



November 6, 2018

Mr. Doug Wimberly
Neel-Schaffer, Inc.
P.O. Box 1487
Hattiesburg, MS 39403-1487

**RE: Seven States Timberlands – Thian Property
Hancock County, Mississippi
Wetland Assessment**

Dear Mr. Wimberly:

Headwaters, Inc. was retained by Neel-Schaffer, Inc. on behalf of the Hancock County Port and Harbor Commission to conduct a wetland assessment on the above referenced property located in Hancock County, Mississippi. Headwaters completed the initial site review and assessment of the subject property on September 19 and 20, 2018.

Our assessment was based upon the property boundaries as depicted on the property location maps provided to us by your office and by our field assessment of the property boundaries. The project is located within unincorporated Hancock County, Mississippi, along Lower Bay Road and south of Old Lower Bay Road and consists of approximately 920 acres of land. The proposed project is situated in Sections 17, 18, 19, 20, 29 and 30, Township 9 South, Range 15 West, and Section 24, Township 9 South, Range 16 West in Hancock County, Mississippi. More specifically, the project site may also be referenced by Global Positioning System (GPS) coordinates: N30.246681° – W89.538005°.

The initial phase of this project included the assimilation of all available information related to the subject property that would help establish a historical perspective of the property and highlight the physical attributes of the property, the primary drainage patterns, and the physical location of any suspected wetland areas present on the property. An integral component of this phase was the review of the USDA National Agricultural Imagery Program (NAIP) 2016 and the U.S.G.S. *Logtown/English Lookout, Mississippi* 7.5-Minute Topographic Quadrangle Map (**Attachment I**).

Our initial review of the Hancock County, Mississippi Soil Survey revealed that the project site is underlain by Atmore silt loam, Beauregard silt loam, Escambia loam, Guyton silt loam, Harleston fine sandy loam, Ocilla loamy sand, Plummer loamy sand, Poarch fine sandy loam, Smithton fine sandy loam and Smithton association soil types. The Poarch soil is classified as not hydric (0%). The Beauregard loam, Escambia loam, Harleston loam and Ocilla soils are classified as 1 to 32% hydric. The remaining soils are classified as 66 to 99% hydric according to the USDA NRCS.

Once the key physical aspects of the property were identified, a field review and assessment were conducted within the boundaries of the subject property to confirm the habitat or land use types present. The initial review, as well as the site visit, revealed that the subject property is predominantly forested, pasture and cut-over habitat. Observations made during the site visit revealed this to be true, and identified additional open areas utilized as electrical and natural gas rights-of-way, wildlife openings, and interior access roads. A few isolated open water ponds were also identified within the property boundary.

Given the nature of the project, systematic transect lines were not employed in the field delineation methodology. Rather, a mapping system was employed whereby the potential wetland habitats/boundaries and “other waters of the United States” were mapped in-field utilizing a Garmin handheld GPS unit. Wetland delineation points were established using a systematic approach based upon observations of vegetative and topographic features and transitions that were encountered in the field. These wetland delineation points are identified utilizing the GPS and their location within the property. In addition, supplemental points were established between the delineation points to provide data on soils, vegetation and hydrology. This GPS and field data were then utilized to create map exhibits within ESRI ArcGIS mapping software. The information gathered within the field was also utilized to prepare the accepted “Wetland Determination Data Forms” as amended in the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). This information is utilized by the U.S. Army Corps of Engineers (USACE), Vicksburg District Regulatory Branch, for the issuance of a preliminary or final jurisdictional determination.

The field assessment completed on the project site confirmed that the site is occupied by eight (8) specific habitat types. The following description is given in general terms consistent with the representative habitat type and without specific chronology.

Ephemeral Channel:

The field assessment revealed the presence of two (2) ephemeral stream channels located within the limits of the subject property. These stream segments exhibit ephemeral flow throughout the year, which basically states that these channels are used to convey only storm water in direct response to precipitation with water flowing only during and shortly after large precipitation events. These drainage features may be characterized by shallow stream banks with the overall lack of significant vegetative components within the channel. Further, storm water runoff generated from rainfall events is the primary source of water flow for these drainages with no apparent ground water recharge. In most cases, soils and vegetative components along the top bank of the ephemeral channels are upland in nature as they are generally higher in elevation. These ephemeral channels are depicted on the GPS/Wetland Location Maps included in **Attachment II**. These stream segments would be classified as “other waters of the U.S.” under the current regulatory framework.

Intermittent Channel:

One (1) intermittent stream was identified within the property boundary. This stream is characterized by a well-defined channel approximately five (5) feet wide that contains water for part of the year, typically during the winter and spring when the aquatic bed is below the water table. Based upon our observations, the stream is heavily supplemented by storm water runoff and exhibits seasonal or intermittent flows. Water within the channel was standing in pools at the time of the site visit which is typical of intermittent streams during the summer and fall when the aquatic bed is above the water table. In most cases, soils and vegetative components along the top banks of the intermittent channel are upland in nature as they are generally higher in elevation.

The intermittent stream is depicted on the GPS/Wetland Location Maps included in **Attachment II**. The presence of this intermittent stream identified within the limits of the subject property would be considered as “other waters of the United States”.

Perennial Channel:

Three (3) perennial streams were identified within the property boundary. This stream is characterized by a well-defined channel with the overall lack of any significant vegetative components within the stream channel. In some instances, hydrophytic vegetative components have established within the banks of the stream channel. This is due primarily from disturbances that have taken place on the site and insignificant interruptions with the channel disrupting the natural flow of the channel. The stream exhibits year-round flow during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for the perennial stream, but it also carries stormwater runoff.

The perennial stream is depicted on the GPS/Wetland Location Maps included in **Attachment II**. The presence of the perennial stream identified within the limits of the project site would be considered as “other waters of the United States.”

Bayhead Forested Wetland Habitat:

Several bayhead forested wetland habitats were identified throughout much of the subject property. These habitats are defined as containing a significant coverage of woody plants of greater than 3-inch diameter at breast height (DBH). Hydric characteristics were exhibited throughout the areas associated with these habitats. Common vegetative components within these habitats consist of black gum (*Nyssa biflora*), slash pine (*Pinus elliottii*), bald cypress (*Taxodium distichum*), sweet bay magnolia (*Magnolia virginiana*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), wax myrtle (*Morella cerifera*), and swamp titi (*Cyrilla racemiflora*).

Rainfall events, overland flows, and seasonal flooding are believed to be the primary sources of hydrology for these areas. Hydrology indicators observed include surface water, high water table, saturation, water stained leaves, crayfish burrows, oxidized rhizospheres along living roots and drainage patterns.

The soils within the wetland habitats were observed to be 3/1 - 5/2 (very dark gray to grayish brown) on the 10 YR page of the Munsell Soil Color Chart with soil mottling.

The size and location of these habitats are represented on the attached GPS/Wetland Location Maps included in [Attachment II](#).

Forested Pine Flat Wetland Habitat:

Several mature wet pine flat habitats were identified throughout much of the subject property. These habitats are defined as containing a significant coverage of woody plants of greater than 3-inch diameter at breast height (DBH). Hydric characteristics were exhibited throughout the areas associated with these habitats. Common vegetative components within these habitats consist of black gum (*Nyssa biflora*), slash pine (*Pinus elliotii*), sweet bay magnolia (*Magnolia virginiana*), red maple (*Acer rubrum*), palmetto (*Sabal minor*), wax myrtle (*Morella cerifera*), and swamp titi (*Cyrilla racemiflora*).

