

Exhibit EE. West Calcasieu Port Site Wetlands Delineation Report





SENT VIA EMAIL

August 8, 2019

West Calcasieu Port Site Wetlands Delineation Report

Mr. Gus Fontenot SWLA Economic Development Alliance 4300 Ryan Street Lake Charles, Louisiana 70605

RE: Wetland Delineation Report West Calcasieu Port Site Carlyss, Louisiana

Dear Mr. Fontenot:

Southland Environmental, LLC is pleased to provide this electronic copy of the Wetland Delineation Report for the referenced property. A copy of this Delineation report can be submitted to the Corps of Engineers with a request for a preliminary wetland determination upon your review and approval.

If you have any questions or need a bound copy of the report, please do not hesitate to contact us. We appreciate the opportunity to provide this service for you.

Sincerely,

C. Blaine Johnson, P.E. Managing Owner

Attachment



WETLAND DELINEATION WEST CALCASIEU PORT SITE CARLYSS, CALCASIEU PARISH, LOUISIANA

Prepared for:

SWLA Economic Development Alliance 4300 Ryan Street Lake Charles, Louisiana 70605

August 8, 2019

C. Blaine Johnson, P.E. Managing Owner

Cleveland R. Hoffpauir Environmental Scientist

Prepared by:

Southland Environmental, LLC 510 Clarence Street Lake Charles, Louisiana 70601 (337) 436-3248

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SUMMARY

An approximate 33-acre tract located at the West Calcasieu Port facility in Carlyss, Calcasieu Parish, Louisiana was evaluated for the presence of jurisdictional wetlands. The property is located in an area of residential and commercial development along the Intracoastal Waterway. The majority of the site is herbaceous and frequently mowed. The eastern portion of the property is wooded, with the dominant species consisting of Live Oaks. Soils present on the property, as mapped by the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) include Crowley-Vidrine complex and Udifluvents, 1 to 20 percent slopes. The eastern portion of the property is relatively flat to gently sloping. The greater part of the property is well drained and did not exhibit characteristics typical of a wetland.

The wetland delineation was performed in accordance with the procedures and methods as described in the U.S. Department of the Army Corps of Engineers (COE) 1987 Manual for Wetland Delineations and the Atlantic and Gulf Coastal Plain Regional Supplement 2010.

Based on the results of this delineation, approximately 0.16 acre of wetland is present within the property boundary. In addition to wetlands, drainage ditches and a portion of the Intracoastal Waterway (ICWW) are located on the investigated property. The drains comprise approximately 4,950 linear feet and the portion of the ICWW located within the property boundary includes 0.21 acre. These features will likely be considered non-wetland waters by the COE.

1.0 INTRODUCTION

Southland Environmental, LLC (Southland Environmental) was retained to conduct a wetland delineation of property located at the West Calcasieu Port in Carlyss, Calcasieu Parish. The property is located in Sections 35, Township 11 South, Range 10 West. The center of the property is located at Latitude 30.06406, Longitude -93.35327. The purpose of the delineation was to evaluate the tract for the potential presence of wetlands. A site location map is included as **Figure 1** and a site diagram is included as **Figure 2**. LIDAR imagery was also reviewed and is included as **Figure 3**. LIDAR is a remote sensing method that uses a near-infrared laser to map changes in elevation of the surface of the Earth. A flagging key map is included as **Figure 4**. The property is frequently maintained by mowing. The wetland area located on the site was not flagged due to these frequent mowing's.

Cleve Hoffpauir of Southland Environmental performed the field evaluation on August 1, 2019. Mr. Hoffpauir has a Bachelors of Science Degree in Environmental Science and has experience in wetland ecosystem evaluation and wetland vegetation identification, in addition to specialized training in performing wetland delineations. Mr Hoffpauir has been performing wetland delineations for approximately ten years. Blaine Johnson managed the project. Mr. Johnson has over thirty years experience in environmental investigation and

permitting, with over twenty years experience in wetland permitting. Copies of the applicable Certificates of Training are included as **Attachment A**.

2.0 METHODOLOGY

The wetland delineation performed by Southland Environmental was conducted in accordance with technical guidelines and methods for wetland delineations set forth by the COE in the 1987 Manual for Wetland Delineations and the Atlantic and Gulf Coastal Plains Regional Supplement 2010. These technical guidelines and methods utilize a multiparameter approach to identify and delineate wetlands for the purposes of Section 404 of the Clean Water Act.

According to the COE 1987 Manual for Wetland Delineations, a site must have hydrophytic vegetation, hydric soils, and wetland hydrology in order for it to be classified as a wetland. The following definitions are from the COE 1987 Manual for Wetland Determinations:

Hydrophytic vegetation – the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hyrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation.

Wetland soils – a soil that is saturated, flooded, ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (US Department of Agriculture – Soil Conservation Service 1985). Hydric soils that occur in areas having positive indicators of hydrophytic vegetation and wetland hydrology are wetland soils.

Wetland hydrology – the sum total of wetness characteristics in areas that are inundated or have saturated soils for sufficient duration to support hydrophytic vegetation.

Prior to the site visit, the Calcasieu Parish Soil Survey prepared by the USDA-NRCS was reviewed. The purpose of that review was to determine the soil types as mapped by USDA. As indicated by the Soil Survey, the delineated site includes two soil types: Crowley-Vidrine Complex (Cr) and Udifluvents, 1 to 20 percent slopes (UA). These soils are not listed as hydric in Calcasieu Parish. In addition to the soils map, infrared aerial photographs from 1998, 2004, and 2008 were reviewed. The soil maps and infrared photographs are included as **Attachment B**.

The delineation was begun by traversing the site and making a general evaluation of the topography and drainage features. Sample points were selected at appropriate locations to properly characterize the soil, vegetation, and hydrology on the investigated property. Nine representative sample points were selected and detailed evaluations were conducted at these locations. The data collected at these sample points was recorded on Wetland Data Forms and the location of each sample plot was marked with a Trimble Global Positioning Unit (GPS). The Wetland Data Forms are included as **Attachment C**.

After a general evaluation of the tract and conducting data points, a Trimble GPS was utilized to map the wetlands and non-wetland waters. Once GPS mapping was completed, geospatial data was imported into ArcView GIS for graphical display and land cover analysis.

3.0 SITE DESCRIPTION

The delineated property is located west of Highway 27 and north of the ICWW at the West Calcasieu Port facility in Carlyss, Calcasieu Parish. The tract is irregular in shape and encompasses approximately 33 acres. Based on aerial photography review and the site investigation, the majority of the property is undeveloped and herbaceous. Two camps and a barn are located in the eastern portion of the property. The southwest portion of the property consists of aggregate and is utilized as a laydown yard (see photographs 46-51). The remainder of the property is primarily herbaceous with a few trees scattered throughout. The dominant vegetation in the forested portions of the property consist primarily of Live Oak (Quercus virginiana). The dominant vegetation in the pasture or herbaceous areas consists primarily of Bahia grass (*Paspalum notatum*), Bermuda grass (Cynodon dactylon), and St. Augustine grass (Stenotaphrum secundatum). The wetland area identified in the northeast portion of the property had dominant vegetation consisting of Torpedo grass (Panicum repens) and Cattail (Typha latifolia). As noted earlier in this report, the USDA-NRCS soil maps indicate that soils on the property consist of two soil types: Crowley-Vidrine complex and Udifluvents, 1 to 20 percent slopes. These soil types are not listed as hydric in Calcasieu Parish. Drainage ditches and a portion of the ICWW are located within the property boundary. The drains will likely be considered Section 404 non-wetland waters and the portion of the ICWW will likely be considered Section 10 nonwetland waters by the COE.

Photographs of the sample locations were taken and are included as Attachment D.

4.0 FINDINGS

The tract of land was inspected with respect to the potential presence of wetlands. Nine sample points were selected to characterize the site. At these sample points, the soils, hydrology, and vegetation were characterized and the information was recorded on Wetland Data Forms. The findings of the delineation are described in the following sections.

4.1 VEGETATION

The typical dominant plant species that were encountered at the site included the following:

FACULTATIVE UPLAND

Cynodon dactylon (Bermuda grass) Quercus virginiana (Live Oak) Paspalum notatum (Bahia grass)

FACULTATIVE

Stenotaphrum secundatum (St. Augustine grass) Toxicodendron radicans (Poison Ivy) Ilex vomitoria (Yaupon) Ampelopsis arborea (Peppervine) Smilax rotundifolia (Common Greenbrier)

FACULTATIVE WETLAND

Panicum repens (Torpedo grass)

OBLIGATE WETLAND

Typha latifolia (Broadleaf Cattail)

Two of the nine sample points had a dominance of hydrophytic vegetation.

4.2 SOILS

The review of the Soil Survey indicated that the delineated tract is located on two soil types. Below is a brief description of the soil from the Soil Survey of Calcasieu Parish.

- Cr soils are level and somewhat poorly drained. They are on broad convex ridges on the Gulf Coast Prairies. This complex consists of small areas of Crowley and Vidrine soils that are so intermingled that they cannot be mapped separately at the scale selected. Areas are irregular in shape and range from 20 to 1,000 acres. The landscape consists of broad, convex ridges that contain many small convex mounds or mound areas that have been smoothed. The mounds are circular and range from 50 to 150 feet in diameter and 1 foot to 6 feet in height before leveling. Most areas have been leveled and have a slope of 0 to 1 percent. Cr soils are not listed as hydric in Calcasieu Parish.
- UA map unit consists of sandy to clayey soil material that has been excavated from other places during the construction and maintenance of navigable waterways. These soils have no identifiable soil layers. They are variable in texture and slope. Areas range from irregular in shape to long and narrow and are from 20 to several hundred acres in size. UA soils are not listed as hydric in Calcasieu Parish.

4.3 HYDROLOGY

General observations and inspections of soil samples were performed to evaluate for wetland hydrology. Potential primary indicators include inundated areas, saturated soil in the upper 12 inches, free water in the soil, water marks, drainage patterns of wetlands, and sediment deposits. Sample Plot 1 exhibited the primary wetland hydrology indicators saturation, surface water, oxidized rhizospheres on living roots, and a thin muck surface. Secondary wetland hydrology indicators FAC neutral test and geomorphic position were also present in Plot 1.

The remaining sample plots were well drained and did not demonstrate wetland hydrology indicators. One primary indicator or two secondary indicators must be present for an area to have wetland hydrology.

