

122-ACRE SPRINGBACK TRACT WETLAND DELINEATION

Caddo Parish
Franks Management Company, LLC
1312 North Hearne Avenue
Shreveport, LA 71101-6516

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CK Project Number: 12981

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1.0 INTRODUCTION

The following report summarizes a wetland delineation conducted by CK Associates (CK) on the approximate 122-acre Springback tract (survey area) owned by Frank's Management Company, LLC adjacent to Pierre Bayou south of Shreveport, Louisiana in Caddo Parish. The survey area is accessed from the east from La. Hwy. 1 South via an oilfield lease road. The purpose of this report is to identify areas that contain potential wetlands and other potential "waters of the United States" (US) as defined in 33 C.F.R. § 328.3. Specifically, the survey area is located at latitude 32°22'58.296"N and longitude 93°41'5.152"W in Section 15, Township 16 North, Range 13 West (Figure 1).

Waters of the US are aquatic areas that are either navigable or have a significant nexus to a navigable water. These areas are regulated by the US Army Corps of Engineers (USACE). Navigable waters are defined as "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (33 C.F.R. § 329.4 [1986]). Any area below the ordinary high water mark, as defined in 33 C.F.R. § 328.3 (1993), may fall under Federal jurisdiction as a navigable water (33 C.F.R. § 329.11 [1986]).

Waters of the US, regardless of navigability, can generally be categorized as either: 1) deepwater aquatic habitats, 2) special aquatic sites, or 3) other waters of the US. Deepwater aquatic habitats are "areas that are permanently inundated at mean annual water depths greater than 6.6 feet or permanently inundated areas, less than or equal to 6.6 feet in depth that do not support rooted-emergent or woody plant species". Special aquatic sites include 1) sanctuaries and refuges, 2) wetlands, 3) mudflats, 4) vegetated shallows, 5) coral reefs, and 6) riffle and pool complexes. Other waters of the US include, but are not limited to 1) isolated wetlands and lakes, 2) intermittent streams, 3) prairie potholes, and 4) other waters that are not part of a tributary system to interstate waters or navigable waters of the US (USACE 1987).

Wetlands are classified as a special aquatic site and are defined as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE 1987). These areas are referred to as "wetlands" throughout this report whereas deepwater aquatic habitats, special aquatic sites, streams, and other waters of the US are referred to as "other waters" in this report.

Three mandatory technical criteria for determining the presence of a wetland are, with exceptions, 1) prevalence of hydrophytic vegetation, 2) wetland hydrology, and 3) hydric soils (USACE 1987). Hydrophytic vegetation is defined as "the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in

oxygen as a result of excessive water content” (USACE 1987). The term wetland hydrology encompasses “the sum total of wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation” (USACE 1987). A hydric soil is defined as “a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (USDA 2010).

2.0 PHYSIOGRAPHY, CLIMATE, AND SITE DESCRIPTION

The survey area is located within Major Land Resource Area (MLRA) 131C – Red River Alluvium. The topography of MLRA 131C is characterized by level or depressional to gently undulating alluvial plains, backswamps, oxbows, natural levees, and terraces. Elevations of this MLRA range from 40 feet to 270 feet. The Red River and Red River tributaries drain southeast to the Atchafalaya and Mississippi Rivers (USDA 2006).

The annual precipitation in MLRA 131C is 47 to 62 inches, increasing from north to south. The average annual temperature is 63 to 67 degrees Fahrenheit (F). The freeze-free period averages 280 days and ranges from 255 to 305 days (USDA 2006).

The survey area is located on an elevated point of land which is bordered on the west, south and southeast by Pierre Bayou. The property is bound on the north and northeast by agricultural fields and oil field properties. The property is utilized for agricultural purposes for the growing of crops such as cotton, corn, soybeans, etc. Field boundaries along Pierre Bayou are maintained by the Caddo Parish Levee Board as herbaceous fields. The topography of the survey area is described as point bar characterized by a southward trending series of ridges and swales. The interior portions of the property drain eastward along herbaceous and forested swales and ditches to a common drain located along the northeast property boundary. The drain flows southeast eventually emptying into Pierre Bayou. Minor field drains and swales located on the south of the property flow directly to Pierre Bayou.

