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Exhibit EE. Rebecca Development Park South Wetlands Delineation Report

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Rebecca Development Park South Wetlands Delineation Report

Terrebonne Parish, Louisiana

CSRS, Inc.

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September 2018

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CK Project Number: 16360

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

The following report summarizes a wetland delineation conducted by CK Associates (CK) on a 285-acre survey area (site) near Gray, Louisiana. 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. The site is located south of Highway 90 and west of Highway 311 in Terrebonne Parish at latitude 29°40'43.00"N and longitude 90°49'24.89"W within Sections 10 of Township 16 South and Range 16 East.

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 Land Resource Region (LRR) O – Mississippi Delta Cotton and Feed Grains Region, in Major Land Resource Area (MLRA) 131A – Southern Mississippi River Alluvium. The topography of MLRA 131A is characterized by level or depressional to very undulating alluvial plains, backswamps, oxbows, natural levees, and terraces. Average elevations start at sea level in the southern part of the area and gradually rise to about 330 feet in the northwestern part. The lower Mississippi River and its tributaries drain nearly all of MLRA 131A, but the Atchafalaya River drains the extreme southwest part (USDA 2006).

The dominant soils in the survey area are typically found in humid subtropical climates. Annual rainfall in these areas averages 156 cm, and mean annual temperature is 18.7 degrees Celsius. Soils are well-drained; runoff is medium to rapid and permeability is moderate. Much of the acreage is used for silviculture and woodlands of mixed hardwood and pines. Cleared areas are often used for soybeans, small grains, hay, and pasture (USDA 2016).

Active agriculture and bottomland hardwoods comprise a majority of the site. The eastern portion of the survey area contains herbaceous

3.0 METHODS

CK visited the survey area August 27, 2018 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 (2015 and 2018) and USDA (2010). Plant nomenclature and wetland indicator status is taken from The National Wetland Plant List (Lichvar et al. 2016). Plant nomenclature not listed in The National Wetland Plant List is taken from the NRCS PLANTS Database (2018).

Prior to conducting the field investigation, CK reviewed available aerial photography, soil survey data, elevation data (Light Detection and Ranging [LiDAR] contours and Digital Elevation Models [DEM]), topographic maps, 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 (Appendix A). Potential wetlands, potential waters of the US, and data point locations were mapped utilizing Trimble® GeoXT® Differential Global Positioning System (DGPS) with real-time corrections. Acreage was obtained by exporting the data from the DGPS unit into ESRI® ArcMap Version 10.6. Digital photographs were taken of the soil profile and surrounding vegetation at each data point (Appendix A).

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

All vegetative species present within each data point plot 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 12- to 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

Thirteen (13) data points (DP) were collected during the field investigation. DP1, DP2, DP3, DP4, DP6, DP7, DP8, DP10, DP11, and DP12 were all located within wetlands. DP5, DP9, and DP13 were all located within non-wetlands.

4.1 Hydrology

No primary hydrology indicators and only one secondary hydrology indicator (FAC-neutral test) were observed at DP5, DP9, and DP13.

Primary and/or secondary hydrology indicators were observed at DP1, DP2, DP3, DP4, DP6, DP7, DP8, DP10, DP11, and DP12. These include saturation, drift deposits, high water table, water-stained leaves, oxidized rhizospheres on living root channels, and FAC-neutral test.

4.2 Vegetation

The bottomland hardwood habitat is dominated by American elm (*Ulmus americana*), water oak (*Quercus nigra),* red maple *(Acer rubrum),* and sugarberry *(Celtis laevigata),* and dwarf palmetto (*Sabal minor*).

The herbaceous wetland habitat is dominated by horned beaksedge (*Rhynchospora corniculata*), common spikerush (*Eleocharis palustris*), yellow foxtail (*Setaria pumila*), and bahia grass (*Paspalum notatum*). The non-wetland herbaceous areas were either within active sugar cane (*Saccharum officinarum*) production or along man-made convex features (small levees) adjacent to canals.

4.3 Soils

The survey area is underlain by the following soils:

a. SrA: Schriever clay, 0 to 1 percent slopes, occasionally flooded
b. ShA: Schriever clay, 0 to 1 percent slopes
c. CdA: Cancienne silty clay loam, 0 to 1 percent slopes
d. CbA: Cancienne silt loam, 0 to 1 percent slopes
e. GcA: Gramercy-Cancienne silty clay loams, 0 to 1 percent slopes

All of the above soil mapping units are listed in the National Hydric Soils List (NRCS 2015). The depleted matrix hydric soil indicator was observed at all data points except DP9, DP12, and DP13. These areas are assumed to feature hydric soils based on NRCS Web Soil Survey data.

4.4 Questions Pertaining to Regulatory Authority

CK has also addressed the items below as directed in the request for proposal:

1. Identify any bodies of water on or abutting the site and identify the authority with jurisdiction over them.
    - The site features man-made canals associated with active agriculture and a storm water retention pond associated with a nearby residential development. These features may potentially be under the jurisdiction of the USACE by authority of Section 404 of the Clean Water Act.
2. Do wetlands and/or other waterways exist on or near the site?
    - By our investigation, there are 103.51 acres of Section 404 Wetlands present on the site. Wetland features are under the jurisdiction of the USACE under the authority of Section 404 of the Clean Water Act.
    - There are 12.29 acres of Section 404 Other Waters of the US present on the site. These features are potentially under the jurisdiction of the USACE by authority of Section 404 of the Clean Water Act.
3. If wetlands are present has a Section 404 permit application been submitted to USACE? If yes, provide a copy.
    - To the best of CK's knowledge, no permit application has been submitted to the USACE.
4. If wetlands are present, has the Section 404 permit been received from the USACE?
    - See above.
5. If wetlands are present, have all wetlands on site been mitigated?
    - See above.

