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

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

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

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

Tree Stratum (Plot size: 30 m) % Cover Cover Status Number of Dominant Species That are OBL, FACW, or FAC: 5 1. Pinus taeda 5 16,7% FAC Total Number of Dominant Species That are OBL, FACW, or FAC: 5 5 3. Magnolia grandiflora 2 6,7% FAC Total Number of Dominant Species Across All Strata: 5 4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 5.	
2. Pinus taeda 5 16,7% FAC Total Number of Dominant Species Across All Strata: 5 3. Magnolia grandiflora 2 6,7% FAC Total Number of Dominant Species Across All Strata: 5 4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 6. 0 0.0% Prevalence Index worksheet: 7. 0 0.0% Total % Cover of: Multiply by:	(B) (A/B)
3. Magnolia grandiflora 2 6.7% FAC Total Number of Dominant Species Across All Strata: 5 4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% Total Number of Dominant Species Across All Strata: 5 6. 0 0.0% Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% Total Are OBL, FACW, or FAC: 100.0% 7. 0 0.0% Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by:	(A/B)
4. Acer rubrum 3 10.0% FAC Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 5. 0 0.0% That Are OBL, FACW, or FAC: 100.0% 7. 0 0.0% Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by:	(A/B)
5. 0 0.0% Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% 7. 0 0.0% Prevalence Index worksheet: 8. 0 0.0% Total % Cover of: Multiply by:	
6. 0 □ 0.0% That Are OBL, FACW, or FAC: 100.0% 7. 0 □ 0.0% Prevalence Index worksheet: 8. 0 □ 0.0% Total % Cover of: Multiply by:	
6. 0 □ 0.0% Prevalence Index worksheet: 8. 0 □ 0.0% Total % Cover of: Multiply by:	
800.0%Total % Cover of:Multiply by:	120
800.0%Total % Cover of:Multiply by:	15
Sapling or Sapling/Shrub Stratum (Plot size: 30 m) FACW species 40 x 2 = 80	
1 Pinus elliottil 15 ▼ 65.2% FACW FAC species 35 x 3 = 105	
UPL Species	
4	(B)
5. 0 \square 0.0% Prevalence Index = B/A = 2.467	
6. 0 0.0%	
7. 0 0 0.0% Hydrophytic Vegetation Indicators:	
8. 0 0 0.0% 1 - Rapid Test for Hydrophytic Vegetation	
50% of Total Cover: 11.5 20% of Total Cover: 4.6 23 = Total Cover ✓ 2 - Dominance Test is > 50%	
1. Morella cerifera15 💆 75.0% FAC Problematic Hydrophytic Vegetation 1 (Ex	(plain)
2. Ilex coriacea 5 25.0% FACW	
3. 0 0 0.0% Indicators of hydric soil and wetland hydrolipe present, unless disturbed or problematic.	ygy must
40 🗆 0.0%	
5 Definition of Vegetation Strata:	
6. 0 0.0% Tree - Woody plants, excluding woody vines,	
50% of Total Cover: 10 20% of Total Cover: 4 20 = Total Cover approximately 20 ft (6 m) or more in height an (7.6 cm) or larger in diameter at breast height	
Herb Stratum (Plot size: _30 m)	(DDII).
— Sanling - Woody plants, evoluding woody vine	s,
approximately 20 ft (6 m) or more in height an	
20 than 3 in. (7.6 cm) DBH.	
30 □ 0.0%	
4. 0 0.0% Sapling/Shrub - Woody plants, excluding vines than 3 in. DBH and greater than 3.28 ft (1m) to	
5. 0 0.0% mail 3 iii. DBH and greater mail 3.26 it (m) to	111.
6 Shrub - Woody plants, excluding woody vines,	
7 0 0.0% approximately 3 to 20 ft (1 to 6 m) in height.	
8 0 □ 0.0%	
O Herb - All herbaceous (non-woody) plants, inc	
10. 0 0.0% herbaceous vines, regardless of size, and wood plants, except woody vines, less than approximately the control of t	
11. 0 0 0.0% steept woody vines, less than approximate of the control of the cont	latery
12. 0 0.0%	
Meady sine All woods since regardless of h	eiaht
50% of Total Cover: 0 20% of Total Cover: 0 0 = Total Cover	
Woody Vine Stratum (Piot size: 30 m	
1 Smilax rotundifolia 2 100.0% FAC	
2. 0 0.0%	
3. 0 0.0%	
4. 0 0.0%	
5. 0 0.0% Hydrophytic	
Veg (A) No (A)	
50% of Total Cover: 1 20% of Total Cover: 0.4 2 = Total Cover Present? Tes No	
Remarks: (If observed, list morphological adaptations below). Heavey pine layer on ground. Not much of a herbaceous layer.	
*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.	

