR U) P, T) Jurface (A: 2) 16) (MLRA 1) (LRR O	, T, U) 11) 150A) , S)	Thin Dark S Loamy Muc Loamy Gley Depleted Mi Redox Dark Depleted Di Redox Depr Marl (F10) ( Depleted Oc Iron-Manga Umbric Surf Delta Ochric Reduced Ve	Surface (F6) ark Surface ( essions (F8) LRR U) chric (F11) (N mese Masses ace (F13) (LL : (F17) (MLR rtic (F18) (M oodplain Soil	LRR S, T, L (1) (LRR O) (1) (LRR O) (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (1) (LRR (1) (LRR (1) (1) (LRR (1) (LRR (1) (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (LRR (1) (	() () () () () () () () () () () () () (	Piedmont Floodpli Anomaious Bright Red Parent Mater Very Shallow Dark Other (Explain in	(LRR S) 18) (outside MLRA 150A,B) ain Soils (F19) (LRR P, S, T) Loamy Soils (F20) (MLRA 153B) al (TF2) c Surface (TF12)
strictive Lay	er (if obse	erved):							
Type: Depth (inche	es):			. 141				Hydric Soil Present?	Yes   No

Trojectjoner Trott Section 17200 read freeding Semicedon	ity/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 36
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace Lo	ocal relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.: 3	0° 24' 5.679" N Long.: 89° 36' 45.177" W Datum: NAD83
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent slop	
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation . , Soil . , or Hydrology . significantly	disturbed? Are "Normal Circumstances" present? Yes   No
Are Vegetation . , Soil . , or Hydrology . naturally pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	Is the Sampled Area
Hydric Soil Present? Yes ● No ○	Vec ( No ( )
Wetland Hydrology Present? Yes  No  No	within a Wetland?
Remarks;	
Plot is 15 feet (+/-) northeast of Up - 36 slight transition into lower a	area.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one 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 Od	or (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ✓ Oxidized Rhizosphere	es along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced	I Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduction	on in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Rer	marks) 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 O No O Depth (inches):	
Saturation Present?  (includes capillary frings)  Yes No Depth (inches):	Wetland Hydrology Present? Yes    No ○
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos,	nrevious inspections) if available:
beschibe Recorded Bata (Scrain gauge, monitoring well, actial photos,	previous inspectation, in available.
Remarks:	

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

			ominant		Sampling Point: Wet - 36
429	Absolute	R		Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m	% Cove	Γ	Cover	Status	Number of Dominant Species
Pinus elliottii	10	✓.	40.0%	FACW	That are OBL, FACW, or FAC: 7 (A)
Nyssa biflora	10	V	40.0%	OBL	THE SHARE OF BOARD
Magnolla virginiana	5	V	20.0%	FACW	Total Number of Dominant Species Across All Strata: 7 (B)
	•		0.0%		, (-)
	_		0.0%		Percent of dominant Species
	_		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/E
			0.0%		Prevalence Index worksheet:
192	0	$\overline{\Box}$	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 12.5 20% of Total Cover: 5		_ T	otal Cove	_	OBL species 28 x 1 = 28
4.1 40 2 ma	- 23	- 11	ocai cove	•	
apling or Sapling/Shrub Stratum (Plot size: 30 m	_,		D		
Pinus elliottii	10	<b>V</b>		FACW	FAC species $0 \times 3 = 0$
Nyssa biflora	<u>15</u>	V		OBL	FACU species $0 \times 4 = 0$
Magnolia virginiana			7.1%	FACW	UPL species $0 \times 5 = 0$
Cyrilla racemiflora	1	Щ	3.6%	FACW	Column Totals: 85 (A) 142 (B
	0	Ш	0.0%		Prevalence Index = B/A = 1.671
184, 71,	0		0.0%		, , , , , , , , , , , , , , , , , , , ,
-	0		0.0%	. 6.	Hydrophytic Vegetation Indicators:
<u></u>	0		0.0%	man file	✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 14 20% of Total Cover: 5.6		= To	otal Cove	r	✓ 2 - Dominance Test is > 50%
10 -0					✓ 3 - Prevalence Index is ≤ 3.0 ¹
hrub Stratum (Plot size: 30 m )  Ilex coriacea	5.5				
		<b>✓</b>	_	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Magnolla virginiana	10	<b>V</b>		FACW	1
Cyrilla racemiflora	. 2		7.4%	FACW	¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
			0.0%	10	<u> </u>
	0		0.0%	m. r	Definition of Vegetation Strata:
	0		0.0%	u	Tree - Woody plants, excluding woody vines,
50% of Total Cover: 13.5 20% of Total Cover: 5.4	27	= To	otal Cove	r	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m )					(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Sarracenia alabamensis	2		66.7%	OBL	Sapling - Woody plants, excluding woody vines,
Lycopodiella alopecuroides	1	$\exists$	33.3%	OBL	approximately 20 ft (6 m) or more in height and less
				UBL	than 3 in. (7.6 cm) DBH.
		H	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
			0.0%	-	than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	닏	0.0%		•
·	0	$\vdash$	0.0%		Shrub - Woody plants, excluding woody vines,
7		$\square$	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
			0.0%		The All technology of the second State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of th
In the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se	0		0.0%	,	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
),	0		0.0%		plants, except woody vines, less than approximately
	0		0.0%		3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 1.5 20% of Total Cover: 0.6	3	= To	tal Cove		Woody vine - All woody vines, regardless of height.
(Plot size: 30 m	<b>9</b> 1 1				
Smllax laurifolia	2	H.	100.0%	FACW	
	. 0	닏.	0.0%		
	0	$\square$ .	0.0%		
	0		0.0%		
			0.0%		Hydrophytic Vegetation
	0	إلسا	0.070	V	
		.لــا To:=	tal Cover	"i==	Present? Yes  No

0-3 10\\ 3-16 10\\ 3-16 10\\ 3-16 10\\ 3-16 10\\ 4	on. D=Depletion. RM=Recors: (A4) (A4)	Redox Features Color (moist) % Type 1 Loc2  10YR 6/6 5 C M  duced Matrix, CS=Covered or Coated Sand Grains 2Loca  Polyvalue Below Surface (S8) (LRR S, T, U) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O)  2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Pledmont Floodplain Soils (F19) (LRR P, S, T)
O-3 10\) 3-16 10\) 3-16 10\) Type: C=Concentration Hydric Soll Indicaton Histosol (A1) Histic Epipedon (A1) Histic Epipedon (A2) Hydrogen Sulfide Stratified Layers (A2) Organic Bodies (A3) Stratified Layers (A3) Hydrogen Sulfide Stratified Layers (A3) Muck Presence (A3)	7R 3/2 100 7R 4/2 95  On. D=Depletion. RM=Recors: A2) (A4) A5) 6) (LRR P, T, U)	duced Matrix, CS=Covered or Coated Sand Grains 2Loca  Polyvalue Below Surface (S8) (LRR S, T, U) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Silt Loam  Silt Loam  Silt Loam  Silt Loam  Silt Loam  And Control of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of
Type: C=Concentration  Hydric Soll Indicate  Histosol (A1)  Histic Epipedon (AB)  Hydrogen Sulfide  Stratified Layers (AB)  Organic Bodies (AB)  5 cm Mucky Mine  Muck Presence (AB)	on. D=Depletion. RM=Recors: (A4) (A4) (A5) (6) (LRR P, T, U)	duced Matrix, CS=Covered or Coated Sand Grains 2Loca  Polyvalue Below Surface (S8) (LRR S, T, U)  Thin Dark Surface (S9) (LRR S, T, U)  Loamy Mucky Mineral (F1) (LRR O)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)	Ition: PL=Pore Lining. M=Matrix  Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T)
Type: C=Concentration Hydric Soil Indicate Histosol (A1) Histic Epipedon (A) Black Histic (A3) Hydrogen Sulfide Stratified Layers (A) Companic Bodies (A) Som Mucky Mine Muck Presence (A)	on. D=Depletion. RM <b>=Re</b> cors:  A2)  (A4)  A5)  6) (LRR P, T, U)	duced Matrix, CS=Covered or Coated Sand Grains 2Loca  Polyvalue Below Surface (S8) (LRR S, T, U)  Thin Dark Surface (S9) (LRR S, T, U)  Loamy Mucky Mineral (F1) (LRR O)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)	Ition: PL=Pore Lining. M=Matrix  Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T)
Histosol (A1) Histosol (A1) Histic Epipedon (A) Black Histic (A3) Hydrogen Sulfide Stratified Layers (A) Organic Bodies (A) 5 cm Mucky Mine Muck Presence (A)	(A4) A5) (6) (LRR P, T, U)	☐ Polyvalue Below Surface (S8) (LRR S, T, U) ☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3)	Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O)  2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Pledmont Floodplain Soils (F19) (LRR P, S, T)
lydric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	(A4) A5) (6) (LRR P, T, U)	☐ Polyvalue Below Surface (S8) (LRR S, T, U) ☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3)	Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O)  2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Pledmont Floodplain Soils (F19) (LRR P, S, T)
lydric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	(A4) A5) (6) (LRR P, T, U)	☐ Polyvalue Below Surface (S8) (LRR S, T, U) ☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3)	Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O)  2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Pledmont Floodplain Soils (F19) (LRR P, S, T)
Hydric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A Organic Bodies (A 5 cm Mucky Mine) Muck Presence (A	(A4) A5) (6) (LRR P, T, U)	☐ Polyvalue Below Surface (S8) (LRR S, T, U) ☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3)	Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O)  2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Pledmont Floodplain Soils (F19) (LRR P, S, T)
Hydric Soil Indicate Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A Organic Bodies (A 5 cm Mucky Mine) Muck Presence (A	(A4) A5) (6) (LRR P, T, U)	☐ Polyvalue Below Surface (S8) (LRR S, T, U) ☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3)	Indicators for Problematic Hydric Soils ³ :  1 cm Muck (A9) (LRR O)  2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Pledmont Floodplain Soils (F19) (LRR P, S, T)
Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Stratified Layers (A  Organic Bodies (A  5 cm Mucky Mine  Muck Presence (A	(A4) A5) 6) (LRR P, T, U)	☐ Thin Dark Surface (S9) (LRR S, T, U) ☐ Loamy Mucky Mineral (F1) (LRR O) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3)	2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Piedmont Floodplain Soils (F19) (LRR P, S, T)
Black Histic (A3) Hydrogen Sulfide Stratified Layers ( Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	(A4) A5) 6) (LRR P, T, U)	Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	2 cm Muck (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Piedmont Floodplain Soils (F19) (LRR P, S, T)
Hydrogen Sulfide Stratified Layers ( Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	A5) 6) (LRR P, T, U)	Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Reduced Vertic (F18) (outside MLRA 150A,B) Pledmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers ( Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	A5) 6) (LRR P, T, U)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers ( Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	A5) 6) (LRR P, T, U)	Depleted Matrix (F3)	
Organic Bodies (A 5 cm Mucky Mine Muck Presence (A	6) (LRR P, T, U)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)
5 cm Mucky Mine Muck Presence (A			Red Parent Material (TF2)
Muck Presence (A	, - , , , - , - , - , - , - , -	Depleted Dark Surface (F7)	
<u> </u>	8) (LRR U)	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)     □ Str. (5 this is Bound to)
acv (∪>) (		Marl (F10) (LRR U)	Uther (Explain in Remarks)
Depleted Below D		<b>=</b> ' ' ' ' '	
Thick Dark Surfac	, ,	Depleted Ochric (F11) (MLRA 151)	
		☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
	x (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
_	al (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	³ Indicators of hydrophytic vegetation and
☐ Sandy Gleyed Mat		Reduced Vertic (F18) (MLRA 150A, 150B)	wetland hydrology must be present,
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 149A)	unless disturbed or problematic.
Stripped Matrix (S	•	Anomalous Bright Loamy Soils (F20) (MLRA 14)	9A, 153C, 153D)
☐ Dark Surface (S7)	(LRR P, S, T, U)		
estrictive Layer (if	observed):		
Туре:			
Depth (inches):			Hydric Soil Present? Yes   No
emarks:	· ·		

