

Assumption · Lafourche · St. Mary · Terrebonne



Exhibit EE. Rebecca Development Park South Wetlands Delineation Report



Rebecca Development Park South Wetlands Delineation Report

Terrebonne Parish, Louisiana **CSRS, Inc.** 6767 Perkins Road, Suite 200 Baton Rouge, Louisiana 70808

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CK Project Number: 16360

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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 (FACneutral 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

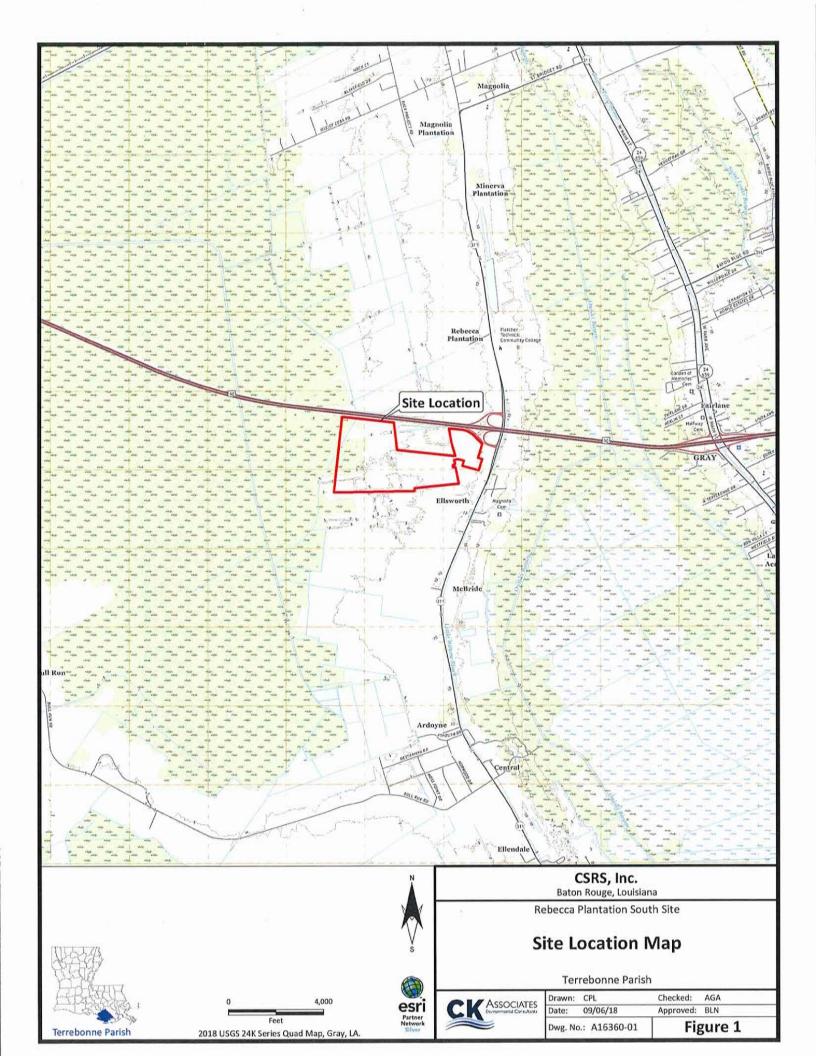
This acreage is influenced by the accuracy of the DGPS unit utilizing real-time corrections and ESRI[®] ArcMap Version 10.6 drafting software.

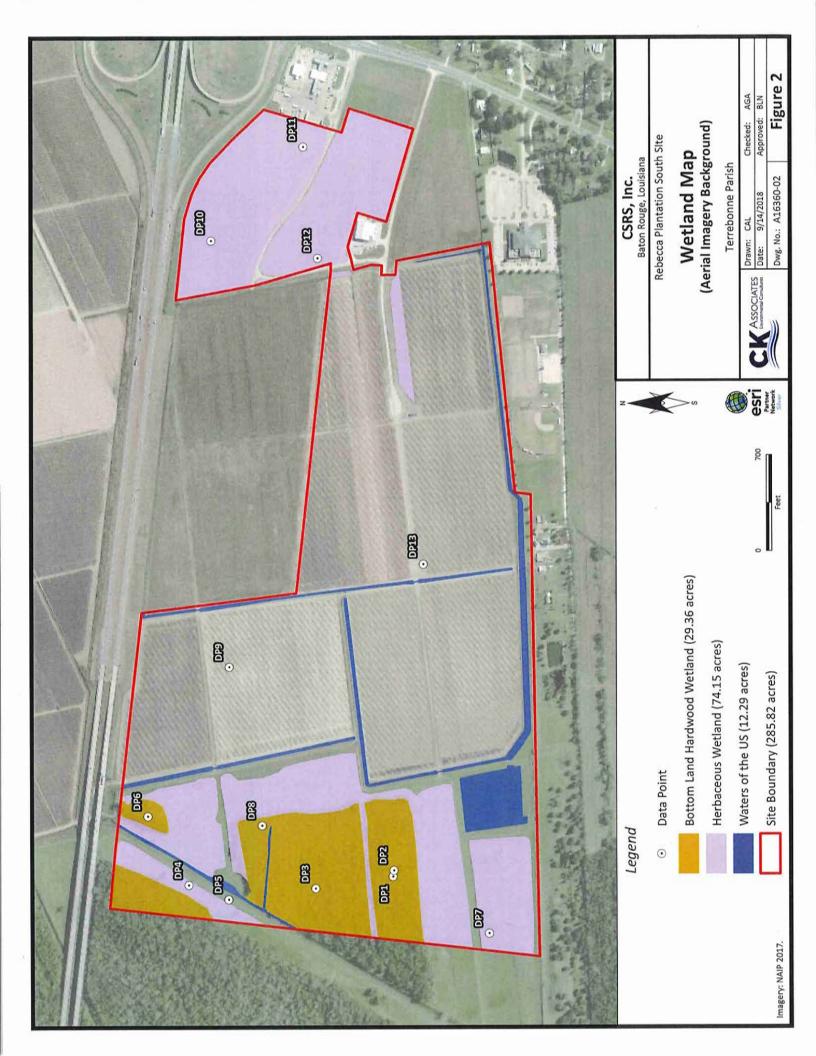
The USACE, under the authority of the Clean Water Act - Section 404 and the Rivers and Harbor Act - Section 10, has the responsibility to make the final determination of the location and extent of jurisdictional wetlands, other waters of the US, and navigable waters on this property. This report represents 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.

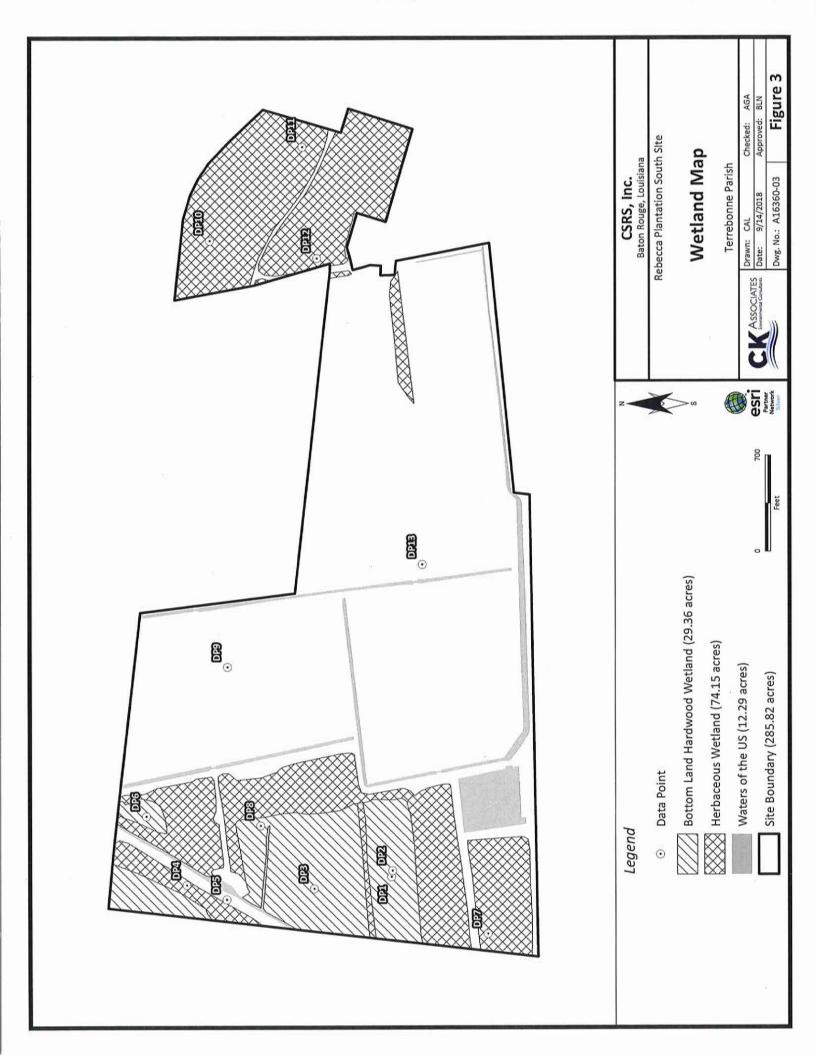
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FIGURES







APPENDIX A

Wetland Determination Data Forms

&

Site Photographs

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site R	ebecca Plantation South	Site Cit	y/County:	Terrebonne Pari	sh Sampling Date:	8/27/2018				
Applicant/Owner:	CSRS	G, Inc.	State:	Louisiana	Sampling Point:	DP1				
Investigator(s):	vestigator(s): Autry Akins, Joseph Sumera				Section, Township, Range: S10 T16S R16E					
Landform (hillslope,	terrace, etc.):		Local relief (concave, conve	ex, none):	Slope (%):				
Subregion (LRR or M	/LRA): 131A	Lat: 29° 40)' 39.6184" N	Long:	90° 49' 55.5306" W	Datum: NAD83				
Soil Map Unit Name	GcA: Gram	ercy-Cancienne s	ilt loams	NWI	Classification:	PFO1A				
Are climatic/hydrolog	gic conditions of the site	typical for this time	e of the year?	Yes (If	no, explain in remarks)					
Are vegetation	, soil , o	r hydrology	significantly	disturbed? A	re "normal circumstances	" present? Yes				
Are vegetation	, soil , o	r hydrology	naturally pro	blematic? (If needed, explain any ans	swers in remarks.)				
SUMMARY OF F	INDINGS Attach	site map showi	- ng sampling	g point locatio	ons, transects, importa	nt features, etc.				
Hydrophytic veg	etation present?	Yes								
Hydric soil prese	ent?	Yes	le the	Sampled Are	ea within a Wetland?	Yes				
Indicators of wet	tland hydrology present?	Yes		- Sampled Are		105				
Remarks:										
HYDROLOGY										
Wetland Hydrology	Indicators:									
Primary Indicators (r	<u>minimum of one is requir</u>	ed; check all that a	ap	<u>Seco</u>	ndary Indicators (minimur	<u>n of two required)</u>				
Surface Water (A	(1)	Aquatic Faur	na (B13)	_	Surface Soil Cracks (B6	3)				
High Water Table	e (A2)	Marl Deposit	s (B15) (LRR	U)	Sparsely Vegetated Cor	ncave Surface (B8)				
Saturation (A3)		Hydrogen Su	lfide Odor (C1) Drainage Patterns (B10)							
Water Marks (B1)	Oxidized Bhi	zospheres on Living Dry-Season Water Table (C2)							
Sediment Deposi	its (B2)	Roots (C3)	Moss Trim Lines (B16)							
X Drift Deposits (B3	3)	Presence of	Reduced Iron (C4) Crayfish Burrows (C8)							
Algal Mat or Crus	st (B4)	Becent Iron I	Reduction in Tilled Saturation Visible on Aerial Imagery (C9)							
Iron Deposits (B5	5)	Soils (C6)	Geomorphic Position (D2)							
	e on Aerial Imagery (B7)	Thin Muck S	urface (C7)		Shallow Aquitard (D3)					
Water-Stained Le	eaves (B9)	Other (Explai	in in Remarks)	, –	X FAC-Neutral Test (D5)					
				5	Sphagnum moss (D8) (LRR T, U)				
				-	_					
Field Observations	:									
Surface water prese	nt? Yes	No X Depth	i (inches):							
Water table present		No X Depth	(inches):		Wetland Hydrology	Yes				
Saturation present?	Yes		inches):		Present?					
(includes capillary fr			· · · _							
, , ,	lata (stream gauge, mon	itoring well. aerial	photos. previ	ous inspections), if available:					
	ada (otroain gaago, mon		F, F		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Remarks:										
FAC-Neutral Te	ct: 1>0									
FAC-Neutral le	st. 1/0					ω				

VEGETATION Use scientific names of plan	its.			Sampling Point: DP	1			
	Absolute	Dominant	Indicator	Dominance Test Worksheet				
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant				
	70	Y	FAC	Species that are OBL, FACW, or FAC: 4	(A)			
1 Quercus nigra 2 Ulmus americana	10		FAC	Total Number of Dominant	(/)			
3 Acer rubrum	10		FAC	Construction of the second	(B)			
4					(-7			
5				Percent of Dominant Species that are OBL, FACW, or				
6					(A/B)			
7								
8								
*	90	= Total Cover						
50% of total cover: 45	20% of to	otal cover:	18	Prevalence Index Worksheet				
				Total % Cover of:				
Sapling/Shrub Stratum (Plot size: 30 feet)			OBL species x 1 = 0				
1 Ulmus americana	5	Y	FAC	FACW species x 2 = 0				
2 Quercus nigra	5	Y	FAC	FAC species x 3 = 0				
3				FACU species x 4 = 0				
4				UPL species $x 5 = 0$				
5				Column totals (A) 0	(B)			
6				During lange ladent D/A				
7				Prevalence Index = B/A =				
8								
		= Total Cover						
50% of total cover: 5	20% of to	otal cover:	2	Hydrophytic Vegetation Indicators:				
				Rapid test for hydrophytic vegetation				
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%				
1 Sabal minor	50	<u> </u>	FACW	Prevalence index is ≤3.0*				
2 Carex lupulina	15	<u> </u>	OBL OBL	Problematic hydrophytic vegetation* (explain)				
3 Carex glaucescens	<u> </u>	<u> </u>	FACW					
4 Osmundastrum cinnamomeum 5 Fraxinus pennsvlvanica	2	·	FACW	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic				
5 Fraxinus pennsylvanica 6 Quercus nigra	2	·	FAC	Definitions of Four Vegetation Strata				
7								
8				Tree- Woody plants, excluding woody vine approximately 20 ft (6m) or more in height				
9				greater than 3 in. (7.6 cm) DBH.	unu			
10				g				
11				Sapling/Shrub - Woody plants, excluding	vines.			
12				less than 3 in. DBH and greater than 3.26				
	84	= Total Cover		tall				
50% of total cover: 42	20% of to	otal cover:	16.8	Herb - All herbaceous (non-woody) plants	,			
				including herbaceous vines, regardless of	size,			
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vines, les	ss than			
1			,	approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless	of			
2				height.	5 01			
3		<u> </u>						
4					1			
5		·		Hydrophytic				
	0	= Total Cover		Vegetation Yes Present?				
50% of total cover: 0		otal cover:	0	Tresent.				
Remarks: (If observed, list morphological	adaptatior	is below).						
· · · · ·				6				