5.0 CONCLUSIONS

Based on field observations, the 285-acre survey area contains (Figure 2 and Figure 3):

- 12.29 acres of Section 404 Other Waters of the US
- 103.51 acres of Section 404 Wetlands

This acreage is influenced by the accuracy of the DGPS unit utilizing real-time corrections and ESRI® ArcMap Version 10.6 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, other waters of the US, and navigable waters on this property. This report represents the opinion of the investigators and should be considered preliminary until final concurrence is obtained from the New Orleans District Army Corps of Engineers office.

6.0 LITERATURE CITED

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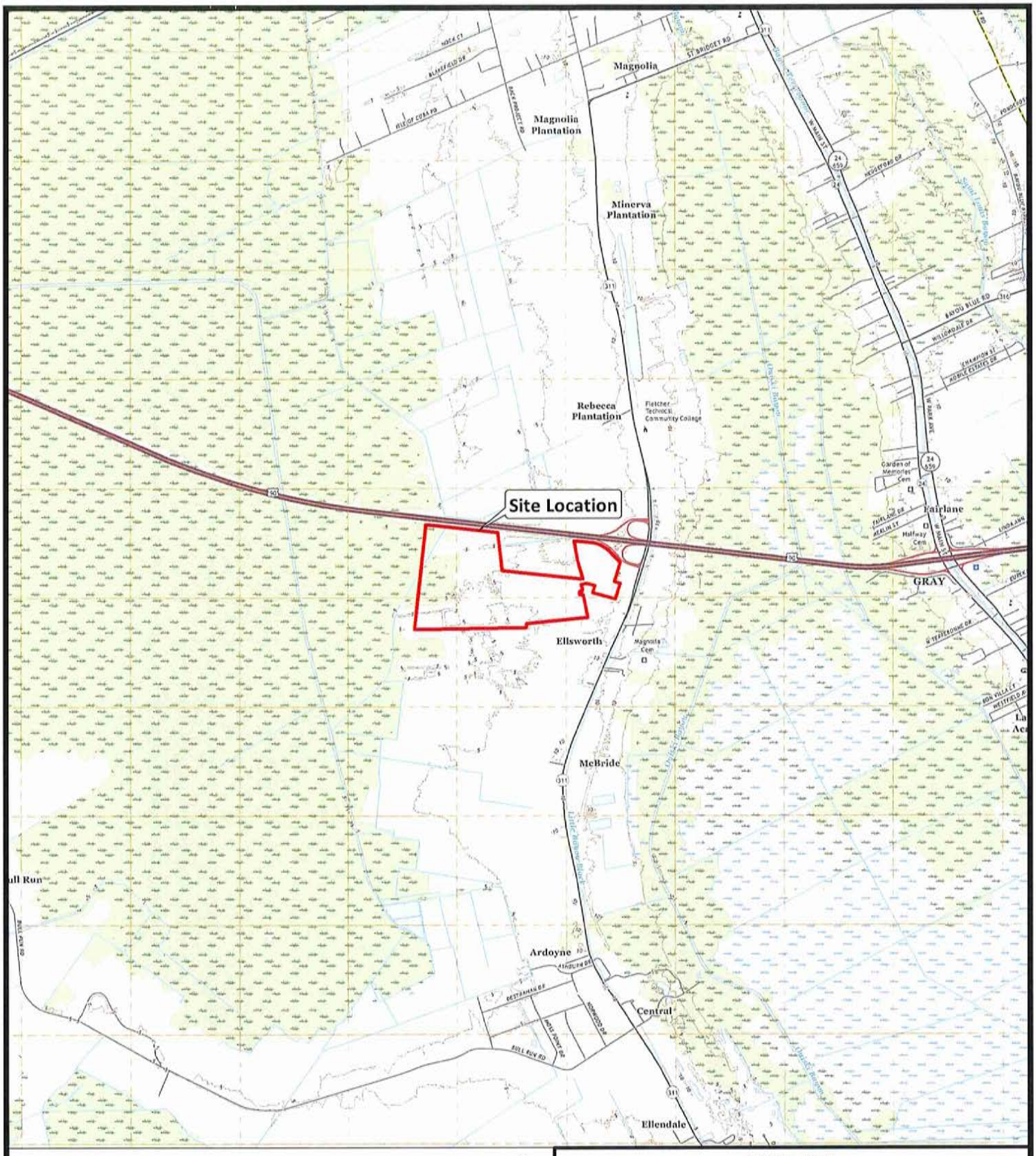
FIGURES



