# Exhibit EE. Lake Charles Regional Airport Site Wetlands Delineation Report





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SENT VIA EMAIL

March 19, 2018

# Lake Charles Regional Airport Site Wetlands Delineation Report

Mr. Gus Fontenot SWLA Economic Development Alliance 4310 Ryan Street Lake Charles, Louisiana 70605

RE: Wetland Delineation Report

SWLA Economic Development Alliance Lake Charles Regional Airport Site Lake Charles, Louisiana

Dear Mr. Fontenot:

Arabie Environmental Solutions, LLC is pleased to provide this electronic copy of the Wetland Delineation Report for the referenced property. A copy of this report can been 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.

Senior Engineer

Attachment

cc: Taylor Gravois, CSRS, Inc.

Elliott Boudreaux, CSRS, Inc.

## WETLAND DELINEATION SWLA ECONOMIC DEVELOPMENT ALLIANCE LAKE CHARLES REGIONAL AIRPORT SITE LAKE CHARLES, CALCASIEU PARISH, LOUISIANA

## Prepared for:

SWLA Economic Development Alliance 4310 Ryan Street Lake Charles, Louisiana 70605

March 19, 2018

C. Blaine Johnson, P.E.

Senior Engineer

Cleveland R. Hoffpauir Environmental Scientist

Prepared by:

Arabie Environmental Solutions, LLC

P.O. Box 928 Lake Charles, Louisiana 70602 (337) 436-3248

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#### **SUMMARY**

An approximate 156-acre tract located west of Gulf Highway at the Lake Charles Regional Airport Facility in Lake Charles, Calcasieu Parish, Louisiana was evaluated for the presence of jurisdictional wetlands. The vegetation on the property is herbaceous (non-woody), and void of any trees, shrubs, or vines. Soils present on the property, as mapped by the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) include Crowley-Vidrine silt loams and Mowata-Vidrine silt loams. The vast majority of the investigated property is frequently baled for Bermuda hay.

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 1.05 acres of herbaceous wetlands are present within the property boundary. In addition to wetlands, approximately 18,400 linear feet of drains are also present on the investigated property. These drains may be considered Section 404 non-wetland waters by the COE.

#### 1.0 INTRODUCTION

Arabie Environmental Solutions, LLC (Arabie Environmental) was retained by Southwest Louisiana Economic Development Alliance to conduct a wetland delineation of property located at the Lake Charles Regional Airport Facility in Lake Charles, Calcasieu Parish. The property is located in Section 6, Township 11 South, Range 8 West. The center of the property is located at Latitude 30° 7' 53.14" Longitude 93° 13' 0.86". 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 site diagrams are included as **Figures 2A** and **2B**. LIDAR imagery was also reviewed and is included as **Figure 3**.

Cleve Hoffpauir of Arabie Environmental performed the field evaluation on March 8<sup>th</sup> and 9<sup>th</sup>, 2018. Mr. Hoffpauir has a Bachelors of Science Degree in Environmental Science and has had specialized training in environmental investigations. Mr Hoffpauir has been performing wetland delineations for approximately ten years. Blaine Johnson managed the project. Mr. Johnson has over twenty years experience in environmental investigation and permitting, with over fifteen 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 Arabie 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 multi-parameter 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 for Calcasieu Parish, soils on the delineated site include two soil types: Crowley-Vidrine silt loams (Cr) and Mowata-Vidrine silt loams (Mt). Mt soils are listed as hydric in Calcasieu Parish. In addition to the soils map, 1998, 2004, and 2008 infrared aerial photographs were reviewed. The soils 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. Ten representative sample points were selected and detailed evaluations were conducted at these locations. The data collected at these sample points were 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 Global Positioning System (GPS) was utilized to map the wetland areas. 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 adjacent to and west of Gulf Highway, at the Lake Charles Regional Airport, in Calcasieu Parish. The tract is irregular in shape and encompasses approximately 156 acres. Based on aerial photography review, and past delineations near the site, the majority of the property is utilized as Bermuda hay pasture.

As noted earlier in this report, the USDA-NRCS soil maps indicate that soils on the property consist of Crowley-Vidrine silt loams and Mowata-Vidrine silt loams. Inspections of the soil during the site investigation revealed that the soils are not consistent with the USDA-NRCS Soil Survey descriptions. The soils on the property are not intermounded as typically seen for these mapped soil types. The dominant vegetation present on the majority of the property consists of Bermuda grass (*Cynodon dactylon*), which is a facultative upland (FACU) species. FACU species do not thrive in wet conditions. Ten small wetland areas were identified on the property. These wetland areas were dominated by spike rush (*Eleocharis*) and carpet grass (*Axonopus fissifolius*) which are obligate wetland and facultative wetland respectively. These species commonly occur in wetlands.

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. Ten sample points were selected to characterize the site. At these sample points, the soils, hydrology and vegetation were characterized and the information 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

Paspalum notatum (Bahia grass) Cynodon dactylon (Bermuda grass)

**FACULTATIVE** 

Paspalum urvillei (Vasey's grass)

FACULTATIVE WETLAND

Axonopus fissifolius (Carpet grass)

**OBLIGATE WETLAND** 

Eleocharis palustris (Common Spike rush) Eleocharis microcarpa (Dwarf Spike rush)

Three of the ten 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: Crowley-Vidrine silt loams (Cr) and Mowata-Vidrine silt loams (Mt). Below is a brief description 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 typical landscape consists of broad, convex ridges that contain many small convex mounds. The mounds are circular and range from 50 to 150 feet in diameter and 1 foot to 6 feet in height.

No mounds were identified within the areas of the investigated property mapped Cr. Inspections of the soil during the site investigation revealed that the characteristics of the Cr soils on the property were not consistent with the USDA-NRCS Soil Survey descriptions. Cr soils are not listed as hydric in Calcasieu Parish, however a small area in the northeast portion of the property mapped Cr was determined to contain hydric soils.

Mt soils are level, and poorly drained and somewhat poorly drained. They are located on broad flats on the Gulf Coast Prairies. This complex consists of small areas of Mowata and Vidrine soils that are so intermingled that they cannot be mapped separately at the scale selected. Areas are irregular in shape and most range from 40 to 2,000 acres. A few areas are as large as 5,000 acres. The typical landscape consists of broad flats that have many small convex mounds.

Mounds were not present on the areas of the investigated property mapped Mt. Inspections of the Mt soils during the site investigation revealed that these soils were not consistent with the USDA-NRCS Soil Survey descriptions. Mt soils are listed as hydric soils in Calcasieu Parish, however the majority of the areas mapped Mt soils did not demonstrate hydric soil characteristics as typically seen for this soil type.

#### 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 plots 1, 3, and 6 exhibited primary wetland hydrology indicators such as high water table, saturation, and surface water. The secondary wetland hydrology indicator crawfish burrows was present in all of the sample plots with the exception of Plots 1 and 10. One primary indicator or two secondary indicators must be present for an area to have wetland hydrology. It should be noted that wetter than normal site conditions were present during the field investigations due to recent heavy rainfall in the area.

#### 5.0 CONCLUSIONS

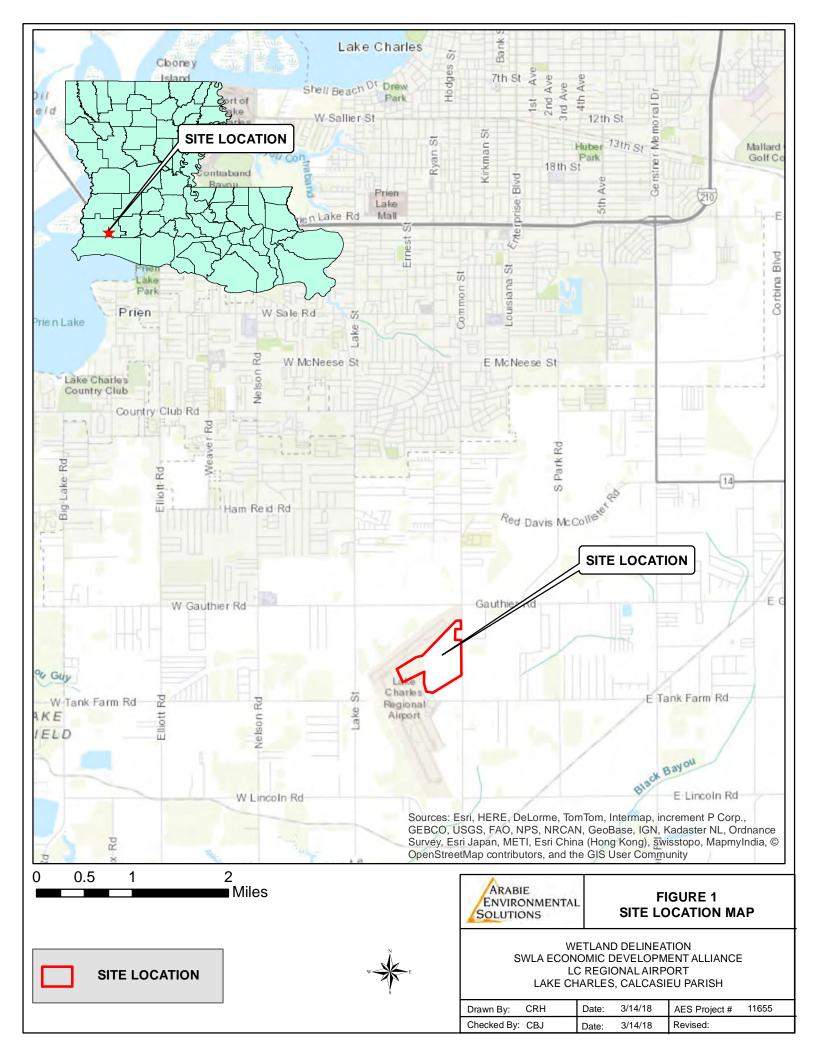
An approximate 156-acre tract located along Gulf Highway at the Lake Charles Regional Airport Facility in Lake Charles, Calcasieu Parish, Louisiana was evaluated for the presence of jurisdictional wetlands. The wetland delineation was performed in accordance with the procedures and methods as described in the COE 1987 Manual for Wetland Delineations

The investigated property is comprised of pasture that is frequently baled for Bermuda hay and/or mowed. The majority of the property did not demonstrate characteristics typical of a wetland. A few depressional areas located on the property were determined to contain wetlands. These depressional areas demonstrated hydrophytic vegetation, wetland hydrology, and hydric soils and were determined to be wetlands. In addition to wetlands, many small drainage ditches are located on the property.

Based on the results of this delineation, 154.95 acres of non-wetlands, 1.05 acres of herbaceous wetlands and 18,400 linear feet of non-wetland waters (ditches) are present on the investigated property.

