

510 Clarence Street • Lake Charles, LA 70601 337 436-3248 • 800 259-3248 • fax: 337 436-3641

SENT VIA EMAIL

March 19, 2018

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

## TABLE OF CONTENTS

SUM	MARY1
1.0	INTRODUCTION1
2.0	METHODOLOGY1
3.0	SITE DESCRIPTION2
4.0	FINDINGS3
	4.1 Vegetation3
	4.2 Soils4
	4.3 Hydrology4
5.0	CONCLUSIONS5
	FIGURES
Site I	Location Map1
	Diagram2A
	Diagram2B
	R Imagery3
	ATTACHMENTS
Certi	ficates of TrainingA
	red Aerial Photograph and Soils MapB
	and Data FormsC
	PhotographsD

#### **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

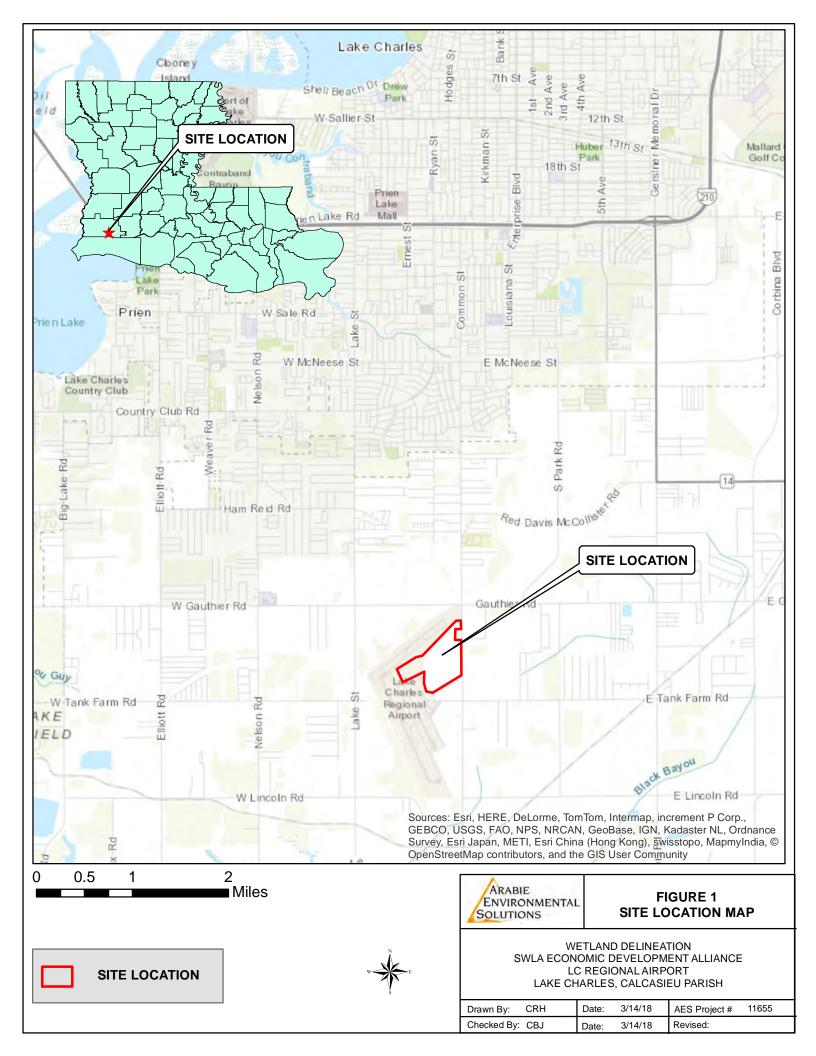
An approximate 156-acre tract located along Gulf Highway at the Lake Charles Regional Airport Facility in Lake Charles, Calcasieu Parish, Louisiana was evaluated for the presence of jurisdictional wetlands. The wetland delineation was performed in accordance with the procedures and methods as described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

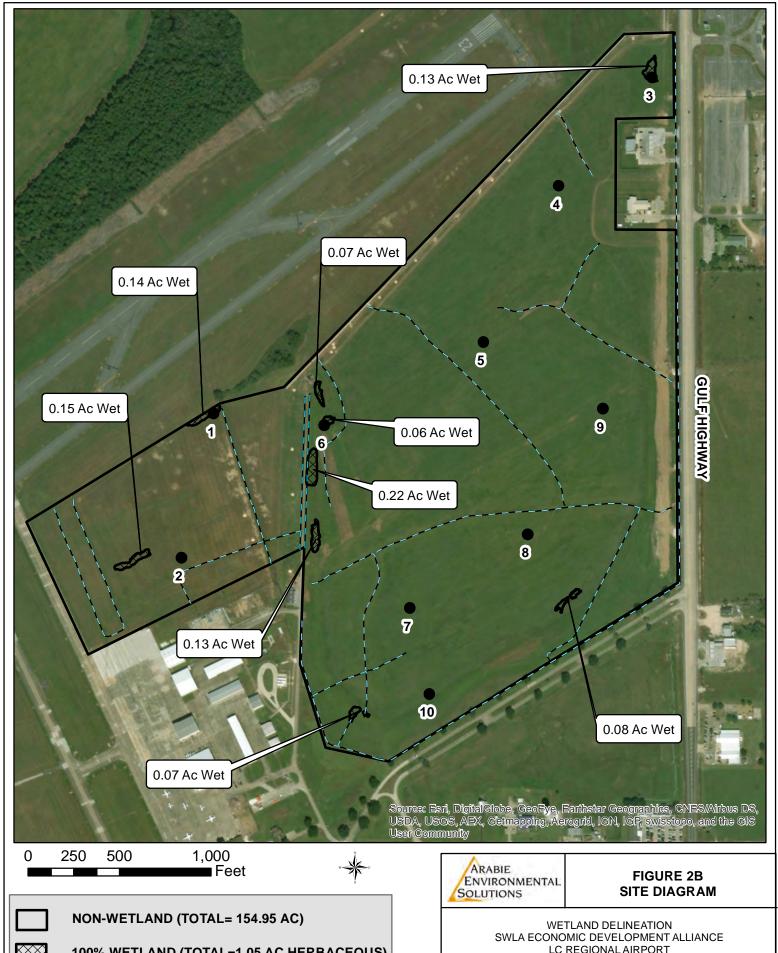


NON-WETLAND (TOTAL= 154.95 AC)

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:	



