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 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)
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) 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	s, previous inspections), if available:
	, , , , , , , , , , , , , , , , , , ,
Remarks:	
Kanara	
	i

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

Dominant

			minant ecies? .		Sampling Point: Wet - 18
	Absolute	e Re	l.Strat.	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 m)	% Cover	_	Cover	Status	Number of Dominant Species
Nyssa biflora	15	Y	65.2%	OBL	That are OBL, FACW, or FAC: 7 (A)
Nyssa sylvatica	5	V	21.7%	FAC	Total Number of Dominant
Pinus elliottii	2		8.7%	FACW	Species Across All Strata: 7 (B)
Cyrilla racemiflora	1		4.3%	FACW	
	0	\square .	0.0%		Percent of dominant Species That Are OBL FACW or FAC: 100.0% (A/B
			0.0%		That Are OBL, FACW, or FAC: 100 0% (A/B
	0		0.0%		Prevalence Index worksheet:
	0		0.0%		Total % Cover of Multiply by:
0% of Total Cover: 11.5 20% of Total Cover: 4.6	23	= Tot	tal Cove	r	OBL species 42 x 1 = 42
apling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species37
Nyssa biflora	15	V	53.6%	OBL	FAC species 6 x 3 = 18
Cyrilla racemiflora		V	35.7%	FACW	FACU species0 _ x 4 =0
Pinus elliottii	3	\Box	10.7%	FACW	UPL species 0 x 5 = 0
	0	\Box	0.0%		
P**:-**	0	_	0.0%		Column Totals: 85 (A) 134 (B)
	_		0.0%	per en	Prevalence Index = B/A = 1.576
	_	=	0.0%		Hydrophytic Vegetation Indicators:
entropy with the second	0	Ш.	0.0%	-	1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 14 20% of Total Cover: 5.6	28	= Tot	al Cove	r	✓ 2 - Dominance Test is > 50%
nrub 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%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
Ilex opaca		$\overline{\Box}$	6.3%	FAC	be present, unless disturbed or problematic.
		$\overline{\Box}$	0.0%		Definition of Vegetation Strata:
	0	<u> </u>	0.0%	· · · · · · · · · · · · · · · · · · ·	Tree - Woody plants, excluding woody vines,
0% of Total Cover: 8 20% of Total Cover: 3.2		 Tot	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).
erb Stratum (Plot size: 30 m)		_			Sapling - Woody plants, excluding woody vines,
Woodwardia areolata		✓_	58.8%	OBL	approximately 20 ft (6 m) or more in height and less
Arundinaria tecta	5	~ _	29.4%	FACW	than 3 in. (7.6 cm) DBH.
Sarracenia flava	2	\square_{\cdot}	11.8%	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,
Tentral for the second of the	0		0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
The same of the sa	0		0.0%		.,,,,,
-	0		0.0%	-	Herb - All herbaceous (non-woody) plants, including
	0	П	0.0%		herbaceous vines, regardless of size, and woody
**************************************		<u> </u>	0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
					O R () III Holgin
NV of Tabel Courts O. G. 2007 of Tabel Courts O. A.	0_		0.0%		Woody vine - All woody vines, regardless of height,
0% of Total Cover: 8.5 20% of Total Cover: 3.4	17 =	= Tota	al Cover	1	
oody Vine Stratum (Plot size: 30 m				ļ	
Smilax laurifolla	_1_		100.0%	FACW	
	0		0.0%		
** 5.54 * *	. 0		0.0%		
			0.0%		
	U	2			Hydrophytic
	0		0.0%		Manatation
0% of Total Cover: 0.5 20% of Total Cover: 0.2	0	O	0.0% al Cover		Vegetation Present? Yes No