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

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 21-Oct-16				
Applicant/Owner: NASA	State: MS Sampling Point: Up - 32				
Investigator(s): Lars Larson, Randv Ellis	Section, Township, Range: S 31 T 7s R 16 W				
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): undulating Slope: 2.0 % / 1.1°				
	30° 23′ 56.796" N Long.: 89° 37′ 24.843" W Datum: NAD83				
was a second control of the second control o	1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Soil Map Unit Name: HIB, Harleston fine sandy loam, 2 to 5 percent slo					
Are climatic/hydrologic conditions on the site typical for this time of year					
Are Vegetation , Soil , or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes 🍳 No 🔾				
Are Vegetation . , Soil . , or Hydrology . naturally p	roblematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No	Table Complet Assa				
Hydric Soil Present? Yes ○ No ●	Is the Sampled Area				
Wetland Hydrology Present? Yes O No	within a Wetland?				
Remarks: This location is approximately 600 feet south of the logging road the this area.	rough center of AOI. This is part of a N-S transect to identify wet-up boundary in				
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)				
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	3) Sparsely Vegetated Concave Surface (B8)				
☐ High Water Table (A2) ☐ Marl Deposits (B15	5) (LRR U) Drainage Patterns (B10)				
Saturation (A3)	Odor (C1) Moss Trim Lines (B16)				
☐ Water Marks (B1) ☐ Oxidized Rhizosphe	eres along Living Roots (C3) Dry Season Water Table (C2)				
Sediment Deposits (B2)	ced Iron (C4) Crayfish Burrows (C8)				
☐ Drift Deposits (B3) ☐ Recent Iron Reduc	ction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Thin Muck Surface	(C7) Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Other (Explain in 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 ⑥				
Describe Recorded Data (stream gauge, monitoring well, aerial photo					
Barrada					
Remarks:					

Tree Stratum (Plot size: 30 m)	Absolute % Cover		el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii	15	V	62.5%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
2. Pinus taeda	2		8.3%	FAC	That are OBL, FACW, or FAC: 5 (A)
3 Magnolia grandiflora	5		20.8%	FAC	Total Number of Dominant
4 (1			8.3%	FAC	Species Across All Strata: 5 (B)
The State of the Company of the Comp		\Box	0.0%	TAC	Percent of dominant Species
^			0.0%	-	That Are OBL, FACW, or FAC: 100.0% (A/B)
0		1			
· -		H,	0.0%		Prevalence Index worksheet:
3.	0	ш,	0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 12 20% of Total Cover: 4.8	.	= T0	tal Cove	T .	OBL species 1 x 1 = 1
Sapling or Sapling/Shrub Stratum (Plot size: 30 m)	_			FACW species 90 x 2 = 180
Pinus elliottii	15	₩.	45.5%	FACW	FAC species 19 x 3 =57
Quercus nigra	1	Ш,	3.0%	FAC	FACU species $1 \times 4 = 4$
Nyssa sylvatica			6.1%	FAC	UPL species $0 \times 5 = 0$
1 Magnolia virginlana	10	✓.	30.3%	FACW	Column Totals: 111 (A) 242 (B)
5. Liquidambar styracifiua	5	\Box	15.2%	FAC	
3	0		0.0%		Prevalence Index = B/A = 2.180
7.	0		0.0%		Hydrophytic Vegetation Indicators:
3	0_		0.0%		1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 16.5 20% of Total Cover: 6.6	33	= To	tal Cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)	-		40.004	F4.044	✓ 3 - Prevalence Index is ≤3.0 ¹
Vaccinium elliottii	2.30.01		10.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Ilex corlacea		\mathbf{V}_{\cdot}	80.0%	FACW	1 Yadisəbəsə əf budula qall and urabland budanlarıy sarab
] Ilex glabra	5		10.0%	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must
	0	Ц,	0.0%		
5.	0	Ц	0.0%		Definition of Vegetation Strata:
3	0	Ш	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
50% of Total Cover: 25 20% of Total Cover: 10	50	= To	tal Cove		(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m					
1 . Lycopodiella alopecuroides	- i-		50.0%	OBL	Sapling - Woody plants, excluding woody vines,
2. Pteridium aquilinum		Ħ.	50.0%	FACU	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3.	0	H	0.0%	17100	than 3 lif. (7.3 diff) BBH.
			0.0%		Sapling/Shrub - Woody plants, excluding vines, less
4 5.	0	H	0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
6	0	Η.	0.0%		
O(H	0.0%		Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7		H	0.0%		approximately 3 to 20 it (1 to 6 iii) in height.
8.		片.			Herb - All herbaceous (non-woody) plants, including
9			0.0%		herbaceous vines, regardless of size, and woody
0		H	0.0%		plants, except woody vines, less than approximately
1		H	0.0%		3 ft (1 m) in height.
2	0	Ц.	0.0%		Woody vine - All woody vines, regardless of height.
50% of Total Cover: 1 20% of Total Cover: 0.4	2 :	= To	tal Cover	'	vvoody vine - All woody vines, regardless of fielght.
Woody Vine Stratum (Plot size: 30 m				l	
Vitis rotundifolia	2		100.0%	FAC	
The second secon			0.0%		
3.	_		0.0%		
		Ē.	0.0%		
	0		0.0%		Hydrophytic
			tal Cover		Vegetation Present? Yes ● No ○
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =				