CSRS, Inc.
Baton Rouge, Louisiana

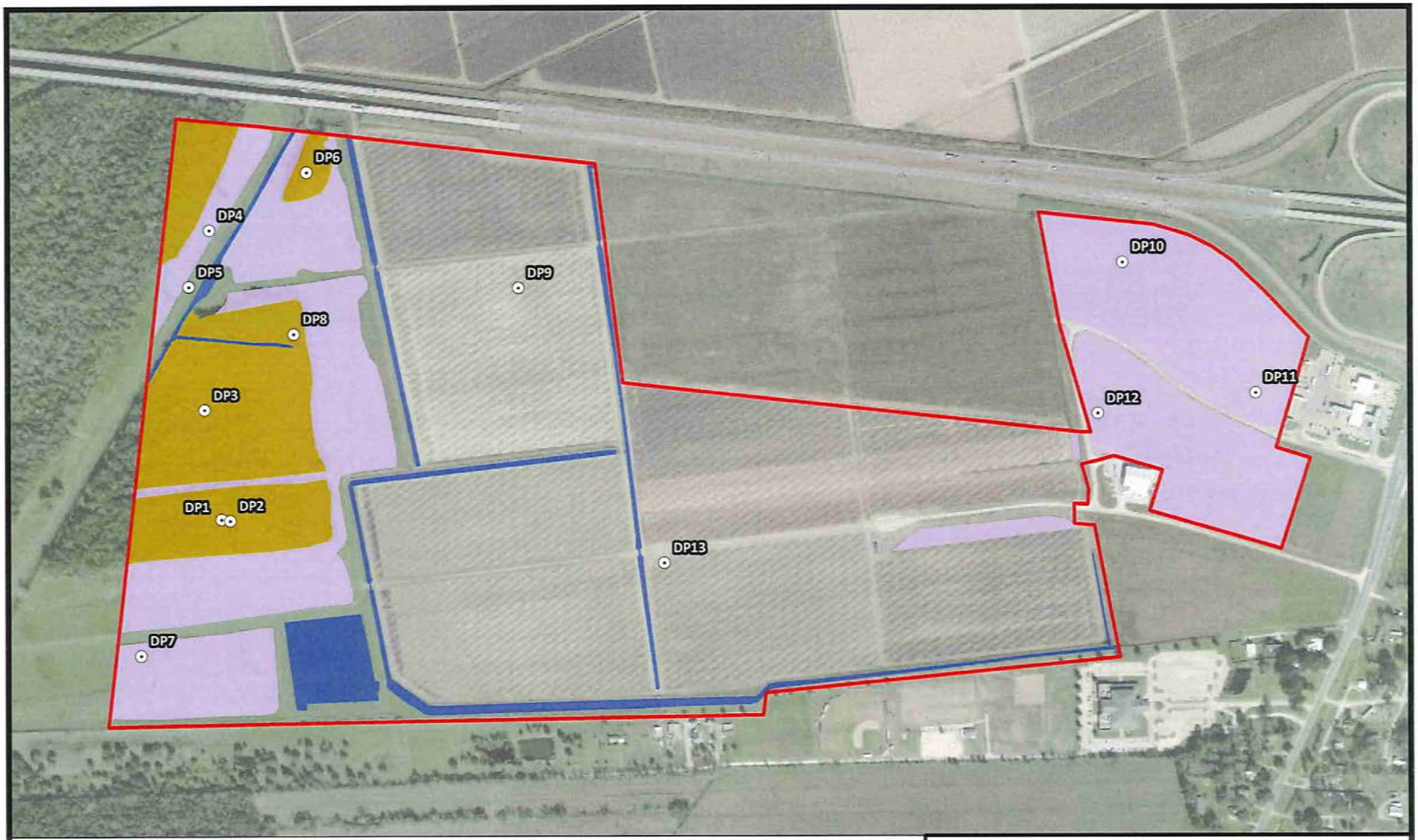
Rebecca Plantation South Site

Site Location Map

Terrebonne Parish

CK Associates Environmental Consultants

Drawn:	CPL	Checked:	AGA
Date:	09/06/18	Approved:	BLN
Dwg. No.:	A16360-01	**Figure 1**	



Legend

- Data Point
- Bottom Land Hardwood Wetland (29.36 acres)
- Herbaceous Wetland (74.15 acres)
- Waters of the US (12.29 acres)
- Site Boundary (285.82 acres)

Imagery: NAIP 2017.