CO	¥	п
30	1	L

Color (molst) Ye	OIL									Samp	ling Point: Wet - 18
Color (moles) Co	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 Loamy Sand 4-20 10YR 3/2 85 10YR 7/2 20 D M Sandy Loam De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains De: C=Concentration. D=Depletion. RM=Reduced Matrix Indicators for Problematic Hydric Soils Reduced K(A10) (IRR S) Reduced K(A10) (IRR S) Reduced K(A10) (IRR S) Reduced K(A10) (IRR S) Reduced Vertic (F10) (IRR S) Reduced Vertic (F10) (IRR A 150) Reduced Vertic (F11) (MLRA 150) Reduced Vertic (F11) (MLRA 150) Sandy Muck Mineral (S1) (IRR O, S) Delte Octnic (F17) (MLRA 150) Reduced Vertic (F18) (MLRA 150) Indicators of hydrophydic vegetation and wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Dark Surface (S7) (IRR P, S, T, U) Indicators for Problematic Hydric Soils Present? Reduced Vertic (F18) (MLRA 150) (MLRA 149A) 153C, 153D) Indicators of hydrophydic vegetation and wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Indicators F	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 **Indicators for Problematic Hydric Soils **1: I am Muck (A9) (LRR D) Peldmont Floodplain Soils (F19) (LRR S) Depleted Matrix (F3) Depleted Delaw Surface (F7) Depleted Selow Dark Surface (F1) (LRR D) Redox Dark Surface (F7) Depleted Below Dark Surface (A11) Depleted Delaw Surface (F1) (LRR D) Redox Dark Surface (F7) Depleted Dark Surface (F1) (LRR D) Depleted Dark Surface (F1) (LRR D) Redox Dark Surface (F1) (LRR D) Depleted Dark Surface (F1) (LRR D) Depleted Dark Surface (A12) Depleted Dark Surface (F1) (LRR D) Depleted Dark Surface (F1) (LRR D) Depleted Dark Surface (A11) Depleted Dark Surface (F1) (LRR D) Depleted Dark Surface (A12) Depleted Dark Surface (F1) (LRR D) Depleted D	(inches)										Remarks
De: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Indicators Indic	0-4	10YR	3/1	90	10YR		10	D	М	Loamy Sand	
Artic Soll Indicators: Histosol (A1)	4-20	10YR	3/2	, 85	10YR	7/2	20	D	. <u>M</u>	Sandy Loarn	
Histo Soll Indicators: Histosol (A1)		_			;		· page · v · u · ;	-			
Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) I cm Muck (A9) (LRR O) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Pedmont Floodplain Solis (F19) (LRR P, S, T) Depleted Below Surface (F6) Thin Dark Surface (F6) Stratified Layers (A5) Doganic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) Cram Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Tom Muck (A9) (LRR P, T, U) Depleted Dark Surface (F7) Wuck Presence (A8) (LRR P, T) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F8) Depleted Dark Surface (F8) Depleted Below Dark Surface (F11) Tron-Manganese Masses (F12) (LRR O, P, T) Depleted Below Dark Surface (F13) (LRR P, T, U) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Delta Ochric (F18) (MLRA 150A, 150B) Sandy Redox (S5) Delta Ochric (F18) (MLRA 150A, 150B) Sandy Redox (S5) Delta Ochric (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Hydric Soil Present? Hydric Soil Present? Yes No		er.									Angletig 1999 to the
Histosol (A1)			=Depletio	n. RM=Redu	iced Matrix, (S=Cover	ed or Coate	ed Sand Gr	ains ² Loca		·
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 Gieyed 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) 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 Dark Surface (F7) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Bolow Dark Surface (A11) Depleted Born Material (T51) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) (Depleted Bolow Dark Surface (A12) Umbric Surface (F13) (LRR O, P, T) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) Very Shallow Dark Surface (MLRA 150A) Umbric Surface (F13) (LRR O, P, T) (MLRA 150A) Umbric Surface (F13) (LRR O, P, T) (MLRA 149A) Umbric Surface (F13) (LRR O, P, T) (MLRA 150A) Umbric Surface (F13) (LRR O, P, T) (MLRA 149A) Umbric Surface (F13) (LRR O, P, T) (MLRA 149A) Umbric Surface (F13) (MLR										Indicators for Pro	blematic Hydric Soils ³ :
Black Histic (A3)		•								1 cm Muck (A9)	(LRR O)
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) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F6) Red Parent Material (TF2) Stratified Layers (A8) (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 Derlow 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 (S4) Stripped Matrix (S4) Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Pietrictive Layer (if observed): Type: Depth (inches): Piedmont Floodplain Soils (P3) Hydric Soil Present? Yes No					∐ Thi	n Dark Su	face (S9) ((LRR S, T,	U)	2 cm Muck (A10	0) (LRR S)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Solls (F20) (MLRA 1538) 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) 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) Short Redox (A5) Derived Work (F17) (MLRA 150A, 150B) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (S7) (LRR P, S, T, U) Trictive Layer (if observed): Type: Depth (inches): Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No No No No No No No No No N		-			☐ Loa	my Mucky	Mineral (F	1) (LRR 0))	Reduced Vertic	(F18) (outside MLRA 150A,B)
Stratified Layers (A5)	Hydrogen	Sulfide (A4)			Loa	my Gleye	d Matrix (F.	2)			
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) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) In Remarks:	Stratified L	Layers (A5)			☐ Dep	leted Mat	rix (F3)				
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) Depleted Below Dark Surface (A11) Depleted Below 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) Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) trictive Layer (if observed): Type: Depth (inches): Mari (F10) Reduced Vertic (F18) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No No No No No No No No No N	Organic Bo	odies (A6) (L	.RR P, T, (J)			- /)			, , , , ,
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) trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	5 cm Muci	ky Mineral (A	7) (LRR P	', T, U)			•	-			= -
1 cm Muck (A9) (LRR P, T)							•				• •
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Dumbric Surface (F13) (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) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No						•				Uther (Explain i	n kemarks)
Thick Dark Surface (A12)				11)	_		-	MI DA 4541			
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) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dertictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No			•)				-			
Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) 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) Arictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No		•	•	A 150A\		_					
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Prictive 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) Dark Surface (S7) (LRR P, S, T, U) trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No		-), S)	Delt	a Ochric (F17) (MLR	A 151)		3radianta	c of hydrophytic vacatotics and
Sandy Redox (55) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6)			54)		L Red	uced Vert	ic (F18) (M	ILRA 150A,	150B)	unucator 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)			Piec	lmont Flo	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 Bi	ight Loamy	y Soils (F20) (MLRA 149	9A, 153C, 153D)	
Type:	Dark Surfa	ice (S7) (LRF	R P, S, T, I	J)							
Depth (inches): Hydric Soil Present? Yes No Control No	trictive La	yer (if obse	erved):								<u> </u>
narks:	Type:						_		Ì		
narks:	Depth (inch	es):								Hydric Soil Present?	' Yes 🖲 No 🔾
		,					***		-		
eted - stripped matrix in lower portion of sample. Redox concentrations also enountered.			Star Star Laure		-E1-	D - d		u			
	etea - stri	ippea matri	iix in iow	er portion	or sample.	кеаох с	oncentrat	cions aiso	enountere	a.	

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion City/County	r: Waveland - Hancock Sampling Date: 18-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Wet -19
Investigator(s): Lars Larson, Randy Ellis Section, T	ownship, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Swale Local relief	(concave, convex, none): none Slope: 0.0 % / 0.0 °
A Later Company of the Company of th	
	DEO 4/4.0
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?	res No (If no, explain in Remarks.)
Are Vegetation , soil , or Hydrology significantly disturbed	? Are "Normal Circumstances" present? Yes O No 💿
Are Vegetation . , Soll . , or Hydrology . naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling po	int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	the Sampled Area
Hydric Soil Present? Yes No O	he sampled Area Yes No
Wetland Hydrology Present? Yes No O	hin a Wetland?
Remarks:	
Bottom area of drainage way between railbeds - this areas had been altered and	water connection apparently disrupted, but not enough to keep it
from being wet. HYDROLOGY	
Wetland Hydrology Indicators:	Constant Testing Control Constant Control
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of 2 required)
Surface Water (A1) Aquatic Fauna (B13)	Surface Soil Cracks (B6)
High Water Table (A2) Marl Deposits (B15) (LRR U)	☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
✓ Water Marks (B1)	<u> </u>
Sediment Deposits (B2) Presence of Reduced Iron (C4)	✓ Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled S	
Algal Mat or Crust (B4) Thin Muck Surface (C7)	✓ Saturation Visible on Aerial Imagery (C9) ✓ Geomorphic Position (D2)
	Shallow Aquitard (D3)
Iron Deposits (B5) Unundation 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):	
, , , , , , , , , , , , , , , , , , ,	
Caturation Brocant?	─ Wetland Hydrology Present? Yes No ○
(includes capillary fringe) Yes No Depth (inches):	ii 2
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous i Remarks:	nspections), if available:
	•
	ļ
	j
I .	I
	l de la companya de