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

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

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

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

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 34
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
A MANY I MANNEY Y	30° 24′ 3.767" N Long.: 89° 37′ 1.217" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year	r? Yes No (If no, explain in Remarks.)
Are Vegetation . , Soil . , or Hydrology . significantly	y disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pr	•
SUMMARY OF FINDINGS - Attach site map showing san	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No O	
Hydric Soil Present? Yes O No 💿	Is the Sampled Area thin > Walland 2 Yes ○ No ●
Wetland Hydrology Present? Yes ○ No ●	within a Wetland? Yes O NO O
Remarks: Transitional area back to an Upland. 100-feet (+/-) from Wet-34.	
Transitional area back to an opiand. 100-leet (+7-7 non wet-54.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required: check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Fauna (B13	
High Water Table (A2) Marl Deposits (B15)) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide O	Odor (C1) Moss Trim Lines (B16)
☐ Water Marks (B1) ☐ Oxidized Rhizosphel	eres along Living Roots (C3) Dry Season Water Table (C2)
Sediment Deposits (B2)	ed Iron (C4) Crayfish Burrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reducti	tion in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface ((C7) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Re	emarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	✓ FAC-Neutral Test (D5)
☐ Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes ○ No ● Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s. previous inspections), if available:
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Remarks:	
Remarks:	

Tree Stratum (Plot size: 30 m			l.Strat.	Indicator	Dominance Test worksheet:
	% Cover	-		Status	Number of Dominant Species
Pinus elliottii	20		54.1%	FACW	That are OBL, FACW, or FAC: 6 (A)
Pinus tzeda	10		27.0%	FAC	Total Number of Dominant
Magnolia virginiana	5,	Ц_	13.5%	FACW	Species Across All Strata: 6 (B)
Liquidambar styraciffua	2	\sqcup_{-}	5.4%	FAC .	
	0	Щ	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
w sp.	0		0.0%		That are Obl., FACVV, OF FAC:
	0		0.0%		Prevalence Index worksheet:
E	0		0.0%		Total % Cover of: Multiply by:
0% of Total Cover: 18.5 20% of Total Cover: 7.4	37	= Tot	tal Cove	r	OBL species $0 \times 1 = 0$
apling or Sapling/Shrub Stratum (Plot size: 30 m					FACW species74
N	19/45	V	68.2%	FACW	
	The second second	V		an prigital designation of	
Pinus taeda			22.7%	FAC	FACU species $0 \times 4 = 0$
Magnolia virginiana	2	Щ.	9.1%	FACW	UPL species $0 \times 5 = 0$
	0	Ц.	0.0%		Column Totals: 110 (A) 256 (B)
J	0		0.0%		Drouglance Indox — P/A 2 227
of Years Face to the Test of the Second Section 1997 (Section 1997).	0		0.0%		Prevalence Index = B/A = 2 327
	0		0.0%		Hydrophytic Vegetation Indicators:
	0		0.0%		1 - Danid Test for Hydrophytic Venetation
0% of Total Cover: 11 20% of Total Cover: 4.4	22 :	= Tot	al Cove	r	1 - Rapid Test for Hydrophytic Vegetation
					✓ 2 - Dominance Test is > 50%
hrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex corlacea	30	~	71.4%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex opaca	.5		11.9%	FAC	
Vaccinium elliottii	2		4.8%	FACW	¹ Indicators of hydric soil and wetland hydrology mus
Morella cerifera	5		11.9%	FAC	be present, unless disturbed or problematic.
	0		0.0%		Definition of Vegetation Strata:
	0	Π,	0.0%	. *	Tree - Woody plants, excluding woody vines,
0% of Total Cover: 21 20% of Total Cover: 8.4 erb Stratum (Plot size: 30 m) Lygodlum japonicum			al Cove		(7.6 cm) or larger in diameter at breast height (DBH). Sapling - Woody plants, excluding woody vines,
1	0		0.0%		approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
	0		0.0%		than one (7.5 only 55)
		<u> </u>	0.0%	-	Sapling/Shrub - Woody plants, excluding vines, less
·		Η-			than 3 in. DBH and greater than 3.28 ft (1m) tall.
•		H-	0.0%		
T		H-	0.0%		Shrub - Woody plants, excluding woody vines,
· · · · · · · · · · · · · · · · · · ·		<u> </u>	0.0%		approximately 3 to 20 ft (1 to 6 m) in height.
· · · · · · · · · · · · · · · · · · ·		H=	0.0%		Horb. All horbonous from woods A starts. (astronomy
	0	\sqcup	0.0%		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0		0.0%		plants, except woody vines, less than approximately
	.0		0.0%		3 ft (1 m) in height.
	0		0.0%		
0% of Total Cover: 2.5 20% of Total Cover: 1	5 =	= Tota	al Cover		Woody vine - All woody vines, regardless of height.
oody Vine Stratum (Plot size: 30 m		_		-	
Vitis rotundifolia	3	1.000	75.0%		
Smilax rotundifolia	1 ,		25.0%	FAC	
	0		0.0%		
	0		0.0%		
·	0		0.0%	4. 4	Hydrophytic
		T	al Cover	-	Vegetation Present? Yes No
0% of Total Cover: 2 20% of Total Cover: 0.8	4 =				

