Exhibit FF. Calhoun Technology Park - South Site Wetlands Delineation Report





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WETLANDS INVESTIGATION REPORT

Calhoun Technology Park South Tract Ouachita Parish, Louisiana

Prepared for

Mr. Kevin Crosby, P.E. Lazenby and Associates, Inc. 2000 North 7th Street West Monroe, Louisiana 71291

Prepared by MCABEE WETLAND SERVICES 655 MEADOWBROOK ROAD JACKSON, MS 39206

May 10, 2015

INTRODUCTION

A wetlands investigation was conducted for an approximately 87 acre tract of land (herein called the "Site") located on the south side of U.S. Highway 80 (US 80) east of Calhoun in Ouachita Parish, Louisiana (Exhibits 1 and 2). The purpose of the investigation was to identify and delineate wetlands and other *Waters of the U.S.* The investigator was Mr. Bill McAbee with McAbee Wetland Services, and the Site was investigated on March 14 and 15, 2015. Methodology of the investigation followed guidelines set forth in the 1987 Wetland Delineation Manual and the Regional Supplement Manual for the Atlantic and Gulf Coastal Plain Region (Version 2.0).

The Site is part of the former Louisiana State University Calhoun Research Center, now named the Calhoun Technology Park. The facility has been the site of agriculture related research for over 100 years and in recent years has focused on timber management, especially loblolly pine (*Pinus taeda*) management. The site contains predominantly upland habitat which has been consistently impacted through various agriculture research, pine plantation stands are the dominant habitat.

US 80 borders the Site to the north. North Cheniere Creek crosses the Site on the southeast corner (Exhibit 3). The topography rises from Chenier Creek and is highest near US 80 where there are a few buildings adjacent to US 80. Elevations on the site vary from approximately 175 feet above sea above mean sea level (msl) near US 80 to approximately 115 feet msl at the Cheniere creek floodplains. Most of the uplands, not involved in experimental plantings, are maintained by mowing maintaining open grass pasture and lawns (Exhibit 4). There is an approximately 2.75 acre pond located near the south central border of the Site that is annually overgrown with herbaceous wetland vegetation.

Uplands were primarily pine and pine/hardwood mix forest or maintained grass pasture and lawns. Wetlands were hardwood bottomland associated with seasonally inundated or saturated floodplain terraces and herbaceous wetlands associated with a minor drainage and the pond.

The Ouachita Parish Soil Survey showed that approximately 70% of the soils on the Site were Ora-Savannah association, gently rolling, 16% were Guyton-Rosebloom complex, frequently flooded, and 13% were Ruston-Lucy association, undulating (see Appendix). Ora-Savannah association, gently rolling and Ruston-Lucy association hilly and gently rolling are moderately well to well drained soils.

Historical aerial photography dating back to 1998 was reviewed on google earth to identify any possible recurring "wet" signatures such as inundation or saturation. These were noted and investigated during the site visit.

FINDINGS

After reviewing the referenced background materials, a site reconnaissance that included soil, vegetation, and hydrological evaluations was conducted, The Field investigations confirmed that there are wetlands and Other Waters of the US on the Site, a total of 5.53 acres of forested wetlands, 2.4 acres of herbaceous wetlands, 1.2 acres of open water pond, and 264 linear feet of perennial streams were identified on the Site. Although the vegetation change from bottomland hardwoods to pine hardwood uplands was often apparent, soils were regularly inspected to confirm the boundary. See Exhibit 5 for the wetlands and stream location map.

Emergent wetlands were found along an ephemeral drain that leads from US 80 to the pond (Exhibit 6) and surrounding pond (Exhibit 7). Forested wetlands were located in a shallow valley on the eastern section near US 80, and between the pond and North Chenier Creek along the railroad ROW (Exhibit 8). Wetlands along the railroad are generally confined between that manmade structure and elevated upland pine forest.

Stormwater overflowing from the pond and general sheet flow from the north provide the hydrology to keep this area saturated and in some areas inundated during part of the growing season. The southeastern section had had some historical wet signatures and mapped Gutyon soils but existing hydrology conditions did not indicate this area as a wetland.

Although the U.S. Army Corps of Engineers will make the final call it is highly likely that the identified wetlands and North Chenier Creek would be considered jurisdiction waters under current regulations and any impacts to the wetlands and or the creek channels would require a Section 404 permit.

If you have any additional questions please contact me any time.

Sincerely,

William C. "Bill" McAbee McAbee Wetland Services 655 Meadowbrook Road

Willia C. Mether

Jackson, MS 39206

Wcmcabee33@gmail.com

601.715.4803



EXHIBIT 1. GENERAL LOCATION MAP

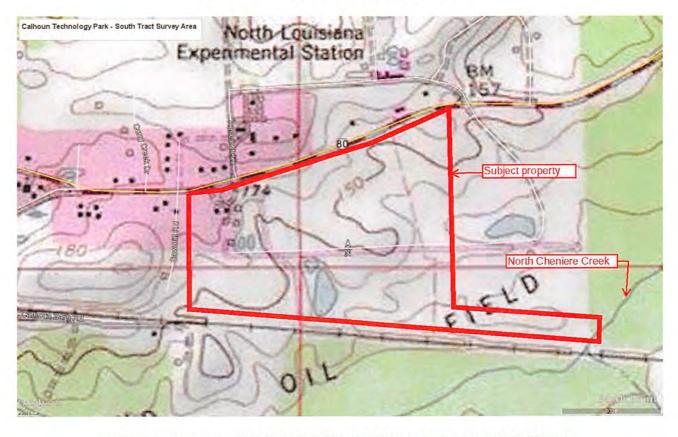


EXHIBIT 2. LOCATION MAP WITH USGS MAPPING BACKGOUND.



EXHIBIT 3. NORTH CHENIERE CREEK.



EXHIBIT 4. TYPICAL GRASS LAWNS



EXHIBIT 5. WETLAND AND STREAM LOCATION MAP.



EXHIBIT 6. HERBACEOUS WETLANDS IN EPEMERAL DRAINAGE NORTH OF THE POND.