5.0 CONCLUSIONS

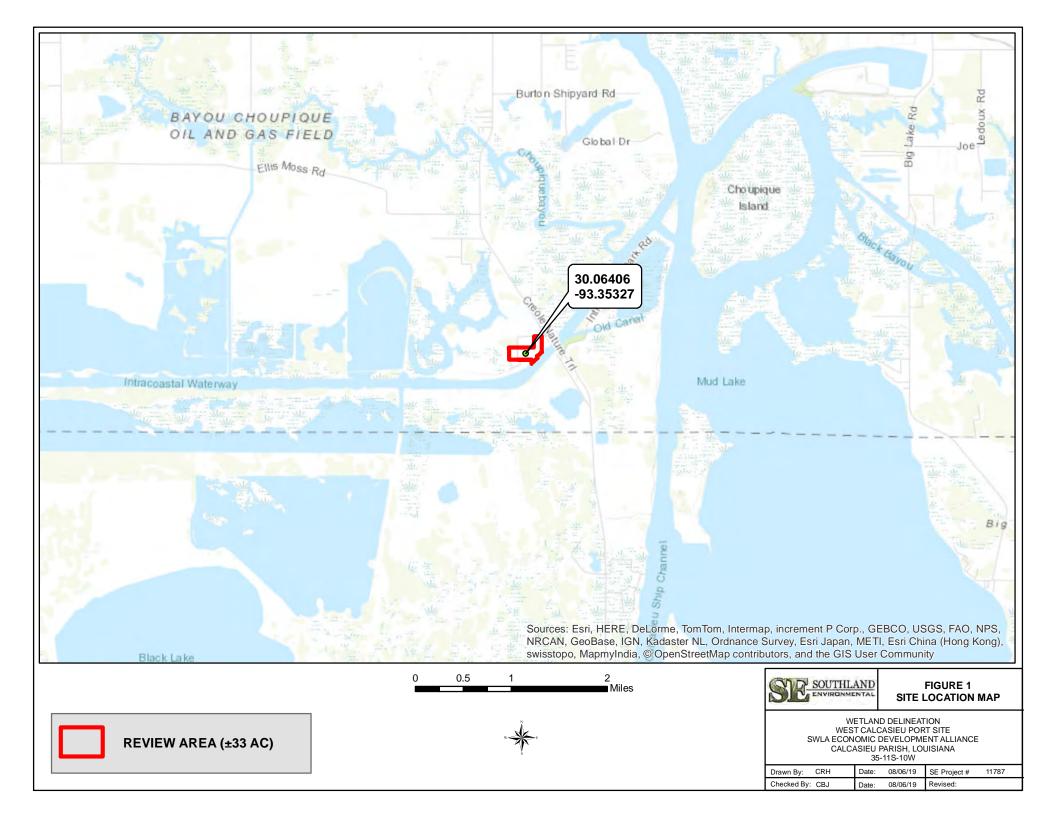
An approximate 33-acre tract located at the West Calcasieu Port in Carlyss, Louisiana was evaluated for the presence of jurisdictional wetlands. The wetland delineation was performed in accordance with the procedures and methods as described in the COE 1987 Manual for Wetland Delineations

The investigated property consists of pasture, forested areas, and two aggregate laydown areas. The eastern portion of the site exhibits a "pimple mounded" topography which is typical of Cr soils. The remainder of the property is relatively flat to gently sloping. The wetland identified on the site was located in a depressional area in the northeastern portion of the property. This depressional area demonstrated wetland characteristics which include hydrophytic vegetation, wetland hydrology, and hydric soils. This area was determined to be wetland. In addition to wetlands, drainage ditches and a portion of the ICWW are located within the property boundary. The ditches will likely be considered Section 404 non-wetland waters and the ICWW will likely be considered Section 10 non-wetland waters by the COE.

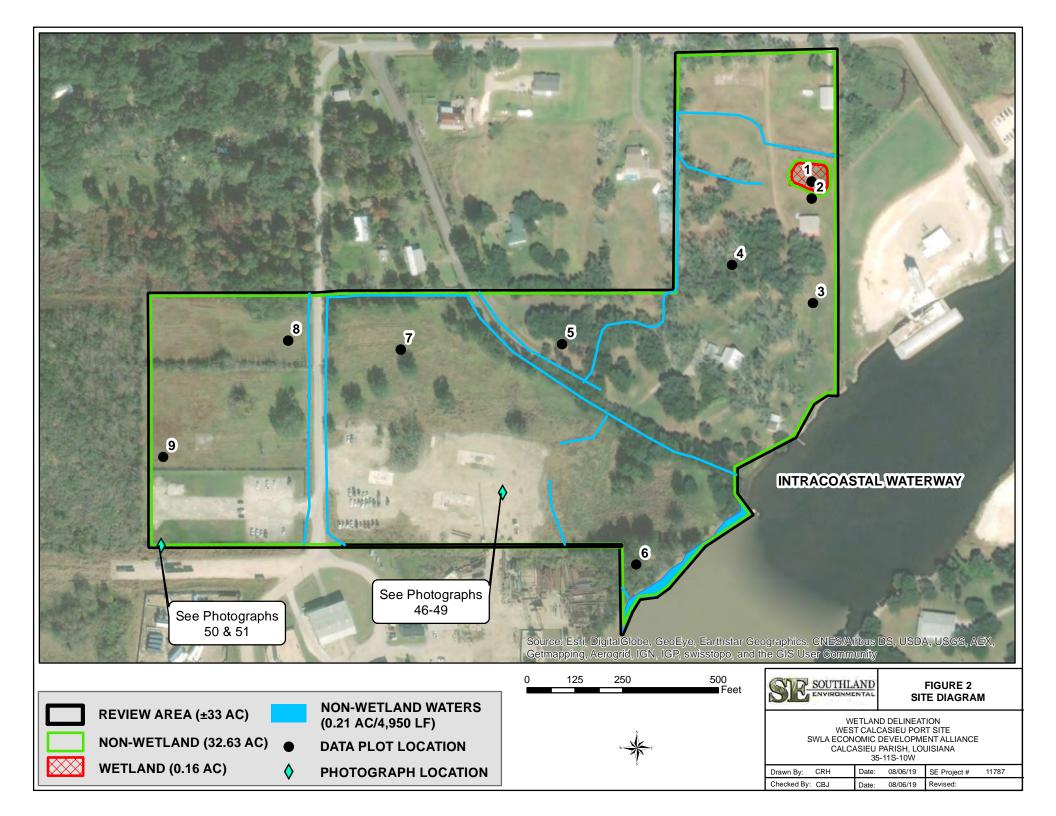
Based on the results of this delineation approximately, 32.63 acres of non-wetlands, 0.16 acre of herbaceous wetland, 0.21 acre of non-wetland waters (ICWW), and 4,950 linear feet of non-wetland waters (drainage ditches) are present on the investigated property.

5

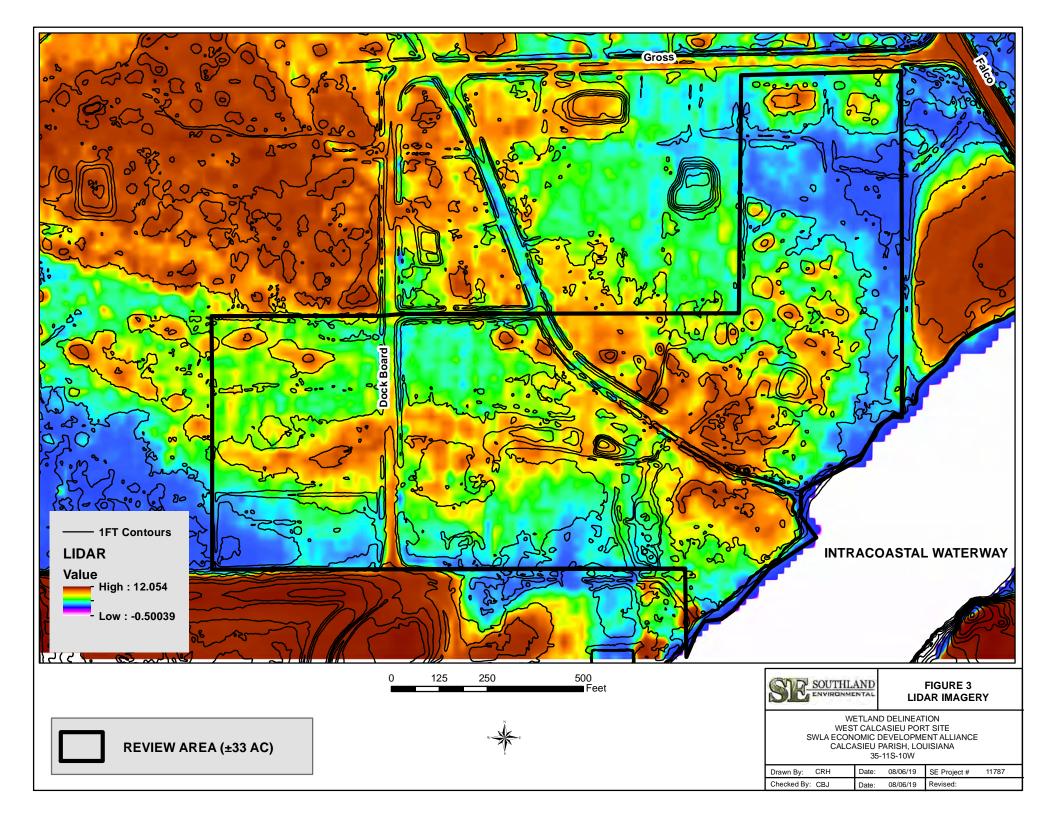
Site Location Map



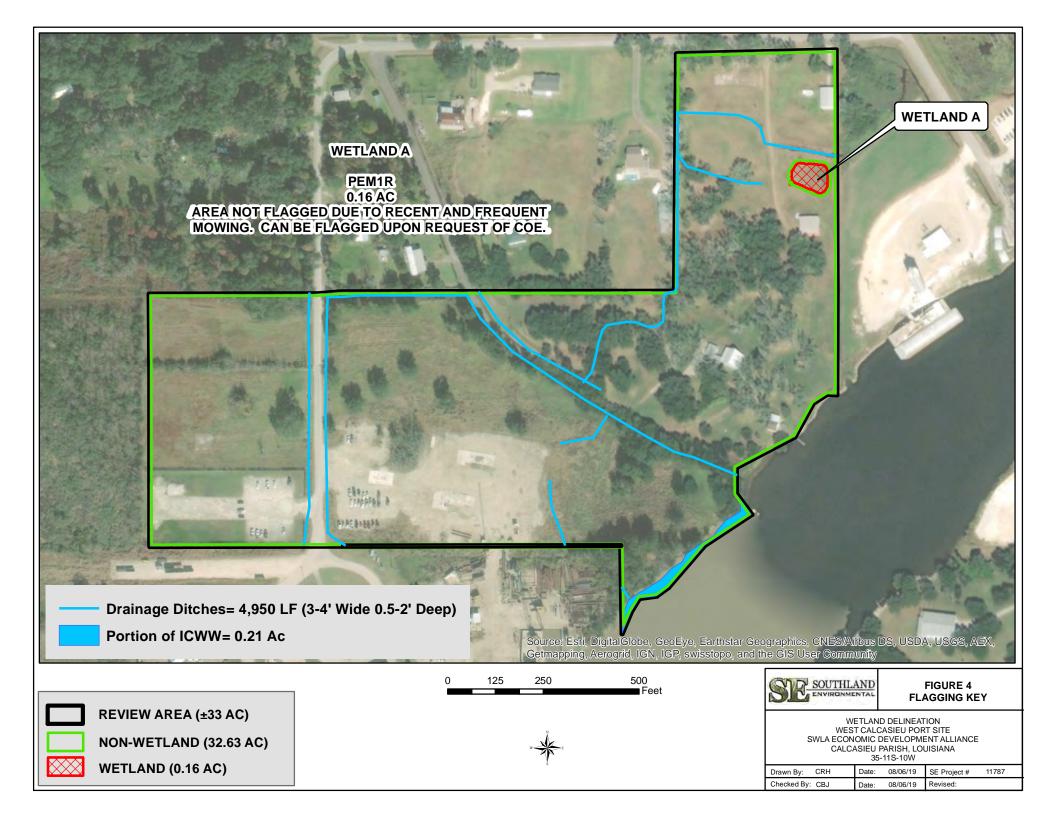
Site Diagram



Lidar Imagery



Flagging Key



ATTACHMENT A

Certificates of Training

Richard Chinn Environmental Training, Inc.