Rainfall events, overland flows, and seasonal flooding are believed to be the primary sources of hydrology for these areas. Hydrology indicators observed include surface water, high water table, saturation, water stained leaves, crayfish burrows, oxidized rhizospheres along living roots and drainage patterns.

The soils within the wetland habitats were observed to be 3/1 - 5/2 (very dark gray to grayish brown) on the 10 YR page of the Munsell Soil Color Chart with soil mottling.

The size and location of these habitats are represented on the attached GPS/Wetland Location Maps included in [Attachment II](#).

Scrub Shrub Pine Flat Wetland Habitat:

Several scrub shrub pine flat wetland habitats were identified throughout portions of the subject property. These habitats are defined as containing a significant coverage of woody plants less than 3-inch DBH, but greater than 3.28 feet tall. These habitats exist within the project area primarily as recent pine savanna cut-overs. Hydric characteristics were exhibited throughout the areas associated with these habitats. Common vegetative components within these habitats consist of slash pine (*Pinus elliotii*), bald cypress (*Taxodium distichum*), sweet bay magnolia (*Magnolia virginiana*), red maple (*Acer rubrum*), swamp titi (*Cyrilla racemiflora*), wax myrtle (*Morella cerifera*), and yaupon holly (*Ilex vomitoria*), among others.

Rainfall events, overland flows, and seasonal flooding are believed to be the primary sources of hydrology for these areas. Hydrology indicators observed include surface water, high water table, saturation, water stained leaves, crayfish burrows, oxidized rhizospheres along living roots and drainage patterns.

The soils within the wetland habitats were observed to be 3/1 - 5/2 (very dark gray to grayish brown) on the 10 YR page of the Munsell Soil Color Chart with soil mottling.

The size and location of these habitats are represented on the attached GPS/Wetland Location Maps included in [Attachment II](#).

Emergent Wetland Habitat:

Several emergent wetland habitats were identified throughout portions of the subject property. These habitats are defined as containing a significant coverage of herbaceous plants and woody plants less than 3.28 feet tall. These habitats exist within the project area primarily as utility rights-of-way and wildlife openings. Hydric characteristics were exhibited throughout the areas associated with these habitats. Common vegetative components within these habitats consist of pitcher plant (*Sarracenia alata*), slash pine (*Pinus elliottii*), rosette grass (*Dichanthelium acuminatum*), sweet bay magnolia (*Magnolia virginiana*), palmetto (*Sabal minor*), bushy bluestem (*Andropogon glomeratus*), cattail (*Typha domingensis*), nutsedge (*Cyperus strigosus*), swamp titi (*Cyrilla racemiflora*), wax myrtle (*Morella cerifera*), rush (*Juncus spp.*), fern (*Woodwardia virginica*), greenbrier (*Smilax laurifolia*) and sedge (*Carex spp.*), among others.

Rainfall events, overland flows, and seasonal flooding are believed to be the primary sources of hydrology for these areas. Hydrology indicators observed include surface water, high water table, saturation, crawfish burrows, oxidized rhizospheres along living roots and drainage patterns.

The soils within the wetland habitats were observed to be 3/1 - 5/2 (very dark gray to grayish brown) on the 10 YR page of the Munsell Soil Color Chart with soil mottling.

The size and location of these habitats are represented on the attached GPS/Wetland Location Maps included in **Attachment II**.

Open Water:

Four (4) open water features were observed within the property. Two (2) open water features appear to be man-made non-jurisdictional "preamble waters". Due to being constructed in upland areas, the open water pond features would not be considered as "other waters of the United States." The remaining two (2) features would be considered "other waters of the United States" under current regulatory framework.

These features are represented on the attached GPS/Wetland Location Maps included in **Attachment II**.

Upland, Non-Wetland Habitat:

The remaining portions of the proposed project site are comprised primarily of hardwood-pine forest and cut-over habitat. The primary species observed within the upland areas were slash pine (*Pinus elliottii*), water oak (*Quercus nigra*), American elm (*Ulmus Americana*), live oak (*Quercus virginiana*), southern magnolia (*Magnolia grandiflora*), red maple (*Acer rubrum*), and American holly (*Ilex opaca*), among others.

The soils within the upland habitats were observed to be 3/3 - 7/2 (dark brown to light gray) on the 10 YR page of the Munsell Soil Color Chart with limited to no soil mottling. Additionally, no wetland hydrology indicators were observed within these areas.

Copies of the U.S.G.S. *Logtown and English Lookout, Mississippi* Quadrangle Maps and USDA NAIP 2016 aerial imagery depicting the location of the wetland areas and GPS

waypoints, as well as the location of the wetland delineation points are included as **Attachment II**. Copies of the data forms completed for each delineation point sample are also included as **Appendix III**. Photographs of selected property features are included within **Appendix IV** for your use and review.

The following is a breakdown of the different habitat types that were found to be present within the limits of the site:

Ephemeral Channels ("Other Waters of the U.S.")	3,083.31 linear feet
Intermittent Channels ("Other Waters of the U.S.")	1,669.96 linear feet
Perennial Channels ("Other Waters of the U.S.")	5,304.86 linear feet
Bayhead Forested Wetlands	45.65 acres
Forested Pine Flat Wetlands	533.40 acres
Scrub Shrub Pine Flat Wetlands	121.27 acres
Emergent Wetlands	52.35 acres
Open Water Features	4.70 acres
Uplands (Non-Wetland)	162.63 acres
Total.....	920 Acres

If any proposed site development activities are planned to encroach within the wetland habitats and/or "other waters of the U.S.", consultation with the USACE, Vicksburg District Regulatory Branch will be required for the issuance of the pertinent USACE Section 404 wetland permit authorizations. These areas should be considered potentially jurisdictional until concurrence is given by a representative of the USACE.

We appreciate the opportunity to be of assistance to you in this matter. If you have any questions or need any additional information, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Lang Kirkwood". The signature is fluid and cursive, with the first name "Lang" and last name "Kirkwood" clearly distinguishable.

Lang Kirkwood
Headwaters, Inc.

Attachments\

Attachment I

General Location Map within Hancock County, Mississippi

U.S.G.S *Logtown and English Lookout, Mississippi* Quadrangle Map

USDA NAIP 2016



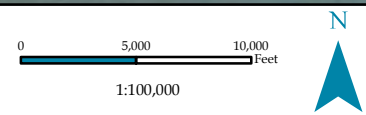
Project Area (± 920.00 ac)