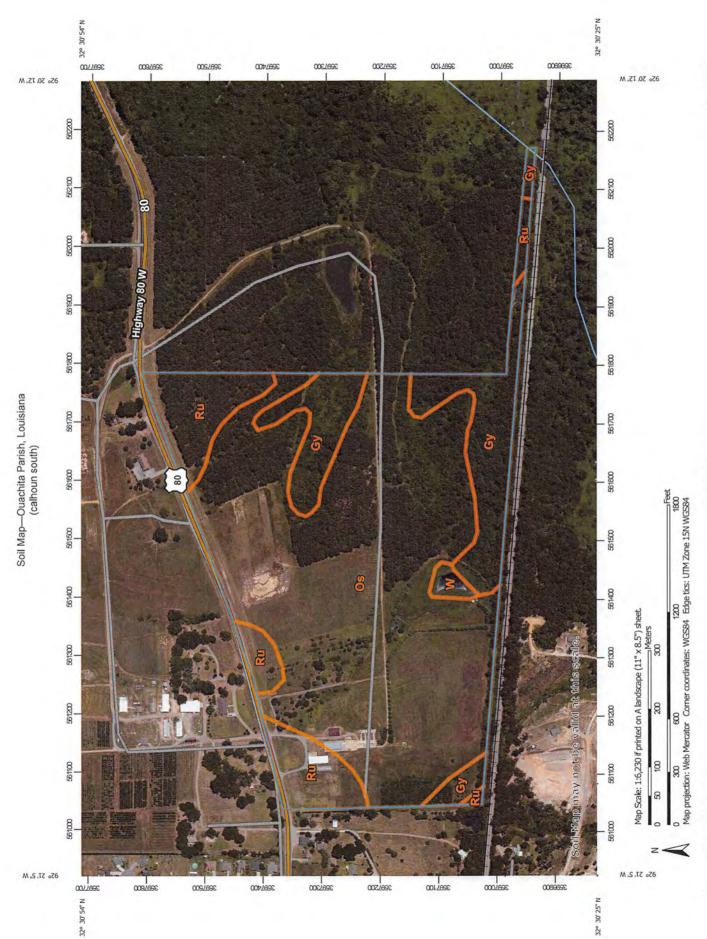


EXHIBIT 7. POND WITH HERBACEOUS WETLANDS.



EXHIBIT 8. FORESTED WETLANDS ADJACENT TO RAILROAD TRACKS.

APPENDIX A SOILS MAPPING



MAP LEGEND

Spoil Area

Stony Spot

Wet Spot

Other

Water Features

Transportation

Background

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

Aerial Photography

US Routes

Major Roads

Local Roads

Area of Interest (AOI)

Area of Interest (AOI)

Soils



Soil Map Unit Polygons Soil Map Unit Lines



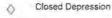
Soil Map Unit Points

Special Point Features





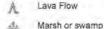














Miscellaneous Water

Perennial Water

Rock Outcrop

+ Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ouachita Parish, Louisiana Survey Area Data: Version 9, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 3, 2011—Jun 11, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Ouachita Parish, Louisiana (LA073)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
Gy	Guyton-Rosebloom complex, frequently flooded	14.6	16.1%			
Os	Ora-Savannah association, gently rolling	63.1	69.8%			
Ru	Ruston-Lucy association, undulating	11.9	13.2%			
W	Water	0.8	0.9%			
Totals for Area of Interest		90.4	100.0%			

APPENDIX B DATA FORMS

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Calhoun Techr		City/C	ounty: Ouachita		Sampling Date: 3-14-2015
Applicant/Owner: North Loui	siana Economic Partn	ership		State: LA	Sampling Point: Wet 1
Investigator(s): Bill McAbee		Section Section	on, Township, Range	S27 T18N, R1E	
Landform (hillslope, terrace, et	c.): hillslope	Local	relief (concave, conv	vex, none): none	Slope (%): <u>0-5%</u>
Subregion (LRR or MLRA):	RR O				Datum:
Soil Map Unit Name: Guyton		frequently flooded		NWI classifi	
Are climatic / hydrologic condit	ions on the site typical for	r this time of year? Y	es_X No	(If no, explain in F	Remarks.)
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "No	mal Circumstances"	present? Yes X No
Are Vegetation, Soil				ed, explain any answ	ers in Remarks.)
					s, important features, etc.
Hydrophytic Vegetation Prese	ent? Vec X	No		712	
Hydric Soil Present?	Yes X	No	Is the Sampled Ar		
Wetland Hydrology Present?		No	within a Wetland?	Yes X	No
Remarks:					
Emergent wetland for					
HYDROLOGY					
Wetland Hydrology Indicate	ors:		***,	Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum	of one is required; check	all that apply)		_ 🔲 Surface Soll	Cracks (B6)
Surface Water (A1)	Aqui	atic Fauna (B13)		Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)	☐ Mari	Deposits (B15) (LRF	R U)	Drainage Pa	atterns (B10)
Saturation (A3)		rogen Sulfide Odor (C		Moss Trim L	, ,
Water Marks (B1)		lized Rhizospheres a		1	Water Table (C2)
Sediment Deposits (B2)		sence of Reduced Iro	• •	Crayfish But	rows (C8) fisible on Aerial Imagery (C9)
Drift Deposits (B3) Algal Mat or Crust (B4)		ent Iron Reduction in Muck Surface (C7)	Tilled Solls (Cd)		: Position (D2)
Iron Deposits (B5)		er (Explain in Remark	s)	Shallow Aqu	• •
inundation Visible on Aer		(-,	FAC-Neutra	• •
Water-Stained Leaves (E				=	moss (D8) (LRR T, U)
Field Observations:					
Surface Water Present?	Yes No <u>X</u>	Depth (inches): 0-1			
Water Table Present?	Yes No <u>X</u>	Depth (inches): >16			
Saturation Present?	Yes <u>x</u> No	Depth (inches): 8"	Wetlar	nd Hydrology Prese	nt? Yes X No
(includes capillary fringe) Describe Recorded Data (stre	eam gauge, monitoring w	ell, a erial photos, pre	vious inspections), if	available:	······
Remarks:					
Marginal hydrology,	saturation minor	given the rec	ent and past r	ain events.	
			•		
1					