3.0 METHODS

CK visited the survey area on November 4th and 10th, 2015 to determine the extent of potential wetlands and other waters of the US. The wetland delineation followed routine onsite field procedures as outlined by the USACE (1987 and 2010). Soil references include the NRCS (2014a, 2014b, and 2014d), and USDA (2010). Plant nomenclature and wetland indicator status is taken from The National Wetland Plant List (Lichvar et al. 2014). Plant nomenclature not listed in The National Wetland Plant List is taken from the NRCS PLANTS Database (2014c).

Prior to conducting the field investigation, CK reviewed available aerial photography, soil survey data, topographic maps, elevation data (Light Detection and Ranging [LiDAR] contours and Digital Elevation Models [DEM]), and National Wetland Inventory (NWI)

data. Data points were established within the dominant plant communities of the survey area. Observations of soils, vegetation, and hydrology were documented at each data point location (Attachment A). Potential wetlands and other waters of the US, and data point locations were mapped with a Trimble® GeoXH® Differential Global Positioning System (DGPS) utilizing real-time corrections. Acreage was obtained by exporting the data from the DGPS unit into ESRI® ArcMap Version 10.3. Digital photographs were taken of the soil profile and surrounding vegetation at each data point (Attachment A).

Wetland hydrology was based on the observation of wetland hydrology indicators, as described by USACE (2010). Wetland hydrology criteria were met if at least one primary indicator was observed or a minimum of two secondary indicators were observed.

All vegetative species present within each data point were documented for all vegetation strata, including the tree stratum, sapling/shrub stratum, herbaceous stratum, and woody vines stratum. Percent absolute cover for each species was determined by ocular estimation. Plant communities met hydrophytic vegetation criteria if all dominant species across all strata are classified as obligatory and/or facultative-wet, or if greater than 50% of all dominant species from all strata were classified as obligatory, facultative-wet, and/or facultative species, or if the prevalence index is 3.0 or less (USACE 2010). Dominant species were selected using the “50/20 rule” described by the USACE (2010).

Soil profiles were obtained by excavating an approximate 16-inch soil pit. Soil color was recorded by matching soil samples throughout the profile to color chips contained in a Munsell soil color chart. The presence or absence of hydric soils was determined utilizing the methods and procedures outlined by the USACE (2010), including, but not limited to, the observation of the hydric soil indicators described by the USACE (2010).

4.0 RESULTS

Nine data points (DP) were collected during the field investigation. DP5, DP6, DP7, and DP9 were located within wetlands. DP1, DP2, DP3, DP4, and DP8 were located in non-wetlands.

4.1 Hydrology

Primary wetland hydrology indicators (surface water, saturation, sediment deposits, drift deposits, inundation visible on aerial imagery, aquatic fauna, and/or presence of reduced iron) and/or secondary wetland hydrology indicators (crayfish burrows, and/or saturation visible on aerial imagery) were observed at DP5, DP6, and DP7. No primary wetland hydrology indicators and no secondary wetland hydrology indicators were observed at DP1, DP2, DP3, DP4, and DP8.

Although saturation was observed at DP1, DP2, DP3, DP4 and DP8, saturated conditions were attributed to recent heavy rain events (Appendix B).

4.2 Vegetation

The herbaceous and woody vine upland habitats within the survey area were dominated by Bermuda grass (*Cynodon dactylon*), great ragweed (*Ambrosia trifida*), perennial rye grass (*Lolium perenne*), love-in-a-puff (*Cardiospermum halicacabum*), whiplash dewberry (*Rubus flagellaria*), and Johnson grass (*Sorghum halepense*). The herbaceous wetlands habitats were dominated by swamp smartweed (*Persicaria hydropiperoides*) and love-in-a-puff.

Forested upland drainage areas and fence-lines were dominated by sugar-berry (*Celtis laevigata*) and eastern red-cedar (*Juniperus virginiana*) in the tree stratum and sugar-berry in the sapling/shrub stratum. Great ragweed dominated the herbaceous stratum.