Date Created: 10/31/2018

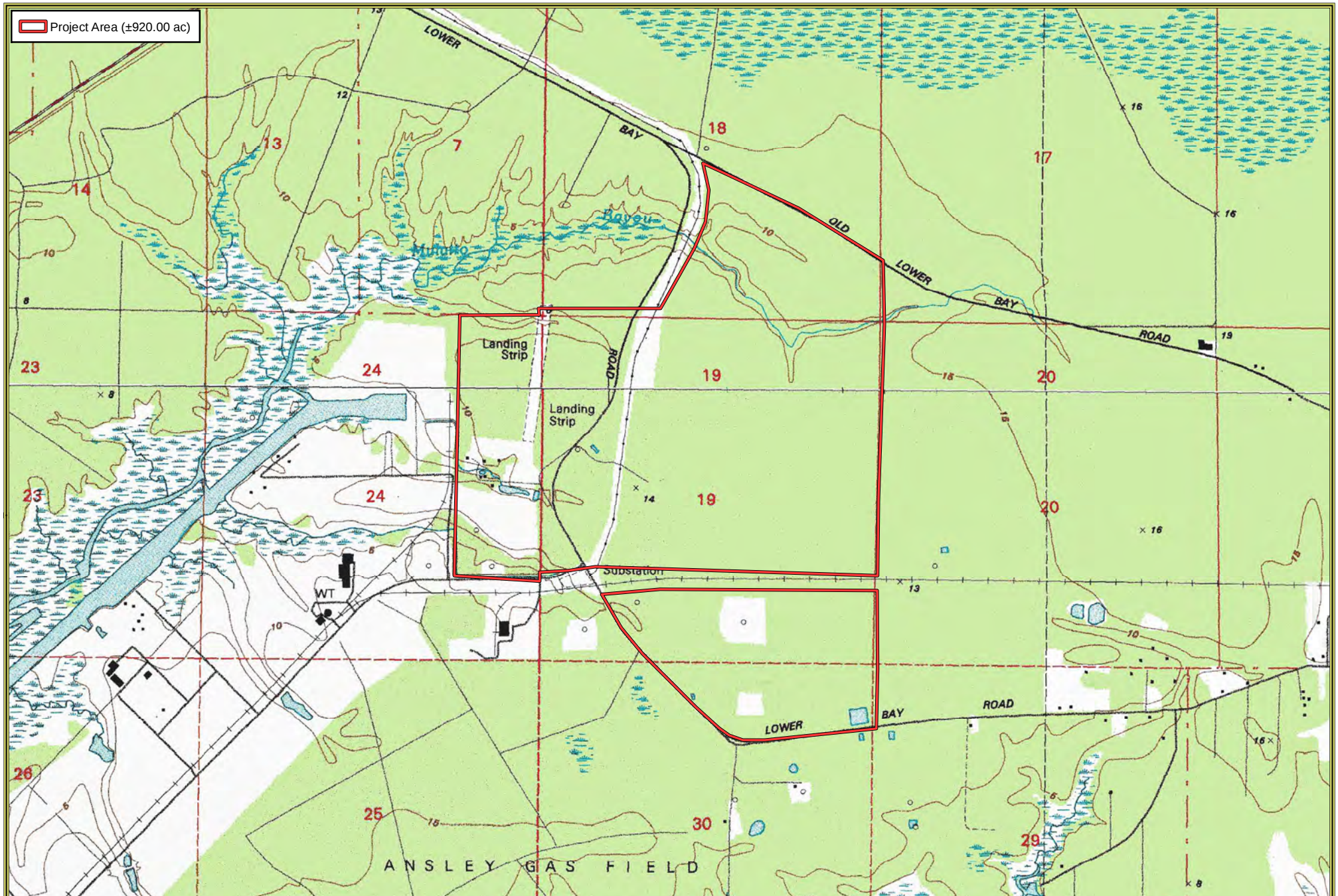
Created by: JDL

Seven States Timberlands/Thian Property
Sec. 17, 18, 19, 24, 30 - T9S - R15W & Sec. 24 - T9S - R16W
Hancock County, Mississippi
[General Location Map](#)

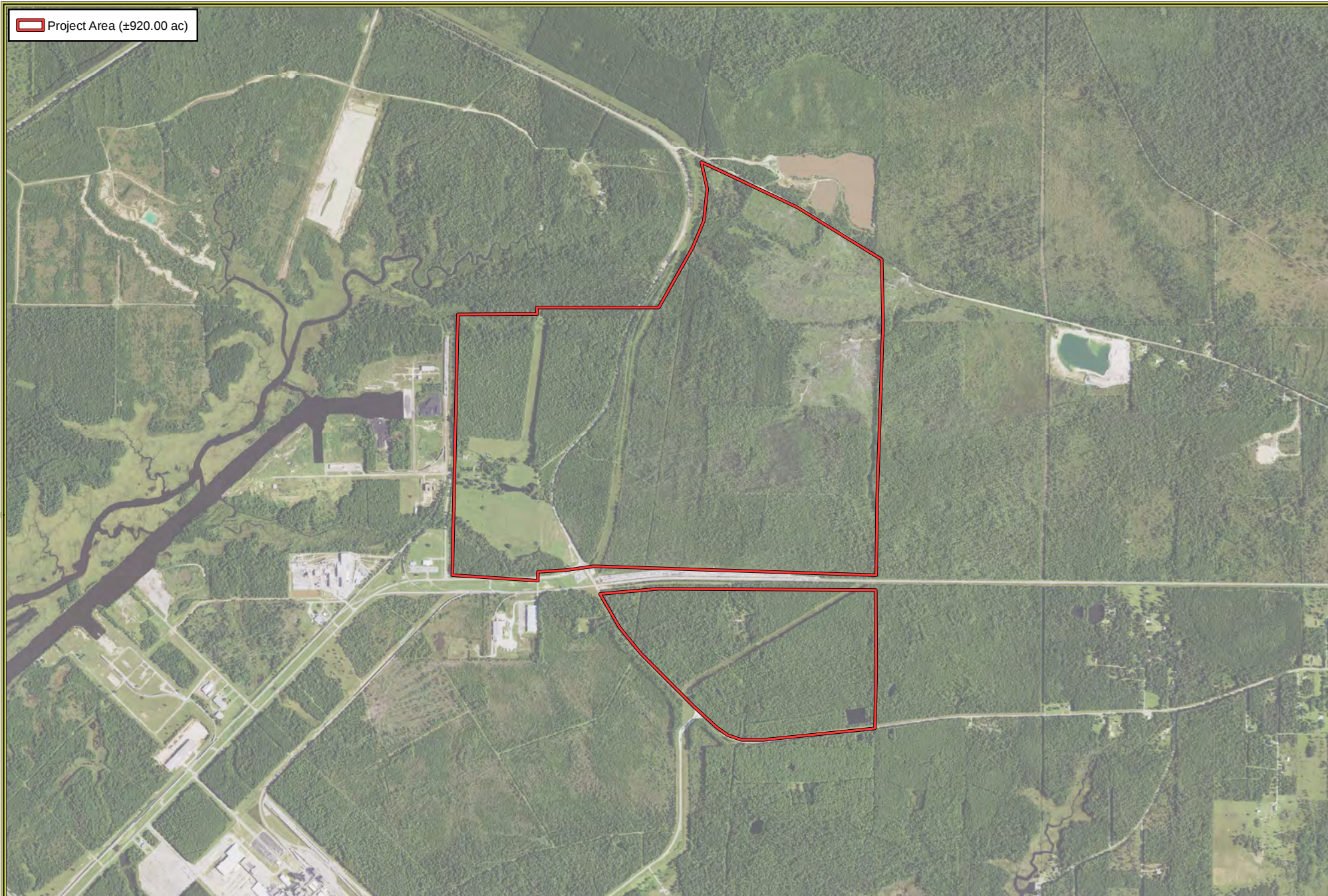


NAD 1983 StatePlane Mississippi East FIPS 2301 Feet

ESRI World Imagery Basemap



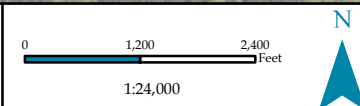
 Project Area (±920.00 ac)



Date Created: 10/31/2018

Created by: JDL

Seven States Timberlands/Thian Property
Sec. 17, 18, 19, 24, 30 - T9S - R15W & Sec. 24 - T9S - R16W
Hancock County, Mississippi
[Site Location Map](#)