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 24-C	Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 37	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): none Slope: 0.0 % /	/ 0.0°
	30° 24′ 1.648" N Long.: 89° 36′ 55.679" W Datum: NA	4D83
Soll Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	emining the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state	
Are climatic/hydrologic conditions on the site typical for this time of year		
		0
	problematic? (If needed, explain any answers in Remarks.)	
	impling point locations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes No O	Is the Sampled Area	
Hydric Soil Present? Yes  No	within a Wetland? Yes  No	
Wetland Hydrology Present? Yes   ● No ○	within a wettand:	
Remarks: Low drainage area - part of the overall main NE-SW trending drainage	ge way conveying surface water through the central to southern part of AO	I.
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)	
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)	=
Surface Water (A1) Aquatic Fauna (B1	L3) Sparsely Vegetated Concave Surface (B8)	
High Water Table (A2)  Marl Deposits (B15)		
Saturation (A3)		l
	neres along Living Roots (C3)	
Sediment Deposits (B2)  Presence of Reduc	= ******	
	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)  Thin Muck Surface		
☐ Iron Deposits (B5) ☐ Other (Explain in F☐ Inundation Visible on Aerial Imagery (B7)	Remarks) Shallow Aquitard (D3)  FAC-Neutral Test (D5)	
✓ Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)	
Field Observations:	Springs and moss (Do) (ERC 1, 0)	
Surface Water Present? Yes No Depth (inches):		
Cabusatian December 2	Wetland Hydrology Present? Yes  No	
(includes capillary fringe) 1es No C Deput (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:	
Remarks:		
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(District 20 cm	Absolute			Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 m )	% Cover		over	Status	Number of Dominant Species		
1. Pinus elilottii			34.5%	FACW	That are OBL, FACW, or FAC: 8 (A)		
2. Nyssa biffora		<b>-</b>	51.7%	OBL	Total Number of Dominant		
3 Taxodium ascendens	3	Н.	10.3%	OBL	Species Across Ali Strata: 8. (B)		
4. Magnolia virginiana	1	Η-	3.4%	FACW	Percent of dominant Species		
5		<u> </u>	0.0%	. (11	That Are OBL, FACW, or FAC: 100.0% (A/B)		
6.	0		0.0%	-			
7.		닏	0.0%		Prevalence Index worksheet:		
8.	0	Ш.	0.0%	4 444	Total % Cover of: Multiply by:		
50% of Total Cover: 14.5 20% of Total Cover: 5.8	29 =	= Tot	al Cove	г	OBL species 39 x 1 = 39		
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	}				FACW species $66 \times 2 = 132$		
1 Pinus elliottii	. 3		14.3%	FACW	FAC species $0 \times 3 = 0$		
2. Nyssa biflora	10	✓	47.6%	OBL	FACU species $0 \times 4 = 0$		
3. Magnolla virginiana	7	<b>✓</b>	33.3%	FACW	UPL species $0 \times 5 = 0$		
4. Taxodium ascendens	1		4.8%	OBL	Column Totals: 105 (A) 171 (B)		
5.	0		0.0%				
6.	0		0.0%		Prevalence Index = B/A = 1.629		
7	0	$\Box$	0.0%		Hydrophytic Vegetation Indicators:		
8.	0		0.0%				
W		Tet	al Cove		✓ 1 - Rapid Test for Hydrophytic Vegetation		
50% of Total Cover: 10.5 20% of Total Cover: 4.2	21 =	= 100	ai cove		✓ 2 - Dominance Test is > 50%		
Shrub Stratum (Plot size: 30 m		_			✓ 3 - Prevalence Index is ≤3.0 ¹		
1. Ilex corlacea			60.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
2. Cyrilla racemiflora	10	✓ _	30.3%	FACW			
3. Magnolla virginiana	3 _		9.1%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
4.	0		0.0%		be present, unless disturbed of problematic.		
5	0		0.0%		Definition of Vegetation Strata:		
6.	0		0.0%		Tree - Woody plants, excluding woody vines,		
50% of Total Cover: 16.5 20% of Total Cover: 6.6	33 =	= Tota	al Cove		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
(Diet size: 20 m					(7.5 cm) or larger in diameter at breast neight (25h).		
Herb Stratum (Plot size: 30 m	_			223	Sapling - Woody plants, excluding woody vines,		
1. Woodwardia areolata			25.0%	OBL	approximately 20 ft (6 m) or more in height and less		
2 Arundinaria tecta		_=	50.0%	FACW	than 3 in. (7.6 cm) DBH.		
3. Sarracenia alabamensis	2	Ц-	10.0%	OBL	B. E. (Block Month about a controller views land		
4. Carex lurida	1	Ц.,	5.0%	OBL	Sapling/Shrub - Woody plants, excluding vines, less than 3 in, DBH and greater than 3.28 ft (1m) tall.		
5. Dichanthelium scabriusculum	2	Щ_	10.0%	OBL	That of the special of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the special state of the spe		
6.	0 _	Щ	0.0%	m n	Shrub - Woody plants, excluding woody vines,		
7	. 0	L.	0.0%	-	approximately 3 to 20 ft (1 to 6 m) in height.		
8	0[		0.0%	n e la			
9.	_ 0_ [		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody		
10	0 [		0.0%		plants, except woody vines, less than approximately		
11	0		0.0%		3 ft (1 m) in height.		
12.	0		0.0%				
50% of Total Cover: 10 20% of Total Cover: 4		: Tota	al Cover		Woody vine - All woody vines, regardless of height.		
Woody Vine Stratum (Plot size: 30 m				· ·			
1 Smilax laurifolia	<u>2</u> . [		100.0%	FACW			
2.		-	0.0%				
3			0.0%				
4			0.0%		Medanahadia		
5	<u></u>		0.0%		Hydrophytic Vegetation		
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	Tota	al Cover		Present? Yes  No		
	, v y						
Remarks: (If observed, list morphological adaptations below).							
*Indicator suffix = National status or professional decision assigned because Re	eolonai status n	ot defi	ined by FV	vs.			

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Deptited Bellow Derivative   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Section   Secti	rofile Descr	iption: (Des	scribe to	the depth	needed to d	locument	the Indic	cator or co	onfirm the	absence of Indicators.)		
9-5 10/9R 2/1 100	Depth	pth Matrix Redox Fe										
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains    **Location: PL=Pore Lining. M=Matrix ydric Soil Indicators:   Histosoi (A1)					Color (	moist)	0/0	Type 1	Loc2		Remarks	
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix  ydric Soil Indicators:    Histosoi (A1)	0-5	10YR	2/1	100			NV 3 %			Sandy Clay Loam		
Histosol (A1)	5-20	10YR	3/1	97	10YR	7/1	. 3	D	. M	Silty Clay Loam	м.	
Indicators for Problematic Hydric Soils 3:    Histosol (A1)		I DE FIVE								-		
Histosol (A1)			 =Depletio	n. RM= <b>Red</b> u	ced Matrix, C	S=Covere	ed or Coate	 ed Sand Gra	ains ² Loca			
Histic Epipedon (A2)  Black Histic (A3)  Coamy Mucky Mineral (F1) (LRR O)  Depleted Matrix (F2)  Depleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F7)  Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Depleted Ochric (F13) (MLRA 151)  Tron-Manganese Masses (F12) (LRR O, P, T)  Depleted Ochric (F13) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Depleted Ochric (F13) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 150A)  Depleted Ochric (F18) (MLRA 150A)  Sandy Redox (S5)  Delta Ochric (F17) (MLRA 150A)  Depleted Ochric (F18) (MLRA 150A)  Depleted Ochric (F18) (MLRA 150A)  Depleted Ochric (F18) (MLRA 150A)  Depleted Ochric (F18) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F18) (MLRA 150A, 150B)  Type:  Depth (inches):  Hydric Soil Present? Yes No	Histosol (A	A1)			Poly	value Belo	ow Surface	(S8) (LRR	S, T, U)			
Black Histic (A3)	Histic Epip	edon (A2)										
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Stratified Layers (A5)  Depleted Matrix (F3)  Anomalous Bright Loamy Soils (F20) (MLRA 1538)  Organic Bodies (A6) (LRR P, T, U)  Redox Dark Surface (F6)  Red Parent Material (TF2)  Strom Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Wery Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U)  Redox Depressions (F8)  Other (Explain in Remarks)  Thick Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 150A)  Stripped Matrix (S6)  Delta Cortic (F17) (MLRA 150A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Black Histi	c (A3)			Loa	my Mucky	Mineral (F	1) (LRR 0)	)	_ ` '	• •	
Stratified Layers (A5)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Red Parent Material (TF2)  S cm Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Wery Shallow Dark Surface (TF12)  Muck Presence (A8) (LRR U)  Redox Depressions (F8)  Other (Explain in Remarks)  1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Hydrogen	Sulfide (A4)			Loa	my Gleyed	Matrix (F	2)				
S cm Mucky Mineral (A7) (LRR P, T, U)    Depleted Dark Surface (F7)	Stratified I	ayers (A5)			☐ Dep	leted Matr	tx (F3)					
5 cm Mucky Mineral (A7) (LRR P, T, U)	Organic B	odies (A6) (Li	RR P, T, U	J)	Red	ox Dark Si	urface (F6)	)				
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)  strictive Layer (if observed): Type: Depth (inches):  Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR P, T, U) Umbric Surface (F13) (LRR P, T, U)  Umbric Surface (F13) (LRR P, T, U)  January Construction (F17) (MLRA 151) January Construction (F17) (MLRA 151) January Construction (F17) (MLRA 151) January Construction (F17) (MLRA 149A) Unless disturbed or problematic.  Strictive Layer (if observed): Type: Depth (inches):  Hydric Soil Present? Yes No	5 cm Mucl	cy Mineral (A	7) (LRR P	, T, U)	☐ Dep	leted Dark	Surface (	F7)		☐ Very Shallow Dark Surface (TF12)		
Depleted Below Dark Surface (A11)  Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Umbric Surface (F13) (LRR P, T, U)  Delta Ochric (F17) (MLRA 151)  Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No	Muck Pres	ence (A8) (Ll	rr u)		Red	ox Depres	sions (F8)			Other (Explain in	Remarks)	
Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes  No	1 cm Mucl	( (A9) (LRR P	P, T)		Mar	l (F10) (LF	RR U)					
Coast Prairie Redox (A16) (MLRA 150A)  Sandy Muck Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes No				11)	Dep	leted Ochr	ric (F11) (ľ	MLRA 151)				
Sandy Muck Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F17) (MLRA 151)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Deta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No	Thick Dark	Surface (A1	2)		Iron	-Mangane	se Masses	(F12) (LRI	R O, P, T)			
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Type:  Depth (inches):	Coast Prai	rie Redox (A1	l6) (MLRA	150A)	Uml	oric Surfac	e (F13) (L	RR P, T, U)	)			
Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Strictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present?  Wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present?  Yes  No	Sandy Muc	k Mineral (S:	1) (LRR O	, S)	☐ Delt	a Ochric (I	F17) (MLR	A 151)		<b>1.</b>	. F. L	
Sandy Redox (S5)	Sandy Gle	yed Matrix (S	4)		Red	uced Verti	c (F18) (M	ILRA 150A,	150B)			
Dark Surface (S7) (LRR P, S, T, U)  **strictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  No	Sandy Red	ox (S5)			Pied	mont Floo	dplain Soil	ls (F19) (M	LRA 149A)			
strictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Stripped M	latrix (S6)			Ano	majous Bri	ight Loamy	Soils (F20	) (MLRA 149	9A, 153C, 153D)		
Type:	Dark Surfa	ce (S7) (LRR	P, S, T, l	J)								
Type:	etrictiva I a	ver (if obse	erved\:							<u></u> .		
Depth (inches): Hydric Soil Present? Yes No C		yer (ii obac	aveu).									
		es):								Hydric Soil Present?	Yes 💿 No 🔾	
enarks:												
	marks											

