

WETLANDS INVESTIGATION REPORT

I-20 South Tract Highway 594 and Interstate 20 Ouachita Parish, Louisiana

Prepared for

Harrod and Harrod Monroe, Louisiana

Prepared by McAbee Wetland Services 655 Meadowbrook Road Jackson, MS 39206

December 5, 2012

INTRODUCTION

A formal investigation for wetlands and Other Waters of the U.S. was conducted for an approximately 232 acre tract of farmland located southwest of the intersection of I-20 Highway 594 (Exhibits 1, 2 and 3). The investigator was Mr. Bill McAbee with McAbee Wetland Services, and the site was investigated on November 30, 2012. Methodology of the investigation followed guidelines set forth in the 1987 COE Wetland Delineation Manual and the Regional Supplement Manual for the Atlantic and Gulf Coastal Plain Region.

BACKGROUND

The subject property is almost 100% homogeneous bottomland hardwood forest. Part of the Russell Sage Wildlife Management Area is located less than one-quarter mile to the east of the southeastern corner of the subject property. A Waste Management facility was located adjacent and south of the subject property. Bennett Bayou crosses through the site beginning at the southwest corner heading east and then turning north dissecting the subject property as it continues north under I-20 (Exhibits 4 and 5). Bennett Bayou has been channelized and straightened along most of its length through the subject property with spoil located on both sides of the channel. The spoil ranges from approximately 10-15 feet above the bank top and from 30-40 feet wide.

According to the USDA Quadrangle mapping there was a remnant of Gourd Bayou along a small section of the very southern section of the subject property. This remnant channel was most likely significantly impacted by the activities on the adjacent landfill which borders the subject property to the south. There were two ponds located on the north portion of the property that were created from borrow areas during the construction of I-20 (Exhibits 6 and 7).

Improvements on the subject property included a gravel road that leads from Highway 594 to the easternmost pond. Adjacent to the larger pond, at the end of the gravel road, there was a historic fill area that may have been associated with a former oil or gas well facility (Exhibit 8). There was and overhead transmission line row and a gas pipeline row located along the far west side of the property (Exhibit 9 and 10). Both of these utilities run north and south across the entire site. There are abandoned dirt roads throughout the subject property that were apparently used as hunting access roads; most of which are not passable by anything other than an ATV.

The forest was fairly homogeneous due to the flat topography (Exhibits 11 and 12). The dominant canopy species were water oak (*Quercus nigra*), willow oak (*Q. phellos*), delta post oak (*Q. stellata*), cherry bark oak (*Q. pagoda*), green ash (*Fraxinus pennsylvanica*), hackberry (*Celtis laevigata*), water hickory (*Carya aquatic*), and cedar elm (*Ulmus crassifolia*) and winged elm (*Ulmus alata*). Midstory and herbaceous species were minimal due to the dense canopy with the exception of dwarf palmetto (*Sabal minor*).

The natural gas pipeline ROW is regularly maintained with only short grasses and it is apparently used as a property access road at times. The overhead power transmission line ROW is more overgrown but still maintained either annually or semi-annually with no woody vegetation noted, other than some small sapling black willows (*Salix nigra*).

The Ouachita Soil Survey indicates that the soils on the site were 92% Perry Clay, occasionally flooded (Exhibit 13). The Perry Clay, occasionally flooded soils are considered a hydric soil.

A review of the USFWS National Wetland Inventory mapping showed most of the tract as Palustrine Forested, broad-leaved deciduous vegetation, temporarily flooded (PFOIA, Exhibit 14).

FINDINGS

<u>Wetlands:</u> Based on the site reconnaissance, and a review of CIR photography, historical aerial photography, USFWS National Wetland Inventory mapping, the USDA Soil Survey for Ouachita Parish, and 7.5 minute topographic quadrangle maps, and a site visit, most of the subject property is forested wetlands. Positive hydrological conditions, vegetation and hydric soil characteristics were clear and distinct throughout the site.

Any impact, permanent or temporary, in a wetland must be permitted through the US Army Corps of Engineers.

<u>Uplands:</u> The areas of exception were the borrow area from dredging of Bennett Bayou, the developed road and abandoned oil/gas site pad. The uplands were noted as such due to historic fill material and continued maintenance. A representative data sheet was prepared for the borrow area uplands adjacent to Bayou Bennett, however the roads and abandoned pad site were considered disturbed and data sheets were not completed since there was rock/gravel fill and no vegetation.