NAD 1983 StatePlane Mississippi East FIPS 2301 Feet

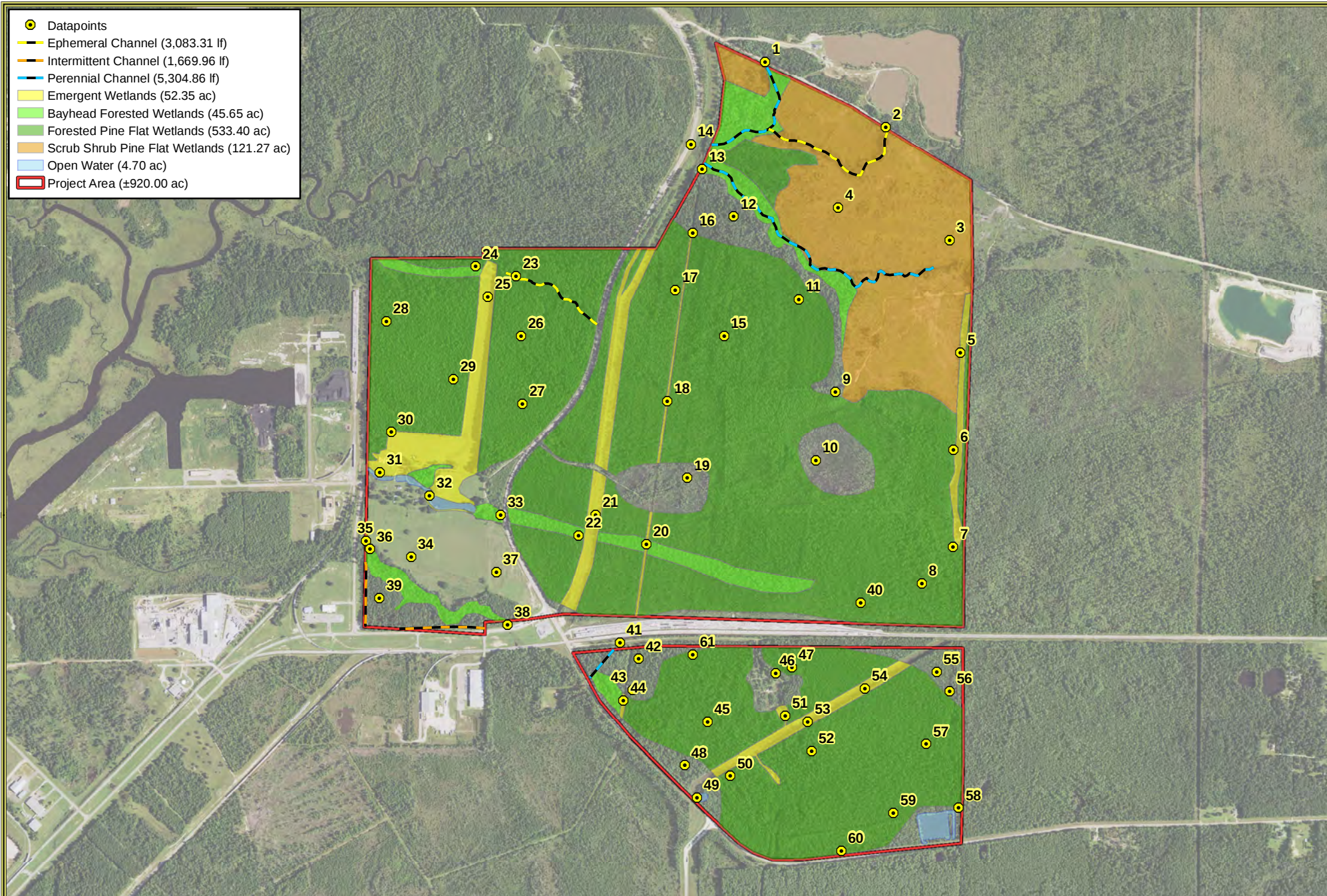
USDA NAIP 2016 Imagery Basemap

Attachment II

U.S.G.S. *Logtown and English Lookout*, MS Quadrangle Map and USDA NAIP 2016 Aerial Color Photograph depicting Wetland Areas, Wetland Delineation Data Points and GPS Waypoints



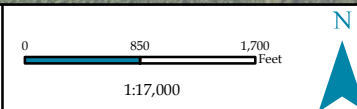
-  Datapoints
-  Ephemeral Channel (3,083.31 lf)
-  Intermittent Channel (1,669.96 lf)
-  Perennial Channel (5,304.86 lf)
-  Emergent Wetlands (52.35 ac)
-  Bayhead Forested Wetlands (45.65 ac)
-  Forested Pine Flat Wetlands (533.40 ac)
-  Scrub Shrub Pine Flat Wetlands (121.27 ac)
-  Open Water (4.70 ac)
-  Project Area (±920.00 ac)



Date Created: 11/6/2018

Created by: JDL

Seven States Timberlands/Thian Property
 Sec. 17, 18, 19, 24, 30 - T9S - R15W & Sec. 24 - T9S - R16W
 Hancock County, Mississippi
[GPS/Wetland Location Map](#)



NAD 1983 StatePlane Mississippi East FIPS 2301 Feet

USDA NAIP 2016 Imagery Basemap

Attachment III

USACE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 3
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 18 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.253986 Long: -89.528853 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 3

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66666666666666</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>NaN</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)	Prevalence Index = B/A = <u>NaN</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = <u>0</u>																			
FACW species _____	x 2 = <u>0</u>																			
FAC species _____	x 3 = <u>0</u>																			
FACU species _____	x 4 = <u>0</u>																			
UPL species _____	x 5 = <u>0</u>																			
Column Totals: <u>0</u> (A)	<u>0</u> (B)																			
Prevalence Index = B/A = <u>NaN</u>																				
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																				
Herb Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Eupatorium capillifolium</u>	<u>50%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Croton capitatus</u>	<u>20%</u>	<u>YES</u>	<u>FAC</u>																	
3. <u>Carex spp.</u>	<u>10%</u>	<u>NO</u>	<u>FACW</u>																	
4. <u>Panicum virgatum</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>																	
5. <u>Juncus spp.</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>																	
6. <u>Andropogon glomeratus</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>95</u> = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>																				
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																				
Remarks: (If observed, list morphological adaptations below).																				

SOIL

Sampling Point: DP 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	70	5/6 10yr	30	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
☐ 2 cm Muck (A10) **(LRR S)**
☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 4
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 18 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.254948 Long: -89.532772 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 4

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
0 = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>NaN</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)	Prevalence Index = B/A = <u>NaN</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = <u>0</u>																			
FACW species _____	x 2 = <u>0</u>																			
FAC species _____	x 3 = <u>0</u>																			
FACU species _____	x 4 = <u>0</u>																			
UPL species _____	x 5 = <u>0</u>																			
Column Totals: <u>0</u> (A)	<u>0</u> (B)																			
Prevalence Index = B/A = <u>NaN</u>																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Pinus elliotii</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
25 = Total Cover																				
50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																				
Herb Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Carex spp.</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Panicum virgatum</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>																	
3. <u>Juncus effusus</u>	<u>5</u>		<u>OBL</u>																	
4. <u>Andropogon glomeratus</u>	<u>5</u>		<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
30 = Total Cover																				
50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																				
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
0 = Total Cover																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

SOIL

Sampling Point: DP 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10YR	80	5/6 10 YR	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 5
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.250557 Long: -89.528448 Datum: WGS 84
 Soil Map Unit Name: At - Atmore silt loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point: DP 5