certifies that

Cleve Hoffpauir

has successfully completed a

4 day 38 hour Army Corps of Engineers Wetland Delineation Training Program

issued Certificate No. 4666 and 3.8 CEUs on this first day of June, 2007, in Austin, Texas



Richard Chinn, PWS, CET,

Richard Chinn Environmental Training, Inc. 804 Cottage Hill Way, Brandon, FL 33511-8098 1.800.427.0307 • FAX: 1.888.457.6331 • info@richardchinn.com • http://www.richardchinn.com

This training has been based in part on the U.S. Army Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1 (1987 manual), as provided for in the training materials developed in conjunction with Section 307(e) of the Water Resources Development Act of 1990 for the Wetland Delineator Certification Program.



Certificate of Training Hydric Soil Updates

This certifies that

Cleveland Hoffpauir

has participated in 2 hours of instruction.

Date: March 22, 2018



RALEIGH, NC 27603 1-877-479-2673

www.SwampSchool.org

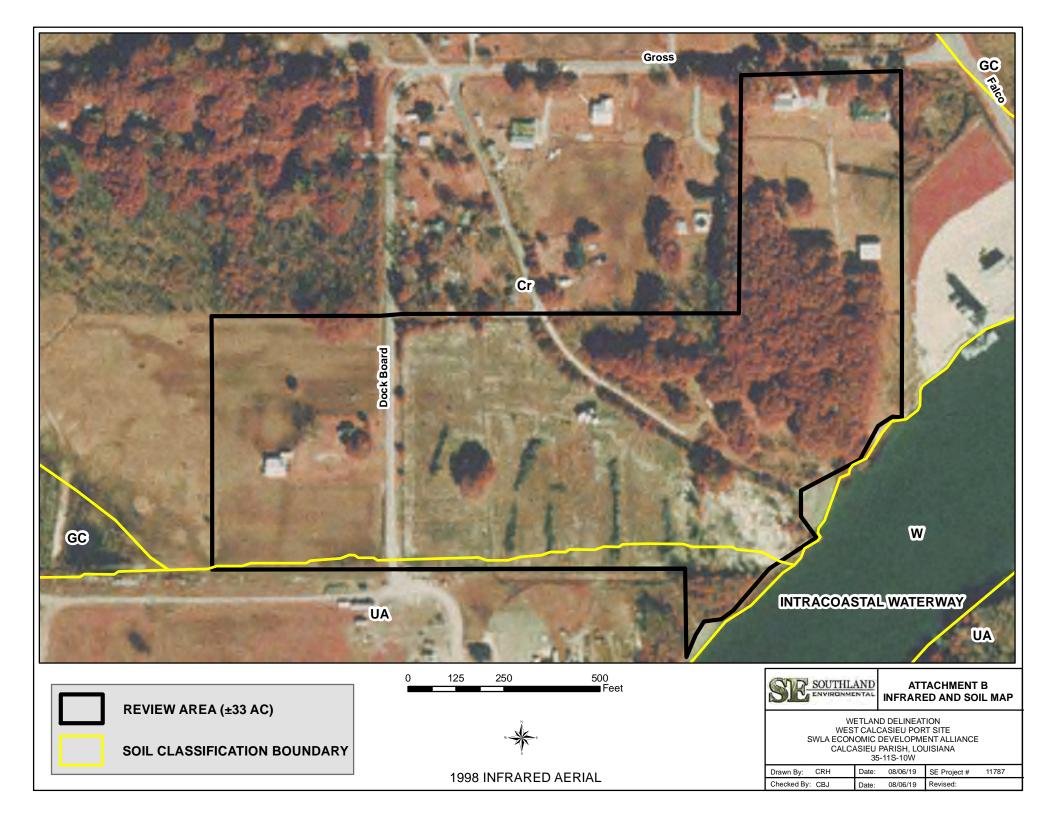


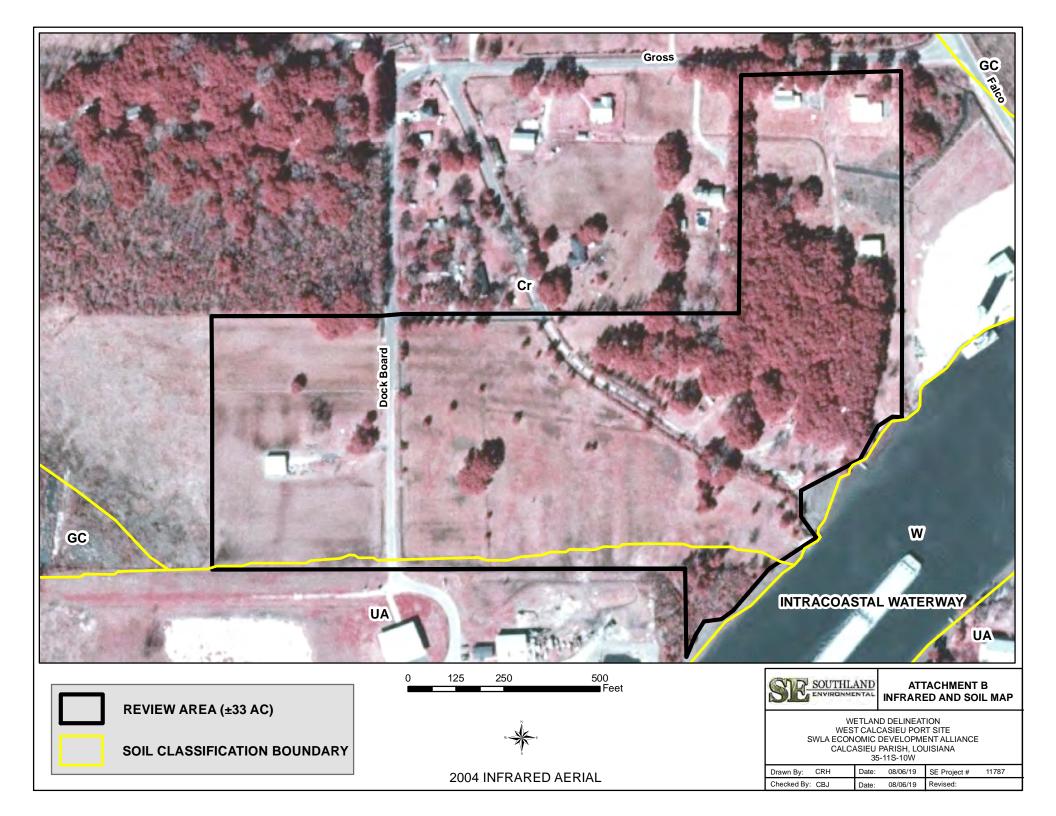
Many +

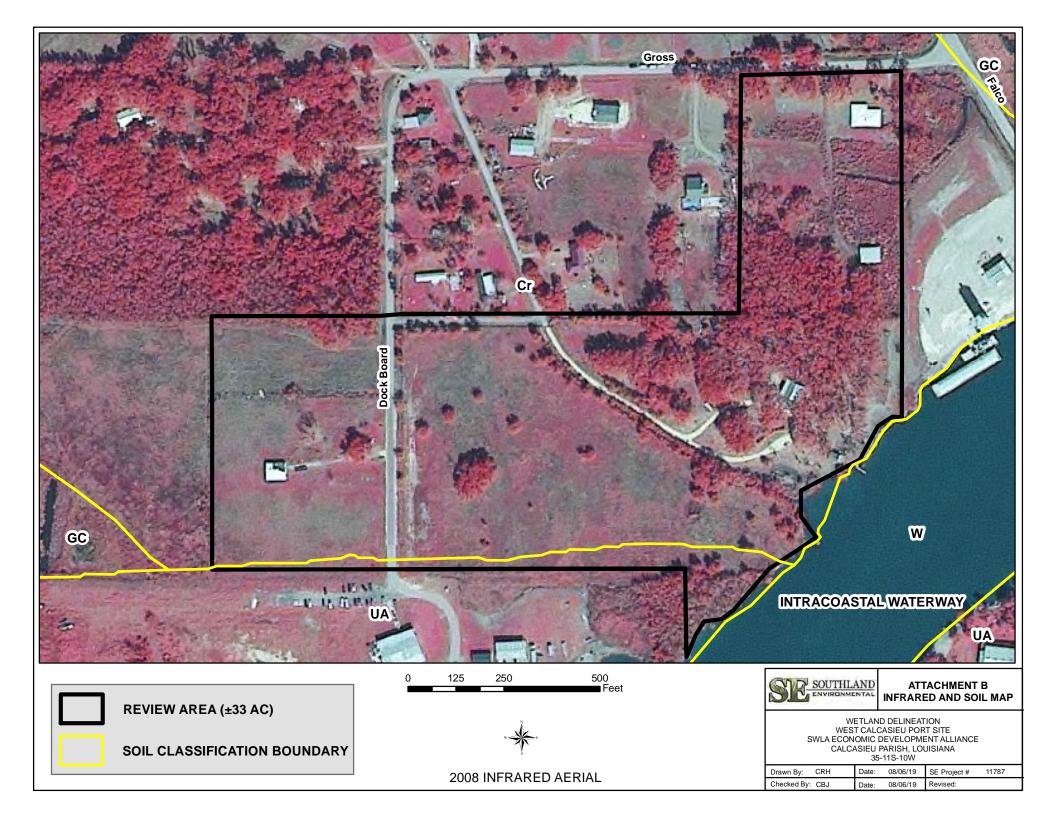
SIGNATURE OF AUTHORIZATION

ATTACHMENT B

Infrared and Soil Maps







ATTACHMENT C

Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: West Calcasieu Port Site	City/County: Carly	/ss/Calcasieu	S	Sampling Date: 8/1/19	
Applicant/Owner: SWLA Economic Development Alliance		Stat	e: LA	Sampling Date: <u>8/1/19</u> Sampling Point: <u>1</u>	
	Section, Township, Range:35-11S-10W				
				Slope (%): 0	
Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 466		Long: 3326	6). 6124.73	Optum: UTM NAD 83	
Soil Map Unit Name: Crowley-Vidrine complex (Cr)		Long	NWI classificat	tion: None	
Are climatic / hydrologic conditions on the site typical for this time of					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significant	tly disturbed?	Are "Normal Cir	cumstances" pre	esent? Yes X No	
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally p					
SUMMARY OF FINDINGS – Attach site map showin					
Hydrophytic Vegetation Present? Yes X No	- Is the Sam				
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	- within a We		Yes X	No	
Wetland Hydrology Present? Yes X No	-				
Remarks:					
Small herbaceous depression, adjacent to sn					
HYDROLOGY					
Wetland Hydrology Indicators:		Se	condary Indicato	ors (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply	()	[]	Surface Soil C	racks (B6)	
Surface Water (A1)	,	님		tated Concave Surface (B8)	
High Water Table (A2)		님	Drainage Patte		
Saturation (A3)	. ,		Moss Trim Line	· · ·	
	oheres along Living R	oots (C3) \Box		(ater Table (C2)	
Sediment Deposits (B2)	uction in Tilled Soils (Crayfish Burro	ws (C8) ble on Aerial Imagery (C9)	
□ Drift Deposits (B3) □ Recent Iron Redu □ Algal Mat or Crust (B4) □ Thin Muck Surface			Geomorphic P		
☐ Iron Deposits (B5) ☐ Other (Explain in	. ,		Shallow Aquita	· · · ·	
Inundation Visible on Aerial Imagery (B7)			FAC-Neutral T		
Water-Stained Leaves (B9)				oss (D8) (LRR T, U)	
Field Observations:					
Surface Water Present? Yes X No Depth (inche	es): <u>0-2"</u>				
Water Table Present? Yes <u>No X</u> Depth (inche					
Saturation Present? Yes X No Depth (inche (includes capillary fringe)	es): <u>0-16"</u>	Wetland Hydr	ology Present	? Yes X No	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspect	ions), if availab	e:		
Remarks:					
Tomano.					

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

Sampling Point: 1

		Dominan		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>±30</u>) 1. <u>None</u>		<u>Species</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 3				Total Number of Dominant Species Across All Strata: (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
6			<u> </u>	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8				OBL species x1 =
		= Total Co		FACW species X 1 = Facw species X 2 =
50% of total cover:	20% of	f total cove	r:	FAC species
Sapling/Shrub Stratum (Plot size: ±30)				FACU species x 4 =
1. None				UPL species x 5 =
2				Column Totals: (A) (B)
3				
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 ≤3.0 ¹
		= Total Co		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	20% of	f total cove	r:	
<u>Herb Stratum</u> (Plot size: <u>±30</u>) 1. Panicum repens	50	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must
2. Typha latifolia	30	Yes	OBL	be present, unless disturbed or problematic.
3. Juncus roemerianus	5	No	OBL	Definitions of Four Vegetation Strata:
4. Vigna luteola	<u>5</u>	_	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
	2	No	FACW	more in diameter at breast height (DBH), regardless of height.
5. Cyperus virens		No		
6 7				Sapling/Shrub – Woody plants, excluding vines, less 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.				
	92	= Total Co	over	
50% of total cover: 46				
Woody Vine Stratum (Plot size: ±30)				
1. None				
2				
3				
4				
5				Hydrophytic
		= Total Co	over	Vegetation
50% of total cover:	20% o	f total cove	r:	Present? Yes <u>×</u> No
Remarks: (If observed, list morphological adaptations be	low).			
	,			

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the	indicator	or confirm	n the absence	of indicators.)
Depth <u>Matrix</u>			x Feature	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	3/N	98	5YR 4/6	2	С	M, PL	Mucky	Saturated
7-9	10YR 4/1	90	5YR 4/6	10	С	M, PL	Silty Sand	Saturated
9-16	10YR 5/1	80	5YR 4/6	20	С	M, PL	Silty Sand	Saturated-Fe/Mn Masses
				·				
				·				
				. <u> </u>				
			=Reduced Matrix, MS			ains.		PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all	LRRs, unless other	wise no	ted.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	. ,		Polyvalue Be		• • •			/luck (A9) (LRR O)