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hand	cock Sampling Date: 24-Oct-16	
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 38	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range:	<b>5</b> 32 <b>T</b> 7 <b>S R</b> 16 W	
Landform (hillslope, terrace, etc.): Floodplain	ocal relief (concave, convex,	none): none Slope: 0.0 % / 0.0 °	
Subregion (LRR or MLRA): LRR T Lat.:	30° 23' 54.543" N Lor	ng.: 89° 37' 1.688" W Datum: NAD83	
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	70 23 3 H3 H3 H	NWI classification: PFO 1/4 C	
	yes  No		
Are climatic/hydrologic conditions on the site typical for this time of year	-	(If no, explain in Remarks.)	
		al Circumstances" present? Yes • No •	
Are Vegetation , Soil , or Hydrology  naturally pr	•	, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing san	ipling point locations,	transects, important features, etc.	
Hydrophytic Vegetation Present? Yes  No  No	Is the Sampled Area		
Hydric Soil Present? Yes ● No ○		Yes   No	
Wetland Hydrology Present? Yes ● No ○	within a Wetland?		
Remarks:			
Low drainage area approximately 200 feet West of Up - 38.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)	
Primary Indicators (minimum of one 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 O	• •	✓ Moss Trim Lines (B16)	
	res along Living Roots (C3)	Dry Season Water Table (C2)	
Sediment Deposits (B2)  Presence of Reduce		Crayfish Burrows (C8)	
	ion in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (84)  Thin Muck Surface (	•	Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Other (Explain in Re	·marks)	☐ Shallow Aquitard (D3)  FAC-Neutral Test (D5)	
Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)	
	<u> </u>	Springfruit friess (D6) (LRK 1, 0)	
Field Observations:  Surface Water Present? Yes No   Depth (inches):			
Contract Protect Protection			
	Wetland Hy	drology Present? Yes   No	
Saturation Present? (includes capillary fringe)  Yes No Depth (inches):	. 12		
Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if avi	ailable:	
Remarks:	-		
İ			

(Diot size) 20 m		Rel.Stra		Dominance Test worksheet:		
Free Stratum (Plot size: 30 m )	% Cove			Number of Dominant Species		
Pinus elliottii	10			That are OBL, FACW, or FAC: 8 (A)		
Nyssa biflora	10			Total Number of Dominant		
Taxodium ascendens	5	17.2		Species Across All Strata: 8 (B)		
Magnolia virginiana		10.3		Percent of dominant Species		
Acer rubrum		3.4		That Are OBL, FACW, or FAC: 100.0% (A/B)		
Tay		0.0				
	0	0.0		Prevalence Index worksheet:		
	0	0.0		Total % Cover of: Multiply by:		
50% of Total Cover: 14.5 20% of Total Cover: 5.8	29	= Total Co	over	OBL species $41 \times 1 = 41$		
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	)	_		FACW species <u>79</u> x 2 = 158		
Pinus elliottii	10	<b>✓</b> 35.7	% FACW	FAC species 16 x 3 = 48		
Magnolia virginiana		17.9	% FACW	FACU species $0 \times 4 = 0$		
Taxodium ascendens	8	28.6	% OBL	UPL species $0 \times 5 = 0$		
Acer rubrum	5	17.9	% FAC	Column Totals: 136 (A) 247 (B)		
	0	0.0	%			
	0	0.0	%	Prevalence Index = B/A = 1.816		
	0	0.0	%	Hydrophytic Vegetation Indicators:		
•	0	0.0	%	1 - Rapid Test for Hydrophytic Vegetation		
50% of Total Cover: 14 20% of Total Cover: 5.6	28	= Total Co	очег	2 - Dominance Test is > 50%		
Shrub Stratum (Plot size: 30 m )				✓ 3 - Prevalence Index is ≤3.0 ¹		
	30	<b>✓</b> 62.5	% FACW	<b>!</b>		
*			The second second	Problematic Hydrophytic Vegetation ¹ (Explain)		
Morella cerifera	10			¹ Indicators of hydric soil and wetland hydrology must		
Magnolia virginiana		10.4	4 /	be present, unless disturbed or problematic.		
Taxodium ascendens		6.3	************	Definition of Manufaction Strate.		
Section 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 an	0			Definition of Vegetation Strata:		
		0.09	*	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.		
50% of Total Cover: 24 20% of Total Cover: 9.6	48	= Total Co	over	(7.6 cm) or larger in diameter at breast height (DBH).		
lerb Stratum (Plot size: 30 m )						
1 Arundinaria tecta	10	✓ 35.7	% FACW	Sapling - Woody plants, excluding woody vines,		
2 Sarracenia alabamensis	-	10.7	% OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
3. Dichantheilum scabriusculum		7.19	% OBL			
4. Hypericum cistifolium	3	10.7		Sapling/Shrub - Woody plants, excluding vines, less		
5. Lycopodiella alopecuroides	10	35.7		than 3 in. DBH and greater than 3.28 ft (1m) tall.		
5.	0	0.09	***			
7		0.09		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.		
3.		0.09		approximately o to 20 it (1 to 0 iii) ii i ioigita		
9		0.09		Herb - All herbaceous (non-woody) plants, including		
)		0.09		herbaceous vines, regardless of size, and woody		
J	0	0,09		plants, except woody vines, less than approximately 3 ft (1 m) in height.		
			**************************************	Ott (Tilly in Height:		
2	0_	0.09		Woody vine - All woody vines, regardless of height.		
50% of Total Cover: 14 20% of Total Cover: 5.6	28	= Total Co	ver	The same state of the same state of the same		
Yoody Vine Stratum (Plot size: 30 m						
Smilax laurifolia	3	100.0	% FACW			
	0	0.09	/6			
		0.09	/o			
h de acces.	17.6.1	0.09	6			
	0	0.09	/o	Hydrophytic		
				Vegetation Present? Yes  No		
60% of Total Cover: 1.5 20% of Total Cover: 0.6			IVEF .	riesellt 100 0 100 0		

COTI				
	~	~	-	Г.

Sampling Point: Wet - 38 Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators,) Matrix **Redox Features** Depth (inches) Color (moist) 0/0 Color (moist) Loc2 Texture % Type 0-4 10YR 3/2 100 Silt Loam 4-16 10YR 97 10YR Silt Loam ¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) ☐ Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) ☐ Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, ✓ Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: No O **Hydric Soil Present?** Yes 💿 Depth (inches): Remarks: depleted matrix with redox features present in soil profile.

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 39
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
	30° 23' 47.542" N Long.: 89° 37' 8.862" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes 🖲 No 🔾 (If no, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significant	tly disturbed? Are "Normal Circumstances" present? Yes   No
	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sal	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No O	Is the Sampled Area
Hydric Soil Present? Yes  No	Van ( Na (
Wetland Hydrology Present? Yes  No	within a Wetland?
to flow through area. Water in turn backs up to abnormally high lev	nd) has split wetland and drainage culverts are sufficiently designed to allow water vies to the north of Keller Road. Area is 30-40 ft North of Keller Road.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1:	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	=
Saturation (A3) Hydrogen Sulfide C	_ , ,
	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	
	ction in Tilled Soils (C6)
Algal Mat or Crust (B4)  Thin Muck Surface	
☐ Iron Deposits (B5) ☐ Other (Explain in R☐ 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):	l
, , , , , , , , , , , , , , , , , , ,	
Soper (manas):	Wetland Hydrology Present? Yes  No
(includes capillary fringe) Yes No Depth (inches):	9
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	