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
Herb Stratum (Plot size: <u>1/10 acre</u>)				
1. <u>Eupatorium capillifolium</u>	<u>25%</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Dichanthelium acuminatum</u>	<u>20%</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Andropogon glomeratus</u>	<u>20%</u>	<u>yes</u>	<u>FACW</u>	
4. <u>Magnolia virginiana</u>	<u>5%</u>	<u>no</u>	<u>FACW</u>	
5. <u>Pinus taeda</u>	<u>5%</u>	<u>no</u>	<u>FAC</u>	
6. <u>Juncus spp.</u>	<u>5%</u>	<u>no</u>	<u>OBL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>80</u>	= Total Cover		
50% of total cover: <u>40</u>	20% of total cover: <u>16</u>			
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			

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

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66.66666666666666</u> (A/B)
Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = <u>0</u>
FACW species _____	x 2 = <u>0</u>
FAC species _____	x 3 = <u>0</u>
FACU species _____	x 4 = <u>0</u>
UPL species _____	x 5 = <u>0</u>
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>NaN</u>	
Hydrophytic Vegetation Indicators:	
☐ 1 - Rapid Test for Hydrophytic Vegetation	
☒ 2 - Dominance Test is >50%	
☐ 3 - Prevalence Index is ≤3.0 ¹	
☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Four Vegetation Strata:	
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vine – All woody vines greater than 3.28 ft in height.	
Hydrophytic Vegetation Present?	
Yes <u>x</u>	No _____

SOIL

Sampling Point: DP 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	90	4/6 10yr	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 6
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.247601 Long: -89.528671 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☒ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☒ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 6

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Magnolia virginiana</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. <u>Acer rubrum</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ligustrum sinense</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Acer rubrum</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Andropogon glomeratus</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Dichantheium acuminatum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Sarracenia alata</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	90	4/6 10yr	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 7
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.244632 Long: -89.528659 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 7

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>35%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Morella cerifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Cyrilla racemiflora</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Smilax laurifolia</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	95	4/6 10yr	5	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 8
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.243496 Long: -89.529754 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 8

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Acer rubrum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Morella cerifera</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. <u>Cyrilla racemiflora</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Andropogon glomeratus</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Smilax laurifolia</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	90	4/6 10yr	10	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 9
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): slight slope Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.249325 Long: -89.53282 Datum: WGS 84
 Soil Map Unit Name: At - Atmore silt loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 9

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>25%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.71428571428571</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
3. <u>Magnolia virginiana</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cyrilla racemiflora</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginiana</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Ilex vomitoria</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Sorghum halepense</u>	<u>5%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Vitis rotundifolia</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	95	5/6 10yr	5	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|---|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|---|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 10
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.247246 Long: -89.533505 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 10

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66666666666666</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Eupatorium capillifolium</u>	<u>50%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	95	5/6 10yr	5	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 11
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.252148 Long: -89.534127 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 11

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Magnolia virginiana</u>	<u>10</u>		<u>FACW</u>															
3. <u>Nyssa biflor</u>	<u>5</u>		<u>OBL</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>60</u> = Total Cover 50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Ligustrum sinense</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Acer rubrum</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10 YR	90	5/6 10 YR	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 12
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.254657 Long: -89.536433 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 12

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>25%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Magnolia virginiana</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Nyssa biflora</u>	<u>5%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Liquidambar styraciflua</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Toxicodendron radicans</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Vitis rotundifolia</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	75	5/6 10yr	25	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 13
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.25607 Long: -89.537583 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☒ Surface Water (A1) ☐ Aquatic Fauna (B13) ☒ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>3-5</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 13

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Acer rubrum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Nyssa biflora</u>	<u>5%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Triadica sebifera</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Typhia domingensis</u>	<u>40%</u>	<u>YES</u>	<u>OBL</u>															
2. <u>Saccharum giganteum</u>	<u>25%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Juncus spp.</u>	<u>10%</u>	<u>NO</u>	<u>OBL</u>															
4. <u>Carex spp.</u>	<u>10%</u>	<u>NO</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>85</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/1 10yr	80	4/6 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|--|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|--|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 15
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.251017 Long: -89.536744 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 15

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Magnolia virginiana</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Nyssa biflora</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Ligustrum sinense</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Acer rubrum</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. <u>Triadica sebifera</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Carex spp.</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Juncus spp.</u>	<u>5%</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	90	5/6 10yr	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 16
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.254147 Long: -89.537874 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 16

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Quercus nigra</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
3. <u>Nyssa biflora</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Ligustrum sinense</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/3 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|---|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|---|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 17
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.252416 Long: -89.538464 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 17

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
3. <u>Acer rubrum</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cyrilla racemiflora</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Acer rubrum</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Ligustrum sinense</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	85	4/6 10yr	15	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 18
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.249019 Long: -89.538728 Datum: WGS 84
 Soil Map Unit Name: Gu - Guyton silt loam, 0 to 1 percent slopes, rarely flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 18

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Carex spp.</u>	<u>30%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Dichanthelium acuminatum</u>	<u>30%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Andropogon glomeratus</u>	<u>10%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	65	4/6 10yr	35	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|--|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|--|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 19
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.246681 Long: -89.538005 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 19

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cyrilla racemiflora</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Morella cerifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Magnolia virginiana</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. <u>Ligustrum sinense</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Eupatorium capillifolium</u>	<u>75%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Dichanthelium acuminatum</u>	<u>20%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Carex spp.</u>	<u>5%</u>	_____	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>100</u> = Total Cover 50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	65	4/6 10yr	35	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|--|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|--|---|--|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 20
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.244645 Long: -89.539434 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☒ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2-4</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 20

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Nyssa biflora</u>	<u>30%</u>	<u>YES</u>	<u>OBL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cyrilla racemiflora</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Morella cerifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Smilax laurifolia</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

SOIL

Sampling Point: DP 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	80	4/6 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 21
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.245536 Long: -89.541218 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>>6</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 21

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>NaN</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)	Prevalence Index = B/A = <u>NaN</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = <u>0</u>																			
FACW species _____	x 2 = <u>0</u>																			
FAC species _____	x 3 = <u>0</u>																			
FACU species _____	x 4 = <u>0</u>																			
UPL species _____	x 5 = <u>0</u>																			
Column Totals: <u>0</u> (A)	<u>0</u> (B)																			
Prevalence Index = B/A = <u>NaN</u>																				
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Herb Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Dichanthelium acuminatum</u>	<u>30%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Andropogon virginicus</u>	<u>20%</u>	<u>YES</u>	<u>FAC</u>																	
3. <u>Carex spp.</u>	<u>10%</u>	<u>NO</u>	<u>OBL</u>																	
4. <u>Juncus spp.</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>																	
5. <u>Eupatorium capillifolium</u>	<u>5%</u>	<u>NO</u>	<u>FACU</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																				
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Remarks: (If observed, list morphological adaptations below).				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																
				Hydrophytic Vegetation Present? Yes <u>x</u> No _____																

SOIL

Sampling Point: DP 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	80	4/6 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/19/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 22
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): Draw Local relief (concave, convex, none): Convex Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.244907 Long: -89.541808 Datum: WGS 84
 Soil Map Unit Name: Esa - Escambia loam, 0 to 2 percent slopes NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☒ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☒ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 22

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Nyssa biflora</u>	<u>20%</u>	<u>YES</u>	<u>OBL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Pinus elliotii</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Nyssa biflora</u>	<u>15%</u>	<u>YES</u>	<u>OBL</u>															
2. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Morella cerifera</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Woodwardia virginica</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Juncus spp.</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	80	4/6 10 yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 23
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.252801 Long: -89.544065 Datum: WGS 84
 Soil Map Unit Name: Gu - Guyton silt loam, 0 to 1 percent slopes, rarely flooded NWI classification: PFO4/1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☒ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☒ Drainage Patterns (B10) ☒ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 23