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

				ominant pecies? .		Sampling Point: Wet -19
		Absolute	R	el.Strat.	Indicator	Dominance Test worksheet:
	tratum (Plot size: 30 m)	% Cover		Cover	Status	Number of Dominant Species
Mag	gnolia virginiana	10	V	50.0%	FACW	That are OBL, FACW, or FAC: 8 (A)
Nys	ssa biflora	5	V	25.0%	OBL	Tabel Niverban of Descious
Pin	us efliottii	3		15.0%	FACW	Total Number of Dominant Species Across All Strata: 8 (B)
Ace	er rubrum	2		10.0%	FAC	· · · · · · · · · · · · · · · · · · ·
=		D		0.0%		Percent of dominant Species
		0		0.0%		That Are OBL, FACW, or FAC: 100 0% (A/B
		^		0.0%		Prevalence Index worksheet:
	•	0		0.0%		Total % Cover of: Multiply by:
	f Total Cover: 10 20% of Total Cover: 4	1990	= To	otal Cove		OBL species 40 x 1 = 40
	g or Sapling/Shrub Stratum (Plot size: 30 m					FACW species 69 x Z = 138
	anoile viralniene	10	V	40.0%	FACW	FAC species 2 x 3 = 6
	nea hidara	40	V	40.0%	OBL	FACU species 0 x 4 = 0
2.20	illa racemiflora	5	V	20.0%	FACW	1200000
		•		0.0%	IACT	and a property of the second
	P - W - P	-		1000000		Column Totals: 111 (A) 184 (B)
				0.0%		Prevalence Index = B/A = 1.658
				0.0%		Hydrophytic Vegetation Indicators:
1		0		0.0%		ya.opnytio regetation mulcatoisi
_	7 FF, 1 7 1	0	Ш	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of	f Total Cover: 12.5 20% of Total Cover: 5	25 :	= To	otal Cove	r	✓ 2 - Dominance Test is > 50%
hrub	Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 1
Cyri	illa racemiflora	25	V	67.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Mag	gnolla virginiana	10	V	27.0%	FACW	
Ilex	coriacea		\Box	5.4%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
			\Box	0.0%		be present, unless disturbed or problematic.
		0		0.0%		Definition of Vegetation Strata:
_		0	H	0.0%	-	Tree - Woody plants, excluding woody vines,
	Total Cover: 18.5 20% of Total Cover: 7.4		<u> </u>	tal Cove		approximately 20 ft (6 m) or more in height and 3 in.
		37 =	- 10	cai Covei		(7.6 cm) or larger in diameter at breast height (DBH).
lerb St	tratum (Plot size: 30 m)					
	odwardia virginica	20	V	71.4%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
, Woo	odwardia areolata	5	\square	17.9%	OBL	than 3 in. (7.6 cm) DBH.
3. Arui	ndinaria tecta	3		10.7%	FACW	
١		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.
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.
		0		0.0%		, , , , , , , , , , , , , , , , , , , ,
).		0		0.0%	- s	Herb - All herbaceous (non-woody) plants, including
	Control of the Contro		$\overline{\Box}$	0.0%		herbaceous vines, regardless of size, and woody
	Control of the contro	0	\Box	0.0%		plants, except woody vines, less than approximately 3 ft (1 m) in height.
		0		0.0%		
	Total Cover: 14 20% of Total Cover: 5.6		 . To	tal Cover	-	Woody vine - All woody vines, regardless of height.
			- 10	vai Cuver		
	Vine Stratum (Plot size: 30 m)		_			
	ax laurifolia	1	닏.	100.0%	FACW	
		0	Ц,	0.0%		
		0	\sqcup	0.0%	D. 1 497 14	
	**************************************	0	□.	0.0%	0.7, 20, 0.4 (min.)	M. A. Mark
		0		0.0%		Hydrophytic Vegetation
		2	To	tal Cover		Present? Yes No
50% of	Total Cover: 0.5 20% of Total Cover: 0.2	- W -	- 10	Cal Cover		

~	~	-	

Depth Matrix Color (moist) 9% Color (moist) 9% Type 10% 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 Redox (A1) (IRR D) Sandy Redox (A1) (IRR D) 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 Col	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 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 (F20) (MLRA 153B) Other (Explain in Remarks) Tm 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 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	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	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)	Otter (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) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Strictive Layer (if observed): Type: Depth (inches): Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric Soil Present? Yes No	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): Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) 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	•		
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) Piedmont Floodplain Soils (F19) (MLRA 149A) 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 •			
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)	-		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: 5 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	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Tetho Compled Aven
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No C
Remarks:	in and the second to the singuistic buffer above TC Cook to the south
Just downslope from railspur in North/NW part of AOI. Nice transiti	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 (B1)	
Saturation (A3) Hydrogen Sulfide	
	heres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduc	
	action 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)	Remarks)
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:	
	į

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

			ninant		Sampling Point: Wet - 21
	Absolute	Rel		Indicator	Dominance Test worksheet:
	% Cover	r Co	over	Status	Number of Dominant Species
Pinus elliottil	5		16.1%	FACW	That are OBL, FACW, or FAC: 10 (A)
Nyssa sylvatica	10_	V	32.3%	FAC	Tabl Number of Day!
Magnolia virginiana	15	V	48.4%	FACW	Total Number of Dominant 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:
	0	П,	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 15.5 20% of Total Cover: 6.2		= Tota	al Cove		OBL species 25 x 1 = 25
77.		_ 104	ai corci		FACW species
apling or Sapling/Shrub Stratum (Plot size: 30 m Taxodium ascendens			2.004	001	
Manager II - Abrahama			3.8%	OBL	FAC species 22 x 3 = 66
Magnolia virginiana			38.5%	FACW	FACU species $0 \times 4 = 0$
Cyrilla racemiffora			38.5%	FACW	UPL species $0 \times 5 = 0$
Acer rubrum		-	19.2%	FAC	Column Totals: 117 (A) 231 (B)
			0.0%		Prevalence Index = B/A = 1.974
		\sqsubseteq	0.0%		
	0	\square _	0.0%		Hydrophytic Vegetation Indicators:
APTIN APPENDANCE OF THE METAL OF	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 13 20% of Total Cover: 5.2	26 =	= Tota	al Cove		✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
Managla	10	V	33 30/	EACW	
A			33.3%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Acer rubrum			16.7%	FAC	1 Tadiophore of hydric soil and wetland hydrolans was
Cyrilla racemiflora	5	-70.400	16.7%	FACW	¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
Ilex coriacea	10		33.3%	FACW	
	Ó	=-	0.0%		Definition of Vegetation Strata:
	0	L.	0.0%	1.6	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
0% of Total Cover: 15 20% of Total Cover: 6 erb Stratum (Plot size: 30 m)	30 =	= Tota	al Cover		(7.6 cm) or larger in diameter at breast height (DBH).
	5	V :	21.7%	OBL	Sapling - Woody plants, excluding woody vines,
1114					approximately 20 ft (6 m) or more in height and less
The state of the s		_	65.2%	OBL	than 3 in. (7.6 cm) DBH.
Osmunda regalis	2		8.7%	OBL	Capling/Charle Mandy plants avaluating vines loss
Sarracenia alabamensis	_1_	~	4.3%	OBL	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%		Shrub - Woody plants, excluding woody vines,
And the second s	0_	∐	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
	. 0	<u> </u>	0.0%		
* e e e e e e e e e e e e e e e e e e e	0	$\Box_{,_}$	0.0%	distribution of	Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
·	_0_	\square	0.0%		plants, except woody vines, less than approximately
	0 [0.0%		3 ft (1 m) in height.
The second secon	0		0.0%		
0% of Total Cover: 11.5 20% of Total Cover: 4.6	23 =	= Tota	i Cover		Woody vine - All woody vines, regardless of height.
(oody Vine Stratum (Plot size: 30 m	-			1	
Vitis rotundifolia	- I		00 604		-
			28.6%		
Smilax laurifolia			71.4%	FACW	
	0		0.0%		
			0.0%		Livelnonhuelo
	0		0.0%		Vegetation
0% of Total Cover: 3.5 20% of Total Cover: 1.4	7 =	- Total	l Cover		Present? Yes No
50% of Total Cover: 3.5 20% of Total Cover: 1.4	0 [1 .			Hydrophytic Vegetation Present? Yes