	pipedon (A2)		Thin Dark Su					Auck (A10) (LRR S)
	stic (A3) en Sulfide (A4)		Loamy Muck			(0)		ed Vertic (F18) (outside MLRA 150A,B) ont Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Mat		(1 2)			alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	P, T, U)	Redox Dark		F6)			RA 153B)
	icky Mineral (A7) (L l		Depleted Dar	k Surfac	e (F7)			arent Material (TF2)
	esence (A8) (LRR L	J)	Redox Depre		-8)			hallow Dark Surface (TF12)
=	ick (A9) (LRR P, T)		Marl (F10) (L			- 11	U Other	(Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	e (A11)	Depleted Och				T) ³ India	ators of hydrophytic vegetation and
	rairie Redox (A12)	MI RA 150						and hydrology must be present,
	lucky Mineral (S1) (Delta Ochric			, .,		ess disturbed or problematic.
	Bleyed Matrix (S4)		Reduced Ver			0A, 150B)		·
	Redox (S5)		Piedmont Flo					
	Matrix (S6)		Anomalous B	Bright Loa	amy Soils (F20) (MLR	A 149A, 153C	, 153D)
	rface (S7) (LRR P, S Layer (if observed)						1	
	Layer (II Observed)	•						
Type:	ches):						Hudria Sail	Present? Yes X No
Remarks:	cnes).						Hyunc Soli	
Remarks.								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: West Calcasieu Port Site	City/County: Carlyss/Ca	Sampling Date: 8/1/19	
Applicant/Owner: SWLA Economic Development Alliance	City/County: Carlyss/Ca	State: LA	Sampling Point: 2
Investigator(s): C. Hoffpauir	Section, Township, Rang	_{e:} 35-11S-10W	
		<u> </u>	Slope (%): <u>1-3</u>
Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 466	5191.48 Loi	ng: 3326064.70	Datum: UTM NAD 83
Landform (hillslope, terrace, etc.): Gentle Slope Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 466 Soil Map Unit Name: Crowley-Vidrine complex (Cr)		NWI classific	cation: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes X No	(If no, explain in R	emarks.)
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significant			
Are Vegetation No, Soil No, or Hydrology No naturally		ded, explain any answe	
SUMMARY OF FINDINGS – Attach site map showi		cations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No X			
Hydric Soil Present? Yes No X	is the outpied A		No X
Wetland Hydrology Present? Yes No X	within a Wetland	? Yes	NO <u>^</u>
Remarks:			
Area recently and frequently mowed.			
HYDROLOGY			
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	• •	Surface Soil	
□ Surface Water (A1) □ Aquatic Fauna (□ High Water Table (A2) □ Marl Deposits (I	,		getated Concave Surface (B8)
High Water Table (A2) Saturation (A3) Marl Deposits (I Hydrogen Sulfic		☐ Drainage Pa	
	spheres along Living Roots (0	—	Water Table (C2)
Sediment Deposits (B2)		Crayfish Bur	
	duction in Tilled Soils (C6)		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	ace (C7)	Geomorphic	Position (D2)
Iron Deposits (B5)	n Remarks)	Shallow Aqu	itard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	Test (D5)
Water-Stained Leaves (B9)		Sphagnum n	noss (D8) (LRR T, U)
Field Observations:	、 、		
Surface Water Present? Yes No X Depth (inch			
Water Table Present? Yes No X Depth (inch Saturation Present? Yes No X Depth (inch		and Hydrology Preser	nt? Yes No ^X
(includes capillary fringe)	-		It? res No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), i	if available:	
Remarks:			
None observed.			

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

Sampling Point: 2

		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>±30</u>) 1. <u>None</u>		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 3				Total Number of Dominant Species Across All Strata: (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8				OBL species x 1 =
		= Total Cov		FACW species x 2 =
50% of total cover:	20% of	f total cover	:	FAC species
Sapling/Shrub Stratum (Plot size: ±30)				FACU species x 4 =
1. None				UPL species x 5 =
2				Column Totals: (A) (B)
3				
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 ≤3.0 ¹
500/ // /		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	20% of	total cover	:	
<u>Herb Stratum</u> (Plot size: <u>±30</u>) 1. Cynodon dactylon	40	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Stenotaphrum secundatum	40	Yes	FAC	be present, unless disturbed or problematic.
3. Phyla nodiflora	10	No	FAC	Definitions of Four Vegetation Strata:
A Panicum repens	5	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Rumex crispus	2	No	FAC	more in diameter at breast height (DBH), regardless of height.
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				
8 9				Herb – All herbaceous (non-woody) plants, regardless 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				
10.5		= Total Cov		
50% of total cover: 48.5	20% of	f total cover	19.4	
Woody Vine Stratum (Plot size: ±30)				
1. None				
2				
3				
4				
5				Hydrophytic
		= Total Cov		Vegetation Present? Yes No X
50% of total cover:	20% of	f total cover	:	
Remarks: (If observed, list morphological adaptations be	elow).			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix			Feature	4	. 2	_	
<u>(inches)</u> 0-4	Color (moist) 10YR 3/2	<u>%</u> 100	Color (moist)	%	Type'	Loc ²	Texture Silt Loam	Remarks
					С			
4-16	10YR 3/2	95	5YR 4/6	5		M, PL	Silty Clay	
4-16	10YR 5/3	80	2.5YR 4/8	20	С	Μ	Clay	Few Clay inclusions from 4-16"
		·			·	·		
		·						
			Reduced Matrix, MS			ains.		PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Red Parent Material (TF2) Very Shallow Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Delted Ochric (F13) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) Mark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D)								
Type:	.ayer (if observed):							
Depth (inc	ches):						Hydric Soil	Present? Yes <u>No X</u>
Remarks:							•	