4.3 Soils

The survey area is underlain by the following soils:

- a. LaA: Latnier clay, 0 to 1 percent slopes, rarely flooded;
- b. MoA: Moreland clay, 0 to 1 percent slopes, rarely flooded and
- c. MsA: Moreland clay, 0 to 1 percent slopes, frequently flooded.

The MsA soil mapping unit is designated as hydric by the NRCS (NRCS 2014). No hydric soil indicators were observed at DP1, DP2, DP3, DP4, and DP8. The red parent material hydric soil indicator was observed at DP5, DP6, DP7, and DP9.

5.0 CONCLUSIONS

Based on field observations, the approximate 122-acre survey area contains 5.24 acres of wetlands and 4.36 acres of other waters of the US (Figure 2 and Figure 3). This acreage is influenced by the accuracy of the DGPS unit utilizing real-time corrections and ESRI® ArcMap Version 10.3 drafting software.

The USACE under the authority of the Clean Water Act, Section 404 and the Rivers and Harbor Act, Section 10 has the responsibility to make the final determination of the location and extent of jurisdictional wetlands and navigable waters within the survey area, respectively. This report represents the opinion of the investigators and should be considered preliminary until final concurrence is obtained from the Vicksburg District Army Corps of Engineers office.

6.0 LITERATURE CITED

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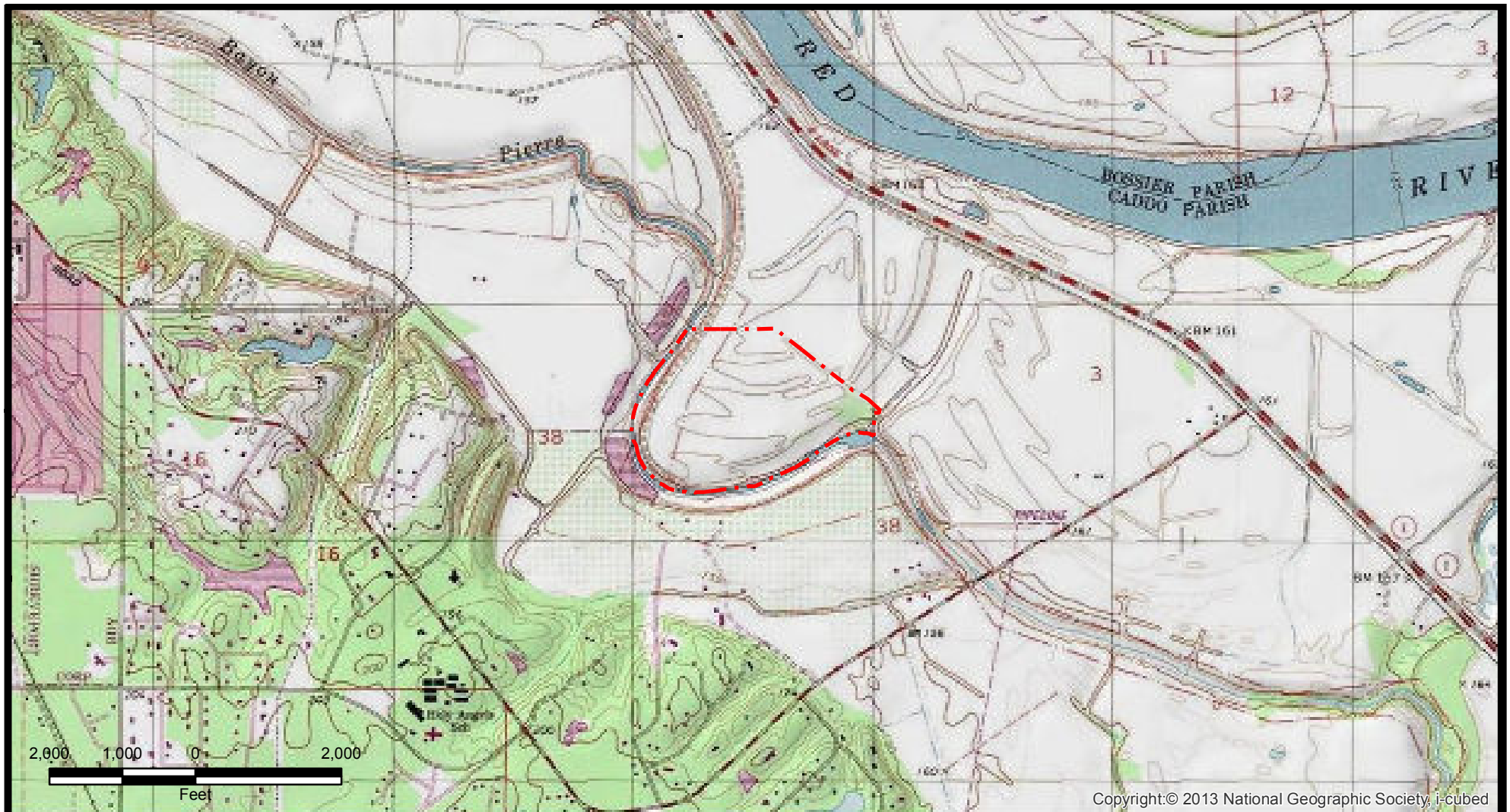
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Figures