SOIL

Sampling Point: DP1

٦

SUL						,	Sampling Point.	DPT	
Profile Des	cription: (Describe	to the d	lepth needed to c	locume	ent the indica	ator or confirm t	he absence of	indicators.)	
Depth	Matrix		÷	Redo	x Features				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-1	10YR 2/1	100					Silt Loam		
1-16	10YR 5/1	90	10YR 5/8	10	С	М	Silt Loam		
*Type: C = C	Concentration, D = D	epletion,	RM = Reduced M	Iatrix, N	1S = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix	
Hydric So	il Indicators:						Indicators fo	r Problematic Hydric Soils:	
Histi	sol (A1)		Polyva	alue Bel	ow Surface (S	68) (LRR S, T, U)	1 cm Muc	k (A9) (LRR O)	
— Histi	c Epipedon (A2)		Thin [Dark Sur	face (S9) (LR	R S, T, U)	2 cm Muc	k (A10) (LRR S)	
Blac	k Histic (A3)		Loam	y Mucky	y Mineral (F1)	Reduced	Vertic(F18) (outside MLRA 150A,B)	
Hyd	rogen Sulfide (A4)		Loam	y Gleye	d Matrix (F2)	ĺ.	Piedmont	Floodplain Soils (F19) (LRR P, S, T)	
Stra	tified Layers (A5)		X Deple	ted Mat	trix (F3)		Anomolou	us Bright Loamy Soils (F20) (MLRA	
Orga	anic Bodies (A6) (LR	R P, T, I	U) Redo	x Dark S	Surface (F6)		153B)		
5 cm	n Mucky Mineral (A7)	(LRR I	P, T, U) Deple	eted Dar	k Surface (F	7)	Red Parent Material (TF2)		
Muc	k Presence (A8) (LR	RU)	Redo	x Depre	ssions (F8)		Very Shallow Dark Surface (TF12)		
1 cm	n Muck (A9) (LRR P,	T)	Marl	(F10) (L	RR U)		Other (explain in remarks)		
Dep	leted Below Dark Su	rface (A	11) Deple	ted Och	ric (F11) (ML	RA 151)			
 Thic	k Dark Surface (A12)	Iron-N	langan	ese Masses	(F12) (LRR O, P,	T)	*Indicators of hydrophytic vegetation	
Coa	st Prairie Redox (A1	6) (MLR	A 150A) Umbr	ic Surfa	.ce (F13) (LR	R P, T, U) and weltand hydrology must be pre			
San	dy Mucky Mineral (S	1) (LRR	O, S) Delta	Ochric	(F17) (MLR A	A 151)		unless disturbed or problematic	
San	dy Gleyed Matrix (S4	+)	Redu	ced Ver	tic (F18) (ML	.RA 150A, 150B)			
San	dy Redox (S5)		Piedr	nont Flo	odplain Soils	s (F19) (MLRA 1 4	9A)		
Strip	ped Matrix (S6)		Anom	nolous B	Bright Loamy	Soils (F20) (MLR	A 149A, 153C,	153D)	
Dark	K Surface (S7) (LRR	P, S, T,	U)						
Restrictive	Layer (if observed)					÷			
Туре:						Hydric Soil Yes			
	Depth (inches)					Present?	165		
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 Pla	antation	South S	ite	City/Count	ty: T	Ferrebonne	Parish	Sampling Date:	8/27/2	018
Applicant/Owner:					5	State: Louis			Sampling Point:	DP2	2
Investigator(s): Autry Akins, Joseph Sumera				5	Section, Township, Range: S10 T16S R16E						
Landform (hillslope	e, terrace, et	c.):			Local r	relief (c	concave, co	onvex, non	e):	Slope (%):	
Subregion (LRR or	r MLRA):	131A	\ L	at: 29	9° 40' 39.560	03" N	Long	: 90°	49' 55.0154" W	Datum:	NAD83
Soil Map Unit Nam		GcA:	Grame	rcy-Cancier	ne silt loam	S	N	WI Classif	ication:	PFO1A	
Are climatic/hydrol	logic conditio	ons of th	e site ty	pical for this	time of the	year?	Yes	(If no, exp	olain in remarks)	a	
Are vegetation	, soil		, or h	ydrology	signific	cantly c	listurbed?		rmal circumstances		
Are vegetation	, soil		, or h	ydrology	natura	lly prob	olematic?	(If need	ed, explain any an	swers in rem	arks.)
SUMMARY OF	FINDING	S A	ttach s	ite map sh	owing san	npling	point loc	ations, tr	ansects, importa	int features	, etc.
Hydrophytic ve	egetation pre	sent?		Yes							
Hydric soil pre	esent?			Yes		le tha	Sampled	Area wit	hin a Wetland?	Yes	
Indicators of w	vetland hydro	ology pre	esent?	Yes		15 110	Jampice		init a Wolland	100	
		2									
Remarks:											
HYDROLOGY											
Wetland Hydrolog	gy Indicator	s:									. n
Primary Indicators	(minimum c	f one is	required	; check all	<u>that ap</u>		2		Indicators (minimu		uired)
Surface Water	(A1)		_		Fauna (B13)				face Soil Cracks (B		
X High Water Tal	ble (A2)		-	Marl De	posits (B15)	(LRR L	J)	Spa	arsely Vegetated Co	ncave Surfac	e (B8)
X Saturation (A3))		_	Hydroge	en Sulfide Oc	ulfide Odor (C1) Drainage Patterns (B10)					
Water Marks (B	31)			Oxidized	d Rhizospher	izospheres on Living Dry-Season Water Table (C2)					
Sediment Depo	osits (B2)			Roots (0		Moss Trim Lines (B16)					
Drift Deposits ((B3)			Presenc	e of Reduce	f Reduced Iron (C4) Crayfish Burrows (C8)					
Algal Mat or Cr	rust (B4)		-	Becent	Iron Reductio	Reduction in Tilled Saturation Visible on Aerial Imagery (C9)				(C9)	
Iron Deposits (B5)			Soils (C		Geomorphic Position (D2)					
Inundation Visi		Imagery	- (B7)	Thin Mu	ck Surface (Surface (C7) Shallow Aquitard (D3)					
Water-Stained	Leaves (B9)		-	Other (E	Explain in Re	ain in Remarks) FAC-Neutral Test (D5)					
			-			Sphagnum moss (D8) (LRR T, U)					
Field Observation	ns:										
Surface water pres	sent?	Yes	1	No X E	epth (inche	s):			Wetland		
Water table prese	nt?	Yes	X	No C	epth (inche	s):	8"		Hydrology	Yes	
Saturation present	t?	Yes	X	No [Depth (inche	s):			Present?		
(includes capillary		-									
Describe recorded	d data (strea	m gauge	e, monito	oring well, a	erial photos	, previo	ous inspec	tions), if av	ailable:		
Remarks:											

VEGETATION Use scientific names of plan	nts.			Sampling Point: D)P2
	Absolute	Dominant	Indicator	Dominance Test Worksheet	
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant	
1 Ulmus americana	40	Ŷ	FAC	Species that are OBL, FACW, or FAC: 4	(A)
2			170		_(//)
3				Total Number of Dominant Species Across all Strata: 5	(B)
4					_(=)
5				Percent of Dominant Species that are OBL, FACW, or	
6				FAC: 80.00%	(A/B)
7					_` /
8					
	40	= Total Cove	r		
50% of total cover: 20	20% of to	otal cover:	8	Prevalence Index Worksheet	
		-		Total % Cover of:	
Sapling/Shrub Stratum (Plot size: 30 feet	1			OBL species $x = 0$	
) 15	Y	FACU	FACW species $x^{T} = 0$	
1 Callicarpa americana	15	· 1	1400	FAC species $x^2 = 0$	-
3				FACU species $x^3 = 0$	
3 				$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $	_
5			<u></u>	Column totals (A) 0	— (B)
6					_()
7				Prevalence Index = B/A =	
8					
5	15	= Total Cove			
F0% of total acutors 7.5	-	tal cover:		Hydrophytic Vegetation Indicators:	
50% of total cover: 7.5	20% 0110		3	Rapid test for hydrophytic vegetation	n
Distribution (Distribution 00 fast	`				
Herb stratum (Plot size: 30 feet)		540	X Dominance test is >50%	
1 Quercus nigra		Y	FAC	Prevalence index is ≤3.0*	
2 Campsis radicans		<u>Y</u>	FAC	Problematic hydrophytic	
3 Osmundastrum cinnamomeum		Y	FACW	vegetation* (explain)	
4 Commelina diffusa	5	<u>N</u>	FACW	*Indicators of hydric soil and wetland hydrology r	
5 Carex glaucescens	2	<u>N</u>	OBL	be present, unless disturbed or problematic Definitions of Four Vegetation Strata	;
6					
7				Tree- Woody plants, excluding woody vi	
8				approximately 20 ft (6m) or more in heig	ht and
9				greater than 3 in. (7.6 cm) DBH.	
10					
11				Sapling/Shrub - Woody plants, excluding	
12		Tatal Onus		less than 3 in. DBH and greater than 3.2	26 ft (1m)
5 00/ (total second 00)		= Total Cove		tall	
50% of total cover:26	20% of to	otal cover:	10.4	Herb - All herbaceous (non-woody) plan	
Manduusing stratum (Plat size) 20 feat	1			including herbaceous vines, regardless	
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vines, l approximately 3 ft (1 m) in height.	less man
1				Woody vine - All woody vines, regardles	ss of
2				height.	
3					
4 5					
°		- Total Caus		Hydrophytic Vegetation Yes	
	-	= Total Cove		Vegetation Yes Present?	
50% of total cover: 0	20% of to	otal cover:	0		
Remarks: (If observed, list morphological	adaptation	ns below).			

SOIL

Sampling Point: DP2

Profile Desc	cription: (Describe	to the d	epth needed to d	locume	ent the indic	ator or confirm t	he absence of	f indicators.)			
Depth	Matrix			Redo	x Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-1	10YR 3/1	100					Silt Loam				
2-7	10YR 5/2	90	10YR 5/4	10	· C	М	Silt Loam				
7-16	10YR 4/2	95	10YR 5/4	5	С	М	Silt Loam				
								-			
	Concentration, $D = D$	epletion,	RM = Reduced M	latrix, N	1S = Masked	Sand Grains.		L = Pore Lining, M = Matrix			
Hydric So	il Indicators:							r Problematic Hydric Soils:			
Histi	sol (A1)					68) (LRR S, T, U)		ck (A9) (LRR O)			
Histi	c Epipedon (A2)		Thin [Dark Sur	face (S9) (LF	R S, T, U)		ck (A10) (LRR S)			
	k Histic (A3)				y Mineral (F1			Vertic(F18) (outside MLRA 150A,B)			
Hydr	rogen Sulfide (A4)		Loam	y Gleye	d Matrix (F2)	Piedmon	t Floodplain Soils (F19) (LRR P, S, T)			
Strat	tified Layers (A5)		X Deple	ted Mat	trix (F3)			us Bright Loamy Soils (F20) (MLRA			
	anic Bodies (A6) (LR			x Dark S	Surface (F6)		153B)				
	n Mucky Mineral (A7)	•	P, T, U) Deple	ted Dar	'k Surface (F	7)	Red Pare	ent Material (TF2)			
	k Presence (A8) (LR				ssions (F8)		Very Shallow Dark Surface (TF12)				
1 cm	n Muck (A9) (LRR P,	T)	1 million 1	(F10) (L			Other (explain in remarks)				
Depl	leted Below Dark Su	rface (A ⁻	I1) Deple	ted Och	ric (F11) (ML	RA 151)					
Thic	k Dark Surface (A12)	Iron-M	langan	ese Masses	(F12) (LRR O, P,	u) and weltand hydrology must be prese				
Coas	st Prairie Redox (A16	6) (MLR	A 150A) Umbr	ic Surfa	.ce (F13) (LF	R P, T, U)					
Sand	dy Mucky Mineral (S	1) (LRR	O, S) Delta	Ochric	(F17) (MLR	A 151)		unless disturbed or problematic			
Sand	dy Gleyed Matrix (S4	·)				RA 150A, 150B)					
Sand	dy Redox (S5)		Piedn	nont Flo	odplain Soils	s (F19) (MLRA 14	9A)				
	ped Matrix (S6)			iolous B	Bright Loamy	Soils (F20) (MLR	A 149A, 153C,	153D)			
Dark	Surface (S7) (LRR	P, S, T,	U)								
U E						-					
Restrictive	Layer (if observed):										
Туре:				0	_	Hydric Soil	Yes				
	Depth (inches):				_	Present?	163				
					-						
Remarks:											
÷ .											
A Designed and the second s											



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

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 naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc. Yes
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 SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc.
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: PF01A 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.) Yes SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc.
Soil Map Unit Name ShA: Schriever clay, 0 to 1 percent slopes NWI Classification: PF01A 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.
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.
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.
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.
SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc.
Hudrophytic vogotation proceed? Vog
Hydrophytic vegetation present? Yes
Hydric soil present? Yes Is the Sampled Area within a Wetland? Yes
Indicators of wetland hydrology present? Yes
Remarks:
HYDROLOGY
Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that ap Secondary Indicators (minimum of two required)
Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6)
High Water Table (A2) Marl Deposits (B15) (LRR U) Sparsely Vegetated Concave Surface (B8)
Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Water Marks (B1) Oxidized Rhizospheres on Living Dry-Season Water Table (C2)
Sediment Deposits (B2) Roots (C3) Moss Trim Lines (B16)
Drift Deposits (B3) Presence of Reduced Iron (C4) Crayfish Burrows (C8)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5) Soils (C6) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3)
X Water-Stained Leaves (B9) Other (Explain in Remarks) 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): Wetland Hydrology Yes
Saturation present? Yes No X Depth (inches): Present?
(includes capillary fringe)
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
FAC-Neutral Test: 4>0

VEGETATION Use scientific names of plant

Sampling Point: DP3

Tree Stratum (Plot size: 30 feet) 1 Ulmus americana 2 Acer rubrum 3 Quercus nigra 4	Absolute % Cover 75 25 10	Dominant Species Y Y N	Indicator Staus FAC FAC FAC	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: 6 Total Number of Dominant Species Across all Strata: 6 Percent of Dominant Species that are OBL, FACW, or FAC: 100.00%
7 8 50% of total cover: 55 Sapling/Shrub Stratum (Plot size: 30 feet		= Total Cover otal cover:	r 22	Prevalence Index Worksheet Total % Cover of: OBL species x 1 = 0
1 Fraxinus pennsylvanica 00 rect 2	, <u>5</u> 	Y	FACW	FACW species $x 2 =$ 0FAC species $x 3 =$ 0FACU species $x 4 =$ 0UPL species $x 5 =$ 0Column totals(A)0Prevalence Index = B/A =
50% of total cover: 2.5		= Total Cove otal cover:	r 1	Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet 1 Sabal minor 2 Saururus cernuus 3 Carex lupulina 4 5) 30 15 15	Y Y Y	FACW OBL OBL	 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
6 7 8 9 10		· · · · · · · · · · · · · · · · · · ·		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.
11		= Total Cove		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall
50% of total cover: <u>30</u> <u>Woody vine stratum</u> (Plot size: <u>30 feet</u> 1 2 3 3	20% of to			 Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height.
4 5 50% of total cover: 0		= Total Cove otal cover:	r 0	Hydrophytic Vegetation Yes Present?
Remarks: (If observed, list morphological	adaptatior	ns below).		č.