Gravel access road = 0.84 acres
Gas well pad site = 0.62 acres
Borrow from Bayou Bennett = 5.5 acres

Total Uplands = 6.96 acres

Other Waters of the US: Bayou Bennett is a manipulated perennial stream which extends through the property for approximately 4,029 feet. The nearest Navigable Waterway is Bayou Lafourche which is approximately 5.8 river miles away and 3.8 aerial miles away. The average high water mark was three feet and the average width at the ordinary high water mark was approximately 30 feet. The bank slopes were typically 3:1 or greater with defined bed and bank. At the time of the visit the water was below the ordinary high water mark and there was no flow noted. The bottom was consolidated silt with riffles and pools created by debris and scouring. There was little vegetation.

There were two ponds noted on the site. These ponds were created back in the 1960s from borrow used to build Interstate 20. The banks are 3:1 or greater with little or no emergent or submergent wetland fringe. The eastern pond was 6.4 acres in size and the western pond was 4.0 acres in size.

Other Waters of the US are regulated by the US Army Corps of Engineers and a permit must be acquired before impacting Bennett Bayou or either of the ponds.

Exhibit 15 shows the wetlands, uplands, and "other waters" located within the subject property limits. Wetland Data Forms are located in the Appendix.

Sincerely,

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

William C. Methe

Jackson, MS 39206 wmcabee@mbakercorp.com 601.842.8938

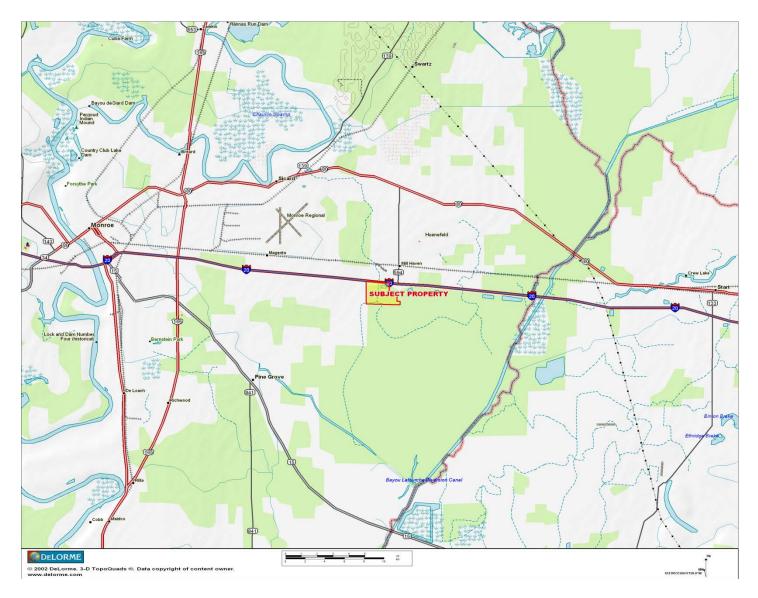


EXHIBIT 1. GENERAL LOCATION MAP

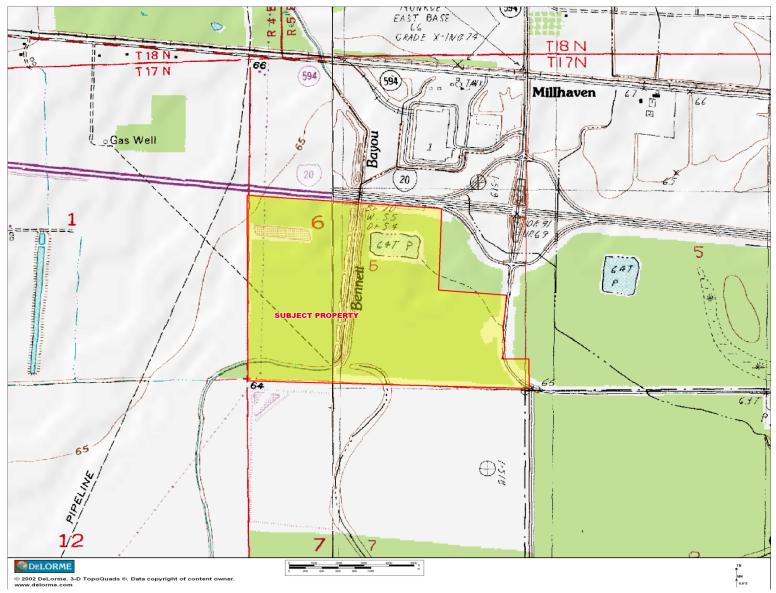


EXHIBIT 2. SITE LOCATION MAP



EXHIBIT 3. SUBJECT PROPERTY ON GOOGLE EARTH (2009 IMAGERY)