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	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	
	es along Living Roots (C3)
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 ellietti	Tree Stratum (Plot size: 30 m	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:		
2. Sepace 10							
3. Magnole virginane	11. Production of the control of the				That are OBL, FACW, or FAC: 9 (A)		
4. Acc campastre			_				
5. Taxodium ascendens 1					Species Across All Strata: 9 (B)		
0	C Tourdium sensedore				Percent of dominant Species		
7.	C			OBL			
8.	-	_					
50% of Total Cover: 14 20% of Total Cover: 5.6 28 = Total Cover			*	interest			
Sappling or Sappling / Shrub Stratum (Plot size: 30 m 1			1				
1. Pinus elliottiti 2. Megnolia virginiana 3. Myses bifiliros 7. Megnolia virginiana 3. Myses bifiliros 7. Megnolia virginiana 4. Taxodium accandens 1	177 - 1 A	. 28 =	= Total Cover		4,-		
2. Megnolia virginiana 3. Nyses biffora 5. Nyses biffora 5. No. Gallam ascendens 5. No. Gallam ascendens 5. No. Gallam ascendens 6. No. Gallam ascendens 7. No. Gallam ascendens 8. No. Gallam ascendens 9. No. Gallam ascendens 10. O.0% 10.0% 11. Rapid Test for Hydrophytic Vegetation Test is > 50% 12. No. Gallam ascendens 10. Gallam ascendens 11. Sex coriaces 12. Sex coriaces 13. No. Gallam ascendens 14. Sex coriaces 15. Gallam ascendens 16. Gallam ascendens 17. Sex coriaces 18. Sex coriaces 19. Gallam ascendens 10. Gallam ascendens 11. Sex coriaces 12. Sex coriaces 13. Sex Gallam ascendens 14. Sex coriaces 15. Gallam ascendens 16. Gallam ascendens 17. Gallam ascendens 18. Sex coriaces 19. Callam ascendens 19. Callam ascendens 10. Gallam ascendens 10. Gallam ascendens 11. Sex coriaces 11. Sex coriaces 12. Sex coriaces 12. Sex coriaces 13. No. Gallam ascendens 14. Sex coriaces 15. Gallam ascendens 16. Gallam ascendens 17. Sex coriaces 18. Callam total cover: 19. Callam ascendens 19. Gallam ascendens 10. Gallam ascendens 10. Gallam ascendens 11. Sex coriaces 11. Sex coriaces 12. Sex coriaces 12. Sex coriaces 13. No. Gallam ascendens 14. Sex coriaces 15. Gallam ascendens 16. Gallam ascendens 17. Gallam ascendens 18. Gallam ascendens 19. Callam ascendens 11. Gallam ascende)					
3. Myses billione							
4. Taxodium ascendens 1				FACW	FACU species $0 \times 4 = 0$		
0			36.8%	OBL	UPL species $\frac{2}{x}$ x 5 = $\frac{10}{x}$		
0	(1	5.3%	OBL	Column Totals: 97 (A) 159 (B)		
0		0	0.0%				
8.		0	0.0%				
50% of Total Cover: 9.5 20% of Total Cover: 3.8 19 = Total Cover Shrub Stratum (Plot size: 30 m)		0	C.0%		Hydrophytic Vegetation Indicators:		
50% of Total Cover: 9.5 20% of Total Cover: 3.8 19 = Total Cover 1	8	0	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation		
1.	50% of Total Cover: 9.5 20% of Total Cover: 3.8	19 =	= Total Cover				
1. Ilex coriscea 2. Magnolla virginiana 10	Shrub Stratum (Plot size: 30 m						
Magnolia virginiana	4	15	✓ 57.7%	FACW			
1	**	-		**			
1			C-2-2-1-1-1-1-1		¹ Indicators of hydric soil and wetland hydrology must		
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).	4			TACIL			
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).					Definition of Vegetation Strata:		
Solve of Total Cover: 13 20% of Total Cover: 5.2 25 = Total Cover Herb Stratum (Plot size: 30 m) 1. Sarracenia alabamensis 7		-		r			
Herb Stratum (Plot size: 30 m) 1. Sarracenia alabamensis 7			test . 9 z		approximately 20 ft (6 m) or more in height and 3 in.		
1. Sarracenia alabamensis 2. Woodwardia areolata 3. Woodwardia virginica 4. 0		- 20 -	- IOCAL COVE		(7.6 cm) or larger in diameter at breast height (DBH).		
2 Woodwardia areolata 2 Woodwardia virginica 4 .			_		Sanling Woody plants, oveluding woody vince		
2. Woodwardla areolata 3. Woodwardla virginica 5.	5 - M			OBĹ			
4.	The state of the s			OBL			
5.		5	22.7%	OBL			
6.		0	0.0%				
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 herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. 12. 0 □ 0.0% 3 ft (1 m) in height. 12. 0 □ 0.0% 50% of Total Cover: 11 20% of Total Cover: 4.4 22 = Total Cover Woody Vine Stratum (Plot size: 30 m) 1. Smilax laurifolia 2 □ 100.0% FACW 2. □ 0.0% 50.00% 50.	5	0	0.0%		than 3 in. DBH and greater than 3.28 it (1m) tail.		
7.			0.0%		Shrub - Woody plants, excluding woody vines,		
9.			0.0%		approximately 3 to 20 ft (1 to 6 m) in height.		
herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Comparison of Total Cover: 11 20% of Total Cover: 4.4 22 = Total Cover			0.0%				
10.			0.0%				
1	10	_ o_ i	0.0%				
2	11	0[0.0%				
Woody Vine Stratum Plot size: 30 m	12	0	0.0%				
1. Smilax laurifolia 2. □ 100.0% FACW 2. □ 0.0% 3. □ 0.0% 4. □ 0.0% 5. □ 0.0% 5. □ 0.0% 6. □ 0.0% 1.	50% of Total Cover: 11 20% of Total Cover: 4.4	22 =	Total Cover		Woody vine - All woody vines, regardless of height.		
1. Smilax laurifolia 2. □ 100.0% FACW 2. □ 0.0% 3. □ 0.0% 4. □ 0.0% 5. □ 0.0% 5. □ 0.0% 6. □ 0.0% 1.	Woody Vine Stratum (Plot size: 30 m						
2. 0		9 [100.0%	FACW/			
3. 0 □ 0.0% 4. 0 □ 0.0% 5. 0 □ 0.0% 5. 0 □ 0.0% 5. Vegetation Present? Yes No □			_	i neiji.			
0							
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover							
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover Present? Yes No					Hydrophytic		
30% of Total Cover. 1 20% of Total Cover. 0.4 2 2 Total Cover			pur Maria		Vegetation V (A) N (C)		
Remarks: (If observed, list morphological adaptations below).	50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	Total Cover		rieseit! 155 O NO O		
	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 o
	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 Wedand?
Remarks:	
Lower drain area approximately 50-50-feet east of Up-23	
EDWAR ARAM AREA APPROXIMATELY DO SO TOOL GOOD OF ED	
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)	
☐ Water Marks (B1) ☑ Oxidized Rhizosph	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) ☐ 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 O Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ● No ○
(medacs capitally range)	, , , , , , , , , , , , , , , , , , , ,
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).