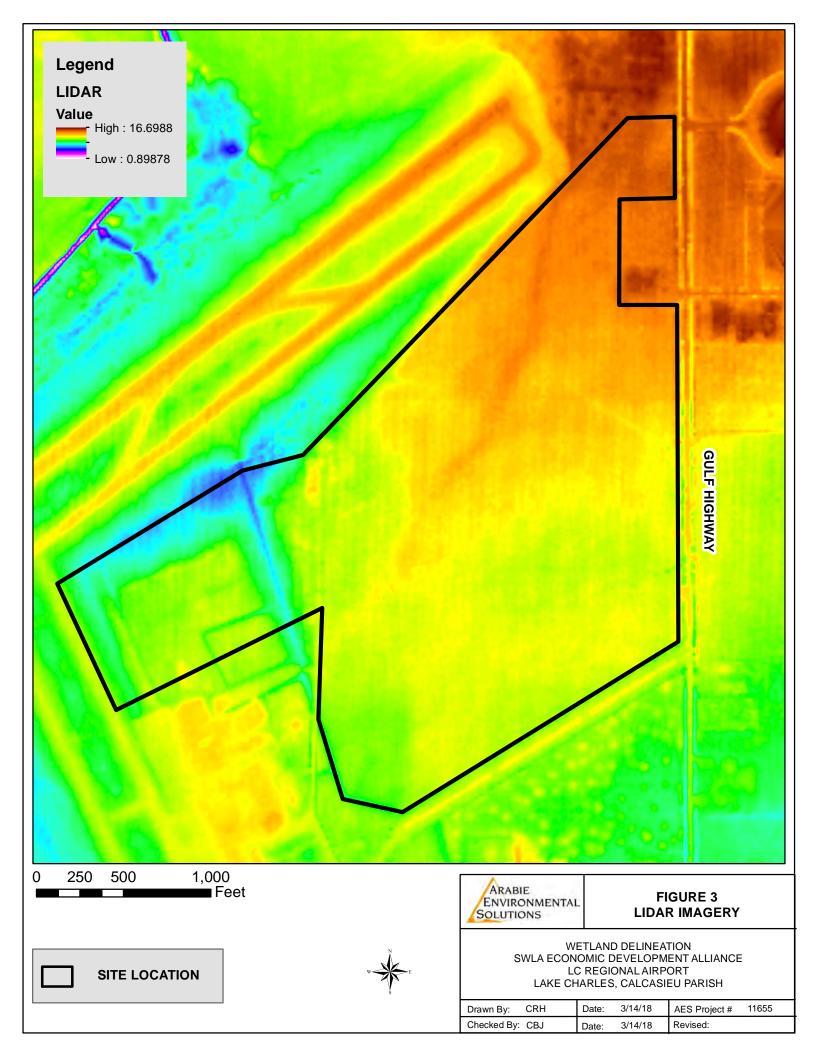
100% WETLAND (TOTAL=1.05 AC HERBACEOUS) **NON-WETLAND WATERS (TOTAL= 18,400 LF)** 

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

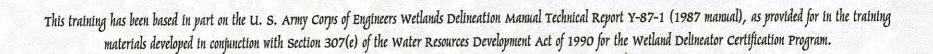
4 day 38 hour Army Corps of Engineers Wetland Delineation Training Program

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

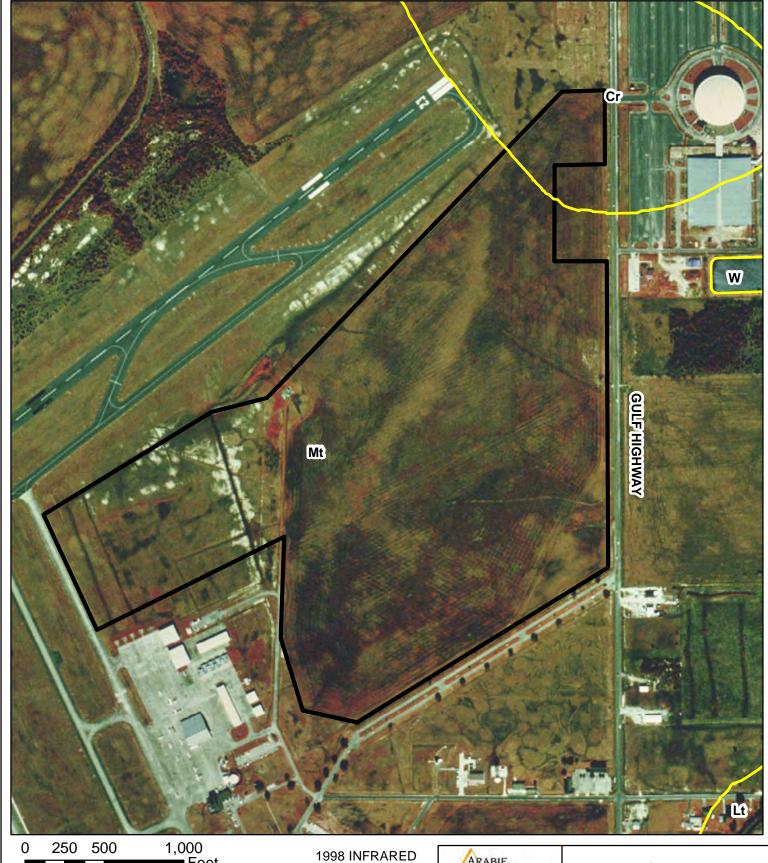
1.800.427.0307 • FAX: 1.888.457.6331 • info@richardchinn.com • http://www.richardchinn.com





# ATTACHMENT B

Infrared and Soil Maps



1,000 Feet

**AERIAL** 

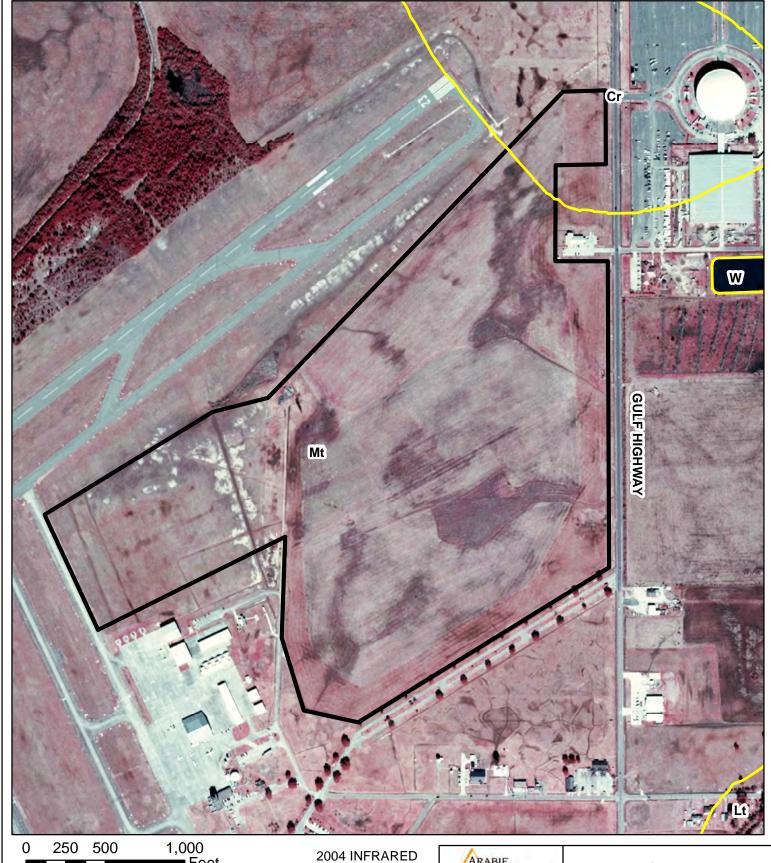
SITE LOCATION

**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

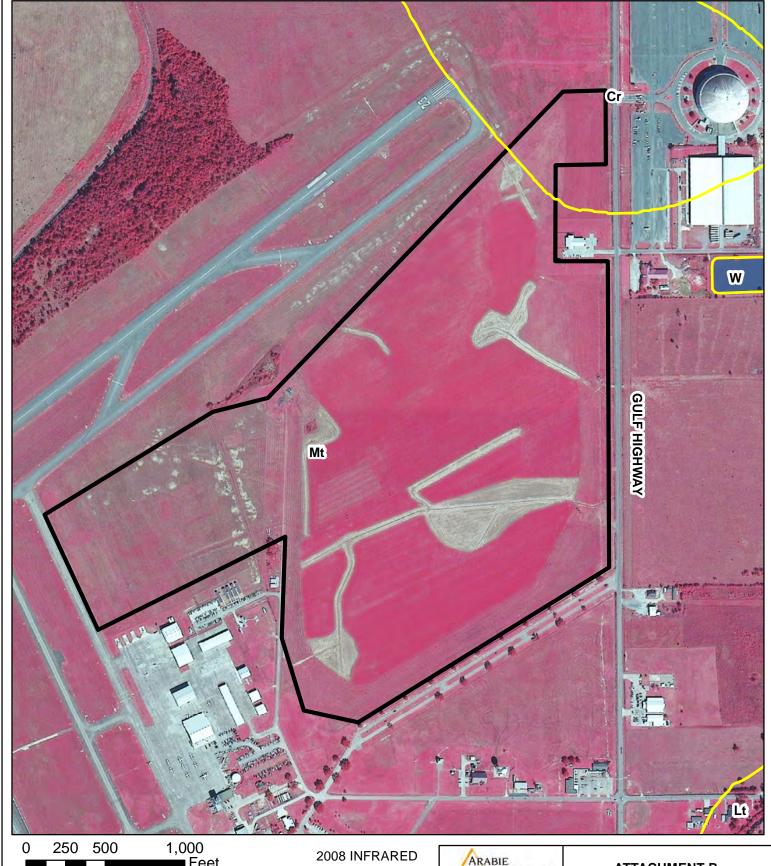
## **ATTACHMENT B INFRARED AND SOIL MAP**