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: West Calcasieu Port Site	_ City/County: Carlyss/Calcasieu Sampling Date: 8/1/19 State: LA Sampling Point: 3				
Applicant/Owner: SWLA Economic Development Alliance	State: LA Sampling Point: 3				
Investigator(s): C. Hoffpauir	Section, Township, Range: 35-11S-10W				
Polativoly Flat	nono 0.1				
Subregion (LRR or MLRA): LRR-T/MLRA-151	199.47 Long: 3326027.97 Datum: UTM NAD 83				
Soil Map Unit Name: Crowley-Vidrine complex (Cr)	_ Local relief (concave, convex, none): <u>Hore</u> Slope (%): <u>OF1</u> 199.47 Long: <u>3326027.97</u> Datum: <u>UTM NAD 83</u> NWI classification: <u>None</u>				
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes X No (If no. explain in Remarks.)				
	ly disturbed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally p	problematic? (If needed, explain any answers in Remarks.)				
	ng sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No X					
Hydrophytic vegetation nesent? Yes No _X Hydric Soil Present? Yes No _X	io the campion field				
Wetland Hydrology Present? Yes No X	within a Wetland? Yes <u>No X</u>				
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)				
Surface Water (A1)					
High Water Table (A2)					
Saturation (A3)					
Water Marks (B1)	oheres along Living Roots (C3) Dry-Season Water Table (C2)				
Sediment Deposits (B2)					
	uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Thin Muck Surface Iron Deposits (B5) Other (Explain in					
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)				
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)				
Field Observations:					
Surface Water Present? Yes No X Depth (inche					
Water Table Present? Yes <u>No X</u> Depth (inche					
Saturation Present? Yes <u>No X</u> Depth (inche (includes capillary fringe)	es): Wetland Hydrology Present? Yes No X				
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:				
Remarks:					
None observed.					
None observed.					

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

Sam	plina	Point:	3

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: <u>±30</u>)		Species?		Number of Dominant Species	
1 Quercus virginiana	10	Yes	FACU	That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>2</u> (B)	
4				Dereent of Deminent Species	
5				Percent of Dominant Species That Are OBL, FACW, or FAC: ⁵⁰ (A/B)	
6					
				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
8					
	10	= Total Cov	/er	OBL species x 1 =	
50% of total cover: 5	20% of	total cover	2	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: ±30)				FAC species x 3 =	
Nono				FACU species x 4 =	
				UPL species x 5 =	
2				Column Totals: (A) (B)	
3					
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 ≤3.0 ¹	
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover:					
	20 /8 01	lotal cover	·		
<u>Herb Stratum</u> (Plot size: ± 30)				¹ Indicators of hydric soil and wetland hydrology must	
1. Stenotaphrum secundatum	60	Yes	FAC	be present, unless disturbed or problematic.	
2. Cynodon dactylon	30	Yes	FACU	Definitions of Four Vegetation Strata:	
3. Phyla nodiflora	5	No	FAC		
A Paspalum dilatatum	5	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
11				more in diameter at breast height (DBH), regardless of height.	
5				noight.	
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 of size, and woody plants less than 3.28 ft tall.	
9					
10				Woody vine – All woody vines greater than 3.28 ft in	
11				height.	
12.					
	100	= Total Cov	/er		
50% of total cover: ⁵⁰					
	20% 01	total cover	20		
Woody Vine Stratum (Plot size: ±30)					
1. <u>None</u>					
2					
3					
4					
5				Hydrophytic	
		= Total Cov	/er	Vegetation	
50% of total cover:	20% of	total cover		Present? Yes No $\frac{X}{X}$	
			·		
Remarks: (If observed, list morphological adaptations be	iow).				

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: West Calcasieu Port Site	City/County: Carlyss/Cal	Sampling Date: 8/1/19						
Applicant/Owner: SWLA Economic Development Alliance	City/County: Carlyss/Cal	State: LA	Sampling Point: 4					
Investigator(s): C. Hoffpauir	Section, Township, Range: 35-11S-10W							
Flat/Intermound Area		none	Slope (%): 0-1					
Subregion (LRR or MLRA): LRR-T/MLRA-151	35.01 Long	3326057.75	Datum: UTM NAD 83					
Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 4661 Soil Map Unit Name: Crowley-Vidrine complex (Cr)	2	NWI classifi	cation. None					
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No	(If no, explain in F	Remarks)					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantl								
Are Vegetation <u>NO</u> soil <u>NO</u> or Hydrology <u>NO</u> poturally p	oblemetic? (If peede		present: 103 NO					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
-								
Hydrophytic Vegetation Present? Yes No ^	Is the Sampled Are							
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes X Wetland Hydrology Present? Yes No	within a Wetland?	Yes	<u>No X</u>					
Remarks:								
Area recently and frequently mowed (maintai								
HYDROLOGY								
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)			Cracks (B6)					
Surface Water (A1)	,		getated Concave Surface (B8)					
High Water Table (A2) Saturation (A3) Marl Deposits (B1		Drainage Pa						
	heres along Living Roots (C3	3) Dry-Season	Water Table (C2)					
Sediment Deposits (B2)		Crayfish Bu						
	ction in Tilled Soils (C6)		isible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	. ,		Position (D2)					
Iron Deposits (B5)	Remarks)	Shallow Aqu	. ,					
L Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)		FAC-Neutra	l Test (D5) noss (D8) (LRR T, U)					
Field Observations:								
Surface Water Present? Yes No X Depth (inche	3):							
Water Table Present? Yes No X Depth (inche								
Saturation Present? Yes No X Depth (inche	s): Wetlan	nd Hydrology Prese	nt? Yes <u>No X</u>					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial pho	os, previous inspections), if	available:						
Remarks:								
None observed.								

Sampling Point: 4	Sam	pling	Point:	4
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Tree Stratum (Plot size: ±30)		Species?	Status	Dominance Test worksheet: Number of Dominant Species
1. Quercus virginiana	50	Yes	FACU	That Are OBL, FACW, or FAC: <u>3</u> (A)
2. Celtis laevigata	5	No	FACW	Total Number of Dominant
3				Species Across All Strata: <u>6</u> (B)
4				Demonst of Deminent Creation
5				Percent of Dominant Species That Are OBL, FACW, or FAC: ⁵⁰ (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of:Multiply by:
	55	= Total Cov	/er	OBL species x 1 =
50% of total cover: 27.5				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: ±30)	2070 01			FAC species x 3 =
Quereus virginiano	5	Yes	FACU	FACU species x 4 =
· · · · · · · · · · · · · · · · · · ·				UPL species x 5 =
2				Column Totals: (A) (B)
3				
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 ≤3.0 ¹
	5	= Total Cov	ver	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 2.5	20% of	total cover	1	
Herb Stratum (Plot size: ±30)				¹ Indicators of hydric soil and wetland hydrology must
1. Stenotaphrum secundatum	60	Yes	FAC	be present, unless disturbed or problematic.
2. Cynodon dactylon	20	Yes	FACU	Definitions of Four Vegetation Strata:
3. Phyla nodiflora	5	No	FAC	
4 Phyllanthus urinaria	5	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5. Echinochloa crus-galli	2	No	FACW	height.
	·			
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				Ŭ (,
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				
		= Total Cov		
50% of total cover: <u>46</u>	20% of	total cover	18.4	
<u>Woody Vine Stratum</u> (Plot size: ±30)				
1. Toxicodendron radicans	2	Yes	FAC	
2. Smilax rotundifolia	2	Yes	FAC	
3				
4				
5				Hydrophytic
	4	= Total Cov	ver	Vegetation
50% of total cover: 2	20% of	total cover	0.8	Present? Yes <u>No X</u>
Remarks: (If observed, list morphological adaptations belo				<u> </u>

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix			Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)				Texture	Remarks
0-3	10YR 2/1	98	5YR 4/6	2	С	Μ	Silt Loam	
3-22	10YR 5/2	95	7.5YR 4/6	5	С	M, PL	Silt Loam	
		·			·			
		·				·······		
		·						
		·						
			Reduced Matrix, MS			ains.		PL=Pore Lining, M=Matrix.
		able to all	LRRs, unless other					for Problematic Hydric Soils ³ :
Histosol	. ,		Polyvalue Bel				· 🗖	Auck (A9) (LRR O)
Black His	vipedon (A2)		Thin Dark Su					/luck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye			(0)		ont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Mat		(• _)			alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	, T, U)	Redox Dark S	. ,	-6)			RA 153B)
	cky Mineral (A7) (LF		Depleted Dar	k Surface	e (F7)			arent Material (TF2)
	esence (A8) (LRR U)	Redox Depres		8)			hallow Dark Surface (TF12)
	ck (A9) (LRR P, T)	- () 4 4)	Marl (F10) (L			F 4\	U Other ((Explain in Remarks)
	l Below Dark Surfac Irk Surface (A12)	e (ATT)	Depleted Och				T) ³ Indic	ators of hydrophytic vegetation and
	airie Redox (A16) (N	/LRA 150						land hydrology must be present,
	lucky Mineral (S1) (L		Delta Ochric (, -,		ess disturbed or problematic.
	leyed Matrix (S4)		Reduced Vert	tic (F18)	(MLRA 15	0A, 150B)		
	edox (S5)		Piedmont Flo					
	Matrix (S6)		Anomalous B	right Loa	my Soils (F20) (MLR	A 149A, 153C,	, 153D)
	face (S7) (LRR P, S .ayer (if observed):	-					1	
Type:	ayer (il observed).							
	ches):						Hydric Soil	Present? Yes X No
Remarks:							Tryunc Son	
Remarks.								