## FIGURE 1

Site Location Map



## FIGURE 2

Site Diagram

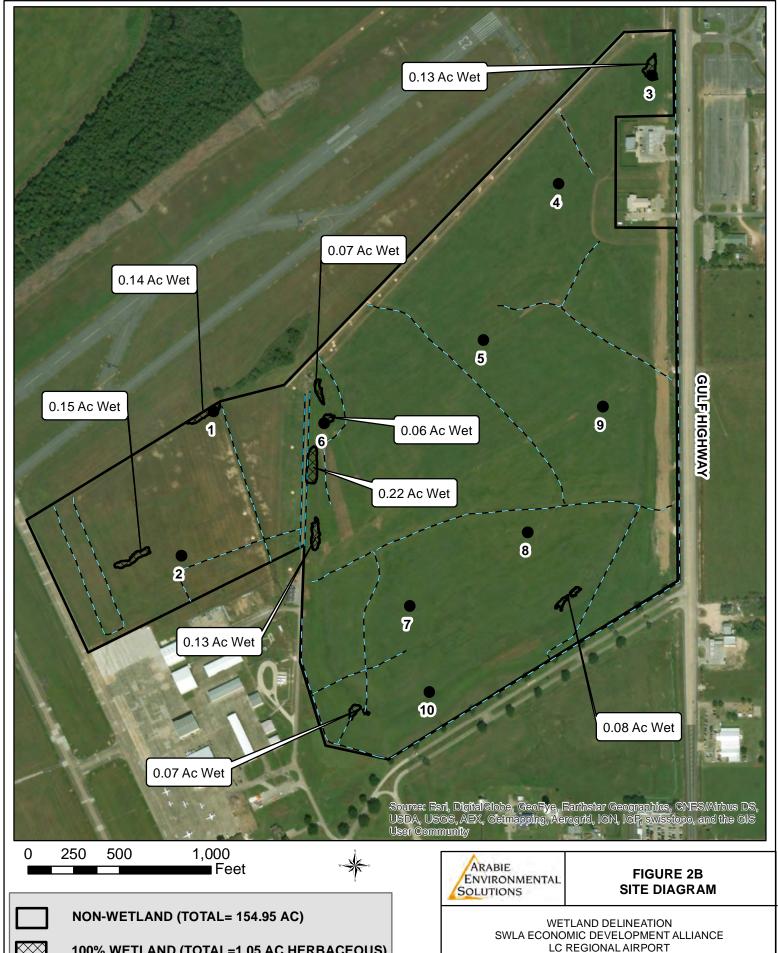


**NON-WETLAND (TOTAL= 154.95 AC)** 

100% WETLAND (TOTAL=1.05 AC HERBACEOUS)

**NON-WETLAND WATERS (TOTAL= 18,400 LF)** 

Drawn By:	CRH	Date:	3/9/18	AES Project #	11655
Checked By:	CBJ	Date:	3/9/18	Revised:	



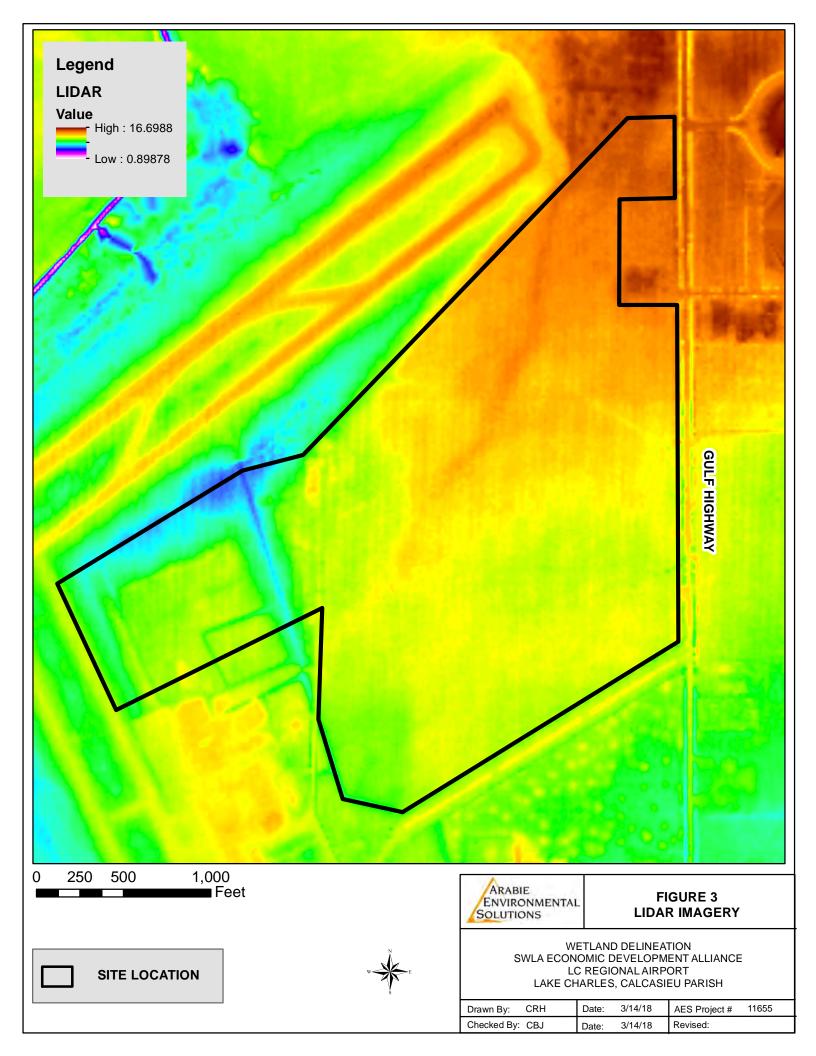
100% WETLAND (TOTAL=1.05 AC HERBACEOUS) **NON-WETLAND WATERS (TOTAL= 18,400 LF)** 

LC REGIONAL AIRPORT LAKE CHARLES, CALCASIEU PARISH

Drawn By:	CRH	Date:	3/9/18	AES Project #	11655
Checked By:	CBJ	Date:	3/9/18	Revised:	

## FIGURE 3

LIDAR Imagery



## ATTACHMENT A

Certificates of Training

## Richard Chinn Environmental Training, Inc.

certifies that

## Cleve Hoffpauir

has successfully completed a

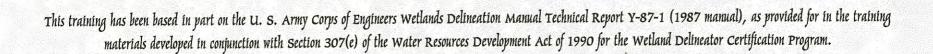
4 day 38 hour Army Corps of Engineers Wetland Delineation Training Program

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

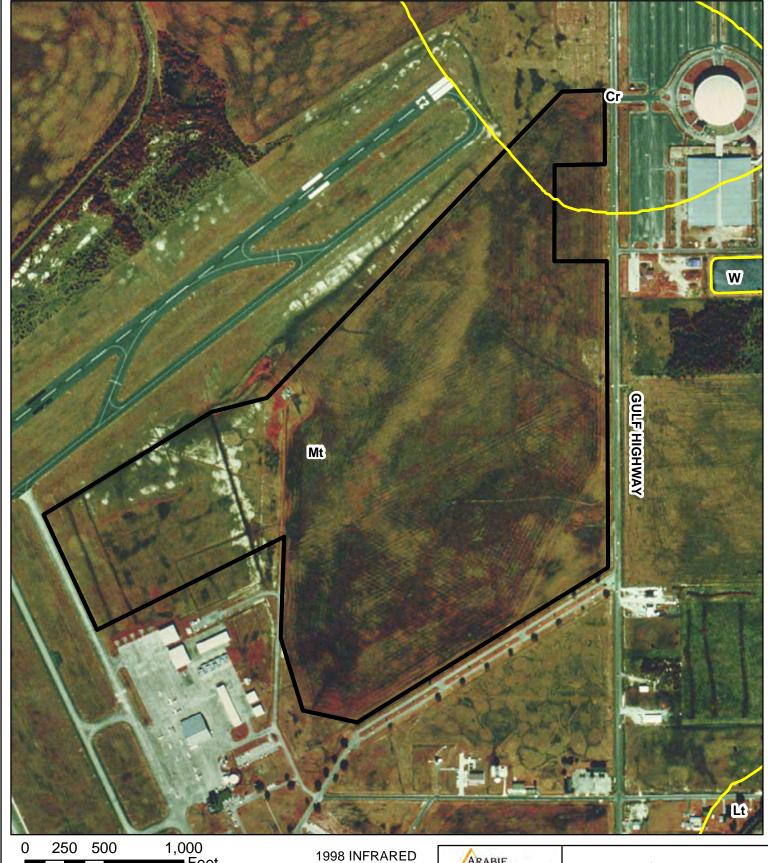
1.800.427.0307 • FAX: 1.888.457.6331 • info@richardchinn.com • http://www.richardchinn.com





## ATTACHMENT B

Infrared and Soil Maps



1,000 Feet

**AERIAL** 

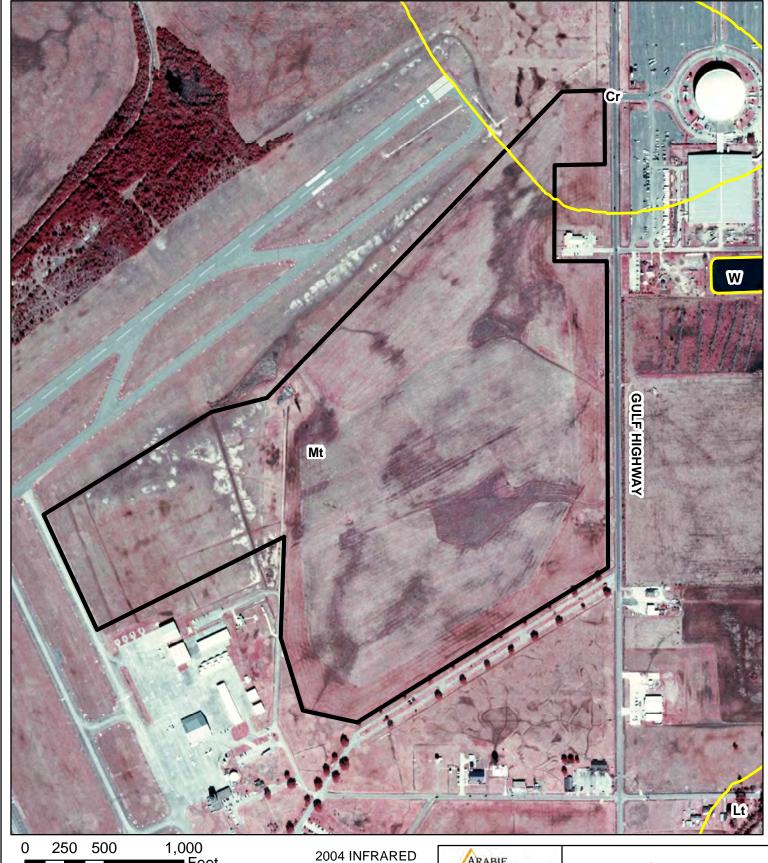
SITE LOCATION

**SOIL CLASSIFICATION BOUNDARY** 



### **ATTACHMENT B INFRARED AND SOIL MAP**

Drawn By: CRH	Date:	2/27/18	AES Project #	11655
Checked By: CBJ	Date:	2/27/18	Revised:	



1,000 Feet

**AERIAL** 

ARABIE ENVIRONMENTAL SOLUTIONS

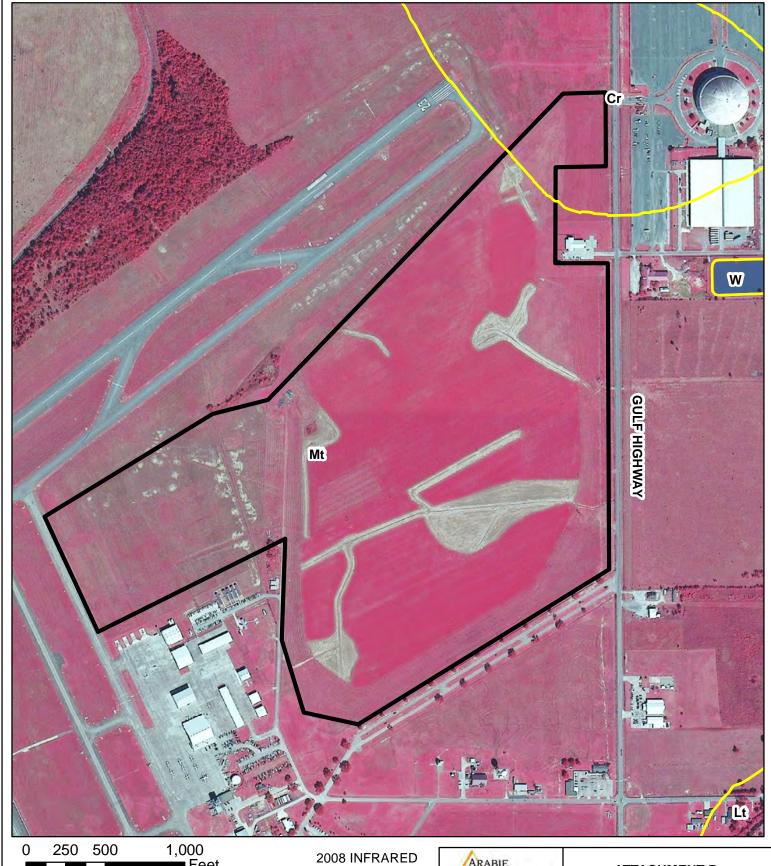
### **ATTACHMENT B INFRARED AND SOIL MAP**

