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December 10, 2013

U.S. Army Engineer District, New Orleans Regulatory Branch **ATTN: Martin Mayer** 7400 Leake Avenue New Orleans, LA 70118 Exhibit GG. Livingston Industrial Park Wetlands Delineation Report & Transmittal Letter

RE: WETLAND DELINEATION REPORT LEDC INDUSTRIAL PARK 77-ACRE TRACT LIVINGSTON PARISH, LOUISIANA

Dear Mr. Mayer:

On behalf of, the Baton Rouge Area Chamber and Livingston Economic Development Council, GEC is pleased to forward one copy of the LEDC Industrial Park 77-Acre Tract Wetland Delineation Report. The enclosed document presents the habitat data gathered and a delineation of the wetland habitats within the study area.

GEC is requesting an Approved Jurisdictional Determination on behalf of the Baton Rouge Area Chamber.

Thank you for your attention in this project. Please do not hesitate to contact me at (225) 612-4175 or Imccauley@gecinc.com if you have any comments or require additional information.

Sincerely,

Leonard McCauley

**Enclosures** 

#### **December 2013**

# WETLAND DELINEATION REPORT LEDC INDUSTRIAL PARK 77 – ACRE TRACT LIVINGSTON PARISH, WALKER, LOUISIANA

#### **Prepared for**

Livingston Economic Development Council 20355 Government Boulevard, Suite E P.O. Box 809 Livingston, Louisiana 70754

#### **Prepared by**



**Baton Rouge, Louisiana** 

## WETLAND DELINEATION REPORT LEDC INDUSTRIAL PARK 77 – ACRE TRACT LIVINGSTON PARISH, WALKER, LOUISIANA

**GEC Project Number: 0013.2122013.009** 



# **TABLE OF CONTENTS**

### **TABLE OF CONTENTS**

Section		Page
INTRODUCTI	ON	1
METHODOLO	GY	1
RESULTS		7
CONCLUSION	S	9
Appendix A: Appendix B:	WETLAND DELINEATION DATA FOR PHOTOGRAPHS	ORMS

### **LIST OF ILLUSTRATIONS**

Nun	nber	Page
1	Project Site Location Map	2
2	Project Vicinity Map	3
3	Wetland Location Map	4
3A	Wetland Location Map B&W	5
5	Soils Map	6

# WETLAND DELINEATION REPORT

#### WETLAND DELINEATION REPORT LEDC INDUSTRIAL PARK 77 – ACRE TRACT LIVINGSTON PARISH, WALKER, LOUISIANA

#### INTRODUCTION

G.E.C., Inc. (GEC) recently conducted a wetland delineation for Livingston Economic Development Counsel (LEDC) in Livingston Parish, Louisiana (Figure 1). Access to the property was through the use of Industrial Park Drive to the west and N. Corbin Road to the south of the project area (Figure 2). The project area consists of mature Pine/Hardwood forest outside of wetland areas and BLH forest along and within wetland areas. The purpose of this delineation was to determine the wetland boundaries within the approximately 77-acre tract.

#### **METHODOLOGY**

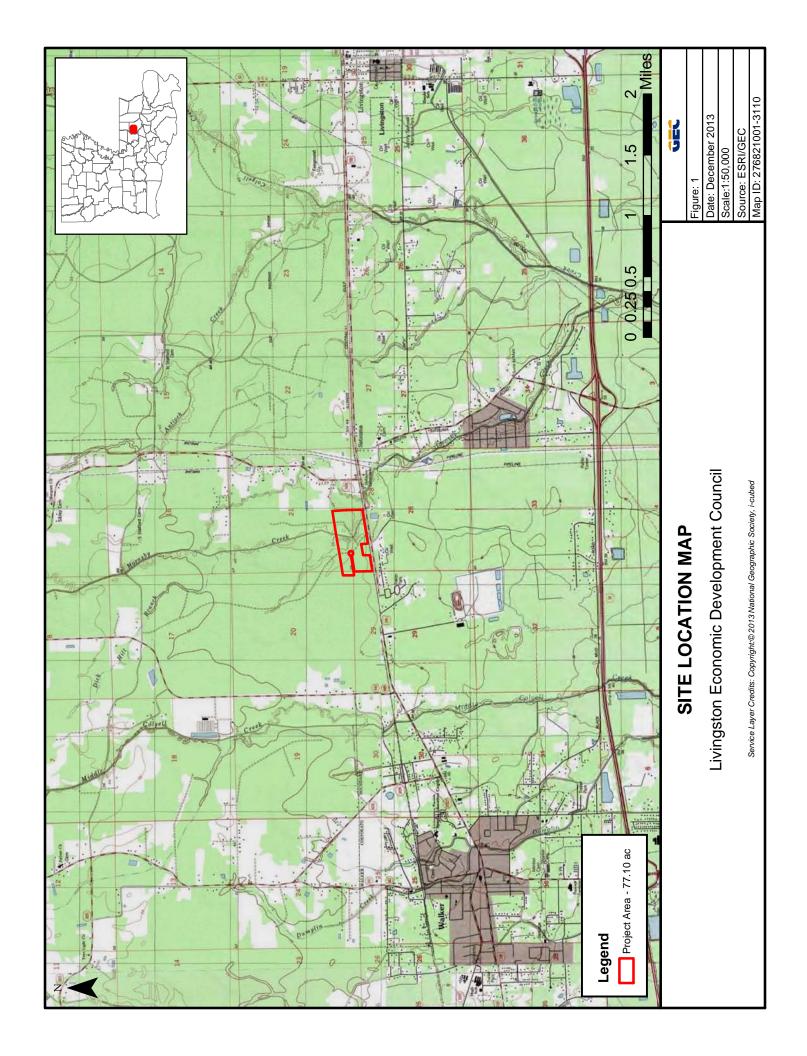
GEC conducted the wetland delineation in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual as well as the Atlantic and Gulf Coastal Plains Regional Supplement. Aerial photography, Natural Resources Conservation Service (NRCS) Livingston Parish soil survey map, U.S. Geological Survey (USGS) topographic quadrangle maps, and LIDAR were reviewed prior to the initiation of field work to identify the potential extent of wetlands present on the subject property.

Routine Wetland Delineation Data Forms (Appendix A), as approved by Headquarters, U.S. Army Corps of Engineers (USACE) 10/08, were completed for the various vegetative communities encountered within the project area. These data forms contain sufficient information regarding the presence or absence of hydric soils, hydrophytic vegetation, and wetland hydrology, to support the demarcation of a wetland boundary. The location of each sample plot along with mapped wetlands and other waters are shown in Figure 3.