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

Dominant

			ominant pecies? .		Sampling Point: Wet - 23
Tree Stratum (Plot size: 30 m)	Absolute	e R	el.Strat. Cover	Indicator Status	Dominance Test worksheet:
Tot bei blain	-				Number of Dominant Species
Nyssa sylvatica	10	V	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 Canada
	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
	. 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	V	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 racemiflora			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	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		V	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 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 Matrix					Re	edox Feat	tures		in se			
(inches)	Color (%		(moist)	%	Type ¹		Texture	Remarks		
0-5	10YR	3/2	95	10YR	6/2	5	D	_ M	Loamy Sand		.	
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		/1)		_			MLRA 150A,		wetiand 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:								1	To the Cilibration			
Depth (inch	nes):			1.1.					Hydric Soil Present	? Yes ® N o ○		
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: 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	
	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	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No Remarks: drainage slough approximately 250 feet south of Turtleskin Creek actions.	Is the Sampled Area within a Wetland? Yes No Coccess road. This is a south to north drainage feature feeding TS creek.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Sediment Deposits (B2)	Drainage Patterns (B10) Odor (C1) Wess Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Ction In Tilled Soils (C6) C(7) Geomorphic Position (D2) Remarks) 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		Strat. ver	Indicator Status	Dominance Test worksheet:
					Number of Dominant Species
1	<u>5</u> 1		83.3% 16.7%	FACW	That are OBL, FACW, or FAC: 7 (A)
—· · · · · · · · · · · · · · · · · · ·	0			FACVV	Total Number of Dominant
3		_	0.0%		Species Across All Strata: 7 (B)
4	ó		0.0%		Percent of dominant Species
5			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		
Te comment of the com			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 :	= Tota	l Cover	•	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	V	60.0%	FACW	FAC species $3 \times 3 = 9$
2 Magnolla virginiana	10	V	40.0%	FACW	FACU species $0 \times 4 = 0$
3	0		0.0%		UPL species $0 \times 5 = 0$
4.	0		0.0%		Column Totals: 101 (A) 197 (B)
5.	0		0.0%		/ W
6.	0		0.0%		Prevalence Index = B/A = 1.950
7.	0		0.0%		Hydrophytic Vegetation Indicators:
8.	0	_	0.0%		A Bart Tark Carlland and Assessment
	-		l Cover		✓ 1 - Rapid Test for Hydrophytic Vegetation
	25_ =	- 10ta	ı cover		2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m.		_			3 - Prevalence Index is ≤3.0 ¹
1 Magnolia virginiana		-	59.8%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ilex corlacea		✓ 2	23.3%	FACW	
3. Liquidambar styracifiua	2		4.7%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Acer rubrum			2.3%	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: 21.5 20% of Total Cover: 8.6	43 =	= Total	l 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		_			Sapling - Woody plants, excluding woody vines,
1 Arundinaria tecta	15	✓ _6	0.0%	FACW	approximately 20 ft (6 m) or more in height and less
2. Scirpus atrocinctus			8.0%	FACW	than 3 in. (7.6 cm) DBH.
3. Woodwardia areolata	5	Y 2	0.0%	OBL	
4. Osmunda regalis	1		4.0%	OBL	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5. Juncus polycephalos	2		8.0%	OBL	triair 5 in. DBH and greater than 5.26 it (1111) 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		0.0%		
9		(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		0.0%		3 ft (1 m) in height.
12.	0		0.0%		·
50% of Total Cover: 12.5 20% of Total Cover: 5		4.00	Cover		Woody vine - All woody vines, regardless of height.
		· · · · · · ·			-
Woody Vine Stratum (Plot size: 30 m				}	
Smilax laurifolia	2		00.0%	FACW	
2	0		0.0%		
3.			0.0%		
1	0 .		0.0%	r	
5.	0 .		0.0%		Hydrophytic Vegetation
	2 =	Total	Cover		Present? Yes No
50% of Total Cover: 1 20% of Total Cover: 0.4					

SOIL									Sam	pling Point: Wet - 25
Profile Descripti	ion: (Descri	be to	the depth	needed to	documer	t the inc	licator or c	onfirm the	absence of indicators	i.)
Depth	Ma	atrix			Re	edox Fea				
(inches)	Color (mo	ist)	%	Color	(moist)	%n	, Type ¹	Loc2	Texture	Remarks
0-4	10YR	3/2	97	10YR	7/2	3	D	М	Loamy Sand	
4-16	10YR	4/2	95	10YR	7/2	5	D	М	Loamy Sand	
	Levas									
					**		· mac . v	_	#2	
							_	_		