SITE LOCATION

**SOIL CLASSIFICATION BOUNDARY** 



Drawn By: CRH	Date:	2/27/18	AES Project #	11655
Checked By: CBJ	Date:	2/27/18	Revised:	



1,000 Feet

**AERIAL** 

SITE LOCATION

**SOIL CLASSIFICATION BOUNDARY** 



### **ATTACHMENT B INFRARED AND SOIL MAP**

Drawn By: CRH	Date:	2/27/18	AES Project #	11655
Checked By: CBJ	Date:	2/27/18	Revised:	

## ATTACHMENT C

Wetland Data Forms

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Charles Regional Airport	City/County: L	ake Charles/Calcasieu	Sampling Date: 3-8-2018
Applicant/Owner: SWLA Economic Development Alli		State: LA	
		ship, Range: 6, 11S, 8W	
Landform (hillslope, terrace, etc.): Slight Depression		oncave, convex, none): Concav	e Slope (%): 0
Subregion (LRR or MLRA): LRR-T			Datum: UTM 83
Soil Map Unit Name: Mowata Vidrine Silt Loams		NWI classif	
Are climatic / hydrologic conditions on the site typical for the	is time of year? Yes	No X (If no, explain in	Remarks.)
Are Vegetation No , Soil No , or Hydrology No	significantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation No , Soil No , or Hydrology No	naturally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling	point locations, transect	s, important features, etc
			21.4
Hydrophytic Vegetation Present?  Yes X  Hydric Soil Present?  Yes X	15 116 4	Sampled Area	
Wetland Hydrology Present?	No within	a Wetland? Yes X	No
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)		il Cracks (B6)
	c Fauna (B13)		egetated Concave Surface (B8)
	eposits (B15) (LRR U)		atterns (B10)
Saturation (A3)	gen Sulfide Odor (C1)	Moss Trim	Lines (B16)
	ed Rhizospheres along Livi		Water Table (C2)
[1]	nce of Reduced Iron (C4)	☐ Crayfish Bu	
	t Iron Reduction in Tilled So luck Surface (C7)		Visible on Aerial Imagery (C9) c Position (D2)
	(Explain in Remarks)	☐ Shallow Aq	
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	
Water-Stained Leaves (B9)		☐ Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X De	epth (inches):	=	
Water Table Present? Yes X No De	epth (inches): 9 BGS	=	v Y
Saturation Present? Yes X No De (includes capillary fringe)	epth (inches): 0-16"	Wetland Hydrology Prese	ent? Yes X No
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous ins	spections), if available:	
Remarks:			
Wetter than normal site conditions.			
BGS=Below Ground Surface			

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

= Total Cover

\_ = Total Cover

Yes

Yes

No

No

No

\_ = Total Cover

\_\_ 20% of total cover: \_19.8

\_\_\_\_\_ = Total Cover

20% of total cover:

OBL

FAC

FACW

**FACW** 

FACW

50% of total cover: \_\_\_\_\_ 20% of total cover: \_

50% of total cover: \_\_\_\_\_ 20% of total cover: \_

50

40

5

2

\_\_\_\_)

\_\_\_\_)

50% of total cover: 49.5

50% of total cover: \_\_\_\_

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

Woody Vine Stratum (Plot size: 30

Tree Stratum (Plot size: 30)

Sapling/Shrub Stratum (Plot size: 30

Herb Stratum (Plot size: 30

1. Eleocharis palustris

2. Axonopus fissifolius

5. Solidago sempervirens

12. \_\_\_\_\_

1. None

3. Dichondra carolinensis

Sesuvium portulacastrum

2. \_\_\_\_\_

1. None

1. None

2.

3.

Sampling Point: 1 Absolute Dominant Indicator Dominance Test worksheet: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species 100 (A/B) That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_ FACW species \_\_\_\_\_ x 2 = \_\_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_ FACU species \_\_\_\_\_ x 4 = \_\_\_\_ UPL species \_\_\_\_\_ x 5 = \_\_\_\_ Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% \_\_ 3 - Prevalence Index is ≤3.0¹ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) <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 more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in Hydrophytic Vegetation Yes X No \_\_\_\_ Present?

110	A	0	 1.00
		Corps	

Depth	Matrix			dox Featur	es			
(inches)	Color (moist)	%	Color (moist)	%_	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 4/1	95	7.5YR 5/8	5	С	M, PL	Silty Clay	Saturated
12-16	10YR 4/2	<u>90</u> 	7.5YR 5/8	_ 10	<u>C</u>	M, PL	Clay	Saturated (Mn Masses)
Hydric Soil Histosol Histic E Black H Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleter Thick Do Coast P Sandy M Sandy G Sandy F Stripped Dark Su	Indicators: (Appl (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR ucky Mineral (A7) (resence (A8) (LRR uck (A9) (LRR P, T d Below Dark Surfiark Surface (A12) rairie Redox (A16) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) I Matrix (S6) urface (S7) (LRR P Layer (if observed	P, T, U) (LRR P, T, U (LRR P, T, U (LRR O, T) (A U) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	Redox Dep  Marl (F10) Depleted C  Iron-Manga  HA) Delta Ochr Reduced V Piedmont F	Below Surface (Strage) Surface (Strage) Surface (Strage) Surface (Strage) Surface (Strage) Surface (Strage) Surface (F11) Surface (F13)	ted.) face (S8) (I 9) (LRR S II (F1) (LRI (F2) (F6) te (F7) F8) ) (MLRA 1 ses (F12) I (LRR P, T ILRA 151) (MLRA 1 Soils (F19)	_RR S, T, U T, U) R O) 51) (LRR O, P, T, U) 60A, 150B)	Indicators  J) 1 cm 2 cm Reduction Anom (ML Red F Very S Other  T) 3Indicators	PL=Pore Lining, M=Matrix.  Is for Problematic Hydric Soils <sup>3</sup> :  Muck (A9) (LRR O)  Muck (A10) (LRR S)  Ced Vertic (F18) (outside MLRA 150A,E  nont Floodplain Soils (F19) (LRR P, S, T  alous Bright Loamy Soils (F20)  RA 153B)  Parent Material (TF2)  Shallow Dark Surface (TF12)  (Explain in Remarks)  Cators of hydrophytic vegetation and  tland hydrology must be present,  less disturbed or problematic.  C. 153D)  I Present? Yes X No

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Charles Regional Airport	City/County: Lake Charles/Calcasieu Sampling Date: 3-8-2018
Applicant/Owner: SWLA Economic Development Alliance	State: LA Sampling Point: 2
Investigator(s): Cleveland Hoffpauir	Section, Township, Range: 6, 11S, 8W
Landform (hillslope, terrace, etc.): Slight Ridge	Local relief (concave, convex, none): Convex Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 333	
Soil Map Unit Name: Mowata Vidrine Silt Loams	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	
	tly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation No , Soil No , or Hydrology No naturally	
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Le the Convoled Asse
Hydric Soil Present? Yes No X	- Is the Sampled Area - within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	- Within a Wetlands 1es No
Remarks:  Poccept Painfall: Wotter than Normal Site Cor	aditions
Recent Rainfall; Wetter than Normal Site Cor	nations
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary 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 (E	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  High Warl Deposits (B	15) (LRR U) Drainage Patterns (B10)
Saturation (A3)	
[1]	oheres along Living Roots (C3)
Sediment Deposits (B2)	. 이 시장 시간 경계 시간 다시 있는 그는 것이 되었다. 그 사람들이 되었다. 그 사람들이 되었다. 그 사람들이 되었다. 그리고 있는 것이 되었다. 그 그리고 있는 것이 되었다.
[ ] - The Control of	uction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surfaction 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	98):
Water Table Present? Yes No X Depth (inche	es):
Saturation Present? Yes No X Depth (inche	es): Wetland Hydrology Present? Yes No X
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial ph	ntoe previous inspections) if available:
Describe Nescrice Data (Stream gauge, monitoring Well, derial prin	stod, previous inspections), in available.
Remarks:	
	*t*

VECETATION	(Four Strata) -	lee ecientific	names of plants

= Total Cover

Present?

50% of total cover: \_\_\_\_ 20% of total cover: \_\_\_

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_

50% of total cover: 40.5 20% of total cover: 16.2

\_\_\_\_)

Tree Stratum (Plot size: 30

Sapling/Shrub Stratum (Plot size: 30

Herb Stratum (Plot size: 30 1. Paspalum notatum

2. Nothoscordum bivalve

4. Axonopus fissifolius

5. Lobelia appendiculata

7. Sonchus asper

3. Cynodon dactylon

Salvia lyrata

Sampling Point: 2 Absolute Dominant Indicator | Dominance Test worksheet:

% Cov	er Specie	s? Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
_			Total Number of Dominant Species Across All Strata: 1 (B)
		-	Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
			Prevalence Index worksheet:  Total % Cover of: Multiply by:
	_ = Total C	Cover	
20%	of total cov	rer:	FAC appaigs x 2 =
			FAC species x 3 =
			FACU species x 4 =
_			UPL species x 5 =
			Column Totals: (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
	- 9		1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
	_		3 - Prevalence Index is ≤3.0 <sup>1</sup>
	_ = Total C	Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
20%	of total cov	ver:	
50	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
10	No	FACU	Definitions of Four Vegetation Strata:
10	No	FACU	
5	No	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
2	No	FAC	height.
2	No	FACU	Sapling/Shrub – Woody plants, excluding vines, less
2	No	FACU	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.
=	-> <del>-</del>		Woody vine – All woody vines greater than 3.28 ft in height.
81	= Total C	Cover	
20%	of total cov		Hydrophytic Vegetation

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_ Remarks: (If observed, list morphological adaptations below).