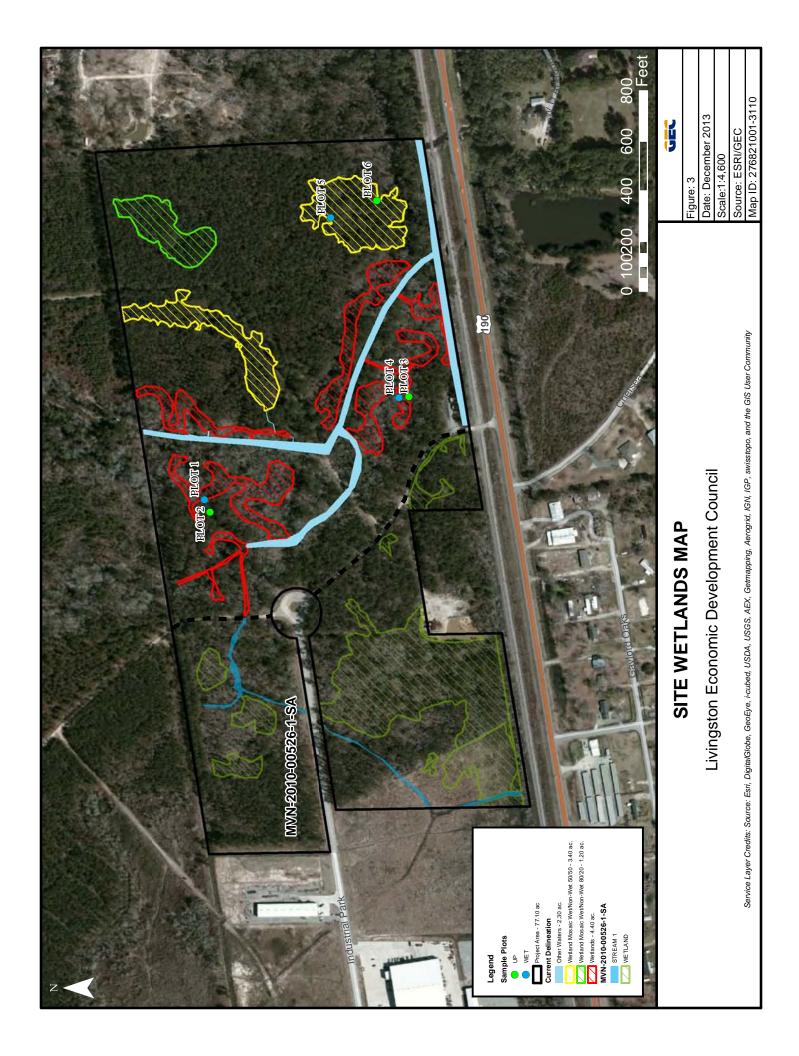
Dominant vegetation was recorded on the data forms along with the indicator status as listed in the *National List of Plant Species Occurring in Wetlands (Region 2)* released by USACE in May 2012 (Release no. 12-005). Once dominant vegetation was recorded and evaluated, if more than 50 percent of the dominant vegetation had an indicator status of FAC, FACW, or OBL or the prevalence index was  $\leq$  3.0, the hydrophytic vegetation criterion was met.

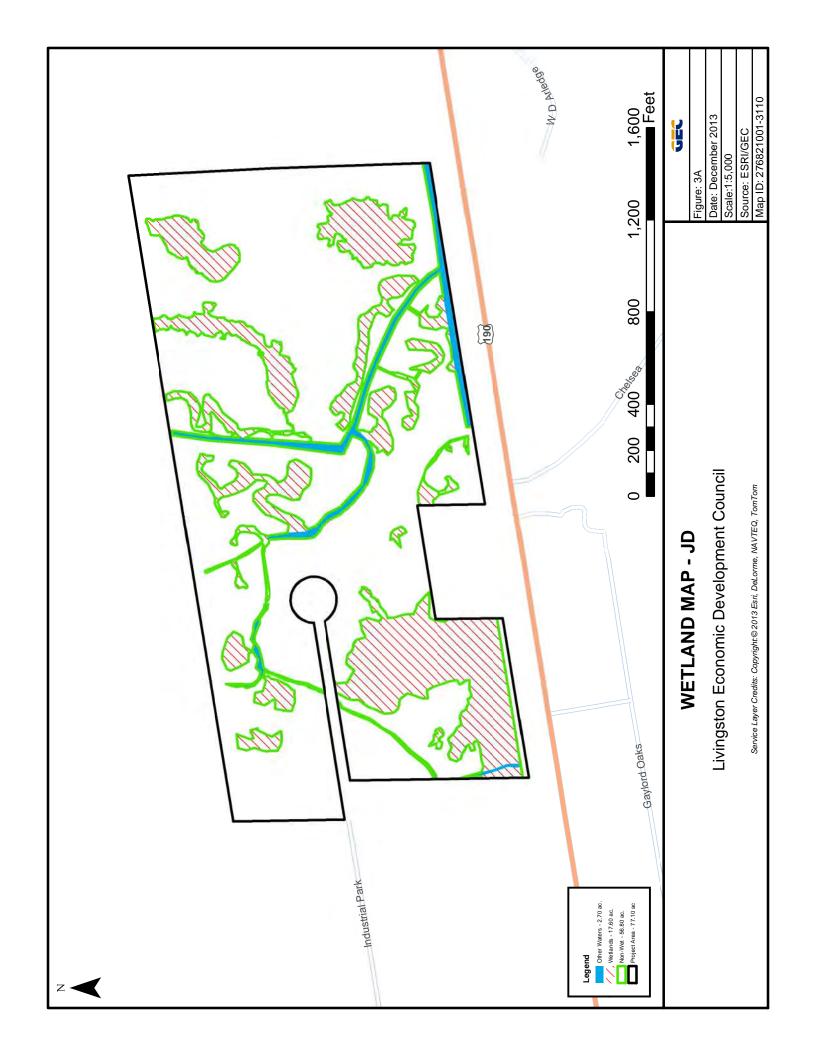
A soil pit was excavated to a depth of approximately 18 inches at each sample plot. The pit remained open for at least 15 minutes to allow the pit to fill with water, if present. Soils were sampled along the exposed stratum. Information recorded on the data forms included soil colors (hue, value, and chroma as per the 1992 revised edition of the Munsell Color Chart), size, color, abundance, and depth of mottles, as well as soil texture. Soil texture was determined using the "texture by feel" analysis. Figure 4 depicts the soils mapped by the NRCS within the project area.

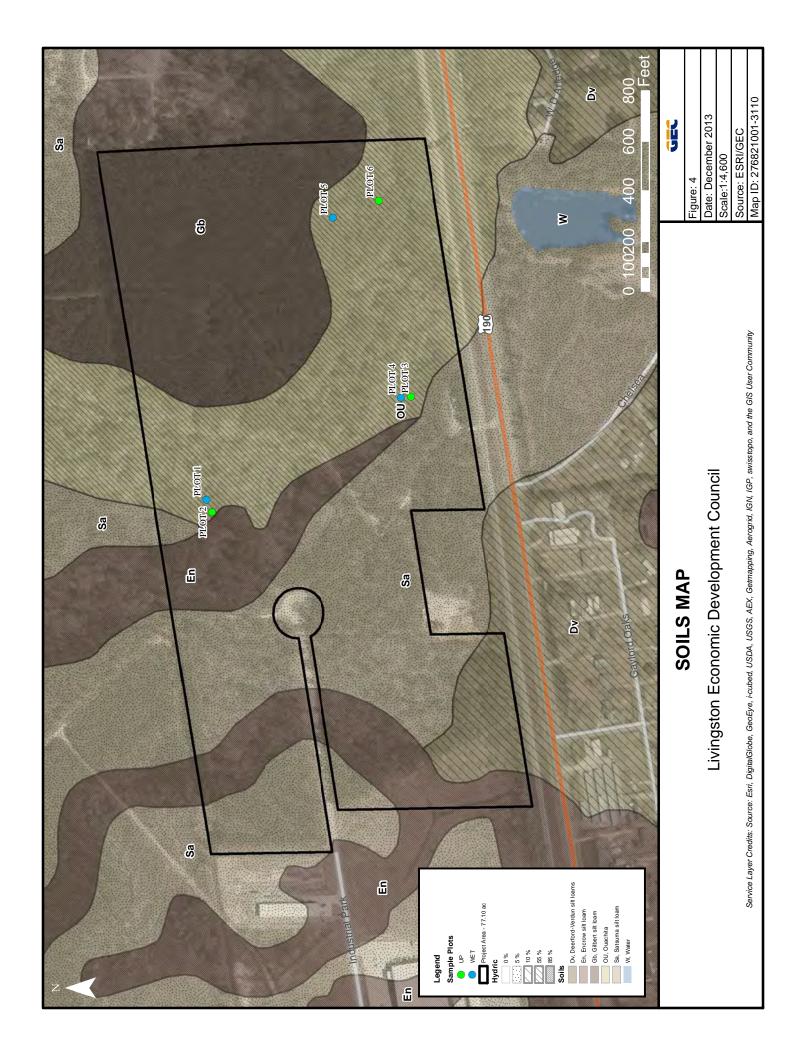
Due to the difficult nature of mapping wetlands within a forested system, field biologist used LIDAR to indicate areas where wetlands may be present and then surveyed those areas intensively collecting GPS points along a wet/nonwet boundary, whereas the rest of the property was surveyed by transect. The wet/nonwet boundaries in Figure 3 encompass wetlands observed as mapped by contour and informed by the observations of field staff.