		pletion	ı. RM= Red u	iced Matrix,	CS=Cover	ed or Coa	ted Sand Gr	ains ² Locat	tion: PL=Pore Lining, M	I=Matrix
Hydric Soil Indic	cators:								Indicators for Pro	oblematic Hydric Solls ³ :
Histosol (A1)	(42)						ce (S8) (LRR		1 cm Muck (A9)) (LRR O)
Histic Epipedo				∐ Thi	in Dark Su	rface (S9)	(LRR S, T,	U)	2 cm Muck (A1	(IO) (LRR S)
Black Histic (A	•			Loa	amy Mucky	/ Mineral	(F1) (LRR 0))	_	(F18) (outside MLRA 150A,B)
				Loa	amy Gleye	d Matrix (F2)			dplain Soils (F19) (LRR P, S, T)
Stratified Laye				De,	pleted Mat	rix (F3)				ght Loamy Soils (F20) (MLRA 153B)
Organic Bodies			•	Red	dox Dark S	Surface (F	6)		Red Parent Mai	
5 cm Mucky M	ineral (A7) (LRR P,	T, U)	☐ De	pleted Dar	k Surface	(F7)			Park Surface (TF12)
Muck Presence	e (A8) (LRR l	J)		☐ Red	dox Depre	ssions (F8	3)		Other (Explain	• •
🗌 1 cm Muck (A9	9) (LRR P, T)	ı			н (F10) (LI	-			□ Ouler (Explain	ir: Remarks)
Depleted Belov	w Dark Surfa	ce (A1:	1)				(MLRA 151)			
Thick Dark Sur	rface (A12)						:s (F12) (LRI			
Coast Prairie R		(MI RA	150A)							
Sandy Muck Mi							LRR P, T, U)	1		
Sandy Mack Mi		LICK O,	3)		ta Ochric (3 _{Tadicato}	rs of hydrophytic vegetation and
				_			MLRA 150A,		wetland	d hydrology must be present,
Sandy Redox (Pied	dmont Floo	odplain Sc	ils (F19) (M	LRA 149A)	unle	ss disturbed or problematic.
Stripped Matrix	٠,,			And	malous Br	ight Loan	ny Soils (F20) (MLRA 149.	A, 153C, 153D)	
Dark Surface (S	S7) (LRR P, 9	S, T, U))							
lestrictive Layer	(if observe	d):			-	<u> </u>	•			
Туре:										
Depth (inches):								İ	Hydric Soil Present?	? Yes 🏵 No 🔾
Remarks:		_								
Cindiks.										

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:	5 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' 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	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) Moss Trim Lines (B16)		
	heres along Living Roots (C3)	✓ Dry Season Water Table (C2)		
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)		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:				

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

Dominant

Tree Stratum (Plot size: 30 m)	Absolute	R	el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii	5	V	NI A	073/4 -	Number of Dominant Species
***				FACW	That are OBL, FACW, or FAC: 8 (A)
2. Magnolia virginiana	10			FACW	Total Number of Dominant
Liriodendron tulipifera	2		9.1%	FACU	Species Across All Strata: 8 (B)
4 Nyssa sylvatica	. 5	Y	22.7%	FAC	
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6.	0		0.0%	114	That Are Obl., TACW, or FAC.
7.	.0		0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 11 20% of Total Cover: 4.4	22	= Te	otal Cove		OBL species 3 x 1 = 3
Sapling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species 65 x 2 = 130
	10	V	50.0%	FAC	
		V	7. Jan 1.		•
2. Magnolia virginiana	1.00		25.0%	FACW	FACU species $\frac{2}{x}$ x 4 = $\frac{8}{x}$
3. Pinus elliottii		\sqcup	10.0%	FACW	UPL species $0 \times 5 = 0$
4.	3	\Box	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 :	= Tr	otal Cove		
	20				✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
1 Ilex corlacea	20	V	55.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Cyrilla racemiflora	10	✓	27.8%	FACW	
3. Ilex vomitoria	1		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	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).
Herb Stratum (Plot size: 30 m					Canling Mondy plants, evaluding woody vines
1 Arundinaria tecta	10	✓	71.4%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2 Sarracenia alabamensis	2		14.3%	OBL	than 3 in. (7.6 cm) DBH.
3. Scirpus atrocinctus	1		7.1%	FACW	
4. Woodwardia virginica			7.1%	OBL	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%		Ober to 1845 and a standard and the stan
7		\Box	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
8.	0	\equiv	0.0%		approximately o to see it (1 to 0 iii) iii iioigiiti
•	0	7	0.0%		Herb - All herbaceous (non-woody) plants, including
- 1	-	금			herbaceous vines, regardless of size, and woody
10		님	0.0%		plants, except woody vines, less than approximately
11	0	닏.	0.0%		3 ft (1 m) in height.
12	_ 0	Ц,	0.0%		NATIONAL CONTRACTOR OF THE PROPERTY OF THE PRO
50% of Total Cover: 7 20% of Total Cover: 2.8	14 =	= To	tal Cover	· [Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m)				Į	
1 Smilax laurifolia	22		100.0%	FACW	
		\Box	0.0%		
	0		0.0%		
3		Η.			
4	0	Η.	0.0%		Hydrophytic
5	0	Ш.	0.0%		Vegetation V
50% of Total Cover: 1 20% of Total Cover: 0.4	2 = Total Cover				Present? Yes No O
Remarks: (If observed, list morphological adaptations below).					
*Indicator suffix = National status or professional decision assigned because R	onional etatue r	of d	ofined in FV	vc	

_	_	- 1	•	

Profile Desci	ription: (De	scribe to	the depth	needed to do	cumen	t.the indic	cator or co	onfirm the	absence of indicators.)			
Depth						dox Feat	ires,					
(inches)		(moist)	%	Color (m	oist)_	. 0/0	Type ¹	Loc2	Texture	Remarks		
0-4	10YR	5/2	100			-			Loamy Sand	and the second s		
5-16	10YR	6/2	95	10YR	7/2	5	D	М	Loamy Sand			
·		, , , , , , , , , , , , , , , , , , , ,						: :	Management III.	W 17-00 - 11 - 12 - 12 - 12 - 12 - 12 - 12 -		
0		***				-	_					
10-2												
									, , , w-	ichii A		
¹ Type: C=Cone Hydric Soll I		=Depletio	n. RM=Redu	iced Matrix, CS	=Covere	ed or Coate	d Sand Gra	ains ² Loca	ation: PL=Pore Lining. M=	-Matrix blematic Hydric Soils ³ :		
Histosol (□ Polyv	alue Rel	ow Surface	(SR) (LBB	STIN	_			
	pedon (A2)					rface (S9) (1 cm Muck (A9)			
Black Hist				_		Mineral (F			2 cm Muck (A10			
_	Sulfide (A4)					d Matrix (F			_	(F18) (outside MLRA 150A,B)		
	Layers (A5)			_		•	<u>-)</u>			plain Soils (F19) (LRR P, S, T)		
_	odies (A6) (L	DD D T I	IN.		ted Mat					ht Loamy Soils (F20) (MLRA 153B)		
	, , ,		•			Surface (F6)			Red Parent Mate			
	ky Mineral (A		, 1, 0)			k Surface (Very Shallow Da	ark Surface (TF12)		
	епсе (A8) (L				-	ssions (F8)			Other (Explain i	n Remarks)		
	k (A9) (LRR I				(F10) (LI	-						
= :	Below Dark S	•	11)	_		ric (F11) (M						
	k Surface (A1	-				ese Masses						
	rie Redox (A		-	Umbr	ic Surfac	ce (F13) (LI	RR P, T, U)					
Sandy Mu	ck Mineral (S	1) (LRR 0	, S)	Delta	Ochric ((F17) (MLR	A 151)		37			
Sandy Gle	yed Matrix (S	54)		Reduc	ed Vert	ic (F18) (M	LRA 150A,	150B)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
Sandy Red	iox (S5)			Piedm	ont Floo	odplain Soil	s (F19) (MI	LRA 149A)		s disturbed or problematic.		
Stripped M	1atrix (S6)			Anom	alous Br	ight Loamy	Soils (F20) (MLRA 14	9A, 153C, 153D)			
☐ Dark Surfa	ace (S7) (LRF	R P, S, T, I	٦)									
Restrictive La	ver (if obs	erved):										
Туре:	., (,.										
Depth (inch	nec).								Hydric Soil Present?	Yes 💿 No 🔾		
	ics).					110						
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 - 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 state of the s
Are climatic/hydrologic conditions on the site typical for this time of ye	
	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 O	
Hydric Soil Present? Yes No O	Is the Sampled Area Ves No No
Wetland Hydrology Present? Yes No	within a Wetland? Yes WO
Remarks:	
Head of drainage feature about 50 feet west - northwest of Up-27.	
Treat of diamage reduce about 50 rect west. Horativese of 5p 277	
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 (B2	13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Mari Deposits (B1	L5) (LRR U)
Saturation (A3) Hydrogen Sulfide	Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Cxidized Rhizosph	heres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	iced Iron (C4)
Drift Deposits (B3)	action in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
☐ 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 No Depth (inches):	
Water Table Present? Yes O No O Depth (inches):	
Saturation Present? (Includes contlined friend) Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	
beschibe Recorded bata (stream gauge, monitoring waii, acriai phot	os, previous inspectacity, 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	

