

# Exhibit EE.

# South Lafourche Airport North Site Wetlands Delineation Report



**SLEC**

South Louisiana Economic Council  
Assumption • Lafourche • St. Mary • Terrebonne

November 5, 2024

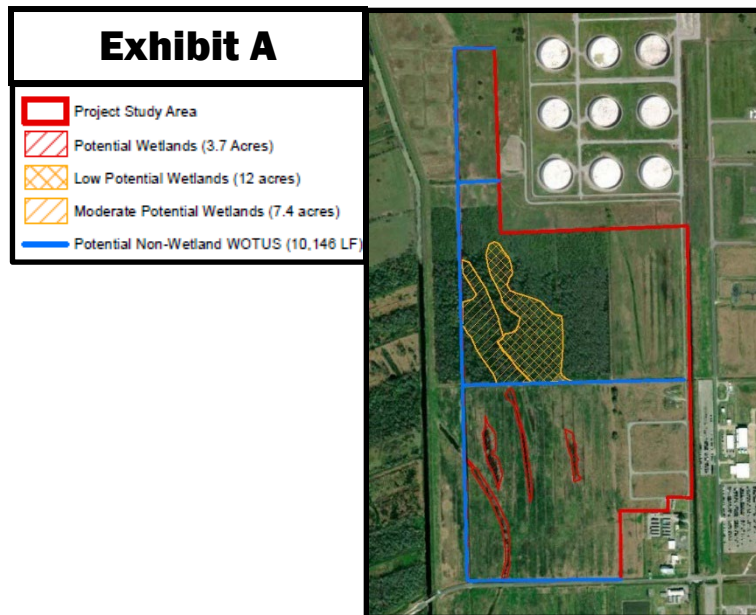
Mrs. Deanna Lafont  
South Louisiana Economic Council  
322 Audubon Avenue  
Thibodaux, Louisiana 70310

# South Lafourche Airport North Site Wetlands Delineation Report

**RE: South Lafourche Airport North Site - Wetlands Delineation Executive Summary  
CSRS Project No 214002**

Dear Mrs. Lafont,

In part of the Louisiana Economic Development (LED) Certified Sites Program, a wetlands delineation was completed for the South Lafourche Airport North Site in Lafourche Parish. In December 2023, the wetland delineation, completed in accordance with the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and Regional Supplements, identified approximately 23.1 acres of potentially jurisdictional wetlands and 10,146 linear feet of potentially jurisdictional streams within the site boundary. According to "Exhibit FF. South Lafourche Airport North Site USACE Wetland Mitigation Documentation", all the wetlands within the Larose to Golden Meadow Hurricane Protection System have been mitigated by the USACE, but a permit will still need to be obtained by the USACE before any wetlands can be altered. Since the South Lafourche Airport North Site is within the Larose to Golden Meadow Hurricane Protection System, no wetlands inside the site boundary will have to be mitigated by the future developer. The findings of the wetland delineation report are shown below in Exhibit A and the full report is provided after this executive summary for additional reference.



Thank you for the opportunity to assist you with this project. Should you have any questions or require additional information, feel free to contact me.

Respectfully,

**Elliott Boudreaux**  
Industrial Development Practice Lead

# WETLAND DELINEATION REPORT



PROPOSED SOUTH LAFOURCHE AIRPORT NORTH SITE

AIRPORT ROAD  
GALLIANO, LOUISIANA 70345

ECS PROJECT NO. 49:21690

FOR: SOUTH LOUISIANA ECONOMIC COUNCIL

DECEMBER 13, 2023





December 13, 2023

Mr. Vic Lafont  
South Louisiana Economic Council  
322 Audobon Avenue / NSU-Babington Hall  
Thibodaux, Louisiana, 70310

ECS Project No. 49:21690

Reference: Waters of the U.S. Wetland Delineation Report, Proposed South Lafourche Airport North Site, Airport Road, Galliano, Lafourche Parish Louisiana

Dear Mr. Vic Lafont:

ECS Southeast, LLC (ECS) is pleased submit this report of the Waters of the U.S. (WOUS) services for the above-referenced site. ECS services were provided in general accordance with ECS Proposal No. 49:37758P authorized on November 8, 2023 and generally meets the requirements of the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 dated November 2010. **Based on our field reconnaissance, potentially jurisdictional WOUS are present onsite.**

If there are questions regarding this report, or a need for further information, please contact the undersigned.

ECS Southeast, LLC

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## 1.0 INTRODUCTION

This report presents the findings of a wetland delineation study conducted by ECS Southeast, LLC (ECS) for South Louisiana Economic Council at the Proposed South Lafourche Airport North Site located at Airport Road, Galliano, Lafourche Parish, Louisiana (29°26'31.71N, 90°16'18.64W). The site, also referred to as the Project Study Area (PSA) throughout this report, consists of an approximate 200-acre parcel. According to the Lafourche Parish Geographic Information System (GIS) website, the Parcel Identification Number (PIN) is 0102313000 (200 acres). The site includes approximately 200 acres, as shown on the Site Location Map (Appendix I, Figure 1). The site consists of agricultural land to the north and south, and forested woodland in the central portion of the site. According to the US Geological Survey (USGS) topo map, sewerage disposal ponds, ponds, and Levees are depicted in the southwestern portion of the site. The purpose of this study was to identify and delineate jurisdictional Waters of the U.S. (WOTUS) within the project study area (PSA).