Wetland hydrology indicators were also recorded at each sample plot as per the USACE requirements. If at least one primary or two secondary hydrology indicators were present, the sample plot was classified as having wetland hydrology.

Photographs were taken at each sample plot where a data form was completed. These photographs show a representative soil profile, as well as overviews in the cardinal directions of the sample plot (Appendix B).

#### **RESULTS**

The following subsections provide descriptions of each of the sites identified during the field survey. Descriptions of vegetation, soil characteristics, and hydrology indicators at each sample plot recorded are provided

<u>Sample Plot - 1:</u> Sample Plot 1 is located within a backwater depression (Figure 3). The tree stratum is dominated by red maple (*Acer rubrum*), and black tupelo (*Nyssa aquatica*) while the sapling/shrub stratum is dominated by persimmon (*Diospyros virginiana*), and winged elm (*Ulmus rubra*). The herbaceous stratum is dominated by lizards tail (*Saururus cernuus*). The woody vine stratum is absent from this plot. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of hydrology include water-stained leaves (B9) and aquatic fauna (B13) while secondary indicators include a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydric vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 1).

<u>Sample Plot - 2:</u> Sample Plot 2 is located in a mature pine/hardwood forest next to the wetland in plot 1 (Figure 3). The tree stratum is dominated loblolly pine (*Pinus taeda*) while the sapling/shrub stratum is dominated by winged elm, and American hornbeam (*Carpinus caroliniana*). The herbaceous stratum is dominated by dwarf palmetto (*Sabal minor*), and long-leaf wood oats (*Chasmanthium sessiliflorum*). The woody vine stratum is dominated by muscadine grape (*Vitis rotundifolia*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is not met at this plot due to the absence of hydric soil indicators. Primary indicators of hydrology are lacking at this plot while the one secondary indicator includes a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydric soils, and wetland hydrology within the plot (see Data Form Plot - 2).

<u>Sample Plot - 3:</u> Sample Plot 3 is located in a mature pine/hardwood forest next to the wetland in plot 4 (Figure 3). The tree stratum is dominated loblolly pine, and winged elm while the

sapling/shrub stratum is dominated by American hornbeam. The herbaceous stratum is dominated by long-leaf wood oats. The woody vine stratum is dominated by muscadine grape. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is not met at this plot due to the absence of hydric soil indicators. Primary and secondary indicators of hydrology are lacking at this plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydric soils, and wetland hydrology within the plot (see Data Form Plot - 3).

<u>Sample Plot - 4:</u> Sample Plot 4 is located within a backwater depression (Figure 3). The tree stratum is dominated by Chinese tallow (*Triadica sebifera*), and black tupelo while the sapling/shrub stratum is dominated by red maple, and green ash (*Fraxinus pensylvanica*). The herbaceous stratum is dominated by dwarf palmetto, and thicket sedge (*Carex abscondita*). The woody vine stratum is dominated by muscadine grape. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of hydrology include moss trim lines (B16), crayfish burrows (C8), and a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydric vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 4).

<u>Sample Plot - 5:</u> Sample Plot 5 is located in a mature pine/hardwood forest within a wet/nonwet mosaic area. This area looks to have been impacted by past silver culture activities leaving the ground topography uneven with many areas where wetland hydrology is either present or lacking (Figure 3). The tree stratum is dominated loblolly pine, while the sapling/shrub stratum is dominated by American hornbeam, and sweetgum (*Liquidambar straciflua*). The herbaceous stratum is dominated by water oak (*Quercus nigra*), and long-leaf basket grass (*Oplismenus hirtellus*). The woody vine stratum is dominated by cat greenbrier (*Smilax hispida*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of wetland hydrology are lacking at this plot while secondary indicators of hydrology include sparsely vegetated concave surface (B8), and crayfish burrows (C8). It is GEC's opinion that this sample plot is within a wetland, based on the presence of wetland hydrology, hydrophytic vegetation and hydric soils within the plot (see Data Form Plot - 5).

<u>Sample Plot - 6:</u> Sample Plot 6 is located in a mature pine/hardwood forest within a wet/nonwet mosaic area. This area looks to have been impacted by past logging activities leaving the ground topography uneven with many areas where wetland hydrology is either present or lacking

(Figure 3). The tree stratum is dominated loblolly pine, while the sapling/shrub stratum is dominated by red maple, and winged elm. The herbaceous stratum is dominated by spruce pine (*Pinus glabra*), and dwarf palmetto. The woody vine stratum is dominated by trumpet vine (*Campsis radicans*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Ouachita, Ochlockonee, Guyton association, described as frequently flooded by the NRCS. Within this association, the Guyton series is listed on the National Hydric Soils list and the Ouachita and Guyton series are listed on the Louisiana Hydric Soils list. The hydric soils criterion is met at this plot due to the presence of a depleted matrix. Primary indicators of wetland hydrology are lacking at this plot while the only secondary indicator of hydrology observed is a positive FAC-neutral test (D5). It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology within the plot (see Data Form Plot - 5).

#### CONCLUSIONS

During the field investigation of the approximately 77-acre site in Livingston Parish, Louisiana, GEC mapped several wetland areas which can be grouped into those areas impacted by ponding associated with the bayou and areas impacted by past logging activities up slope consisting of wetland/upland mosaics where the hydrology is driven by rainfall. The total acreage of the wetland areas associated with the bayou total 4.40 acres. Two wetland areas mapped in yellow on figure 3 are wetland mosaics where approximately 50% of the acreage meets the criteria for a wetland. The wetlands in these two areas total approximately 1.70 acres of wetlands. In addition to those areas, there is a second area of wetland mosaic where an estimated 80 percent of the acreage meets the definition of a wetland and encompasses approximately 0.96 acres. There are approximately 7.06 acres of wetlands within the project area.

In addition to the wetlands on site, are other waters and streams. The total acreage of the bayou is approximately 1.00 acre while the stream extending to the northeast and the ditches cut into the natural bank encompass approximately .40 acres within the project area. The remainder of the project area consists of non-wetland mature pine/hardwood forest.

Although GEC uses the same criteria and methodology as that of the USACE, due to the degree of subjectivity associated with studies of this type, there may be some degree of variance in the demarcation of the wetland boundary. Consequently, GEC's opinion may not necessarily reflect that of the USACE, nor does it relieve our client of any legal obligations to verify the wetland findings, consult with the USACE, and possibly obtain a Department of the Army permit prior to performing any dredging, filling and/or construction operations in Waters of the United States, including wetlands.