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

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16
Applicant/Owner: NASA	State: MS Sampling Point: Up - 35
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR T Lat.:	30° 24' 3.834" N Long.: 89° 36' 56.966" W Datum: NAD83
Soil Map Unit Name: At, Atmore silt loam, 0 to 2 percent slopes	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significant	ntly disturbed? Are "Normal Circumstances" present? Yes No O
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Transitional area back into an Upland - approximately 100 feet north	Is the Sampled Area within a Wetland? Yes O No th of Wet-35.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)	
Surface Water (A1) Aquatic Fauna (B:	
High Water Table (A2) Marl Deposits (B1	
Saturation (A3) Hydrogen Sulfide	
	wheres along Living Roots (C3) Dry Season Water Table (C2)
	uced Iron (C4) Crayfish Burrows (C8) uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	, , ,
☐ Iron Deposits (B5) ☐ Other (Explain in	
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	☐ Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes O No O Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? (includes capillary frings) Yes No Depth (inches):	Wetland Hydrology Present? Yes ○ No •
Describe Recorded Data (stream gauge, monitoring well, aerial photo	
Describe Recorded Data (Scream gauge, monitoring well, aerial prior	.us, previous inspections), it available.
Remarks:	

			ominant Species? _		Sampling Point: Up - 35
(5)	Absolute	∍ R	tel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 m)	% Cove		Cover	Status	Number of Dominant Species
Pinus elliottii	10	Y		FACW	That are OBL, FACW, or FAC: 5 (A)
Magnolia virginiana	5	✓.		FACW	Total Number of Dominant
Liquidambar styracifiua	<u> </u>		6.3%	FAC	Species Across All Strata: 5 (B)
			0.0%		Descent of deminant Charles
-71			0.0%	_	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
• 1	0	Н	0.0%		· · · · · · · · · · · · · · · · · · ·
			0.0%		Prevalence Index worksheet:
	_ , . 0 _		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 8 20% of Total Cover: 3.2		= T	otal Cove		OBL species 1 x 1 =1
Sapling or Sapling/Shrub Stratum (Plot size: 30 m		_			FACW species 95 x 2 = 190
Pinus elliottii		V	78.1%	FACW	FAC species $\frac{4}{}$ x 3 = $\frac{12}{}$
Magnolla virginiana		Ш	15.6%	FACW	FACU species $0 \times 4 = 0$
Liquidambar styraciflua	2		6.3%	FAC	UPL species $0 \times 5 = 0$
· //	0	\sqcup	0.0%		Column Totals: 100 (A) 203 (B)
	0		0.0%		Prevalence Index = B/A = 2.030
W. #*	0		0.0%		<u> </u>
	0		0.0%		Hydrophytic Vegetation Indicators:
1917	. 0		0.0%_		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 16 20% of Total Cover: 6.4	32	= T	otal Cover		✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m					✓ 3 - Prevalence Index is ≤3.0 ¹
Ilex coriacea	40	V	80.0%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Ilex glabra	10	V	20.0%	FACW	
	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
		\Box	0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
	0	H	0.0%		Tree - Woody plants, excluding woody vines,
50% of Total Cover: 25 20% of Total Cover: 10	1, 1, M. V				approximately 20 ft (6 m) or more in height and 3 in.
I will a second	50	= 10	otal Cover		(7.6 cm) or larger in diameter at breast height (DBH).
lerb Stratum (Plot size: _30 m)					Carlina Manda data analysisa was taning
Lycopodiella alopecuroides	1		100.0%	OBL	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
	0		0.0%		than 3 in. (7.6 cm) DBH.
·	0		0.0%		
			0.0%		Sapling/Shrub - Woody plants, excluding vines, less
No Aller				_	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.
· · · · · · · · · · · · · · · · · · ·	0		0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall.
т Суд «	0 0		0.0% 0.0%		
	0 0 0 0		0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines,
	0 0 0 0 0		0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tail. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including
5. 7. 8.	0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
1. 5. 5. 7. 3. 9.	0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
1. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
5. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 100.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
5. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0 0 0 0 0 0 0 0 0 0		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
6	0 0 0 0 0 0 0 0 0 0 1 =		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. 5. 6. 7. 8. 9. 9. 90% of Total Cover: 0.5 20% of Total Cover: 0.2 Voody Vine Stratum (Plot size: 30 m) Smilax rotundifolia	0 0 0 0 0 0 0 0 0 1 =		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height.
4	0 0 0 0 0 0 0 0 0 0 1 =		0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%		than 3 in. DBH and greater than 3.28 ft (1m) tall. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