Woody Vine Stratum (Plot size: \_\_\_\_\_)

Yes \_\_\_\_ No X

		2	
Sampling	Point.	4	
Samping	I OIIIL.		

Depth	cription: (Describe Matrix		Red	ox Feature	es		2	
(inches)	Color (moist)	%	Color (moist)	2	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-3	10YR 4/3	- <del>98</del>	7.5YR 4/6	2	<u>C</u>	-		Eill
3-10	10YR 4/2	_ 60	10YR 5/4	40	C	M	Clay	Fill
10-16	10YR 4/2	100					Silt Loam	
Hydric Soil Histoso Histic E Black H Hydrog Stratifie Organic 5 cm M Muck P 1 cm M Deplete Thick D Coast F Sandy I Sandy I Strippe Dark St	pipedon (A2) pistic (A3) en Sulfide (A4) d Layers (A5) c Bodies (A6) (LRR ucky Mineral (A7) (Lresence (A8) (LRR P, T) d Below Dark Surfa ark Surface (A12) Prairie Redox (A16) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR P, Layer (if observed)	Cable to all P, T, U) LRR P, T, U) U) CCE (A11) (MLRA 1504 (LRR O, S)	LRRs, unless other Polyvalue B Thin Dark S Loamy Muci Loamy Gley Depleted Manager Redox Dark Depleted Dark Redox Depr Marl (F10) ( Depleted Or Iron-Mangar Company Delta Ochric Reduced Ver Piedmont Fl	erwise no elow Surface (SS ky Mineral red Matrix atrix (F3) Surface ( ark Surface ressions (F LRR U) chric (F11) nese Mass face (F13) c (F17) (M ertic (F18)	ted.) ace (S8) ( b) (LRR S (F1) (LR (F2) F6) e (F7) F8) (MLRA Ses (F12) (LRR P, LRA 151) (MLRA 1 Soils (F19	LRR S, T, , T, U) R O) (LRR O, F T, U) 50A, 150E ) (MLRA 1	Indicators  U)	PL=Pore Lining, M=Matrix.  For Problematic Hydric Soils³:  Muck (A9) (LRR O)  Muck (A10) (LRR S)  Cod Vertic (F18) (outside MLRA 150A,B)  Bront Floodplain Soils (F19) (LRR P, S, T)  Balous Bright Loamy Soils (F20)  RA 153B)  Parent Material (TF2)  Shallow Dark Surface (TF12)  (Explain in Remarks)  Cators of hydrophytic vegetation and etland hydrology must be present, less disturbed or problematic.  C. 153D)  I Present? Yes No _X

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Charles Regional Airport	City/County: Lake Charles/Ca	lcasieu	Sampling Date: 3-8-2018
Applicant/Owner: SWLA Economic Development Alliance	Sta		
	Section, Township, Range: 6, 1		
Landform (hillslope, terrace, etc.): Depression			Slone (%). 0
Subregion (LRR or MLRA): LRR-T Lat: 33339	24.42 Long: 479	9374.14	Datum: UTM 83
Soil Map Unit Name: Crowley Vidrine Silt Loams			ation:
Are climatic / hydrologic conditions on the site typical for this time of year			
Are Vegetation No , Soil No , or Hydrology No significantly			
Are Vegetation No , Soil No , or Hydrology No naturally pro	olematic? (If needed, exp	olain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point location	s, transects	important features, etc.
Hydrophytic Vegetation Present? Yes X No	The state of the s		
Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland?	vaa X	No
Wetland Hydrology Present? Yes X No	within a Wetland?	res	
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:	S	econdary Indica	tors (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		- 10 to 10 t	etated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15)	7	Drainage Pat	
Saturation (A3) Hydrogen Sulfide O		Moss Trim Li	
☐ Water Marks (B1) ☐ Oxidized Rhizosphe ☐ Presence of Reduce	res along Living Roots (C3)	Crayfish Burr	Vater Table (C2)
[ [	on in Tilled Soils (C6)		sible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	and the second s	Geomorphic I	
Iron Deposits (B5)	emarks)	Shallow Aquit	
Inundation Visible on Aerial Imagery (B7)	<u>  •</u>	FAC-Neutral	
Water-Stained Leaves (B9)	<u>L</u>		oss (D8) (LRR T, U)
Field Observations:  Surface Water Present? Yes X No Depth (inches)	0-2"		
Water Table Present? Yes No _X Depth (inches)			
Saturation Present? Yes X No Depth (inches)		drology Presen	t? Yes X No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if availa	ble:	
Remarks:			
Standing Water in Plot 3.			
Standing Water in Flot 6.			

TEGET THOU I TO COUNTY OF THE THOU OF PIGHT	ETATION (Four Strata) - Use scientific names of plan	nts
---	--	-----

Sampling Point: 3

			Indicator	Dominance Test workshee		
Tree Stratum (Plot size: 30 )  1. None		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FA		_ (A)
2. 				Total Number of Dominant Species Across All Strata:	2	(B)
				Percent of Dominant Species That Are OBL, FACW, or FA		(A/B
				Prevalence Index workshee	A+-	
				Total % Cover of:		
				OBL species		
		= Total Cov	er			
50% of total cover:	20% of	total cover		FACW species		
apling/Shrub Stratum (Plot size: 30 )				FAC species		
None				FACU species		
					x 5 =	
				Column Totals:	. (A)	(B
				Prevalence Index = B/	Δ =	
				Hydrophytic Vegetation Inc		
				1 - Rapid Test for Hydro		
				2 - Dominance Test is >		J.
		= Total Cov	er	3 - Prevalence Index is s		21 9 5 V
50% of total cover:				Problematic Hydrophytic	Vegetation' (Ex	plain)
erb Stratum (Plot size: 30 )  Axonopus fissifolius	40	Yes	FACW	Indicators of hydric soil and	wetland hydrolog	gy must
	30	Yes	OBL	be present, unless disturbed		
Eleocharis palustris	5	Tal		Definitions of Four Vegetat	ion Strata:	
Paspalum urvillei		No	FAC	Tree - Woody plants, exclud		
Eleocharis microcarpa	5	No	OBL	more in diameter at breast he	eight (DBH), rega	ardless o
Ludwigia repens	5	No	OBL	height.		
Nothoscordum bivalve	2	No	FACU	Sapling/Shrub - Woody pla	nts, excluding vir	es, less
Typha domingensis	2	No	OBL	than 3 in. DBH and greater th	nan 3.28 ft (1 m)	tall.
Cyperus acuminatus	2	No	FACW	Herb – All herbaceous (non- of size, and woody plants les		
			_			
						28 ft in
Ď				Woody vine – All woody vine	es greater than 3	.20 10 11
). 				Woody vine – All woody vine height.	es greater than 3	.20 10 11
) 1					es greater than 3	.20 ((1))
0 1 2	91	= Total Cov			es greater than 3	.20 (0 11)
0	91				es greater than 3	
0	91 20% of	= Total Cov			es greater than 3	
0	91 20% of	= Total Cov			es greater than 3	
0	91 20% of	= Total Cov			es greater than 3	
0	91 20% of	= Total Cov		height.	es greater than 3	
0	91 20% of	= Total Cover	18.2	height.	es greater than 3	
0	91 20% of	= Total Cover	18.2	height.		

**	Matrix		needed to docu Red	lox Feature		3 4 1 7 4 7	0.000	A. C.
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 4/2	95 7	.5YR 4/6	5	С	M, PL	Silt Loam	Saturated
								4
					_		-	-
				-	-		-	
Type: C=C	oncentration, D=Deple	etion RM=R	educed Matrix A	 AS=Masker	d Sand Gr	ains	2 ocation	PL=Pore Lining, M=Matrix.
	Indicators: (Applica					unio.		for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue E		The state of the s	RR S. T. U		Muck (A9) (LRR O)
	oipedon (A2)		Thin Dark S				the second secon	Muck (A10) (LRR S)
The second secon	stic (A3)		Loamy Muc					ed Vertic (F18) (outside MLRA 150A
	en Sulfide (A4)		Loamy Gley	yed Matrix	(F2)		Piedm	ont Floodplain Soils (F19) (LRR P, S,
Stratifie	d Layers (A5)		✓ Depleted M				Anoma	alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P,		Redox Dark					RA 153B)
_	ucky Mineral (A7) (LRI		Depleted D					arent Material (TF2)
=	esence (A8) (LRR U)		Redox Dep		8)			Shallow Dark Surface (TF12)
	uck (A9) (LRR P, T)	(111)	Mari (F10) (		AMI DA 4	E41	Other	(Explain in Remarks)
	d Below Dark Surface ark Surface (A12)	(ATT)	☐ Depleted O ☐ Iron-Manga			and the same of th	T) <sup>3</sup> India	cators of hydrophytic vegetation and
	rairie Redox (A16) (M	LRA 150A)	Umbric Sur					tland hydrology must be present,
	lucky Mineral (S1) (LI		Delta Ochri			,		ess disturbed or problematic.
	Gleyed Matrix (S4)		Reduced V	ertic (F18)	MLRA 15	0A, 150B)		A CONTRACTOR OF THE PROPERTY O
Sandy F	Redox (S5)		Piedmont F	loodplain S	ioils (F19)	(MLRA 14	19A)	
	Matrix (S6)		Anomalous	Bright Loa	my Soils (	F20) (MLR	A 149A, 153C	, 153D)
	rface (S7) (LRR P, S,	T, U)						
Restrictive	Layer (if observed):							
Type:			-				10000	V
Depth (in	ches):		30				Hydric Soil	Present? Yes X No
har ha	20.000000000000000000000000000000000000							
Remarks:								
	2.410.							

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Charles Regional Airport	City/County: Lt	ake Charles/Calcasieu	Sampling Date: 3-8-2018
Applicant/Owner: SWLA Economic Development All	iance		Sampling Point: 4
	Section, Towns	ship, Range: 6, 11S, 8W	
Landform (hillslope, terrace, etc.): Relatively Flat			Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T	Lat: 3333743.07	Long: 479219.13	Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams	Lat.		fication:
Are climatic / hydrologic conditions on the site typical for the	ale times of come O. Van		
Are Vegetation No , Soil No , or Hydrology No			
Are Vegetation No , Soil No , or Hydrology No	naturally problematic?	(If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling p	oint locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes	No X	- 12 - Co 24 E	
Hydrophytic Vegetation Present?         Yes           Hydric Soil Present?         Yes X           Wetland Hydrology Present?         Yes	No Is the S	ampled Area	X
Wetland Hydrology Present? Yes	No X within a	Wetland? Yes	No X
Remarks:			
Recent Rainfall; Wetter than Normal S	Site Conditions		
Area is Frequently Baled for Bermuda			
Area is i requeitily baled for berindda	ilay.		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check al	I that apply)	Surface So	oil Cracks (B6)
Surface Water (A1)	c Fauna (B13)	☐ Sparsely V	egetated Concave Surface (B8)
[18] The state of	eposits (B15) (LRR U)		Patterns (B10)
[1]	gen Sulfide Odor (C1)	이 그는 데 맛있는 것을 하셨습니?	Lines (B16)
☐ Water Marks (B1) ☐ Oxidiz	ed Rhizospheres along Livin	g Roots (C3) Dry-Seaso	n Water Table (C2)
Sediment Deposits (B2)	nce of Reduced Iron (C4)	Crayfish B	urrows (C8)
Drift Deposits (B3)	t Iron Reduction in Tilled Soi	ils (C6) 🔲 Saturation	Visible on Aerial Imagery (C9)
	luck Surface (C7)		ic Position (D2)
H	(Explain in Remarks)		quitard (D3)
Inundation Visible on Aerial Imagery (B7)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ral Test (D5)
Water-Stained Leaves (B9)		☐ Sphagnum	moss (D8) (LRR T, U)
Field Observations:	- M. Carley A.		
	epth (inches):	-	
Water Table Present? Yes No X D			ent? Yes No X
Saturation Present? Yes No X D (includes capillary fringe)	epth (inches):	_ Wetland Hydrology Pres	ent? Yes No _^_
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, previous insp	pections), if available:	
Remarks:			
Few Crawfish Burrows in Plot 4			
±1 inch of rainfall recently			