Sampling Point: wet 1 VEGETATION (Four Strata) - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30' radius) % Cover Species? Status Number of Dominant Species 2 That Are OBL, FACW, or FAC: _ (A) Total Number of Dominant Species Across All Strata: Percent of Dominant Species 100 _ (A/B) That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = ____ 0 ____ = Total Cover FACW species _____ x 2 = _____ ___ 20% of total cover: __ 50% of total cover: ___ FAC species _____ x 3 = _____ Sapling/Shrub Stratum (Plot size: 30' radius) FACU species _____ x 4 = _____ 1. _____ x 5 = _____ UPL species ___ 2. ___ Column Totals: ___ _____ (A) _____ (B) 3. Prevalence Index = B/A = _ Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation 7. ___ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 0 = Total Cover __ Problematic Hydrophytic Vegetation¹ (Explain) 50% of total cover: ____ 20% of total cover. Herb Stratum (Plot size: 30' radius) ¹Indicators of hydric soil and wetland hydrology must 1. Juncus effusus be present, unless disturbed or problematic. 2. Schedonorus arundinaceus fac **Definitions of Four Vegetation Strata:** 35 3. several unknown grasses not greater than 20% n Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 6. _ Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 7. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 12. _____ 100 = Total Cover 50% of total cover: 50 __ 20% of total cover: 20 Woody Vine Stratum (Plot size: 30' radius) Hydrophytic 0 = Total Cover Vegetation Present? 50% of total cover: ___ 20% of total cover: Remarks: (If observed, list morphological adaptations below). A few planted cypress trees are located along the drainage.

Sampling Point: wet 1

Profile Desc	cription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirm	n the absence of Indi	cators.)
Depth	Matrix			x Feature		- , ,-	T	Barranda
(inches)	Color (moist)	- %	Color (moist)	%	Type ¹	Loc ²		Remarks
0-8	10YR 5/2						loam	
8-14	10YR 5/2	80	7.5YR5/6	20	С	<u>m</u>	loam clay	·
				· •				
					. ——			
								
	****		<u>.</u>					
							2	
			Reduced Matrix, MS			ains.		ore Lining, M=Matrix.
		cable to all	LRRs, unless other					oblematic Hydric Soils ³ :
Histosol	• •		Polyvalue Be				J)	1
	oipedon (A2) stic (A3)		Loamy Muck					ic (F18) (outside MLRA 150A,B)
	en Suifide (A4)		Loamy Gleye			. •,	—	odplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		✓ Depleted Mai	trix (F3)			Anomalous B	right Loamy Soils (F20)
	Bodies (A6) (LRR I		Redox Dark	Surface (l	F6)		(MLRA 153	•
	ıcky Mineral (A7) (L						Red Parent M	
	esence (A8) (LRR I	-	Redox Depre		8)			Dark Surface (TF12)
	ick (A9) (LRR P, T) d Below Dark Surfac		Marl (F10) (L Depleted Oct		(801 D A 4)	54 \	U Other (Explain	in Remarks)
_ :	ark Surface (A12)	36 (ATT)	iron-Mangan		-	-	T) ³ Indicators of	f hydrophytic vegetation and
I 	rairie Redox (A16) (MLRA 150/	_				•	drology must be present,
	łucky Mineral (S1) (Delta Ochric			,		urbed or problematic.
Sandy G	Bleyed Matrix (S4)		Reduced Ver	tic (F18)	(MLRA 15	0A, 150B)	l.	
_	Redox (S5)		Piedmont Flo	•		•	=	
	Matrix (S6)		Anomalous B	right Loa	my Solis (F20) (MLR	A 149A, 153C, 153D)	
	rface (S7) (LRR P, Layer (if observed)					-	T	
Type:	Layer (ii observed)	•						
Depth (in	ches):						Hydric Soil Preser	nt? Yes X No
Remarks:							<u> </u>	
								1

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Calhoun Techno	ology Park	uachita	_ Sampling Date: 3-14-2015	
Applicant/Owner: North Louis	siana Economic Partne	ership	State: LA	Sampling Point: up 1
Investigator(s): Bill McAbee		Section, Towns	hip, Range: S26 T18N, R1E	
Landform (hillslope, terrace, etc	:.): hillslope	Local relief (cor	ncave, convex, none): _concav	e Slope (%): 0-5%
Subregion (LRR or MLRA): LR	R O	Lat: 32.5102	Long: <u>-92.3472</u>	Datum:
Soil Map Unit Name: Ora-Sav	annah association roll	ing	NWI classi	fication: upland
Are climatic / hydrologic condition	ons on the site typical for	this time of year? Yes X	_ No (If no, explain in	Remarks.)
Are Vegetation, Soil	, or Hydrology	_significantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil			(If needed, explain any answ	
			oint locations, transect	s, important features, etc.
Hydrophytic Vegetation Prese	ent? Yes X	No L		
Hydric Soil Present?	Yes	No X	ampled Area	No_X
Wetland Hydrology Present?	Yes	No x Within a	Wetland? Yes	NO <u></u>
Remarks:				
Upland pasture				
HYDROLOGY				
Wetland Hydrology Indicato	rs:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum		all that apply)		Il Cracks (B6)
Surface Water (A1)		tic Fauna (B13)		egetated Concave Surface (B8)
High Water Table (A2)		Deposits (B15) (LRR U)	— • • •	Patterns (B10)
Saturation (A3)	☐ Hydro	ogen Sulfide Odor (C1)	Moss Trim	Lines (B16)
Water Marks (B1)	Oxidi:	zed Rhizospheres along Livin	g Roots (C3) 🔲 Dry-Season	n Water Table (C2)
Sediment Deposits (B2)	☐ Prese	ence of Reduced iron (C4)	🛄 Crayfish Bu	ırrows (C8)
Drift Deposits (B3)	⊢ Rece	nt Iron Reduction in Tilled Soi	ils (C6) La Saturation	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Muck Surface (C7)		c Position (D2)
Iron Deposits (B5)		r (Explain in Remarks)		uitard (D3)
Inundation Visible on Aeri			=	al Test (D5)
Water-Stained Leaves (B	9) —		LI Sphagnum	moss (D8) (LRR T, U)
Field Observations:		Death Coahan		
Surface Water Present?		Depth (inches):	-	
Water Table Present?	Yes No X		- NA(-Alamed Shudrala - Pro-	ent? Yes No_X
Saturation Present? (includes capillary fringe)	res No_^_ L	Depth (inches):	_ Wetland Hydrology Pres	entr resNo
Describe Recorded Data (stre	am gauge, monitoring we	ll, aerial photos, previous insp	pections), if available:	
Remarks:				