-	-	

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators-) Depth Mitrik (Insheb) Color (noish) % Colo	SOIL					Sampling Point: Up - 35
Depth	Profile Descr	iption: (Desc	ribe to	the depth	needed to document the indicator or confirm the	absence of indicators.)
Color (molet)						
0-4 10YR 3/2 100 Loamy Sand 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 Type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Sand Grains 2 Location: PL=Pore Lining. M=Natrix 1 type: C=Concentration. D=Depletion. RM=Reduced Plank Surface (\$8) (LRR S, T, U)				%		Texture Remarks
1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains 2 Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators:	0-4	10YR	3/2	100		Loamy Sand
1 Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains 2 Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators:	4-15	10YR	5/4	100	* · ^ * . ·	Loamy Sand
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Coasy Prairie Redox (A1) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Surface (S8) (LRR S, T, U) Coast Surface (S9) (LRR S, T, U) Coard Muck (A10) Coast Surface (A10) Coast Prairie Redox (A10) Coast Surface (S8) Coast Reduced Vertic (F18) Coast Reduced Vertic (F18) Coast Prairie Redox (A16) Coast Surface (A12) Coast Prairie Redox (A16) Coast Prairie Redox (A16) Coast Surface (A12) Coast Redox Coast Coast Redox Coast Coast Redox Coast Coast Redox Coast Coast Redox (A16) Coast			-7'			
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Coasy Prairie Redox (A1) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Surface (S8) (LRR S, T, U) Coast Surface (S9) (LRR S, T, U) Coard Muck (A10) Coast Surface (A10) Coast Prairie Redox (A10) Coast Surface (S8) Coast Reduced Vertic (F18) Coast Reduced Vertic (F18) Coast Prairie Redox (A16) Coast Surface (A12) Coast Prairie Redox (A16) Coast Prairie Redox (A16) Coast Surface (A12) Coast Redox Coast Coast Redox Coast Coast Redox Coast Coast Redox Coast Coast Redox (A16) Coast			_			
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Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Coasy Prairie Redox (A1) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Surface (S8) (LRR S, T, U) Coast Surface (S9) (LRR S, T, U) Coard Muck (A10) Coast Surface (A10) Coast Prairie Redox (A10) Coast Surface (S8) Coast Reduced Vertic (F18) Coast Reduced Vertic (F18) Coast Prairie Redox (A16) Coast Surface (A12) Coast Prairie Redox (A16) Coast Prairie Redox (A16) Coast Surface (A12) Coast Redox Coast Coast Redox Coast Coast Redox Coast Coast Redox Coast Coast Redox (A16) Coast						
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Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Coasy Prairie Redox (A1) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Stripped Black (A10) Coast Prairie Redox (A10) Coast Stripped Black (A10) Coast Stripped Matrix (S4) Coast Stripped Matrix (S6) Coast Stripped Matr			_	_	r n.	
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Coasy Prairie Redox (A1) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Stripped Black (A10) Coast Prairie Redox (A10) Coast Stripped Black (A10) Coast Stripped Matrix (S4) Coast Stripped Matrix (S6) Coast Stripped Matr						
Histosol (A1)	1 Type: C=Cond	centration. D=I	Depletion	n. RM= R edu	aced Matrix, CS=Covered or Coated Sand Grains 2Loc	ation: PL=Pore Lining. M=Matrix
Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Mari (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Delta Ochric (F17) (MLRA 151) Sandy Redox (S5) Delta Ochric (F17) (MLRA 150B) Mari (F10) (LRR U) Depleted Matrix (S4) Reduced Vertic (F18) (MLRA 150B) Reduced Vertic (F18) (MLRA 150B) Mari (F10) (LRR U) Depleted Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Umbric Surface (F17) (MLRA 151) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Pledmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No I cm Muck (A9) (LRR S, T, U) 1 cm Muck (A10) (LRR S) Reduced Vertic (F18) (LRR O, P) Redox Darks Surface (S9) (LRR P, S, T, U)	Hydric Soil I	ndicators:				Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2)	Histosol (A	A1)			Polyvalue Below Surface (S8) (LRR S, T, U)	