EGETATION (Four Strata) – Use scientific na	A 7 44 - 1 T 11 A 1	111111	Luarente		ling Point: 4	
ree Stratum (Plot size: 30 ) None	% Cover		Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
						- 1.4
				Total Number of Dominant Species Across All Strata:	1	(B)
					-	_ (0)
-				Percent of Dominant Species That Are OBL, FACW, or FAC:	0	_ (A/E
-				Prevalence Index worksheet:		
·-				Total % Cover of:	Multiply by:	
•				OBL species x		
	-			FACW species x		
50% of total cover:	20% of	total cover		FAC species x		
apling/Shrub Stratum (Plot size: 30 )				FACU species x		
None						
* ·						
				Column Totals: (A	)	(1
				Prevalence Index = B/A =		
				Hydrophytic Vegetation Indica	tors:	
				1 - Rapid Test for Hydrophyl	tic Vegetation	
				2 - Dominance Test is >50%		
				3 - Prevalence Index is ≤3.0		
		= Total Co	ver	Problematic Hydrophytic Ve		ain)
50% of total cover:	20% of	total cover		Troblematio riyarophiyae ve	Joidion (Expir	unij
Herb Stratum (Plot size: 30 )				Indicators of budgie sail and wat	land hudralagu	munt
Cynodon dactylon	60	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wet be present, unless disturbed or p		musi
Poa annua	10	No	FACU	Definitions of Four Vegetation	Strata:	
Lolium perenne	5	No	FACU	Tree – Woody plants, excluding	vince 2 in /7 6	6 cm)
Juncus marginatus	5	No	FACW	more in diameter at breast heigh	t (DBH), regard	dless
Nothoscordum bivalve	2	No	FACU	height.		
Dichanthelium sphaerocarpon	2	No	FACU	Sapling/Shrub – Woody plants, than 3 in. DBH and greater than		
•						
				Herb – All herbaceous (non-woo of size, and woody plants less th		
0.				Woody vine – All woody vines g	reater than 3.2	OR ft in
1.				height.	reater than 5.2	.0 11 11
2						
	84	= Total Co	ver			
50% of total cover: 42_ Voody Vine Stratum (Plot size:)	_					
None	7					
			-			
	377					
i		= Total Co		Hydrophytic Vegetation		
500/ of lotal acres				Present? Yes	No X	
50% of total cover:		total cover		1 1000	. 12.4	
Remarks: (If observed, list morphological adaptations be	iow).					
Bermuda Hay Pasture						
The State of the S						

Depth	Matrix	4		lox Feature	es			
(inches)	Color (moist) 10YR 4/2	98	Color (moist) 7.5YR 4/6	%2	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-8						<u>M</u>		
3-16	10YR 4/3	98	7.5YR 4/6	_ 2	<u>C</u>	<u>M</u>	Silt Loam	
ydric Soil Histoso Histic E Black H Hydrogo Stratifie Organic 5 cm Mo Muck P 1 cm Mo Deplete Thick D Sandy M Sandy M Sandy M Strippec Dark Su estrictive Type: Depth (in	Indicators: (Appli (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) E Bodies (A6) (LRR ucky Mineral (A7) (I resence (A8) (LRR P, T) d Below Dark Surfa ark Surface (A12) Prairie Redox (A16) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR P, Layer (if observed	P, T, U) LRR P, T, U U) ce (A11) (MLRA 150 (LRR O, S) S, T, U) ):	Redox Dep  Marl (F10)  Depleted O  Iron-Manga  Medical Ochri Reduced V  Piedmont F	erwise no Below Surfa Burface (St Surface (St Surface (F3) Surface (F3) Surface (F1) Chric (F11 nese Mass face (F13) C (F17) (Mertic (F18)	ted.) ace (S8) (I 9) (LRR S, I (F1) (LRI (F2) F6) e (F7) =8) ) (MLRA 1 ses (F12) (LRR P, 1 LRA 151) (MLRA 1: Soils (F19)	ERR S, T, T, U) R O) 51) (LRR O, P T, U) 50A, 150B	Indicators for  U)	nt Material (TF2)  Ilow Dark Surface (TF12)  Iplain in Remarks)  ors of hydrophytic vegetation and in hydrology must be present, in disturbed or problematic.

Project/Site: Lake Charles Regional Airport	City/County: Lake	Charles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic Development Alliance		State: LA	
Investigator(s): Cleveland Hoffpauir	Section, Township		-,
Landform (hillslope, terrace, etc.): Relatively Flat to Gently Slo	ping Local relief (concav	ve, convex, none): None	Slope (%); <u>0-1</u>
Subregion (LRR or MLRA): LRR-T Lat: 3	3333482.92	Long: 479094.16	Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams		NWI classifi	ication:
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes N	lo X (If no, explain in	Remarks.)
Are Vegetation No , Soil No , or Hydrology No signifi	cantly disturbed?	Are "Normal Circumstances"	present? Yes No X
Are Vegetation No , Soil No , or Hydrology No natura		If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site map sho			
Hydrophytic Vegetation Present? Yes No X	Latte Com	aled Asses	
Hydric Soil Present? Yes X No	Is the Samp		No_X
Hydric Soil Present?         Yes X         No X           Wetland Hydrology Present?         Yes	- Within a we	etiano: res	
Remarks:			
Recent Rainfall; Wetter than Normal Site C	Conditions.		
Area is Frequently Baled for Bermuda Hay			
, , , , , , , , , , , , , , , , , , , ,			
WAREL COV			
HYDROLOGY		Casandar, India	atora (minimum afficia especificad)
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a			I Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Faur ☐ High Water Table (A2) ☐ Marl Deposit	s (B15) <b>(LRR U)</b>		egetated Concave Surface (B8) atterns (B10)
H	Ifide Odor (C1)	Moss Trim	
1 14 . J. J	zospheres along Living R		Water Table (C2)
1 Decident Control of the Contro	Reduced Iron (C4)	Crayfish Bu	
	Reduction in Tilled Soils (		/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Si			c Position (D2)
N	in in Remarks)	☐ Shallow Aq	
Inundation Visible on Aerial Imagery (B7)		☐ FAC-Neutra	al Test (D5)
Water-Stained Leaves (B9)		☐ Sphagnum	moss (D8) (LRR T, U)
Field Observations:	7		
Surface Water Present? Yes No X Depth (i			
Water Table Present? Yes No X Depth (ii			
Saturation Present? Yes No X Depth (includes capillary fringe)		Wetland Hydrology Prese	nt? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspect	ions), if available:	-
Remarks:			
Very Few Crawfish Burrows in Plot 5			
±1 inch of rainfall recently			

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

Sapling/Shrub Stratum (Plot size: 30 )

2.\_\_\_\_\_

= Total Cover

= Total Cover

Yes

No

No

= Total Cover

\_\_\_ 20% of total cover: \_18.8

\_\_\_ = Total Cover

\_\_ 20% of total cover: \_

FACU

FACU

FACU

FAC

Hydrophytic

Vegetation

Present?

50% of total cover: \_\_\_\_\_ 20% of total cover: \_

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_

80

10

2

Tree Stratum (Plot size: 30

Herb Stratum (Plot size: 30

3. Nothoscordum bivalve

5. \_\_\_\_\_

4. Paspalum dilatatum

1 Cynodon dactylon

2 Lolium perenne

1. None

1. None

Sampling Point: 5 Absolute Dominant Indicator Dominance Test worksheet: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 0 Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_ FACW species \_\_\_\_\_ x 2 = \_\_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_ FACU species \_\_\_\_\_ x 4 = \_\_\_\_ UPL species \_\_\_\_\_ x 5 = \_\_\_\_ Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% \_ 3 - Prevalence Index is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain) <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 more in diameter at breast height (DBH), regardless of 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

Remarks:	(If observed,	list morphological	adaptations below)

Woody Vine Stratum (Plot size: \_\_\_\_\_)

50% of total cover: 47

50% of total cover: \_\_\_

#### Bermuda Hay Pasture

Yes \_\_\_\_ No X

		E
Sampling	Point.	0

C	2	ı	ſ	
J	u	ı	L	

	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
8-0	10YR 4/3	98	7.5YR 3/4	2	С	M	Silt Loam	
8-12	10YR 3/2	95	7.5YR 3/4	5	С	М	Silt Loam	
12-16	10YR 4/3	100					Silt Loam	
Type: C=Cc lydric Soil I Histosol Histic Ep Black Hi: Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Thick Da Coast Pr Sandy M Sandy G Sandy R Stripped Dark Sur Restrictive L Type: Depth (inc	Color (moist) 10YR 4/3 10YR 3/2 10YR 4/3 10YR 4/3 10YR 4/3 10YR 4/3 10YR 4/3  concentration, D=Deplet (A1) concentration, D=Deplet (A2) stic (A3) concentration (A2) stic (A3) concentration (A2) stic (A3) concentration (A2) stic (A3) concentration (A2) concentration (A2) concentration (A2) concentration (A2) concentration (A3) concentr	98 95 100 100 100 100 100 100 100 10	Color (moist) 7.5YR 3/4 7.5YR 3/4 7.5YR 3/4 7.5YR 3/4  Reduced Matrix,	S=Maskerwise no elow Surface (Sty Minera ed Matrix (F3) Surface (rk Surface (F11) esse Masace (F13) (F17) (Mrtic (F18) oodplain styles (F18)	Type <sup>1</sup> C C C d Sand Gi ted.) ace (S8) (I G) (LRR S, (F1) (LRR (F2) F6) e (F7) F8) (MLRA 1 Ses (F12) (MLRA 15) (MLRA 15) (MLRA 15)	M M M M M M M M M M M M M M M M M M M	Silt Loam  Silt Loam  Silt Loam  Silt Loam  Silt Loam	Pore Lining, M=Matrix. Problematic Hydric Soils³: (A9) (LRR O) (A10) (LRR S) ertic (F18) (outside MLRA 150A,B loodplain Soils (F19) (LRR P, S, T) Bright Loamy Soils (F20) 33B) Material (TF2) w Dark Surface (TF12) ain in Remarks) of hydrophytic vegetation and hydrology must be present, sturbed or problematic.

Project/Site: Lake Charles Regional A	irport	City/County: Lak	e Charles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic De	velopment Alliance	7474777	State: LA	Sampling Point: 6
Investigator(s): Cleveland Hoffpauir		Section, Townshi	o, Range: 6, 11S, 8W	
Landform (hillslope, terrace, etc.): Slight	Dression	Local relief (conc	ave, convex, none): Cor	ncave Slope (%): 0
Subregion (LRR or MLRA): LRR-T	Lat: 333	3344.66		Datum: UTN
Soil Map Unit Name: Mowata-Vidrine S	ilt Loams			lassification:
Are climatic / hydrologic conditions on the		year? Yes		
Are Vegetation No_, Soil No_, or Hy				
Are Vegetation No , Soil No , or Hy			(If needed, explain any	
SUMMARY OF FINDINGS - Atta				
Hydrophytic Vegetation Present?	Yes X No			
Hydric Soil Present?	Yes X No	is the San	pled Area	X No
Wetland Hydrology Present?	Yes X No	within a v	retiand? Yes	NO
HYDROLOGY				
Wetland Hydrology Indicators:			Cocondon	Indicators (minimum of two requir
Primary Indicators (minimum of one is re	quired: check all that apply	W)		Indicators (minimum of two requires Soil Cracks (B6)
Surface Water (A1)	Aquatic Fauna (E			ely Vegetated Concave Surface (B
High Water Table (A2)	Marl Deposits (B			ige Patterns (B10)
Saturation (A3)	Hydrogen Sulfide			Trim Lines (B16)
Water Marks (B1)		pheres along Living		eason Water Table (C2)
Sediment Deposits (B2)	Presence of Red	luced Iron (C4)	Crayfis	sh Burrows (C8)
Drift Deposits (B3)		uction in Tilled Soils		tion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surfa			orphic Position (D2)
Iron Deposits (B5) Inundation Visible on Aerial Imagery	☐ Other (Explain in	remarks)		w Aquitard (D3) leutral Test (D5)
Water-Stained Leaves (B9)	(0.7)			num moss (D8) (LRR T, U)
Field Observations:				
Surface Water Present? Yes X	No Depth (inche	es): 0-2"		
Water Table Present? Yes X	_ No Depth (inche	es): _@ 8" BGS	1	ala di santa
Saturation Present? Yes X	No Depth (inche	es): <u>0-16"</u>	Wetland Hydrology F	Present? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge,	monitoring well, aerial ph	otos, previous inspe	tions), if available:	
, , , , ,			10. 10. W. 11. 11. 11. 11. 11. 11. 11. 11. 11.	
Remarks:				
±1 inch of rainfall recently				
BGS=Below Ground Surface	e			
<b>N</b>				
li .				