			ominant Species? .		Sampling Point: Wet - 39
		e R	el.Strat.	Indicator	Dominance Test worksheet:
(Plot size: 30 m	% Cove	_	Cover	Status	Number of Dominant Species
Pinus elliottii Nyssa biflora	10	<b>✓</b>		FACW	That are OBL, FACW, or FAC: 6 (A)
	20	V	54.1%	OBL	Total Number of Dominant
Magnolla virginiana	5		13.5%	FACW	Species Across All Strata: 6 (B)
Acer rubrum	2	Ш	5.4%	FAC	
	. 0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
	0		0.0%		That Are Obl., FACW, or FAC. 100 078.
1.47.4%	0		0.0%		Prevalence Index worksheet:
	.0.		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= T	otal Cove	r	OBL species 26 x 1 = 26
apling or Sapling/Shrub Stratum (Plot size: 30 m	}				FACW species 70 x 2 = 140
Cyrilla racemifiora	40	V	50.0%	FACW	FAC species $5 \times 3 = 15$
Pinus elliottii	2		10.0%	FACW	FACU species $0 \times 4 = 0$
Nyssa biffora		V	25.0%	OBL	UPL species 0 x 5 = 0
Acer rubrum	_	$\overline{\Box}$	15.0%	FAC	4-1
CIT C	Υ	$\overline{\Box}$	0.0%		Column Totals: 101 (A) 181 (B)
4	0	П	0.0%		Prevalence Index = B/A = 1.792
****	0	H	0.0%		Hydrophytic Vegetation Indicators:
	- 0	H	0.0%		
					✓ 1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 10 20% of Total Cover: 4	20	= To	otal Cove	·	✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex glabra	20	<b>V</b>	90.9%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilla racemiflora	2		9.1%	FACW	
	_		0.0%	.,,	$^{ m 1}$ Indicators of hydric soil and wetland hydrology mus
			0.0%	- 124	be present, unless disturbed or problematic.
					Definition of Vegetation Strata:
	12	1	0.0%		Deminion of Acceptation Strata.
		H	0.0%	-	_
	0	= To	0.0%	-	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
0% of Total Cover: 11 20% of Total Cover: 4.4	. 0	_ = To		end to	Tree - Woody plants, excluding woody vines,
0% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )	22		0.0% otal 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).
o% of Total Cover: 11 20% of Total Cover: 4.4  crb Stratum (Plot size: 30 m )  Arundinaria tecta	22	= 70	0.0% otal Cover 95.2%	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
o% of Total Cover: 11 20% of Total Cover: 4.4  orb Stratum (Plot size: 30 m )  Arundinaria tecta Scirpus expansus	20		0.0% otal Cover 95.2% 4.8%		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,
0% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )  Arundinaria tecta  Scirpus expansus	20 1		0.0% otal Cover 95.2% 4.8% 0.0%	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.
0% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )  Arundinaria tecta  Scirpus expansus	20 1		0.0% otal Cover 95.2% 4.8% 0.0% 0.0%	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.  Sapling/Shrub - Woody plants, excluding vines, less
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0% 0.0%	FACW 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.
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0%	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0%	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0 0 0 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0% 0.0% 0.0%	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0 0 0 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0%	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb - All herbaceous (non-woody) plants, including
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0 0 0 0 0 0		0.0% 95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0%	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0 0 0 0 0 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus	20 1 0 0 0 0 0 0		0.0% otal Cover 95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	FACW 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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
60% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )  Arundinaria tecta  Scirpus expansus	20 1 0 0 0 0 0 0		0.0% ptal Cover  95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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
0% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )  Arundinaria tecta  Scirpus expansus  0% of Total Cover: 10.5 20% of Total Cover: 4.2	20 1 0 0 0 0 0 0		0.0%  95.2%  4.8%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
0% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )  Arundinaria tecta Scirpus expansus  0% of Total Cover: 10.5 20% of Total Cover: 4.2  boody Vine Stratum (Plot size: 30 m )	20 1 0 0 0 0 0 0 0		0.0% ptal Cover  95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
o% of Total Cover: 11 20% of Total Cover: 4.4  arb Stratum (Plot size: 30 m )  Arundinaria tecta Scirpus expansus  o% of Total Cover: 10.5 20% of Total Cover: 4.2  cody Vine Stratum (Plot size: 30 m )  Smilax laurifolia	20 1 0 0 0 0 0 0 0 0 0 0		0.0%  95.2%  4.8%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  100.0%	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
0% of Total Cover: 11 20% of Total Cover: 4.4  erb Stratum (Plot size: 30 m )  Arundinaria tecta Scirpus expansus  0% of Total Cover: 10.5 20% of Total Cover: 4.2  coody Vine Stratum (Plot size: 30 m )  Smilax laurifolia	20 1 0 0 0 0 0 0 0 0 0 0		0.0%  95.2%  4.8%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  1.00%  0.0%  0.0%  0.0%	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
o% of Total Cover: 11 20% of Total Cover: 4.4  orb Stratum (Plot size: 30 m )  Arundinaria tecta Scirpus expansus  o% of Total Cover: 10.5 20% of Total Cover: 4.2  oody Vine Stratum (Plot size: 30 m )  Smilax laurifolia	20 1 0 0 0 0 0 0 0 0 0 0 21		0.0%  95.2%  4.8%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
0% of Total Cover: 11 20% of Total Cover: 4.4 erb Stratum (Plot size: 30 m ) Arundinaria tecta Scirpus expansus  0% of Total Cover: 10.5 20% of Total Cover: 4.2 coody Vine Stratum (Plot size: 30 m ) Smilax laurifolia	20 1 0 0 0 0 0 0 0 0 0 0 0 21		0.0%  ptal Cover  95.2%  4.8%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%  0.0%	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.
co% of Total Cover: 11 20% of Total Cover: 4.4  lerb Stratum (Plot size: 30 m )  Arundinaria tecta  Scirpus expansus  3.  3.  3.  3.  3.  4.  5.  6.  7.  7.  8.  9.  9.  9.  9.  9.  9.  9.  9.  9	20 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>∀</b> □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	0.0% otal Cover  95.2% 4.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	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.  Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.  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.

SOIL Sampling Point: Wet - 39 Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.) **Matrix Redox Features** Depth (inches) Color (moist) % Color (moist) % Type 1 Loc2 Remarks 0-8 10YR 100 3/1 Sandy Clay Loam 8-18 10YR 95 5/3 10YR Sandy Clay Loam 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL≂Pore Lining. M=Matrix Hydric Soll Indicators: Indicators for Problematic Hydric Soils 3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) ☐ Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Lavers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ─ Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) ☐ Marl (F10) (LRR IJ) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) ☐ Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Yes 

No **Hydric Soil Present?** Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 40
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 s R 16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
/N.e.v	30° 23' 43.163" N Long.: 89° 36' 49.831" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: PFO 1/4 C
	- 6 - 0
Are climatic/hydrologic conditions on the site typical for this time of year	
	The Holling of Country Product.
Are Vegetation, Soil, or Hydrology naturally p	problematic? (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 ● No ○	within a Wetland? Yes  No
Wetland Hydrology Present? Yes  No	within a wetland?
Remarks: Bottom drainage area approximately 50-feet north of UKP - 40. Watthat restrict water flow to the south.	ater comes through this area but appears to be impacted by road and small culvert
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B1	.5) (LRR U)
Saturation (A3) Hydrogen Sulfide (	Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizosph	neres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	_ , , ,
	ction in Tilled Soils (C6)
Algal Mat or Crust (B4)	
Iron Deposits (B5) Other (Explain in F	
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):	Wetland Hydrology Present? Yes  No
Saturation Present? (includes capillary fringe)  Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	

			ominant species?		Sampling Point: Wet - 40
Tree Stratum (Plot size: 30 m )	Absolut	e R	tel.Strat. Cover	Indicator Status	Dominance Test worksheet:
Nyssa biflora	20	<b>V</b>		OBL	Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)
Liquidambar styraciflua	5	Ē	17.2%	FAC	That are OBL, FACW, or FAC:
Ouescue plans	3		10.3%	FAC	Total Number of Dominant
Telephone as his	1		3.4%	FAC	Species Across All Strata: 7 (B)
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	0		0.0%		Percent of dominant Species
	0	F	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B
	0		0.0%		Prevalence Index worksheet:
	0	$\overline{}$	0.0%	V	
0% of Total Cover: 14.5 20% of Total Cover: 5.8			otal Cove		Total % Cover of: Multiply by:  OBL. species 43 x 1 = 43
1 2 2		- 1	OLAI COVE	1	
pling or Sapling/Shrub Stratum (Plot size: _30 m Nyssa biflora		. 4			FACW species $1 \times 2 = 2$
+ F * 6 + 1 ± 71 ■		<b>V</b>		OBL	FAC species x 3 =
Quercus nigra		<b>V</b>	41.7%	FAC	FACU species 0 x 4 = 0
Acer rubrum		Н	12.5%	FAC	UPL species $0 \times 5 = 0$
Triadica sebifera			4.2%	FAC	Column Totals: 81 (A) 156 (B)
			0.0%		Prevalence Index = B/A = 1.926
•			0.0%		
	0		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 12 20% of Total Cover: 4.8	24	= Te	otal Cove	r	✓ 2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index Is ≤3.0 1
Quercus nigra	5	<b>V</b>	41.7%	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
Acer rubrum	5	V	41.7%	FAC	
Triadica sebifera	1		8.3%	FAC	¹ Indicators of hydric soil and wetland hydrology mus
Diospyros virginiana		$\Box$	8.3%	FAC	be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
The second to the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	0		0.0%		Tree - Woody plants, excluding woody vines,
0% of Total Cover: 6 20% of Total Cover: 2.4	12	= To	tal Cove		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
erb Stratum (Plot size: 30 m )				111.0.72.21	Sapling - Woody plants, excluding woody vines.
Typha lattifolia		V	76.9%	OBL	approximately 20 ft (6 m) or more in height and less
Scirpus expansus		V	23.1%	OBL	than 3 in. (7.6 cm) DBH.
·	0	$\sqcup$	0.0%		
	O	$\square$	0.0%	•	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	$\sqcup$	0.0%		and one borrand greater than 3.20 ft (111) tail.
	0	Ц.	0.0%		Shrub - Woody plants, excluding woody vines,
		$\sqsubseteq$	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
	0	$\sqcup$	0.0%		Hart All barbaras of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state
	. 0	$\sqsubseteq$	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
· · · · · · · · · · · · · · · · · · ·	0		0.0%		plants, except woody vines, less than approximately
	0	Ш_	0.0%	-,	3 ft (1 m) in height.
	0		0.0%		
	13	= То	tal Cover		Woody vine - All woody vines, regardless of height.
% of Total Cover: 6.5 20% of Total Cover: 2.6				-	
% of Total Cover: 6.5 20% of Total Cover: 2.6  ody Vine Stratum (Plot size: 30 m )	<u> </u>		EC 701	EAC	
% of Total Cover: 6.5 20% of Total Cover: 2.6  ody Vine Stratum (Plot size: 30 m )  Vitts rotundifolia			66.7%	FAC	
% of Total Cover: 6.5 20% of Total Cover: 2.6  ody Vine Stratum (Plot size: 30 m )  Vitts rotundifolia  Smilax laurifolia	1		33.3%	FACW FACW	
% of Total Cover: 6.5 20% of Total Cover: 2.6  ody Vine Stratum (Plot size: 30 m )  Vitis rotundifolia  Smilax laurifolia	1 0		33.3% 0.0%		
% of Total Cover: 6.5 20% of Total Cover: 2.6  cody Vine Stratum (Plot size: 30 m )  Vitis rotundifolia  Smilax laurifolia	1 0 0		33.3% 0.0% 0.0%		Hydrophytic
% of Total Cover: 6.5 20% of Total Cover: 2.6  cody Vine Stratum (Plot size: 30 m )  Vitis rotundifolia  Smilax Jaurifolia	0 0 0		33.3% 0.0%		Hydrophytic Vegetation Present?  Yes  No

SOIL									Samp	oling Point: Wet - 40
Profile Descr	iption: (De	scribe to	the depth	needed to d	ocument	the indi	cator or c	onfirm the	absence of indicators.	)
Depth		Matrix			. Re	dox Feat				
(inches)	Color (	moist)	%	Color (	moist)	°/o	Type 1	Loc2	Texture	Remarks
0-4	10YR	3/1	98	10YR	7/2	2	D	М	Silt Loam	
4-18	10YR	4/2	90	10YR	7/2	10	D	M	Silt Loam	-
14					р мо					
Type: C=Conc		=Depletio	n. RM=Redu	iced Matrix, C	 S=Covere	ed or Coate	ed Sand Gr	rains ² Loca	ation: PL=Pore Lining. M	
Histosol (A				□ poly	valua Bak	w Surface	(CO) (I DI	1 C T 11	_	blematic Hydric Soils ³ :
Histic Epip	•					ow Surrace face (S9) (			1 cm Muck (A9)	•
Black Histie						Mineral (F			2 cm Muck (A10	
	Sulfide (A4)					Matrix (F		)		(F18) (outside MLRA 150A,B)
	ayers (A5)				leted Matr	•	<b>2</b> j		_	plain Soils (F19) (LRR P, S, T)
	odies (A6) (L	RRPTI	n							ht Loamy Soils (F20) (MLRA 153B)
	ry Mineral (A					urface (F6)			Red Parent Mat	` '
	ence (A8) (L		, 1, 0)			Surface (	F/)			ark Surface (TF12)
_	(A9) (LRR F	-				sions (F8)			Uther (Explain i	n Remarks)
_	Below Dark S		(4)		(F10) (LF	-				
		-	11)			ic (F11) (N				
	Surface (A1					se Masses				
	ie Redox (A					e (F13) (L		)		
	k Mineral (S		, S)	Delta	a Ochric (I	F17) (MLR.	A 151)		3 _{Tardinaha}	er of hardroom tier and
-	ed Matrix (S	<del>34</del> )		☐ Redu	iced Verti	c (F1 <b>8)</b> (M	LRA 150A,	, 150B)		s of hydrophytic vegetation and I hydrology must be present,
✓ Sandy Red	• •			Pied	mont Floo	dplain Soil	s (F19) (M	ILRA 149A)		ss disturbed or problematic.
✓ Stripped M	atrix (S6)			Anor	nalous Bri	ight Loamy	Soils (F20	D) (MLRA 149	9A, 153C, 153D)	
Dark Surfac	ce (S7) (LRR	l P, S, T, l	J)							
Restrictive La	yer (if obse	erved):								
Туре:										
Depth (inche	es):								Hydric Soil Present?	Yes 💿 No 🔾
Remarks:								<del>:</del>		

Project/Site: NASA - Stennis: 1,100 Acre Wetland Delineation Ci	ity/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 41
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 S R 16 W
10.4	ocal relief (concave, convex, none): None Slope: 0.0 % / 0.0 * 0° 23' 46.616" N Long.: 89° 36' 57.298" W Datum: NAD83
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	NWI classification: PFO 1/4 B
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly or	
Are Vegetation, Soil, or Hydrology naturally pro	me nome of outloading product.
SUMMARY OF FINDINGS - Attach site map showing same	
Hydrophytic Vegetation Present? Yes  No  Hydric Soil Present? Yes  No  Wetland Hydrology Present? Yes  No  Yes  No  Remarks:	Is the Sampled Area within a Wetland? Yes  No
HYDROLOGY Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Presence of Reduced  Thin Muck Surface (C  Other (Explain in Rem  Depth (inches):	or (C1)  Moss Trim Lines (B16)  s along Living Roots (C3)  Dry Season Water Table (C2)  Iron (C4)  Crayfish Burrows (C8)  n in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  (includes capillary fringe) Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos,	Wetland Hydrology Present? Yes No O
Remarks:	previous inspectionsy, in available.