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

Dominant

Species?

(Diet size) 25 1	Absolute	Rel.Strat		Dominance Test worksheet:
Tree Stratum (Plot size: 30 m) Magnolla virginiana	% Cover		Status	Number of Dominant Species
Magnolla virginiana Nyssa sylvatica	10	40.0%		That are OBL, FACW, or FAC: 9 (A)
	10	40.0%		Total Number of Dominant
Pinus elliottii		20.0%	- 14 - 14	Species Across All Strata: 9 (B)
ki.		0.0%		Percent of dominant Species
		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
		U 0.0%		
	0	0.0%		Prevalence Index worksheet:
	0	□ 0.0%	عاللم عدد في	Total % Cover of: Multiply by:
50% of Total Cover: 12.5 20% of Total Cover: 5	25	= Total Cov	er	OBL species $2 \times 1 = 2$
apling 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 racemifiora	10	✓ 31.3%	FACW	FACU species $0 \times 4 = 0$
Nyssa sylvatica		15.6%	FAC	UPL species 0 x 5 = 0
Acer rubrum	2	6.3%	FAC	Column Totals: 122 (A) 261 (B)
	0	0.0%		Column locals:122 (A)201 \>
	0	0.0%		Prevalence Index = B/A = 2.139
	0	0.0%		Hydrophytic Vegetation Indicators:
• '	0	0.0%	**4	
		-		1 - Rapid Test for Hydrophytic Vegetation
0% of Total Cover: 16 20% of Total Cover: 6.4	32	= Total Cov	er	2 - Dominance Test is > 50%
rub Stratum (Plot size: 30 m)				3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	30	52.6%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Cyrilla racemiflora	. 15	26.3%	FACW	
Magnolia virginiana	10	17.5%	FACW	¹ Indicators of hydric soil and wetland hydrology must
Ilex opaca	2	3.5%	FAC	be present, unless disturbed or problematic.
		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.
erb Stratum (Plot size: 30 m) Arundinaria tecta Woodwardia areolata	5	✓ 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	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
	•	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
	0	0.0%		Shrub - Woody plants, excluding woody vines,
A control was and some some some control to the control of the con	0	0.0%		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 plants, except woody vines, less than approximately
	0	0.0%		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				
Smilax laurifolia	1	100.0%	FACW	
	0	0.0%	www.cam21	
•	0	0.0%	183 41 4	
	0	0.0%	· A - · • · · · · · · · · · · · · · · · · ·	
W. A	0	0.0%		Hydrophytic
				Vegetation Present? Yes No No
0% of Total Cover: 0.5 20% of Total Cover: 0.2	1 -	= Total Cov	NP	FIGSCILE 100 - 110 -

Profile Descr	iption: (De	scribe to	the depth	needed to document	t the indic	ator 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		* *** * * *B			Loamy Sand	
5-16	10YR	. , 5/2	95	10YR 7/2	5	C	M	Loamy Sand	
		=Depletio	n. RM= R edu	uced Matrix, CS=Covere	ed or Coate	ed Sand Gra	ins ²Loca	ition: PL=Pore Lining, M=	Matrix
Hydric Soil I				_				Indicators for Prob	lematic Hydric Soils ³ :
Stratified ! Organic Bd S cm Muck Muck Pres 1 cm Muck Depleted E Thick Dark Coast Praii Sandy Muc Sandy Gley Sandy Red Stripped M	pedon (A2) ic (A3) Sulfide (A4) Layers (A5) odies (A6) (L ky Mineral (A pence (A8) (L k (A9) (LRR I Below Dark S k Surface (A1 rie Redox (A ck Mineral (S yed Matrix (S dox (S5)	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 Bell Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Mat Redox Dark S Depleted Darl Redox Depres Marl (F10) (LI Depleted Och Iron-Mangane Umbric Surfac Delta Ochric (Reduced Vert Piedmont Floc Anomalous Br	face (S9) if Mineral (Fild Matrix (F3) murface (F6) k Surface (F8) murface (F8) murface (F11) (in the fild Mineral (F13) (the fild Mineral (F13) (the fild Mineral (F18) (Mineral (Mineral (F18) (Mineral (Minera)	(LRR S, T, U F1) (LRR O) 2)) F7) MLRA 151) (F12) (LRR RR P, T, U) A 151) iLRA 150A, Is (F19) (ML	O, P, T) 150B) RA 149A)	Piedmont Floodp Anomalous Brigh Red Parent Mate Very Shallow Dar Other (Explain in	I (LRR S) F18) (outside MLRA 150A,B) Iain Soils (F19) (LRR P, S, T) t Loamy Soils (F20) (MLRA 153B) rial (TF2) k Surface (TF12)
Restrictive La	yer (if obs	erved):	_						
Type:								Hydric Soil Present?	Yes ● No ○
Depth (inch	es):	-,		- A. - C - 1 - 1				nyuric 3011 Fresenti	TES © NO C
Remarks:									