N

S

0 700

Feet

esri Partner Network Silver

CSRS, Inc.
Baton Rouge, Louisiana

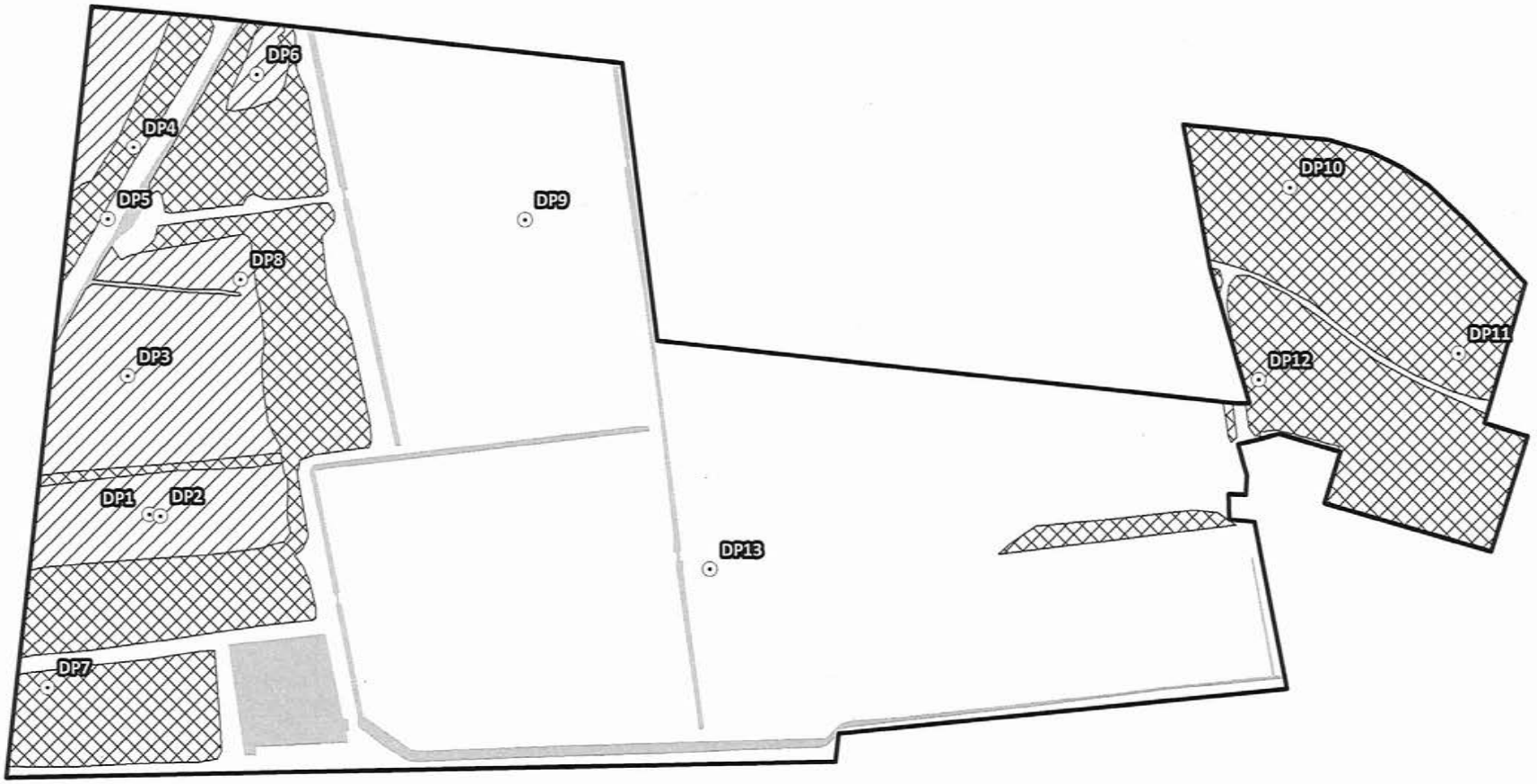
Rebecca Plantation South Site

Wetland Map
(Aerial Imagery Background)

Terrebonne Parish

CK Associates Environmental Consultants

Drawn:	CAL	Checked:	AGA
Date:	9/14/2018	Approved:	BLN
Dwg. No.:	A16360-02		Figure 2



Legend

- Data Point
- Bottom Land Hardwood Wetland (29.36 acres)
- Herbaceous Wetland (74.15 acres)
- Waters of the US (12.29 acres)
- Site Boundary (285.82 acres)

N

S

0 700

Feet

esri Partner Network Silver

CSRS, Inc.
Baton Rouge, Louisiana

Rebecca Plantation South SIte

Wetland Map

Terrebonne Parish

CK Associates Environmental Consultants

Drawn:	CAL	Checked:	AGA
Date:	9/14/2018	Approved:	BLN
Dwg. No.:	A16360-03		**Figure 3**

APPENDIX A
Wetland Determination Data Forms
&
Site Photographs

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP1

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 39.6184" N | Long: 90° 49' 55.5306" W | Datum: NAD83

Soil Map Unit Name: GcA: Gramercy-Cancienne silt loams | NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes	____	No	X	Depth (inches): ____
Water table present?	Yes	____	No	X	Depth (inches): ____
Saturation present? (includes capillary fringe)	Yes	____	No	X	Depth (inches): ____

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 1>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Quercus nigra*	70	Y	FAC
2 *Ulmus americana*	10	N	FAC
3 *Acer rubrum*	10	N	FAC
4			
5			
6			
7			
8			
	90	= Total Cover	

50% of total cover: 45 20% of total cover: 18

Sapling/Shrub Stratum (Plot size: 30 feet)			
1 *Ulmus americana*	5	Y	FAC
2 *Quercus nigra*	5	Y	FAC
3			
4			
5			
6			
7			
8			
	10	= Total Cover	

50% of total cover: 5 20% of total cover: 2

Herb stratum (Plot size: 30 feet)			
1 *Sabal minor*	50	Y	FACW
2 *Carex lupulina*	15	N	OBL
3 *Carex glaucescens*	10	N	OBL
4 *Osmundastrum cinnamomeum*	5	N	FACW
5 *Fraxinus pennsylvanica*	2	N	FACW
6 *Quercus nigra*	2	N	FAC
7			
8			
9			
10			
11			
12			
	84	= Total Cover	

50% of total cover: 42 20% of total cover: 16.8

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0	= Total Cover	

50% of total cover: 0 20% of total cover: 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column totals	(A)	0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

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*	Loc**		
0-1	10YR 2/1	100					Silt Loam	
1-16	10YR 5/1	90	10YR 5/8	10	C	M	Silt Loam	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP1 facing north taken 8/27/2018

DP1 facing east taken 8/27/2018

DP1 facing south taken 8/27/2018

DP1 facing west taken 8/27/2018

Soil profile taken at DP1 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP2