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

Sampling Point: 6

Tree Stratum (Plot size: 30 )			Indicator	
	% Cover	Species'	Status	Number of Dominant Species
None				That Are OBL, FACW, or FAC: 3 (A)
				Total Number of Dominant
		ni-		Species Across All Strata: 3 (B)
(x	-			Percent of Dominant Species
j				That Are OBL, FACW, or FAC: 100 (A/E
),				
				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species x 1 =
50% of total cover:				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30 )	2070 0	i total cove		FAC species x 3 =
Sesbania punicea	2	Yes	FAC	FACU species x 4 =
-	-			UPL species x 5 =
				Column Totals: (A) (B
			$\overline{}$	7.
<u>.                                    </u>		-		Prevalence Index = B/A =
		-		Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
•		-		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	2	= Total Co	ver	Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover: 1				Troblematic Hydrophytic Vegetation (Explain)
lerb Stratum (Plot size: 30 )	40	Yes	FACW	¹Indicators of hydric soil and wetland hydrology must
Avananus fissifolius	70	100	LAOW	be present, unless disturbed or problematic.
·	30	Voc	OPI	- 0 W
Eleocharis microcarpa	30	Yes	OBL	Definitions of Four Vegetation Strata:
Eleocharis microcarpa  Juncus marginatus	5	No	FACW	
Eleocharis microcarpa  Juncus marginatus  Juncus effusus	5 5	No No	FACW OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei	5 5 5	No No No	FACW OBL FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei  Ludwigia repens	5 5 5 2	No No	FACW OBL	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon	5 5 5 2 2	No No No	FACW OBL FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height.
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon	5 5 5 2	No No No	FACW OBL FAC OBL	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.
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei  Ludwigia repens  Cynodon dactylon  Solidago sempervirens	5 5 5 2 2 2	No No No No No	FACW OBL FAC OBL FACU	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
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei  Ludwigia repens  Cynodon dactylon  Solidago sempervirens	5 5 5 2 2 2	No No No No No	FACW OBL FAC OBL FACU	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.
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens	5 5 2 2 2	No No No No No	FACW OBL FAC OBL FACU	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0	5 5 2 2 2	No No No No No	FACW OBL FAC OBL FACU	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.
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0	5 5 2 2 2	No No No No No No No No	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei  Ludwigia repens  Cynodon dactylon  Solidago sempervirens  0.  1.	5 5 2 2 2 2	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47	5 5 2 2 2 2	No No No No No No No No	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47 Voody Vine Stratum (Plot size:)	5 5 2 2 2 2	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47 Voody Vine Stratum (Plot size:) None	5 5 2 2 2 2 94 20% o	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47 Voody Vine Stratum (Plot size:) None	5 5 2 2 2 2 94 20% o	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47 None	5 5 2 2 2 2 94 20% o	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47 Woody Vine Stratum (Plot size:) None	5 5 2 2 2 2 2 94 20% o	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei  Ludwigia repens  Cynodon dactylon  Solidago sempervirens   50% of total cover: 47  Woody Vine Stratum (Plot size:)  None	5 5 2 2 2 2 2 94 20% o	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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
Juncus marginatus Juncus effusus Paspalum urvellei Ludwigia repens Cynodon dactylon Solidago sempervirens  0. 1. 2. 50% of total cover: 47  None None	5 5 2 2 2 2 2 94 20% o	No No No No No No To Total Co	FACW OBL FAC OBL FACU FACW	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.

	G
Sampling Po	oint: O

0	-	'n	
3	u	ı	L

Depth	cription: (Describe Matrix		Redo	x Feature	es			The state of the s
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
)-16	10YR 4/1	90	5YR 4/6	10	<u>C</u>	<u>M</u>	Silty Clay	Saturated
ydric Soil  Histosol  Histic E  Black Hi  Hydroge  Stratified  Organic  5 cm Mu  Muck Pr  1 cm Mu  Depleted  Thick De  Sandy M  Sandy M  Sandy F  Stripped  Dark Su  estrictive  Type:  Depth (incemarks:	pipedon (A2) pistic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P LICKY Mineral (A7) (LI PESENCE (A8) (LRR P, T) d Below Dark Surface ark Surface (A12) rairie Redox (A16) (I Mucky Mineral (S1) (I Bleyed Matrix (S4) Redox (S5) I Matrix (S6) rface (S7) (LRR P, S Layer (if observed)	eable to all P, T, U) RR P, T, U) Pe (A11) MLRA 150A LRR O, S) S, T, U)	LRRs, unless othe  Polyvalue Be Thin Dark St Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da Redox Depre Marl (F10) (L Depleted Oc Iron-Mangan Umbric Surfa Delta Ochric Reduced Ve	rwise notelow Surface (SS y Mineral ed Matrix (F3) Surface (F14) hric (F11) lesse Massace (F13) (F17) (Matrix (F18) boodplain Steelow Surface (F18) boodplain Surface (F18) boodplain Steelow Surface (F18) boodplain Steelow	ted.) ace (S8) (I b) (LRR S (F1) (LRI (F2) F6) e (F7) F8) (MLRA 1 ses (F12) (LRR P, T LRA 151) (MLRA 1 Soils (F19)	ERR S, T, T, U) R O) 51) (LRR O, P T, U) (MLRA 1	Indicators  U)	E PL=Pore Lining, M=Matrix.  For Problematic Hydric Soils <sup>3</sup> :  Muck (A9) (LRR O)  Muck (A10) (LRR S)  Ced Vertic (F18) (outside MLRA 150A, It nont Floodplain Soils (F19) (LRR P, S, Talous Bright Loamy Soils (F20)  RA 153B)  Parent Material (TF2)  Shallow Dark Surface (TF12)  (Explain in Remarks)  cators of hydrophytic vegetation and stand hydrology must be present, less disturbed or problematic.  C., 153D)  I Present? Yes X No

Project/Site: Lake Charles Regional Airport	City/County: Lake	e Charles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic Development Alliar			Sampling Point; 7
Investigator(s): Cleveland Hoffpauir	Section, Township	o, Range: 6, 11S, 8W	
Landform (hillslope, terrace, etc.): Relatively Flat	Local relief (conca	ave. convex. none); None	Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T	3333040.27	Long: 478971.05	Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams			fication:
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes	No X (If no, explain in	Remarks.)
Are Vegetation No , Soil No , or Hydrology No si	gnificantly disturbed?	Are "Normal Circumstances	"present? Yes No X
Are Vegetation No , Soil No , or Hydrology No na	aturally problematic?	(If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site map s			
	4,		,,
Hydrophytic Vegetation Present?         Yes         No           Hydric Soil Present?         Yes         X         No           Wetland Hydrology Present?         Yes         No	Is the Sam		. Y
Wetland Hydrology Present? Yes No	x within a W	etland? Yes	No X
Remarks:			
Area is Frequently Baled for Bermuda H	27		
HYDROLOGY		*	
Wetland Hydrology Indicators:	Table.		cators (minimum of two required)
Primary Indicators (minimum of one is required; check all th	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		oil Cracks (B6)
[ ]	auna (B13)		egetated Concave Surface (B8)
그	osits (B15) <b>(LRR U)</b> n Sulfide Odor (C1)		Patterns (B10) Lines (B16)
[ ]	Rhizospheres along Living F		n Water Table (C2)
[ ]	of Reduced Iron (C4)		urrows (C8)
☐ Drift Deposits (B3) ☐ Recent Ir	on Reduction in Tilled Soils (		Visible on Aerial Imagery (C9)
[1] <del>-   1</del>   1   2   3   4   4   5   5   4   4   5   5   5   5	k Surface (C7)	☐ Geomorph	ic Position (D2)
	plain in Remarks)		uitard (D3)
Inundation Visible on Aerial Imagery (B7)			al Test (D5)
Water-Stained Leaves (B9)		☐ Sphagnum	moss (D8) (LRR T, U)
Field Observations: Surface Water Present?  Yes  No X  Depi	th (inchas):		
Surface Water Present?         Yes	th (inches):		
	th (inches):	Watland Hydrology Proc	ent? Yes No X
(includes capillary fringe)			entr resNo
Describe Recorded Data (stream gauge, monitoring well, a	erial photos, previous inspec	tions), if available:	
De tradition			
Remarks:			
Very Few Crawfish Burrows in Plot 7			
±1 inch of rainfall recently			

EGETATION (Four Strata) – Use scientific na	E 47.7 DUG.			Sampling Point: 7	
ree Stratum (Plot size: 30 )		Dominant Species?	111111111111111111111111111111111111111	Dominance Test worksheet:	
None	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Number of Dominant Species	920
				That Are OBL, FACW, or FAC:	(A)
-				Total Number of Dominant	
				Species Across All Strata: 1	(B)
				C- Carlotte Carlotte Carlotte	
				Percent of Dominant Species That Are OBL, FACW, or FAC:  0	/ ^ /
				mat Are OBL, FACVV, of FAC.	(A/
				Prevalence Index worksheet:	_
			$\overline{}$	Total % Cover of: Multiply by:	
·	-	- V-C-		OBL species x 1 =	
		= Total Co	ver		
50% of total cover:	20% of	total cover	;	FACW species x 2 =	
apling/Shrub Stratum (Plot size: 30 )				FAC species x 3 =	
None				FACU species x 4 =	
				UPL species x 5 =	
1				Column Totals: (A)	
				- V V	1.
×	. —			Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	÷
				1 - Rapid Test for Hydrophytic Vegetation	
		_		2 - Dominance Test is >50%	
100				3 - Prevalence Index is ≤3.0¹	
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	)
50% of total cover:	20% of	total cover		A CONTRACTOR OF THE PROPERTY O	
Herb Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology ma	ıst
Cynodon dactylon	85	Yes	FACU	be present, unless disturbed or problematic.	131
Andropogon virginicus	5	No	FAC	Definitions of Four Vegetation Strata:	_
Stellaria media	2	No	FACU	Dominions of Four Togotation Guata.	
				Tree – Woody plants, excluding vines, 3 in. (7.6 ci	
				more in diameter at breast height (DBH), regardles	SS
				height.	
h				Sapling/Shrub - Woody plants, excluding vines, I	es
				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
				II I AUG I	ii -
				Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	le
			-	or size, and woody plants less than size it tall.	
0				Woody vine - All woody vines greater than 3.28 f	t ir
1,				height.	
2		-			
	92	= Total Co	ver	1	_
50% of total cover: 16	20% of	total cover	18.4		
Voody Vine Stratum (Plot size: )					
None				1	
		_	-	ı	
	-				
\					
				Undershidia	
·		= Total Co	/or	Hydrophytic Vegetation	
F00/ +5141-1 1-1-1-1-1	C TONY OF THE			Present? Yes No_X	
50% of total cover:		total cover	·——	, which is a second of the sec	
emarks: (If observed, list morphological adaptations bel	ow).				
ermuda Hay Pasture					
elilidda i lay i asture					