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

/EGETATION (Four Strata) – Use scientific na	imes of pl	ants.		Sampling Point: up i		
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: 30' radius) 1.	-	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)		
2						
3				Total Number of Dominant Species Across All Strata: 1 (B)		
4.						
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)		
6.				That Are Obl., FACW, OF FAC.		
				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
8		= Total Cov		OBL species x 1 =		
500/ -54-4-1				FACW species x 2 =		
50% of total cover:	20% 01	total cover		FAC species x 3 =		
Sapling/Shrub Stratum (Plot size: 30' radius)				FACU species x 4 =		
1				UPL species x 5 =		
2				Column Totals: (A) (B)		
3				Countil Totals (7)		
4			 	Prevalence Index = B/A =		
5				Hydrophytic Vegetation Indicators:		
6				1 - Rapid Test for Hydrophytic Vegetation		
7				2 - Dominance Test is >50%		
8				3 - Prevalence Index is ≤3.0¹		
	0 ;	= Total Cov	ег	Problematic Hydrophytic Vegetation¹ (Explain)		
50% of total cover:	20% of	total cover:		Toblematic Hydrophytic Vogetation (Explain)		
Herb Stratum (Plot size: 30' radius)				1 disatons of hydric and molland hydrology much		
1. Schedonorus arundinaceus	60	у	fac	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
2. Andropogon virginicus	15	n	fac	Definitions of Four Vegetation Strata:		
3. several unknown grasses none greater than 20%	35	<u>n</u>		Bommaton of Four Vogetation Character		
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
4				more in diameter at breast height (DBH), regardless of height.		
5						
6				Sapling/Shrub – Woody plants, excluding vines, less		
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
8.				Herb - All herbaceous (non-woody) plants, regardless		
9	- ——			of size, and woody plants less than 3.28 ft tall.		
10				Woody vine - All woody vines greater than 3.28 ft in		
11.				height.		
12						
	100	= Total Cov	ег			
	20% of	total cover	20			
Woody Vine Stratum (Plot size: 30' radius)						
1,				į		
2						
3						
4						
5				Hydrophytic		
	0	= Total Cov	er	Vegetation		
50% of total cover:				Present? Yes X No		
Remarks: (If observed, list morphological adaptations bel				J		
Temans. (II observed, list mappining and adaptations by	o.,,.					

Sampling	Daint:	up	1
Samound	Pant		•

SOIL

Profile Desc	cription: (Describe	to the depth	needed to docur	nent the i	ndicator	or confirm	the absence of India	ators.)	
Depth	Matrix			x Feature			- .	Dl	
(inches)	Color (moist)	· <u> </u>	Color (moist)	<u> </u>	_Type ¹	Loc ²	Texture	Remarks	
0-14	10YR 5/4	100	.				loam		·
			•						
	-				•			<u>.</u>	
				. —					
¹Type: C=C	oncentration, D=Dep	letion RM=Re	educed Matrix, MS	S=Masked	Sand Gr	ains.	² Location: PL=Por	e Lining, M=Mat	 rix.
	Indicators: (Applic						Indicators for Pro		
Histosol			Polyvalue Be			.RR S. T. U) 1 cm Muck (A9) (LRR O)	
: 	oipedon (A2)		Thin Dark Su				2 cm Muck (A1		
	istic (A3)		Loamy Muck				Reduced Verti	(F18) (outside	MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			dplain Soils (F19	
: 1	d Layers (A5)		Depleted Ma	` '			_	ght Loamy Soils	(F20)
_	Bodies (A6) (LRR P		Redox Dark	-	•		(MLRA 153E		
! 1	ucky Mineral (A7) (LF		Depleted Dat		. ,		Red Parent Ma		42)
_	resence (A8) (LRR U))	Redox Depre		5)		Other (Explain	ark Surface (TF	12)
	ıck (A9) (LRR P, T) d Below Dark Surfac	e (Δ11)	Marl (F10) (L Depleted Ocl		MIRA 1	54)	Other (Explain	iii Reiliaiks)	
· = ·	ark Surface (A12)	ν (Δ11)	Iron-Mangan		•	•	T) ³ Indicators of	hydrophytic veg	etation and
1 	rairie Redox (A16) (R	HLRA 150A)	Umbric Surfa					rology must be p	
	lucky Mineral (S1) (L		Delta Ochric				unless distu	rbed or problem	atic.
Sandy C	Bleyed Matrix (S4)		Reduced Ver	tic (F18) (MLRA 15	0A, 150B)			
	Redox (S5)		Piedmont Flo	-					
	Matrix (S6)		Anomaious E	Bright Loar	ny Soils (F20) (MLR	A 149A, 153C, 153D)		
	rface (S7) (LRR P, S Layer (If observed):						1		
Type:	Layer (ii observed).						:		
	ches):		_				Hydric Soil Presen	? Yes	No X
Remarks:	<u> </u>		_				11,4110 00		
Kenaks.									
								•	
,									
	•								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Calhoun Technology Park	City/0	county: Ouachita	;	Sampling Date: 3-14-2015
Applicant/Owner: North Louisiana Economi	c Partnership		State: LA .	Sampling Point: wet 2
Investigator(s): Bill McAbee	on, Township, Range: S			
Landform (hillslope, terrace, etc.): hillslope	Local	relief (concave, convex,	none); concave	Slope (%): 0-5%
Subregion (LRR or MLRA): LRR O	Lat: 32.5095	l ong:	92.3496	Datum:
Soil Map Unit Name: Guyton-Rosebloom co	omplex, frequently flooded		NWI classifica	tion: PSS
Are climatic / hydrologic conditions on the site t				
Are Vegetation, Soil, or Hydrolo				esent? Yes X No No No
Are Vegetation, Soil, or Hydrolo			xplain any answers	in Remarks.)
SUMMARY OF FINDINGS - Attach			ns, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes	x No		· · · · · · · · · · · · · · · · · · ·	
	x No	Is the Sampled Area	Y	
	x No	within a Wetland?	Yes_^	No
HYDROLOGY				
Wetland Hydrology Indicators:	·			ors (minimum of two required)
Primary Indicators (minimum of one is require			Surface Soil C	, -
Surface Water (A1) High Water Table (A2)	Aquatic Fauna (B13)		—	etated Concave Surface (B8)
☐ High Water Table (A2)☐ Saturation (A3)	Mari Deposits (B15) (LRI Hydrogen Sulfide Odor (•	Drainage Patte Moss Trim Line	, ,
	Oxidized Rhizospheres a	•		/ater Table (C2)
Sediment Deposits (B2)	Presence of Reduced Iro		Crayfish Burro	• •
Drift Deposits (B3)	Recent Iron Reduction in		_	ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Geomorphic P	osition (D2)
iron Deposits (B5)	Other (Explain in Remark	(s)	Shallow Aquita	ard (D3)
Inundation Visible on Aerial Imagery (B7)			FAC-Neutral T	` '
Water-Stained Leaves (B9)			Sphagnum mo	oss (D8) (LRR T, U)
Field Observations:	Depth (inches):			
Surface Water Present? Water Table Present? Yes No	Depth (inches): 8"			
Saturation Present? Yes X No.	Depth (inches): surf	ace Wetland H	ydrology Present	? Yes X No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, pre	vious inspections), if avai	lable:	
Remarks:	-			
1				