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 39.5603" N | Long: 90° 49' 55.0154" W | Datum: NAD83

Soil Map Unit Name: GcA: Gramercy-Cancienne silt loams | NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ 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	X	Depth (inches): ___
Water table present?	Yes	X	No	___	Depth (inches): 8"
Saturation present? (includes capillary fringe)	Yes	X	No	___	Depth (inches): ___

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants. Sampling Point: DP2

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Ulmus americana*	40	Y	FAC
2			
3			
4			
5			
6			
7			
8			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1 *Callicarpa americana*	15	Y	FACU
2			
3			
4			
5			
6			
7			
8			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		

Herb stratum (Plot size: 30 feet)			
1 *Quercus nigra*	25	Y	FAC
2 *Campsis radicans*	10	Y	FAC
3 *Osmundastrum cinnamomeum*	10	Y	FACW
4 *Commelina diffusa*	5	N	FACW
5 *Carex glaucescens*	2	N	OBL
6			
7			
8			
9			
10			
11			
12			
	52 = Total Cover		
50% of total cover: 26	20% of total cover: 10.4		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column totals		(A)	0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP2

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*	Loc**		
0-1	10YR 3/1	100					Silt Loam	
2-7	10YR 5/2	90	10YR 5/4	10	C	M	Silt Loam	
7-16	10YR 4/2	95	10YR 5/4	5	C	M	Silt Loam	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP2 facing north taken 8/27/2018

DP2 facing east taken 8/27/2018

DP2 facing south taken 8/27/2018

DP2 facing west taken 8/27/2018

Soil profile taken at DP2 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP3

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 45.2431" N | Long: 90° 49' 56.3836" W | Datum: NAD83

Soil Map Unit Name: ShA: Schriever clay, 0 to 1 percent slopes | NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ 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)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes ____	No X	Depth (inches): ____	**Wetland Hydrology Present?**	**Yes**
Water table present?	Yes ____	No X	Depth (inches): ____		
Saturation present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____		

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 4>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP3

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Ulmus americana*	75	Y	FAC
2 *Acer rubrum*	25	Y	FAC
3 *Quercus nigra*	10	N	FAC
4			
5			
6			
7			
8			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1 *Fraxinus pennsylvanica*	5	Y	FACW
2			
3			
4			
5			
6			
7			
8			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Herb stratum (Plot size: 30 feet)			
1 *Sabal minor*	30	Y	FACW
2 *Saururus cernuus*	15	Y	OBL
3 *Carex lupulina*	15	Y	OBL
4			
5			
6			
7			
8			
9			
10			
11			
12			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP3

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*	Loc**		
0-16	10YR 5/1	90	10YR 5/8	10	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

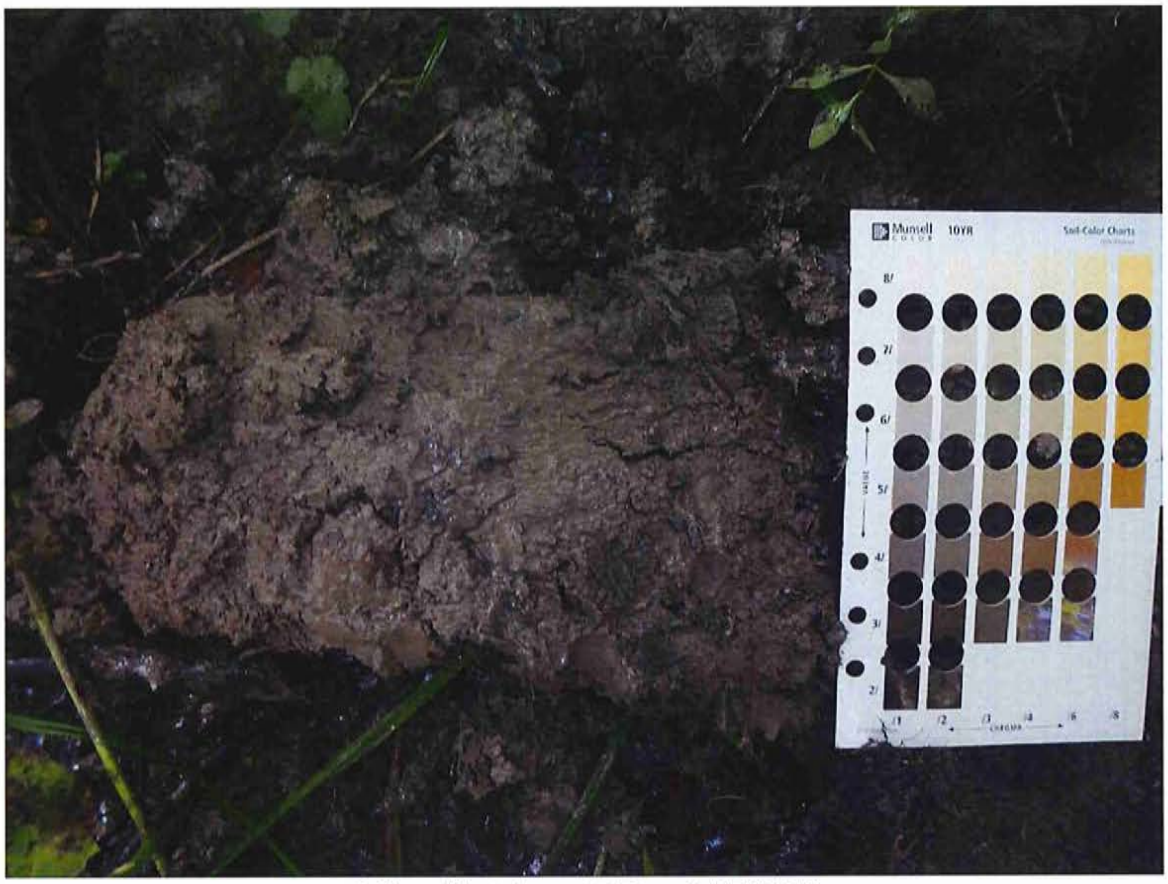
Remarks:

DP3 facing north taken 8/27/2018

DP3 facing east taken 8/27/2018

DP3 facing south taken 8/27/2018

DP3 facing west taken 8/27/2018



Soil profile taken at DP3 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP4

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 54.4739" N | Long: 90° 49' 55.9037" W | Datum: NAD83

Soil Map Unit Name: SrA: Schriever clay, occassionally flooded | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ 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	X	Depth (inches):	___
Water table present?	Yes	X	No	X	Depth (inches):	5"
Saturation present? (includes capillary fringe)	Yes	X	No	X	Depth (inches):	0"

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 1>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP4

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1 *Rhynchospora corniculata*	70	Y	OBL
2 *Eleocharis palustris*	10	N	OBL
3 *Juncus effusus*	10	N	OBL
4 *Persicaria punctata*	10	N	OBL
5 *Cyperus difformis*	5	N	OBL
6 *Alternanthera philoxeroides*	5	N	OBL
7 *Paspalum urvillei*	2	N	FAC
8			
9			
10			
11			
12			
	112 = Total Cover		
50% of total cover: 56	20% of total cover: 22.4		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00% (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Rapid test for hydrophytic vegetation
- [X] Dominance test is >50%
- [ ] Prevalence index is ≤3.0*
- [ ] Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP4

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*	Loc**		
0-16	10YR 5/1	80	10YR 5/4	20	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP4 facing north taken 8/27/2018

DP4 facing east taken 8/27/2018

DP4 facing south taken 8/27/2018

DP4 facing west taken 8/27/2018

Soil profile taken at DP4 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP5

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): Convex | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 51.6011" N | Long: 90° 49' 57.1601" W | Datum: NAD83

Soil Map Unit Name: SrA: Schriever clay, occassionally flooded | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? No	**Is the Sampled Area within a Wetland?** **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ 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	X	Depth (inches): ____
Water table present?	Yes	____	No	X	Depth (inches): ____
Saturation present? (includes capillary fringe)	Yes	____	No	X	Depth (inches): ____

Wetland Hydrology Present? **No**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants. Sampling Point: DP5

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1 *Paspalum notatum*	50	Y	FACU
2 *Setaria pumila*	40	Y	FAC
3 *Paspalum dilatatum*	10	N	FAC
4 *Sesbania drummondii*	2	N	FACW
5			
6			
7			
8			
9			
10			
11			
12			
	102 = Total Cover		
50% of total cover: 51	20% of total cover: 20.4		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species		x 1 =	0
FACW species	1	x 2 =	2
FAC species	2	x 3 =	6
FACU species	1	x 4 =	4
UPL species		x 5 =	0
Column totals	4 (A)		12 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- [ ] Rapid test for hydrophytic vegetation
- [ ] Dominance test is >50%
- [X] Prevalence index is ≤3.0*
- [ ] Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP5

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*	Loc**		
0-4	10YR 4/1	95	10YR 5/6	5	C	M	Clay	
4-16	10YR 4/2	70	10YR 5/1	20	C	M	Clay	
			10YR 5/4	10	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP5 facing north taken 8/27/2018

DP5 facing east on 8/27/2018

DP5 facing south taken 8/27/2018

DP5 facing west taken 8/27/2018

Soil profile taken at DP5 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP6

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 57.3119" N | Long: 90° 49' 50.1416" W | Datum: NAD83

Soil Map Unit Name: ShA: Schriever clay, 0 to 1 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches):	___
Water table present?	Yes	X	No	X	Depth (inches):	12"
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches):	___

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 4>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP6

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Ulmus americana*	60	Y	FAC
2 *Celtis laevigata*	25	Y	FACW
3			
4			
5			
6			
7			
8			
	85	= Total Cover	
50% of total cover: 42.5	20% of total cover:	17	

Sapling/Shrub Stratum (Plot size: 30 feet)			
1 *Celtis laevigata*	50	Y	FACW
2 *Acer negundo*	25	Y	FAC
3			
4			
5			
6			
7			
8			
	75	= Total Cover	
50% of total cover: 37.5	20% of total cover:	15	

Herb stratum (Plot size: 30 feet)			
1 *Sabal minor*	5	Y	FACW
2 *Acer negundo*	5	Y	FAC
3 *Phanopyrum gymnocarpon*	5	Y	OBL
4 *Rubus trivialis*	2	N	FACU
5			
6			
7			
8			
9			
10			
11			
12			
	17	= Total Cover	
50% of total cover: 8.5	20% of total cover:	3.4	

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column totals		(A)	0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Rapid test for hydrophytic vegetation
- [X] Dominance test is >50%
- [ ] Prevalence index is ≤3.0*
- [ ] Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP6