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: Li	ake Charles/Calcasieu	Sampling Date: 3-8-2018
Applicant/Owner: SWLA Economic Development Allian		State: LA	
		ship, Range: 6, 11S, 8W	
Landform (hillslope, terrace, etc.): Slight Depression		ncave, convex, none): Concav	e Slope (%): 0
Subregion (LRR or MLRA): LRR-T			Datum: UTM 83
Soil Map Unit Name: Mowata Vidrine Silt Loams	73.	NWI classif	
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 X No
Are Vegetation No , Soil No , or Hydrology No na	aturally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing sampling p	oint locations, transect	s. important features, etc.
	771111 (21111111111111111111111111111111		
Hydrophytic Vegetation Present?  Yes X  No  Hydric Soil Present?  Yes X  No	15 1110 0	ampled Area	
Hydric Soil Present?  Wetland Hydrology Present?  Yes X  Yes X  No  X	within a	ı Wetland? Yes X	No
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all the	nat apply)		il Cracks (B6)
_	Fauna (B13)		egetated Concave Surface (B8)
	osits (B15) (LRR U)		atterns (B10)
	n Sulfide Odor (C1)		Lines (B16)
	Rhizospheres along Livin		Water Table (C2)
[1]	e of Reduced Iron (C4)	Crayfish Bu	
	on Reduction in Tilled So k Surface (C7)		Visible on Aerial Imagery (C9) c Position (D2)
[ [	xplain in Remarks)	Shallow Aq	
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	
Water-Stained Leaves (B9)		☐ Sphagnum	moss (D8) (LRR T, U)
Field Observations:	of many form		
Surface Water Present? Yes No X Dep	th (inches):	-	
Water Table Present? Yes X No Dep	th (inches): 9 665	-	v X
Saturation Present? Yes X No Dep (includes capillary fringe)	th (inches): 0-16"	_ Wetland Hydrology Prese	ent? Yes X No
Describe Recorded Data (stream gauge, monitoring well, a	erial photos, previous insp	pections), if available:	
2 7			
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			and the same of th
(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	90	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: (App (A1) Dipedon (A2) Istic (A3) In Sulfide (A4) Id Layers (A5) Bodies (A6) (LRR Icky Mineral (A7) (Iesence (A8) (LRR Ick (A9) (LRR P, Total Below Dark Surface (A12) Irairie Redox (A16) Ifucky Mineral (S1) Idleyed Matrix (S4) Idleyed Matrix (S4) Indicator (S5) Indicator (S7) (LRR P) Layer (if observed	P, T, U) (LRR P, T, U U) (LRR P, T, U U) (MLRA 150 (LRR O, S)	Redox Dep  Marl (F10) Depleted C  Iron-Manga  Holder Control 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 taland 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	In the Committed Asset
Hydric Soil Present? Yes No X	─ Is the Sampled Area  within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	- Within a Wetland?
Remarks:  Poccept Painfall: Wotter than Normal Site Cor	aditions
Recent Rainfall; Wetter than Normal Site Cor	naitions
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	y) 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]	pheres along Living Roots (C3)
Sediment Deposits (B2)	2014년 6월 18일
[ ] - 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:	<u> </u>
Surface Water Present? Yes No X Depth (inche	es):
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	ntos previous inspections) if available:
Describe Nescrice Data (Stream gauge, monitoring Well, derial prin	otos, previous inspections), ii available.
Remarks:	
	**

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:

% Cove	r 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:
	. —		OBL species x 1 =
	_ = Total C	over	FACW species x 2 =
20% (	of total cov	er:	
			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
	= Total C	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
20% (	of total cov	er:	
50	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
10	No	FACU	be present, unless disturbed or problematic.
10	No	FACU	Definitions of Four Vegetation Strata:
5	No	FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
2	No	FAC	more in diameter at breast height (DBH), regardless of height.
2	No	FACU	
2	No	FACU	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
	INO	- TACO	than 3 in. DBH and greater than 3.26 it (1 in) tail.
			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
	-	=	Woody vine – All woody vines greater than 3.28 ft in height.
81	= Total C	over	
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	
Sampling	FOIII.		

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						Silt Loam	
Hydric Soil Histoso Histoso Histic E Black F Hydrog Stratifie Organic 5 cm M Muck P 1 cm M Deplete Thick D Coast F Sandy Sandy Strippe Dark St Restrictive	Concentration, D=De Indicators: (Applii I (A1) Ipipedon (A2) Ilistic (A3) en Sulfide (A4) d Layers (A5) c Bodies (A6) (LRR ucky Mineral (A7) (Lresence (A8) (LRR P, T) d Below Dark Surfa eark 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)	Polyvalue E Thin Dark S Loamy Muce Loamy Gley Depleted M Redox Dark Depleted D Redox Depl Marl (F10) ( Depleted O Iron-Manga Umbric Suri Reduced Ve Piedmont F	delow Surface (Selow Surface (Selow Surface (Selow Antrix (F3)) a Surface (ark Surface (ERR U)) a chric (F11) (Mertic (F18)) loodplain Selow Surface (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	51) (LRR O, F (LRR O, F (, U) (MLRA 1	Indicators  U)	EPL=Pore Lining, M=Matrix.  Is for Problematic Hydric Soils <sup>3</sup> :  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/Cal	casieu	Sampling Date: 3-8-2018
Applicant/Owner: SWLA Economic Development Alliance	Sta		
	Section, Township, Range: 6, 1		
Landform (hillslope, terrace, etc.): Depression			Slope (%): 0
Subregion (LRR or MLRA): LRR-T Lat: 333392	24.42 Long: 479	374.14	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 of			
Are Vegetation No , Soil No , or Hydrology No naturally prol			
SUMMARY OF FINDINGS – Attach site map showing			
Hydrophytic Vegetation Present? Yes X No	II LONGO DO LA T		
Hydric Soil Present? Yes X No	10 10 10 10 10 10 10 10 10 10 10 10 10 1	X	100
Wetland Hydrology Present? Yes X No	within a Wetland?	Yes _^	No
Remarks:			
Recent Rainfall; Wetter than Normal Site Cond	tions		
HYDROLOGY			
Wetland Hydrology Indicators:	Se	econdary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil C	Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13		Sparsely Veg	etated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15)	(LRR U)	Drainage Patt	terns (B10)
Saturation (A3) Hydrogen Sulfide O		Moss Trim Lir	
H <del></del> 1.2 (19:2) (1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1	res along Living Roots (C3)		Vater Table (C2)
Sediment Deposits (B2)		Crayfish Burro	
☐ Drift Deposits (B3) ☐ Recent Iron Reducti	on in Tilled Soils (C6)	Geomorphic F	sible on Aerial Imagery (C9)
Iron Deposits (B5)  Other (Explain in Re	_	Shallow Aquit	
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	7.7.4.4.4
Water-Stained Leaves (B9)			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):			10 - 22
Saturation Present? Yes X No Depth (inches):	0-16" Wetland Hyd	Irology Present	t? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos	l s, previous inspections), if availat	ole:	
Remarks;			
Standing Water in Plot 3.			