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30' radius)		Species?				
1 Salix nigra	20	y	obl	Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)		
· · · · · · · · · · · · · · · · · · ·	10			Illat Ale OBL, FAC99, OF FAC.		
2. Quercus nigra		<u>y</u>	fac	Total Number of Dominant		
3				Species Across All Strata: 9 (B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: 100 (A/B)		
6						
				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
8						
	30	= Total Cov	/er	OBL species x 1 =		
50% of total cover: <u>15</u>	20% of	total cover	- 6	FACW species x 2 =		
	20% 0	total cover	•	FAC species x 3 =		
Sapling/Shrub Stratum (Plot size: 30' radius)						
1. Salix nigra	30	у	obl	FACU species x 4 =		
2 Liquidamabar styraciflua	30	<u>y</u>	fac	UPL species x 5 =		
	15		100	Column Totals: (A) (B)		
3. Rubus argutus		<u>y</u>	fac	(-)		
4				Prevalence index = B/A =		
!						
5				Hydrophytic Vegetation Indicators:		
6				1 - Rapid Test for Hydrophytic Vegetation		
7						
i e				2 - Dominance Test is >50%		
8				3 - Prevalence Index is ≤3.01		
	75	= Total Cov	er/er	Problematic Hydrophytic Vegetation¹ (Explain)		
50% of total cover: 38	20% of	total cover	15			
<u> </u>				1.		
Herb Stratum (Plot size: 30' radius)				¹ Indicators of hydric soil and wetland hydrology must		
1. Juncus effusus	60	<u>y</u>	obl	be present, unless disturbed or problematic.		
2. Schedonorus arundinaceus	10	n	fac	Definitions of Four Vegetation Strata:		
3. Lonicera japonica	20	y	fac			
	- —			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or		
4. Ligustrum japonicus	20	у	fac	more in diameter at breast height (DBH), regardless		
5 Andropogon virginicus	5	n	fac	height.		
				}		
6				Sapling/Shrub - Woody plants, excluding vines, less		
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
8				11. 1. All 1		
				Herb – All herbaceous (non-woody) plants, regardless		
9				of size, and woody plants less than 3.28 ft tall.		
10				Woody vine - All woody vines greater than 3.28 ft in		
				height.		
11				neight.		
12	. 					
	115	= Total Cov	er er			
50% of total cover: 50	20% at	total cover	. 20			
	20 70 OI	LOCAL COVE	•			
Woody Vine Stratum (Plot size: 30' radius)						
1. Smilax glauca	10	у	fac			
2						
3						
4.						
5						
J				Hydrophytic		
	10	= Total Cov	⁄er	Vegetation		
50% of total cover:	20% of	total cover	:	Present? Yes X No		
			`	<u> </u>		
Remarks: (If observed, list morphological adaptations bel	OW).					
	•					