EXHIBIT 4. BENNETT BAYOU SOUTHWEST CORNER



EXHIBIT 5. BENNETT BAYOU NORTH NEAR I-20

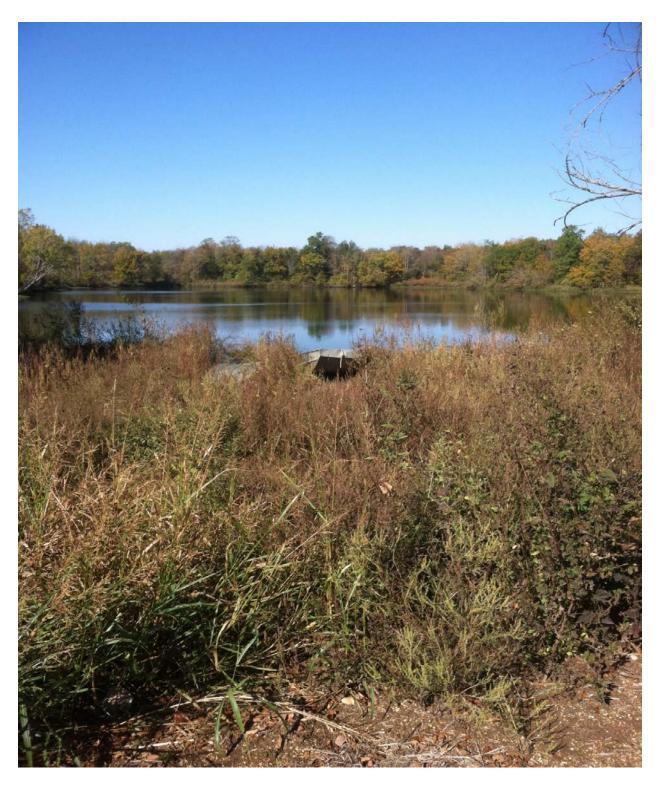


EXHIBIT 6. EASTERN POND



EXHIBIT 7. WESTERN POND.



EXHIBIT 8. OLD GAS/OIL WELL SITE



EXHIBIT 9. POWERLINE TRANSMISSION ROW.



EXHIBIT 10. NATURAL GAS PIPELINE ROW



EXHIBIT 11. BOTTOMLAND HARDWOOD FOREST



EXHIBIT 12. BOTTOMLAND HARDWOOD FOREST

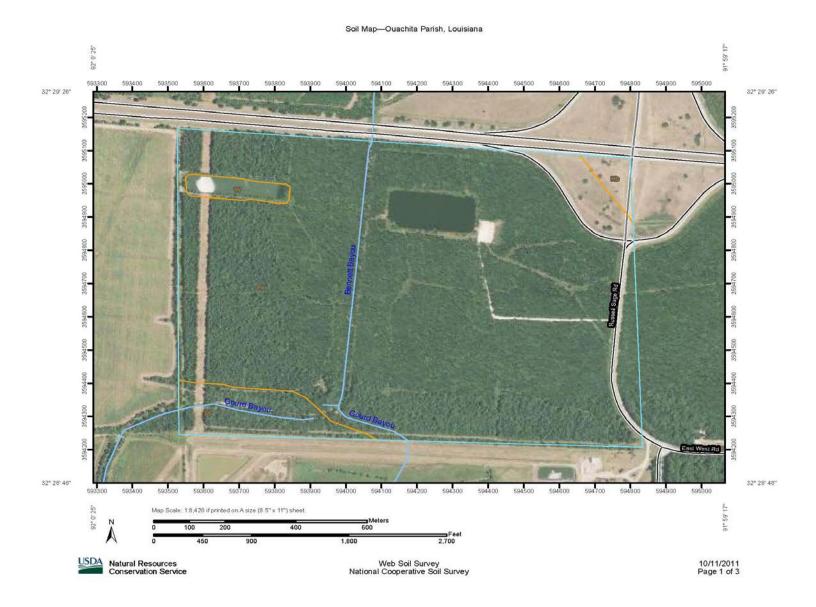


EXHIBIT 13. 1 SOIL SURVEY MAP

Map Unit Legend

Ouachita Parish, Louisiana (LA073)					
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
Hb	Hebert silt loam	3.4	1.2%		
Pe	Perry clay, occasionally flooded	261.3	91.8%		
Pr Portland clay		15.4	5.4%		
w	Water	4.4	1.5%		
Totals for Area of Interest		284.6	100.0%		