		Domin Specie		Sampling Point: Wet - 41
Tree Stratum (Plot size: 30 m )	Absolute % Cover	Rel.St	rat. Indicato	
1 Pinus elliottii	5		.7% FACW	Number of Dominant Species That are OBL, FACW, or FAC: 9 (A)
2. Nyssa biflora	10		.5% OBL	That are Obl., FACW, or FAC.
3. Magnolla virginiana		=	.7% FACW	Total Number of Dominant
	. 5			Species Across All Strata: 9 (B)
The service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the se			7% FAC	Percent of dominant Species
5. Cyrilla racemifiora	1		3% FACW	That Are OBL, FACW, or FAC: 100.0% (A/B)
<u>6</u>			0%	Makealk s
7.	0		0%	Prevalence Index worksheet:
8	0		0%	Total % Cover of: Multiply by:
50% of Total Cover: 11.5 20% of Total Cover: 4.6	23 :	= Total C	Cover	OBL species 26 x 1 = 26
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	)			FACW species $\underline{66}$ x 2 = $\underline{132}$
1 Pinus elliottii	5	16.	7% FACW	FAC species 8 x 3 = 24
2 Cyrilla racemiflora	_ 10	<b>✓</b> 33.	3% FACW	FACU species $0 \times 4 = 0$
3. Acer rubrum	5	☐ 16.	7% FAC	UPL species $0 \times 5 = 0$
4. Nyssa bifiora	10	<b>✓</b> 33.	3% OBL	Column Totals: 100 (A) 182 (B)
5	0	0.0	0%	100
6.	0	0.0	0%	Prevalence Index = B/A = 1.820
7.	0	0.0	0%	Hydrophytic Vegetation Indicators:
8.	0	0.0	0%	A Bouid Took for Modern both Woods to
50% of Total Cover: 15 20% of Total Cover: 6	30 =	= Total C		✓ 1 - Rapid Test for Hydrophytic Vegetation
	30 -	- 10tal C	WACI	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m				3 - Prevalence Index is ≤3.0 ¹
1 Ilex coriacea	25	67.	6% FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Magnolia virginiana	5	13.	5% FACW	
3. Cyrilla racemiflora	5 _	13.	5% FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 Ilex vomitoria	1	2.7	7% FAC	be present unless disturbed of problematic,
5. Persea palustris	1	2.7	% FACW	Definition of Vegetation Strata:
6	0	0.0	)%	Tree - Woody plants, excluding woody vines,
50% of Total Cover: 18.5 20% of Total Cover: 7.4 <b>Herb Stratum</b> (Plot size: 30 m)	37 =	= Total C	Cover	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1 Sarracenia alabamensis	2	<b>✓</b> 22.:	2% OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2 Arundinaria tecta	3	33.3	3% FACW	than 3 in. (7.6 cm) DBH.
3. Dichanthelium scabriusculum	2	22,2	2% OBL	
4. Scirpus expansus	1	11,:	1% OBL	Sapling/Shrub - Woody plants, excluding vines, less
5, Osmunda regalis	1	11.:	1% OBL	than 3 in. DBH and greater than 3.28 ft (1m) tall.
6	0	0.0	1%	Shrub - Woody plants, excluding woody vines,
7.	0	0.0	1%	approximately 3 to 20 ft (1 to 6 m) in height.
8		0.0	1%	
9	0	0.0		Herb - All herbaceous (non-woody) plants, including
10		0.0		herbaceous vines, regardless of size, and woody
11.	0	0.0		plants, except woody vines, less than approximately 3 ft (1 m) in height.
12.	0	0.0		
50% of Total Cover: 4.5 20% of Total Cover: 1.8		= Total C		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m )				
Smilax laurifolia	1 [	100	0% FACW	-
		0.0	1 1 100 100 100 100 100 100 100 100 100	
	0 1			
	_ 0 l	0.0	****	
1. ,		0.0	21. (*********	Hydrophytic
5. ,	<u> </u>	0.0	<del>7</del> 0	Vegetation
50% of Total Cover: 0.5 20% of Total Cover: 0.2	1 =	Total Co	over	Present? Yes S No C
Remarks: (If observed, list morphological adaptations below).				
*Indicator suffix = National status or professional decision assigned because Re	gional status n	ot defined	by FWS.	<u> </u>

SOIL Sampling Point: Wet - 41 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) 0/0 Color (moist) % Type 1 Loc2 Remarks 0-4 10YR 100 3/1 Very Fine Loamy Sand 4-18 10YR 3/2 95 10YR 6/2 Loamy Sand 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) ☐ 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) ☐ Muck Presence (A8) (LRR U) Redox Depressions (F8) Other (Explain in Remarks) ☐ 1 cm Muck (A9) (LRR P, T) ☐ Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) ³Indicators of hydrophytic vegetation and Sandy Gieyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) wetland hydrology must be present, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. ✓ Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Yes 💿 No O Hydric Soil Present? Depth (inches): Remarks:

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hancock Sampling Date: 25-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 43
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 32 T 7 S R 16 W
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	.: 30° 23' 52.457" N Long.: 89° 37' 18.611" W Datum: NAD83
Soil Map Unit Name: Smithton - escambia	NWI classification: PFO 1/4 C
Are climatic/hydrologic conditions on the site typical for this time of ye	(11 lis) deplois in 12-12-13
	antly disturbed? Are "Normal Circumstances" present? Yes No Virginial No Virginial No Virginial No Virginial No Virginial No Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Virginial No. Vir
SUMMARY OF FINDINGS - Attach site map showing sa	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No No Remarks:	Is the Sampled Area within a Wetland? Yes No O
Low drainage area approximately 250-feet east of the black top roa	oad in the SW part of the AOI.
HYDROLOGY	
Sediment Deposits (B2)	(B13) Sparsely Vegetated Concave Surface (B8)  (B15) (LRR U) ✓ Drainage Patterns (B10)  de Odor (C1) ✓ Moss Trim Lines (B16)  spheres along Living Roots (C3) □ Dry Season Water Table (C2)  duced Iron (C4) □ Crayfish Burrows (C8)  sduction in Tilled Soils (C6) □ Saturation Visible on Aerial Imagery (C9)  face (C7) □ Geomorphic Position (D2)  in Remarks) □ Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Sphagnum moss (D8) (LRR T, U)  Shi:  Wetland Hydrology Present? Yes ● No □
Describe Recorded Data (stream gauge, monitoring well, aerial phot Remarks:	otos, previous inspections), if available:

Mouse afford   10		/Blot size: 20 1	Absolute			Indicator	Dominance Test worksheet:	
Nysab Biffore   15	Tre	x y .	% Cover	_	Cover	Status		
3   Quercus higher   5	1.			=		er to a com-	That are OBL, FACW, or FAC:	
Towodlum ascendens					7			
5.   0   0.0%   Percent of dominant Species   100.0%   That Are OBL, FACW, PAC   100.0%   That Are OBL, FACW, PAC   100.0%   Prevalence Index worksheet:   Total % Cover of:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply by:   Multiply b		u Tarana a Tarana a Araba a Araba a Araba a Araba		Η.	·	****	Species Across All Strata: 6 (B)	
6		Taxodium ascendens	3	H		ÓBL	Porcont of dominant Species	
5				Ц.	-			
8.	6.			H				
Sow of Total Cover: 16.5   20% of Total Cover: 6.6   33   = Total Cover		No. 1 Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the		Η.				
Sapling or Saplina/Shrab Stratum   (Plot size: 30 m   )				Ш,	*			
1. Pinus elilottil 2. Taxodium secendens 10	50	% of Total Cover: 16.5 20% of Total Cover: 6.6		= To	tal Cove	r		
2 Taxodium ascendens 3 Nyss biffore 5 ✓ 23.5% OBL 4 Cyrtlia racenilifore 5 ✓ 23.5% OBL 5 ✓ 23.5% OBL 4 Cyrtlia racenilifore 5 ✓ 23.5% OBL 5 ✓ 23.5% OBL 6 ✓ 0 □ 0.0% 6 ○ □ 0.0% 7 ✓ 0 □ 0.0% 8. 8. 9 □ 0.0% 8. 9 □ 0.0% 8. 10 ○ 0.0% 8. 11 Oyrilla racenilifora 10 ✓ 58.8% FACW 11 Oyrilla racenilifora 10 ✓ 58.8% FACW 12 Total Cover: 10 Sybrabum (Plot size: 30 m) 11 Arundinaria tecta 1 □ 100.0% 11 Arundinaria tecta 1 □ 100.0% 12 Oyrilla racenilifora 1 □ 0.0% 1 Oyrilla racenilifora 1 □ 0.0% 1 Oyrilla racenilifora 2 □ 11.8% FACW 1 Traciocore of Problematic Hydrophytic Vegetation 1 (Expl 7 Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in helgith and 1 (7.6 cm) DBH. 1 Arundinaria tecta 1 □ 100.0% 1 Oyrilla racenilifora 2 □ 0.0% 1 Oyrilla racenilifora 3 □ 0.0% 1 Oyrilla racenilifora 2 □ 11.8% FACW 2 Dominance Test is > 50% 2 2- Dominance Test is > 50% 2 3- Prevalence Index is \$3.0 x²  1 Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in helgith and 1 (7.6 cm) DBH. 1 Arundinaria tecta 2 □ 0.0% 1 Oyrilla racenilifora 3 □ 0.0% 1 Oyrilla racenilifora 4 □ 0.0% 5 Oyrilla racenilifora 5 ✓ 29.4% FACW 2 Dominance Test is > 50% 2 2- Dominance Test is > 50% 2 3- Prevalence Index is \$3.0 x²  1 Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in helgith and 1 than 3 in, Cf.6 cm) DBH. 1 Arundinaria tecta 2 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 7 □ 0.0% 5 Oyrilla racenilifora 8 □ 0.0% 6 Oyrilla racenilifora 9 □ 0.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1 □ 100.0% 5 Oyrilla racenilifora 1	Saj	pling or Sapling/Shrub Stratum (Plot size: 30 m	)					
2. Taxodium ascendens   10   M   47,6%   OBL   4. Cyrilla racentiflora   5   M   23,8%   OBL   5.   0   0,0%   6.   0   0,0%   7.   0   0,0%   8.   0   0,0%   8.   0   0,0%   8.   0   0,0%   8.   0   0,0%   8.   0   0,0%   8.   0   0,0%   8.   0   0,0%   9.   0,0%   9.   1. Oyrilla racentiflora   10   M   58,8%   FACW   1. Oyrilla racentiflora   10   M   58,8%   FACW   2. Morella cerifera   5   29,4%   FAC   3.   Megnolia virginiana   2   11,8%   FACW   4.   0   0,0%   8.   0   0,0%   1. Aundinaria tecta   1   100,0%   8.   0   0,0%   9.   0   0,0%   1. Aundinaria tecta   1   100,0%   8.   0   0,0%   9.   0   0,0%   1. Aundinaria tecta   1   100,0%   1. Aundinaria tecta   1   100,0%   1. Aundinaria tecta   1   0,0%   1. Aundinaria tecta   1   0,0%   1. Aundinaria tecta   1   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%   1. Aundinaria tecta   0   0,0%	1.	Pinus elliottii	3		14.3%	FACW	FAC species $10 \times 3 = 30$	
4. Cyrilla racemillora  3	2.			V,	47.6%	OBL	FACU species $0 \times 4 = 0$	
5.	3.	Nyssa biflora	5	V.	23.8%	OBL	UPL species $0 \times 5 = 0$	
5.	4.	Cyrilla racemiflora	3		14.3%	FACW	Column Totals: 72 (A) 121 (B)	
0			0		0.0%			
7.   0			0		0.0%	7 77	Prevalence Index = B/A = 1.681	
8.			0		0.0%		Hydrophytic Vegetation Indicators:	
Solution   Stratum   Flot size: 30 m			0		0.0%		1 - Panid Test for Hydranhytic Vegetation	
Shrub Stratum   Plot size: 30 m   10		% of Total Cover: 10.5 20% of Total Cover: 4.2	21 =	= To	tal Cove	r		
1. Cyrilla racemiflora 2. Morella cerifera 3. Magnolla virginlana 2. □ 11.896 FACW 5. □ 0.0% 5. □ 0.0% 5. □ 0.0% 5. □ 0.0% 5. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 6. □ 0.0% 7. □ 0.0% 7. □ 0.0% 7. □ 0.0% 7. □ 0.0% 8. □ 0.0% 8. □ 0.0% 9. □ 0.0% 9. □ 0.0% 9. □ 0.0% 9. □ 0.0% 10. □ 0.0% 11. Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic.  7. Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 1 than 3 in. (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger in diameter at breast height (7.6 cm) or larger								
2		-	45		-0.00/	546044		
3   Magnolia virginiana				-		-	Problematic Hydrophytic Vegetation 1 (Explain)	
be present, unless disturbed or problematic.				ዾ.			1 To discharge of herdule and sendenced herdunians much	
1		Magnolla virginiana		님.		FACW		
6.		. ***	0	Η.	0.0%	-		
Some of Total Cover: 8.5   20% of Total Cover: 3.4   17   = Total Cover   approximately 20 ft (6 m) or more in height and (7.6 cm) or larger in diameter at breast height (D total Cover)   1		20., . M . A., .	0	Ц,	0.0%		_	
Herb Stratum   (Plot size: 30 m   )	6.		0	Ш.	0.0%			
Herb Stratum	50	% of Total Cover: 8.5 20% of Total Cover: 3.4	17_=	= To	tal Cove	•	(7.6 cm) or larger in diameter at breast height (DBH).	
1	Her	b Stratum (Plot size: 30 m				i		
2.	-		1		100.0%	FACW	Sapling - Woody plants, excluding woody vines,	
3.	2.00			$\Box$	-	171011		
4.			0	$\Box$		=	tian 3 in. (7.5 din) DBH.	
5.	"		-	Η.			Sapling/Shrub - Woody plants, excluding vines, less	
6.	- 1	The Water				No. 7 F Alex	than 3 in. DBH and greater than 3.28 ft (1m) tall.	
7.	٥.	-	•	Η-				
8.	7.			Н-		-	Shrub - Woody plants, excluding woody vines,	
9.	-			Η.	~	-	approximately 3 to 20 ft (1 to 6 m) in height.	
10.				H			Herb - All herbaceous (non-woody) plants, including	
11.					•		herbaceous vines, regardless of size, and woody	
12.	IU.,			닖.			plants, except woody vines, less than approximately	
Woody Vine Stratum   (Plot size: 30 m )	11.			Ц.			on (im) in neight.	
Woody Vine Stratum       (Plot size: 30 m)         1.       0       0.0%         2.       0       0.0%         3.       0       0.0%         4.       0       0.0%         5.       0       0.0%         Hydrophytic				Щ			Mondy vine - All woody vines regardless of height	
1. 0 0.0% 2. 0 0.0% 3. 0 0.0% 4. 0 0.0% 5. 0 0.0% Hydrophytic	509	% of Total Cover: 0.5 20% of Total Cover: 0.2	1 =	: Tol	tal Cover	'	vvoody ville - All woody villes, regardless of neight.	
2. 0 0.0% 3. 0 0.0% 4. 0 0.0% 5. 0 0.0% Hydrophytic	Wor	ody Vine Stratum (Plot size: 30 m				ļ		
2. 0 0.0% 3. 0 0.0% 4. 0 0.0% 5. 0 0.0% Hydrophytic	1		0		0.0%			
3. 0 0.0% 4. 0 0.0% 5. 0 0.0% Hydrophytic	_		. 0		0.0%			
4. 0 0.0% Hydrophytic					0.0%			
5. 0 0.0% Hydrophytic					0.0%			
	5. <u> </u>				0.0%		V	
50% of Total Cover: 0 20% of Total Cover: 0 0 = Total Cover Present? Yes • No				Tot	al Cover		Vegetation Present? Yes  No	
ET STATE		20/001 TOTAL COVERS	- Villes					

~	_	-	
	п		

SOIL			Sampling Point: Wet - 43
Profile Descr	ription: (Describe to the depti	needed to document the indicator or confirm the	absence of indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist) %	Color (moist) % Type 1 Loc2	Texture Remarks
0-5	10YR 3/1		Very Fine Loamy Sand
5-16	10YR 3/2		Sandy Clay Loam
1			
			•
	,		M 9 9 671 mm 1 mm 11 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm 12 mm
v		- 10	
ių.			
¹Type: C=Con	centration, D=Depletion, RM=Rec	luced Matrix, CS=Covered or Coated Sand Grains 2Loc	ation: PL=Pore Lining. M=Matrix
Hydric Soil I	indicators:	<del></del>	Indicators for Problematic Hydrlc Soils ³ :
Histosol (	A1)	Polyvalue Below Surface (S8) (LRR S, T, U)	☐ 1 cm Muck (A9) (LRR O)
Histic Epip	pedon (A2)	☐ Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Hist	ic (A3)	Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
Organic B	odies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	Red Parent Material (TF2)
5 cm Muc	ky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
Muck Pres	sence (AB) (LRR U)	Redox Depressions (F8)	Other (Explain in Remarks)
1 cm Muc	k (A9) (LRR P, T)	Marl (F10) (LRR U)	Oule: (Explain in Remains)
Depleted	Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
P***	k Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)	
Coast Prai	irie Redox (A16) (MLRA 150A)	Umbric Surface (F13) (LRR P, T, U)	
Sandy Mu	ck Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	_
_	yed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	³ Indicators of hydrophytic vegetation and
Sandy Red		Piedmont Floodplain Soils (F19) (MLRA 149A)	wetland hydrology must be present, unless disturbed or problematic.
	Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA 14	
	ace (S7) (LRR P, S, T, U)		,,
	ayer (if observed):		
Type:	. 20 33		Hydric Soil Present? Yes  No
Depth (inch	nes):		7,7
Remarks:			

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hano	ock Sampling Date: 27-Oct-16
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 47
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: \$	31 T 7s R 16 W
Landform (hillslope, terrace, etc.): Hillside		none): flat Slope: 2.0 % / 1.1
* * Market Will a Million Will a Million Will a Million William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William William Willia	30° 24' 15.210" N Lon	
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	24.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	DCC 1/4
Are climatic/hydrologic conditions on the site typical for this time of year		(If no, explain in Remarks.)
	ly disturbed? Are "Norma	l Circumstances" present? Yes Son O
Are Vegetation, Soll, or Hydrology naturally p	roblematic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sar	npling point locations, t	ransects, 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 ○	within a wetianu?	
Remarks: Sideslope of low relief hillside drainage feature that transitions down Lot (Main NASA site) road.	into more of a wet area below	. Plot is approximately 500-600- feet east of Trent
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1:		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)		✓ Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide C	* *	✓ Moss Trim Lines (B16)
	eres along Living Roots (C3)	☐ Dry Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduc	, ,	Crayfish Burrows (C8)
	tion in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)
	• •	Shallow Aquitard (D3)
☐ Iron Deposits (B5) ☐ Other (Explain in R☐ Inundation Visible on Aerial Imagery (B7)	emarks)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		✓ Sphagnum moss (D8) (LRR T, U)
Field Observations:		E Springham mose (50) (crox 1) 0)
Surface Water Present? Yes No Depth (inches):		
Water Table Present? Yes O No O Depth (inches):		
	Wetland Hyd	rology Present? Yes 💿 No 🔾
(includes capillary fringe) Yes V No V Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if ava	ilable:
Remarks:		
No real strong hydrology, but a few secondary indicators,		