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pinus elliotii</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Liquidambar styraciflua</u>	<u>10</u>		<u>FAC</u>	
3. <u>Acer rubrum</u>	<u>10</u>		<u>FAC</u>	
4. <u>Magnolia virginiana</u>	<u>10</u>		<u>FACW</u>	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u>NaN</u>
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>55</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)				
1. <u>Pinus elliotii</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Acer rubrum</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>	
3. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
12. _____	_____	_____	_____	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
Herb Stratum (Plot size: <u>1/10 acre</u>)				
1. _____	_____	_____	_____	Remarks: (If observed, list morphological adaptations below).
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>1/10 acre</u>)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	

SOIL

Sampling Point: DP 23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10 YR	85	5/6 10 YR	15	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 24
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.253087 Long: -89.545482 Datum: WGS 84
 Soil Map Unit Name: Gu - Guyton silt loam, 0 to 1 percent slopes, rarely flooded NWI classification: PFO4/1R

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☒ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 24

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Acer rubrum</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. <u>Magnolia virginiana</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Acer rubrum</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Magnolia virginiana</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10yr	85	5/6 10yr	15	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|--|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|--|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 25
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.252164 Long: -89.545049 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 25

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66666666666666</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Juncus spp.</u>	<u>20%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Carex spp.</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Paspalum notatum</u>	<u>20%</u>	<u>YES</u>	<u>FACU</u>															
4. <u>Hydrocotyle umbellata</u>	<u>10%</u>	<u>NO</u>	<u>OBL</u>															
5. <u>Persicaria hydropiperoides</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>75</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	6/1 10yr	90	5/6 10yr	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 26
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.250983 Long: -89.543877 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☒ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 26

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Magnolia virginiana</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Pinus elliotii</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Magnolia virginia</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cynodon dactylon</u>	<u>10%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10yr	85	5/6 10yr	15	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☒ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 27
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.248898 Long: -89.543808 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 27

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Magnolia virginiana</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.33333333333334</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Magnolia virginia</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cynodon dactylon</u>	<u>10%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10yr	85	5/6 10yr	15	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 28
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.251402 Long: -89.54861 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 28

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Magnolia virginiana</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginiana</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10 YR	90	4/6 10 YR	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|--|---|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 29
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.249648 Long: -89.546245 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 29

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Magnolia virginia</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginia</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Ligustrum sinense</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes _____ No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	6/1 10yr	80	5/8 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 30
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.24802 Long: -89.548418 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 30

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Magnolia virginia</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginia</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Ligustrum sinense</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	6/1 10yr	80	5/8 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 31
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.246779 Long: -89.548805 Datum: WGS 84
 Soil Map Unit Name: Be - Beauregard silt loam NWI classification: PUBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 31

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ilex vomitoria</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Triadica sebifera</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cynodon dactylon</u>	<u>30%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Carex spp.</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Juncus spp.</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	6/1 10yr	80	5/8 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 32
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.24609 Long: -89.547056 Datum: WGS 84
 Soil Map Unit Name: HIA - Harleston fine sandy loam, 0 to 2 percent slopes NWI classification: PUBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 32

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Persicaria hydropiperoides</u>	<u>30%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Juncus spp.</u>	<u>20%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Carex spp.</u>	<u>15%</u>	<u>YES</u>	<u>OBL</u>															
4. <u>Cynodon dactylon</u>	<u>10%</u>	<u>NO</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>75</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	6/1 10yr	85	5/8 10yr	15	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 33
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): flat Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.245505 Long: -89.544554 Datum: WGS 84
 Soil Map Unit Name: ESA - Escambia loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 33

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>15</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Nyssa biflora</u>	<u>15</u>	<u>YES</u>	<u>OBL</u>															
2. <u>Pinus elliotii</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Morella cerifera</u>	<u>5</u>	_____	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10YR	90	4/6 10YR	10	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 34
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.244216 Long: -89.547687 Datum: WGS 84
 Soil Map Unit Name: EsA - Escambia loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 34

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Paspalum notatum</u>	<u>75</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Eupatorium capillifolium</u>	<u>10</u>		<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>85</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/4 10YR	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
☐ 2 cm Muck (A10) **(LRR S)**
☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 35
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): draw Local relief (concave, convex, none): none Slope (%): 2 - 5
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.244692 Long: -89.549275 Datum: WGS 84
 Soil Map Unit Name: PoB - Poarch fine sandy loam, 2 to 5 percent slopes NWI classification: PFO2R

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 35

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Persicaria hydropiperoides</u>	<u>45%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Juncus spp.</u>	<u>25%</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

SOIL

Sampling Point: DP 35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	95	4/6 10YR	5	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 36
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24 - T9S - R16W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 2 - 5
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.244444 Long: -89.549135 Datum: WGS 84
 Soil Map Unit Name: PoB - Poarch fine sandy loam, 2 to 5 percent slopes NWI classification: PFO2R

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 36

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Acer rubrum</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Persicaria hydropiperoides</u>	<u>50%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Juncus spp.</u>	<u>20%</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	90	4/6 10yr	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
☐ 2 cm Muck (A10) **(LRR S)**
☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 37
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.243773 Long: -89.544693 Datum: WGS 84
 Soil Map Unit Name: Pe - Plummer loamy sand NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 37

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>NaN</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)	Prevalence Index = B/A = <u>NaN</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = <u>0</u>																			
FACW species _____	x 2 = <u>0</u>																			
FAC species _____	x 3 = <u>0</u>																			
FACU species _____	x 4 = <u>0</u>																			
UPL species _____	x 5 = <u>0</u>																			
Column Totals: <u>0</u> (A)	<u>0</u> (B)																			
Prevalence Index = B/A = <u>NaN</u>																				
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Herb Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Paspalum notatum</u>	<u>40%</u>	<u>YES</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Cynodon dactylon</u>	<u>30%</u>	<u>YES</u>	<u>FACU</u>																	
3. <u>Sorghum halepense</u>	<u>20%</u>	<u>YES</u>	<u>FACU</u>																	
4. <u>Andropogon virginicus</u>	<u>10%</u>	<u>NO</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</u> = Total Cover 50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																				
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Remarks: (If observed, list morphological adaptations below).				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _____ No ^x _____																

SOIL

Sampling Point: DP 37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/4 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 38
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.242159 Long: -89.544283 Datum: WGS 84
 Soil Map Unit Name: HIA - Harleston fine sandy loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 38

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Nyssa biflora</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Acer rubrum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Acer rubrum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Triadica sebifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Woodwardia virginica</u>	<u>20%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Juncus spp.</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Carex spp.</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
4. <u>Persicaria hydropiperoides</u>	<u>5%</u>	<u>NO</u>	<u>OBL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10yr	80	5/8 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 39
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 24- T9S - R16W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____ Slope (%): 2-5
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.242958 Long: -89.548796 Datum: WGS 84
 Soil Map Unit Name: PoB - Poarch fine sandy loam, 2 to 5 percent sloepes NWI classification: PFO1S

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 39

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Liquidambar styraciflua</u>	<u>20%</u>	<u>YES</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Triadica sebifera</u>	<u>20%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Pinus elliotii</u>	<u>10%</u>	<u>NO</u>	<u>FACW</u>															
4. <u>Prunus serotina</u>	<u>5%</u>	<u>NO</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>55</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Liquidambar styraciflua</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Triadica sebifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Baccharis halimifolia</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/4 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|--|--|--|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 40
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.242908 Long: -89.531902 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 40