Legend

Survey Area

 Approx. 122 acres



FRANKS MANAGEMENT COMPANY, LLC.
SHREVEPORT, LOUISIANA

122-ACRE SPRINGBACK TRACT

VICINITY MAP

CADDO PARISH, LOUISIANA



Drawn:	ADB/AM10.3
Checked:	ACH
Approved:	GRM
Date:	12/2/2015
Dwg. No.:	12981

FIGURE 1



Legend

Survey Area

Approx. 122 acres

Potential Wetlands

5.24 Acres

Potential Other Waters of the U S

4.36 Acres

FRANKS MANAGEMENT COMPANY, LLC.
SHREVEPORT, LOUISIANA

122-ACRE SPRINGBACK TRACT

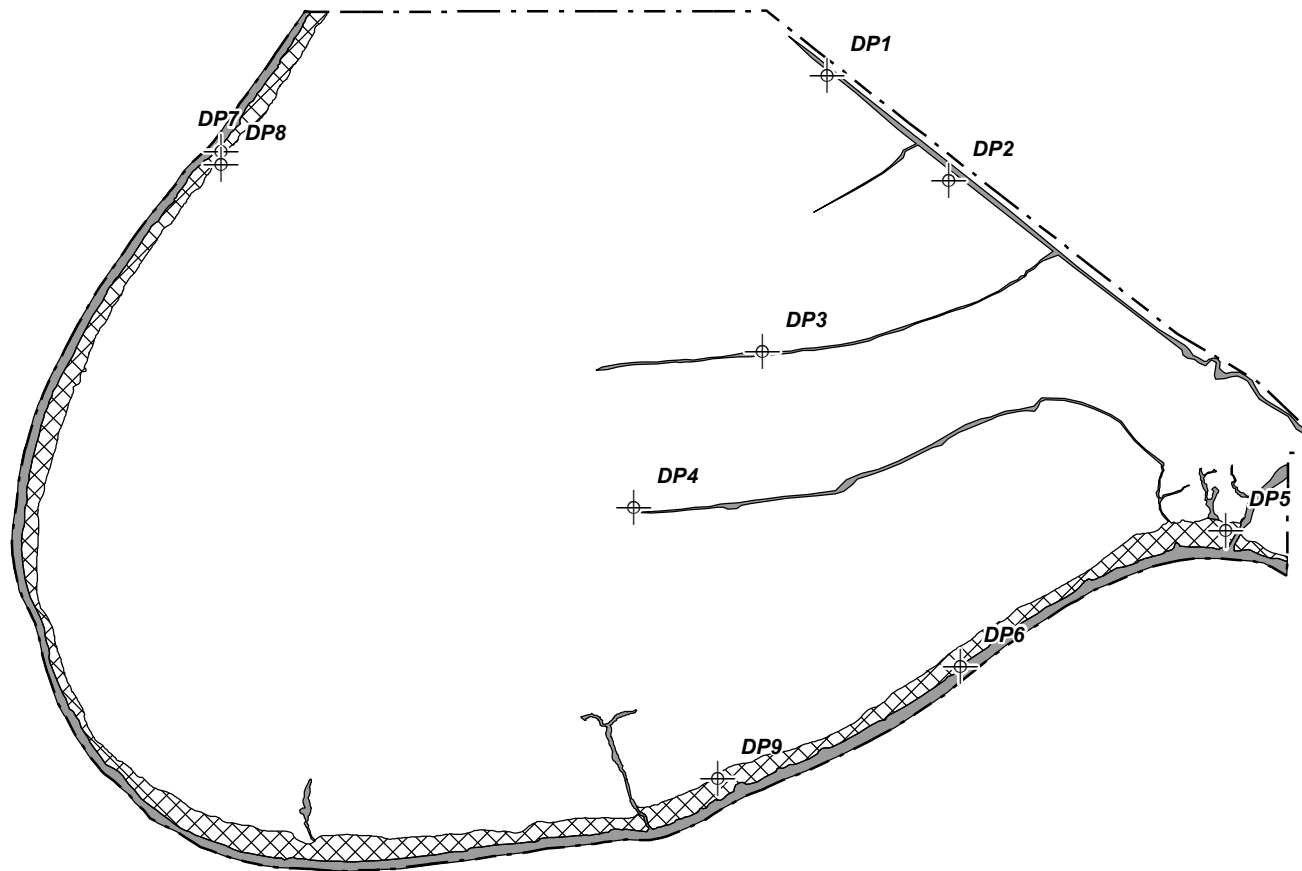
WETLAND MAP (2015 AERIAL IMAGERY)