EXHIBIT 14. USFWS NATIONAL WETLAND INVENTORY MAP

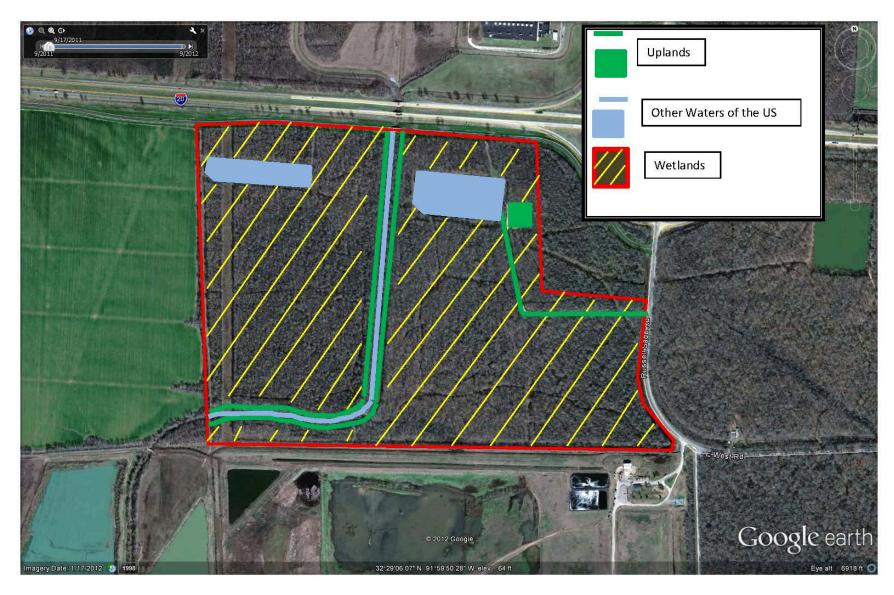


EXHIBIT 15. WETLANDS MAP

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: I-20 South		City/Co	ounty: Ouachita		_ Sampling Date:	11/30/2012
Applicant/Owner: Harrod and Harro	d, LLC			State: LA	_ Sampling Point:	Wetland #1
nvestigator(s): Mr. Bill McAbee Section, Township, Range: T17N R5E S6						
Landform (hillslope, terrace, etc.):					Slo	pe (%): 0-2
Subregion (LRR or MLRA):			•	, -		
Soil Map Unit Name: Perry Clay Occ				NWI classif		
Are climatic / hydrologic conditions on the						
Are Vegetation, Soil, or H	• •	•		ormal Circumstances"	ŕ	✓ No
Are Vegetation, Soil, or H	-			ded, explain any answ		
SUMMARY OF FINDINGS – At						eatures, etc.
Hadanahadia Vanatadia a Basasa 10				<u> </u>	<u> </u>	
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes ✓ N	No	Is the Sampled A		,	
Wetland Hydrology Present?	,	No	within a Wetland	? Yes <u>v</u>	No	_
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:				Secondary Indic	cators (minimum o	f two required)
Primary Indicators (minimum of one is r	equired check all	that apply)		·	il Cracks (B6)	rtwo required)
Surface Water (A1)		iter-Stained Leaves	: (B9)		egetated Concave	Surface (B8)
High Water Table (A2)		uatic Fauna (B13)	(20)	✓ Drainage P		Curiaco (Bo)
✓ Saturation (A3)		rl Deposits (B15) (I	LRR U)	Moss Trim		
✓ Water Marks (B1)		drogen Sulfide Odd			n Water Table (C2))
Sediment Deposits (B2)	✓ Oxi	idized Rhizosphere	s on Living Roots	(C3) Crayfish Bu	rrows (C8)	
Drift Deposits (B3)	Pre	esence of Reduced	Iron (C4)	✓ Saturation \	Visible on Aerial In	nagery (C9)
Algal Mat or Crust (B4)		cent Iron Reduction			c Position (D2)	
Iron Deposits (B5)	· · · · · · · · · · · · · · · · · · ·	n Muck Surface (C	•	Shallow Aq		
✓ Inundation Visible on Aerial Imager	y (B7) Oth	ner (Explain in Rem	narks)	FAC-Neutra	al Test (D5)	
Surface Water Present? Yes	No <u></u> ✓ De	epth (inches):				
	No <u>√</u> De					
	/ No De		Wetla	and Hydrology Prese	ent? Yes ✓	No
(includes capillary fringe)	<u> </u>	,		,		
Describe Recorded Data (stream gauge	e, monitoring well,	aerial photos, prev	vious inspections),	if available:		
Remarks:						
Remarks.						
1						