SOIL

Sampling Point: DP3

SUL						3	sampling Foint.		
Profile Des	cription: (Describe	to the c	lepth needed to a	docume	ent the indic	ator or confirm th	ne absence o	f indicators.)	
Depth	<u>Matrix</u>			<u>Redo</u>	x Features	3			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-16	10YR 5/1	90	10YR 5/8	10	С	М	Clay		
						-			
*Type: C = C	Concentration, $D = December 2$	epletion,	, RM = Reduced N	/latrix, N	IS = Masked	Sand Grains.		PL = Pore Lining, M = Matrix	
Hydric So	il Indicators:							or Problematic Hydric Soils:	
	isol (A1)				•	68) (LRR S, T, U)		ck (A9) (LRR O)	
	ic Epipedon (A2)				face (S9) (LF			ck (A10) (LRR S)	
	k Histic (A3)				y Mineral (F1			Vertic(F18) (outside MLRA 150A,B)	
Hyd	rogen Sulfide (A4)		Loam	iy Gleye	d Matrix (F2)		Piedmon	t Floodplain Soils (F19) (LRR P, S, T)	
Stra	tified Layers (A5)		X Deple	eted Mat	trix (F3)			us Bright Loamy Soils (F20) (MLRA	
	anic Bodies (A6) (LR				Surface (F6)		153B)		
	n Mucky Mineral (A7)				k Surface (F	7)	Red Parent Material (TF2)		
	k Presence (A8) (LR			•	ssions (F8)		Very Shallow Dark Surface (TF12)		
	n Muck (A9) (LRR P,			(F10) (L	-		Other (explain in remarks)		
Dep	leted Below Dark Sur	face (A			ric (F11) (ML				
	k Dark Surface (A12)			Mangan	ese Masses	(F12) (LRR O, P,	Т)	*Indicators of hydrophytic vegetation	
Coa	st Prairie Redox (A16	6) (MLR	A 150A) Umbr	ric Surfa	ce (F13) (LF	R P, T, U)	unless disturbed or problematic		
San	dy Mucky Mineral (S ⁻	1) (LRR	O, S) Delta	Ochric	(F17) (MLR /	A 151)		uniess disturbed of problematic	
San	dy Gleyed Matrix (S4)				RA 150A, 150B)			
San	dy Redox (S5)		Piedr	nont Flo	odplain Soils	s (F19) (MLRA 14 9	9A)		
Strip	oped Matrix (S6)		Anom	nolous E	Bright Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)	
Darl	K Surface (S7) (LRR	P, S, T,	U)						
				·					
Restrictive	Layer (if observed):								
Туре:					_	Hydric Soil	Yes		
	Depth (inches):				_	Present?	103		
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

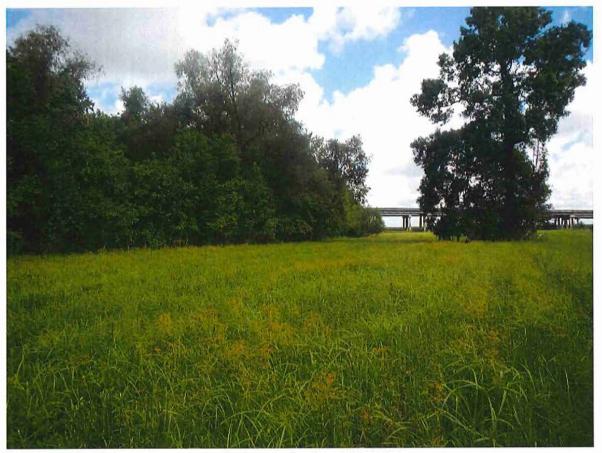
Project/Site	Rebecca Plantation South	Site	City/County:	Ferrebonne Parish	Sampling Date:	8/27/2018			
Applicant/Owner:	CSRS	S, Inc.	State:	Louisiana	Sampling Point:	DP4			
Investigator(s):	Autry Akins, Jos	eph Sumera	Section	, Township, Range:	S10 T1	6S R16E			
Landform (hillslope	e, terrace, etc.):		Local relief (c	concave, convex, no	ne):	Slope (%):			
Subregion (LRR or	r MLRA): 131A	Lat: 29°	40' 54.4739" N	Long: 90	° 49' 55.9037" W	Datum: NAD83			
Soil Map Unit Nam	A	er clay, occassio	onally flooded	NWI Class	ification:	N/A			
Are climatic/hydrol	logic conditions of the site	typical for this ti	ime of the year?	Yes (If no, e	xplain in remarks)				
Are vegetation	, soil , o	r hydrology	significantly o	disturbed? Are "n	ormal circumstances	" present? Yes			
Are vegetation	, soil , o	r hydrology	naturally prot	olematic? (If nee	eded, explain any ans	wers in remarks.)			
SUMMARY OF	FINDINGS Attach	site map sho	wing sampling	point locations, t	transects, importa	nt features, etc.			
Hydrophytic ve	egetation present?	Yes							
Hydric soil pre	sent?	Yes	la tha	Compled Area wi	thin a Watland?	Vac			
	vetland hydrology present?	Yes	is the	Is the Sampled Area within a Wetland? Yes					
	, .,								
Remarks:									
HYDROLOGY									
Wetland Hydrolo	gy Indicators:								
Primary Indicators	(minimum of one is requir	ed; check all the	at ap	<u>Secondar</u>	y Indicators (minimur	<u>n of two required)</u>			
Surface Water	(A1)	Aquatic Fa	auna (B13)						
				ts (B15) (LRR U) Sparsely Vegetated Concave Surface (B8)					
X Saturation (A3)		Hydrogen	Sulfide Odor (C1)	rainage Patterns (B10))			
Water Marks (E					ry-Season Water Tabl	e (C2)			
Sediment Depo		X Oxidized F Roots (C3	Rhizospheres on I		oss Trim Lines (B16)				
Drift Deposits (and the second s	of Reduced Iron		rayfish Burrows (C8)				
				· ·	aturation Visible on Ae	rial Imagery (C9)			
Algal Mat or Cr		NOT 0. 11000000	on Reduction in Ti	neu	eomorphic Position (D				
Iron Deposits (Soils (C6)			hallow Aquitard (D3)	~)			
	ble on Aerial Imagery (B7)		(Surface (C7)		AC-Neutral Test (D5)				
Water-Stained	Leaves (B9)	Other (Exp	plain in Remarks)	1	phagnum moss (D8) (IBBT.U)			
					shaghan mooo (50) (
Field Observation	201								
Standar contention process			nth (inches)						
Surface water pre	· 정상 20 · · · · · · · · · · · · · · · · · ·	Contract - Contract - Contract - Contract	pth (inches):	5"	Wetland	Yes			
Water table prese			pth (inches):		nyulology	165			
Saturation present		No X De	pth (inches):	0"	Present?				
(includes capillary					- 10-11-12-14-14-14-14-14-14-14-14-14-14-14-14-14-				
Describe recorded	d data (stream gauge, mon	itoring well, aer	ial photos, previo	ous inspections), if a	vailable:				
Remarks:									
FAC-Neutral T	est: 1>0								

VEGETATION Use scientific names of plan	its.			Sampling Point:	DP4
	Absolute	Dominant	Indicator	Dominance Test Worksheet	
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant	
	70 00001	opeoleo	oludo	Species that are OBL,	
1				FACW, or FAC: 1	(A)
2				Total Number of Dominant	
3				Species Across all Strata: 1	(B)
4				Percent of Dominant Species	
5				that are OBL, FACW, or	
6				FAC: 100.00	% (A/B)
7			·		197 -
8					
	0 =	Total Cove	r		
50% of total cover: 0	20% of to		0	Prevalence Index Worksheet	
50% of total cover: 0	20 % 01 10		0		
				Total % Cover of:	
Sapling/Shrub Stratum (Plot size: 30 feet)			OBL species x 1 =0	
1				FACW species x 2 = 0	
2				FAC species x 3 = 0	
3				FACU species x 4 = 0	
4				UPL species x 5 = 0	
5			·	Column totals (A) 0	(B)
6					
7				Prevalence Index = B/A =	
8					-
	0 =	Total Cove			
				I huke why tie Venetation Indicatory	
50% of total cover: 0	20% of to	tal cover:	0	Hydrophytic Vegetation Indicators:	
				Rapid test for hydrophytic vegetat	ion
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%	
1 Rhynchospora corniculata	70	Y	OBL	Prevalence index is ≤3.0*	
2 Eleocharis palustris	10	N	OBL	Problematic hydrophytic	
3 Juncus effusus	10	N	OBL	vegetation* (explain)	
4 Persicaria punctata	10	N	OBL	*Indicators of hydric soil and wetland hydrolog	av must
5 Cyperus difformis	5	N	OBL	be present, unless disturbed or problema	
6 Alternanthera philoxeroides	5	N	OBL	Definitions of Four Vegetation Strat	
7 Paspalum urvillei	2	N	FAC		
				Tree- Woody plants, excluding woody	
8	-			approximately 20 ft (6m) or more in he	eight and
9				greater than 3 in. (7.6 cm) DBH.	
10					
11				Sapling/Shrub - Woody plants, exclu	
12				less than 3 in. DBH and greater than 3	3.26 ft (1m)
		Total Cove		tall	
50% of total cover: 56	20% of to	tal cover:	22.4	Herb - All herbaceous (non-woody) pl	ants,
	;			including herbaceous vines, regardles	
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vines	s, less than
1				approximately 3 ft (1 m) in height.	
2				Woody vine - All woody vines, regard	lless of
3				height.	
4					
5				Hydrophytic	
	0 =	Total Cove		Vegetation Yes	
				Present?	
50% of total cover: 0	20% of to	tal cover:	0		
Remarks: (If observed, list morphological	adaptation	s below).			
· · ·					
				-	

SOIL

Sampling Point: DP4

							oumping rom		
Profile Des	cription: (Describe	to the c	lepth needed to	docume	ent the indic	ator or confirm	the absence o	f indicators.)	
Depth	Matrix			Redo	ox Features				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-16	10YR 5/1	80	10YR 5/4	20	C	М	Clay		
							-		
	ж.								
*Tvpe: C = 0	Concentration, $D = D$	epletion	RM = Reduced N	Aatrix, N	I IS = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix	
	oil Indicators:							or Problematic Hydric Soils:	
-	isol (A1)		Polyv	alue Bel	ow Surface (S	68) (LRR S, T, U)		ck (A9) (LRR O)	
	ic Epipedon (A2)				, face (S9) (LF			ck (A10) (LRR S)	
	ck Histic (A3)				y Mineral (F1			Vertic(F18) (outside MLRA 150A,B)	
	rogen Sulfide (A4)				d Matrix (F2)	·		t Floodplain Soils (F19) (LRR P, S, T)	
	tified Layers (A5)		X Deple					us Bright Loamy Soils (F20) (MLRA	
	anic Bodies (A6) (LR	ррт			Surface (F6)		153B)	us blight Loarny Solis (1 20) (META	
	n Mucky Mineral (A7)		· · · · · · · · · · · · · · · · · · ·		rk Surface (F	7)	, Red Pare	ent Material (TF2)	
	k Presence (A8) (LR				-	()	Very Shallow Dark Surface (TF12)		
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) Marl (F10) (LRR U)					Other (explain in remarks)				
Depleted Below Dark Surface (A11)				-	RA 151)	Other (c/			
		2				, (F12) (LRR O, P ,	T)		
	k Dark Surface (A12			-)	*Indicators of hydrophytic vegetation and weltand hydrology must be present,	
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (L							unless disturbed or problematic		
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (N					-		name de service de la construction de la fair de la construction de la		
	dy Gleyed Matrix (S4	-)				RA 150A, 150B)			
	dy Redox (S5)				•	s (F19) (MLRA 1 4	•	1500)	
•	oped Matrix (S6)	пст		Iolous E	sright Loamy	Soils (F20) (MLF	(A 149A, 153C	, 153D)	
Dan	k Surface (S7) (LRR	Ρ, δ, Ι,	0)						
						1			
	Layer (if observed)								
Туре:	3				-	Hydric Soi	l Yes		
	Depth (inches)				_	Present?			
						10 C			
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

Project/Site Rebecca Plantation South	Site Cit	y/County:	Ferrebonne P	arish	Sampling Date:	8/27/20	018	
Applicant/Owner: CSRS	, Inc.	State:	Louisia	na	Sampling Point:	DP5	5	
Investigator(s): Autry Akins, Jose	ph Sumera	Section	, Township,	Range:	S10 T1	6S R16E		
Landform (hillslope, terrace, etc.):		Local relief (concave, con	ivex, none	e): Convex	Slope (%):		
Subregion (LRR or MLRA): 131A	Lat: 29° 40) 51.6011" N	Long:	90° ∠	49' 57.1601" W	Datum:	NAD83	
	r clay, occassiona	ally flooded	NW	/I Classific	cation:	N/A		
Are climatic/hydrologic conditions of the site t	ypical for this time	e of the year?	Yes	(If no, expl	lain in remarks)			
Are vegetation , soil , or	hydrology	significantly of	disturbed?	Are "norr	mal circumstances	" present?	Yes	
	hydrology	- naturally prol	olematic?	(If neede	ed, explain any ans	swers in rema	arks.)	
SUMMARY OF FINDINGS Attach		- ng sampling	point loca	tions, tra	insects, importa	nt features,	, etc.	
Hydrophytic vegetation present?	Yes							
Hydric soil present?	Yes	l. I.	O a manufact d		in a WatlandQ	Ne		
Indicators of wetland hydrology present?	No	Is the	Sampled A	Area with	in a Wetland?	No		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is require	ed; check all that a	ap	Se	condary li	ndicators (minimur	m of two requ	uired)	
Surface Water (A1)	Aquatic Faun	na (B13)		Surfa	ace Soil Cracks (B6	6)		
High Water Table (A2)	s (B15) (LRR l	1)	Spar	rsely Vegetated Cor	ncave Surface	e (B8)		
Saturation (A3)	Hydrogen Su	Ilfide Odor (C1)	Drain	nage Patterns (B10)		
Water Marks (B1)	Ovidized Phi	zospheres on I	iving	Dry-	Season Water Tabl	e (C2)		
Sediment Deposits (B2)	Roots (C3)	zospheres on	livilig	Mos	s Trim Lines (B16)			
Drift Deposits (B3)		Reduced Iron	(C4)		fish Burrows (C8)			
Algal Mat or Crust (B4)		Deduction in T	المعا	Satu	ration Visible on Ae	erial Imagery	(C9)	
Iron Deposits (B5)	Soils (C6)	Reduction in TilledSaturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)						
Inundation Visible on Aerial Imagery (B7)	Thin Muck S	urface (C7)			llow Aquitard (D3)	-,		
Water-Stained Leaves (B9)		in in Remarks)			-Neutral Test (D5)			
					agnum moss (D8) (LRR T, U)		
Field Observations:								
Surface water present? Yes	No X Depth	(inches):			×.			
Water table present? Yes		(inches):			Wetland	No		
Saturation present? Yes		i (inches):			Hydrology Present?			
(includes capillary fringe)		i (iliciles).			i resent.			
	toring well porial	photos provid		nc) if ava	ilablo:			
Describe recorded data (stream gauge, monit	toring well, aerial	photos, previo	ous inspectio	ns), ii ava				
		2						
Remarks:								