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*	Loc**		
0-2	10YR 4/1	100					Clay	
2-16	10YR 5/2	80	10YR 5/4	20	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP6 facing north taken 8/27/2018

DP6 facing east taken 8/27/2018

DP6 facing south taken 8/27/2018

DP6 facing west taken 8/27/2018

Soil profile taken at DP6 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP7

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 32.7603" N | Long: 90° 50' 0.3939" W | Datum: NAD83

Soil Map Unit Name: ShA; Schriever clay, 0 to 1 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes	X	No	___	Depth (inches):	2"
Water table present?	Yes	X	No	___	Depth (inches):	3"
Saturation present? (includes capillary fringe)	Yes	X	No	___	Depth (inches):	

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 2>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP7

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1 *Eleocharis palustris*	50	Y	OBL
2 *Rhynchospora corniculata*	25	Y	OBL
3 *Paspalum urvillei*	20	N	FAC
4 *Cyperus difformis*	5	N	OBL
5 *Setaria pumila*	5	N	FAC
6 *Persicaria punctata*	2	N	OBL
7			
8			
9			
10			
11			
12			
	107	= Total Cover	
50% of total cover: 53.5	20% of total cover: 21.4		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		

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: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column totals	(A)	0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP7

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*	Loc**		
0-16	10YR 5/1	80	10YR 5/4	20	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP7 facing north taken 8/27/2018

DP7 facing east taken 8/27/2018

DP7 facing south taken 8/27/2018

DP7 facing west taken 8/27/2018

Soil profile taken at DP7 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP8

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 49.0493" N | Long: 90° 49' 51.0851" W | Datum: NAD83

Soil Map Unit Name: ShA: Schriever clay, 0 to 1 percent slopes | NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes	____	No	X	Depth (inches): ____
Water table present?	Yes	____	No	X	Depth (inches): ____
Saturation present? (includes capillary fringe)	Yes	____	No	X	Depth (inches): ____

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 1>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP8

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Ulmus americana*	50	Y	FAC
2 *Acer negundo*	30	Y	FAC
3 *Liquidambar styraciflua*	5	N	FAC
4			
5			
6			
7			
8			
	85	= Total Cover	
50% of total cover: 42.5	20% of total cover: 17		

Sapling/Shrub Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Acer negundo*	15	Y	FAC
2 *Celtis laevigata*	2	N	FACW
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 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Sabal minor*	30	Y	FACW
2 *Toxicodendron radicans*	5	N	FAC
3 *Osmundastrum cinnamomeum*	2	N	FACW
4			
5			
6			
7			
8			
9			
10			
11			
12			
	37	= Total Cover	
50% of total cover: 18.5	20% of total cover: 7.4		

Woody vine stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Toxicodendron radicans*	5	Y	FAC
2 *Parthenocissus quinquefolia*	5	Y	FACU
3			
4			
5			
	10	= Total Cover	
50% of total cover: 5	20% of total cover: 2		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 83.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	x 1 =	0	
FACW species	x 2 =	0	
FAC species	x 3 =	0	
FACU species	x 4 =	0	
UPL species	x 5 =	0	
Column totals	(A)	0	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

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*	Loc**		
0-2	10YR 3/1	100					Clay	
2-16	10YR 5/1	85	10YR 5/6	15	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP8 facing north taken 8/27/2018

DP8 facing east taken 8/27/2018

DP8 facing south taken 8/27/2018

DP8 facing west taken 8/27/2018

Soil profile at DP8 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP9

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 51.2248" N | Long: 90° 49' 37.9542" W | Datum: NAD83

Soil Map Unit Name: CbA: Cancienne silt loam, 0 to 1 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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? No Hydric soil present? Yes Indicators of wetland hydrology present? No	**Is the Sampled Area within a Wetland?** **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ 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	X	Depth (inches): ____
Water table present?	Yes	____	No	X	Depth (inches): ____
Saturation present? (includes capillary fringe)	Yes	____	No	X	Depth (inches): ____

Wetland Hydrology Present? **No**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants. Sampling Point: DP9

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1 *Saccharum officinarum*	100	Y	FACU
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	1	x 4 =	4
UPL species		x 5 =	0
Column totals	1 (A)		4 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **No**

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

SOIL Sampling Point: DP9

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*	Loc**		
								No soil profile - Sugar cane field

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks: Soil assumed hydric due to soil mapping unit.

DP9 facing north taken 8/27/2018

DP9 facing east taken 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP10

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 51.9112" N | Long: 90° 49' 2.7130" W | Datum: NAD83

Soil Map Unit Name: ShA: Schriever clay, 0 to 1 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- X Surface Water (A1)
- X 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)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ 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	X	No	___	Depth (inches):	2"
Water table present?	Yes	X	No	___	Depth (inches):	0"
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches):	___

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants. Sampling Point: DP10

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	

Herb stratum (Plot size: 30 feet)			
1 *Paspalum notatum*	50	Y	FACU
2 *Setaria pumila*	20	Y	FAC
3 *Eleocharis palustris*	15	N	OBL
4 *Paspalum dilatatum*	10	N	FAC
5 *Cyperus difformis*	5	N	OBL
6 *Echinochloa crus-galli*	5	N	FACW
7			
8			
9			
10			
11			
12			
	105	= Total Cover	
50% of total cover: 52.5	20% of total cover:	21	