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>35%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10%</u>	<u>NO</u>	<u>OBL</u>															
3. <u>Prunus serotina</u>	<u>10%</u>	<u>NO</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>55</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Acer rubrum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Cyrilla racemiflora</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. <u>Smilax laurifolia</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	95	4/6 10YR	5	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 41
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.241653 Long: -89.54034 Datum: WGS 84
 Soil Map Unit Name: ESA - Escambia loam, 0 to 2 percent slopes. NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 41

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Acer rubrum</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Magnolia virginiana</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ilex vomitoria</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Cyrilla racemiflora</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Smilax rotundifolia</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 42
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.241153 Long: -89.539671 Datum: WGS 84
 Soil Map Unit Name: ESA - Escambia loam, 0 to 2 percent slopes. NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes S No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 42

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>25%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Quercus nigra</u>	<u>15%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Magnolia virginiana</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ligustrum sinense</u>	<u>30%</u>	<u>YES</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Toxicodendron radicans</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	60	4/3 10yr	40	D	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 43
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.240199 Long: -89.539878 Datum: WGS 84
 Soil Map Unit Name: At - Atmore silt loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 43

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Triadica sebifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Triadica sebifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Ligustrum sinense</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. <u>Ilex opaca</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Sabal minor</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	2/1 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
☐ 2 cm Muck (A10) **(LRR S)**
☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 44
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.239874 Long: -89.540208 Datum: WGS 84
 Soil Map Unit Name: At - Atmore silt loam, 0 to 2 percent slopes NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 44

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Triadica sebifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Quercus nigra</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Triadica sebifera</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Quercus nigra</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Arundinaria tecta</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Smilax laurifolia</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. <u>Vitis rotundifolia</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10yr	85	4/6 10yr	15	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 45
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): slight concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.239233 Long: -89.537245 Datum: WGS 84
 Soil Map Unit Name: At - Atmore silt loam, 0 to 2 percent slopes NWI classification: PFO1/SS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 45

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>9</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Triadica sebifera</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Acer rubrum</u>	<u>5</u>		<u>FAC</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Acer rubrum</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Arundinaria tecta</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Sabal minor</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Woodwardia virginica</u>	<u>5</u>	<u>YES</u>	<u>OBL</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. <u>Smilax laurifolia</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>															
3. _____																		
4. _____																		
5. _____																		
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10YR	90	4/6 10 YR	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 46
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.24073 Long: -89.534855 Datum: WGS 84
 Soil Map Unit Name: EsA - Escambia loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: Sample taken at an abandoned well pad site.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 46

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Triadica sebifera</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ligustrum sinense</u>	<u>30%</u>	<u>YES</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Vitis rotundifolia</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <u>x</u> No _____														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/3 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|---|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|---|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ^X _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 47
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.240916 Long: -89.534297 Datum: WGS 84
 Soil Map Unit Name: Esa - Escambia loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 47

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Triadica sebifera</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Cyrilla racemiflora</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Juncus spp.</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Cyperus strigosus</u>	<u>5%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 47

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/1 10yr	95	4/6 10yr	5	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
☐ 2 cm Muck (A10) **(LRR S)**
☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 48
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30- T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.237912 Long: -89.538043 Datum: WGS 84
 Soil Map Unit Name: Oc - Ocilla loamy sand, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 48

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Pinus elliotii</u>	<u>55</u>	<u>YES</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)														
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)														
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>55</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				Prevalence Index = B/A = <u>NaN</u>														
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
1. <u>Ilex opaca</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Pinus elliotii</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Acer rubrum</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Sabal minor</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____														
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>				Woody Vine Stratum (Plot size: <u>1/10 acre</u>)														
1. <u>Vitis rotundifolia</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____	Remarks: (If observed, list morphological adaptations below).														
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		

SOIL

Sampling Point: DP 48

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/1 10YR	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 50
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30- T9S - R15W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.237599 Long: -89.536437 Datum: WGS 84
 Soil Map Unit Name: At - Atmore silt loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 50

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliottii</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cyrilla racemiflora</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Pinus elliottii</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Magnolia virginiana</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Woodwardia virginica</u>	<u>10</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

SOIL

Sampling Point: DP 50

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/1 10YR	95	4/6 10YR	5	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 51
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.239432 Long: -89.534516 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: PUBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☒ Surface Water (A1) ☐ Aquatic Fauna (B13) ☒ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2-4</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 51

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Juncus spp.</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Carex spp.</u>	<u>30%</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Dichanthelium acuminatum</u>	<u>30%</u>	<u>YES</u>	<u>FAC</u>															
4. <u>Arundinaria tecta</u>	<u>5%</u>	<u>NO</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>95</u> = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes <u>x</u> No _____														

SOIL

Sampling Point: DP 51

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10yr	80	5/6 10yr	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 52
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.23838 Long: -89.533584 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>>6</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 52

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>20%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Cyrilla racemiflora</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginiana</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Woodwardia virginica</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 52

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	2/1 10yr	100					Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 53
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.239261 Long: -89.533719 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 53

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66666666666666</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>NaN</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)	Prevalence Index = B/A = <u>NaN</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = <u>0</u>																			
FACW species _____	x 2 = <u>0</u>																			
FAC species _____	x 3 = <u>0</u>																			
FACU species _____	x 4 = <u>0</u>																			
UPL species _____	x 5 = <u>0</u>																			
Column Totals: <u>0</u> (A)	<u>0</u> (B)																			
Prevalence Index = B/A = <u>NaN</u>																				
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Herb Stratum (Plot size: <u>1/10 acre</u>)																				
1. <u>Dichanthelium acuminatum</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Juncus effusus</u>	<u>15</u>	<u>YES</u>	<u>OBL</u>																	
3. <u>Eupatorium capillifolium</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>																	
4. <u>Carex spp.</u>	<u>5</u>		<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>75</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>																				
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

SOIL

Sampling Point: DP 53

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/1 10 YR	95	4/6 10YR	5	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☒ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 54
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.240293c Long: -89.531724 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 54

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Dichanthelium acuminatum</u>	<u>35</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Juncus effusus</u>	<u>15</u>	<u>YES</u>	<u>OBL</u>															
3. <u>Carex spp.</u>	<u>15</u>	<u>YES</u>	<u>OBL</u>															
4. <u>Eupatorium capillifolium</u>	<u>10</u>		<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>75</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

SOIL

Sampling Point: DP 54

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/1 10 YR	90	4/6 10YR	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|--|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|--|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 55
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.240815 Long: -89.529213 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 55

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginiana</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Woodwardia virginica</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 55

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/1 10 yr	95	5/1 10 YR	5	D	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 56
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 19 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.24022 Long: -89.528756 Datum: WGS 84
 Soil Map Unit Name: SW - Smithton association, frequently flooded NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 56

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Ulmus americana</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Pinus elliotii</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Magnolia virginiana</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Woodwardia virginica</u>	<u>20%</u>	<u>YES</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Toxicodendron radicans</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		

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

SOIL

Sampling Point: DP 56

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/1 10yr	95	5/1 10YR	5	D	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- | | | |
|---|--|---|
| ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☒ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks) |
|---|--|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 57
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): _____ Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.238604 Long: -89.52956 Datum: WGS 84
 Soil Map Unit Name: Oc - Ocilla loamy sand, 0 to 2 percent slopes NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☒ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 57