VEGETATION Use scientific names of plants	VE	GET	ATION	Use sci	entific	names	of	plants.
-------------------------------------------	----	-----	-------	---------	---------	-------	----	---------

EGETATION Use scientific names of plan	nts.			Sampling Point: DP5
	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant
	/0 00001	opeolee	Oluus	Species that are OBL,
1				FACW, or FAC: <u>1</u> (A)
2				Total Number of Dominant
3				Species Across all Strata: 2 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or
6				FAC: 50.00% (A/B)
7				
8	-			
8		T. tal Oau		
		Total Cover		
50% of total cover:0	20% of tot	tal cover:	0	Prevalence Index Worksheet
				Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet)			OBL species x 1 = 0
	_/			FACW species $1 \times 2 = 2$
				FAC species $2 \times 3 = 6$
2				FAC species $2 \times 3 = 6$ FACU species $1 \times 4 = 4$
3				
4				$\begin{array}{c} \text{UPL species} \\ \text{Column table} \\ \hline \end{array} \begin{pmatrix} x \\ x \\ y \\ z \\ z$
5				Column totals 4 (A) 12 (B)
6		¥		
7				Prevalence Index = B/A = 3
8				·
	0 =	Total Cover		·
50% of total cover: 0	20% of to		0	Hydrophytic Vegetation Indicators:
	2070 OF 10.		0	Rapid test for hydrophytic vegetation
4				
Herb stratum (Plot size: 30 feet)			Dominance test is >50%
1 Paspalum notatum	50	Y	FACU	X Prevalence index is ≤3.0*
2 Setaria pumila	40	Y	FAC	Problematic hydrophytic
3 Paspalum dilatatum	10	N	FAC	vegetation* (explain)
4 Sesbania drummondii	2	N	FACW	*Indicators of hydric soil and wetland hydrology must
5	-			be present, unless disturbed or problematic
e				Definitions of Four Vegetation Strata
				-
7	_			Tree - Woody plants, excluding woody vines,
8				approximately 20 ft (6m) or more in height and
9				greater than 3 in. (7.6 cm) DBH.
10				
11				Sapling/Shrub - Woody plants, excluding vine
12	-			less than 3 in. DBH and greater than 3.26 ft (1
	102 =	= Total Cove	r	tall
50% of total cover: 51	20% of to		20.4	
	-	la 00, 5	2011	 Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size
(Dist size) 20 foot				
Woody vine stratum (Plot size: 30 feet	_)			and woody plants, except woody vines, less th
1				approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of
2				
3				height.
4				
5				- Hydrophytic
		= Total Cove		Vegetation Yes
				Present?
50% of total cover: 0	20% of to	tal cover:	0	
Remarks: (If observed, list morphological	Adaptation	s below).		
	uuup	5 60.0.7		

SOIL

Depth	Matrix				x Features	1	T 1	Deverales		
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
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	С	М	Clay			
Гуре: C – (Concentration, D = D	enletion	BM – Beduced M	Aatrix M	S – Masked	Sand Grains	**Location: F	PL = Pore Lining, M = Matrix		
	bil Indicators:	epietion,	TIM - Heddeed N	natrix, ivi	0 – Maskeu			or Problematic Hydric Soils:		
-	isol (A1)		Polvv	alue Belo	ow Surface (S	8) (LRR S, T, U)		ck (A9) (LRR O)		
	ic Epipedon (A2)				face (S9) (LR			ck (A10) (LRR S)		
	k Histic (A3)				/ Mineral (F1)			Vertic(F18) (outside MLRA 150A,B)		
	rogen Sulfide (A4)				d Matrix (F2)	-		t Floodplain Soils (F19) (LRR P, S, T		
	tified Layers (A5)		X Deple				us Bright Loamy Soils (F20) (MLRA			
	anic Bodies (A6) (LR		·		Surface (F6)		153B)			
	n Mucky Mineral (A7		· · · ·		k Surface (F7	7)		ent Material (TF2)		
	k Presence (A8) (LF				ssions (F8)			allow Dark Surface (TF12)		
	n Muck (A9) (LRR P ,			(F10) (L			Other (e:	xplain in remarks)		
	leted Below Dark Su				ric (F11) (MLF					
	k Dark Surface (A12	-		-	,	F12) (LRR O, P, 1	Г)	*Indicators of hydrophytic vegetation		
<u> </u>	st Prairie Redox (A1				ce (F13) (LR		unless disturbed or problem			
	dy Mucky Mineral (S				(F17) (MLRA	•				
	dy Gleyed Matrix (S4	1)				RA 150A, 150B)				
and the second se	dy Redox (S5)					(F19) (MLRA 149		1520)		
· · · · · · · · · · · · · · · · · · ·	oped Matrix (S6) < Surface (S7) (LRR	P, S, T,		IOIOUS B	ngnt Loamy a	Soils (F20) (MLRA	a 149A, 153C	, 1530)		
	Layer (if observed)	•				Hydric Soil	4.5			
Type: Depth (inches):				Present? Yes						
emarks:						-				



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

Project/Site Rebecca Plantation South Site	e City/	County:	Terrebonne Pa	arish	Sampling Date:	8/27/2018	
Applicant/Owner: CSRS, In	c.	State:	Louisian	isiana Sampling Point: DP6			
Investigator(s): Autry Akins, Joseph	Sumera	Section	n, Township, F	Range:	S10 T1	6S R16E	
Landform (hillslope, terrace, etc.):	L	ocal relief (concave, conv	vex, none)	: 9	Slope (%):	
Subregion (LRR or MLRA): 131A La	t: 29° 40' 5	57.3119" N	Long:	90° 4	9' 50.1416" W	Datum: NA	D83
Soil Map Unit Name ShA: Schriever c	lay, 0 to 1 perce	nt slopes	NWI	I Classific	ation:	N/A	
Are climatic/hydrologic conditions of the site typi	cal for this time of	of the year?	Yes (I	lf no, expla	ain in remarks)		
Are vegetation , soil , or hy	drology s	ignificantly of	disturbed?	Are "norm	nal circumstances	present? Yes	6
	drology n	aturally prol	olematic?	(If neede	d, explain any ans	wers in remarks	s.)
SUMMARY OF FINDINGS Attach site	e map showing	g sampling	j point locati	ions, trai	nsects, importar	nt features, etc	с.
Hydrophytic vegetation present? Y	es						
Hydric soil present? Y	es	In the			n e Wetland?	Vee	
	es	Is the	Sampled Al	rea withi	n a Wetland?	Yes	
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:					<i>a</i> .		
Primary Indicators (minimum of one is required;	<u>check all that ap</u>	l:	Sec	condary In	dicators (minimun	n of two required	<u>d)</u>
Surface Water (A1)	Aquatic Fauna	(B13)		Surfa	ce Soil Cracks (B6)	
X High Water Table (A2)	Marl Deposits ((B15) (LRR l	J) .	Spars	sely Vegetated Con	cave Surface (B	8)
Saturation (A3)	Hydrogen Sulfi	de Odor (C1)	Drain	age Patterns (B10)		
Water Marks (B1)	 Oxidized Rhizo 	enhorae on l	Livina	Dry-S	Season Water Table	e (C2)	
Sediment Deposits (B2)	Roots (C3)	spheres of f	Living .	Moss	Trim Lines (B16)		
X Drift Deposits (B3)	Presence of Re	educed Iron	(C4)	X Crayf	ish Burrows (C8)		
Algal Mat or Crust (B4)	-	duction in T	المما	Satur	ation Visible on Ae	rial Imagery (C9))
Iron Deposits (B5)	Recent Iron Re Soils (C6)	auction in T	illea .		norphic Position (D		
Inundation Visible on Aerial Imagery (B7)	Thin Muck Sur	face (C7)			ow Aquitard (D3)		
X Water-Stained Leaves (B9)	 Other (Explain				Neutral Test (D5)		
		,			gnum moss (D8) (l	_RR T, U)	
Field Observations:							
Surface water present? Yes No	X Depth (i	inches):					
Water table present? Yes X No	· ·	·	12"		Wetland ,	Yes	
Saturation present? Yes No	<u> </u>	·			Hydrology Present?		
(includes capillary fringe)							
Describe recorded data (stream gauge, monitori	na well aprial pl	notos provid	ous inspection	ns) if avai	lable:		
Describe recorded data (stream gauge, monitor	ng wen, aenai pi	iolos, previo	Jus inspection	15), ii avai			
Pemerke:							
Remarks: FAC-Neutral Test: 4>0							
rac-neutral lest: 420							

VEGETATION Use scientific names of plan	nts.			Sampling Point: DP6
Tree Stratum (Plot size: es ()	Absolute	Dominant	Indicator	Dominance Test Worksheet Number of Dominant
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Species that are OBL,
1 Ulmus americana	60	Y	FAC	FACW, or FAC: 7 (A)
2 Celtis laevigata 3	25	<u> </u>	FACW	Total Number of Dominant Species Across all Strata: 7 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or
6				FAC: <u>100.00%</u> (A/B)
8				·
	85	= Total Cover		
50% of total cover: 42.5		tal cover:	17	Prevalence Index Worksheet
	2076 01 10			Total % Cover of:
	`			
Sapling/Shrub Stratum (Plot size: 30 feet)	V	FACW	OBL species $x 1 = 0$ FACW species $x 2 = 0$
1 Celtis laevigata	50 	Y .	FAC	FAC species $x^2 = 0$ FAC species $x^3 = 0$
2 Acer negundo 3	20	·	FAC	FACU species $x = 0$
4		······································		$\begin{array}{c} \text{UPL species} \\ \text{VPL species} \\ \text{x 5} = \\ 0 \end{array}$
5				Column totals (A) 0 (B)
6	·			() <u> </u>
7				Prevalence Index = B/A =
8				
	75	= Total Cover		
50% of total cover: 37.5	20% of to	otal cover:	15	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%
1 Sabal minor	5	Y	FACW	Prevalence index is ≤3.0*
2 Acer negundo	5	Y	FAC	Problematic hydrophytic
3 Phanopyrum gymnocarpon	5	Y	OBL	vegetation* (explain)
4 Rubus trivialis	2	<u>N</u>	FACU	*Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata
7				Tree- Woody plants, excluding woody vines,
8				approximately 20 ft (6m) or more in height and
9				greater than 3 in. (7.6 cm) DBH.
10				
11				Sapling/Shrub - Woody plants, excluding vines,
12	17	= Total Cover		less than 3 in. DBH and greater than 3.26 ft (1m) tall
50% of total cover: 8.5		tal cover:	3.4	
	2070 01 10			Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size,
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vines, less than
1				approximately 3 ft (1 m) in height.
2				Woody vine - All woody vines, regardless of
3				height.
4				
5				Hydrophytic
	0	= Total Cover		Vegetation Yes
50% of total cover: 0	20% of to	otal cover:	0	Present?
Remarks: (If observed, list morphological	adaptation	s below).		
	Laspiaion			

SOIL

Sampling Point: DP6 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

			•	446- 525				-
Depth	Matrix			T	x Features			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-2	10YR 4/1	100					Clay	
2-16	10YR 5/2	80	10YR 5/4	20	С	М	Clay	
		4						
					- (*			
	Concentration, $D = D$	epletion,	RM = Reduced N	Aatrix, N	1S = Masked	Sand Grains.		L = Pore Lining, M = Matrix
-	oil Indicators:							r Problematic Hydric Soils:
	isol (A1)					88) (LRR S, T, U)		ck (A9) (LRR O)
	ic Epipedon (A2)				face (S9) (LR	N 1.2 -		ck (A10) (LRR S)
	k Histic (A3)			-	y Mineral (F1			Vertic(F18) (outside MLRA 150A,B)
Hyd	rogen Sulfide (A4)		Loam	ny Gleye	d Matrix (F2)			Floodplain Soils (F19) (LRR P, S, T)
Stra	tified Layers (A5)		Deple	eted Mat	trix (F3)			us Bright Loamy Soils (F20) (MLRA
	anic Bodies (A6) (LR		· · · · · · · · · · · · · · · · · · ·		Surface (F6)		153B)	
	n Mucky Mineral (A7)					7)		nt Material (TF2)
	k Presence (A8) (LR		Redo			llow Dark Surface (TF12)		
	n Muck (A9) (LRR P,	-		(F10) (L	-		Other (ex	plain in remarks)
Dep	leted Below Dark Su	,		ric (F11) (ML I				
Thic	k Dark Surface (A12))	Iron-I	Mangan	ese Masses	(F12) (LRR O, P,	Т)	*Indicators of hydrophytic vegetation
Coa	st Prairie Redox (A16	6) (MLR.	A 150A) Umbr	ric Surfa	ice (F13) (LR	R P, T, U)		and weltand hydrology must be present,
San	dy Mucky Mineral (S ⁻	1) (LRR			(F17) (MLRA	-		unless disturbed or problematic
San	dy Gleyed Matrix (S4)	Redu	ced Ver	tic (F18) (ML	.RA 150A, 150B)		
San	dy Redox (S5)		Piedr	nont Flo	odplain Soils	(F19) (MLRA 14 9	9A)	
	oped Matrix (S6)			nolous E	Bright Loamy	Soils (F20) (MLR	A 149A, 153C,	153D)
Darl	k Surface (S7) (LRR	P, S, T,	U)					
Restrictive	Layer (if observed):							
Туре:					_	Hydric Soil	Yes	
	Depth (inches):					Present?	163	
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



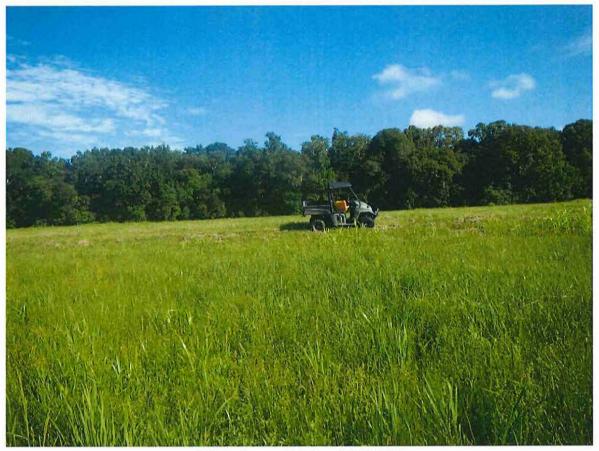
Soil profile taken at DP6 on 8/27/2018

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
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
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 Is the Sampled Area within a Wetland? Yes
Indicators of wetland hydrology present? Yes
Remarks:
HYDROLOGY
Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that ap Secondary Indicators (minimum of two required)
X Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6)
X High Water Table (A2) Marl Deposits (B15) (LRR U) Sparsely Vegetated Concave Surface (B8)
X Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Water Marks (B1) X Oxidized Rhizospheres on Living Dry-Season Water Table (C2)
Sediment Deposits (B2) Roots (C3) Moss Trim Lines (B16)
Drift Deposits (B3) Presence of Reduced Iron (C4) Crayfish Burrows (C8)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5) Soils (C6) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3)
Water-Stained Leaves (B9)Other (Explain in Remarks)XFAC-Neutral Test (D5)
Sphagnum moss (D8) (LRR T, U)
Field Observations:
Surface water present? Yes X No Depth (inches): 2" Wetland
Water table present? Yes X No Depth (inches): 3" Hydrology Yes
Saturation present? Yes X No Depth (inches): Present?
(includes capillary fringe)
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
FAC-Neutral Test: 2>0