- (Plot size) 20 m		te Rel.S		licator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 m			or was not be a second	atus	Number of Dominant Species	
1 Pinus elilottii	. 15		1.7% FAC		That are OBL, FACW, or FAC: 10 (A)	
2. Nyssa sylvatica	10	_	4.5% FAC		Total Number of Dominant	
4 Outstand alam			.9% FAC		Species Across All Strata: 10 (B)	
			.4% FAC		Percent of dominant Species	
	1		.4% FAC	<u></u>	That Are OBL, FACW, or FAC: 100.0% (A/B)	
<u>6</u>			.0%			
7.			.0%		Prevalence Index worksheet:	
8.		*	.0%	9.17	Total % Cover of: Multiply by:	
50% of Total Cover: 14.5 20% of To	otal Cover: 5.8 29	= Total	Cover		OBL species 10 x 1 = 10	
Sapling or Sapling/Shrub Stratum (Ple	ot size: _30 m)			'	FACW species $43 \times 2 = 86$	
1 Pinus elliottii	,10		7.6% FAC	CW, I	FAC species $56 \times 3 = 168$	
2 Magnolia virginiana	- 5		3.8% FAC	CW I	FACU species $0 \times 4 = 0$	
3 Nyssa sylvatica	5	<b>✓</b> 2.	8.8% FAC	<u> </u>	UPL species $0 \times 5 = 0$	
4. Morella certfera	_ 1	4	.8% FAC		Column Totals: 109 (A) 264 (B)	
5	. 0		.0%	-		
6	0		.0%		Prevalence Index = B/A = 2.422	
7	0		.0%		Hydrophytic Vegetation Indicators:	
8.	0	□ 0	.0%		1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 10.5 20% of To	otal Cover: 4.2 21	= Total	Cover		2 - Dominance Test is > 50%	
Shrub Stratum (Plot size: 30 m			. 40/ - 540	.	✓ 3 - Prevalence Index is ≤3.0 ¹	
	25	-	2.1% FAC		☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
	10		).8% FAC		1 To displace of hydric call and watland budgeloon worth	
	10	(	.8% FAC		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
4. Ilex opaca		4	.2% FAC	-	- C	
		***	1% FAC	art a new circ	Definition of Vegetation Strata:	
3	0. ,	0	.0%	4 -0/-	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.	
50% of Total Cover: 24 20% of To	otal Cover: 9.6 48	= Total	Cover		(7.6 cm) or larger in diameter at breast height (DBH).	
Herb Stratum (Plot size: 30 m	_)					
	5_	<b>✓</b> 50	.0% OBL		Sapling - Woody plants, excluding woody vines,	
2. Woodwardia areolata	3		.0% OBL		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
3. Sagittaria lancifolia	1		.0% OBL		than 3 in. (7.3 dif) DDF.	
A Disharthallow applyingstone			.0% OBL		Sapling/Shrub - Woody plants, excluding vines, less	
5.		(Treatment	.0% ODE		than 3 in. DBH and greater than 3.28 ft (1m) tall.	
	0					
6			.0%	S	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
7				- 6	approximately 3 to 20 it (1 to 6 iii) in height.	
8			.0%		Herb - All herbaceous (non-woody) plants, including	
9			0%	I	herbaceous vines, regardless of size, and woody	
l0,		=	0%		plants, except woody vines, less than approximately	
11,		1,000,000	0%		3 ft (1 m) in height.	
12.		0.	.0%		Mandy vine All woods vines regardless of bright	
50% of Total Cover: 5 20% of To	otal Cover: 2 10	= Total	Cover	Ι,	Woody vine - All woody vines, regardless of height.	
Woody Vine Stratum (Plot size: 30 m	)			_		
Smilax laurifolla	1	100	0.0% FAC	.w _ [		
	/ · · ·		0%			
3.			0%			
·			0%			
			0%		Hydrophytic	
.V			Ų70		Vegetation	
1. 5. 50% of Total Cover: 0.5 20% of To					Vegetation Present? Yes  No	

Hydric Soil Indicators:  Histosol (A1) Polyv Histic Epipedon (A2) Thin Black Histic (A3) Loam Hydrogen Sulfide (A4) Loam Stratified Layers (A5) Depk Organic Bodies (A6) (LRR P, T, U) Redo 5 cm Mucky Mineral (A7) (LRR P, T, U) Peple Muck Presence (A8) (LRR U) Redo	Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy Loam  Sandy	<b>Golls³:</b> A 150A,B) RR P, S, T)
0-6         10YR         3/2         100           6-16         10YR         4/2         95         10YR           Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS           Hydric Soil Indicators:           Histosol (A1)         Polyv           Histic Epipedon (A2)         Thin           Black Histic (A3)         Loam           Hydrogen Sulfide (A4)         Loam           Stratified Layers (A5)         Deple           Organic Bodies (A6) (LRR P, T, U)         Redo           5 cm Mucky Mineral (A7) (LRR P, T, U)         Redo           Muck Presence (A8) (LRR U)         Redo           1 cm Muck (A9) (LRR P, T)         Mark	Sandy Loam  5=Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated Sand Grains    Covered or Coated S	<b>Golls³:</b> A 150A,B) RR P, S, T)
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS  Hydric Soil Indicators:  Histosol (A1) Polyo  Histic Epipedon (A2) Thin  Black Histic (A3) Loam  Hydrogen Sulfide (A4) Loam  Stratified Layers (A5) Deple  Organic Bodies (A6) (LRR P, T, U) Redo  5 cm Mucky Mineral (A7) (LRR P, T, U) Redo  Muck Presence (A8) (LRR U) Redo	S=Covered or Coated Sand Grains    Location: PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric S  ralue Below Surface (S8) (LRR S, T, U)	A 150A,B) RR P, S, T)
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS  lydric Soil Indicators:  Histosol (A1) Polyo Histic Epipedon (A2) Thin Black Histic (A3) Loam Hydrogen Sulfide (A4) Loam Stratified Layers (A5) Deple Organic Bodies (A6) (LRR P, T, U) Redo 5 cm Mucky Mineral (A7) (LRR P, T, U) Deple Muck Presence (A8) (LRR U) Redo	S=Covered or Coated Sand Grains    **Indicators for Problematic Hydric Stratue Below Surface (S8) (LRR S, T, U)    Dark Surface (S9) (LRR S, T, U)    Day Mucky Mineral (F1) (LRR O)    Reduced Vertic (F18) (outside MLR or piedmont Floodplain Soils (F19) (LR Matrix (F3)    Anomalous Bright Loamy Soils (F20 outside Dark Surface (F6)    Red Parent Material (TF2) outside Material (TF2) outside Dark Surface (F7)    Very Shallow Dark Surface (TF12)	A 150A,B) RR P, S, T)
ydric Soil Indicators:  Histosol (A1) Polyv Histic Epipedon (A2) Thin Black Histic (A3) Loam Hydrogen Sulfide (A4) Loam Stratified Layers (A5) Deple Organic Bodies (A6) (LRR P, T, U) Redo 5 cm Mucky Mineral (A7) (LRR P, T, U) Deple Muck Presence (A8) (LRR U) Redo	Indicators for Problematic Hydric S ralue Below Surface (S8) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (LRR O)  Day Mucky Mineral (F1) (URR S)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky Mineral (F18) (outside MLR)  Day Mucky (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muck (A10) (LRR O)  Day Muc	A 150A,B) RR P, S, T)
Histosol (A1) Polyv Histic Epipedon (A2) Thin Black Histic (A3) Loam Hydrogen Sulfide (A4) Loam Stratified Layers (A5) Deple Organic Bodies (A6) (LRR P, T, U) Redo 5 cm Mucky Mineral (A7) (LRR P, T, U) Redo Muck Presence (A8) (LRR U) Redo 1 cm Muck (A9) (LRR P, T)	ralue Below Surface (S8) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (F1) (LRR O)  Reduced Vertic (F18) (outside MLR)  Piedmont Floodplain Soils (F19) (LR  Anomalous Bright Loamy Soils (F20)  Red Parent Material (TF2)  Seted Dark Surface (F7)  Very Shallow Dark Surface (TF12)	A 150A,B) RR P, S, T)
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  5 cm Mucky Mineral (A7) (LRR P, T, U)  Muck Presence (A8) (LRR U)  1 cm Muck (A9) (LRR P, T)  Mark	ralue Below Surface (S8) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (S9) (LRR S, T, U)  Dark Surface (F1) (LRR O)  Reduced Vertic (F18) (outside MLR)  Piedmont Floodplain Soils (F19) (LR  Anomalous Bright Loamy Soils (F20)  Red Parent Material (TF2)  Seted Dark Surface (F7)  Very Shallow Dark Surface (TF12)	A 150A,B) RR P, S, T)
Coast Prairie Redox (A16) (MLRA 150A) Umbi Sandy Muck Mineral (S1) (LRR O, S) Delta Sandy Gleyed Matrix (S4) Redu Sandy Redox (S5)	x Depressions (F8)	present,
strictive Layer (if observed): Type: Depth (inches):	Hydric Soll Present? Yes  N	io O

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 26-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet - 52
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 21 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat.:	30° 25' 2.553" N Long.: 89° 36' 29.223" W Datum: NAD83
Soil Map Unit Name: HIA, Harleston fine sandy loam, 0 to 2 percent slo	M
Are climatic/hydrologic conditions on the site typical for this time of year	
	ty disturbed? Are "Normal Circumstances" present? Yes  No O
	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No  Hydric Soil Present? Yes  No  Yes  No	Is the Sampled Area
1.1	within a Wetland? Yes  No
Wetland Hydrology Present? Yes   No   No	<u> </u>
Remarks:  Area is approximately 250 feet east of Up - 52.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1.	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	=
Saturation (A3) Hydrogen Sulfide (	
	eres along Living Roots (C3) Ury Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduc	
	tion in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface	
Iron Deposits (B5) Other (Explain in R	·
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):	
Suite Held Hessie	
	Wetland Hydrology Present? Yes  No
Saturation Present? (includes capillary fringe)  Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	
Barely have hydrology, Slight evidence of oxidized rhizospheres.	
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(Diet size) 20 mg				Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 m )	% Cover		ver	Status	Number of Dominant Species
1 Pinus elliottii	15		12.9%	FACW	That are OBL, FACW, or FAC: 7 (A)
2. Magnolia virginiana	10		28.6%	FACW	Total Number of Dominant
3 Nyssa sylvatica			28.6%	FAC .	Species Across All Strata: 7 (B)
4.	- 0		0.0%		Percent of dominant Species
5.		=	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6.			0.0%		<u> </u>
7.			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 17.5 20% of Total Cover: 7	. 35 _	= Tota	l Cover	'	OBL species 0 x 1 = 0
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	)				FACW species 104 x 2 =208_
1 Pinus eiliottii	5	1	L5.6%	FACW	FAC species $22 \times 3 = 66$
2. Nyssa sylvatica		✓ _3	31.3%	FAC	FACU species $0 \times 4 = 0$
3. Magnolia virginiana	15	<b>✓</b> 4	16.9%	FACW	UPL species $0 \times 5 = 0$
4 Acer rubrum	2		6.3%	FAC	Column Totals: 126 (A) 274 (B)
5	0		0.0%		
6	0		0.0%		Prevalence Index = B/A = 2.175
7	0		0.0%		Hydrophytic Vegetation Indicators:
8	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 16 20% of Total Cover: 6.4	32 :	= Tota	l Cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m )					✓ 2 - Dominance Test is > 50%  ✓ 3 - Prevalence Index is ≤ 3.0 ¹
	EO	<b>✓</b> 9	4.3%	FACW	
		-	5.7%	FACW	Problematic Hydrophytic Vegetation 1 (Explain)
				FACVV	² Indicators of hydric soil and wetland hydrology must
3	0		0.0%		be present, unless disturbed or problematic.
1			0.0%		Definition of Venetation Streets
5			0.0%		Definition of Vegetation Strata:
6	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 26.5 20% of Total Cover: 10.6	53	= Total	l Cover		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m)					
1 . Ilex coriacea	5	<b>V</b> 10	00.0%	FACW	Sapfing - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2.			0.0%		than 3 in. (7.6 cm) DBH.
3	0		0.0%		,
A	0		0.0%		Sapling/Shrub - Woody plants, excluding vines, less
5.	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6.	0		0.0%		Shrub - Woody plants, excluding woody vines,
7	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8.			0.0%		
9.			0.0%		Herb - All herbaceous (non-woody) plants, including
10.			0.0%	-	herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
1			0.0%		3 ft (1 m) in height.
2.	0		0.0%		
50% of Total Cover: 2.5 20% of Total Cover: 1		= Total			Woody vine - All woody vines, regardless of height.
			COTE		•
Woody Vine Stratum (Plot size: 30 m				}	
Smilax laurifolia		100.000	0.0%	FACW _	
**************************************			0.0%		
B		_	0.0%		
',	0		0.0%		Livelyonhydio
),	. 0	□_0	0.0%		Hydrophytic Vegetation
50% of Total Cover: 0.5 20% of Total Cover: 0.2	1 =	= Total	Cover		Present? Yes No O
temarks: (If observed, list morphological adaptations below).					
(a. vood rea) iist morphological adaptations below).					
*Indicator suffix = National status or professional decision assigned because Re	gional status r	not define	ed by FW	s.	