VEGETATION (Four Strata) – Use scientific names of pla
--

Sampling Point: 3

			Indicator	Dominance Test workshee	t:	
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	·+·	
	سسر			Total % Cover of:		
				OBL species		
	_	= Total Cov	er			
50% of total cover:	20% of	f 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 >	and the second	51
		= Total Cov	/er	3 - Prevalence Index is s		31.9.5V
50% of total cover:				Problematic Hydrophytic	Vegetation' (Ex	plain)
erb Stratum (Plot size: 30 )  Axonopus fissifolius	40	Yes	FACW	<sup>1</sup> Indicators of hydric soil and	wetland hydrolog	gy must
	30	Yes	OBL	be present, unless disturbed		
Eleocharis palustris	5	7.6		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	nes, 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		
0						
				Manda dia Allumadu vin		.28 ft in
				Woody vine – All woody vine	es greater than 3	
l		_		height.	es greater than 3	
1					es greater than 3	
1 2	91	= Total Cov			es greater than 3	
1	91				es greater than 3	
1	91 20% of	= Total Cov			es greater than S	
1	91 20% of	= Total Cov			es greater than s	
1	91 20% of	= Total Cov			es greater than 3	
1	91 20% of	= Total Cov		height.	es greater than S	
1	91 20% of	= Total Cover	18.2	height.	es greater than S	
1	91 20% of	= Total Cover	18.2	height.		

(inches)	Matrix		Red	lox Feature			n the absence	
(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
						_		
								· <del>-</del>
					-		-	
T 0.0		- DM D				2500	21	Dis Desp Linies McMakin
	ncentration, D=Deplicandicators: (Applica					ains.		PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :
<u>- 1</u> -1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		ible to all Liv			The state of the s	DDCTI		Muck (A9) (LRR O)
Histosol	ipedon (A2)		☐ Polyvalue B☐ Thin Dark S				the second secon	Muck (A10) (LRR S)
Black His	The second secon		Loamy Muc					eed Vertic (F18) (outside MLRA 150A
_	n Sulfide (A4)		Loamy Gley		4 1 1000 0 1000			iont Floodplain Soils (F19) (LRR P, S,
	Layers (A5)		Depleted M		100			alous Bright Loamy Soils (F20)
Organic	Bodies (A6) (LRR P,	T, U)	Redox Dark	Surface (F	F6)		_ (MLI	RA 153B)
5 cm Mu	cky Mineral (A7) (LR	R P, T, U)	Depleted Da	ark Surface	(F7)			arent Material (TF2)
=	esence (A8) (LRR U)		Redox Dep	Programme and the same	8)			Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T)		Marl (F10) (		War San C	2.12	U Other	(Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted O				T) 311:-	
	rk Surface (A12) airie Redox (A16) <b>(M</b>	U DA 150A)	Iron-Manga					cators of hydrophytic vegetation and tland hydrology must be present,
	ucky Mineral (S1) (L	The second second second second	Umbric Sur Delta Ochri			, 0)		ess disturbed or problematic.
	leyed Matrix (S4)	itit 0, 0)	Reduced Ve			OA. 150B)		ess disturbed of problemans.
	edox (S5)		Piedmont F		The second second second			
	Matrix (S6)		The second second second				A 149A, 153C	, 153D)
Dark Sur	face (S7) (LRR P, S,	, T, U)						
Restrictive L	ayer (if observed):							
			_					
Туре:							Hydric Soil	Present? Yes X No
Type: Depth (inc	:hes):							
Depth (inc	thes):						1	
	hes):		-					
Depth (inc	rhes):							
Depth (inc	rhes):							
Depth (inc	ches):							
Depth (inc	thes):							
Depth (inc	thes):							
Depth (inc	ches):							
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Depth (inc	ches):							
Depth (inc	ches):							
Depth (inc	ches):							
Depth (inc	shes):							

## 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: 4
	Section, Township, Range: 6, 11S, 8W
	Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 3	333743.07 Long: 479219.13 Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	
	cantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation No , Soil No , or Hydrology No natura	illy problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	7 38 3 3 7 5 5 7 7
Hydric Soil Present? Yes X No	Is the Sampled Area
Hydrophytic Vegetation Present?         Yes         No         X           Hydric Soil Present?         Yes         X         No         X           Wetland Hydrology Present?         Yes         No         X	within a Wetland? Yes No X
Remarks:	
Recent Rainfall; Wetter than Normal Site C	Conditions.
Area is Frequently Baled for Bermuda Hay	
Area is i requently baled for bernidda riay	*
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	pply) Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Faun	a (B13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	s (B15) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Su	Ifide Odor (C1) Moss Trim Lines (B16)
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	zospheres along Living Roots (C3) 🔲 Dry-Season Water Table (C2)
[ ] 프로그램 시민	Reduced Iron (C4)
	Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Su	
☐ Iron Deposits (B5) ☐ Other (Explain Inundation Visible on Aerial Imagery (B7)	n in Remarks) $\square$ Shallow Aquitard (D3) $\square$ FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	opriogram moss (bo) (Erik 1, 0)
Surface Water Present? Yes No X Depth (in	nches):
Water Table Present? Yes No X Depth (in	
Saturation Present? Yes No X Depth (in	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), 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	1.0.49 - 0.10		ling Point: 4	
Tree Stratum (Plot size: 30 )	% Cover		Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
						- 1.7
				Total Number of Dominant Species Across All Strata:	1	(B)
						_ (D)
				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 )						
None				FACU species x		
				UPL species x		
				Column Totals: (A	.)	(E
·				Prevalence Index = B/A =		
				Hydrophytic Vegetation Indica		
				1 - Rapid Test for Hydrophy	tic Vegetation	
				2 - Dominance Test is >50%	THE STREET	
			1	3 - Prevalence Index is ≤3.0		
		= Total Co	ver	Problematic Hydrophytic Ve		ain)
50% of total cover:	20% of	total cover	·C	Froblematic Hydrophytic ve	getation (Expir	allij
Herb Stratum (Plot size: 30 )		1010, 0010	-	to see a	i vale inc	
Cynodon dactylon	60	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wet be present, unless disturbed or p	problematic.	must
Poa annua	_ 10	No	FACU	Definitions of Four Vegetation	Strata:	
Lolium perenne	5	No	FACU	Tree - Woody plants, excluding	vines, 3 in. (7.6	cm)
Juncus marginatus	5	No	FACW	more in diameter at breast heigh	it (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		
				Harb All barbassays (non was	du) planta roa	ordlor
				Herb – All herbaceous (non-wood of size, and woody plants less the		arules
0.				Woody vine – All woody vines g	roator than 2.2	0 ft in
1.				height.	reater triair 5.2	.0 11 11
2.						
	84	= Total Co	ver			
50% of total cover: 42	_					
None	7					
2.				I		
			-			
	377					
			_			
5				Hydrophytic Vegetation		
Access to the contract of the		= Total Co		Present? Yes	No X	
50% of total cover:		total cover	·—			
Remarks: (If observed, list morphological adaptations be	low).					
Bermuda Hay Pasture						

Depth	Matrix	4		lox Featur	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 M Muck P 1 cm M Deplete Thick D Sandy I Sandy I Strippec Dark Sc 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) trairie 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) ICE (A11) (MLRA 150 (LRR O, S) S, T, U) Tesent	Redox Dep  Marl (F10)  Depleted O  Iron-Manga  Medical Ochri Reduced V  Piedmont F	erwise no Below Surf Burface (St Surface (St Surface (F3) Surface (F3) Chric (F11 Inese Mas face (F13) C (F17) (Mertic (F18)	ted.) ace (S8) (I 9) (LRR S, I (F1) (LRI (F2) (F6) ee (F7) F8) ) (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)  Flow Dark Surface (TF12)  plain in Remarks)  Fors of hydrophytic vegetation and dhydrology must be present, disturbed or problematic.