Sampling P	aint. \	Net	land	#1
Sampling P	oint. I	vvci	.iai iu	#

00.00	Absolute	Dominant		Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot sizes: <u>30x30</u>)		Species?		Number of Dominant Species	
Quercus phellos	25	yes	<u>FACW</u>	That Are OBL, FACW, or FAC: (A)	
Quercus nigra	20	yes	<u>FAC</u>	Total Number of Dominant	
3. Gleditsia triacanthos	20	yes	<u>FAC</u>	Species Across All Strata: (B)	
4. Celtis laevigata	20	yes	FAC	Percent of Dominant Species	
5. Ulmus crassifolia	15	no	FAC	That Are OBL, FACW, or FAC: (A/E	3)
6					′
7				Prevalence Index worksheet:	
		= Total Co	ver	Total % Cover of: Multiply by:	
Sapling Stratum (30x30)				OBL species x 1 =	
1				FACW species x 2 =	
2				FAC species x 3 =	
3				FACU species x 4 =	
4				UPL species x 5 =	
5				Column Totals: (A) (B)
6					
7				Prevalence Index = B/A =	
		= Total Co	ver	Hydrophytic Vegetation Indicators:	
Shrub Stratum (30x30)				Dominance Test is >50%	
1. Sabal Minor	15	yes	FAC	Prevalence Index is ≤3.0 ¹	
2				Problematic Hydrophytic Vegetation ¹ (Explain)	
3					
4.				¹ Indicators of hydric soil and wetland hydrology must	
5				be present.	
6					-
7				Definitions of Vegetation Strata:	
		= Total Co	ver	3	
Herb Stratum ()		= 10tai 00	VEI	Tree – Woody plants, excluding woody vines,	
1				approximately 20 ft (6 m) or more in height and	
2.				3 in. (7.6 cm) or larger in diameter at breast	
3.				height (DBH).	
4.				Conling Westerland and discount of the	
5				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
6.				than 3 in. (7.6 cm) DBH.	
7				than o m. (1.6 om) bbm	
8				Shrub – Woody plants, excluding woody vines,	
				approximately 3 to 20 ft (1 to 6 m) in height.	
9					
10				Herb – All herbaceous (non-woody) plants, including	g
11				herbaceous vines, regardless of size. Includes	
12				woody plants, except woody vines, less than approximately 3 ft (1 m) in height.	
Woody Vine Stratum ()		= Total Co	ver	approximately 3 ft (1 fil) in fleight.	
				Woody vine - All woody vines, regardless of heigh	nt.
1					
2					
3					
4			-	Hydrophytic	
5				Vegetation	
	_0	= Total Co	ver	Present? Yes No	
Remarks: (If observed, list morphological adaptations by	pelow).				_
-					
					1