# Appendix A DATA FORMS

City/County: Walker/Livingsto	n Parish	Sampling Date: 12-04-2013	
	State: LA	Sampling Point: Plot 1	
Section, Township, Range: $\underline{S}$	EC-21-TS-06-RE-04	1	
)' 16.077" N Long:	90° 48' 59.477" W	Datum: NAD 1983	
		oresent? Yes No	
roblematic? (If needed,	explain any answe	rs in Remarks.)	
g sampling point locati	ons, transects	, important features, etc.	
Is the Sampled Area within a Wetland?	Yes <u></u> ✓	No	
	Secondary Indica	tors (minimum of two required)	
13) 15) (LRR U) Odor (C1) Theres along Living Roots (C3) Liced Iron (C4) Liction in Tilled Soils (C6) Lice (C7) Remarks)	<ul> <li>Drainage Pat</li> <li>Moss Trim Li</li> <li>Dry-Season \( \)</li> <li>Crayfish Burr</li> <li>Saturation Vi</li> <li>Geomorphic</li> <li>Shallow Aqui</li> <li>✓ FAC-Neutral</li> </ul>	getated Concave Surface (B8) tterns (B10) nes (B16) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) Position (D2) ttard (D3)	
		t? Yes_ <u>√</u> No	
	Section, Township, Range: Solution, Local relief (concave, convex, 2016.077" N Long:	Secondary Indications   Sec	

<u>% Cover</u>	Species?	<u>Status</u>	
40			Number of Dominant Species
40	yes	FAC	That Are OBL, FACW, or FAC: 5(A)
			Total Number of Dominant
		FAC	Species Across All Strata: 5 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC: 100% (A/B)
			Prevalence Index worksheet:
			Total % Cover of:Multiply by:
			OBL species x 1 =
			FACW species x 2 =
20% of	total cover	14.2	FAC species x 3 =
10	*****	EAC	FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (B)
			(-)
		FACW	Prevalence Index = B/A = NaN
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
20% of	total cover	3.8	
20		ODI	<sup>1</sup> Indicators 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
	no	FAC	more in diameter at breast height (DBH), regardless of height.
			noight.
			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.
20% of	total cover		
			Hydrophytic
			Vegetation Present? Yes√ No
	total cover	:	
low).			
	71 20% of 10 7 2 iso 20% of 20	Total Cover	10   yes   FAC

Sampling Point: Plot 1

SOIL Sampling Point: Plot 1

Profile Desc	cription: (Describe	to the dept	th needed to docui	ment the	indicator	or confirm	n the absence of inc	dicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup> _	Loc <sup>2</sup>	Texture	Remarks
0-3	10 YR 6/2	100					ZC	
3-18	10 YR 7/2	98	7.5 YR 5/6	2	C	PL	ZC	
					- ——			
				_				
<sup>1</sup> Type: C=C	oncentration, D=De	letion RM=	:Reduced Matrix M	S=Masker	d Sand Gr	ains	2l ocation: PL=P	Pore Lining, M=Matrix.
	Indicators: (Appli	· · · · · · · · · · · · · · · · · · ·				J		roblematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Be		-	RR S. T. L		-
' <del></del>	pipedon (A2)		Thin Dark Su				. —	A10) (LRR S)
Black Hi	stic (A3)		Loamy Muck	y Mineral	(F1) (LRF	O)	Reduced Ve	rtic (F18) (outside MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Piedmont Flo	oodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		✓ Depleted Ma					Bright Loamy Soils (F20)
<b>—</b>	Bodies (A6) (LRR I		Redox Dark	•			(MLRA 15	•
	icky Mineral (A7) <b>(L</b>		Depleted Da		` ′			Material (TF2)
·	esence (A8) <b>(LRR I</b> ick (A9) <b>(LRR P, T)</b>	(ر	Redox Depre Marl (F10) (L	,	.0)			v Dark Surface (TF12) in in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Oc		(MIRA 1	51)	Other (Expla	iii iii Keiliaiks)
	ark Surface (A12)	()	Iron-Mangan		-		T) <sup>3</sup> Indicators	of hydrophytic vegetation and
Coast P	rairie Redox (A16) (	MLRA 150 <i>A</i>					•	ydrology must be present,
Sandy N	Mucky Mineral (S1) (	LRR O, S)	Delta Ochric	(F17) <b>(M</b> 1	LRA 151)		unless dis	sturbed or problematic.
	Gleyed Matrix (S4)		Reduced Ve					
	Redox (S5)		Piedmont Flo	•	, ,	•	•	
	Matrix (S6)	O T II)	Anomalous I	Bright Loa	my Soils (	F20) (NILR	A 149A, 153C, 153E	))
	rface (S7) (LRR P, Layer (if observed)						1	
Type: No		•						
							Undria Cail Broom	anta Van de Na
	ches):		<del></del>				Hydric Soil Prese	ent? Yes <u>√</u> No
Remarks:								

Project/Site: LEDC Industrial Complex West Track - 2 C	ity/County: Walker/Livingston Parish	Sampling Date: 12-04-2013
Applicant/Owner: Linvingston Economic Development Council	State: LA	Sampling Point: Plot 2
Investigator(s): J. Avant S	section, Township, Range: SEC-21-TS-06-RE	-04
	ocal relief (concave, convex, none): Convex	
Subregion (LRR or MLRA): LRR P Lat: 30° 30′ 15		
Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently for		
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes ✓ No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology significantly di	isturbed? Are "Normal Circumstances	s" present? Yes No
Are Vegetation, Soil, or Hydrology naturally prob	lematic? (If needed, explain any ansv	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	sampling point locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present?         Yes	Is the Sampled Area within a Wetland? Yes	No <u></u>
Remarks: Plot taken on a hillslope next to backwater stream.		
The taken on a manage non-to-cate and sactains		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Ind	icators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)	Sparsely \ (LRR U)	n moss (D8) (LRR T, U)
Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe)	Wetland Hydrology Pres	ent? Yes No✓
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	, previous inspections), if available:	
Remarks:		

•			Sampling Point: Plot 2
	Dominant		Dominance Test worksheet:
			Number of Dominant Species
70	yes		That Are OBL, FACW, or FAC: 6(A)
15	no	FAC	Total Number of Dominant
5	no	FAC	Species Across All Strata: 6 (B)
3	no	FAC	
			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/E
			That Ale OBE, I ACW, OF I AC (AL
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
20% of	total cover:	18.0	FAC species x 3 =
			FACU species x 4 =
5	yes	FAC	
3	yes	FAC	UPL species x 5 =
iso	no	FAC	Column Totals: (A) (B)
			Prevalence Index = B/A = NaN
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
20% of	total cover:	1.6	
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3	yes	FACW	be present, unless disturbed or problematic.
3	yes	FAC	Definitions of Four Vegetation Strata:
1	no	FAC	T 18/ 11(7.0)
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of 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.
			than 5 m. BBN and groater than 5.25 h (1 m) tan.
			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.
7	= Total Cov	er	
_			
	yes	FAC	
10			
10			
1		FAC	
1			
1			Hydrophytic
1		FAC	Hydrophytic Vegetation Present? Yes√_ No
	70 15 5 3	70 yes  15 no  5 no  3 no  93 = Total Cov  20% of total cover:  5 yes  3 yes  iso no  8 = Total Cov  20% of total cover:  3 yes  1 no  7 = Total Cov	70 yes FAC  15 no FAC  5 no FAC  3 no FAC  3 no FAC  93 = Total Cover  20% of total cover: 18.6  5 yes FAC  3 yes FAC  iso no FAC  8 = Total Cover  20% of total cover: 1.6  3 yes FAC  3 yes FAC  The fact of the