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

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 Slop			Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 3	333482.92	Long: 479094.16	Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams	10-10-10-10-10-10-10-10-10-10-10-10-10-1	Long NWI classif	
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation No Soil No or Hydrology No signific			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> natura	Illy problematic? (	If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	wing sampling poi	nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes No X		east.	
Hydric Soil Present? Yes X No	Is the Samp		No X
Hydric Soil Present?         Yes X         No	within a We	etland? Yes	No <u>^</u>
Remarks:			
Recent Rainfall; Wetter than Normal Site C	Conditions.		
Area is Frequently Baled for Bermuda Hay			
Area is Frequently Balea for Bermada Flay			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	eators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	pply)	Surface Soi	I Cracks (B6)
Surface Water (A1)	a (B13)		egetated Concave Surface (B8)
H "입사이스(), 이번 2시, "라면서 이 전에 이렇게 되었다. ### ### ############################	(B15) (LRR U)	Drainage P	atterns (B10)
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	lfide Odor (C1)	Moss Trim I	
이	zospheres along Living R		Water Table (C2)
- 1	Reduced Iron (C4)	Crayfish Bu	
1	Reduction in Tilled Soils (		/isible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Su	n in Remarks)		c Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain Inundation Visible on Aerial Imagery (B7)	ii iii Reiliaiks)	☐ Shallow Aq	
Water-Stained Leaves (B9)			moss (D8) (LRR T, U)
Field Observations:	9	opingment	
Surface Water Present? Yes No X Depth (in	nches):		
Water Table Present? Yes No X Depth (in			
Saturation Present? Yes No X Depth (in		Wetland Hydrology Prese	nt? Yes No X
(includes capillary fringe)			
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	plants.
------------	-----------------	----------------	----------	---------

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	•	
J	u	ı	L	

Depth	Matrix		Redo	x Feature			m the absence of in	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	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=Co Hydric Soil Ir Histosol ( Histic Epi Black His Hydroger Stratified Organic E Organic E Tom Muck Pre 1 cm Muck Pre 1 cm Muck Pre 2 Sandy Mi Sandy Gi Sandy Gi Sandy Re Stripped Dark Sun Restrictive L Type: Depth (inci	Color (moist) 10YR 4/3 10YR 3/2 10YR 4/3 10YR 4/3 10YR 4/3  concentration, D=Depindicators: (Applie (A)	98 95 100 100 	Color (moist) 7.5YR 3/4 7.5YR 3/4 7.5YR 3/4 7.5YR 3/4 7.5YR 3/4	S=Maske rwise no elow Surface (St ty Minera ed Matrix strix (F3) Surface (rk Surface essions (F LRR U) hric (F11) lesse Masa ace (F13) (F17) (M rtic (F18) bodplain s	Type <sup>1</sup> C C C C d Sand G ted.) ace (S8) (I G) (LRR S I (F1) (LRI (F2) F6) e (F7) F8) (MLRA 1 Ses (F12) (MLRA 151) (MLRA 155) (MLRA 155)	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 Soils <sup>3</sup> : (A9) (LRR O) (A10) (LRR S) ertic (F18) (outside MLRA 150A,B loodplain Soils (F19) (LRR P, S, T) Bright Loamy Soils (F20) 53B) Material (TF2) w Dark Surface (TF12) ain in Remarks) of hydrophytic vegetation and hydrology must be present, isturbed or problematic.

Project/Site: Lake Charles Regiona	Airport	City/County: Lak	e Charles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic [	Development Alliance			Sampling Point: 6
Investigator(s): Cleveland Hoffpauir		Section, Townshi	p, Range: 6, 11S, 8W	
Landform (hillslope, terrace, etc.): Slig	ht Dression	Local relief (conc	ave, convex, none): Con	cave Slope (%): 0
Subregion (LRR or MLRA): LRR-T	Lat: 333	3344.66		Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine	Silt Loams			assification:
Are climatic / hydrologic conditions on t		year? Yes		
Are Vegetation No , Soil No , or				
Are Vegetation No, Soil No, or			(If needed, explain any a	
SUMMARY OF FINDINGS - A				
Hydrophytic Vegetation Present?	Yes X No			
Hydric Soil Present?	Yes X No	is the San	npled Area	x
Wetland Hydrology Present?	Yes X No	within a V	Vetland? Yes	No
Recent Rainfall; Wetter th	an Normal Site Cor	nditions.		
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary	Indicators (minimum of two required)
Primary Indicators (minimum of one is	required; check all that appl	y)		e Soil Cracks (B6)
Surface Water (A1)	Aquatic Fauna (	313)		ly Vegetated Concave Surface (B8)
High Water Table (A2)	Marl Deposits (B	15) (LRR U)	Drainag	ge Patterns (B10)
Saturation (A3)	Hydrogen Sulfide			rim Lines (B16)
Water Marks (B1)		pheres along Living		ason Water Table (C2)
Sediment Deposits (B2)	Presence of Red			h Burrows (C8)
Drift Deposits (B3)	Thin Muck Surfa	uction in Tilled Soils		ion Visible on Aerial Imagery (C9) rphic Position (D2)
Algal Mat or Crust (B4)  Iron Deposits (B5)	Other (Explain in			v Aquitard (D3)
✓ Inundation Visible on Aerial Image		Tromano,		eutral Test (D5)
Water-Stained Leaves (B9)	24,7-45			num moss (D8) (LRR T, U)
Field Observations:		100		
Surface Water Present? Yes X	No Depth (inches	es): 0-2"		
Water Table Present? Yes X	No Depth (inch-	es): @ 8" BGS	A-1-20-40-0	W
Saturation Present? Yes X (includes capillary fringe)	No Depth (inche	es): 0-16"	Wetland Hydrology P	resent? Yes X No
Describe Recorded Data (stream gaug	ge, monitoring well, aerial ph	otos, previous inspe	tions), if available:	
Remarks:				
±1 inch of rainfall recently				
BGS=Below Ground Surfa	ace			

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

Sampling Point: 6

<u>Tree Stratum</u> (Plot size: 30 )			Indicator	Dominance Test worksheet:
	% 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/
),				
				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 =
- Soobaliid parilosa	-		11.15	UPL species x 5 =
×				Column Totals: (A) (E
<u> </u>				Prevalence Index = B/A =
·				Hydrophytic Vegetation Indicators:
	<u></u>	-		1 - Rapid Test for Hydrophytic Vegetation
		-		2 - Dominance Test is >50%
i.				3 - Prevalence Index is ≤3.0¹
	2	= Total Co	ver	Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover: 1				Troblemade Trydrophlydd Vogetadolf (Explain)
Herb Stratum (Plot size: 30) Axonopus fissifolius	40	Yes	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		-		be present, unless disturbed or problematic.
·	30	Vac	OBL	D. C. Him of F We note that Charles
Eleocharis microcarpa	30	Yes	OBL	Definitions of Four Vegetation Strata:
Eleocharis microcarpa  Juncus marginatus	5	No	FACW	Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
Eleocharis microcarpa  Juncus marginatus  Juncus effusus	5 5	No No	FACW OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless
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)
Eleocharis microcarpa  Juncus marginatus  Juncus effusus  Paspalum urvellei  Ludwigia repens	5 5 5 2	No No No	FACW OBL FAC OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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) more in diameter at breast height (DBH), regardless 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) more in diameter at breast height (DBH), regardless 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) more in diameter at breast height (DBH), regardless height.  Sapling/Shrub – Woody plants, excluding vines, less
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) more in diameter at breast height (DBH), regardless 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) more in diameter at breast height (DBH), regardless 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	No No No No No	FACW OBL FAC OBL FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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	FACW OBL FAC OBL FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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 No To Total Co	FACW OBL FAC OBL FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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	FACW OBL FAC OBL FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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 To No To Total Co	FACW OBL FAC OBL FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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 	No No No No No No To No To Total Co	FACW OBL FAC OBL FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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 	No No No No No No To No To Total Co	FACW OBL FAC OBL FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless 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 94 	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) more in diameter at breast height (DBH), regardless 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) more in diameter at breast height (DBH), regardless 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  1	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) more in diameter at breast height (DBH), regardless 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 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  Ver 18.4	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless theight.  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	
Point:	0	
	oint:	oint: 6