Black Histic (A3)	Histic Epip	edon (A2)				
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (A5) Delta Ochric (F17) (MLRA 150A) Sandy Redox (S5) Delta Ochric (F19) (MLRA 150A, 150B) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Piedmont Floodplain Soils (F19) (MRA 150A) Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)	Black Histi	ic (A3)			_	
Stratified Layers (A5)	Hydrogen	Sulfide (A4)				
Organic Bodies (A6) (LRR P, T, U)	= ' -					
□ 5 cm Mucky Mineral (A7) (LRR P, T, U) □ Depleted Dark Surface (F7) □ Very Shallow Dark Surface (TF12) □ Muck Presence (A8) (LRR U) □ Redox Depressions (F8) □ Other (Explain in Remarks) □ 1 cm Muck (A9) (LRR P, T) □ Marl (F10) (LRR U) □ Depleted Below Dark Surface (A11) □ Depleted Dorhic (F11) (MLRA 151) □ Thick Dark Surface (A12) □ Iron-Manganese Masses (F12) (LRR O, P, T) □ Coast Prairie Redox (A16) (MLRA 150A) □ Umbric Surface (F13) (LRR P, T, U) □ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ unless disturbed or problematic. □ Stripped Matrix (S6) □ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) □ Dark Surface (S7) (LRR P, S, T, U) □ Restrictive Layer (if observed): Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ●			R P. T. U	n		_
Muck Presence (A8) (LRR U)	<u> </u>	,		-		
□ 1 cm Muck (A9) (LRR P, T) □ Marl (F10) (LRR U) □ Depleted Below Dark Surface (A11) □ Depleted Ochric (F11) (MLRA 151) □ Thick Dark Surface (A12) □ Iron-Manganese Masses (F12) (LRR O, P, T) □ Coast Prairie Redox (A16) (MLRA 150A) □ Umbric Surface (F13) (LRR P, T, U) □ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Wetland hydrology must be present, unless disturbed or problematic. □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ unless disturbed or problematic. □ Stripped Matrix (S6) □ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) □ Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): □ Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ●				., -,		
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Depleted Ochric (F13) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Depleted Ochric (F13) (LRR O, P, T) Depleted Ochric (F14) (MLRA 151) Tron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F15) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F17) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Ochric (F18) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Iron-Manganese Masses (F12) (LR O, P, T) Iron-Manganese Masses						U Other (Explain in Remarks)
Thick Dark Surface (A12)				11)		
Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No				/		
□ Sandy Muck Mineral (S1) (LRR O, S) □ Delta Ochric (F17) (MLRA 151) □ Sandy Gleyed Matrix (S4) □ Reduced Vertic (F18) (MLRA 150A, 150B) □ Sandy Redox (S5) □ Piedmont Floodplain Soils (F19) (MLRA 149A) □ unless disturbed or problematic. □ Stripped Matrix (S6) □ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) □ Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): □ Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ●				1504)		
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_	• •		, 3)		³ Indicators of hydrophytic vegetation and
Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No •			,			wetland hydrology must be present,
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes O No						
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes O No No				15	Anomalous Bright Loamy Soils (F20) (MLRA 14	19A, 153C, 153D)
Type: Depth (inches): Hydric Soil Present? Yes O No No	□ Dark Surra	ice (S/) (LKK i	, S, I, L	<i>')</i>		
Type: Depth (inches): Hydric Soil Present? Yes O No No						
Type: Depth (inches): Hydric Soil Present? Yes O No No	Restrictive La	ver (if ohser	ved):			
Depth (inches): Hydric Soil Present? Yes O No 🖲		., (
		vec).				Hydric Soil Present? Yes O No 💿
Remarks:		res).,		110	V 1	
	Remarks:					
· · · · · · · · · · · · · · · · · · ·						