Project/Site: West Calcasieu Port Site		City/County: Carlyss/Cal	lcasieu	_ Sampling Date: 8/1/19	
Applicant/Owner: SWLA Economic Development Al	liance		State: LA	_ Sampling Point: 5	
Investigator(s): C. Hoffpauir		Section, Township, Range	35-11S-10W		
Landform (hillslope, terrace, etc.): Flat/Intermound Are	ea	Local relief (concave, conv	/ex, none): <u>none</u>	Slope (%): <u>0-1</u>	
Subregion (LRR or MLRA): LRR-T/MLRA-151	Lat: 46599	98.31 Long	_{g:} 3325994.71	Datum: UTM N	AD 83
Soil Map Unit Name: Crowley-Vidrine complex (Cr)					
Are climatic / hydrologic conditions on the site typical for the Are Vegetation No, Soil No, or Hydrology No Are Vegetation No, Soil No, or Hydrology No SUMMARY OF FINDINGS – Attach site ma	_significantly _naturally pr	v disturbed? Are "Nor oblematic? (If neede	rmal Circumstances" ed, explain any answ	' present? Yes \underline{X} No vers in Remarks.)	
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No No _X No _X	Is the Sampled Are within a Wetland?		<u>No X</u>	
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:				cators (minimum of two require	<u>:d)</u>
Primary Indicators (minimum of one is required; check a				il Cracks (B6)	
	tic Fauna (B1	,		egetated Concave Surface (B8 Patterns (B10)	5)

Primary Indicators (minimum	of one is required; ch	neck all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		Aquatic Fauna (B13)	Ē	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	님	Marl Deposits (B15) (LRR U)	Ļ	Drainage Patterns (B10)
Saturation (A3)	님	Hydrogen Sulfide Odor (C1)	Ĺ	Moss Trim Lines (B16)
Water Marks (B1)	님	Oxidized Rhizospheres along Living	Roots (C3)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	닏	Presence of Reduced Iron (C4)	L	Crayfish Burrows (C8)
Drift Deposits (B3)	님	Recent Iron Reduction in Tilled Soils	(C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Thin Muck Surface (C7)		Geomorphic Position (D2)
Iron Deposits (B5)		Other (Explain in Remarks)	Ľ	Shallow Aquitard (D3)
Inundation Visible on Aer	ial Imagery (B7)			FAC-Neutral Test (D5)
Water-Stained Leaves (B	9)		Ľ	Sphagnum moss (D8) (LRR T, U)
Field Observations:				
Surface Water Present?	Yes No _X	Depth (inches):		
Water Table Present?	Yes No X	Depth (inches):		
Saturation Present?	Yes No X	Depth (inches):	Wetland Hy	drology Present? Yes No $\frac{X}{2}$
(includes capillary fringe)				
(includes capillary fringe)		Depth (inches): ng well, aerial photos, previous inspec		
(includes capillary fringe) Describe Recorded Data (stre				
(includes capillary fringe)				
(includes capillary fringe) Describe Recorded Data (stre				
(includes capillary fringe) Describe Recorded Data (stre Remarks:				
(includes capillary fringe) Describe Recorded Data (stre Remarks:				
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(includes capillary fringe) Describe Recorded Data (stre Remarks:				
(includes capillary fringe) Describe Recorded Data (stre Remarks:				

Sampling Point:	Sam	mpling	Point:	5
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		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: ±30)		Species?	-	Number of Dominant Species	
1. Quercus virginiana		50	Yes	FACU	That Are OBL, FACW, or FAC: 3	(A)
2. Celtis laevigata		5	No	FACW	Total Number of Dominant	
3					Species Across All Strata: 5	(B)
4						,
5					Percent of Dominant Species That Are OBL, FACW, or FAC: ⁶⁰	(A/B)
6						(A/D)
					Prevalence Index worksheet:	
7					Total % Cover of:Multiply by:	
8					OBL species x 1 =	
	27 5		= Total Cov		FACW species x 2 =	
	50% of total cover: 27.5	20% of	total cover:		FAC species x 3 =	
Sapling/Shrub Stratum (Plot siz	e: <u>±30</u>)	_			FACU species x 0 = x 4 = x 4 =	
1. Ilex vomitoria		5	Yes	FAC	· · · · · · · · · · · · · · · · · · ·	
2. Quercus virginiana		2	Yes	FACU	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 ≤3.0 ¹	
			= Total Cov		Problematic Hydrophytic Vegetation ¹ (Expla	ain)
	50% of total cover: 3.5	20% of	total cover	1.4		
Herb Stratum (Plot size: ±30)				¹ Indicators of hydric soil and wetland hydrology	must
1. Stenotaphrum secundatum		95	Yes	FAC	be present, unless disturbed or problematic.	
2. Quercus virginiana		2	No	FACU	Definitions of Four Vegetation Strata:	
3					_	
					Tree – Woody plants, excluding vines, 3 in. (7.6	
4					more in diameter at breast height (DBH), regard height.	liess of
5						
6					Sapling/Shrub – Woody plants, excluding vines	
7					than 3 in. DBH and greater than 3.28 ft (1 m) tal	ıl.
8					Herb – All herbaceous (non-woody) plants, rega	ardless
9					of size, and woody plants less than 3.28 ft tall.	
10					Woody vine – All woody vines greater than 3.2	8 ft in
11					height.	51111
12.						
		97	= Total Cov	er		
	50% of total cover: 48.5					
Maadu Vina Ctrature (Distainer		20 /0 01				
<u>Woody Vine Stratum</u> (Plot size: 1 Smilax rotundifolia)	2	Yes	FAC		
				FAC		
2						
3						
4						
5					Hydrophytic	
		^	= Total Cov	er	Vegetation	
	50% of total cover: 1				Present? Yes X No	
Remarks: (If observed, list mor				·		
	,	,				

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirm	n the absence	of indicators.)	
Depth	Matrix		Redox	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 2/1	100				·	Silt Loam		
4-6	10YR 3/2	100					Silt Loam		
6-21	10YR 3/2	98	5YR 4/6	2	С	M, PL	Silt Loam		
						·			
					·	·			
						<u> </u>			
¹ Type: C=C	ncentration D=Der	letion RM:	Reduced Matrix, MS	S=Masker	d Sand G	rains	² Location:	PL=Pore Lining, M=Matrix.	
			LRRs, unless other					for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Bel			LRR S. T. L		/luck (A9) (LRR O)	
	pipedon (A2)		Thin Dark Su				· 🗖	/luck (A10) (LRR S)	
Black Hi	,		Loamy Mucky	,	, .			ed Vertic (F18) (outside MLRA 150	A,B)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		Piedmo	ont Floodplain Soils (F19) (LRR P, S	5, T)
	l Layers (A5)		Depleted Mat	. ,				alous Bright Loamy Soils (F20)	
-	Bodies (A6) (LRR P		Redox Dark S					RA 153B)	
	icky Mineral (A7) (Ll							arent Material (TF2)	
	esence (A8) (LRR L))	Redox Depre		-8)			Shallow Dark Surface (TF12)	
	ick (A9) (LRR P, T)	- () ()	Marl (F10) (L	,		54)	Other ((Explain in Remarks)	
	d Below Dark Surfac	e (A11)	Depleted Och				T) ³ India	eters of hydrophytic version and	
	ark Surface (A12) rairie Redox (A16) (I							cators of hydrophytic vegetation and tand hydrology must be present,	
	lucky Mineral (S1) (Delta Ochric (ess disturbed or problematic.	
	ileyed Matrix (S4)	Litit 0, 0,	Reduced Ver						
	edox (S5)		Piedmont Flo						
	Matrix (S6)			•		•	A 149A, 153C	, 153D)	
	rface (S7) (LRR P, S	S, T, U)		U				. ,	
Restrictive I	ayer (if observed)								
Type:									
Depth (ind	ches):						Hydric Soil	Present? Yes <u>No X</u>	
Remarks:									

Project/Site: West Calcasieu Port Site	City/County: Carlyss/Calcasieu Sampling Date: 8/1/19
Applicant/Owner: SWLA Economic Development Alliance	_ City/County: Carlyss/Calcasieu Sampling Date: 8/1/19 State: LA Sampling Point: 6
Investigator(s): C. Hoffpauir	Section, Township, Range: 35-11S-10W
Landform (billslope, terrace, etc.). Gentle Slope	Local relief (concave, convex, none): <u>none</u> Slope (%): <u>1-3</u>
Subregion (LRB or MLRA). LRR-T/MLRA-151	059.19 Long: <u>3325819.38</u> Datum: UTM NAD 83
Soil Map Unit Name: Udifluvents, 1-20% slopes (UA)	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of	
	itly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally	
	ng sampling point locations, transects, important features, etc.
-	
Hydrophytic Vegetation Present? Yes No X	- Is the Sampled Area
Hydric Soil Present? Yes No X	— within a Wetland? Yes <u>No X</u>
Wetland Hydrology Present? Yes No X Remarks:	
Area wooded with Live Oaks.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	
Surface Water (A1)	
High Water Table (A2) Marl Deposits (B Saturation (A3) Hydrogen Sulfide	
	pheres along Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2)	
	luction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
Iron Deposits (B5)	
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9) Field Observations:	Sphagnum moss (D8) (LRR T, U)
Surface Water Present? Yes No X Depth (inch	es):
Water Table Present? Yes No X Depth (inch	
Saturation Present? Yes No X Depth (inch	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:
Remarks:	
None observed.	

Sam	nlina	Point:	6
Sam	pilliq	FUIII.	

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: ±30)		Species?		Number of Dominant Species
1. Quercus virginiana	70	Yes	FACU	That Are OBL, FACW, or FAC: 3 (A)
2. Celtis laevigata	10	No	FACW	
3. Triadica sebifera	5	No	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>50</u> (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8				
	85	= Total Cov	er	OBL species x 1 =
50% of total cover: 42.5	20% of	total cover	17	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: ±30)				FAC species x 3 =
1. Ilex vomitoria	30	Yes	FAC	FACU species x 4 =
2. Quercus virginiana	10	Yes	FACU	UPL species x 5 =
3. Morella cerifera	5	No	FAC	Column Totals: (A) (B)
 J ∠ Triadica sebifera 	2	No	FAC	
т				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 ≤3.0 ¹
	· —	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 23.5	20% of	total cover:	9.4	
Herb Stratum (Plot size: ±30)				
1. Quercus virginiana	5	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Ilex vomitoria	5	Yes	FAC	
3. Rubus argutus	2	No	FAC	Definitions of Four Vegetation Strata:
				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.				neight.
12	12	Tatal Oa		
		= Total Cov		
	20% of	total cover:	2.4	
Woody Vine Stratum (Plot size: ±30)				
1. Ampelopsis arborea	2	Yes	FAC	
2				
3				
4				
5				Underschutte
···	2	= Total Cov	or	Hydrophytic Vegetation
50% of total cover: 1				Present? Yes \times No
		total cover		
Remarks: (If observed, list morphological adaptations bel	ow).			