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3	u	ı	L

Depth	cription: (Describe Matrix		Redo	x Feature	es			
(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 Ep  Black Hi  Hydroge  Stratified  Organic  5 cm Mu  Muck Pr  1 cm Mu  Depleted  Thick Da  Sandy M  Sandy M  Sandy M  Sandy F  Stripped  Dark Su  Lestrictive I  Type:  Depth (inclemarks:	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 Delta Ochric Reduced Vei Piedmont Flo	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)	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, Report 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 thand 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 Alliand			_ 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 Lat	. 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 t	ime of year? Yes	No X (If no, explain in	Remarks.)
Are Vegetation No , Soil No , or Hydrology No sig	nificantly disturbed?	Are "Normal Circumstances"	present? Yes No X
Are Vegetation No , Soil No , or Hydrology No nat	urally problematic?	(If needed, explain any ansv	
SUMMARY OF FINDINGS – Attach site map sl			
Hydrophytic Vegetation Present?         Yes No           Hydric Soil Present?         Yes No           Wetland Hydrology Present?         Yes No		pled Area	No <u>X</u>
Remarks:			
Recent Rainfall; Wetter than Normal Site Area is Frequently Baled for Bermuda Ha			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	it apply)	Surface So	il Cracks (B6)
Surface Water (A1)	auna (B13)	Sparsely V	egetated Concave Surface (B8)
그	sits (B15) <b>(LRR U)</b>		atterns (B10)
[ ]	Sulfide Odor (C1)		Lines (B16)
[ ] [ ] [ [ ] [ ] [ ] [ ] [ ] [ ] [	Rhizospheres along Living F		n Water Table (C2)
[1]	of Reduced Iron (C4)	Crayfish Bu	
T → 1 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 ×	n Reduction in Tilled Soils (		Visible on Aerial Imagery (C9)
1. <del>                                     </del>	Surface (C7)		c Position (D2)
	olain in Remarks)	☐ Shallow Aq	V 9 7 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3
Inundation Visible on Aerial Imagery (B7)			al Test (D5)
Water-Stained Leaves (B9)		<u></u> Sphagnum	moss (D8) (LRR T, U)
Field Observations:	(inches)		
Surface Water Present?         Yes	(inches):		
		and being the larger	X
Saturation Present? Yes No X Depth (includes capillary fringe)	(inches):	Wetland Hydrology Prese	ent? Yes No X
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspec	tions), if available:	
De madrin			
Remarks:			
Very Few Crawfish Burrows in Plot 7			
±1 inch of rainfall recently			

EGETATION (Four Strata) – Use scientific na	W. C. C. T. DOUGE			Sampling Point: 7
ree Stratum (Plot size: 30 )		Dominant Species?	11.14.4	Dominance Test worksheet:
None				Number of Dominant Species
				That Are OBL, FACW, or FAC: 0
·				Total Number of Dominant
				Species Across All Strata: 1 (
				Company of the second
				Percent of Dominant Species That Are OBL, FACW, or FAC:  0
				That Are OBL, FACW, or FAC:
				Prevalence Index worksheet:
			$\overline{}$	Total % Cover of: Multiply by:
·	-	- T- V-		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 =
<del>}</del>				Column Totals: (A)
-				Column retails (r y
S	. —			Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
		_		2 - Dominance Test is >50%
ve				3 - Prevalence Index is ≤3.0¹
				Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover:	20% of	total cover		
Herb Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology mu
Cynodon dactylon	85	Yes	FACU	be present, unless disturbed or problematic.
Andropogon virginicus	5	No	FAC	Definitions of Four Vegetation Strata:
Stellaria media	2	No	FACU	20mmono or roun rogonation official
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm
				more in diameter at breast height (DBH), regardles
				height.
h				Sapling/Shrub - Woody plants, excluding vines, le
				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
				I I I AUGUST AND A STATE OF THE
				Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.
			<del></del>	or size, and woody plants less than 5.20 it tall.
0				Woody vine - All woody vines greater than 3.28 ft
1,				height.
2				
	92	= Total Cov	ver	1
50% of total cover: 16	20% of	total cover	18.4	
Voody Vine Stratum (Plot size: )				
None				1
		_		ı
	-			
<u> </u>				
				Under bude
		= Total Cov		Hydrophytic Vegetation
F00/ +5141-1 1-1-1-1-1				Present? Yes No_X
50% of total cover:		total cover	₹	
emarks: (If observed, list morphological adaptations be	ow).			
	· /·			
ermuda Hay Pasture				
sermuda Hay Pasture				

Depth	Matrix		Re	dox Feature	S		m the absence of	
(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	
Hydric Soil Histosol Histic E Black H Hydroge Stratifier Organic 5 cm Mu Muck Pr 1 cm Mr Deplete Thick Dr Sandy N Sandy N Sandy F Stripped Dark Su Restrictive Type: Depth (in	pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) e Bodies (A6) (LRR F ucky Mineral (A7) (L resence (A8) (LRR P, T) d Below Dark Surface ark Surface (A12) trairie Redox (A16) (Mucky Mineral (S1) (Sleyed Matrix (S4) d Matrix (S6) trace (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)	LRRs, unless oth Polyvalue I Thin Dark S Loamy Gle Depleted M Redox Dar Depleted D Redox Dep Marl (F10) Depleted C Iron-Manga Umbric Sur Delta Ochr Reduced V Piedmont F Anomalous	derwise not Below Surfa Surface (S9 cky Mineral yed Matrix (F3) Matrix (F3) k Surface (F park Surface pressions (F (LRR U) Dehric (F11) anese Mass face (F13) dertic (F18) (F10) Floodplain S Bright Loar	ed.) ce (S8) ( ) (LRR S (F1) (LRI (F2)  6) (MLRA 1 es (F12) (LRR P, - LRA 151) (MLRA 1 eoils (F19) my Soils	LRR S, T, T, U) R O) 51) (LRR O, P T, U) 50A, 150B	Indicators for U) 1 cm Mur 2 cm Mur 2 cm Mur 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	harles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic	c Development Alliance	11111	State: LA	Sampling Point: 8
Investigator(s): Cleveland Hoffpau		_ Section, Township, R		- 18 1.7 % 1.5 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 class	
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 Wetla	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 . 4		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 ADDRESS OF THE PARTY OF THE	Lines (B16)
Water Marks (B1)	Presence of Redu	heres along Living Root		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				ral 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): W	etland Hydrology Pres	ent? Yes No_X
Describe Recorded Data (stream ga	uge, monitoring well, aerial pho	tos, previous inspection	s), if available:	
Remarks:				
	over in Dist 0			
Very Few Crawfish Burro				
±1 inch of rainfall recent		4		
Area ditched to improve	drainage for hay prod	duction.		