VEGETATION Use scientific names of pla	nts.			Sampling Point: DP7	7
	Absolute	Dominant	Indicator	Dominance Test Worksheet	
Tree Stratum (Plot size: 30 feet)	% Cover	Species	Staus	Number of Dominant	
				Species that are OBL,	^
1					(A)
2				Total Number of Dominant Species Across all Strata: 2 ('D)
3				Species Across all Strata: 2 ((B)
4				Percent of Dominant Species	
5				that are OBL, FACW, or FAC: 100.00% ((A/B)
6				FAC. 100.00% ((A/B)
8					
8	0	- Total Cove			
				Durandan as Index Worksheet	
50% of total cover: 0	20% of to	tal cover:	0	Prevalence Index Worksheet	
				Total % Cover of:	
Sapling/Shrub Stratum (Plot size: 30 feet	_)			OBL species x 1 =0	
1				FACW species x 2 = 0	
2				FAC species $x 3 = 0$	
3				FACU species x 4 = 0	
4				UPL species $x 5 = 0$	
5				Column totals (A) 0 ((B)
6					
7				Prevalence Index = B/A =	
8					
	0 :	= Total Cove	r		
50% of total cover: 0	20% of to	tal cover:	0	Hydrophytic Vegetation Indicators:	
	-			Rapid test for hydrophytic vegetation	
Herb stratum (Plot size: 30 feet)			X Dominance test is >50%	
1 Eleocharis palustris	50	Y	OBL	Prevalence index is ≤3.0*	
2 Rhynchospora corniculata	25	Y	OBL	Problematic hydrophytic	
3 Paspalum urvillei	20	N	FAC	vegetation* (explain)	
4 Cyperus difformis	5	N	OBL	*Indicators of hydric soil and wetland hydrology mus	st
5 Setaria pumila	5	N	FAC	be present, unless disturbed or problematic	
6 Persicaria punctata	2	N	OBL	Definitions of Four Vegetation Strata	
7				Tree Woody plants, systuding woody vins	0
8				Tree - Woody plants, excluding woody vine approximately 20 ft (6m) or more in height	
9	-			greater than 3 in. (7.6 cm) DBH.	unu
10				g. • • • • • • • • • • • • • • • • • • •	
11				Conting (Chrub - Woody planta, avaluding)	vinoo
12				Sapling/Shrub - Woody plants, excluding less than 3 in. DBH and greater than 3.26 f	
12	107	= Total Cove	r	tall	it (iiii)
50% of total cover: 53.5		tal cover:	. 21.4		
	-	-		Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of s	
Woody vine stratum (Plot size: 30 feet)			and woody plants, except woody vines, les	
1	-'			approximately 3 ft (1 m) in height.	o man
2	-			Woody vine - All woody vines, regardless	of
3				height.	
4					
5				Hydronbytic	
	0	= Total Cove		Hydrophytic Vegetation Yes	
				Present?	
50% of total cover: 0	20% of to	otal cover:	0		
Remarks: (If observed, list morphologica	l adaptation	s below).			

C	\mathbf{n}	п	
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		-	

Depth	Matrix			Redo	x Features			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-16	10YR 5/1	80	10YR 5/4	20	С	М	Clay	
		ļ						
	· ·							
					<u> </u>		++1 1' 5	
	Concentration, $D = D$	epletion	, RM = Reduced N	/latrix, M	S = Masked			PL = Pore Lining, M = Matrix
	il Indicators:		Doha	alua Pak	w Surface (S			or Problematic Hydric Soils: ck (A9) (LRR O)
	sol (A1)				face (S9) (LR	8) (LRR S, T, U)		ck (A10) (LRR S)
	c Epipedon (A2) k Histic (A3)				Mineral (F1			Vertic(F18) (outside MLRA 150A,B)
	ogen Sulfide (A4)				d Matrix (F2)			t Floodplain Soils (F19) (LRR P, S, T)
	ified Layers (A5)		X Deple					us Bright Loamy Soils (F20) (MLRA
	nic Bodies (A6) (LR	BPT			Surface (F6)		153B)	us Bright Loarny Solis (F20) (MLHA
	Mucky Mineral (A7		· · · · · · · · · · · · · · · · · · ·		k Surface (F	7)	Red Pare	ent Material (TF2)
	k Presence (A8) (LF				ssions (F8)	.,		allow Dark Surface (TF12)
	Muck (A9) (LRR P,			(F10) (L				xplain in remarks)
Depl	eted Below Dark Su	rface (A	11) Deple	ted Ochr	ic (F11) (MLI	RA 151)		
 Thicl	k Dark Surface (A12)	Iron-N	Mangane	ese Masses (F12) (LRR O, P,	Т)	*Indicators of hydrophytic vegetation
Coas	st Prairie Redox (A1	6) (MLR	A 150A) Umbr	ric Surfa	ce (F13) (LR	R P, T, U)		and weltand hydrology must be present,
Sand	dy Mucky Mineral (S	1) (LRR	O, S) Delta	Ochric ((F17) (MLRA	151)		unless disturbed or problematic
Sand	dy Gleyed Matrix (S4	4)	Redu	ced Vert	ic (F18) (ML	RA 150A, 150B)		
Sand	ly Redox (S5)					(F19) (MLRA 14 9		
	ped Matrix (S6)			nolous B	right Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)
Dark	Surface (S7) (LRR	P, S, T,	U)					
						Г		
	Layer (if observed)	:						
Туре:						Hydric Soil	Yes	
	Depth (inches)					Present?		
Remarks:								
						2		