Project/Site: NASA - Stennis; 1,100 Acre Wetland Delineation	City/County: Waveland - Hancock Sampling Date: 24-Oct-16 State: MS Sampling Point: Up - 36
Applicant/Owner: NASA	
Investigator(s): Lars Larson, Randy Ellis	Section, Township, Range: S 29 T 7 s R 16 W
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR T Lat:	30° 24′ 4.173" N Long.: 89° 36′ 44.961" W Datum: NAD83
Soil Map Unit Name: EsB, Escambia loam, 2 to 5 percent slopes Are climatic/hydrologic conditions on the site typical for this time of year	NWI classification: N/A ar? Yes No (If no, explain in Remarks.)
	ly disturbed? Are "Normal Circumstances" present? Yes No
	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 Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes ○ No ●
Remarks: Upland Area approximately 100 feet west of access road along easter	ern side of AOI.
HYDROLOGY	
Sediment Deposits (B2)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Odor (C1)
Remarks:	

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

Tree Stratum (Plot size: 30 m)	Absolute % Cover	R	pecies? . el.Strat. Cover	Indicator Status	Dominance Test worksheet:
1 Pinus elliottii	20	V	69.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)
2. Magnolia virginiana	5		17.2%	FACW	, , , , , , , , , , , , , , , , , , , ,
3 Liquidambar styraciflua	3	\Box	10.3%	FAC	Total Number of Dominant
4 Mess substitut			3.4%	FAC	Species Across All Strata: 7 (B)
And the second of the second o		H	(Management)	- FAC	Percent of dominant Species
5		吕.	0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
6.	0,.,	\sqsubseteq	0.0%		11.001.00 00.001
7	0	Щ	0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
50% of Total Cover: 14.5 20% of Total Cover: 5.8	29 :	= To	otal Cove	r	OBL species $0 \times 1 = 0$
Sapling or Sapling/Shrub Stratum (Plot size: 30 m	1				FACW species 91 x 2 = 182
	/		FO 004	ELOW	
1. Pinus elliottii		V,	58.8%	FACW	FAC species 13 x 3 = 39
Magnolia virginiana		V,	29.4%	FACW	FACU species $0 \times 4 = 0$
3. Liquidambar styraciflua	2	Ш,	11.8%	FAC	UPL species $0 \times 5 = 0$
4.	0		0.0%		Column Totals: 104 (A) 221 (B)
5.	0		0.0%		
6	0	\Box	0.0%		Prevalence Index = $B/A = 2.125$
7.	0	\Box	0.0%		Hydrophytic Vegetation Indicators:
8.		Η.	0.0%		
0	. 0	Ш,	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
50% of Total Cover: 8.5 20% of Total Cover: 3.4	17 =	= To	otal Cover	r	✓ 2 - Dominance Test is > 50%
Shrub Stratum (Plot size: 30 m)					✓ 3 - Prevalence Index is ≤3.0 1
1 Ilex corlacea	15	V	41.7%	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
		=			☐ Problematic Hydrophytic Vegetation * (Explain)
2. Ilex glabra		◩.	41.7%	FACW	1 was a second of the second o
3. Ilex vomitoria	5	Ц,	13.9%	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Cyrilla racemiflora	1	Ш	2.8%	FACW	
5	0		0.0%		Definition of Vegetation Strata:
6.	0		0.0%	•	Tree - Woody plants, excluding woody vines,
50% of Total Cover: 18 20% of Total Cover: 7.2	36 =	= To	tal Cover		approximately 20 ft (6 m) or more in height and 3 in.
					(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30 m.)					Conline Mondy plants, avaluating woody vines
1 . Ilex coriacea	10	V.	50.0%	FACW	Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2. Ilex glabra	10	V	50.0%	FACW	than 3 in. (7.6 cm) DBH.
3.	0	\Box	0.0%		,
A	0	\Box	0.0%		Sapling/Shrub - Woody plants, excluding vines, less
		H٦			than 3 in. DBH and greater than 3.28 ft (1m) tall.
5	0	,,	0.0%		
D.,	0	٣.	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	Ш,	0.0%		
9	0		0.0%		Herb - All herbaceous (non-woody) plants, including
10	0		0.0%		herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
11,	0		0.0%		3 ft (1 m) in height.
12.					- X (1 //) 11 // - 3 // - 1
~	0	. 10	0.0%		Woody vine - All woody vines, regardless of height.
50% of Total Cover: 10 20% of Total Cover: 4	20 =	To	tai Cover	·	Woody Ville - All Woody Villes, regardless of fleight.
Woody Vine Stratum (Plot size: 30 m				Į	
1. Smilax rotundifolia	2		100.0%	FAC	
	i	=	0.0%	, , , ,	
2	_	415			
3			0.0%		
4	0 [0.0%		
5	0 [0.0%		Hydrophytic Vegetation
50% of Total Cover: 1 20% of Total Cover: 0.4	2 =	Tot	tal Cover	/	Present? Yes No O
Co. Co. Co.		101			
Remarks: (If observed, list morphological adaptations below). *Indicator suffix = National status or professional decision assigned because Re					