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineatiion	City/County: Waveland - Hanco	21 00.10		
Applicant/Owner: NASA	State: MS	Sampling Point: Wet - 29		
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: 5	31 T 7s R 16 W		
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, n	none): none		
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 23.925" N Long	9: 89° 37' 49.957" W Datum: NAD83		
Soil Map Unit Name: Su, Smithton fine sandy loam, frequently flooded	The state of the s	NWI classification: PFO 1/4 C		
Are climatic/hydrologic conditions on the site typical for this time of year	ır? Yes 💿 No 🔾	(If no, explain in Remarks.)		
Are Vegetation . , Soil . , or Hydrology . significantl	y disturbed? Are "Normal	Circumstances" present? Yes No		
Are Vegetation, Soil, or Hydrology naturally p		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		Yes No		
Wetland Hydrology Present? Yes ● No ○	within a Wetland?			
Remarks:		· ·		
Lower bottom area just up from UP - 20 approximately 50 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 (B1:	•	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2) Marl Deposits (B15		✓ 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 Reduce Recent Iron Polytics Presence of Reduce		Crayfish Burrows (C8)		
☐ Drift Deposits (B3) ☐ Recent Iron Reduction ☐ Algal Mat or Crust (B4) ☐ Thir: Muck Surface	tion in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)		
☐ Iron Deposits (B5) ☐ Other (Explain in R	• •	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	enarks)	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 Hydr	rology Present? Yes 💿 No 🔾		
(includes capillary fringe) Yes No Depth (inches):				
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if avail	lable:		
	<u> </u>			
Remarks:				
Lower area within a drain with plenty of secondary hydrological indica	ators.			
•				

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

Dominant
Species?

(District 20 -)				Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 m)	% Cover		cover	Status	Number of Dominant Species
1. Pinus elliottii	2		11.1%	FACW	That are OBL, FACW, or FAC: 9 (A)
2. Magnolia virginiana	10	V	55.6%	FACW	Total Number of Dominant
3 Acer rubrum	5		27,8%	FAC	Species Across All Strata: 9 (B)
4. Nyssa biffora			5.6%	OBL	Percent of dominant Species
5	0	닖.	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6		片	0.0%	_	
7.	0	Ц_	0.0%		Prevalence Index worksheet:
8	0	Ш.	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 9 20% of Total Cover: 3.6	18 =	= Tot	al Cove	r	OBL species <u>13</u> x 1 = <u>13</u>
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)				FACW species $55 \times 2 = 110$
1 Magnolia virginiana	5		18.5%	FACW	FAC species $15 \times 3 = 45$
2 Acer rubrum	10	✓_	37.0%	FAC	FACU species $0 \times 4 = 0$
3. Cyrilla racemiflora	10	✓	37.0%	FACW	UPL species $0 \times 5 = 0$
4. Nyssa biflora	2		7.4%	OBL	Column Totals: 83 (A) 168 (B)
5.	0		0.0%		COTAIN TOLETA
6.	0		0.0%		Prevalence Index = B/A = 2.024
7	0		0.0%		Hydrophytic Vegetation Indicators:
8	0		0.0%		(a Boots Works the Control of the C
50% of Total Cover: 13.5 20% of Total Cover: 5.4		- Tot	al Cove	,	1 - Rapid Test for Hydrophytic Vegetation
	21	- 100	ai cove		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 ¹
1 Magnolia virginiana		V _	20.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Cyrilla racemiflora		✓.	40.0%	FACW	
3. Ilex corlacea		y _	40.0%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4	0		0.0%		be present, unless disturbed of problematica
5. ,	_		0.0%		Definition of Vegetation Strata:
6	0		0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 12.5 20% of Total Cover: 5	25 =	= 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)				ı	(7.0 cm) of larger in diameter at bleast height (DBH).
	-				Sapling - Woody plants, excluding woody vines,
1. Woodwardia areolata		V _	41.7%	OBL	approximately 20 ft (6 m) or more in height and less
2. Osmunda regalis		<u>~</u> _	25.0%	OBL	than 3 in. (7.6 cm) DBH.
3. Arundinaria tecta	2	片-	16.7%	FACW	Continue/Charle Manda alone avaluation visco loss
4. Dichanthelium scabriusculum		Η-	16.7%	OBL	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	Ц	0.0%		
6	. 0	<u> </u>	0.0%		Shrub - Woody plants, excluding woody vines,
7	. 0	۵.	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
8		∐_	0.0%		I lash All bashaga are /man years to A also to the first of
9	0		0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
10	0	Щ.	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: 6 20% of Total Cover: 2.4	12 =	Total	al Cover		Woody vine - All woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30 m					
	4 1		100.0%	EAC4,	
Smilax laurifolia	_ <u>1</u> _ l	<u>ا</u> ۔۔		I-ACVV	
	0	-	0.0%		
3.	0 l	=	0.0%		
1.	0 [٣-	0.0%	6.00	Hydrophytic
j. _{j=x}	<u> </u>		0,0%		Vegetation
50% of Total Cover: 0.5 20% of Total Cover: 0.2	1 = Total Cover				Present? Yes No O
Demarks: (If observed, list morphological adaptations helps)					
Remarks: (If observed, list morphological adaptations below).					
*Indicator suffix = National status or professional decision assigned because Re	gional status n	ot def	ined by FV	vs.	

rı	

	.heioir (DE		are acput					,, UIC	absence of indicators.)			
Depth Matrix (inches) Color (moist) %		0/	Redox Features Color (moist) % Type 1					Texture	Remarks			
0-4	10YR	3/2	% 95	10YR	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 ini	-		
										<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 :		
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)			☐ Thin D ☐ Loamy ☐ Loamy ☐ Deplet	Oark Sur / Mucky / Gleyed ted Mat	ow Surface fface (S9) (Mineral (F d Matrix (F2 rix (F3)	(LRR S, T, U (1) (LRR O) (2)	J)	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) Anomalous Bright Loamy Soils (F20) (MLRA 153B)				
☐ Organic Bodies (A6) (LRR P, T, U) ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) ☐ Muck Presence (A8) (LRR U)				Deplet	ed Darl	iurface (F6) k Surface (I ssions (F8)			Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
Depleted Thick Dar Coast Prai	k (A9) (LRR I Below Dark S k Surface (A1 irie Redox (A ck Mineral (S	Surface (A: .2) 16) (MLRA	150A)	Deplet Iron-M Umbrid	langane c Surfac	ric (F11) (M ese Masses ce (F13) (Li	(F12) (LRF RR P, T, U)			· · · · · · · · · · · · · · · · · · ·		
Sandy Gle Sandy Rec Stripped N	Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U)		LRA 149A)									
strictive La	ayer (if obse	erved):				-						
Type: Depth (inch	\ae\·					-			Hydric Soil Present?	Yes ● No □		
emarks:	163),		<u></u>	,								
letions thr	oughout so	il profile.										