Depth	Matrix		Red	dox Feature	s		m the absence of	and the second of the
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
-16	10YR 3/2	95	5YR 4/6	5	<u>C</u>	<u>M</u>	Silt Loam	
Histoso Histic E Black H Hydrogo Stratifie Organic 5 cm Mi Muck P 1 cm Mi Deplete Thick D Coast F Sandy M Sandy F Strippec Dark Su Restrictive Type: Depth (in	pipedon (A2) pipedon (A2) pistic (A3) en Sulfide (A4) d Layers (A5) Edodies (A6) (LRR F ucky Mineral (A7) (L resence (A8) (LRR P, T) d Below Dark Surface ark Surface (A12) Prairie Redox (A16) (Mucky Mineral (S1) (Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR P, S Layer (if observed)	cable to all L P, T, U) RR P, T, U) J) De (A11) MLRA 150A) LRR O, S)	RRs, unless oth Polyvalue B Thin Dark S Loamy Muc Loamy Gle Depleted M Redox Dari Depleted D Redox Dep Marl (F10) Depleted C Iron-Manga Impric Sur Delta Ochri Reduced V Piedmont F Anomalous	erwise not Below Surfa Surface (S9 Sky Mineral yed Matrix (F3) k Surface (F ark Surface ressions (F (LRR U) Inchric (F11) Inchric (F11) Inchric (F18) (F15) Ertic (F18) (F16) Bright Loai	ed.)  ce (S8) ( ) (LRR S (F1) (LRI (F2)  6) (MLRA 1 es (F12) (LRR P, - LRA 151) (MLRA 1 exists (F19) exists (	LRR S, T, T, U) R O) 51) (LRR O, P T, U) 50A, 150B	Indicators for U) 1 cm Mul 2 cm Mul 2 cm Mul Reduced Piedmon Anomalo (MLRA Red Pare Very Sha Other (Extended of the Control of	

Project/Site: Lake Charles Region	nal Airport	_ City/County: Lake C	Charles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic	c Development Alliance	144.4	State: LA	Sampling Point: 8
Investigator(s): Cleveland Hoffpau		_ Section, Township, F		- 10 10 0 10 1
Landform (hillslope, terrace, etc.): R				Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T				Datum: UTM 83
Soil Map Unit Name: Mowata-Vidri	ne Silt Loams		NWI classi	
Are climatic / hydrologic conditions or	n the site typical for this time of	year? Yes No	X (If no, explain in	Remarks.)
Are Vegetation No , Soil No ,				
Are Vegetation No , Soil No ,				
SUMMARY OF FINDINGS -				
				,
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No _X Yes No _X Yes No _X	Is the Sample		
Wetland Hydrology Present?	Yes No X	within a Wetl	and? Yes	No X
Remarks:	10310			
Plot Location Chosen due to Dominant Vegetation Cynode		Intrared Aerial.		
HYDROLOGY				
Wetland Hydrology Indicators:				cators (minimum of two required)
Primary Indicators (minimum of one		1 - 1		oil Cracks (B6)
Surface Water (A1)	Aquatic Fauna (B			egetated Concave Surface (B8)
High Water Table (A2)	Mari Deposits (B			Patterns (B10)
Saturation (A3)	Hydrogen Sulfide		AND A SECURITY OF THE PARTY OF	Lines (B16)
Water Marks (B1)	Presence of Redu	heres along Living Roc		n Water Table (C2)
Sediment Deposits (B2)  Drift Deposits (B3)		uction in Tilled Soils (C6	=	urrows (C8) Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface			ic Position (D2)
Iron Deposits (B5)	Other (Explain in			quitard (D3)
Inundation Visible on Aerial Ima				al Test (D5)
☐ Water-Stained Leaves (B9)			☐ Sphagnum	moss (D8) (LRR T, U)
Field Observations:	14			
Surface Water Present? Yes	No X Depth (inche	es):		
Water Table Present? Yes	No X Depth (inche			
Saturation Present? Yes (includes capillary fringe)	No X Depth (inche	es): V	Vetland Hydrology Pres	ent? Yes No_X
Describe Recorded Data (stream ga	uge, monitoring well, aerial pho	tos, previous inspection	ns), if available:	
Remarks:				
	over in Dist 0			
Very Few Crawfish Burro				
±1 inch of rainfall recent		1		
Area ditched to improve	drainage for hay prod	duction.		

<b>EGETATION (Four Strata)</b> – Use scientific	names of p	olants.		Sa	mpling Point: 8	
<b>-</b> 30 30			ant Indicator	Dominance Test worksheet	¥ -	
<u>Tree Stratum</u> (Plot size: 30 ) 1. None	-		es? Status	Number of Dominant Species That Are OBL, FACW, or FAC		(A)
2				Total Number of Dominant		
3				Species Across All Strata:	2	_ (B)
4,				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC		_ (A/B)
6					Y. Y. F.	
7				Prevalence Index workshee	V-	
8				Total % Cover of:		
		= Total (	Cover	OBL species		
50% of total cover:	20%	of total cov	ver:	FACW species		
Sapling/Shrub Stratum (Plot size: 30 )				FAC species		
1. None				FACU species		
2				UPL species		
3				Column Totals:	(A)	(B)
4				Prevalence Index = B/A	A =	
5				Hydrophytic Vegetation Ind		
6				1 - Rapid Test for Hydron		
7				2 - Dominance Test is >5		
8				3 - Prevalence Index is ≤		
		= Total C	Cover	Problematic Hydrophytic		lain)
50% of total cover:	20%	of total cov	ver:		regeration (Exp	, with y
Herb Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and v	wetland hydrology	must
1. Cynodon dactylon	60	Yes	FACU	be present, unless disturbed		must
2. Paspalum urvellei	30	Yes	FAC	Definitions of Four Vegetati	ion Strata:	
3. Stellaria media	2	No	FACU			C \
Andropogon virginicus	2	No	FAC	Tree – Woody plants, excludi more in diameter at breast he		
5. Phalaris angusta	2	No	FACW	height.	J (= =. //, . ogai	
6. Eragrostis spectabilis	2	No	FACU	Sapling/Shrub – Woody plan	nts excluding vine	es less
7				than 3 in. DBH and greater th	an 3.28 ft (1 m) ta	all.
8.			7	Herb – All herbaceous (non-v		
				HOLD — All DELDSCHOOLS (DOD-N	voody) plants rec	Parmies

98 \_\_\_ = Total Cover

\_\_\_ 20% of total cover: 19.6

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_ Remarks: (If observed, list morphological adaptations below).

Woody Vine Stratum (Plot size: \_\_\_\_\_)

50% of total cover: 49

Bermuda Hay Pasture

Yes \_\_\_\_ No X

Woody vine - All woody vines greater than 3.28 ft in

height.

Hydrophytic

Vegetation

Present?

Sampling	Doint:	8	
Sampling	Politi.		

c	0	п	
J	u	u	ᆫ

Depth	Matrix	to the de	pth needed to docu	x Featur		or commi	ii tile absence of iii	dicators.
(inches)	Color (moist)	%	Color (moist)	- %	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 4/2	99	5YR 4/6	1	С	M	Silt Loam	
3-16	10YR 5/2	95	5YR 4/6	5	С	M, PL	Silt Loam	
Type: C=Cc lydric Soil I Histosol Histic Ep Black Hi Hydroge Stratifiec Organic 5 cm Mu Muck Pr 1 cm Mu Depletec Thick Da Coast Pr Sandy M Sandy G Sandy R Stripped Dark Sul Lestrictive I Type: Depth (inc	oncentration, D=Deplindicators: (Application (A1) pipedon (A2) distic (A3) distic (A3) distic (A3) distic (A3) distic (A3) distic (A3) distic (A4) distic (A5) distic (A5) distic (A6) (LRR Foundation (A7) (Liesence (A8) (LRR Foundation (LRR Foundation (A12) distinct (A12) distinct (A12) distinct (A12) rairie Redox (A16) (Mucky Mineral (S1) (Gleyed Matrix (S4) Redox (S5) distinct (S6) distinct (S7) (LRR Foundation (LRR Foundation (A12) distinct (A12) dis	95  Deletion, RN Date to all Discontinuous (A11)  MLRA 150 LRR O, S S, T, U)  Service (A11)	5YR 4/6    SYR 4/6     SYR 4/6     SYR 4/6     SYR 4/6     SYR 4/6     SYR 4/6     I LRRs, unless other     Polyvalue Bear     Thin Dark Standard     Loamy Muck     Loamy Muck     Loamy Gleye     Depleted Mark     Redox Dark     Redox Dark     Depleted Dark     Redox Deprement     Marl (F10) (I     Depleted Occord     Iron-Mangar     Delta Ochrice     Reduced Ve     Piedmont Fle	S=Maskerwise no elow Surface (Sty Minera ed Matrix (F3) Surface (rk Surfacessions (I_RR U) hric (F11) lesse Masace (F13) (F17) (Mrtic (F18) bodplain Bright Loa	C Sand Greed.) ace (S8) (I S) (LRR S, I (F1) (LRR GF1) F6) (MLRA 1 Ses (F12) (LRR P, T LRA 151) (MLRA 1: Soils (F19) amy Soils (F19)	M, PL  ains.  ARR S, T, U  T, U)  CO)  51)  LRR O, P,  C, U)  60A, 150B)  (MLRA 14	Silt Loam  2Location: PL=I Indicators for P J) 1 cm Muck of Piedmont FI Anomalous (MLRA 15 Red Parent Very Shallor Other (Explain)  3Indicators wetland of unless di	Material (TF2) w Dark Surface (TF12) ain in Remarks) of hydrophytic vegetation and hydrology must be present, isturbed or problematic.

Project/Site: Lake Charles Regional Airport	City/County: Lake Charles/Calcasieu Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic Development Alliance	State: LA Sampling Point: 9
	Section, Township, Range: 6, 11S, 8W
Landform (hillslope terrace etc.): Relatively Flat	Local relief (concave, convex, none): None Slope (%): 0-1
Landform (hillslope, terrace, etc.): Relatively Flat  Subregion (LRR or MLRA): LRR-T Lat: 33	333373.01 Long: 479288.25 Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	
Are Vegetation No , Soil No , or Hydrology No signific	
Are Vegetation No , Soil No , or Hydrology No natural	
SUMMARY OF FINDINGS – Attach site map show	ving 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 No_X
Wetland Hydrology Present? Yes No X	
Remarks:	
Recent Rainfall; Wetter than Normal Site C	onditions.
Area is Frequently Baled for Bermuda Hay.	
Thea is requesting balea for borniada riay.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	
Surface Water (A1)	그렇게 하는 요
[1]	(B15) (LRR U)
Saturation (A3) Hydrogen Sulf Water Marks (B1) Oxidized Rhiz	ide Odor (C1)
[F - 70] I BERTHAN STATE OF THE	educed Iron (C4)
[1] - [1] :	eduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	이 맛있는데, 이 그림은이 아이는 아이에게 하는데 그를 살고 있다면 아이에 가지만 그는 것이 나를 하는데 하다면 하는데 하다 하다 하는데
Iron Deposits (B5) Other (Explain	(이 다양이의 기업,
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 (in	ches):
Water Table Present? Yes No X Depth (in	
Saturation Present? Yes No X Depth (in	ches): Wetland Hydrology Present? Yes No X
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial)	photos, previous inspections), if available:
	Public Control of the second o
Remarks:	
Very Few Crawfish Burrows in Plot 9.	
±1 inch of rainfall recently.	
7.7	

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

Sampling Point:	9
at.	