SOIL Sampling Point: Wetland #1

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the	indicator	or confirm	m the absence	of indicator	s.)	
Depth	Matrix		Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	0	Remarks	in ton in als
0-8	10YR 4/2	90	10YR 4/5	_ 10	<u></u>	<u>M</u>	silty clay	Some da	rk organic	in top inc
8-16	10YR 5/2	80	7.5YR 5/6	20	С	M	clay			
					_					
										_
		_			-					
										_
¹Type: C=Co	ncentration D=De	oletion RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	irains ² l c	cation: PL=F	Pore Lining M	1-Matrix
Hydric Soil I		piction, raivi	-reduced Matrix, O	0-0010	a or oout	od Odrid O		for Problem		
Histosol	(A1)		Polyvalue B	elow Surfa	ace (S8) (L	RR S, T,	U) 1 cm l	Muck (A9) (LF	RR O)	
	pipedon (A2)		Thin Dark S					Muck (A10) (L		
Black His			Loamy Muck			R O)				/LRA 150A,B)
	n Sulfide (A4) I Layers (A5)		Loamy Gley ✓ Depleted Ma		(F2)			iont Floodplai alous Bright L		(LRR P, S, T)
	Bodies (A6) (LRR I	P, T, U)	Redox Dark		F6)			RA 153B)	odiny cons (i	20)
	cky Mineral (A7) (L		Depleted Da	ark Surfac	e (F7)			arent Materia	l (TF2)	
	esence (A8) (LRR I	J)	Redox Depr		⁻ 8)					2) (LRR T, U)
	ck (A9) (LRR P, T) Below Dark Surface	oo (A11)	Marl (F10) (I		/MIDA 1	E4\	Other	(Explain in R	emarks)	
	ark Surface (A12)	Se (ATT)	Iron-Mangar				. T) 3 _{India}	ators of hydro	nhutia va sate	ation and
		MLRA 150	A) Umbric Surfa				illaio	tland hydrolog		
	lucky Mineral (S1) (LRR O, S)							, p.	
	leyed Matrix (S4)		Reduced Ve							
	edox (S5) Matrix (S6)		Piedmont FI Anomalous					: 153D)		
	rface (S7) (LRR P,	S, T, U)	/	Drigin Loc	arry conc (. 20) (2 .		, .002,		
Restrictive L	ayer (if observed)):								
Туре:									/	
Depth (inc	ches):						Hydric Soil	Present?	Yes	No
Remarks:										

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 1-20 South	City/County: Oua	chita	Sampling Date: 11/30/2012
Applicant/Owner: Harrod and Harrod, LLC		State: LA	Sampling Point: Upland #1
• •		, Range: T17N R5E S6	
Landform (hillslope, terrace, etc.):			
Subregion (LRR or MLRA): Lat: N			
Soil Map Unit Name:			
Are climatic / hydrologic conditions on the site typical for this time of			
Are Vegetation, Soil, or Hydrology signification, signification			" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	y problematic? ((If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling poi	nt locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No			
Hydric Soil Present? Yes No ✓			No
Wetland Hydrology Present? Yes No	within a We	etiand? Yes	No <u>√</u>
Remarks:			
this upland feature was created from spoil resulting	from dredging of E	Bennett Bayou. Based	I on review of historical
photography and age of trees growing on the spoil		•	
	,		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	oly)	Surface So	oil Cracks (B6)
Surface Water (A1) Water-Stair	ned Leaves (B9)	Sparsely V	egetated Concave Surface (B8)
High Water Table (A2) Aquatic Fa	una (B13)	Drainage F	Patterns (B10)
	sits (B15) (LRR U)		Lines (B16)
	Sulfide Odor (C1)		n Water Table (C2)
	hizospheres on Living F		urrows (C8)
	of Reduced Iron (C4)		Visible on Aerial Imagery (C9)
<u> </u>	Reduction in Tilled So	• • - •	ic Position (D2)
Iron Deposits (B5) Thin Muck	, ,	Shallow Ac	
Inundation Visible on Aerial Imagery (B7) Other (Exp Field Observations:	lain in Remarks)	FAC-Neutr	ral Test (D5)
Surface Water Present? Yes No _ ✓ Depth (inc	hes).		
Water Table Present? Yes No _ ✓ Depth (inc			
Saturation Present? Yes No Depth (inc		Wetland Hydrology Pres	ent? Yes No✓
(includes capillary fringe)			· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspect	tions), if available:	
Remarks:			
the high point on the bank ranges from 10-15 feet a	bove the adjacent	elevation.	