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Nyssa biflora</u>	<u>10</u>	<u>YES</u>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Magnolia virginiana</u>	<u>15%</u>	<u>YES</u>	<u>FACW</u>															
2. <u>Ligustrum sinense</u>	<u>5%</u>	<u>YES</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Dichanthelium acuminatum</u>	<u>20%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Juncus spp.</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Woodwardia virginica</u>	<u>10%</u>	<u>YES</u>	<u>OBL</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 57

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	3/2 10yr	95	5/6 10yr	5	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 58
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.236664 Long: -89.528411 Datum: WGS 84
 Soil Map Unit Name: Oc - Ocilla loamy sand, 0 to 2 percent slopes NWI classification: PFO1/SS4A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ 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)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>None</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 58

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>30%</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Quercus nigra</u>	<u>5%</u>	<u>NO</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ilex vomitoria</u>	<u>10%</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Cyrilla racemiflora</u>	<u>10%</u>	<u>YES</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Dichanthelium acuminatum</u>	<u>50%</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Hydrophytic Vegetation Present? Yes <u>x</u> No _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 58

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10yr	95	4/6 10yr	5	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 59
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30 - T9S - R15W
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.23649 Long: -89.530694 Datum: WGS 84
 Soil Map Unit Name: Oc - Ocilla loamy sand, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 59

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>45</u> = Total Cover 50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ilex vomitoria</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Cyrilla racemiflora</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Ligustrum sinense</u>	<u>15</u>	<u>YES</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

- Hydrophytic Vegetation Indicators:**
- ☐ 1 - Rapid Test for Hydrophytic Vegetation
 - ☒ 2 - Dominance Test is >50%
 - ☐ 3 - Prevalence Index is ≤3.0¹
 - ☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

SOIL

Sampling Point: DP 59

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	5/2 10 YR	90	4/6 10YR	10	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 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) | ☐ 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 Mucky 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) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Seven States Timberlands/Thian Property City/County: Hancock Sampling Date: 9/20/2018
 Applicant/Owner: Hancock County Port and Harbor Commission State: MS Sampling Point: DP 60
 Investigator(s): Headwaters, Inc. Section, Township, Range: Sec. 30 - T9S - R15W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2
 Subregion (LRR or MLRA): MLRA 152A Lat: 30.235343 Long: -89.532521 Datum: WGS 84
 Soil Map Unit Name: Oc - Ocilla loamy sand, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: DP 60

Tree Stratum (Plot size: <u>1/10 acre</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Pinus elliotii</u>	<u>35</u>	<u>YES</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species _____	x 3 = <u>0</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species _____	x 3 = <u>0</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Ilex vomitoria</u>	<u>15</u>	<u>YES</u>	<u>FAC</u>															
2. <u>Morella cerifera</u>	<u>15</u>	<u>YES</u>	<u>FAC</u>															
3. <u>Cyrilla racemiflora</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																		
Herb Stratum (Plot size: <u>1/10 acre</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Woody Vine Stratum (Plot size: <u>1/10 acre</u>)																		
1. <u>Smilax laurifolia</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP 60

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	4/2 10 YR	80	4/6 10YR	20	C	PL	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) **(LRR P, T, U)**
☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
☐ Muck Presence (A8) **(LRR U)**
☐ 1 cm Muck (A9) **(LRR P, T)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) **(MLRA 150A)**
☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
☐ Thin Dark Surface (S9) **(LRR S, T, U)**
☐ Loamy Mucky Mineral (F1) **(LRR O)**
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) **(LRR U)**
☐ Depleted Ochric (F11) **(MLRA 151)**
☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
☐ Umbric Surface (F13) **(LRR P, T, U)**
☐ Delta Ochric (F17) **(MLRA 151)**
☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
☐ 2 cm Muck (A10) **(LRR S)**
☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
☐ Anomalous Bright Loamy Soils (F20)
(MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ^X_____ No _____

Remarks:

Attachment IV

Photographs of Selected Property Features

DP-1

Perennial Channel



Description

Photo looking down gradient at channel.

DP-2

Ephemeral Channel



Description

Photo looking down gradient at channel.

DP-3

Scrub Shrub Wetland



Description

Photo looking south across wetland habitat.

DP-5

Emergent Wetland



Description

Photo looking south across wetland habitat.

DP-6

Forested Wetland



Description

Photo looking northwest across wetland habitat.

DP-7

Forested Wetland



Description

Photo looking southwest across wetland habitat.

DP-8

Forested Wetland



Description

Photo looking at wetland soil profile.

DP-9

Upland Habitat



Description

Photo looking west across upland habitat.

DP-10

Upland Habitat



Description

Photo looking east across upland habitat.

DP-12

Upland Habitat



Description

Photo looking northeast across upland habitat.

DP-13

Scrub Shrub Wetland



Description

Photo looking north across wetland habitat.

DP-14

Perennial Channel



Description

Photo looking east at channel.

DP-15

Forested Wetland



Description

Photo looking east across wetland habitat.

DP-16

Upland Habitat



Description

Photo looking northeast across wetland habitat.

DP-17

Forested Wetland



Description

Photo looking west across wetland habitat.

DP-18

Emergent Wetland



Description

Photo looking north across wetland habitat.

DP-19

Upland Habitat



Description

Photo looking southeast across upland habitat.

DP-20

Forested Wetland



Description

Photo looking east across wetland habitat.

DP-21

Emergent Wetland



Description

Photo looking west across wetland habitat.

DP-22

Forested Wetland



Description

Photo looking west across wetland habitat.

DP-23

Forested Wetland/Ephemeral Channel



Description

Photo looking east across wetland habitat.

DP-25

Emergent Wetland



Description

Photo looking south across wetland habitat.

DP-26

Forested Wetland



Description

Photo looking north across wetland habitat.

DP-29

Forested Wetland



Description

Photo looking at wetland soil profile.

DP-30

Forested Wetland



Description

Photo looking north across wetland habitat.

DP-30

Forested Wetland



Description

Photo looking west across wetland habitat.

DP-31

Emergent Wetland



Description

Photo looking east across wetland habitat.

DP-32

Emergent Wetland



Description

Photo looking west across wetland habitat.

DP-32

Open Water Pond



Description

Photo looking south across pond.

DP-34

Upland Habitat



Description

Photo looking south across upland habitat.

DP-35

Emergent Wetland



Description

Photo looking north across wetland habitat.

DP-36

Forested Wetland



Description

Photo looking east across wetland habitat.

DP-37

Upland Habitat



Description

Photo looking south across upland habitat.

DP-38

Intermittent Channel/Forested Wetlands



Description

Photo looking north across intermittent channel at forested wetlands.

DP-41

Upland Habitat



Description

Photo looking west across upland habitat.

DP-42

Upland Habitat



Description

Photo looking east across upland habitat.

DP-43

Upland Habitat



Description

Photo looking north across upland habitat.

DP-44

Forested Wetland



Description

Photo looking west across wetland habitat.

DP-46

Upland Habitat



Description

Photo looking south across upland habitat.

DP-47

Forested Wetland



Description

Photo looking east across wetland habitat.

DP-49

Open Water Pond



Description

Photo looking east across pond.

DP-51

Emergent Wetland



Description

Photo looking north across wetland habitat.

DP-52

Forested Wetland



Description

Photo looking west across wetland habitat.

DP-56

Upland Habitat



Description

Photo looking north across upland habitat.

DP-57

Forested Wetland



Description

Photo looking west across wetland habitat.

DP-58

Forested Wetland



Description

Photo looking east across wetland habitat.

DP-59

Forested Wetland



Description

Photo looking south across wetland habitat.

DP-60

Forested Wetland



Description

Photo looking at wetland soil profile.