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

Project/Site Rebecca Plantation South	Site City	//County: T	errebonne F	Parish	Sampling Date:	8/27/20	018
Applicant/Owner: CSRS	, Inc.	State:	Louisia	ina	Sampling Point:	DP8	3
Investigator(s): Autry Akins, Jose	ph Sumera	Section	, Township,	Range:	S10 T1	6S R16E	
Landform (hillslope, terrace, etc.):		Local relief (c	oncave, cor	nvex, none	e):S	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: Schrieve	r clay, 0 to 1 perc	ent slopes	NV	VI Classifi	cation:	PFO1A	
Are climatic/hydrologic conditions of the site t	ypical for this time	of the year?	Yes	(If no, exp	lain in remarks)		
Are vegetation , soil , or	hydrology	significantly d	isturbed?	Are "nor	mal circumstances'	' present?	Yes
Are vegetation , soil , or	hydrology	naturally prob	lematic?	(If neede	ed, explain any ans	wers in rem	arks.)
SUMMARY OF FINDINGS Attach	site map showir	ng sampling	point loca	tions, tra	ansects, importar	nt features	, etc.
Hydrophytic vegetation present?	Yes						
Hydric soil present?	Yes	la tha	Compled	Aroo with	nin a Wetland?	Yes	
Indicators of wetland hydrology present?	Yes	is the	Sampleu	Alea witi		165	
Remarks:							
HYDROLOGY	6						
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one is require	ed; check all that a	цр	Se	econdary I	ndicators (minimun	n of two req	uired)
Surface Water (A1)	Aquatic Faun	a (B13)		Surf	ace Soil Cracks (B6)	
High Water Table (A2)	Marl Deposits	s (B15) (LRR U)	Spa	rsely Vegetated Con	cave Surfac	e (B8)
Saturation (A3)	Hydrogen Sul	lfide Odor (C1)		Drai	nage Patterns (B10)		ar.
Water Marks (B1)	cospheres on L	ivina	Dry-	Season Water Table	e (C2)		
Sediment Deposits (B2)	Roots (C3)		aving	Mos	s Trim Lines (B16)		
X Drift Deposits (B3)	Presence of F	Reduced Iron (C4)	Cray	yfish Burrows (C8)		
Algal Mat or Crust (B4)		Poduction in Til	lod	Satu	uration Visible on Ae	rial Imagery	(C9)
Iron Deposits (B5)	Soils (C6)	Reduction in Tilled Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	Thin Muck Su	urface (C7)		Sha	llow Aquitard (D3)		
X Water-Stained Leaves (B9)		n in Remarks)		X FAC	C-Neutral Test (D5)		
	```			Sph	agnum moss (D8) <b>(I</b>	.RR T, U)	
Field Observations:							
Surface water present? Yes	No X Depth	(inches):					
Water table present? Yes		(inches):			Wetland , Hydrology	Yes	
		(inches):			Present?		
(includes capillary fringe)		(1101100).					
Describe recorded data (stream gauge, monit	toring well aerial	nhotos previo	us inspectio	ons) if ava	ailable:		
Describe recorded data (stream gauge, moni	toring weil, aeriar	priotos, previo		5113), ii ave			
l Remarks:							
FAC-Neutral Test: 1>0							
TAC-NEULIAI LESL 1/0							

VEGETATION Use scientific names of plan	ts.			Sampling Point: DP8
	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30 feet )	% Cover	Species	Staus	Number of Dominant
· · · · · · · · · · · · · · · · · · ·				Species that are OBL,
1 Ulmus americana	<u> </u>		FAC FAC	FACW, or FAC: 5 (A)
2 Acer negundo 3 Liquidambar styraciflua	5		FAC	Total Number of Dominant Species Across all Strata: 6 (B)
			TAU	
5				Percent of Dominant Species
6				that are OBL, FACW, or FAC: 83.33% (A/B)
7				
8	<u> </u>			
	85 =	Total Cover		
E0% of total action 40.5	20% of to		17	Prevalence Index Worksheet
50% of total cover: 42.5	20% 01 10		17	
				Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet )	)			OBL species x 1 = 0
1 Acer negundo	15	Y	FAC	FACW species x 2 = 0
2 Celtis laevigata	2	<u>N</u>	FACW	FAC species $x 3 = 0$
3				FACU species $x 4 = 0$
4				UPL species $x 5 = 0$
5				Column totals (A) 0 (B)
6				
7				Prevalence Index = B/A =
8				
	:	= Total Cover		
50% of total cover: 8.5	20% of to	tal cover:	3.4	Hydrophytic Vegetation Indicators:
				Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet )	)			X Dominance test is >50%
1 Sabal minor	30	Y	FACW	Prevalence index is ≤3.0*
2 Toxicodendron radicans	5	N	FAC	Problematic hydrophytic
3 Osmundastrum cinnamomeum	2	N	FACW	vegetation* (explain)
4				*Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata
7				Tree- Woody plants, excluding woody vines,
8				approximately 20 ft (6m) or more in height and
9		•		greater than 3 in. (7.6 cm) DBH.
10				g, e alter analit e num (+ + = + + + + + + + + + + + + + + + +
11				Conting/Chrub Moody planta avaluding vipos
12				Sapling/Shrub - Woody plants, excluding vines less than 3 in. DBH and greater than 3.26 ft (1m
	37 :	Total Cover		tall
50% of total cover: 18.5	20% of to		7.4	1.5 Set Mar
	2070 01 10			<b>Herb</b> - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size,
Woody vine stratum (Plot size: 30 feet	)			and woody plants, except woody vines, less that
1 Toxicodendron radicans	5	Y	FAC	approximately 3 ft (1 m) in height.
2 Parthenocissus quinquefolia	5		FACU	Woody vine - All woody vines, regardless of
3				height.
4	<u> </u>			
5				Undranhutic
	10 :	- Total Cover		Hydrophytic Vegetation <b>Yes</b>
			0	Present?
50% of total cover: 5	20% of to	otal cover:	2	
Remarks: (If observed, list morphological a	adaptation	s below).		

SOIL

							1 0			
Profile Des	cription: (Describe	to the c	lepth needed to	docume	ent the indic	ator or confirm t	he absence o	f indicators.)		
Depth	Matrix			Redo	x Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-2	10YR 3/1	100					Clay			
2-16	10YR 5/1	85	10YR 5/6	15	С	M	Clay			
							***			
	Concentration, D = D	epletion	, RM = Reduced N	Aatrix, N	IS = Masked	Sand Grains.		PL = Pore Lining, M = Matrix		
-	bil Indicators:		Doha	alua Pal	ow Surface /			or Problematic Hydric Soils: ck (A9) (LRR O)		
	isol (A1)				face (S9) <b>(LF</b>	68) (LRR S, T, U)		ck (A10) <b>(LRR S)</b>		
	ic Epipedon (A2)							Vertic(F18) (outside MLRA 150A,B)		
	ck Histic (A3) rogen Sulfide (A4)			-	y Mineral (F1 d Matrix (F2)	-		t Floodplain Soils (F19) (LRR P, S, T)		
								· · · · · · · · · · · · · · · · · · ·		
	itified Layers (A5) anic Bodies (A6) <b>(LR</b>	ррт	X Deple		Surface (F6)		Anomolo 153B)	us Bright Loamy Soils (F20) <b>(MLRA</b>		
	n Mucky Mineral (A7				rk Surface (F6)	7)	Red Parent Material (TF2)			
·	k Presence (A8) (LF		·		essions (F8)	")		Illow Dark Surface (TF12)		
	n Muck (A9) <b>(LRR P</b> ,		-	(F10) <b>(L</b>				kplain in remarks)		
	leted Below Dark Su				ric (F11) <b>(ML</b>	RA 151)		,piani ni romanioj		
	k Dark Surface (A12			/angan	ese Masses	(F12) (LRR O, P,	T)			
	st Prairie Redox (A1			_	nce (F13) <b>(LF</b>		,	*Indicators of hydrophytic vegetation and weltand hydrology must be present,		
	dy Mucky Mineral (S				(F17) (MLRA		unless disturbed or problem			
	dy Gleyed Matrix (S4					RA 150A, 150B)				
	dy Redox (S5)					s (F19) <b>(MLRA 14</b>	9A)			
	oped Matrix (S6)		Anom	nolous E	Bright Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)		
	k Surface (S7) (LRR	P, S, T,	U) —							
						1				
	Layer (if observed)	:								
Type:					<b>-</b> . *	Hydric Soil Present?	Yes			
	Depth (inches):									
Demerica										
Remarks:										
0										



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

Project/Site Rebecca	Plantation South Sit	te C	ity/County:	Terrebonne Parish	Sampling Date:	8/27/2018			
Applicant/Owner:			State:	Louisiana	Sampling Point:	DP9			
Investigator(s):	Section	Section, Township, Range: S10 T16S R16E							
Landform (hillslope, terrace	, etc.):		Local relief (	concave, convex, r	none):	Slope (%):			
Subregion (LRR or MLRA):	131A La	at: 29° 4	0' 51.2248" N	Long:	90° 49' 37.9542" W	Datum: NAD83			
Soil Map Unit Name	CbA: Cancienne sil	t loam, 0 to 1	percent slopes	NWI Cla	ssification:				
Are climatic/hydrologic cond	litions of the site typ	ical for this tim	ne of the year?	Yes (If no,	explain in remarks)	8			
Are vegetation , so	bil , or hy	/drology	significantly	disturbed? Are	'normal circumstances'	" present? Yes			
Are vegetation, so	or hy	/drology	naturally pro	blematic? (If n	eeded, explain any ans	wers in remarks.)			
SUMMARY OF FINDIN	GS Attach sit	e map show		point locations	, transects, importa	nt features, etc.			
Hydrophytic vegetation	present?	No							
Hydric soil present?	1	/es	1. 1.		within a Watlando	No			
Indicators of wetland hy	drology present?	No	Is the	Sampled Area	within a Wetland?	Νο			
Remarks:									
HYDROLOGY		5							
Wetland Hydrology Indica	tors:								
Primary Indicators (minimur	n of one is required;	check all that	ар	Seconda	ary Indicators (minimun	n of two required)			
Surface Water (A1)		Aquatic Fau			Surface Soil Cracks (B6	)			
High Water Table (A2)				(B15) (LRR U) Sparsely Vegetated Concave Surface (B8)					
Saturation (A3)	0 <del></del>	Hvdroaen S	ulfide Odor (C1	Ifide Odor (C1) Drainage Patterns (B10)					
Water Marks (B1)	3	—		Dry Season Water Table (C2)					
Sediment Deposits (B2)		Oxidized Rh Roots (C3)	nizospheres on	zospheres on LivingDry-Season Water Table (62) Moss Trim Lines (B16)					
Drift Deposits (B3)		- Charles and a second second	f Reduced Iron	Reduced Iron (C4) Crayfish Burrows (C8)					
and the second se		-	i neddoed non	5 S	an a ^{la} an ana am	vial Imagony (CQ)			
Algal Mat or Crust (B4)			Reduction in T	Reduction in Tilled Saturation Visible on Aerial Imagery (C9)					
Iron Deposits (B5)		Soils (C6)	urface (C7) Geomorphic Position (D2) Shallow Aquitard (D3)						
Inundation Visible on Ae									
Water-Stained Leaves (E	.9) —	Other (Expla	ain in Remarks) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)						
					opnagnam moss (Do) (				
Field Observations									
Field Observations:	¥	V Deri	h (Inchas)						
Surface water present?	Yes N	· · · · · · · · · · · · · · · · · · ·	h (inches):		Wetland	No			
Water table present?	Yes N		h (inches):		Hydrology	No			
Saturation present?	Yes N	o X Dept	h (inches):		Present?				
(includes capillary fringe)				1					
Describe recorded data (str	eam gauge, monitor	ing well, aeria	l photos, previ	ous inspections), if	available:				
					1				
Remarks:									

<b>VEGETATION</b> -	Use scientific	names of pla	ants.			Sampling Point	: DP9			
			Absolute	Dominant	Indicator	Dominance Test Worksheet				
Tree Stratum	(Plot size:	30 feet )	% Cover	Species	Staus	Number of Dominant				
		,				Species that are OBL,	0 (4)			
1						FACW, or FAC:	0(A)			
2						Total Number of Dominant	- (D)			
3		×				Species Across all Strata:	1(B)			
4						Percent of Dominant Species				
5						that are OBL, FACW, or	0.000/ (4/D)			
6						FAC:	0.00% (A/B)			
/				-						
8										
				= Total Cover						
	50% of total co	ver: 0	_ 20% of to	otal cover:	0	Prevalence Index Worksheet				
						Total % Cover of:				
Sapling/Shrub Str	ratum (Plot size:	30 feet	)			OBL species x 1 =	0			
1						FACW species x 2 =	0			
2					x	FAC species x 3 =	0			
3	(i					FACU species 1 x 4 =	4			
4						UPL species x 5 =	0			
5			_			Column totals 1 (A)	(B)			
6										
7						Prevalence Index = B/A =	4			
8			-							
			0	= Total Cover						
	50% of total co	ver: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indic	ators:			
		•	_			Rapid test for hydrophytic v				
Herb stratum	(Plot size:	30 feet	<b>)</b>			Dominance test is >50%	Ū			
1 Saccharum	•		_′ ₁₀₀	Y	FACU	Prevalence index is ≤3.0*				
2	Unicinarum				1700	Problematic hydrophytic				
3						vegetation* (explain)				
4							huder la sur much			
5						*Indicators of hydric soil and wetland be present, unless disturbed or present.				
6			1. 1			Definitions of Four Vegetatio				
7				•						
/						Tree- Woody plants, excluding				
8			_			approximately 20 ft (6m) or mo greater than 3 in. (7.6 cm) DBH				
9						greater than 5 m. (7.0 cm) DB				
10				<u> </u>						
11						Sapling/Shrub - Woody plants				
12			100	= Total Cover		less than 3 in. DBH and greate tall	r (nan 3.26 it (111)			
	FOO/ of total age	F0		tal cover:	20					
	50% of total co	ver: 50	_ 20% 0110		20	Herb - All herbaceous (non-wo				
Moody vine atra	tum (Plot size	30 feet	1			including herbaceous vines, re- and woody plants, except wood				
Woody vine stra	tum (Plot size:	30 1661	_/			approximately 3 ft (1 m) in heig				
2						Woody vine - All woody vines,				
3						height.	0			
4			-							
5										
				= Total Cover		Hydrophytic Vegetation	١o			
	500/ 1	-				Present?				
	50% of total co	ver: 0	20% of to	otal cover:	0					
Remarks: (If	Remarks: (If observed, list morphological adaptations below).									

S	n	I	L
0	-	•	-

Depth	Matrix		4		Redo	x Features						
(Inches)	Color (moist)	%	Color (r	noist)	%	Type*	Loc**	Texture	Remarks			
	i.								No soil profile - Sugar cane field			
									A			
			45									
								1				
Type: $C = 0$	Concentration, $D = Determined a transformed by the Determined at the Determined at$	epletion	. RM = Red	luced N	I Aatrix, M	S = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix			
	oil Indicators:		,						r Problematic Hydric Soils:			
	isol (A1)			Polvva	alue Belo	ow Surface (S	8) (LRR S, T, U)		ck (A9) <b>(LRR O)</b>			
	ic Epipedon (A2)		-	_		face (S9) <b>(LR</b>			ck (A10) (LRR S)			
	ck Histic (A3)			-		/ Mineral (F1			Vertic(F18) (outside MLRA 150A,B)			
				_		d Matrix (F2)	-		t Floodplain Soils (F19) (LRR P, S, T)			
	lrogen Sulfide (A4)			-								
	tified Layers (A5)				eted Mat			the second se	us Bright Loamy Soils (F20) <b>(MLRA</b>			
	anic Bodies (A6) (LR		-			Surface (F6)		153B)				
	n Mucky Mineral (A7)	S	P, I, U)	_		k Surface (F	7)	Red Parent Material (TF2)				
	ck Presence (A8) <b>(LR</b>	-				ssions (F8)		Very Shallow Dark Surface (TF12)				
1 cn	n Muck (A9) <b>(LRR P,</b>	Т)			(F10) <b>(L</b>	-		X Other (ex	xplain in remarks)			
Dep	leted Below Dark Su	rface (A	11)	Deple	ted Och	ric (F11) <b>(MLI</b>	RA 151)					
Thic	k Dark Surface (A12)	)		Iron-	Mangane	ese Masses (	(F12) <b>(LRR O, P,</b>	Т)	*Indicators of hydrophytic vegetation			
Coa	st Prairie Redox (A16	6) ( <b>MLR</b>	A 150A)	Umbr	ic Surfa	ce (F13) <b>(LR</b>	R P, T, U)		and weltand hydrology must be prese			
San	dy Mucky Mineral (S [.]	1) <b>(LRR</b>	0, S)	_ Delta	Ochric	(F17) <b>(MLRA</b>	151)		unless disturbed or problematic			
San	dy Gleyed Matrix (S4	)		Redu	ced Ver	tic (F18) <b>(ML</b>	RA 150A, 150B)					
San	dy Redox (S5)		4.	Piedn	nont Flo	odplain Soils	(F19) <b>(MLRA 14</b>	9A)				
	oped Matrix (S6)			Anom	nolous B	right Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)			
	k Surface (S7) (LRR	P, S, T,	U) —	-								
Postrictivo	Layer (if observed):											
	Layer (il observeu).						Hudria Sail	ſ				