<b>EGETATION (Four Strata)</b> – Use scientific	names of	plants.		Sa	mpling Point: 8	
7 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 co	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		ř
7				2 - Dominance Test is >5	A STATE OF THE STA	
8				3 - Prevalence Index is ≤		
		_ = Total (		Problematic Hydrophytic		olain)
50% of total cover:	20%	of total co	ver:		regetation (Exp	J. G. I. I.
Herb Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and v	wetland hydrolog	iv must
1. Cynodon dactylon	60	Yes	FACU	be present, unless disturbed		iy 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 (/,	
6. Eragrostis spectabilis	2	No	FACU	Sapling/Shrub – Woody plar	nts excluding vin	es less
7				than 3 in. DBH and greater th	an 3.28 ft (1 m) t	tall.
8.			J-1			
7.0				Herb - All herbaceous (non-v	voody) plants, re	gardiess

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 Foucky Mineral (A7) (Liesence (A8) (LRR Fouck (A9) (LRR Fouck (A9) (LRR Fouck (A12) distinct (A12) dist	95  Deletion, RN  Date to all  Discourse (A11)  MLRA 150  LRR O, S  S, T, U)  :	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 ( 2 cm Muck ( Reduced Ve Piedmont FI Anomalous (MLRA 15 Red Parent Very Shallor Other (Explain)  3Indicators wetland I 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 (hillstope, terrace, etc.). Relatively Flat	Local relief (concav		Slope (%): 0-1
Landform (hillslope, terrace, etc.): Relatively Flat  Subregion (LRR or MLRA): LRR-T Lat:	3333373.01		Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams			cation:
Are climatic / hydrologic conditions on the site typical for this tim	o of year? Voc. A		
Are Vegetation No , Soil No , or Hydrology No signif			present? Yes No X
Are Vegetation No , Soil No , or Hydrology No natur			
		If needed, explain any answ	and the same of the same
SUMMARY OF FINDINGS – Attach site map sho	wing sampling poir	nt locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes No X		non Acto	
Hydric Soil Present? Yes No X	Is the Samp		No X
Wetland Hydrology Present? Yes No X	- Wittill a We	tianu! Tes	
Remarks:			
Recent Rainfall; Wetter than Normal Site (	Conditions.		
Area is Frequently Baled for Bermuda Hay	1.		
HYDROLOGY			
Wetland Hydrology Indicators:	and the	11 - 7 - 7 - 7 - 7 - 7 - 7 - 7	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a			Cracks (B6)
Surface Water (A1)	100 100 100 100 100 100 100 100 100 100		egetated Concave Surface (B8)
[[1]	ts (B15) <b>(LRR U)</b> ulfide Odor (C1)	Moss Trim L	atterns (B10)
	izospheres along Living R		Water Table (C2)
[4] (C.C.) [1] [2] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	Reduced Iron (C4)	Crayfish Bu	
[1] - [1] -	Reduction in Tilled Soils (		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		기가 ^	Position (D2)
☐ Iron Deposits (B5) ☐ Other (Expla	in in Remarks)	☐ Shallow Aqu	uitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutra	l Test (D5)
Water-Stained Leaves (B9)		Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No X Depth (i	nches):		
Water Table Present? Yes No X Depth (i			
Saturation Present? Yes No X Depth (i (includes capillary fringe)	nches):	Wetland Hydrology Prese	nt? Yes No ^
Describe Recorded Data (stream gauge, monitoring well, aeria	I photos, previous inspect	ions), if available:	
Remarks:			
Very Few Crawfish Burrows in Plot 9.			
±1 inch of rainfall recently.			

VEGETATION	(Four Strata) -	Use scientific	names of plants.
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Sampling Point:	9
at.	

Tree Stratum (Plot size: 30 )			t Indicator	Dominance Test worksh		
1. None	% Cover	Species	? Status	Number of Dominant Spec That Are OBL, FACW, or I		(A)
9. 3.				Total Number of Dominant Species Across All Strata:		(B)
 				Percent of Dominant Spec That Are OBL, FACW, or R	cies FAC: 0	(A/B
	-			Prevalence Index worksl	hoot:	
				In the second control of the second of the 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 =	R/A =	
				Hydrophytic Vegetation		
				1 - Rapid Test for Hyd		ation
					Control Barrier of wall to	ation
				2 - Dominance Test is		
-		= Total Co		3 - Prevalence Index i		
F00/ -54-4-1	To be a control			Problematic Hydrophy	ytic Vegetation'	(Explain)
50% of total cover: lerb Stratum (Plot size: 30)		r total cove		<sup>1</sup> Indicators of hydric soil ar	nd wetland hydi	rology must
		Yes	EACH	be present, unless disturbe	ad ar arablama	tic.
Cynodon dactylon	80	165	FACU	be present, unless disturbe	ed or problema	
Cynodon dactylon	10	No	FACU	Definitions of Four Vege		
Cynodon dactylon Lolium perenne	-	-		Definitions of Four Vege	tation Strata:	
Cynodon dactylon  Lolium perenne  Stellaria media	10	No	FACU	Definitions of Four Vege Tree – Woody plants, excl	tation Strata:	n. (7.6 cm) o
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve	10 2 2	No No No	FACU FACU	Definitions of Four Vege	tation Strata:	n. (7.6 cm) o
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve	10 2 2	No No No	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excl more in diameter at breast height.	tation Strata: luding vines, 3 it height (DBH),	n. (7.6 cm) o regardless o
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve	10 2 2	No No	FACU FACU	Definitions of Four Vege Tree – Woody plants, excluder in diameter at breast	tation Strata: luding vines, 3 i t height (DBH), plants, excludin	n. (7.6 cm) c regardless o g vines, less
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve	10 2 2	No No No	FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants and greate	tation Strata: luding vines, 3 in theight (DBH), plants, excluding than 3.28 ft (1	n. (7.6 cm) c regardless o g vines, less m) tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve	10 2 2	No No	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding 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	n. (7.6 cm) oregardless og vines, less m) tall.
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve	10 2 2	No No	FACU FACU FACU	Definitions of Four Vege  Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate  Herb – All herbaceous (not 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	in. (7.6 cm) of regardless of g vines, less m) tall. s, regardless t tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve	2 2	No No	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, exclude more in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine	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	in. (7.6 cm) of regardless of g vines, less m) tall. s, regardless t tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve	2 2	No No	FACU FACU FACU	Definitions of Four Vege  Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate  Herb – All herbaceous (not 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	in. (7.6 cm) of regardless of 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, exclude more in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine	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	in. (7.6 cm) of regardless of g vines, less m) tall. s, regardless t tall.
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve	10 2 2	No No No	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, exclude more in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine	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	in. (7.6 cm) c regardless o g vines, less m) tall. s, regardless t tall.
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve  0. 1. 2. 50% of total cover: 47	10 2 2	No No No	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, exclude more in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine	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	in. (7.6 cm) c regardless o g vines, less m) tall. s, regardless t tall.
Cynodon dactylon  Lolium perenne Stellaria media  Nothoscordum bivalve  0	94 20% 0	No No No Total Cof	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, exclude more in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine	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	in. (7.6 cm) of regardless of g vines, less m) tall. s, regardless t tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve  0	94 20% 0	No No No Total Cof	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine – All woody vine.	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	in. (7.6 cm) c regardless o g vines, less m) tall. s, regardless t tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve  0. 1. 2. 50% of total cover: 47  None	94 20% 0	No No No Total Cof	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine – All woody vine.	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	in. (7.6 cm) c regardless o g vines, less m) tall. s, regardless t tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve  0. 1. 2. 50% of total cover: 47  None	94 20% 0	No No No Total Cof	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine – All woody vine.	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	in. (7.6 cm) oregardless og vines, less m) tall.
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve   0  1  2  50% of total cover: 47  None None	94 20% 0	No No No Total Cof	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine – All woody vine.	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	in. (7.6 cm) oregardless og vines, less m) tall.
Cynodon dactylon Lolium perenne Stellaria media Nothoscordum bivalve   0	94 20% 0	No No No Total Cof	FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, excluding in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants)  Woody vine – All woody vine – All woody vine.	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	in. (7.6 cm) oregardless og vines, less m) tall.
Cynodon dactylon  Lolium perenne  Stellaria media  Nothoscordum bivalve  0	94 20% 0	No No No Total Cof	FACU FACU FACU FACU FACU FACU FACU FACU	Definitions of Four Vege Tree – Woody plants, exclusioner in diameter at breast height.  Sapling/Shrub – Woody plants in. DBH and greate Herb – All herbaceous (not of size, and woody plants) Woody vine – All woody wheight.  Hydrophytic Vegetation	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	in. (7.6 cm) o 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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S. coder	cription: (Describ	se to the deb	th needed to doc	ument the	e indicato	or or confir	rm the absence of	f indicators.)	
Depth	Matrix			dox Featu			- 1.		
(inches)	Color (moist)	%	Color (moist)	%_	Type			Texture Remarks	
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>	·		
Type: C=C	oncentration, D=D	onlotion DM-	- Poducod Matrix I	MS-Mack	od Sand (		21 ocation: D	L=Pore Lining, M=I	Matrix
	Indicators: (App					Jianis.		or Problematic Hy	
Histosol		modello to un	Polyvalue I			(IRRS T		ick (A9) (LRR O)	
	pipedon (A2)		Thin Dark					ick (A10) (LRR S)	
	istic (A3)		Loamy Muc					Vertic (F18) (outs	ide MLRA 150A.E
	en Sulfide (A4)		Loamy Gle				The second secon	nt Floodplain Soils (	
	d Layers (A5)		Depleted M				Anomalo	ous Bright Loamy So	oils (F20)
Organic	Bodies (A6) (LRR	P, T, U)	Redox Dar	k Surface	(F6)			A 153B)	
	ucky Mineral (A7)		Depleted D	ark Surfa	ce (F7)			ent Material (TF2)	
	resence (A8) (LRR		Redox Dep		(F8)			allow Dark Surface	(TF12)
	ick (A9) (LRR P, 1	A Short of the	Marl (F10)		o decident	Nobe	U Other (E	xplain in Remarks)	
	d Below Dark Surf	ace (A11)	Depleted C				3, -, 3,	and the second second	7550 P. WOT - 523
	ark Surface (A12)	/MLDA 1504	Iron-Manga					tors of hydrophytic	
	rairie Redox (A16) /lucky Mineral (S1)		A) Umbric Sur Delta Ochr					nd hydrology must s disturbed or probl	
	Gleyed Matrix (S4)	(LKK 0, 3)	Reduced V					s disturbed of probl	emanc.
	Redox (S5)		Piedmont F						
	Matrix (S6)				And Hill have high	20 100 7 7 7 7 7	.RA 149A, 153C, 1	153D)	
	rface (S7) (LRR P	, S, T, U)			200.		nee obet a cavara		
estrictive	Layer (if observe	d):							
Type:									
Depth (in	ches):						Hydric Soil P	resent? Yes	No X
lemarks:							The same of		
F	ew Redox F	eatures C	Observed fro	m 0-16	3"				