SOIL Sampling Point: Plot 2

Depth	cription. (Describe	to the deb	in needed to docu	ment the	indicator	or confirm	n the absence of i	ndicators.)
•	<u>Matrix</u>			ox Feature			<b>-</b> .	
(inches) 0-3	Color (moist)		Color (moist)	%	_Type'	<u>Loc<sup>2</sup></u>	Texture	Remarks
	10 YR 5/4	100					ZC	
3-6	10 YR 5/3	100					ZC	
6-18	10 YR 7/3	80	10 YR 7/2	18	D	M	ZC	
			7.5 YR 6/8	2	C	M	ZC	
1							2	
	oncentration, D=Dep					ins.		=Pore Lining, M=Matrix.
_	Indicators: (Applic	able to all	ŕ		•			Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) pipedon (A2)		Polyvalue Bo				· —	k (A9) <b>(LRR O)</b> k (A10) <b>(LRR S)</b>
	istic (A3)		Loamy Much	,				Vertic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		Loamy Gley	-		-,		Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma		•			s Bright Loamy Soils (F20)
_	Bodies (A6) (LRR F		Redox Dark	,			(MLRA	
	ucky Mineral (A7) (L				, ,			nt Material (TF2)
	resence (A8) (LRR U	J)	Redox Depr	,	8)			ow Dark Surface (TF12)
	uck (A9) <b>(LRR P, T)</b> d Below Dark Surfac	se (A11)	Marl (F10) (I Depleted Oc		(MI D A 44	41	Other (Exp	plain in Remarks)
	ark Surface (A12)	,C (ATT)	Iron-Mangar		•	•	T) <sup>3</sup> Indicator	rs of hydrophytic vegetation and
	rairie Redox (A16) (	MLRA 150	_		, , ,	, ,	•	d hydrology must be present,
Sandy N	Mucky Mineral (S1) (	LRR O, S)	Delta Ochric	(F17) <b>(M</b>	RA 151)		unless	disturbed or problematic.
	Gleyed Matrix (S4)		Reduced Ve					
	Redox (S5)		Piedmont FI	•	, ,	•	•	
	Matrix (S6)	O T II)	Anomalous	Bright Loa	my Soils (I	(MLR	A 149A, 153C, 15	(3D)
	rface (S7) (LRR P, Layer (if observed)						T	
Type: No		•						
Denth (in	ches):						Hydric Soil Pre	osent? Yes No √
Depth (in	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
Depth (in-	ches):		<del></del>				Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):		_				Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No <u>√</u>
	ches):						Hydric Soil Pre	esent? Yes No _✓
	ches):						Hydric Soil Pre	esent? Yes No _✓
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No _✓
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No
	ches):						Hydric Soil Pre	esent? Yes No

Project/Site: LEDC Industrial Complex West Track - 2	City/County: Walker/Livingston Pa	arish S	Sampling Date: 12-04-2013		
Applicant/Owner: Linvingston Economic Development Council	Sta	ite: <u>LA</u> S	Sampling Point: Plot 3		
Investigator(s): J. Avant	Section, Township, Range: SEC-	28-TS-06-RE-04			
Landform (hillslope, terrace, etc.): Hill slope	Local relief (concave, convex, no	ne): Convex	Slope (%): 2-3		
Subregion (LRR or MLRA): $\frac{LRR\ P}{}$ Lat: $\frac{30^{\circ}\ 30'}{}$					
Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently	y flooded	_ NWI classificat	ion:		
Are climatic / hydrologic conditions on the site typical for this time of year	ear? Yes✓ No (If i	no, explain in Rer	marks.)		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Ci	rcumstances" pre	esent? Yes _ ✓ No		
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, exp	lain any answers	in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations	s, transects, i	important features, etc.		
Hydrophytic Vegetation Present? Yes No	lo the Compled Area				
Hydric Soil Present? Yes No ✓	Is the Sampled Area within a Wetland?	Voc	_ No <u>√</u> _		
Wetland Hydrology Present? Yes No✓	within a wettand?	Tes	_ NO <u>_ v</u>		
Remarks:	·				
HYDROLOGY					
Wetland Hydrology Indicators:	Se	econdary Indicato	ors (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)		_ Surface Soil Ci	racks (B6)		
Surface Water (A1) Aquatic Fauna (B1			tated Concave Surface (B8)		
High Water Table (A2) Marl Deposits (B15		_ Drainage Patte			
Saturation (A3) Hydrogen Sulfide (		_ Moss Trim Line			
	eres along Living Roots (C3)				
Sediment Deposits (B2) Presence of Reduc		_ Crayfish Burro	` '		
	tion in Tilled Soils (C6)	_	ble on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Thin Muck Surface Iron Deposits (B5) Other (Explain in R		<ul><li>Geomorphic Policy</li><li>Shallow Aquita</li></ul>			
Inundation Visible on Aerial Imagery (B7)		_ Shallow Aquita _ FAC-Neutral Te			
Water-Stained Leaves (B9)	_	_	ss (D8) <b>(LRR T, U)</b>		
Field Observations:		_	00 (D0) ( <b>2</b> .t.t 1, <b>0</b> )		
Surface Water Present? Yes No _✓ _ Depth (inches	):				
Water Table Present? Yes No ✓ Depth (inches	ı				
Saturation Present? Yes No _✓ Depth (inches	I	Irology Present?	? Yes No✓_		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if availal	ole:			
Remarks:					
Remarks.					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft rad.</u> )		Species?		Number of Dominant Species
1. Pinus taeda	30	yes	FAC	That Are OBL, FACW, or FAC: 5(A)
2. Ulmus rubra	25	yes	FAC	Total Number of Dominant
3. Triadica sebifera	15	no	FAC	Species Across All Strata: 5 (B)
4. Quercus nigra		no	FAC	Percent of Dominant Species
Liquidambar straciflua	3	no	FAC	That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
7				
8				
	79	= Total Cov	er	OBL species x 1 =
50% of total cover: <u>39.5</u>	20% of	total cover:	15.8	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30 ft rad. )				FAC species x 3 =
1. Carpinus caroliniana	15	yes	FAC	FACU species x 4 =
2. Carya glabra	2	no	FACU	UPL species x 5 =
3				Column Totals: (A) (B)
4				Prevalence Index = B/A = NaN
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: 9	20% of	total cover:	3.6	Troblematic Hydrophytic regulation (Explain)
Herb Stratum (Plot size: _30 ft rad)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1. Chasmanthium sessiliflorum	2	yes	FAC	be present, unless disturbed or problematic.
2. Arundinaria gigantea		no	FACW	Definitions of Four Vegetation Strata:
3.				
4.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or 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.				
9.				Herb – All herbaceous (non-woody) plants, regardless 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				neight.
12.		= Total Cov		
50% of total cover: $\_$ $^1$				
Woody Vine Stratum (Plot size: _30 ft rad)	20% 01	iolai cover.	0.7	
*****	7	MOG	FAC	
· · ·		yes	TAC	
2				
3				
4				
5				Hydrophytic
2.5		= Total Cov		Vegetation Present? Yes√ No
50% of total cover: 3.5		total cover:	1.4	100
Remarks: (If observed, list morphological adaptations belo	W).			

Sampling Point: Plot 3

SOIL Sampling Point: Plot 3

Depth	Matrix		Red	ox Feature			the absence of	,
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-3	10 YR 4/6	100					ZC	
3-18	7.5 YR 5/8	100					ZC	
				_				
<sup>1</sup> Type: C=0	Concentration, D=De	pletion, RM=F	Reduced Matrix, M	S=Masked	Sand Gr	ains.	<sup>2</sup> Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all L	RRs, unless othe	rwise not	ed.)			r Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Polyvalue B	elow Surfa	ce (S8) <b>(L</b>	RR S, T, U	) 1 cm Mud	ck (A9) (LRR O)
	pipedon (A2)		Thin Dark S	, ,				ck (A10) <b>(LRR S)</b>
	listic (A3)		Loamy Mucl			O)		Vertic (F18) (outside MLRA 150A,
	en Sulfide (A4) ed Layers (A5)		Loamy Gley Depleted Ma		F2)			t Floodplain Soils (F19) <b>(LRR P, S, 1</b> us Bright Loamy Soils (F20)
	c Bodies (A6) <b>(LRR I</b>	P. T. U)	Redox Dark	. ,	6)		(MLRA	
_	lucky Mineral (A7) <b>(L</b>		Depleted Da	,	*		•	ent Material (TF2)
	Presence (A8) (LRR I		Redox Depr					llow Dark Surface (TF12)
1 cm M	luck (A9) (LRR P, T)		Marl (F10) (	LRR U)			Other (Ex	rplain in Remarks)
	ed Below Dark Surfac	ce (A11)	Depleted O		-		2	
	ark Surface (A12)	MI DA 450A)	Iron-Mangar				•	ors of hydrophytic vegetation and
	Prairie Redox (A16) ( Mucky Mineral (S1) (			` '	,	, U)		nd hydrology must be present, s disturbed or problematic.
_	Mucky Milleral (31) ( Gleyed Matrix (S4)	LKK 0, 3)	Delta Ochrid			NA 150B)		suisturbed or problematic.
	Redox (S5)		Piedmont FI					
	d Matrix (S6)						A 149A, 153C, 1	53D)
Dark S	urface (S7) (LRR P,	S, T, U)						
	Layer (if observed)	):						
Туре: <u>N</u>	one seen							
							Hydric Soil Pr	esent? Yes No <u>√</u>
Depth (ir	nches):						1 -	
Depth (in Remarks:	nches):		_				1 -	
	nches):		<del>_</del>				1 -	
	nches):		_				1 -	
	nches):		<del></del>					
	nches):		<del></del>					
	nches):		<del></del>				,	
	nches):		<del></del>				,	<u> </u>
	nches):		<del></del>				,	
	nches):						,	
	nches):						,	<u> </u>
	nches):		<del></del>				,	<u> </u>
	nches):		<del></del>				,	
	nches):						,	
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	nches):							