ype:						•	Hydric Soil Present?	Yes				
	Depth (inches):						Tresent.					
Remarks:	Soil assumed hyd	fric du	e to soil r	nappir	ng unit.							



DP9 facing north taken 8/27/2018



DP9 facing east taken 8/27/2018

Project/Site Rebecca Plantation South	Rebecca Plantation South Site C			ish Sampling Date:	8/27/2018			
Applicant/Owner: CSRS	er: CSRS, Inc.			a Sampling Point:	DP10			
Investigator(s): Autry Akins, Jos	eph Sumera	Section, Township, Range: S10 T16S R16E						
Landform (hillslope, terrace, etc.):		Local relief (d	concave, conve	ex, none):	Slope (%):			
Subregion (LRR or MLRA): 131A	Lat: 29° 40	0' 51.9112" N	Long:	90° 49' 2.7130" W	Datum: NAD83			
Soil Map Unit Name ShA: Schriev	er clay, 0 to 1 per	rcent slopes	NWI	Classification:	N/A			
Are climatic/hydrologic conditions of the site	typical for this tim	ne of the year?	Yes (If	no, explain in remarks)				
Are vegetation , soil , o	r hydrology	significantly of	disturbed?	Are "normal circumstances	s" present? Yes			
Are vegetation , soil , o	r hydrology	naturally prob	olematic?	(If needed, explain any ans	swers in remarks.)			
SUMMARY OF FINDINGS Attach	site map show	ring sampling	point location	ons, transects, importa	nt features, etc.			
Hydrophytic vegetation present?	Yes							
Hydric soil present?	Yes	le the	Sampled Ar	ea within a Wetland?	Yes			
Indicators of wetland hydrology present?	Yes		Janipicu Ai	ea within a wettand.	103			
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is requir	ed; check all that	ap	Sec	ondary Indicators (minimu	m of two required)			
X Surface Water (A1)	Aquatic Fau	ına (B13)		Surface Soil Cracks (B6	6)			
X High Water Table (A2)	Marl Deposi	its (B15) <b>(LRR U</b>	s (B15) (LRR U) Sparsely Vegetated Concave Surface (B8)					
Saturation (A3)	Hydrogen S	ulfide Odor (C1)	) –	Drainage Patterns (B10	))			
Water Marks (B1)		Dry Seesen Weter Table (C2)						
Sediment Deposits (B2)	Roots (C3)	zospheres on Living Dry-Season Water Table (62) Moss Trim Lines (B16)						
Drift Deposits (B3)		Reduced Iron (C4) Crayfish Burrows (C8)						
Algal Mat or Crust (B4)		Saturation Visible on Aerial Imageny (C9)						
	Recent Iron Soils (C6)	Reduction in Tilled Geomorphic Position (D2)						
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)		Surface (C7) Shallow Aquitard (D3)						
Water-Stained Leaves (B9)								
Water-Stained Leaves (B9)		ain in Remarks) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)						
			-					
Field Observations:								
	No Dept	h (inches):	2"					
		· · ·	0"	Wetland	Yes			
		h (inches):		Hydrology	165			
Saturation present? Yes (includes capillary fringe)	No X Dept	h (inches):		Present?				
, , , , , ,		Inhoton provid						
Describe recorded data (stream gauge, mor	itoring well, aeria	i photos, previo	bus inspections	s), il avallable.				
Remarks:								

VEGETATION Use scientific names of pla	ints.		Sampling Point: DP10
Tree Stratum       (Plot size:	Absolute Dominant % Cover Species	Indicator Staus	Dominance Test Worksheet         Number of Dominant         Species that are OBL,         FACW, or FAC:       1         Total Number of Dominant         Species Across all Strata:       2         Percent of Dominant Species         that are OBL, FACW, or         FAC:       50.00%         (A/B)
8	0 = Total Cove	er	
50% of total cover:         0           Sapling/Shrub Stratum         (Plot size:         30 feet           1	20% of total cover:	0	Prevalence Index WorksheetTotal % Cover of:OBL species $2$ $x 1 =$ PACW species $1$ $x 2 =$ FAC species $2$ $x 3 =$ FAC species $1$ $x 4 =$ FACU species $1$ $x 4 =$ UPL species $x 5 =$ Column totals $6$ $(A)$ Item (B)Prevalence Index = B/A = $2.33$
8	· · · · · · · · · · · · · · · · · · ·		
50% of total cover: 0	0 = Total Cove 20% of total cover:	er O	Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation
Herb stratum       (Plot size:       30 feet         1       Paspalum notatum       2         2       Setaria pumila       3         3       Eleocharis palustris       4         4       Paspalum dilatatum       5         5       Cyperus difformis       6         6       Echinochloa crus-galli       7	50     Y       20     Y       15     N       10     N       5     N       5     N	FACU FAC OBL FAC OBL FACW	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
8 9 10 11 12			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)
50% of total cover: <u>52.5</u> <u>Woody vine stratum</u> (Plot size: <u>30 feet</u> 1 2		er 21 	tall <b>Herb</b> - 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. <b>Woody vine</b> - All woody vines, regardless of height.
4550% of total cover: 0	0 = Total Cove 20% of total cover:	ər O	Hydrophytic Vegetation <b>Yes</b> Present?
Remarks: (If observed, list morphologica	l adaptations below).		

S	0	I	L

Profile Des	cription: (Describe	to the c	lepth needed to o	docume	ent the indic	ator or confirm t	he absence o	f indicators.)	
Depth	<u>Matrix</u>			Redo	ox Features				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-16	10YR 5/1	90	10YR 5/8	10	C	М	Clay		
								· · · · · · · · · · · · · · · · · · ·	
*Tvpe: C = 0	Concentration, $D = Determined a transformed provide the set of t$	epletion.	RM = Reduced N	l Aatrix, N	I IS = Masked	Sand Grains.	**Location: P	L L = Pore Lining, M = Matrix	
	oil Indicators:							or Problematic Hydric Soils:	
	isol (A1)		Polvv	alue Bel	ow Surface (S	68) (LRR S, T, U)		ck (A9) <b>(LRR O)</b>	
	ic Epipedon (A2)				face (S9) (LF			ck (A10) (LRR S)	
	k Histic (A3)		÷		y Mineral (F1			Vertic(F18) (outside MLRA 150A,B)	
	rogen Sulfide (A4)				ed Matrix (F2)			t Floodplain Soils (F19) <b>(LRR P, S, T)</b>	
						L.			
	tified Layers (A5)		X Deple				Anomolo 153B)	us Bright Loamy Soils (F20) (MLRA	
2.77.0	anic Bodies (A6) <b>(LR</b> n Mucky Mineral (A7)				Surface (F6)				
					rk Surface (F	7)	Red Parent Material (TF2)		
	k Presence (A8) (LR				essions (F8)		Very Shallow Dark Surface (TF12)		
	n Muck (A9) (LRR P,	-		(F10) <b>(L</b>		DA 161)	Other (e)	xplain in remarks)	
	leted Below Dark Sur				ric (F11) <b>(ML</b>				
	k Dark Surface (A12)			langan	ese Masses	(F12) <b>(LRR O, P,</b>	Т)	*Indicators of hydrophytic vegetation	
Coa	st Prairie Redox (A16	6) (MLR	A 150A) Umbr	ic Surfa	ice (F13) <b>(LR</b>	R P, T, U)	and weltand hydrology must be prese unless disturbed or problematic		
	dy Mucky Mineral (S1	184 B			(F17) <b>(MLR</b>	- T		unless disturbed of problematic	
San	dy Gleyed Matrix (S4	)				.RA 150A, 150B)			
San	dy Redox (S5)				and statement of the state	(F19) <b>(MLRA 14</b> 9			
· · ·	oped Matrix (S6)			iolous B	Bright Loamy	Soils (F20) (MLR	A 149A, 153C	, 153D)	
Dark	CSurface (S7) (LRR I	P, S, T,	U) —						
Restrictive	Layer (if observed):						5		
Туре:						Hydric Soil			
,	Depth (inches):				-	Present?	Yes		
					-				
Remarks:	· · · · · · · · · · · · · · · · · · ·								
i tornantor									
8									



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 Pla	antation Sou	uth Site	City/County:	Terrebonne	Parish	Sampling Date:	8/27/20	018
Applicant/Owner:	:	CS	RS, Inc.	State	e: Louis	iana	Sampling Point:	DP1	1
Investigator(s):	Au	ıtry Akins, J	oseph Sumera	Secti	on, Township	o, Range:	S10 T	16S R16E	
Landform (hillslop	pe, terrace, et	c.):		Local relief	(concave, c	onvex, non	e):	Slope (%):	
Subregion (LRR	or MLRA):	131A	Lat: 29	- 9° 40' 45.0686" N	N Long	: 90°	48' 55.1217" W	Datum:	NAD83
Soil Map Unit Na	ime	GcA: Gram	ercy-Cancienne	silty clay loams	N	WI Classif	ication:	N/A	
Are climatic/hydr	ologic conditio	ons of the si	te typical for this	time of the year	r? Yes	(If no, ex	plain in remarks)		
Are vegetation	, soil		or hydrology	significantly	y disturbed?	Are "no	rmal circumstance	s" present?	Yes
Are vegetation	, soil		or hydrology	naturally pr	roblematic?	(If need	led, explain any an	swers in rem	arks.)
SUMMARY O	F FINDINGS	S Attac	ch site map sh	owing samplin	ng point loc	ations, tr	ansects, importa	ant features	, etc.
Hydrophytic	vegetation pre	sent?	Yes						
Hydric soil pr	resent?		Yes	10.11	e Complee	Aree wit	hin a Watland?	Yes	
Indicators of	wetland hydro	ology preser	nt? Yes	is ti	ne Sampleo	Area wit	hin a Wetland?	Tes	
Remarks:	10 - E								
HYDROLOGY	1								
Wetland Hydrol	ogy Indicator	s:							
Primary Indicator	rs (minimum o	f one is req	uired; check all t	hat ap	3	Secondary	Indicators (minimu	im of two requ	<u>uired)</u>
Surface Wate	ər (A1)			Fauna (B13)		-	face Soil Cracks (B	NO 1281	
X High Water T	able (A2)		Marl Dep	posits (B15) (LRF	ט וּ	Spa	arsely Vegetated Co	ncave Surface	ə (B8)
X Saturation (A	3)		Hydroge	n Sulfide Odor (C	01)	Dra	inage Patterns (B10	))	
Water Marks	(B1)		X Oxidized	Rhizospheres o	n Livina	Dry	-Season Water Tab	le (C2)	
Sediment Dep	posits (B2)		Roots (C		in Living	Mo	ss Trim Lines (B16)		
Drift Deposits	to a fill a f		Presenc	e of Reduced Iro	n (C4)	. Cra	yfish Burrows (C8)		
Algal Mat or 0	Crust (B4)		Beacent I	ron Reduction in	Tillod	Sat	uration Visible on A	erial Imagery	(C9)
Iron Deposits			Soils (C		Tilled	Ge	omorphic Position (I	D2)	
	sible on Aerial	Imagery (B7	`	ck Surface (C7)			allow Aquitard (D3)		
	d Leaves (B9)			xplain in Remark	s)	X FA	C-Neutral Test (D5)		
	· · · · · · · · · · · · · · · · · · ·		· · · · · ·		SS-51		nagnum moss (D8)	(LRR T, U)	
Field Observation	ons:								
Surface water pr	esent?	Yes	No X D	epth (inches):			M		
Water table pres		Yes X	– _{No} – D	epth (inches):	0"		Wetland Hydrology	Yes	
Saturation prese		Yes X		epth (inches):	0"		Present?		
(includes capillar									
Describe recorde	ed data (strear	m daude. m	onitoring well, a	erial photos, pre	vious inspec	tions), if av	ailable:		
	sa aata (siloa								
Remarks:									
FAC-Neutral	Test: 1>0								
L									

<b>/EGETATION</b>	Use scientif	ic names of pla	ants.			Sampling Poir	nt: DF	^{&gt;} 11
			Absolute	Dominant	Indicator	Dominance Test Worksheet		
Tree Stratum	(Plot size:	30 feet )	% Cover	Species	Staus	Number of Dominant		
	· · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , , ,		opooloo	oludo	Species that are OBL,	0	( • )
1						FACW, or FAC:	2	_(A)
2			_			Total Number of Dominant		
3			_			Species Across all Strata:	2	_(B)
4						Percent of Dominant Species		
5						that are OBL, FACW, or		
6						FAC:	100.00%	_(A/B)
7				-		9		
8								
			0	= Total Cover				
	50% of total c	over: 0	20% of to	otal cover:	0	Prevalence Index Worksheet	t	
			_	-		Total % Cover of:		
Sapling/Shrub S	tratum (Plot siz	e: 30 feet	)			OBL species x 1 =	0	
1			_'			FACW species x 2 =	0	_
2						FAC species x 3 =	0	_
3						FACU species x 4 =	0	-
4				· ·		UPL species x 5 =	0	-
4 			_			Column totals (A)	0	- (B)
5	8							_(D)
6						Brovelence Index - B/A -		
/						Prevalence Index = B/A =		
8								
				= Total Cover				
	50% of total c	over: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indi		
			_			Rapid test for hydrophytic	vegetation	n
Herb stratum	(Plot siz	e: 30 feet	)			X Dominance test is >50%		
1 Setaria pur	nila	-		Y	FAC	Prevalence index is ≤3.0*		
	autumnalis		50		OBL	Problematic hydrophytic		
3 Paspalum u			10		FAC	vegetation* (explain)		
4						*Indicators of hydric soil and wetland	d hydrology n	must
5				·		be present, unless disturbed or		
6						Definitions of Four Vegetation		
7				<u> </u>		_		
/						Tree- Woody plants, excluding		
8						approximately 20 ft (6m) or mo		ht and
9						greater than 3 in. (7.6 cm) DB	п.	
10								
11						Sapling/Shrub - Woody plant		
12						less than 3 in. DBH and greate	er than 3.2	6 ft (1m)
				= Total Cover		tall		
	50% of total c	over: 60	_ 20% of to	otal cover:	24	Herb - All herbaceous (non-we		
						including herbaceous vines, re		
Woody vine str	atum (Plot siz	e: 30 feet	_)			and woody plants, except woo		ess thar
1						approximately 3 ft (1 m) in hei		,
2						Woody vine - All woody vines	, regardles	ss of
3						height.		
4								
5						Hydrophytic		
			0	= Total Cover			Yes	
	50% of total c	over: 0		otal cover:	0	Present?		
					0			
Remarks: (	If observed, lis	t morphologica	al adaptation	s below).				

S	0	L
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Sampling Point: DP11

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SOIL							Sampling Point:	DELL		
Profile Des	cription: (Describe	to the c	lepth needed to	docume	ent the indic	ator or confirm t	the absence of	f indicators.)		
Depth	Matrix			Redo	x Features					
(Inches)	Color (moist)	%	Color (moist)	lor (moist) % Type* Loc**			Texture	Remarks		
0-16	10YR 4/2	90	10YR 5/6	10	C	М	Silty Clay			
						e				
*Type: C = 0	Concentration, $D = Determinent D$	epletion	RM = Reduced M	Matrix, N	IS = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix		
Hydric So	il Indicators:						Indicators fo	r Problematic Hydric Soils:		
Histi	isol (A1)		Polyv	alue Bel	ow Surface (S	68) <b>(LRR S, T, U)</b>	1 cm Mu	ck (A9) <b>(LRR O)</b>		
	ic Epipedon (A2)		Thin	Dark Sur	face (S9) <b>(L</b> R	R S, T, U)	2 cm Mu	ck (A10) <b>(LRR S)</b>		
Blac	k Histic (A3)		Loan	ny Muck	y Mineral (F1	)	Reduced	Vertic(F18) (outside MLRA 150A,B)		
Hyd	rogen Sulfide (A4)		Loan	ny Gleye	d Matrix (F2)	)	Piedmon	t Floodplain Soils (F19) <b>(LRR P, S, T)</b>		
Stra	tified Layers (A5)		X Deple	eted Ma	trix (F3)		Anomolo	us Bright Loamy Soils (F20) (MLRA		
	anic Bodies (A6) (LR	R P, T,	U) Redo	x Dark	Surface (F6)		153B)			
	n Mucky Mineral (A7)		·		rk Surface (F	7)	Red Pare	ent Material (TF2)		
Muc	k Presence (A8) (LR	R U)	Redo	ox Depre	essions (F8)		Very Sha	llow Dark Surface (TF12)		
1 cn	n Muck (A9) (LRR P,	T)	Marl	(F10) <b>(L</b>	.RR U)		Other (explain in remarks)			
Dep	leted Below Dark Su	rface (A	11) Deple	eted Och	ric (F11) <b>(ML</b>	RA 151)				
Thic	k Dark Surface (A12)	)	lron-	Mangan	ese Masses	(F12) <b>(LRR O, P</b> ,	, T)	*Indicators of hydrophytic vegetation		
Coa	st Prairie Redox (A16	6) ( <b>MLR</b>	A 150A) Umb	ric Surfa	ice (F13) <b>(LF</b>	RR P, T, U)		and weltand hydrology must be present,		
San	dy Mucky Mineral (S	1) (LRR	O, S) Delta	0 Ochric	(F17) (MLRA	A 151)		unless disturbed or problematic		
	dy Gleyed Matrix (S4			iced Ver	tic (F18) <b>(ML</b>	RA 150A, 150B)				
	dy Redox (S5)	1	Pied	mont Flo	odplain Soils	s (F19) <b>(MLRA 1</b> 4	19A)			
	oped Matrix (S6)						Goils (F20) (MLRA 149A, 153C, 153D)			
	k Surface (S7) <b>(LRR</b>	P, S, T,	terror and		0 ,	( ) (				
							<i>e</i>			
Restrictive	Layer (if observed):									