CADDO PARISH, LOUISIANA




Drawn:	ADB/AM10.3
Checked:	AK
Approved:	AK
Date:	12/2/2015
Dwg. No.:	12981

FIGURE 2




Legend

Survey Area

 Approx. 122 acres

Potential Wetlands

 5.24 Acres

Potential Other Waters of the U S

 4.36 Acres

FRANKS MANAGEMENT COMPANY, LLC.
SHREVEPORT, LOUISIANA

122-ACRE SPRINGBACK TRACT

WETLAND MAP

CADDO PARISH, LOUISIANA



Drawn:	ADB/AM10.3
Checked:	AK
Approved:	AK
Date:	12/2/2015
Dwg. No.:	12981

FIGURE 3

Appendix A

Wetland Determination Data Forms and
Photographs

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/4/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP1
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.382477 Long: -93.684344 Datum: NAD83
 Soil Map Unit Name: LaA - Latnier clay, 0-1% slopes, rarely flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data point taken at edge of plowed field.	

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) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Reviewed 1998 IR, 2004 IR and 2015 NAIP aerial imagery.		
Remarks: The saturation observed at the data point was attributed to recent heavy rain events. See Record of Climatological Observations in Appendix B.		

Sampling Point: DP1

Tree Stratum (Plot size: 30' radius)				Absolute % Cover	Dominant Species?	Indicator Status
1.	Celtis laevigata	10	yes	FACW		
2.						
3.						
4.						
5.						
6.						
7.						
8.						
		10	= Total Cover			
50% of total cover:		5	20% of total cover:		2	
Sapling/Shrub Stratum (Plot size: 30' radius)						
1.	Celtis laevigata	15	yes	FACW		
2.	Juniperus virginiana	2	no	FACU		
3.						
4.						
5.						
6.						
7.						
8.						
		17	= Total Cover			
50% of total cover:		8.5	20% of total cover:		3.4	
Herb Stratum (Plot size: 30' radius)						
1.	Ambrosia trifida	20	yes	FAC		
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
		20	= Total Cover			
50% of total cover:		10	20% of total cover:		4	
Woody Vine Stratum (Plot size: 30' radius)						
1.						
2.						
3.						
4.						
5.						
		0	= Total Cover			
50% of total cover:			20% of total cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP1