Project/Site: LEDC Industrial Complex West Track - 2	City/County: Walker/Livingston Pa	arish S	ampling Date: 12-04-2013
Applicant/Owner: Linvingston Economic Development Council	Sta	ite: LA S	ampling Point: Plot 4
Investigator(s): J. Avant	Section, Township, Range: SEC-	28-TS-06-RE-04	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, no	ne): Concave	Slope (%): <u>0-1</u>
Subregion (LRR or MLRA): LRR P Lat: 30° 30°			
Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently	y flooded	_ NWI classification	on:
Are climatic / hydrologic conditions on the site typical for this time of year	ear? Yes✓ No (If r	no, explain in Rem	narks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Ci	rcumstances" pre	sent? Yes _✓_ No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, exp	lain any answers i	in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations	s, transects, i	mportant features, etc.
Hydrophytic Vegetation Present?         Yes	Is the Sampled Area within a Wetland?	Yes <u>√</u>	_ No
Remarks: Plot taken in a backwater wetland area associated with the bayou			
HYDROLOGY			
Wetland Hydrology Indicators:	Se	condary Indicator	rs (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_ Surface Soil Cra	acks (B6)
Surface Water (A1) Aquatic Fauna (B1			ated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15)	_	_ Drainage Patter	
Saturation (A3) Hydrogen Sulfide (		_ Moss Trim Line	
	neres along Living Roots (C3)	_ Dry-Season Wa	` '
Sediment Deposits (B2) Presence of Reduc		_ Crayfish Burrow	
	ction in Tilled Soils (C6)		ole on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface		_ Geomorphic Po	
Iron Deposits (B5) Other (Explain in F		_ Shallow Aquitar	(= -,
Inundation Visible on Aerial Imagery (B7)	✓	_ FAC-Neutral Te	` '
Water-Stained Leaves (B9)	<del>_</del>	_ Sphagnum mos	ss (D8) <b>(LRR T, U)</b>
Field Observations:			
Surface Water Present? Yes No Depth (inches			
Water Table Present? Yes No _ ✓ Depth (inches			
Saturation Present? Yes No _✓_ Depth (inches (includes capillary fringe)			Yes✓ No
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if availab	ole:	
Remarks:			

	nes of pl	ariis.		Sampling Point: Plot 4
		Dominant	Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30 ft rad. )		Species?	<u>Status</u>	Number of Dominant Species
Triadica sebifera	25	yes	FAC	That Are OBL, FACW, or FAC: 7(A)
Nyssa aquatica	15	yes	OBL	Total Number of Dominant
Carya aquatica	3	no	OBL	Species Across All Strata: 7 (B)
				Dorgant of Dominant Species
				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/E
				· · · · · · · · · · · · · · · · · · ·
				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover: <u>21.5</u>				FACW species x 2 =
apling/Shrub Stratum (Plot size: _ 30 ft rad)				FAC species x 3 =
Acer rubrum	25	yes	FAC	FACU species x 4 =
Encyrinus manaylyaniaa	1.5	yes	FACW	UPL species x 5 =
I Ilmus rubro	10	no	FAC	Column Totals: (A) (B
Lonicera japonica		no	FAC	Prevalence Index = B/A = NaN
Triadica sebifera			FAC	Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.01
		= Total Cov		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 31	20% of	total cover:	12.4	
erb Stratum (Plot size: <u>30 ft rad.</u> )				Indicators of hydric soil and wetland hydrology must
Sabal minor	35	yes	FACW	be present, unless disturbed or problematic.
Carex abscondita	10	yes	FACW	Definitions of Four Vegetation Strata:
				Two Meady plants avaluating since 2 in (7.5 and)
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
				height.
				Continue(Church ) 0 (continue to explication of the continue to the continue t
				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, regardles of size, and woody plants less than 3.28 ft tall.
				of size, and woody plants less than 3.20 it tall.
).				Woody vine - All woody vines greater than 3.28 ft in
·				height.
2				
		= Total Cov		
50% of total cover: 22.5	20% of	total cover:	9	
/oody Vine Stratum (Plot size: 30 ft rad. )				
Vitis rotundifolia	7	yes	FAC	
	_			
				Hudrophytic
	7	 = Total Cov	 er	Hydrophytic Vegetation
		Total Cov		Hydrophytic Vegetation Present? Yes No

**SOIL** Sampling Point:  $\frac{\text{Plot 4}}{}$ 

Profile Desc	cription: (Describe	to the dep	h needed to docur	nent the	indicator	or confirm	the absence	of indicators.)	
Depth	<u>Matrix</u>			x Feature		. 2	<b>-</b> ,		
(inches) 0-1	Color (moist)		Color (moist)	%	Type'	<u>Loc²</u>	<u>Texture</u>	Remarks	
	10 YR 5/2	100			- ——		ZC		
1-7	10 YR 6/2	98	7.5 YR 4/6	2	C	PL_	ZC		
7-18	10 YR 7/1	90	5 YR 5/8	10	С	PL	С	Clay with silt	
	-								
1									
			Reduced Matrix, M			ains.		PL=Pore Lining, M=Matrix.	
		cable to all	LRRs, unless othe			DD 0 T 1		for Problematic Hydric Soils <sup>3</sup> :	
Histosol (A1) — Polyvalue Below Surface (S8) (LRR S, T, U)  Histic Epipedon (A2) — Thin Dark Surface (S9) (LRR S, T, U)							J) 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S)		
	stic (A3)		Loamy Muck	,				red Vertic (F18) (outside MLRA 150A,B)	
	en Sulfide (A4)		Loamy Gleye			-,		ont Floodplain Soils (F19) (LRR P, S, T)	
Stratified	d Layers (A5)		✓ Depleted Ma				Anoma	alous Bright Loamy Soils (F20)	
_ ~	Bodies (A6) (LRR I		Redox Dark	,	*		•	RA 153B)	
	ıcky Mineral (A7) <b>(L</b>		Depleted Da		, ,			arent Material (TF2)	
·	esence (A8) (LRR I	J)	Redox Depre Marl (F10) (L	,	-8)			Shallow Dark Surface (TF12)	
	ick (A9) <b>(LRR P, T)</b> d Below Dark Surfa	re (Δ11)	Nan (F10) (L	•	(MIRA 1	54)	Other	(Explain in Remarks)	
	ark Surface (A12)	50 (7111)	Iron-Mangan		-	-	T) <sup>3</sup> India	cators of hydrophytic vegetation and	
	rairie Redox (A16) (	MLRA 150A					wetland hydrology must be present,		
	lucky Mineral (S1) (	LRR O, S)	Delta Ochric		-			ess disturbed or problematic.	
	Gleyed Matrix (S4)		Reduced Ver						
	Redox (S5)		Piedmont Flo	•	, ,	•	•	452D)	
	Matrix (S6) rface (S7) (LRR P,	S T III	Anomalous E	origini Loa	my Solis (	-20) (IVILK	A 149A, 153C	, 1530)	
	Layer (if observed)								
Туре:	, ,								
	ches):						Hvdric Soil	Present? Yes <u>√</u> No	
Remarks:			<del></del>				1		