☐ Sandy Redox (S5) ☐ Piedmont Floodplain Soils (F19) (MLRA 149A) ☐ unless disturbed or problemati ☐ 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:		ption: (Describe	to the depth	needed to document	the indicator or o	confirm the a	bsence of indicators.)		
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix (CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix (CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix (CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix (CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix (CS=Covered or Costed Sand Grains Type: C=Concentration. D=Depleted Matrix (CS=Covered or Costed Sand Grains Table Sand Matrix (CS=Covered or Costed Sand Grains Table Sandy Mick Mineral (AS) (LRR O)	Depth Matrix		Redox Features						
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils Indicators I		Color (moist) %	Color (moist)	% Type	Loc2	Texture	Remarks	
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix *Hydric Soil Indicators:	0-4	10YR 4/	2 100						
Histosol (A1)	4-15	10YR 5/0	6 100						
Histosol (A1)									
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Scra Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150, 4150, 4150, 4150, 4150, 4150, 4150, 4150) Tom Muck (A9) (LRR P, T, U) Depleted Matrix (F2) Piedmont Floodplain Soils (F20) (MLR O) Red Parent Material (TF2) Red Parent Material (TF2) Period Muck (A10) (LRR P, T, U) Depleted Dark Surface (F6) Red Parent Material (TF2) Wery Shallow Dark Surface (TF12) Marck (A9) (LRR P, T) Depleted Below Dark Surface (F11) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 150A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U)			etion, RM=Redu	ced Matrix, CS=Covere	d or Coated Sand G	irains ² Locati			
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S)				Polyvaluo Rolo	w Curface (CO) (LD	D C T IIV		•	
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150, Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Scr Mucky Mineral (A7) (LRR P, T, U) Redox 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) Sandy Muck Mineral (S1) (LRR O, S) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Selow Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Depleted Dela Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type:	_ `	•						•	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLR P, S Granic Bodfies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2)									
Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Red Parent Material (TF2) Search Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S6) Depleted Matrix (F3) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Present Material (TF2) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Marl (F10) (LRR U) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Marl (F10) (LRR U) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Depleted Dark Surface (F8) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Need Parent Material (TF2) Very Shallow Dark Surface (TF12) Need Parent Material (TF2) Very Shallow Dark Surface (TF12) Need Parent Material (TF2) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (F7) Very Shallow Dark Surface (F7) Very Shallow Dark Surface (F7) Very Shallow Dark Surface (F12) Need Parent Material (TF2) Very Shallow Dark Surface (F12) Very Shallow Dark Surface (F7) Very Shallow Dark Surface (F7) Very Sha	_	•				<i>7)</i>	_		
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Red Parent Material (TF2) Stim Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Redox 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) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Part Surface (S7) (LRR P, S, T, U) Part Allomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Redox Dark Surface (F6) Red Parent Material (TF2) Red Parent Material (TF2) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Very Shallow Dark							·		
5 cm Mucky Minerai (A7) (LRR P, T, U)									
Muck Presence (A8) (LRR U) Redox Depressions (F8)	_							• •	
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Sestrictive Layer (if observed): Type:									
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Participle Layer (if observed): Type:							U Other (Explain in	Remarks)	
Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Type: Type:	_		(A11)		•	`			
Coast Prairie Redox (A16) (MLRA 150A) Sandy Muck Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F13) (LRR P, T, U) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic (F18) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U)	_		(122)			•			
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) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B) Wetland hydrology must be prese unless disturbed or problematic unless disturbed or problematic problematic unless disturbed or problematic unless	_		I DA 1EGA)						
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) Particitive Layer (if observed): Type:	_			_		١)			
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) **estrictive Layer (if observed): Type:	_		panel .			3 Indicators of hydrophytic vegetation and			
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) Estrictive Layer (if observed): Type:					-	wetland hydrology must be present,			
Dark Surface (S7) (LRR P, S, T, U) estrictive Layer (if observed): Type:					-	•			
estrictive Layer (if observed): Type:				Anomalous Brig	ght Loamy Soils (F2	0) (MLRA 149A	A, 153C, 153D)		
Type:	」 Dark Surfac	e (S7) (LRR P, S, `	T, U)						
		er (if observed)	:		===				
Depth (inches): Hydric Soil Present? Yes No No		s):					Hydric Soil Present?	Yes 🔾 No 🖲	
	Depth (inche:								
	Depth (inche: emarks:								

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