Profile Desc	ription: (Describe	to the dept	n needed to docu	nent the i	ndicator	or confirm	the absence	of indicato	ors.)	
Depth	Matrix		Redo	x Features	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-4	10YR 3/2	100					Silt Loam			
4-21	10YR 4/3	100					Silt Loam			
						·				
¹ Type: C=Co	oncentration, D=Dep	letion. RM=I	Reduced Matrix. M	S=Masked	I Sand Gra	ains.	² Location:	PL=Pore L	ining, M=Matr	ʻix.
	Indicators: (Applic								matic Hydric	
Histosol			Polyvalue Be			PPSTI	_	luck (A9) (L	-	
	oipedon (A2)		Thin Dark Su					luck (A3) (L		
Black Hi	,		Loamy Muck					, ,	. ,	MLRA 150A,B)
	en Sulfide (A4)		Loamy Gleye			,) (LRR P, S, T)
	d Layers (A5)		Depleted Ma)				Loamy Soils	
	Bodies (A6) (LRR P	T. U)	Redox Dark	()	6)			RA 153B)		(1 20)
	icky Mineral (A7) (LF		Depleted Da					arent Mater	ial (TF2)	
	esence (A8) (LRR U		Redox Depre		. ,				surface (TF	12)
	ick (A9) (LRR P, T)	/	Marl (F10) (L		-			Explain in F		/
	d Below Dark Surfac	e (A11)	Depleted Oc		(MLRA 1	51)			, , , , ,	
	ark Surface (A12)	()	Iron-Mangan				T) ³ Indic	ators of hyd	drophytic vege	etation and
	rairie Redox (A16)	ILRA 150A							ogy must be p	
Sandy M	lucky Mineral (S1) (I	_RR O, S)	Delta Ochric				unle	ess disturbe	ed or problema	atic.
Sandy G	Bleyed Matrix (S4)		Reduced Ve			0A, 150B)				
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	9A)			
Stripped	Matrix (S6)		Anomalous E	Bright Loar	my Soils (I	F20) (MLR	A 149A, 153C,	153D)		
Dark Su	rface (S7) (LRR P, S	6, T, U)								
Restrictive I	Layer (if observed):									
Type:										
Depth (inc	ches):						Hydric Soil	Present?	Yes	No X
Remarks:										
Remarks.										

Project/Site: West Calcasieu Port Site	City/County: Carly	vss/Calcasieu	Sampling Date: 8/1/19		
Applicant/Owner: SWLA Economic Development Alliance		vss/Calcasieu _{State:} LA	Sampling Point: 7		
Investigator(s). C. Hoffpauir	Section Township	Bange: 35-11S-10W			
Landform (hillslope, terrace, etc.): Relatively Flat	Local relief (concav	ve, convex, none): none	Slope (%): 0-1		
Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 4	65870.60	Long: 3325990.82	Datum: UTM NAD 83		
Soil Map Unit Name: Crowley-Vidrine complex (Cr)		NWI classifi	cation: None		
Are climatic / hydrologic conditions on the site typical for this time					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> signifi	cantly disturbed?	Are "Normal Circumstances"	present? Yes X No		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> natura		If needed, explain any answe			
SUMMARY OF FINDINGS – Attach site map sho	wing sampling poir	nt locations, transects	s, important features, etc.		
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes X No X Wetland Hydrology Present? Yes No X Remarks: No X	Is the Sam within a We		No <u>X</u>		
Area herbaceous and frequently mowed.					
HYDROLOGY					
Wetland Hydrology Indicators:			ators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that a			Cracks (B6)		
□ Surface Water (A1) □ Aquatic Faun □ High Water Table (A2) □ Marl Deposite	ia (B13) s (B15) (LRR U)		getated Concave Surface (B8) atterns (B10)		
	llfide Odor (C1)	Moss Trim L			
	zospheres along Living R		Water Table (C2)		
	Reduced Iron (C4)	Crayfish Bu			
Drift Deposits (B3)	Reduction in Tilled Soils (C6) C6) Saturation V	isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	urface (C7)	Geomorphic Position (D2)			
	in in Remarks)	Shallow Aqu			
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	. ,		
Water-Stained Leaves (B9) Field Observations:	T		moss (D8) (LRR T, U)		
Surface Water Present? Yes <u>No X</u> Depth (ii	nches).				
Water Table Present? Yes No X Depth (ii					
Saturation Present? Yes No $\frac{X}{2}$ Depth (ii		Wetland Hydrology Prese	nt? Yes <u>No X</u>		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspect	ions), if available:			
Remarks:					
None observed.					

Sampling Point: 7

		Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size: ±30)	% Cover	Species?	Status	Number of Dominant Species		
1. None				That Are OBL, FACW, or FAC: 0	(A)	
2				Total Number of Dominant		
3				Species Across All Strata: 1	(B)	
4	- <u> </u>			Percent of Dominant Species		
5					(A/B)	
6					· · /	
7				Prevalence Index worksheet:		
8				Total % Cover of:Multiply by:	-	
		= Total Cov	er	OBL species x 1 =		
50% of total cover:				FACW species x 2 =		
Sapling/Shrub Stratum (Plot size: ±30)				FAC species x 3 =		
1				FACU species x 4 =		
				UPL species x 5 =		
2				Column Totals: (A)	(B)	
3						
4				Prevalence Index = B/A =		
5				Hydrophytic Vegetation Indicators:		
6				1 - Rapid Test for Hydrophytic Vegetation		
7				2 - Dominance Test is >50%		
8	. <u> </u>			3 - Prevalence Index is $≤3.0^1$		
		= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover:	20% of	total cover:			,	
Herb Stratum (Plot size: ±30)				¹ Indicators of hydric soil and wetland hydrology mu	ust	
1. Paspalum notatum	60	Yes	FACU	be present, unless disturbed or problematic.		
2. Paspalum urvellei	10	No	FAC	Definitions of Four Vegetation Strata:		
3. Axonopus fissifolius	10	No	FACW		,	
4. Rhynchospora caduca	10	No	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of		
5. Solidago altissima	5	No	FACU	height.	33 01	
	·					
6				Sapling/Shrub – Woody plants, excluding vines, I than 3 in. DBH and greater than 3.28 ft (1 m) tall.	less	
7						
8				Herb – All herbaceous (non-woody) plants, regard	lless	
9				of size, and woody plants less than 3.28 ft tall.		
10				Woody vine - All woody vines greater than 3.28 f	't in	
11				height.		
12						
		= Total Cov				
50% of total cover: 47.5	20% of	total cover:	19			
Woody Vine Stratum (Plot size: ±30)						
1. None	<u> </u>					
2						
3						
4						
5				Undrendrutie		
		= Total Cov		Hydrophytic Vegetation		
50% of total cover:				Present? Yes No $\frac{X}{X}$		
Remarks: (If observed, list morphological adaptations belo	ow).					

SOIL

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the i	ndicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	—
0-20	10YR 4/2	98	5YR 4/6	2	С	M, PI	Silt Loam	
		·						—
		·				·		—
		·				·		
¹ Type: C=Co	oncentration, D=Dep	letion, RM	=Reduced Matrix, MS	=Masked	I Sand G	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise not	ed.)		Indicators for Problematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalue Bel	low Surfa	ce (S8) (I		U) 🔲 1 cm Muck (A9) (LRR O)	
Histic Ep	pipedon (A2)		Thin Dark Su	rface (S9)	(LRR S,	T, U)	2 cm Muck (A10) (LRR S)	
Black Hi	stic (A3)		Loamy Mucky			R O)	Reduced Vertic (F18) (outside MLRA 150A	
	n Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soils (F19) (LRR P, S,	T)
	Layers (A5)	T 10	Depleted Mat	· · /			Anomalous Bright Loamy Soils (F20)	
	Bodies (A6) (LRR P icky Mineral (A7) (LF		Redox Dark S	`	,		(MLRA 153B) Red Parent Material (TF2)	
	esence (A8) (LRR U		Redox Depres				Very Shallow Dark Surface (TF12)	
	ick (A9) (LRR P, T)	,	Marl (F10) (L		.,		Other (Explain in Remarks)	
	Below Dark Surface	e (A11)	Depleted Och		(MLRA 1	51)		
Thick Da	ark Surface (A12)		Iron-Mangane	ese Mass	es (F12)	(LRR O, P,	T) ³ Indicators of hydrophytic vegetation and	
	rairie Redox (A16) (N			. , ,		', U)	wetland hydrology must be present,	
	lucky Mineral (S1) (L	.RR O, S)	Delta Ochric (unless disturbed or problematic.	
	edox (S5)		Reduced Vert					
	Matrix (S6)			•	· · ·	•	+∍⊼) ≹A 149A, 153C, 153D)	
=	rface (S7) (LRR P, S	5. T. U)				. 20) (2.		
	_ayer (if observed):							
Type:								
Depth (ind	ches):						Hydric Soil Present? Yes $\frac{\chi}{2}$ No	_
Remarks:	<i>.</i> .							
V	ery few redox	teature	es.					

Project/Site: West Calcasieu Port Site	City/County: Carlys	s/Calcasieu	Sampling Date: 8/1/19
Applicant/Owner: SWLA Economic Development Alliance		s/Calcasieu _{State:}	Sampling Point: 8
Investigator(s). C. Hoffpauir	Section Township	Range: 35-11S-10W	
Landform (hillslope, terrace, etc.): Relatively Flat	Local relief (concave	, convex, none): <u>none</u>	Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 46	5799.89	Long: <u>3325997.04</u>	Datum: UTM NAD 83
Soil Map Unit Name: Crowley-Vidrine complex (Cr)		NWI classific	cation: None
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X No	(If no, explain in F	Remarks.)
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significa	Intly disturbed? Ar	e "Normal Circumstances"	present? Yes X No
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally	/ problematic? (If	needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point	locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sampl within a Wet		No <u>X</u>
Remarks: Area herbaceous and frequently mowed.			
HYDROLOGY			
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app			Cracks (B6)
□ Surface Water (A1) □ Aquatic Fauna □ High Water Table (A2) □ Marl Deposits (A)		Drainage Pa	getated Concave Surface (B8)
Saturation (A3)		Moss Trim L	
	spheres along Living Ro	=	Water Table (C2)
	educed Iron (C4)	Crayfish Bur	
	duction in Tilled Soils (C		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	face (C7)	Geomorphic	Position (D2)
Iron Deposits (B5)	in Remarks)	Shallow Aqu	itard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	· · ·
Water-Stained Leaves (B9)	I	Sphagnum r	noss (D8) (LRR T, U)
Field Observations:	h a a)		
Surface Water Present? Yes No X Depth (inc			
Water Table Present? Yes No X Depth (inc Saturation Present? Yes No X Depth (inc		Netland Hydrology Prese	nt? Yes No ^X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspectio	ns), if available:	
Remarks:			
None observed.			