Tree Stratum (Plot size: 30 )			t Indicator	Dominance Test worksh	7.7.31	
None	% Cover	Species	? Status	Number of Dominant Spec That Are OBL, FACW, or I		(A)
9. 3.				Total Number of Dominan Species Across All Strata:		(B)
 				Percent of Dominant Spec That Are OBL, FACW, or I	cies FAC: 0	(A/B
	-	-		Prevalence Index works	hoot:	
				In the second state of the second second second		. kon
				Total % Cover of:		
		= Total Co	ver	OBL species		
50% of total cover:	20% o	f total cove	r;	FACW species		
apling/Shrub Stratum (Plot size: 30 )				FAC species		
None				FACU species		
				UPL species		
				Column Totals:	(A)	(B
				Prevalence Index =	B/A =	
				Hydrophytic Vegetation		
				1 - Rapid Test for Hyd		ation
				2 - Dominance Test is	Control Barrier of wall to	ation
		= Total Co		3 - Prevalence Index		(Eunlain)
50% of total cover:	To be a control			Problematic Hydrophy	tic vegetation	(Explain)
lerb Stratum (Plot size: 30 )	80	Yes	FACU	<sup>1</sup> Indicators of hydric soil ar be present, unless disturb		
Cynodon dactylon		100	1 700	i de dresent, uniess disturb	ed of problema	tic.
	10	No	EACH			
Lolium perenne	10	No	FACU	Definitions of Four Vege		
Lolium perenne Stellaria media	2	No	FACU	Definitions of Four Vege Tree – Woody plants, excl	tation Strata:	
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU FACU	Definitions of Four Vege	tation Strata:	
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast	tation Strata: luding vines, 3 i t height (DBH), plants, excludin	regardless o
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate	tation Strata: luding vines, 3 in theight (DBH), plants, excluding than 3.28 ft (1	regardless o g vines, less m) tall.
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU	Definitions of Four Vege Tree – Woody plants, exclusion in diameter at breast height.  Sapling/Shrub – Woody puthan 3 in. DBH and greate Herb – All herbaceous (no	tation Strata: luding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1	g vines, less m) tall.
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve  0	2 2	No No	FACU FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve	2 2	No No = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve  0. 1. 2. 50% of total cover: 47	2 2	No No = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve  0	94 20% 0	No No  = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne  Stellaria media  Nothoscordum bivalve  0	94 20% 0	No No  = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne  Stellaria media  Nothoscordum bivalve  0. 1. 2. 50% of total cover: 47  None	94 20% 0	No No  = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne  Stellaria media  Nothoscordum bivalve  0.  1.  2.  50% of total cover: 47  None	94 20% 0	No No  = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne  Stellaria media  Nothoscordum bivalve  0.  1.  2.  50% of total cover: 47  None  None	94 20% 0	No No  = Total Co	FACU	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants)  Woody vine – All woody v	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne Stellaria media Nothoscordum bivalve  0	94 20% 0	No No Total Cof total cove	FACU FACU  Ver r: 18.8	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants Woody vine – All woody wheight.	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall.
Lolium perenne  Stellaria media  Nothoscordum bivalve  0	94 20% 0	No No Total Coef total cove	FACU FACU  Ver 18.8	Definitions of Four Vege Tree – Woody plants, exc more in diameter at breast height.  Sapling/Shrub – Woody p than 3 in. DBH and greate Herb – All herbaceous (no of size, and woody plants Woody vine – All woody wheight.	tation Strata: duding vines, 3 it t height (DBH), plants, excludin or than 3.28 ft (1 on-woody) plant less than 3.28 ft	regardless o g vines, less m) tall. s, regardless ft tall. an 3.28 ft in

OIL				
OIL				

Sampling Point:	9
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Depth	cription: (Descrit	be to the dep	th needed to doc	ıment the	indicato	r or confir	m the absence of	indicators.)	
The second second	Matrix			ox Featu					tra an
(inches)	Color (moist)	%	Color (moist)	%_	Type		Texture	Remar	arks
0-8	10YR 4/3	98	5YR 4/4	_ 2	С	M	Silt Loam		
3-16	10YR 3/2	98	5YR 4/4	2	C	M	Silt Loam		
				7/1					
	-		-				·		
	<del></del>		<del></del>			<del>-</del>	-		
	, <u> </u>								
Type: C=C	oncentration D=D	enletion RM=	Reduced Matrix, N	/S=Mask	ed Sand (		<sup>2</sup> Location: Pl	L=Pore Lining, M=N	// Atrix
			LRRs, unless oth			oranio.		r Problematic Hyd	
Histosol			Polyvalue E			(LRR S. T.		ck (A9) (LRR O)	
	pipedon (A2)		Thin Dark S					ck (A10) (LRR S)	
	istic (A3)		Loamy Muc					Vertic (F18) (outsi	de MLRA 150A,E
_	en Sulfide (A4)		Loamy Gle				Piedmon	t Floodplain Soils (F	19) (LRR P, S, T
Stratified	d Layers (A5)		☐ Depleted M	atrix (F3)			Anomalo	us Bright Loamy So	oils (F20)
	Bodies (A6) (LRR		Redox Darl				(MLRA		
	ucky Mineral (A7) (							ent Material (TF2)	
	resence (A8) (LRR		Redox Dep		F8)			llow Dark Surface (	(TF12)
	uck (A9) (LRR P, T	A Section of the sect	Marl (F10)			2-20	U Other (E)	oplain in Remarks)	
	d Below Dark Surf	ace (A11)	Depleted O				T) 3Indicate	are of budrambudia u	constation and
	ark Surface (A12) rairie Redox (A16)	/MI DA 150/	Iron-Manga  Umbric Sur					ors of hydrophytic v nd hydrology must b	
	Mucky Mineral (S1)		Delta Ochri					s disturbed or proble	
	Gleyed Matrix (S4)	(LINITO, O)	Reduced V					disturbed of proble	cinauc.
	Redox (S5)		Piedmont F						
	Matrix (S6)			the second secon	And the formal property.		RA 149A, 153C, 1	53D)	
	rface (S7) (LRR P	, S, T, U)	-						
estrictive	Layer (if observe	d):							
Type:									
Depth (in	ches):						Hydric Soil Pr	resent? Yes	No X
lemarks:							12.0.20.20.20.20		
	ew Redox F	eatures C	Observed fro	m - 0 - 16	3"				
Γ.									
Г									
į,									

Project/Site: Lake Charles Regional Airport	City/County: Lake Charles	/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic Development Alliance			Sampling Point: 10
	Section, Township, Range:		-
	Local relief (concave, conve	- AA	Slone (%). 0-1
Subregion (LRR or MLRA): LRR-T Lat: 3	332897.91	479003.74	Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams			cation:
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation No , Soil No , or Hydrology No signific			
Are Vegetation No , Soil No , or Hydrology No natura		explain any answe	
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No X			
Hydric Soil Present? Yes No X	Is the Sampled Area		No_X
Wetland Hydrology Present? Yes No X	within a Wetland?	res	No <u>^</u>
Remarks:			
Area is Frequently Baled for Bermuda Hay.			
HYDROLOGY		One and the second second	
Wetland Hydrology Indicators:	mi A		ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap			Cracks (B6)
☐ Surface Water (A1) ☐ Aquatic Fauna ☐ High Water Table (A2) ☐ Marl Deposits	(B15) <b>(LRR U)</b>		getated Concave Surface (B8) atterns (B10)
Saturation (A3)  Hydrogen Sul		Moss Trim L	
[1]	ospheres along Living Roots (C3)		Water Table (C2)
[1] <del>- 1</del> [1] [1] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	educed Iron (C4)	Crayfish Bu	
Drift Deposits (B3)	eduction in Tilled Soils (C6)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain	in Remarks)	☐ Shallow Aqu	
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)		FAC-Neutra	moss (D8) <b>(LRR T, U)</b>
Field Observations:		Spriagrium	110SS (Do) (LRK 1, U)
Surface Water Present? Yes No X Depth (in	ches):		
Water Table Present? Yes No X Depth (in	ches):		
Saturation Present? Yes No X Depth (in		Hydrology Prese	nt? Yes No_X
(includes capillary fringe)	7 1014	T. S. D. D.	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if av	/allable:	
Remarks:			
±1 inch of rainfall recently.			
11 mon or familian recently.			

	CONTRACTOR OF THE PARTY OF THE	41.4	- 1 - 7 - 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1		Marchael Son :	
VEGETATION	(Four Strata)	<ul> <li>Use</li> </ul>	scientific	names	of plants.	

Sampling Point:	10
Company of the Second	

Tree Stratum (Plot size: 30 )	Absolute	Dominan	Indicator	Dominance Test worksheet:
None		Species'	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2.				
				Total Number of Dominant Species Across All Strata:  (B)
3		<del></del>		Species Across All Strata: 1 (B)
1.				Percent of Dominant Species
5.		_	$\overline{}$	That Are OBL, FACW, or FAC: 0 (A/B
5	,			
7				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species x 1 =
		= Total Co		FACW species x 2 =
50% of total cover:	20% of	f total cove	;	
Sapling/Shrub Stratum (Plot size: 30 )				FAC species x 3 =
None				FACU species x 4 =
V				UPL species x 5 =
				Column Totals: (A) (B)
		-		V 7 X 57
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
·				3 - Prevalence Index is ≤3.01
		= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:	20% of	total cove		
lerb Stratum (Plot size: 30 ) Cynodon dactylon	80	Yes	FACU	¹Indicators of hydric soil and wetland hydrology must
•	10		FACU	be present, unless disturbed or problematic.
Lolium perenne	-	No		Definitions of Four Vegetation Strata:
Nothoscordum bivalve	5	No	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
Paspalum dilatatum	2	No	FAC	more in diameter at breast height (DBH), regardless of
i				height.
1				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.
0				
				Woody vine – All woody vines greater than 3.28 ft in
1,	-			height.
	-			
	97	= Total Co	ver	
2				
2		= Total Co total cove		
2				
2				
2				
50% of total cover: 48.5  Noody Vine Stratum (Plot size:)  None				
2				
2				
2	20% of	total cove	19.4	Hydrophytic
2	20% of		19.4	Vegetation
50% of total cover: 48.5    Moody Vine Stratum (Plot size:)	20% of	total cove	19.4	

	1	0
ampling Point:	- 1	U

Depth	Matrix		pth needed to docu Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
				2	_ <u>C</u>	M	Silt Loam	
10-16	10YR 3/2	95	5YR 4/4	5	_ <u>C</u>	M	Silt Loam	
Type: C=C ydric Soil Histosol Histic Ep Black Hi Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Thick Da Coast P Sandy M Sandy G Sandy F Stripped Dark Su estrictive I Type: Depth (incemarks:	oncentration, D=Deplicators: (Applications: (Applications: (Applications) (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P. Lucky Mineral (A7) (Livesence (A8) (LRR P. T) d Below Dark Surface (A12) rairie Redox (A16) (Mucky Mineral (S1) (Fileyed Matrix (S4) Redox (S5) d Matrix (S6) Inface (S7) (LRR P. Section (LRR P. Section (S7) (LRR P	pletion, RN pable to all p, T, U) RR P, T, U Pee (A11) MLRA 150 LRR O, S)	Redox Depre	S=Maskerwise no selow Surface (Sty Mineral Matrix (F3) Surface or k Surface essions (LRR U) hric (F11) (No tic (F13) codplain Bright Los	ed Sand Gioted.) Face (S8) (I 9) (LRR S, II (F1) (LRF II (F2) (F6) De (F7) F8) ) (MLRA 1 Ses (F12) ILRA 151) (MLRA 15 Soils (F19) amy Soils (	ains.  RR S, T, T, U) RO)  51) CLRR O, F C, U)  60A, 150B (MLRA 1	2Location: PL= Indicators for U)	nt Material (TF2) ow Dark Surface (TF12) olain in Remarks) rs of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.

# ATTACHMENT D

Site Photographs



Photograph 1 Sample Plot 1



Photograph 2 General View of Plot 1



Photograph 3 Sample Plot 2



Photograph 4 General View of Plot 2



Photograph 5 Sample Plot 3



Photograph 6 General View of Plot 3



Photograph 7 Sample Plot 4



Photograph 8 General View of Plot 4



Photograph 9 Sample Plot 5



Photograph 10 General View of Plot 5



Photograph 11 Sample Plot 6



Photograph 12 General View of Plot 6



Photograph 13 Sample Plot 7



Photograph 14 General View of Plot 7



Photograph 15 Sample Plot 8



Photograph 16 General View of Plot 8



Photograph 17 Sample Plot 9



Photograph 18 General View of Plot 9



Photograph 19 Sample Plot 10



Photograph 20 General View of Plot 10



Photograph 21 View of Typical Small Ditches Traversing Property



Photograph 22 View of Drainage Ditch along Gulf Highway