Project/Site: LEDC Industrial Complex West Track - 2	City/County: Walker/Livingstor	n Parish	Sampling Date: 12-04-2013
Applicant/Owner: Linvingston Economic Development Council		State: LA	Sampling Point: Plot 5
Investigator(s): J. Avant	Section, Township, Range: SE	EC-28-TS-06-RE-04	
	Local relief (concave, convex,		
Subregion (LRR or MLRA): $LRR P$ Lat: $30^{\circ} 30$			
Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequent			ation:
Are climatic / hydrologic conditions on the site typical for this time of years $\frac{1}{2} \left( \frac{1}{2} \right) \left( \frac{1}{2}$	ear? Yes✓_ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal	Circumstances" pr	resent? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, e	explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point locatio	ons, transects,	important features, etc.
Hydrophytic Vegetation Present?  Yes   ✓ No   Yes   No  No   No   No   Hydric Soil Present?		Yes √	No
Wetland Hydrology Present? Yes No  Remarks:	www.marronana.		
Plot 5 was taken in a flat area utilized for timber production in the past lea	ding to micro topography and a w	et/nonwet mosaic.	
HYDROLOGY			
Wetland Hydrology Indicators:			ors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1) Aquatic Fauna (B1 High Water Table (A2) Marl Deposits (B1 Saturation (A3) Hydrogen Sulfide Water Marks (B1) Oxidized Rhizosph Sediment Deposits (B2) Presence of Redu	(3) (5) (LRR U) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) e (C7) Remarks)  (8): (8): (8): Wetland H	Surface Soil C Sparsely Veg Drainage Patt Moss Trim Lir Dry-Season V Crayfish Burro Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Sphagnum mo	Cracks (B6) etated Concave Surface (B8) terns (B10) nes (B16) Vater Table (C2) pws (C8) sible on Aerial Imagery (C9) Position (D2) tard (D3)
Remarks:			

mes of pla			Sampling Point: Plot 5
	Dominant		Dominance Test worksheet:
			Number of Dominant Species
			That Are OBL, FACW, or FAC: 6(A)
			Total Number of Dominant
			Species Across All Strata: 6 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC: 100% (A/B
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
2070 01	total cover.		FAC species x 3 =
15	1100	EAC	FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (B)
2	no	FAC	Column Totals (A) (B)
			Prevalence Index = B/A = NaN
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0¹
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
20 70 01	total cover.		
10	*****	EAC	Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
			Definitions of Four Vegetation Strata:
2	no	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
1	no	FAC	more in diameter at breast height (DBH), regardless o
iso	no	OBL	height.
			Sapling/Shrub – Woody plants, excluding vines, less
			than 3 in. DBH and greater than 3.28 ft (1 m) tall.
			Hart All back and a constant of the standard o
			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
			or size, and troody plants less than e.ze it tall.
			Woody vine - All woody vines greater than 3.28 ft in
			height.
20% of	total cover:	4	
2	yes	FAC	
			Hydrophytic
	 = Total Cov		Hydrophytic Vegetation Present? Yes√_ No
		55 yes  3 no 3 no 3 no  61 = Total Cov 20% of total cover:  15 yes 7 yes 2 no  24 = Total Cov 20% of total cover:  10 yes 7 yes 2 no 1 no iso no  20 = Total Cov	3 no FAC 3 no FAC  3 no FAC  61 = Total Cover 20% of total cover: 12.2  15 yes FAC 7 yes FAC 2 no FAC  20% of total cover: 4.8  10 yes FAC 7 yes FAC 1 no FAC 1 no FAC 1 no FAC 2 no OBL

SOIL Sampling Point: Plot 5

Profile Desc	cription: (Describe	to the dept	h needed to docur	ment the	indicator	or confirm	the absence of ind	licators.)	
Depth	Matrix			x Feature		. 2	T4		
(inches) 0-4	Color (moist)		Color (moist)		Type'	Loc²	Texture	Remarks	
	10 YR 6/3	100					ZC		
4-9	10 YR 7/2	100					ZC		
9-18	10 YR 7/2	97	5 YR 5/6	3	C	PL	ZC		
								_	
								_	
	oncentration, D=De					ains.		ore Lining, M=Matrix.	
_	Indicators: (Appli	cable to all I	•		•			roblematic Hydric Soils <sup>3</sup> :	
Histosol	l (A1) pipedon (A2)		Polyvalue Be Thin Dark Su				· —	49) (LRR O) 410) (LRR S)	
	istic (A3)		Loamy Muck	,				rtic (F18) (outside MLRA 150A,B)	
	en Sulfide (A4)		Loamy Gleye			. •,		podplain Soils (F19) (LRR P, S, T)	
Stratified	d Layers (A5)		✓ Depleted Ma		` ,			Bright Loamy Soils (F20)	
Organic	Bodies (A6) (LRR	P, T, U)	Redox Dark	Surface (I	F6)		(MLRA 15	3B)	
	ucky Mineral (A7) <b>(L</b>		Depleted Da		, ,			Material (TF2)	
·	resence (A8) (LRR	•	Redox Depre		·8)			/ Dark Surface (TF12)	
	uck (A9) <b>(LRR P, T)</b> d Below Dark Surfa		Marl (F10) <b>(L</b> Depleted Oc	•	(MIRA 1	54)	Other (Expla	in in Remarks)	
	ark Surface (A12)	ce (ATT)	Iron-Mangan		-	-	T) <sup>3</sup> Indicators	of hydrophytic vegetation and	
	rairie Redox (A16)	MLRA 150A					wetland hydrology must be present,		
Sandy N	Mucky Mineral (S1)	(LRR O, S)	Delta Ochric	(F17) <b>(M</b> I	LRA 151)		unless disturbed or problematic.		
	Gleyed Matrix (S4)		Reduced Ve						
	Redox (S5)		Piedmont Flo	•	, ,	•	•		
	d Matrix (S6)	C T II\	Anomalous E	Bright Loa	my Solls (	F20) (IVILR	A 149A, 153C, 153D	P)	
	ırface (S7) (LRR P, Layer (if observed						T		
Type:	Layor (III obsortou	,.							
	ches):						Hydric Soil Prese	ent? Yes <u>√</u> No	
Remarks:							11,4110 001111000	105 <u></u> 110 <u></u>	
Romants.									

Project/Site: LEDC Industrial Complex West Track - 2 City/C	County: Walker/Livingston Paris	h Sampling Date: 12-04-2013			
Applicant/Owner: Linvingston Economic Development Council	State:	LA Sampling Point: Plot 6			
	on, Township, Range: SEC-28	TS-06-RE-04			
		: Convex Slope (%): 0-1			
Subregion (LRR or MLRA): LRR P Lat: 30° 30′ 9.031					
Soil Map Unit Name: Ouachita, Ochlockonee, and Guyton soils, frequently floor					
Are climatic / hydrologic conditions on the site typical for this time of year?	res ✓ No (If no,	explain in Remarks.)			
Are Vegetation, Soil, or Hydrology significantly distu		mstances" present? Yes _ ✓ No			
Are Vegetation, Soil, or Hydrology naturally problem		n any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sar					
Hydrophytic Vegetation Present? Yes No					
	Is the Sampled Area				
Hydric Soil Present?  Yes   ✓ No   ✓ On   ✓ On	within a Wetland?	Yes No <u></u>			
Remarks:					
Plot 6 was taken in a convex mound in an area utilized for timber production in t a mature pine/hardwood forest.	ne past leading to micro topograp	ny and a wet/nonwet mosaic. The entire area is			
HYDROLOGY					
Wetland Hydrology Indicators:	Seco	ndary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)	;	Surface Soil Cracks (B6)			
Surface Water (A1) Aquatic Fauna (B13)	\$	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2) Marl Deposits (B15) (LR	R U) 1	Orainage Patterns (B10)			
Saturation (A3) Hydrogen Sulfide Odor (		Moss Trim Lines (B16)			
Water Marks (B1) Oxidized Rhizospheres a	along Living Roots (C3)	Dry-Season Water Table (C2)			
Sediment Deposits (B2) Presence of Reduced Iro	• •	Crayfish Burrows (C8)			
Drift Deposits (B3) Recent Iron Reduction in		Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4) Thin Muck Surface (C7)		Geomorphic Position (D2)			
Iron Deposits (B5) Other (Explain in Remar		Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)		<ul><li>✓ FAC-Neutral Test (D5)</li><li>✓ Sphagnum moss (D8) (LRR T, U)</li></ul>			
Water-Stained Leaves (B9) Field Observations:	<u>_</u> `	spriagrium moss (Do) (ERR 1, 0)			
Surface Water Present? Yes No ✓ _ Depth (inches):					
Water Table Present?  Yes No _✓ Depth (inches):					
Saturation Present? Yes No ✓ Depth (inches):	l l	ogy Present? Yes No√_			
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available				
Powerles					
Remarks:					