Sampling	Daint:	wet	2
Samound	Pant		

S	0	IL

Profile Desc	ription: (Describe	to the depti	needed to docum	nent the l	Indicator	or confirm	the absence of Indi	cators.)
Depth	Matrix			x Feature		1 - 2	Tandona	Demonto-
(inches)	Color (moist)	<u> </u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-4	10YR 5/3						silty loam	
4-14	10YR 5/2	80	7.5YR5/6	20	<u>c</u>	<u>m</u>	loam clay	
¹Type: C=Co	oncentration, D=Dep	letion, RM=I	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: PL=Po	re Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless other	wise not	ed.)		Indicators for Pro	blematic Hydric Solis ³ :
☐ Histosol	(A1)		Polyvalue Be	low Surfa	ce (S8) (L	.RR S, T, L	J) 🔲 1 cm Muck (A	9) (LRR O)
Histic Ep	ipedon (A2)		Thin Dark Su				2 cm Muck (A	10) (LRR S)
🔲 Black Hi			Loamy Mucky			l O)	77	ic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye	-	F2)		7-1	odplain Soils (F19) (LRR P, S, T)
1 1 1 1	Layers (A5)		✓ Depleted Mat		-0\			ight Loamy Soils (F20)
	Bodies (A6) (LRR P		Redox Dark				(MLRA 153) Red Parent M	
	cky Mineral (A7) (LF esence (A8) (LRR U		Depleted Dar Redox Depre					atenai (1F2) Dark Surface (TF12)
_	ck (A9) (LRR P, T)	,	Marl (F10) (L	-	0)		Other (Explain	•
_	Below Dark Surfac	e (A11)	Depleted Och	•	(MLRA 1	51)	Onlor (Explain	The restriction
	rk Surface (A12)	- (,	Iron-Mangan		-		T) ³ Indicators of	hydrophytic vegetation and
Coast Pr	aine Redox (A16) (R	ALRA 150A)						drology must be present,
_	lucky Mineral (S1) (L	RR O, S)	Delta Ochric		•			urbed or problematic.
	leyed Matrix (S4)		Reduced Ver					
	edox (S5)		Piedmont Flo					
	Matrix (S6)	· T 10	Anomalous B	right Loar	my Solls (120) (MLR	A 149A, 153C, 153D)	
	face (S7) (LRR P, S .ayer (if observed):							
Type:	ayer (II observed).							
	:hes):						Hydric Soil Preser	nt? Yes X No
	JIICS)						nydiic Soil Flesei	Kt 163 NO
Remarks:								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Calhoun Techn	ology Park	City/C	ounty: Ouachita		Sampling Date: 3-14-2015
Applicant/Owner: North Louisiana Economic Partnership				State: LA	Sampling Point: up 2
Investigator(s): Bill McAbee		Sectio	n, Township, Range:	S27 T18N, R1E	
Landform (hillslope, terrace, etc	:.): shoulder/hill slope	Local	relief (concave, conve	x, none): concave	Slope (%): 5-10%
Subregion (LRR or MLRA): LR					Datum:
Soil Map Unit Name: Ora-Sav	annah association, ger	ntly rolling		NWI classific	
Are climatic / hydrologic condition	ons on the site typical for	this time of year? Yo	es <u>X</u> No	(If no, explain in R	emarks.)
Are Vegetation, Soil	, or Hydrology	significantly disturt	oed? Are "Norm	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil				, explain any answe	
SUMMARY OF FINDING	S – Attach site ma	up showing sam	pling point locat	ions, transects	, important features, etc.
Hydrophytic Vegetation Prese	int? Vec X	No			
Hydric Soil Present?		No x	Is the Sampled Area		N- X
Wetland Hydrology Present?	Yes	No x	within a Wetland?	Yes	No X
HYDROLOGY					
Wetland Hydrology Indicato	rs:			=	tors (minimum of two required)
Primary Indicators (minimum				Surface Soil	• •
Surface Water (A1)		atic Fauna (B13)			getated Concave Surface (B8)
High Water Table (A2)		Deposits (B15) (LRR ogen Sulfide Odor (C		Drainage Pat Moss Trim Li	· · · · · · · · · · · · · · · · · · ·
Saturation (A3) Water Marks (B1)	— •	- '	ong Living Roots (C3)	_	Water Table (C2)
Sediment Deposits (B2)		ence of Reduced Iron		Crayfish Burr	
Drift Deposits (B3)		ent Iron Reduction in	• •	_	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin	Muck Surface (C7)		Geomorphic	Position (D2)
iron Deposits (B5)	U Othe	r (Explain in Remarks	s)	Shallow Aqui	tard (D3)
Inundation Visible on Aer				FAC-Neutral	` '
Water-Stained Leaves (B	9)			Sphagnum m	noss (D8) (LRR T, U)
Field Observations:	v 11 X	Bank (bankan)			
Surface Water Present?	Yes No X				
Water Table Present? Saturation Present?	Yes No X Yes No X			Hydrology Presen	t? Yes No ^X
(includes capillary fringe)					
Describe Recorded Data (stre	am gauge, monitoring we	ll, aerial photos, prev	vious inspections), if a	vailable:	
Remarks:					<u></u>

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

Sampling Point: up 1

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius)		Species?		Number of Dominant Species
1. Pinus taeda	65	<u>y</u>	fac	That Are OBL, FACW, or FAC: 5 (A)
2. Quercus nigra	5	n	fac	Total Number of Dominant
3. Liquidambar styraciflua	15	<u>n</u>	fac	Species Across All Strata: 7 (B)
4				
5.				Percent of Dominant Species That Are ORL FACW or FAC: 71 (A/B)
1				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8	~-			OBL species x 1 =
_		= Total Cov		FACW species x 2 =
	20% of	total cover	:	1
Sapling/Shrub Stratum (Plot size: 30' radius)				FAC species x 3 =
1. Ligustrum japonicus	25	<u>y</u>	fac	FACU species x 4 =
2.	-			UPL species x 5 =
3.				Column Totals: (A) (B)
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0¹
	25	= Total Cov	er	Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover:	20% of	total cover	•	Problematic Hydrophytic Vegetation (Explain)
Herb Stratum (Plot size: 30' radius)		1014. 0010,		1
1. Rubus argutus	15	у	fac	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
**	5	3		
2. Aesculus pavia			facu	Definitions of Four Vegetation Strata:
3. Ionicera japonica		у	facu	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
4. Smilax smalii	10	<u>y</u>	facu	more in diameter at breast height (DBH), regardless of
5				height.
6				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
	· 			Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine - All woody vines greater than 3.28 ft in
11	. ——			height.
12				
	40	= Total Cov	<i>е</i> г	
50% of total cover: 20		total cover		
Woody Vine Stratum (Plot size: 30' radius)				
1 Vitis rotundifolia	15	v	fac	
2 Smilax rotundifolia	10	y	fac	
2. Similax rounidiona		у	140	
3.				
4				
5				Hydrophytic
	25	= Total Cov	⁄ег	Vegetation
50% of total cover: 13		total cover		Present? Yes X No
Remarks: (If observed, list morphological adaptations beli			·	
Remarks. (II observed, list morphological adaptations bei	OW).			