Sampling Point:	Upland #1

00.00	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot sizes: 30x30)		Species?		Number of Dominant Species	
Celtis laevigata	50	yes	FAC	That Are OBL, FACW, or FAC:	(A)
2. Gleditsia triacanthos	20	yes	FAC	Total Number of Dominant	
3. Ulmus crassifolia	20	yes	FAC		(B)
4					, ,
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
6.				That Ale OBE, I AOW, OF AO.	(700)
7.				Prevalence Index worksheet:	
		= Total Co	VAr	Total % Cover of: Multiply by:	_
Sapling Stratum ()		= 10tai 00	VCI	OBL species x 1 =	_
1.				FACW species x 2 =	_
2.				FAC species x 3 =	
3.				FACU species x 4 =	
				UPL species x 5 =	
4				Column Totals: (A)	
5				Column rotals (A)	_ (D)
6				Prevalence Index = B/A =	
7				Hydrophytic Vegetation Indicators:	_
Shrub Stratum ()	-	= Total Co	ver	Dominance Test is >50%	
				Prevalence Index is ≤3.0 ¹	
1				Problematic Hydrophytic Vegetation¹ (Explain	2)
2.				1 Toblematic Tryarephytic Vegetation (Explain	''
3				¹ Indicators of hydric soil and wetland hydrology m	vuot
4				be present.	iusi
5				·	
6					
7				Definitions of Vegetation Strata:	
11.1.00		= Total Co	ver	T W	
Herb Stratum ()				Tree – Woody plants, excluding woody vines,	
1				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast	
2				height (DBH).	
3					
4				Sapling – Woody plants, excluding woody vine	s,
5				approximately 20 ft (6 m) or more in height and le	ess
6				than 3 in. (7.6 cm) DBH.	
7					
8				Shrub – Woody plants, excluding woody vines,	
9.				approximately 3 to 20 ft (1 to 6 m) in height.	
10				Horb All harbassass (non succedis) plants in al	
11.				Herb – All herbaceous (non-woody) plants, includer herbaceous vines, regardless of size. Includes	uaing
12				woody plants, except woody vines, less than	
·		= Total Co		approximately 3 ft (1 m) in height.	
Woody Vine Stratum ()		= 10tai 00	VCI		
1				Woody vine - All woody vines, regardless of h	neight.
2.					
3.					
4				Hydrophytic	
5				Vegetation Present? Yes No	
	_0	= Total Co	ver	Fresent: 1esNO	
Remarks: (If observed, list morphological adaptations bel	ow).				

SOIL Sampling Point: Upland #1

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the	indicator	or confire	m the absence of indi	cators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 5/3	100			<u>C</u>	M	loamy s	
8-16	10YR 5/6	80	7.5YR 5/6	20	C	M	loamy o	
				_				
								_
	-		-		_			
1- 0 0							2,	
Hydric Soil		oletion, RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G		PL=Pore Lining, M=Matrix. bblematic Hydric Soils ³ :
Histosol			Polyvalue Be	alow Surfa	ne (S8) (I	DD C T		•
	pipedon (A2)		Thin Dark S				2 cm Muck (A	
	stic (A3)		Loamy Muck					tic (F18) (outside MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy Gley					odplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma	. ,				right Loamy Soils (F20)
	Bodies (A6) (LRR F		Redox Dark	•	,		(MLRA 153	
	ıcky Mineral (A7) (L esence (A8) (LRR I		Depleted Da Redox Depreted				Red Parent M	Dark Surface (TF12) (LRR T, U)
	ick (A9) (LRR P, T)	,	Marl (F10) (I		0)		Other (Explain	
	d Below Dark Surface	ce (A11)	Depleted Oc		(MLRA 1	51)	Other (Explain	Till Rolland)
	ark Surface (A12)		Iron-Mangar				, T) ³ Indicators of	hydrophytic vegetation and
			A) Umbric Surfa				wetland hy	drology must be present.
	Mucky Mineral (S1) (Bleyed Matrix (S4)	LRR 0, 5)	Delta Ochric Reduced Ve				1	
	Redox (S5)		Piedmont Fl					
	Matrix (S6)						RA 149A, 153C, 153D))
	rface (S7) (LRR P,							
Restrictive I	Layer (if observed)	:						
Type:								./
Depth (inc	ches):						Hydric Soil Presei	nt? Yes No
Remarks:								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: I-20 South	City/County: Oua	chita	Sampling Date: 11/30/2012
Applicant/Owner: Harrod and Harrod, LLC			Sampling Point: Upland #2
	Section, Township		
Landform (hillslope, terrace, etc.):			Slope (%): 0-2
Subregion (LRR or MLRA):			
Soil Map Unit Name:			
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes N	lo (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes No✓
Are Vegetation, Soil, or Hydrology		If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site m			
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No Is the Sample within a We		No _ √
Wetland Hydrology Present? Yes	No ✓		
This is apparently an old gas/oil well pad s still exist in the top 18 of the soil profile. T			•
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; chec	k all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Pa	atterns (B10)
Saturation (A3)	Marl Deposits (B15) (LRR U)	Moss Trim L	ines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living F	Roots (C3) Crayfish Bur	rrows (C8)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Saturation V	isible on Aerial Imagery (C9)
	Recent Iron Reduction in Tilled So	ils (C6) Geomorphic	Position (D2)
	Thin Muck Surface (C7)	Shallow Aqu	
	Other (Explain in Remarks)	FAC-Neutra	l Test (D5)
Field Observations:			
	Depth (inches):		
	Depth (inches):		
(includes capillary fringe)	Depth (inches):	Wetland Hydrology Prese	nt? Yes No
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous inspect	ions), if available:	
Remarks:			
There was a sure in directors of manager store.	dia a contanta amanda da manana	al aita a a a tha a al al a a al a	ita lautus ta taubatantial an
There was some indicators of recent stand	aing water in smail depresse	d sites on the old pad s	site, but not substantial or
indicative of wetland habitat.			