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		
0-16	7.5YR 3/3	100					Clay	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)							Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)			<input type="checkbox"/> 1 cm Muck (A9) (LRR O)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)			<input type="checkbox"/> 2 cm Muck (A10) (LRR S)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)			<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)		
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> (MLRA 153B)		
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)			<input type="checkbox"/> Depleted Dark Surface (F7)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Muck Presence (A8) (LRR U)			<input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)			<input type="checkbox"/> Marl (F10) (LRR U)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)					
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)			<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)					
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)			<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)					
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)					
<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)					
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)								
Restrictive Layer (if observed):						Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Type: _____ Depth (inches): _____								
Remarks:								



Vegetation at DP1 facing north taken 11/4/2015



Vegetation at DP1 facing east taken 11/4/2015



Vegetation at DP1 facing south taken 11/4/2015



Vegetation at DP1 facing west taken 11/4/2015



Soil profile at DP1 taken 11/4/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/4/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP2
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.381732 Long: -93.683309 Datum: NAD83
 Soil Map Unit Name: LaA - Latnier clay, 0-1% slopes, rarely flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data point taken at edge of plowed field.	

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) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks: The saturation observed at the data point was attributed to recent heavy rain events. See Record of Climatological Observations in Appendix B.		

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

 Sampling Point: DP2

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Juniperus virginiana</u>	<u>10</u>	<u>yes</u>	<u>FACU</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>67</u> (A/B)																
2. _____	_____	_____	_____																	
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>				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 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>0</u></td> <td>(A) <u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>0</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: <u>0</u>	(A) <u>0</u> (B)	Prevalence Index = B/A = <u>0</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: <u>0</u>	(A) <u>0</u> (B)																			
Prevalence Index = B/A = <u>0</u>																				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Celtis laevigata</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>																	
2. <u>Juniperus virginiana</u>	<u>2</u>	<u>no</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>12</u> = Total Cover 50% of total cover: <u>6</u> 20% of total cover: <u>2.4</u>																				
Herb Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Ambrosia trifida</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>✓</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. _____	_____	_____	_____																	
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>30'</u> radius)																				
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: _____ 20% of total cover: _____																				
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>✓</u> No _____																

SOIL

Sampling Point: DP2

[illegible]



Vegetation at DP2 facing north taken 11/4/2015



Vegetation at DP2 facing east taken 11/4/2015



Vegetation at DP2 facing south taken 11/4/2015



Vegetation at DP2 facing west taken 11/4/2015



Soil profile at DP2 taken 11/4/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/4/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP3
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.380499 Long: -93.684876 Datum: NAD83
 Soil Map Unit Name: LaA - Latnier clay, 0-1% slopes, rarely flooded NWI classification:

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No	Hydric Soil Present? Yes No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes No <input checked="" type="checkbox"/>
Remarks: Data point taken in vegetated swale.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input checked="" type="checkbox"/> No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks: The saturation observed at the data point was attributed to recent heavy rain events. See Record of Climatological Observations in Appendix B.		

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

 Sampling Point: DP3

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u> radius)				
1. <u>Ambrosia trifida</u>	20	yes	FAC	
2. <u>Sorghum halepense</u>	5	no	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. <u>Cardiospermum halicacabum</u>	15	yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>0</u>	

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP3

[illegible]



Vegetation at DP3 facing north taken 11/4/2015



Vegetation at DP3 facing east taken 11/4/2015



Vegetation at DP3 facing south taken 11/4/2015



Vegetation at DP3 facing west taken 11/4/2015



Soil profile at DP3 taken 11/4/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/4/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP4
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.379377 Long: -93.685952 Datum: NAD83
 Soil Map Unit Name: LaA - Latnier clay, 0-1% slopes, rarely flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data point taken in swale of plowed field adjacent to vegetated drain.	

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) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks: The saturation observed at the data point was attributed to recent heavy rain events. See Record of Climatological Observations in Appendix B.		