Project/Site: Lake Charles Regional Airport	City/County: Lake C	harles/Calcasieu	Sampling Date: 3-9-2018
Applicant/Owner: SWLA Economic Development Alliance		State: LA	
	Section, Township, R		
		PROPERTY OF THE PROPERTY OF TH	Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat:	3332897.91	Long: 479003.74	Datum: UTM 83
Soil Map Unit Name: Mowata-Vidrine Silt Loams	13000000000		
		NWI classifi	
Are climatic / hydrologic conditions on the site typical for this tim			
Are Vegetation No , Soil No , or Hydrology No signif			
Are Vegetation No , Soil No , or Hydrology No natur	ally problematic? (If r	eeded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing sampling point	locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No X		. 200	
Hydric Soil Present? Yes No X	io the cumple		Y
Wetland Hydrology Present? Yes No X	within a Wetla	ind? Yes	No X
Remarks:			
Area is Frequently Baled for Bermuda Hay	1.		
HYDROLOGY			dimension and the L
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a			Cracks (B6)
Surface Water (A1) Aquatic Fau			getated Concave Surface (B8)
	s (B15) (LRR U)		atterns (B10)
[1]	ulfide Odor (C1)	Moss Trim L	
[1] <del>- 1</del> [1] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	izospheres along Living Root Reduced Iron (C4)	Crayfish Bu	Water Table (C2)
[1] <del></del>	Reduction in Tilled Soils (C6)		/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck S			Position (D2)
[	in in Remarks)	Shallow Aqu	
Inundation Visible on Aerial Imagery (B7)		☐ FAC-Neutra	
Water-Stained Leaves (B9)		Sphagnum	moss (D8) (LRR T, U)
Field Observations:	A. (T.)		
Surface Water Present? Yes No X Depth (i	nches):		
Water Table Present? Yes No X Depth (i			
Saturation Present? Yes No X Depth (i (includes capillary fringe)	nches): W	etland Hydrology Prese	nt? Yes No_X
Describe Recorded Data (stream gauge, monitoring well, aeria	I photos, previous inspection	s), if available:	
Danielo			
Remarks:			
±1 inch of rainfall recently.			

	CONTRACTOR OF THE PARTY OF THE	41.4	- 1 - 7 - 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1		March and Stories
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: 1 (B)
3		<del></del>		Species Across All Strata: 1 (B)
1.				Percent of Dominant Species
5.		-		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	7	
Sapling/Shrub Stratum (Plot size: 30 )				FAC species x 3 =
None				FACU species x 4 =
				UPL species x 5 =
<u> </u>				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	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
•	10	_	FACU	
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.
h				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.
2	-			
	0.7	= Total Co	105	
	97	- Total Co	vei	
50% of total cover: 48.5		total cove		
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)				
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)  None				
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)  None				
50% of total cover: 48.5  Noody Vine Stratum (Plot size:)  None				
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)  None				
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)  None				
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)  None	20% of	total cove	19.4	Hydrophytic
50% of total cover: 48.5  Voody Vine Stratum (Plot size:)  None	20% of	total cove	19.4	Vegetation
50% of total cover: 48.5  Woody Vine Stratum (Plot size:)  1. None  2  3	20% of	total cove	19.4	

	1	0
ampling Point:	- 1	U

Depth	Matrix			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=Cr ydric Soil  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 Su estrictive I Type: Depth (incemarks:	oncentration, D=Del Indicators: (Applic (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P. Licky Mineral (A7) (Lresence (A8) (LRR P. T) d Below Dark Surface ark Surface (A12) rairie Redox (A16) ( Mucky Mineral (S1) ( Sleyed Matrix (S4) Redox (S5) I Matrix (S6) Irface (S7) (LRR P. S Layer (if observed)	pletion, RN pable to all properties of the control of the properties of the control of the control of the properties of the control of the control of the control of the properties of the control of the contr	Redox Depre	S=Maskerwise no selow Surface (S sy Minera ed Matrix (F3) Surface rk Surface essions (LRR U) hric (F11) (N (F17) (N (F17) (N (F18) Endph (	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