Sampling	Point	Upland #2
Sambilliu	I UIIIL.	Op.aa.//_

Tana Chantana (Diataina 20v20	Absolute	Dominant Indic	
<u>Tree Stratum</u> (Plot sizes: <u>30x30</u>) 1. sorghum halepense		<u>Species?</u> Sta	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant Species Across All Strata: (B)
4.			
5.			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6.			That Are Obl., FACW, OF FAC. (A/b)
7.			Prevalence Index worksheet:
		= Total Cover	Total % Cover of: Multiply by:
Sapling Stratum ()			OBL species x 1 =
1			FACW species x 2 =
2			FAC species x 3 =
3			FACU species x 4 =
4			UPL species x 5 =
5			(A) (B)
6			Prevalence Index = B/A =
7			Hydrophytic Vegetation Indicators:
Charille Chrotisms (= Total Cover	Dominance Test is >50%
Shrub Stratum ()			Prevalence Index is ≤3.0 ¹
1			Problematic Hydrophytic Vegetation ¹ (Explain)
2			Trobonialo riyaropriyao vogolalion (Explain)
3			Indicators of hydric soil and wetland hydrology must
4			be present.
5			
6			Definitions of Vegetation Strata:
7		= Total Cover	Dominions of Vogetation Strata.
Herb Stratum ()		= Total Gover	Tree – Woody plants, excluding woody vines,
1			approximately 20 ft (6 m) or more in height and
2			3 in. (7.6 cm) or larger in diameter at breast
3			height (DBH).
4			
5			approximately 20 ft (6 m) or more in height and less
6			than 3 in. (7.6 cm) DBH.
7			
8			Shrub – Woody plants, excluding woody vines,
9			approximately 3 to 20 ft (1 to 6 m) in height.
10			Herb – All herbaceous (non-woody) plants, including
11			
12			woody plants, except woody vines, less than
W 1 15 0 1 1		= Total Cover	approximately 3 ft (1 m) in height.
Woody Vine Stratum ()			Woody vine – All woody vines, regardless of height.
1			VVOOdy Virie – All woody viries, regardless of fielgrit.
2			
3			—
4			Hydrophytic
5			Vegetation Present? Yes No
	<u>U</u>	= Total Cover	Present? Yes No
Remarks: (If observed, list morphological adaptations b	,		
Jonnson grass was the dominant plant but v	egetation w	as recently d	isturbed as well as historically disturbed by oil/gas

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activities.

SOIL Sampling Point: Upland #2

Profile Des	cription: (Describe t	o the depth	needed to docu	ment the i	indicator	or confirm	the absence of	indicators.)
Depth Matrix Redox Features							- .	5
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	Texture	Remarks
-							gravel	
,								
-								
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :								
_			Daharaha D	.l 0f.	(CO) (I	DD C T II		•
Histoso	,		Polyvalue Be					k (A9) (LRR O) k (A10) (LRR S)
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O)							2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S,								
Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20)								
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (M							(MLRA	153B)
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)						Red Parent Material (TF2)		
Muck Presence (A8) (LRR U) Redox Depressions (F8)						•	low Dark Surface (TF12) (LRR T, U)	
1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)								
TILL D. L.O. (1940)								
Coast Brainin Boday (AG) (MI BA 450A) Limbrin Curfoce (F42) (I BB B T II)								
— Coast Prairie Redox (A16) (MLRA 150A) — Umbric Surface (F13) (LRR P, 1, 0) wetland hydrology must be present. — Sandy Mucky Mineral (S1) (LRR O, S) — Delta Ochric (F17) (MLRA 151)								
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)								
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)								
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)								
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed):								
Type:								
	nches):						Hydric Soil Pre	esent? Yes No
							Hydric 30ii Fre	esent: 165 NO
Remarks:								
soils were dominated by gravel/sand/silt soils that were part of original and subsequent fill materials for the histoic								
oil/gas pad site.								