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	2	x 1 =	2
FACW species	1	x 2 =	2
FAC species	2	x 3 =	6
FACU species	1	x 4 =	4
UPL species		x 5 =	
Column totals	6 (A)		14 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

- [ ] Rapid test for hydrophytic vegetation
- [ ] Dominance test is >50%
- [X] Prevalence index is ≤3.0*
- [ ] Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP10

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*	Loc**		
0-16	10YR 5/1	90	10YR 5/8	10	C	M	Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP10 facing north taken 8/27/2018

DP10 facing east taken 8/27/2018

DP10 facing south taken 8/27/2018

DP10 facing west taken 8/27/2018

Soil profile at DP10 on 8/27/2018

Hydrology at DP10 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP11

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 45.0686" N | Long: 90° 48' 55.1217" W | Datum: NAD83

Soil Map Unit Name: GcA: Gramercy-Cancienne silty clay loams | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches):	___
Water table present?	Yes	X	No	___	Depth (inches):	0"
Saturation present? (includes capillary fringe)	Yes	X	No	___	Depth (inches):	0"

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 1>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP11

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1	*Setaria pumila*	60	Y	FAC
2	*Fimbristylis autumnalis*	50	Y	OBL
3	*Paspalum urvillei*	10	N	FAC
4				
5				
6				
7				
8				
9				
10				
11				
12				
	120 = Total Cover			
50% of total cover: 60	20% of total cover: 24			

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column totals	(A)	0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP11

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*	Loc**		
0-16	10YR 4/2	90	10YR 5/6	10	C	M	Silty Clay	

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ Loamy Gleyed Matrix (F2)
- X 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

DP11 facing north taken 8/27/2018

DP11 facing east taken 8/27/2018

DP11 facing south taken 8/27/2018

DP11 facing west on 8/27/2018

Soil profile at DP11 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP12

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 44.1550" N | Long: 90° 49' 4.3463" W | Datum: NAD83

Soil Map Unit Name: ShA: Schriever clay, 0 to 1 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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 Hydric soil present? Yes Indicators of wetland hydrology present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- X 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface water present?	Yes	X	No		Depth (inches):	4-6"
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Wetland Hydrology Present? Yes

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-Neutral Test: 1>0

VEGETATION -- Use scientific names of plants. Sampling Point: DP12

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1 *Eleocharis palustris*	50	Y	OBL
2 *Setaria pumila*	40	Y	FAC
3 *Fimbristylis autumnalis*	15	N	OBL
4 *Echinochloa crus-galli*	5	N	FACW
5 *Paspalum urvillei*	5	N	FAC
6			
7			
8			
9			
10			
11			
12			
	115 = Total Cover		
50% of total cover: 57.5	20% of total cover: 23		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column totals	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes**

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

SOIL Sampling Point: DP12

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*	Loc**		
								No soil profile taken due to inundation.

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

Soil assumed to be hydric based on soil map unit.

DP12 facing north on 8/27/2018

DP12 facing east on 8/27/2018

DP12 facing south on 8/27/2018

DP12 facing west on 8/27/2018

Inundated soil profile at DP12 on 8/27/2018

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebecca Plantation South Site | City/County: Terrebonne Parish | Sampling Date: 8/27/2018

Applicant/Owner: CSRS, Inc. | State: Louisiana | Sampling Point: DP13

Investigator(s): Autry Akins, Joseph Sumera | Section, Township, Range: S10 T16S R16E

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): | Slope (%):

Subregion (LRR or MLRA): 131A | Lat: 29° 40' 36.9609" N | Long: 90° 49' 29.7831" W | Datum: NAD83

Soil Map Unit Name: CbA: Cancienne silt loam, 0 to 1 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes** (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? **Yes**

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? No Hydric soil present? Yes Indicators of wetland hydrology present? No	**Is the Sampled Area within a Wetland?** **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that ap

- ___ 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Moss Trim Lines (B16)
- ___ 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	X	Depth (inches): ____
Water table present?	Yes	____	No	X	Depth (inches): ____
Saturation present? (includes capillary fringe)	Yes	____	No	X	Depth (inches): ____

Wetland Hydrology Present? **No**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION -- Use scientific names of plants. Sampling Point: DP13

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb stratum (Plot size: 30 feet)			
1 *Paspalum notatum*	70	Y	FACU
2 *Setaria pumila*	30	Y	FAC
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody vine stratum (Plot size: 30 feet)			
1			
2			
3			
4			
5			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	1	x 3 =	3
FACU species	1	x 4 =	4
UPL species		x 5 =	0
Column totals	2 (A)		7 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Problematic hydrophytic vegetation* (explain)

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

Definitions of Four Vegetation Strata

Tree- Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **No**

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

SOIL Sampling Point: DP13

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*	Loc**		
0-3	10YR 4/1	90					Silt Loam	0-3 inch profile 90% 10YR 4/1 and 10% gravel.

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

Hydric Soil Indicators:

- ___ Histisol (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)
- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils:

- ___ 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)**
- ___ Anomolous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 3 inches

Hydric Soil Present? **Yes**

Remarks: Disturbed area. Potential turnrow or staging area.
0-3 inch soil profile was 90% 10YR 4/1 and 10% gravel.
Soil assumed hydric due to soil mapping unit.

DP13 facing north on 8/27/2018

DP13 facing east on 8/27/2018

DP13 facing south on 8/27/2018

DP13 facing west on 8/27/2018

Soil profile at DP13 on 8/27/2018