Туре:					_	Hydric Soi	VAC			
	Depth (inches):				_	Present?	100			
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 Ci	ity/County:	Terrebonne Parish	Sampling Date:	8/27/2018		
Applicant/Owner: CSRS	S, Inc.	State:	Louisiana	Sampling Point:	DP12		
Investigator(s): Autry Akins, Jos	eph Sumera	Section	n, Township, Rang	je: S10 T16	6S R16E		
Landform (hillslope, terrace, etc.):		Local relief (	concave, convex,	none): S	Slope (%):		
Subregion (LRR or MLRA): 131A	Lat: 29° 40	0' 44.1550" N	Long:	90° 49' 4.3463" W	Datum: NAD83		
Soil Map Unit Name ShA: Schrieve	er clay, 0 to 1 per	cent slopes	NWI Cla	ssification:	N/A		
Are climatic/hydrologic conditions of the site	typical for this tim	ne of the year?	Yes (If no	, explain in remarks)			
Are vegetation , soil , o	r hydrology	significantly	disturbed? Are	"normal circumstances"	present? Yes		
Are vegetation , soil , o	r hydrology	naturally pro	blematic? (If r	eeded, explain any ansv	wers in remarks.)		
SUMMARY OF FINDINGS Attach	site map show	_ ing sampling	point locations	s, transects, importan	t features, etc.		
Hydrophytic vegetation present?	Yes						
Hydric soil present?	Yes	le the	Sampled Area	within a Wetland?	Yes		
Indicators of wetland hydrology present?	Yes	15 110	Sampled Alea	within a wettand:	165		
			•				
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one is require	ed; check all that	ap	Second	ary Indicators (minimum	of two required)		
X Surface Water (A1)	Aquatic Fau	na (B13)		Surface Soil Cracks (B6)			
High Water Table (A2)		ts (B15) (LRR	)	Sparsely Vegetated Cond	cave Surface (B8)		
Saturation (A3)	Hydrogen S	ulfide Odor (C1	de Odor (C1) Drainage Patterns (B10)				
Water Marks (B1)	A CARACTER AND A DATE			Dry-Season Water Table	(C2)		
Sediment Deposits (B2)	Roots (C3)	izospheres on		Moss Trim Lines (B16)	- 89.200		
Drift Deposits (B3)	Construction and the second	Reduced Iron	(C4)	Crayfish Burrows (C8)			
Algal Mat or Crust (B4)		Reduction in T	107.02	Saturation Visible on Aer	ial Imagery (C9)		
Iron Deposits (B5)	Soils (C6)	Reduction in 1		Geomorphic Position (D2	2)		
Inundation Visible on Aerial Imagery (B7)	Thin Muck S	Surface (C7)		Shallow Aquitard (D3)	18		
Water-Stained Leaves (B9)	Other (Expla	ain in Remarks)	×	FAC-Neutral Test (D5)			
	· · ·	8		Sphagnum moss (D8) (L	RR T, U)		
					ii.		
Field Observations:							
Surface water present? Yes X	No Depti	h (inches):	4-6"	111111111111			
Water table present? Yes	No X Depti	h (inches):		Wetland Hydrology	/es		
Saturation present? Yes		h (inches):		Present?			
(includes capillary fringe)							
Describe recorded data (stream gauge, mon	itoring well, aerial	l photos, previe	ous inspections),	f available:			
	orana and a 77 mars of the first of the first second second second second second second second second second s	na n		nener och var Folgen kan vicent v			
Remarks:							
FAC-Neutral Test: 1>0							
n nast industriation associations in							

VEGETATION Use scientific names of plan	ts.			Sampling Point: DP12
Tree Stratum (Plot size: 30 feet )	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL,
1				FACW, or FAC: <u>2</u> (A)
23				Total Number of Dominant Species Across all Strata: 2 (B)
4				Percent of Dominant Species
5		·		that are OBL, FACW, or FAC: 100.00% (A/B)
6		· ·		FAC: <u>100.00%</u> (A/B)
8		· ·		
	0	= Total Cover		
50% of total cover: 0	20% of to	otal cover:	0	Prevalence Index Worksheet
				Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet )	1			OBL species $x = 0$
1		·		FACW species $x 2 = 0$ FAC species $x 3 = 0$
3		· ·		FACU species $x = 0$
4				UPL species $x 5 = 0$
5				Column totals (A) 0 (B)
6		······· ·		Prevalence Index = B/A =
8		· ·		
	0	= Total Cover		
50% of total cover: 0	20% of to	otal cover:	0	Hydrophytic Vegetation Indicators:
		_		Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet )	l .			X Dominance test is >50%
1 Eleocharis palustris	50	<u> </u>	OBL	Prevalence index is ≤3.0*
2 Setaria pumila 3 Fimbristylis autumnalis	40	<u> </u>	FAC OBL	Problematic hydrophytic vegetation* (explain)
4 Echinochloa crus-galli	5		FACW	*Indicators of hydric soil and wetland hydrology must
5 Paspalum urvillei	5	N	FAC	be present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata
7				Tree- Woody plants, excluding woody vines,
8				approximately 20 ft (6m) or more in height and
9 10				greater than 3 in. (7.6 cm) DBH.
11		· ·		Sapling/Shrub - Woody plants, excluding vine
12				less than 3 in. DBH and greater than 3.26 ft (1r
		= Total Cover		tall
50% of total cover: 57.5	20% of to	otal cover:	23	Herb - All herbaceous (non-woody) plants,
Woody vine stratum (Plot size: 30 feet	)			including herbaceous vines, regardless of size, and woody plants, except woody vines, less that
1				approximately 3 ft (1 m) in height.
2				Woody vine - All woody vines, regardless of height.
3				
4 5				Underschudie
°	0	= Total Cover		Hydrophytic Vegetation <b>Yes</b>
50% of total cover: 0		otal cover:	0	Present?
Remarks: (If observed, list morphological	adaptation	is below).		
			4	
L				

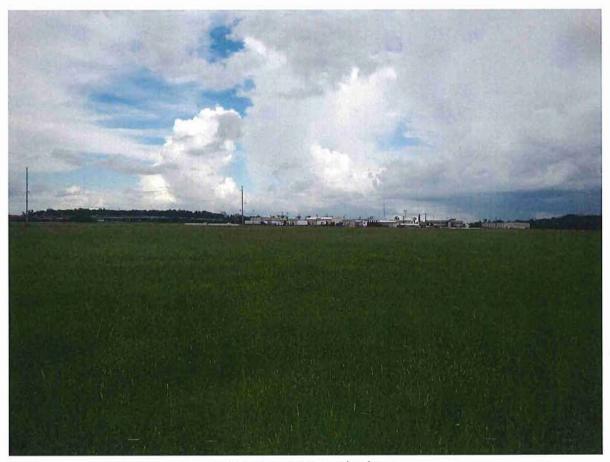
C	0	I	1
Э	U	I	L

Sampling Point: DP12

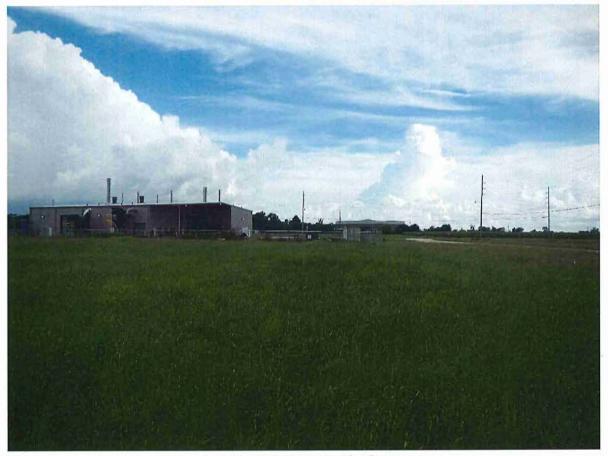
SUL							Sampling Point.	DFTZ	
Profile Des	cription: (Describe	to the d	lepth needed to o	docume	ent the indic	ator or confirm	the absence of	f indicators.)	
Depth	<u>Matrix</u>			Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
								No soil profile taken due to inundation.	
	н. 				_				
*Type: C = 0	Concentration, D = De	epletion,	RM = Reduced M	Iatrix, N	1S = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix	
Hydric Sc	oil Indicators:						Indicators fo	r Problematic Hydric Soils:	
Hist	isol (A1)		Polyv	alue Bel	ow Surface (S	68) <b>(LRR S, T, U)</b>	1 cm Mu	ck (A9) <b>(LRR O)</b>	
Hist	ic Epipedon (A2)		Thin I	Dark Sur	face (S9) <b>(LR</b>	R S, T, U)	2 cm Mu	ck (A10) <b>(LRR S)</b>	
Blac	k Histic (A3)		Loam	y Muck	y Mineral (F1	)	Reduced	Vertic(F18) (outside MLRA 150A,B)	
Hyd	rogen Sulfide (A4)		Loam	y Gleye	d Matrix (F2)	÷	Piedmon	t Floodplain Soils (F19) <b>(LRR P, S, T)</b>	
Stra	tified Layers (A5)		Deple	eted Mat	trix (F3)		Anomolo	us Bright Loamy Soils (F20) (MLRA	
Orga	anic Bodies (A6) <b>(LR</b> I	R P, T, I	U) Redo	x Dark S	Surface (F6)		153B)		
5 cn	n Mucky Mineral (A7)	(LRR I	<b>P, T, U)</b> Deple	eted Dar	rk Surface (F	7)	Red Pare	ent Material (TF2)	
Muc	k Presence (A8) (LR	R U)	Redo	x Depre	ssions (F8)		Very Shallow Dark Surface (TF12)		
1 cn	n Muck (A9) (LRR P,	T)	Marl	(F10) <b>(L</b>	.RR U)		X Other (explain in remarks)		
Dep	leted Below Dark Sur	face (A	11) Deple	ted Och	ric (F11) <b>(ML</b>	RA 151)			
Thic	k Dark Surface (A12)		Iron-I	Mangan	ese Masses	(F12) <b>(LRR O, P</b>	, T)	*Indicators of hydrophytic vegetation	
Coa	st Prairie Redox (A16	6) (MLR	A 150A) Umbr	ic Surfa	ice (F13) <b>(LF</b>	R P, T, U)		and weltand hydrology must be present,	
San	dy Mucky Mineral (S1	I) <b>(LRR</b>	O, S) Delta	Ochric	(F17) <b>(MLR</b> A	A 151)		unless disturbed or problematic	
San	dy Gleyed Matrix (S4	)	Redu	ced Ver	tic (F18) <b>(ML</b>	.RA 150A, 150B)			
San	dy Redox (S5)		Piedr	nont Flo	odplain Soils	s (F19) <b>(MLRA 1</b> 4	19A)		
Strip	oped Matrix (S6)		Anon	nolous E	Bright Loamy	Soils (F20) (MLF	RA 149A, 153C,	, 153D)	
Darl	k Surface (S7) (LRR	P, S, T,	U)						
	÷								
Restrictive	Layer (if observed):								
Туре:					_	Hydric So	VAC		
	Depth (inches):				-	Present?	100		
Remarks:									
	Soil assumed to b	be hydi	ric based on so	il map	unit.				



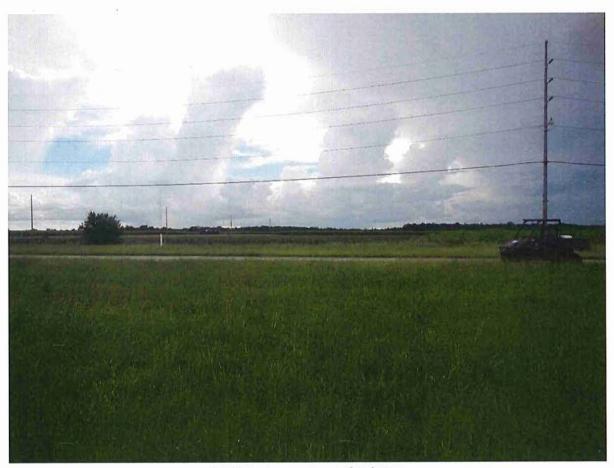
DP12 facing north on 8/27/2018



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:	8/27/2	2018	
Applicant/Owner:	CSRS	S, Inc.	State:	Louisi	ana	Sampling Point:	DP1	13	
Investigator(s):	Autry Akins, Jos	eph Sumera	Sectio	n, Township	, Range:	S10 T	16S R16E		
Landform (hillslope, terrace	, etc.):		Local relief	concave, co	nvex, non	e):	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 slope:	s N	WI Classif	ication:	N/A		
Are climatic/hydrologic cond	ditions of the site	typical for this t	ime of the year?	Yes	(If no, exp	olain in remarks)			
Are vegetation, se	oil, o	r hydrology	significantly	disturbed?	Are "nor	rmal circumstances	" present?	Yes	
Are vegetation, se	o , o	r hydrology	naturally pro	blematic?	(If need	ed, explain any ans	swers in rem	narks.)	
SUMMARY OF FINDIN	IGS Attach	site map sho	wing samplin	g point loc	ations, tra	ansects, importa	nt features	s, etc.	
Hydrophytic vegetation	present?	No							
Hydric soil present?		Yes	Is th	e Sampled	Area with	nin a Wetland?	No		
Indicators of wetland hy	/drology present?	No			0.000			2	
Remarks:									
								8	
HYDROLOGY									
Wetland Hydrology Indica	itors:								
Primary Indicators (minimu	<u>m of one is require</u>	ed; check all th	at ap	<u>s</u>	econdary	Indicators (minimu	n of two req	<u>uired)</u>	
Surface Water (A1)		Aquatic Fa	auna (B13)		Sur	face Soil Cracks (B6	5)		
High Water Table (A2)		Marl Depo	osits (B15) (LRR	U)	Spa	rsely Vegetated Concave Surface (B8)			
Saturation (A3)		Hydrogen	Sulfide Odor (C	(C1) Drainage Patterns (B10			)	18.5 - 200 oct 10 - 187	
Water Marks (B1)		Oxidized F	Rhizospheres on				-Season Water Table (C2)		
Sediment Deposits (B2)		Roots (C3			Mos	ss Trim Lines (B16)			
Drift Deposits (B3)		Presence	of Reduced Iron	(C4)	Cra	yfish Burrows (C8)			
Algal Mat or Crust (B4)		Becent Irc	on Reduction in T	illed	Sati	uration Visible on Ae	erial Imagery	(C9)	
Iron Deposits (B5)		Soils (C6)		lied	Geo	morphic Position (D	2)		
Inundation Visible on Ae	rial Imagery (B7)	Thin Muck	c Surface (C7)		Sha	llow Aquitard (D3)			
Water-Stained Leaves (B	39)	Other (Exp	plain in Remarks	in in Remarks) FAC-Neutral Test (D5)					
		_		Sphagnum moss (D8) (LRR T, U)					
					-				
Field Observations:									
Surface water present?	Yes	No X Dep	pth (inches):						
Water table present?	Yes		pth (inches):			Wetland Hydrology	No		
Saturation present?	Yes	California de Contrata de Contrata	pth (inches):			Present?			
(includes capillary fringe)	1977					5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Describe recorded data (str	eam gauge, moni	toring well, aer	ial photos, previ	ous inspecti	ons), if ava	ailable:			
	3 3 /								
Remarks:									

VEGETATION Use scientific names of pla	nts.		Sampling Point: DP13
Tree Stratum (Plot size: <u>30 feet</u> )	Absolute Dominant % Cover Species	Indicator Staus	Dominance Test Worksheet         Number of Dominant         Species that are OBL,         FACW, or FAC:       1         (A)
23			Total Number of Dominant Species Across all Strata: 2 (B)
45			Percent of Dominant Species that are OBL, FACW, or
67			FAC: <u>50.00%</u> (A/B)
8	0 = Total Cover		
50% of total cover: 0	20% of total cover:	0	Prevalence Index Worksheet Total % Cover of:
Sapling/Shrub Stratum (Plot size: 30 feet 1 2	_) 		OBL species $x 1 = 0$ FACW species $x 2 = 0$ FAC species $1 = 3 = 3$
3		,	FACU species1 $x 4 =$ 4UPL species $x 5 =$ 0Column totals2(A)7
56 7			Column totals $2$ (A) $7$ (B) Prevalence Index = B/A = $3.5$
8	0 = Total Cover		
50% of total cover: 0	20% of total cover:	0	Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation
Herb stratum (Plot size: 30 feet	_) 70 Y	FACU	Dominance test is >50% Prevalence index is ≤3.0*
1 Paspalum notatum 2 Setaria pumila 3	30 Y	FAC	Problematic hydrophytic vegetation* (explain)
4 5	· ·		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
67			Definitions of Four Vegetation Strata Tree- Woody plants, excluding woody vines,
8 9 10			approximately 20 ft (6m) or more in height and greater than 3 in. (7.6 cm) DBH.
11			Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall
50% of total cover: 50	20% of total cover:	20	Herb - All herbaceous (non-woody) plants,
Woody vine stratum (Plot size: 30 feet 1 2 3 3	_) 		including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. <b>Woody vine</b> - All woody vines, regardless of height.
4 5			Hydrophytic
50% of total cover: 0	0 = Total Cover 20% of total cover:	0	Vegetation <b>No</b> Present?
Remarks: (If observed, list morphological	adaptations below).		

S	O	IL
-	-	

Sampling	Point.	DP13

JOIL							Sampling Form		
Profile Desc	cription: (Describe	to the c	lepth needed to o	locume	ent the indic	ator or confirm	the absence o	f indicators.)	
Depth (Inches)	Matrix		Redox Features						
	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-3	10YR 4/1	90					Silt Loam	0-3 inch profile 90% 10YR 4/1 and 10% gravel.	
	2								
*Type: C = C	Concentration, D = D	epletion,	, RM = Reduced N	latrix, N	IS = Masked	Sand Grains.	**Location: P	L = Pore Lining, M = Matrix	
Hydric Soil Indicators: Indicators for Problematic Hydric Soils:									
Histisol (A1) Polyvalue Below Surface (S						58) <b>(LRR S, T, U</b>	)1 cm Mu	ck (A9) <b>(LRR O)</b>	
Histic Epipedon (A2) Thin Dark Surface (S9) (						RR S, T, U)	2 cm Muck (A10) <b>(LRR S)</b>		
Black Histic (A3) Loamy Mucky Mineral (								Vertic(F18) (outside MLRA 150A,B)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2						)		t Floodplain Soils (F19) <b>(LRR P, S, T)</b>	
Stratified Layers (A5)Depleted Matrix (F3)							per se	us Bright Loamy Soils (F20) <b>(MLRA</b>	
Organic Bodies (A6) (LRR P, T, U)Redox Dark Surface (F6) 153B)									
					leted Dark Surface (F7)			Red Parent Material (TF2)	
	k Presence (A8) (LF			Redox Depressions (F8)				Very Shallow Dark Surface (TF12)	
	Muck (A9) <b>(LRR P</b> ,			Marl (F10) (LRR U)				kplain in remarks)	
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) *Indicators of hydrophy									
							, 1)	indicators of hydrophytic vegetation	
								and weltand hydrology must be present, unless disturbed or problematic	
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17)									
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)									
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)									
Stripped Matrix (S6) Anomolous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U)									
		r, 0, 1,	0)						
Postrictivo	Layer (if observed)		,			1			
		•				Hydric So	, II		
Type: Gravel Depth (inches): 3 inches					-	Present	VAC		
	Deptil (meries)	. 0110	103						
Remarks:	Disturbed area.	Potenti	al turnrow or s	taging	area				
	0-3 inch soil prot								
	Soil assumed hy								
			e ce ce i i i i i i i i i i i i i i	.0	-			· ·	



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