Sam	nlina	Point:	up	1
Sam	Diina	Point:	чР	•

SOIL	S	0	1	L
------	---	---	---	---

Profile Desc	ription: (Describe	to the depth	needed to docum	nent the in	dicator	or confirm	the absence of	indicators.)	
Depth	Matrix			x Features		 	_		
(inches)	Color (moist)	<u>%</u> _	Color (moist)		Type ¹	Loc ²		Remarks	
0-2	10YR 5/2	100					organic loarny		
2-16	10YR 5/4	100					sandy loam		
									···
								<u> </u>	
		 -							
	ncentration, D=Depndicators: (Applie					ins.		=Pore Lining, M=Ma Problematic Hydric	
l <u> </u>	,	Capie IO ali L	RKS, uniess other Polyvalue Be			DD C T II	_	(A9) (LRR O)	, dons .
Histosol	ipedon (A2)		Thin Dark Su					(A10) (LRR S)	
Black Hi			Loamy Muck					/ertic (F18) (outside	MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye			·	Piedmont	Floodplain Soils (F19) (LRR P, S, T)
i 122	l Layers (A5)		Depleted Mat					s Bright Loamy Soils	(F20)
	Bodies (A6) (LRR F		Redox Dark		•		(MLRA	•	
	cky Mineral (A7) (L		Depleted Dar	1				nt Material (TF2) ow Dark Surface (TF	:12)
_	esence (A8) (LRR I ck (A9) (LRR P, T)	•1	Marl (F10) (L	•	,			ow Dark Surface (17 Diain in Remarks)	12)
_	Below Dark Surfac	e (A11)	Depleted Och		MLRA 15	1)	001 (
Thick Da	rk Surface (A12)		Iron-Mangan	ese Masse	s (F12) (L	RR O, P,	T) ³ Indicato	rs of hydrophytic veg	etation and
	airie Redox (A16) (U)		d hydrology must be	
	lucky Mineral (S1) (LRR O, S)	Delta Ochric		-	A 450D)		disturbed or problem	atic.
-	leyed Matrix (S4) edox (S5)		Reduced Ver Piedmont Flo						
	Matrix (S6)			-		-	A 149A, 153C, 15	3D)	
	face (S7) (LRR P,	S, T, U)	_	•	•	, ,		•	
Restrictive I	ayer (if observed)	:			· ·				
Туре:									
Depth (inc	:hes):		<u> </u>				Hydric Soil Pre	sent? Yes	_ No_ <u>x</u>
Remarks:					****				
41									
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WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Calhoun Technology Park	City/County: Ouac	hita	Sampling Date: 3-14-2015
Applicant/Owner: North Louisiana Economic Partnership		State: LA	
Investigator(s): Bill McAbee		Range: S35 T18N, R1E	
Landform (hillslope, terrace, etc.); Swale	Local relief (concav	e, convex, none): CONCAVE	Slope (%): 0%
Subregion (LRR or MLRA): LRR O Lat: 3	2.5083	Long: <u>-92.3412</u>	Datum:
Subregion (LRR or MLRA): LRR O Lat: 3 Soil Map Unit Name: Guyton-Rosebloom complex, frequen			
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation, Soil, or Hydrology signific			
Are Vegetation, Soil, or Hydrology natura	ly problematic? (I	f needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	wing sampling poin	t locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes X No			
Hydric Soil Present? Yes X No	15 the Camp		N-
Wetland Hydrology Present? Yes x No		tland? Yes X	NO
Remarks:		·	
Forested wetland with minor inclusions of herbaced			
from minor drainage flow east from the on site pon-	d and from accumula	ation of sheet flow trapp	ped between the railroad
and elevated pine uplands. Not all of the mapped	GY soils in this gene	ral area had positive hy	ydrology, this was found
only along the railroad corridor.			-
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	oply)	Surface Soll	
Surface Water (A1)			jetated Concave Surface (B8)
	(B15) (LRR U)	Drainage Pat	
	fide Odor (C1)	Moss Trim Li	
	cospheres along Living Ro	=	Water Table (C2)
	Reduced Iron (C4)	Crayfish Burr	
	eduction in Tilled Soils (C	— •	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Su	•	Geomorphic	
	n in Remarks)	☐ Shallow Aqui	· · · · · · · · · · · · · · · · · · ·
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	* *
Water-Stained Leaves (B9)		🔲 Sphagnum m	oss (D8) (LRR T, U)
Field Observations:		· · · · · · · · · · · · · · · · · · ·	
Surface Water Present? Yes X No Depth (ir	ches): 0-3"		
Water Table Present? Yes X No Depth (in			
Saturation Present? Yes X No Depth (in	ches): surface	Wetland Hydrology Presen	t? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial		one) if available:	
Describe recorded Data (Stream gauge, monitoring won, aonai	pilotos, pievious ilisposa	Olis), il avallabic.	
Remarks:			
	,		

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

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius)		Species?		Number of Dominant Species
1. Quercus phelios	40	<u>y</u>	facw	That Are OBL, FACW, or FAC: 9 (A)
2. Liquidambar styraciflua	30	<u>y</u>	fac	Total Number of Dominant
3. Salix nigra	10	<u>n</u>	obl	Species Across All Strata: 9 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	00	= Total Cov	er	OBL species x 1 =
50% of total cover: 40	20% of	total cover	16	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30' radius)				FAC species x 3 =
1. Cephalanthus occidentalis	20	у	obl	FACU species x 4 =
2. Liquidamabar styraciflua	10	у	fac	UPL species x 5 =
3. Tradica sebifera	10	y	fac	Column Totals: (A) (B)
4. Ligustrum japonicus	10	y	fac	
				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.01
		= Total Cov		Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover: 25	20% of	total cover:	10	
Herb Stratum (Plot size: 30' radius)				¹ Indicators of hydric soil and wetland hydrology must
1. Juncus effusus	_ 15	<u>y</u>	obl	be present, unless disturbed or problematic.
2. Sagitarria L.	15	<u>y</u>	obi	Definitions of Four Vegetation Strata:
3. polygonum spp	25	<u>y</u>	obi	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5				height.
6.				Sapling/Shrub - Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				Herb All herbaceous (non-woody) plants, regardless
9.				of size, and woody plants less than 3.28 ft tall.
10				
11				Woody vine – All woody vines greater than 3.28 ft in height.
12				I noight.
12.	55	= Total Cov		
50% of total cover: 28		total cover:		
	20% 0	total cover.	· 	
Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
5	· 			Hydrophytic
		= Total Cov		Vegetation Present? Yes X No
50% of total cover:	20% of	total cover	:	1030111
Remarks: (If observed, list morphological adaptations beli	ow).			

Sampling Point: wet 3

5 U	Ł	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of in	dicators.)
Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type Loc Texture	Remarks
0-2 10YR 6/2 100 silty clay	
2-14 10YR6/1 60 7.5YR5/6 40 c m clay	· · · · · · · · · · · · · · · · · · ·
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=	Pore Lining, M=Matrix.
	Problematic Hydric Solls ³ :
	(A9) (LRR O)
	(A10) (LRR S)
	ertic (F18) (outside MLRA 150A,B) loodplain Soils (F19) (LRR P, S, T)
	Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 15)	
	Material (TF2)
	w Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T) Mari (F10) (LRR U) Other (Explined Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	ain in Remarks)
	of hydrophytic vegetation and
	hydrology must be present,
	isturbed or problematic.
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153	ח
Dark Surface (S7) (LRR P, S, T, U)	<i>5</i> ,
Restrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soil Pres	ent? Yes X No
Remarks:	
1	