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

 Sampling Point: DP4

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Celtis laevigata</u>	<u>2</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>2</u> = Total Cover 50% of total cover: <u>1</u> 20% of total cover: <u>0.4</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 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>0</u></td> <td>(A) <u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>0</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: <u>0</u>	(A) <u>0</u> (B)	Prevalence Index = B/A = <u>0</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: <u>0</u>	(A) <u>0</u> (B)																			
Prevalence Index = B/A = <u>0</u>																				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____																				
Herb Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Ambrosia trifida</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>✓</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Sorghum halepense</u>	<u>5</u>	<u>yes</u>	<u>FACU</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>5</u>																				
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Cardiospermum halicacabum</u>	<u>15</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. _____	_____	_____	_____																	
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>																				
Hydrophytic Vegetation Present? Yes <u>✓</u> No <u> </u>																				

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

SOIL

Sampling Point: DP4

[illegible]



Vegetation at DP4 facing north taken 11/4/2015



Vegetation at DP4 facing east taken 11/4/2015



Vegetation at DP4 facing south taken 11/4/2015



Vegetation at DP4 facing west taken 11/4/2015



Soil profile at DP4 taken 11/4/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/4/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP5
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.379238 Long: -93.680954 Datum: NAD83
 Soil Map Unit Name: MsA - Moreland clay, 0-1% slopes, frequently flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Data point taken at toe of slope along Pierre Bayou.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) _____ Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) _____ Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) _____ Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) _____ Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks:		

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

 Sampling Point: DP5

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u> radius)				
1. <u>Pericaria hydropiperoides</u>	95	yes	OBL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>0</u>	

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP5

[illegible]



Vegetation at DP5 facing north taken 11/4/2015



Vegetation at DP5 facing east taken 11/4/2015



Vegetation at DP5 facing south taken 11/10/2015



Vegetation at DP5 facing west taken 11/4/2015



Soil profile at DP5 taken 11/4/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/4/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP6
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.378253 Long: -93.683188 Datum: NAD83
 Soil Map Unit Name: MsA - Moreland clay, 0-1% slopes, frequently flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Data point taken on edge of bank along Pierre Bayou.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks:		

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

 Sampling Point: DP6

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u> radius)				
1. <u>Pericaria hydropiperoides</u>	95	yes	OBL	
2. <u>Typha domingensis</u>	5	no	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

 Total Number of Dominant Species Across All Strata: 1 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>0</u>	

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP6

[illegible]



Vegetation at DP6 facing north taken 11/4/2015



Vegetation at DP6 facing east taken 11/4/2015



Vegetation at DP6 facing south taken 11/10/2015



Vegetation at DP6 facing west taken 11/4/2015



Soil profile at DP6 taken 11/4/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/10/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP7
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.381909 Long: -93.689453 Datum: NAD83
 Soil Map Unit Name: MsA - Moreland clay, 0-1% slopes, frequently flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Data point taken at toe of slope of embankment along Pierre Bayou.	

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) <input checked="" type="checkbox"/> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks:		

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

 Sampling Point: DP7

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u> radius)				
1. <u>Pericaria hydropiperoides</u>	65	yes	OBL	
2. <u>Cardiospermum halicacabum</u>	20	yes	FAC	
3. <u>Typha domingensis</u>	3	no	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>44</u> 20% of total cover: <u>17.6</u>				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. <u>Rubus flagellaris</u>	5	yes	UPL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>0</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

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 ☐

SOIL

Sampling Point: DP7

[illegible]



Vegetation at DP7 facing north taken 11/10/2015



Vegetation at DP7 facing east taken 11/10/2015



Vegetation at DP7 facing south taken 11/10/2015



Vegetation at DP7 facing west taken 11/10/2015



Soil profile at DP7 taken 11/10/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/10/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP8
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.381813 Long: -93.689452 Datum: NAD83
 Soil Map Unit Name: MsA - Moreland clay, 0-1% slopes, frequently flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data point taken on hillslope along Pierre Bayou.	

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) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks: The saturation observed at the data point was attributed to recent heavy rain events. See Record of Climatological Observations in Appendix B.		