Sampling Point: <u>8</u>

		Dominant		Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: <u>±30</u>) 1. <u>None</u>		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
2 3				Total Number of Dominant Species Across All Strata: <u>1</u> (B)		
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: ⁰ (A/B)		
6						
7				Prevalence Index worksheet: Total % Cover of:Multiply by:		
8				OBL species x 1 =		
		= Total Cov		FACW species x 2 =		
50% of total cover:	20% of	total cover:		FAC species x 3 =		
Sapling/Shrub Stratum (Plot size: ±30)				FACU species x 4 =		
1				UPL species x 5 =		
2				Column Totals: (A) (B)		
3						
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 $\leq 3.0^1$		
50% of total array		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)		
50% of total cover:	20% 01	total cover:				
Herb Stratum (Plot size: ±30) 1. Paspalum notatum	70	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
2. Paspalum urvellei	10	No	FAC			
3. Rhynchospora caduca	10	No	OBL	Definitions of Four Vegetation Strata:		
4. Stenotaphrum secundatum	5	No	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
5. Paspalum plicatulum	2	No	FAC	 more in diameter at breast height (DBH), regardless of height. 		
67				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
7 8				ö		
9				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
10				Woody vine - All woody vines greater than 3.28 ft in		
11			<u> </u>	height.		
12	07		·			
		= Total Cov				
50% of total cover: <u>48.5</u>	20% of	total cover:	13.4			
<u>Woody Vine Stratum</u> (Plot size: <u>±30</u>) 1. None						
2						
3						
4						
5				Hydrophytic Vegetation		
50% of total cover:		= Total Cov		Present? Yes No $\frac{\chi}{\chi}$		
Remarks: (If observed, list morphological adaptations belo		total cover.	·			

Profile Desc	ription: (Describe	to the depth	needed to docun	nent the indicate	or or confirm	the absence	of indicators.)
Depth	Matrix			x Features	1 . 2	_	
<u>(inches)</u> 0-8	Color (moist) 10YR 4/2	<u>%</u>	Color (moist)	<u>%</u> Type	¹ Loc ²	<u>Texture</u>	Remarks
		100		· ·		Silt Loam	
8-24	10YR 3/2	100		· ·		Silt Loam	
¹ Type: C=Co	oncentration, D=Dep	letion, RM=F	educed Matrix, MS	S=Masked Sand	Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless other	wise noted.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	()			low Surface (S8)		· –	Muck (A9) (LRR O)
	hipedon (A2)			rface (S9) (LRR			Muck (A10) (LRR S)
Black His	n Sulfide (A4)		Loamy Mucky	y Mineral (F1) (L l d Matrix (F2)	RR 0)		ed Vertic (F18) (outside MLRA 150A,B) ont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Mat				alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	, T, U)	Redox Dark S	. ,			RA 153B)
	cky Mineral (A7) (Ll			k Surface (F7)			arent Material (TF2)
	esence (A8) (LRR L	1)	Redox Depre	· · ·			Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T) I Below Dark Surfac	o (A11)	Marl (F10) (L	RR U) hric (F11) (MLRA	151)	U Other	(Explain in Remarks)
	rk Surface (A12)	0 (711)		ese Masses (F12		T) ³ Indic	cators of hydrophytic vegetation and
	airie Redox (A16) (I	MLRA 150A)		ce (F13) (LRR P			tland hydrology must be present,
	lucky Mineral (S1) (I	LRR O, S)		(F17) (MLRA 15			ess disturbed or problematic.
	leyed Matrix (S4)			tic (F18) (MLRA			
	edox (S5) Matrix (S6)			odplain Soils (F1 bright Loamy Soils	, .		152D)
	face (S7) (LRR P, \$	S. T. U)		Signi Loanty Soli		A 149A, 1330	, 130)
	ayer (if observed)						
Туре:							
Depth (inc	ches):					Hydric Soil	Present? Yes No $\frac{X}{2}$
Remarks:							

Project/Site: West Calcasieu Port Site	City/County: Carlyss/0	Calcasieu	Sampling Date: 8/1/19
Applicant/Owner: SWLA Economic Development Alliance	City/County: Carlyss/	State: LA	Sampling Point: 9
Investigator(s). C. Hoffpauir	Section Township Rar		
Landform (hillslope, terrace, etc.): Relatively Flat	Local relief (concave, c	onvex, none): <u>none</u>	Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T/MLRA-151 Lat: 465	5681.09 L	ong: 3325904.74	Datum: UTM NAD 83
Soil Map Unit Name: Crowley-Vidrine complex (Cr)		NWI classifie	cation: None
Are climatic / hydrologic conditions on the site typical for this time of			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significar			
Are Vegetation No, Soil No, or Hydrology No naturally		eded, explain any answe	
SUMMARY OF FINDINGS – Attach site map showi		ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: Ketter Ketter Ketter Ketter	Is the Sampled within a Wetlan		No <u>X</u>
Area herbaceous and frequently mowed.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl			Cracks (B6)
Surface Water (A1)	,		getated Concave Surface (B8)
High Water Table (A2)		Drainage Pa	
Saturation (A3) Hydrogen Sulfid Water Marks (B1) Oxidized Rhizos	spheres along Living Roots	(C3) Moss Trim L	Water Table (C2)
Sediment Deposits (B2)		Crayfish Bur	
	duction in Tilled Soils (C6)		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Position (D2)
Iron Deposits (B5)	. ,	Shallow Aqu	itard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	Test (D5)
Water-Stained Leaves (B9)		🔲 Sphagnum r	noss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X Depth (inch			
Water Table Present? Yes No X Depth (inch			X
Saturation Present? Yes <u>No X</u> Depth (inch (includes capillary fringe)	nes): We	tland Hydrology Prese	nt? Yes <u>No X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections)), if available:	
Remarks:			
None observed.			

Sampling Point: 9

		Dominant		Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: ±30 1. None		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
2						
3				Total Number of Dominant Species Across All Strata: (B)		
4						
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)		
6	·			Prevalence Index worksheet:		
7	·	<u> </u>		Total % Cover of: Multiply by:		
8				OBL species x 1 =		
		= Total Cov				
50% of total cover:	20% of	total cover		FACW species x 2 =		
Sapling/Shrub Stratum (Plot size: ±30)				FAC species x 3 =		
1				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 \leq 3.0^{1}$		
		= Total Cov				
50% of total cover:				Problematic Hydrophytic Vegetation ¹ (Explain)		
Herb Stratum (Plot size: ± 30)				1		
Paspalum notatum	70	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
2. Paspalum urvellei	10	No	FAC	Definitions of Four Vegetation Strata:		
3. Rhynchospora caduca	5	No	OBL	Demnitions of Four vegetation Strata:		
4. Andropogon virginicus	5	No	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or		
	5	No	FAC	 more in diameter at breast height (DBH), regardless of height. 		
5. Paspalum plicatulum	2			neight.		
6. Mimosa hystricina	· <u> </u>	No	UPL	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
7						
8 9				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
10						
				Woody vine – All woody vines greater than 3.28 ft in		
11 12.				height.		
12.	97	= Total Cov				
50% of total cover: 48.5						
	20% 01					
<u>Woody Vine Stratum</u> (Plot size: <u>±30</u>) 1. None						
2						
3						
4						
5	·			Hydrophytic		
		= Total Cov		Vegetation Present? Yes No X		
50% of total cover:	20% of	total cover				
Remarks: (If observed, list morphological adaptations belo	ow).					

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth	Matrix			k Feature		. 2	
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture Remarks
0-11	10YR 3/2	98	5YR 4/6	2	С	M, PL	Silt Loam
11-21	10YR 4/3	98	5YR 4/6	2	С	M, PL	Silt Loam
				 S=Maske		 	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	ndicators: (Applic	able to all	LRRs, unless other	wise no	ted.)		Indicators for Problematic Hydric Soils ³ :
Histosol Histic Ep Black Hi Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Coast Pi Sandy M Sandy G Sandy R Stripped	(A1) bipedon (A2)	, T, U) RR P, T, U)) e (A11) /ILRA 150, .RR O, S)	 Polyvalue Be Thin Dark Su Loamy Mucky Loamy Gleye Depleted Mat Redox Dark S Depleted Dar Redox Depre Marl (F10) (L Depleted Och Iron-Mangane A) Umbric Surfa Delta Ochric Reduced Ver Piedmont Flo 	low Surfa rface (SS / Mineral d Matrix rix (F3) Surface (k Surface (k Surface ssions (F RR U) nric (F11) ese Mass ce (F13) (F17) (M tic (F18) odplain S	ace (S8) (L (LRR S, (F1) (LRF (F2) F6) e (F7) F8) (MLRA 1 (LRR P, T LRA 151) (MLRA 15 Soils (F19)	T, U) ₹ O) ₹ RR O, P, ₹, U) 50A, 150B) (MLRA 14	 U) 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,B) Piedmont Floodplain Soils (F19) (LRR P, S, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) , T) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):							
Type:							X
Depth (inc	ches):						Hydric Soil Present? Yes No $\frac{\chi}{\chi}$
Remarks: V	ery few redox	feature	es.				

ATTACHMENT D

Site Photographs



Photograph 1 Sample Plot 1



Photograph 2 General View of Plot 1 Facing North



Photograph 3 General View of Plot 1 Facing East



Photograph 4 General View of Plot 1 Facing South



Photograph 5 General View of Plot 1 Facing West



Photograph 6 Sample Plot 2



Photograph 7 General View of Plot 2 Facing North



Photograph 8 General View of Plot 2 Facing East



Photograph 9 General View of Plot 2 Facing South



Photograph 10 General View of Plot 2 Facing West



Photograph 11 Sample Plot 3



Photograph 12 General View of Plot 3 Facing North



Photograph 13 General View of Plot 3 Facing East



Photograph 14 General View of Plot 3 Facing South



Photograph 15 General View of Plot 3 Facing West



Photograph 16 Sample Plot 4



Photograph 17 General View of Plot 4 Facing North



Photograph 18 General View of Plot 4 Facing East



Photograph 19 General View of Plot 4 Facing South



Photograph 20 General View of Plot 4 Facing West



Photograph 21 Sample Plot 5



Photograph 22 General View of Plot 5 Facing North



Photograph 23 General View of Plot 5 Facing East



Photograph 24 General View of Plot 5 Facing South



Photograph 25 General View of Plot 5 Facing West



Photograph 26 Sample Plot 6



Photograph 27 General View of Plot 6 Facing North



Photograph 28 General View of Plot 6 Facing East



Photograph 29 General View of Plot 6 Facing South



Photograph 30 General View of Plot 6 Facing West



Photograph 31 Sample Plot 7



Photograph 32 General View of Plot 7 Facing North



Photograph 33 General View of Plot 7 Facing East



Photograph 34 General View of Plot 7 Facing South



Photograph 35 General View of Plot 7 Facing West



Photograph 36 Sample Plot 8



Photograph 37 General View of Plot 8 Facing North



Photograph 38 General View of Plot 8 Facing East



Photograph 39 General View of Plot 8 Facing South



Photograph 40 General View of Plot 8 Facing West



Photograph 41 Sample Plot 9



Photograph 42 General View of Plot 9 Facing North



Photograph 43 General View of Plot 9 Facing East



Photograph 44 General View of Plot 9 Facing South



Photograph 45 General View of Plot 9 Facing West



Photograph 46 Facing North



Photograph 47 Facing East



Photograph 48 Facing South



Photograph 49 Facing West



Photograph 50 Facing South



Photograph 51 Facing Southeast