Depth (Inches)	/R 4/2 /R 5/2	96 100 97 97	Color (mo 10YR 10YR	6/6 6/6	3	Type.1	Loc2	Texture Remarks Loamy Sand
4-12 10° 12-24 10° Type: C=Concentration	/R 4/2 /R 5/2	97	m	-	-			Loamy Sand
12-24 10°	(R 5/2		m	-	-			A TOTAL NEW TOTAL CONTROL OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T
/pe: C=Concentration		97	10YR	6/6	3	-	M	Loamy Sand
						D	.M	Loamy Sand
	on D-Danioti	an DM—Dedu	red Matrix CS-	Covere	d or Coate	d Sand Gra	ine 21 oca	tion: DI –Dara Lining M=Matrix
		on, Kri–Kedu	Leu Mauix, CS-	COVELE	J OI COBLE	u Sanu Gre	IIIS -LUCA	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (ABlack Histic (A3) Hydrogen Sulfide Stratified Layers (AB) Torganic Bodies (AB) Som Mucky Mine Muck Presence (AB) Tom Muck (A9) (Depleted Below EB) Thick Dark Surfact Coast Prairie Redus Sandy Muck Mine Sandy Gleyed Matter Sandy Redox (S5) Stripped Matrix (SB) Dark Surface (S7)	(A4) (A5) (A6) (LRR P, T, ral (A7) (LRR U) LRR P, T) (Ark Surface (A12) (A16) (MLR ral (S1) (LRR R) (A16) (MLR ral (S1) (LRR R) (A16) (MLR R)	P, T, U) A11) A150A) O, S)	Thin D Loamy Loamy Deplet Redox Deplet Redox Under (F Under (F Under (F) Reduce Reduce	ark Surf Mucky Gleyed ed Matri Dark Su ed Dark Depress (10) (LR ed Ochri anganes Surface Ochric (F ed Verticont Flood	ace (S9) ( Mineral (F Matrix (F2 x (F3) rface (F6) Surface (F6) R U) c (F11) (N se Masses e (F13) (LF 17) (MLR f t (F18) (M dplain Soils	F7)  MLRA 151)  (F12) (LRR  RR P, T, U)  A 151)  LRA 150A,  s (F19) (ML	(O, P, T) 150B) RA 149A)	□ 1 cm Muck (A9) (LRR O)     □ 2 cm Muck (A10) (LRR S)     □ Reduced Vertic (F18) (outside MLRA 150A,B)     □ Piedmont Floodplain Soils (F19) (LRR P, S, T)     □ Anomalous Bright Loamy Soils (F20) (MLRA 153B)     □ Red Parent Material (TF2)     □ Very Shallow Dark Surface (TF12)     □ Other (Explain in Remarks)    3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  9A, 153C, 153D)
trictive Layer (if	observed):							
Type:								
Depth (inches):								Hydric Soil Present? Yes  No

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hance					
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 53				
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S	21 T 7s R 16 W				
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex,	none): none Slope: 0.0 % / 0.0 °				
Subregion (LRR or MLRA): LRR T Lat.:	30° 25' 2.254" N Lon	g.: 89° 36' 14.733" W Datum: NAD83				
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	And the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o	NWI classification: N/A				
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes No O	(If no, explain in Remarks.)				
		· A O				
		I Circumstances" present? Yes NO O				
SUMMARY OF FINDINGS - Attach site map showing sa	• • • • • • • • • • • • • • • • • • • •					
Hydrophytic Vegetation Present? Yes  No  No	Is the Sampled Area					
Hydric Soil Present? Yes ● No ○	i '	Yes   ● No ○				
Wetland Hydrology Present? Yes  No	within a Wetland?	168 0 140 0				
Remarks: Plot is approximately 200 feet southy of the main property boundary area.	y and fence small wet area ap	oproximately 500 feet north of the toe of the landfill				
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)				
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)				
Surface Water (A1) Aquatic Fauna (B1	13)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2) Mari Deposits (B1	5) (LRR U)	✓ Drainage Patterns (B10)				
Saturation (A3) Hydrogen Sulfide	* *	Moss Trim Lines (B16)				
	neres along Living Roots (C3)	Dry Season Water Table (C2)				
Sediment Deposits (B2) Presence of Redu	• •	Crayfish Burrows (C8)				
	ction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)				
☐ Algal Mat or Crust (84) ☐ Thin Muck Surface	• •	✓ Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Other (Explain in I	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):						
	: Wetland Hydrology Present? Yes   No					
Saturation Present? Yes No Depth (inches):						
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if ava	ilable:				
Remarks:		···				
No strong redoximorphic indicators in soil.						

Γ	(District 20 or )		R	el.Strat. Cover	Indicator Status	Dominance Test worksheet;
-	ree Stratum (Plot size: 30 m )	% Cover				Number of Dominant Species
1.	Pinus elliottii	10	V	27.8%	FACW	That are OBL, FACW, or FAC: 7 (A)
2.	Nyssa sylvatica	15	V	41.7%	FAC	Total Number of Dominant
3.	Magnolia virginiana	10	<b>V</b>	27.8%	FACW	Species Across Ali Strata:7 (B)
4.	Taxodium ascendens	1		2.8%	OBL	
5.		Ö		0.0%		Percent of dominant Species  That Are ORL FACW or FAC: 100.0% (A/B)
6.		0		0.0%	-	That Are OBL, FACW, or FAC: 100.0% (A/B)
7.		0		0.0%		Prevalence Index worksheet:
8.		0		0.0%		Total % Cover of: Multiply by:
l	0% of Total Cover: 18 20% of Total Cover: 7.2	36	= Tr	otal Cove	T.	OBL species 4 x 1 = 4
l				Jun 5516		FACW species 67 x 2 =134
	pling or Sapling/Shrub Stratum (Plot size: 30 m			5 701		
1.	Pinus elliottii			6.3%	FACW	FAC species $25 \times 3 = 75$
2.	Nyssa sylvatica	M. MAN	V	62,5%	FAC	FACU species $0 \times 4 = 0$
3.	Magnolla virginiana	55	₹.	31.3%	FACW	UPL species $0 \times 5 = 0$
4.		0	Ш	0.0%		Column Totals: 96 (A) 213 (B)
5.		0		0.0%		December 7 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 december 17 decembe
6.		0		0.0%		Prevalence Index = B/A = 2.219
7.		0		0.0%		Hydrophytic Vegetation Indicators:
8.		0		0.0%		D. C. David Washfan Hardward Manageria
	0% of Total Cover: 8 20% of Total Cover: 3.2		_ T-	tal Cove		1 - Rapid Test for Hydrophytic Vegetation
5	0% of Total Cover: 8 20% of Total Cover: 3.2	16	= 10	cai cove		✓ 2 - Dominance Test is > 50%
S	rub Stratum (Plot size: 30 m )		_			✓ 3 - Prevalence Index is ≤3.0 ¹
1.	Ilex coriacea	30_	V	75.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2.	Cyrilla racemiflora	10	<b>V</b>	25.0%	FACW	
3.		0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.		0	$\Box$	0.0%		be present, unless disturbed or problematic.
5.			_	0.0%		Definition of Vegetation Strata:
		0	H	0.0%	-	Tree - Woody plants, excluding woody vines,
6.		982				approximately 20 ft (6 m) or more in height and 3 in.
	0% of Total Cover: 20 20% of Total Cover: 8	40 :	= 10	tal Cove		(7.6 cm) or larger in diameter at breast height (DBH).
He	erb Stratum (Plot size: 30 m					
	Juncus polycephalos	1		33.3%	OBL	Sapling - Woody plants, excluding woody vines,
_	Sarracenia alabamensis		$\Box$	33.3%	OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
			$\Box$	33,3%	OBL	
		_	Н	0.0%	- DE	Sapling/Shrub - Woody plants, excluding vines, less
4	· · · · ·		H			than 3 in. DBH and greater than 3.28 ft (1m) tall.
5		0	片	0.0%		
0	74).	0	片.	0.0%	-	Shrub - Woody plants, excluding woody vines,
	of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se		Η.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
			닏.	0.0%		Hade All backgroup (man over the Allente Sentential)
9	( , <b>)</b>	0_	<u>.</u> ,	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
10		0	$\Box$ .	0,0%		plants, except woody vines, less than approximately
11		0		0.0%		3 ft (1 m) in height.
12		0	Π.	0.0%		
	% of Total Cover: 1.5 20% of Total Cover: 0.6	3 =	. To	tal Cover		Woody vine - All woody vines, regardless of height.
			- 10	tai covei		
W	oody Vine Stratum (Plot size: 30 m				}	
1.	Smilax laurifolia	1		100.0%	FACW	
2.	en de est en en en en en en en en en en en en en	0		0.0%		
3.		0		0.0%		
4.		0		0.0%		
5.	÷ 6	0	$\Box$	0.0%		Hydrophytic
	W of Total Covers D.E. 200/ of Tatal Covers					Vegetation Present? Yes  No
50	% of Total Cover: 0.5 20% of Total Cover: 0.2	1, =	- 10	rai Cover		
Rem	arks: (If observed, list morphological adaptations below).					
*Inc	licator suffix = National status or professional decision assigned because Re-	gional status i	not de	efined by EV	VS.	

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	-		

Profile Description: (De:	scribe to	the depth	needed to docu	ment the ind	icator or c	onfirm the	absence of Indicators.	)
Depth Matrix				Redox Fea				
(inches) Color (		0/0	Color (mols		Type 1		Texture	Remarks
0-4 10YR	. 3/1	98		6/2 2	D	М	Sandy Loam	
4-16 10YR	4/2	. 98	10YR	6/2 20	D	M	Sandy Loam	
Type: C=Concentration. D:  Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (L  5 cm Mucky Mineral (A  Muck Presence (A8) (L  1 cm Muck (A9) (LRR F  Depleted Below Dark S  Thick Dark Surface (A1  Coast Prairie Redox (A:  Sandy Muck Mineral (S  Sandy Gleyed Matrix (S6)  V  Stripped Matrix (S6)	RR P, T, U 7) (LRR P RR U) 9, T) urface (A 2) 16) (MLRA 1) (LRR O	J) , T, U) 11) A 150A) A, S)	Polyvalu Thin Dar Loamy M Loamy G Depleted Redox D Marl (F10 Depleted Iron-Mar Umbric S Delta Oc Reduced	e Below Surface (S9) Mucky Mineral (Sleyed Matrix (F3) Ark Surface (F6) Dark Surface (F6) Dark Surface (F10) Cochric (F11) Diganese Masse Surface (F13) (Chric (F17) (ML) Vertic (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chric (F18) (Chr	ce (S8) (LRF (LRR S, T, (F1) (LRR O F2) (F7) (MLRA 151) cs (F12) (LR LRR P, T, U RA 151) MLRA 150A oils (F19) (M	R S, T, U) U) ) R O, P, T) ) , 150B)	Indicators for Pro  1 cm Muck (A9) 2 cm Muck (A1) Reduced Vertic Piedmont Flood Anomalous Brig Red Parent Mat Very Shallow Di Other (Explain i	blematic Hydric Soils ³ :  ) (LRR O)  ) (LRR S)  (F18) (outside MLRA 150A,B)  plain Soils (F19) (LRR P, S, T)  ht Loamy Soils (F20) (MLRA 153B)  erial (TF2)  ark Surface (TF12)
Dark Surface (S7) (LRR								0 0
Depth (inches):							Hydric Soil Present?	Yes  No
Remarks:								