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Calhoun Technological	ogy Park	City/Co.	unty: Ouachita		Sampling Date: 3-14-2015
Applicant/Owner: North Louisian	na Economic Partne	ership		State: LA	Sampling Point: up 3
Investigator(s): Bill McAbee		Section,	. Township, Range: S	35 T18N, R1E	
Landform (hillslope, terrace, etc.):	terrace	Local re	elief (concave, convex,	none): none	Slope (%): 0-2%
Subregion (LRR or MLRA): LRR	0	Lat. 32.5082	Long:	92.3415	Datum:
Soil Map Unit Name: Ora-Savan	nah association roll	ling		NWI classifi	cation: upland
Are climatic / hydrologic conditions	s on the site typical for	this time of year? Yes	<u>x</u> No	(If no, explain in I	Remarks.)
Are Vegetation, Soil	, or Hydrology	significantly disturbe	ed? Are "Norma	l Circumstances"	present? Yes X No
Are Vegetation, Soil				explain any answ	
SUMMARY OF FINDINGS				ons, transect	s, important features, etc.
Hydrophytic Vegetation Present?	, Ves X	No			
Hydric Soil Present?	Yes	No X	s the Sampled Area		v
Wetland Hydrology Present?	Yes	No x	within a Wetland?	Yes	No <u>X</u>
Remarks:			. =	·	
Upland pine forest.					
Opidita pirio totoca					
HYDROLOGY					
Wetland Hydrology Indicators:	•	,		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of o	one is required; check a	all that apply)		Surface Soi	Cracks (B6)
Surface Water (A1)	Aqua	atic Fauna (B13)		Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)	П .	Deposits (B15) (LRR L	(ע)		atterns (B10)
Saturation (A3)		ogen Sulfide Odor (C1)	·	Moss Trim I	
Water Marks (B1)	Oxidi:	ized Rhizospheres alor	ng Living Roots (C3)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)		ence of Reduced Iron (Crayfish Bu	rrows (C8)
Drift Deposits (B3)		ent Iron Reduction in Ti		Saturation \	fisible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	☐ Thin i	Muck Surface (C7)		Geomorphic	Position (D2)
iron Deposits (B5)	☐ Other	r (Explain in Remarks)	1	Shallow Aqu	uitard (D3)
Inundation Visible on Aerial	Imagery (B7)			FAC-Neutra	il Test (D5)
Water-Stained Leaves (B9)				Sphagnum :	moss (D8) (LRR T, U)
Field Observations:					
Surface Water Present? Y	/es No_ <u>X</u> [Depth (inches):			
Water Table Present? Y	/es No_X [Depth (inches):			
	/es No_ <u>x</u> [Depth (inches):	Wetland I	Hydrology Prese	nt? Yes No X
(includes capillary fringe) Describe Recorded Data (stream	n galige monitoring we	all aerial photos, previ	ous inspections), if av	ailahle:	
Describe Noosiaca Zata (a	1 gaage,e	II, Goina pirotos, p	odo mopositivi,	andoro.	
Remarks:				·	· · · · · · · · · · · · · · · · · · ·
Noniano.					
1					
1					•

VEGETATION	(Four Strata)	- Use scientific	names of plants
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50% of total cover: 50

50% of total cover:

50% of total cover: ___

<u>Tree Stratum</u> (Plot size: _30' radius)

Sapling/Shrub Stratum (Plot size: 30' radius)

Herb Stratum (Plot size: 30' radius)

1 Pinus taeda

2 Liquidambar styraciflua

1. Ligustrum japonicus

Absolute Dominant Indicator

fac

у

100 = Total Cover

__ 20% of total cover: 20

50 = Total Cover

0 = Total Cover __ 20% of total cover: __

10 = Total Cover

20% of total cover:

50% of total cover: _____ 20% of total cover. ___

20 y

80

Sampling Point: up 3 Dominance Test worksheet: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species 100 That Are OBL. FACW, or FAC: ___ (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = ____ FACW species _____ x 2 = ____ FAC species ____ x 3 = ____ FACU species _____ x 4 = ____ UPL species _____ x 5 = ____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% __ 3 - Prevalence Index is ≤3.0¹ ___ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in, (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.

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

Woody Vine Stratum (Plot size: 30' radius)

2.____

1. Vitis rotundifolia

Yes X No ____

Hydrophytic

Vegetation

Present?

Sampling	Point:	up 3

JUIL

Profile Des	cription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence of Indic	ators.)
Depth (inches)	Matrix Color (moist)	 -	Redo Color (moist)	x Features %	_Type¹_	Loc ²	Texture	Remarks
0-2	10YR 5/2	100	<u>Color (moist)</u>		<u> 19be</u>	LOC	organic loamy	Nomars
2-16	10YR 5/4	100					sandy loam	
2-10	10110374							
				. ——				
								
		 .						
¹Type: C=C	oncentration, D=De	oletion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.	² Location: PL=Por	e Lining, M=Matrix.
Hydric Soll	Indicators: (Applic	able to all l	RRs, unless other	rwise note	ed.)		Indicators for Prol	olematic Hydric Soils ³ :
Histosol			Polyvalue Be					
	pipedon (A2)		Thin Dark Su				2 cm Muck (A1	
: 	istic (A3) en Sulfide (A4)		Loamy Muck	-	-	(0)		c (F18) (outside MLRA 150A,B) dplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma		1 2)			ght Loamy Soils (F20)
	Bodies (A6) (LRR F	P, T, U)	Redox Dark	Surface (F	6)		(MLRA 153B)
	ucky Mineral (A7) (L		Depleted Da				Red Parent Ma	
	resence (A8) (LRR L	١)	Redox Depre		3)			Park Surface (TF12)
	uck (A9) (LRR P, T) d Below Dark Surfac	·e (Δ11)	Marl (F10) (L Depleted Oc	•	MIRA 14	54)	U Other (Explain	in Remarks)
	ark Surface (A12)	,	Iron-Mangan	-			T) ³ Indicators of	hydrophytic vegetation and
=	raine Redox (A16) (MLRA 150A						rology must be present,
=	Mucky Mineral (S1) (LRR O, S)	Delta Ochric		-			rbed or problematic.
_	Gleyed Matrix (S4)		Reduced Ver					
	Redox (S5) d Matrix (S6)		Piedmont Flo			-	9A) A 149A, 153C, 153D)	
_	rface (S7) (LRR P,	S, T, U)	Alonialous L	Angric Louis	ily Colla (i	20) (MEIL	A 140A, 1000, 1000)	
	Layer (if observed)							· · · · · · · · · · · · · · · · · · ·
Type:			<u> </u>					
Depth (in	ches):						Hydric Soil Present	? Yes No_X
Remarks:								
								į