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

 Sampling Point: DP8

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u> radius)				
1. <u>Cynodon dactylon</u>	80	yes	FACU	
2. <u>Lolium perenne</u>	15	no	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. <u>Rubus flagellaris</u>	5	yes	UPL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>0</u>	

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

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 ✓

SOIL

Sampling Point: DP8

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		
0-3	7.5YR 3/4	100					Clay	
3-16	7.5YR 4/4	100					Clay	

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 Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	



Vegetation at DP8 facing north taken 11/10/2015



Vegetation at DP8 facing east taken 11/10/2015



Vegetation at DP8 facing south taken 11/10/2015



Vegetation at DP8 facing west taken 11/10/2015



Soil profile at DP8 taken 11/10/2015

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 122-Acre Springback Tract City/County: Caddo Sampling Date: 11/10/2015
 Applicant/Owner: Franks Management Company, LLC State: La Sampling Point: DP9
 Investigator(s): Alan Bickham Section, Township, Range: Section 15, Township 16N, Range 13W
 Landform (hillslope, terrace, etc.): Natural Levee Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRRO Lat: 32.377438 Long: -93.685229 Datum: NAD83
 Soil Map Unit Name: MsA - Moreland clay, 0-1% slopes, frequently flooded NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Data point taken toe of slope along Pierre Bayou.	

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) <input checked="" type="checkbox"/> Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Examined 1998 IR, 2004 IR and 2014 NAIP aerial imagery		
Remarks:		

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

 Sampling Point: DP9

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>30'</u> radius)				
1. <u>Panicum hydropiperoides</u>	95	yes	OBL	
2. <u>Cynodon dactylon</u>	5	no	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>0</u>	

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP9

[illegible]



Vegetation at DP9 facing north taken 11/10/2015



Vegetation at DP9 facing east taken 11/10/2015



Vegetation at DP9 facing south taken 11/10/2015



Vegetation at DP9 facing west taken 11/10/2015



Soil profile at DP9 taken 11/10/2015

Appendix B

Record of Climatological Observations

P r e l i m i n a r y	Y e a r	M o n t h	D a y	Temperature (F)		Precipitation(see **)				Evaporation		Soil Temperature (F)		
				24 hrs. ending at observation time		24 Hour Amounts ending at observation time				At Obs Time	24 Hour Wind Movement (mi)	4 in depth		
				Max.	Min.	Rain, melted snow, etc. (in)	F l o o d i n g	Snow, ice pellets, hail (in)	F l o o d i n g			Ground Cover (see *)	Max.	Min.
	2015	11	1	71	55	0.04		0.0		0				
	2015	11	2	67	61	0.98		0.0		0				
	2015	11	3	73	61	0.00		0.0		0				
	2015	11	4	69	63	0.00		0.0		0				
	2015	11	5	78	64	0.00		0.0		0				
	2015	11	6	82	66	1.80		0.0		0				
	2015	11	7	72	60	1.18		0.0		0				
	2015	11	8	60	51	0.41		0.0		0				
	2015	11	9	68	45	0.00		0.0		0				
	2015	11	10	69	47	0.00		0.0		0				
	2015	11	11	72	55	0.00		0.0		0				
	2015	11	12	81	50	0.40		0.0		0				
	2015	11	13	67	44	0.00		0.0		0				
	2015	11	14	66	42	0.00		0.0		0				
	2015	11	15	67	52	0.01		0.0		0				
	2015	11	16	66	52	0.00		0.0		0				
	2015	11	17	76	58	0.08		0.0		0				
	2015	11	18	74	50	2.64		0.0		0				
	2015	11	19	67	44	0.00		0.0		0				
	2015	11	20	76	43	0.00		0.0		0				
	2015	11	21											
	2015	11	22											
	2015	11	23											
	2015	11	24											
	2015	11	25											
	2015	11	26											
	2015	11	27											
	2015	11	28											
	2015	11	29											
	2015	11	30											
			Summary	71.0	53.2	7.54		0.0						

The "*" flags in Preliminary indicate the data have not completed processing and quality control and may not be identical to the original observation

Empty, or blank, cells indicate that a data observation was not reported.

*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass mulch; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation category above indicate a TRACE value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.