			Sampling Point: Plot 6
	Dominant		Dominance Test worksheet:
	Species?		Number of Dominant Species
60	yes		That Are OBL, FACW, or FAC: 6(A)
10	no	FAC	Total Number of Dominant
7	no	FACW	Species Across All Strata: 6 (B)
2	no	FAC	Percent of Dominant Species
			That Are OBL, FACW, or FAC: 100%
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
25	ves	FAC	FACU species x 4 =
1.5			UPL species x 5 =
			Column Totals: (A) (B
			Prevalence Index = B/A = NaN
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			Problematic Hydrophytic Vegetation¹ (Explain)
20% of	total cover:	8.8	i Tobicinatic Tryarophytic vegetation (Explain)
_			11-4:
7	ves	FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2			Definitions of Four Vegetation Strata:
1			Definitions of Four Vegetation Strata.
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
			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, regardles
			of size, and woody plants less than 3.28 ft tall.
			Woody vine - All woody vines greater than 3.28 ft in
			height.
11 :	= Total Cov		
20 /0 01	total cover.		
2	*****	EAC	
	yes	FAC	
			Hydrophytic
	= Total Cov	  er	Hydrophytic Vegetation Present? Yes ✓ No
	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 no 7 no 2 no 2 no  79 = Total Cov 20% of total cover: 25 yes 15 yes 2 no 2 no 2 no  44 = Total Cov 20% of total cover: 7 yes 3 yes 1 no iso no  11 = Total Cov	10

SOIL Sampling Point: Plot 6

Profile Desc	ription: (Describe	to the dept	h needed to docum	ent the i	indicator	or confirm	the absence of	indicators.)	
Depth	Matrix			<u>Feature</u>		1 2	Tardina	Damada	
<u>(inches)</u> 0-6	Color (moist)		Color (moist)	%	_Type'	<u>Loc<sup>2</sup></u>	Texture	Remarks	
	10 YR 7/2	100					ZC		
6-8	10 YR 7/2	99	7.5 YR 5/8	_1		PL_	ZC		
8-18	10 YR 7/1	97	7.5 YR 5/8	3	С	PL	ZC		
								_	
					· ——				
			Reduced Matrix, MS			ains.		L=Pore Lining, M=Matrix.	
_		able to all I	RRs, unless other		•			r Problematic Hydric Soils <sup>3</sup> :	
Histosol	1 ,		Polyvalue Bel				· —	ck (A9) (LRR O)	
	oipedon (A2) stic (A3)		Thin Dark Sur Loamy Mucky	,			<del></del>	ck (A10) <b>(LRR S)</b> Vertic (F18) <b>(outside MLRA 150A,B)</b>	
	n Sulfide (A4)		Loamy Gleyer			Ο,		t Floodplain Soils (F19) (LRR P, S, T)	
	d Layers (A5)		✓ Depleted Mati		. ,			us Bright Loamy Soils (F20)	
	Bodies (A6) (LRR P		Redox Dark S	,	,		(MLRA		
	ıcky Mineral (A7) (LI		Depleted Dark		, ,			ent Material (TF2)	
	esence (A8) (LRR U	J)	Redox Depres		8)			llow Dark Surface (TF12)	
	ick (A9) <b>(LRR P, T)</b> d Below Dark Surfac	·= (Δ11)	Marl (F10) <b>(LI</b> Depleted Och	,	(MIRA 14	54.)	Other (Ex	plain in Remarks)	
	ark Surface (A12)	C (A11)	Iron-Mangane		•	•	T) <sup>3</sup> Indicate	ors of hydrophytic vegetation and	
	rairie Redox (A16) (I	MLRA 150A			, , ,	, ,	wetland hydrology must be present,		
Sandy M	Mucky Mineral (S1) (	LRR O, S)	Delta Ochric (	F17) <b>(M</b> L	-RA 151)		unless disturbed or problematic.		
	Gleyed Matrix (S4)		Reduced Vert						
	Redox (S5)		Piedmont Floo	•	, ,	•	•	F2D)	
	l Matrix (S6) rface (S7) <b>(LRR P, \$</b>	S T 11)	Anomaious Bi	rignt Loai	my Solls (I	-20) (NILK	A 149A, 153C, 1	930)	
	Layer (if observed)						1		
	mpaction of silt								
	ches): <u>16-18</u>						Hydric Soil Pr	resent? Yes ✓ No	
Remarks:	· '-								
ı									
l									

# Appendix B PHOTOGRAPHS



Photograph 1. Soil Profile Observed at Plot 1



Photograph 2. Overview of the Habitat Observed at Plot 1, Facing North



Photograph 3. Overview of the Habitat Observed at Plot 1, Facing East



Photograph 4. Overview of the Habitat Observed at Plot 1, Facing South



Photograph 5. Overview of the Habitat Observed at Plot 1, Facing West



Photograph 6. Soil Profile Observed at Plot 2



Photograph 7. Overview of the Habitat Observed at Plot 2, Facing North



Photograph 8. Overview of the Habitat Observed at Plot 2, Facing East



Photograph 9. Overview of the Habitat Observed at Plot 2, Facing South



Photograph 10. Overview of the Habitat Observed at Plot 2, Facing West



Photograph 11. Soil Profile Observed at Plot 3



Photograph 12. Overview of the Habitat Observed at Plot 3, Facing North



Photograph 13. Overview of the Habitat Observed at Plot 3, Facing East



Photograph 14. Overview of the Habitat Observed at Plot 3, Facing South



Photograph 15. Overview of the Habitat Observed at Plot 3, Facing West



Photograph 16. Soil Profile Observed at Plot 4



Photograph 17. Overview of the Habitat Observed at Plot 4, Facing North



Photograph 18. Overview of the Habitat Observed at Plot 4, Facing East



Photograph 19. Overview of the Habitat Observed at Plot 4, Facing South



Photograph 20. Overview of the Habitat Observed at Plot 4, Facing West



Photograph 21. Soil Profile Observed at Plot 5



Photograph 22. Overview of the Habitat Observed at Plot 5, Facing North



Photograph 23. Overview of the Habitat Observed at Plot 5, Facing East



Photograph 24. Overview of the Habitat Observed at Plot 5, Facing South



Photograph 25. Overview of the Habitat Observed at Plot 5, Facing West



Photograph 26. Soil Profile Observed at Plot 6



Photograph 27. Overview of the Habitat Observed at Plot 6, Facing North



Photograph 28. Overview of the Habitat Observed at Plot 6, Facing East



Photograph 29 Overview of the Habitat Observed at Plot 6, Facing South



Photograph 30. Overview of the Habitat Observed at Plot 6, Facing West



Photograph 31. Overview of the Habitat Observed Around Bayou, Facing Across



Photograph 32. Overview of the Habitat Observed Around Bayou, Facing Up Stream



Photograph 33. Overview of the Habitat Observed Around Bayou, Facing Down Stream