Wetlands are defined by the United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions.” In order for an area to be classified as wetland, hydrophytic vegetation, hydric soils, and wetland hydrology indicators must be present described in the 1987 “Corps of Engineers Wetlands Delineation Manual” and the Appropriate Regional Supplement.

## 2.0 METHODOLOGY

The findings of the WOTUS delineation is based on ECS’ professional judgment and application of the technical criteria presented in the 1987 USACE Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 dated November 2010.

ECS completed the following tasks to identify and delineate potentially jurisdictional WOTUS boundaries onsite:

### 2.1 Literature Review

ECS reviewed supporting information from publicly-available databases to identify possible ecological effects the project may have on potential state- and/or federally-jurisdictional water resources. During the desktop review, ECS documented relevant, site-specific details (e.g., topographic characteristics, soil composition, recent precipitation, level of disturbance, plant community structure, etc.) and integrated the obtained information with the onsite delineation effort.

### 2.2 Methodology for Field Investigation

Wetland boundaries were delineated using the routine onsite determination method described in the USACE Manual and Regional Supplement, in conjunction with the Atlantic and Gulf Coastal Plain 2020 Regional Wetland Plant List and the USDA Soil Survey.



ECS performed onsite wetland delineations as described above. First, site hydrology was observed and the plant community within the data plot was characterized. The dominant plant species within each community were then identified, and it was determined whether or not hydrophytic (wetland) plants dominated the plant community. The USFWS has defined five wetland plant indicator categories including:

- Obligate wetland (OBL) – has >99% probability of occurring in wetlands
- Facultative wetland (FACW) – has 66% to 99% chance of occurring in wetlands
- Facultative (FAC) – has 33% to 66% chance of occurring in wetlands
- Facultative upland (FACU) – has 1 to 33% chance of occurring in wetlands
- Upland (UPL) – has <1% chance of occurring in wetlands
- No Indicator (NI) – no wetland indicator for the specified species, considered UPL

Plants identified as OBL, FACW, or FAC are considered wetland plants (or hydrophytes) by USACE.

In areas determined to be dominated by hydrophytic vegetation and potential wetland hydrology is observed, an approximately 16-inch soil pedon was excavated with a shovel to determine if hydric soils were present. The soil pit was also inspected to determine if indicators of wetland hydrology (inundation, soil saturation, oxidized rhizospheres on living roots, etc.) were present.

Once an area is determined to be a wetland, further testing was performed to locate the wetland/non-wetland boundary. A second data point was established in an adjacent non-wet area to document non-wetland conditions. Wetland boundaries were documented with a handheld global positioning unit (Trimble Geo 7X™).

Data forms specified in the Regional Supplement were completed for each wetland and non-wetland data point location. Information recorded on the USACE-approved wetland data sheets included vegetation data (species and percent cover in each stratum), soil matrix and redox conditions to a depth of 16 inches, and hydrological indicator observations utilized in making wetland determinations.

### **2.3 Methodology for Delineating Streams**

During the field investigation for wetlands, ECS identified streams onsite that could be considered jurisdictional by state and federal regulatory agencies. ECS used field indicators such as flow, substrate composition, presence/absence of defined bed and banks, origin of hydrologic source, presence/absence of vegetation in the stream channel, and composition and relative abundance of resident benthic macroinvertebrates to classify onsite streams into three stream types: ephemeral, intermittent, and perennial.

RGL No. 05-05 provides guidance on identifying physical indicators of Ordinary High Water Mark (OHWM) as defined in 33 CFR Sections 328.3(e) and 329.11(a)(1) and discusses implementation of other appropriate means that consider the characteristics of the surrounding areas to establish the lateral limits of jurisdiction over tidal and non-tidal waters. Per RGL No. 05-05, “the lateral limits of jurisdiction over non-tidal water bodies extend to the [OHWM], in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands”.



## 3.0 FINDINGS

### 3.1 Literature Review

ECS professionals reviewed the USGS Topographic Map, U.S. Department of Agriculture -Natural Resource Conservation Service (USDA-NRCS) Web Soil Survey, the USDA Hydric Soils List, the Federal Emergency Management Agency (FEMA) Floodplain Mapping Service, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper, and available aerial photographs to identify potentially jurisdictional Waters of the U.S. (i.e., streams, wetlands, natural ponds, lakes) and available watershed information.

#### 3.1.1 Literature Review Summary

The following is a summary of the available desktop information that was reviewed as part of this study:

- According to the Golden Meadow (Louisiana) USGS Topographic Map Quadrangle dated 2015 (Appendix I, Figure 2) sewage disposal ponds, ponds, and a Levee are depicted on site. The PSA occurs at approximately zero feet above mean sea level (MSL) (Appendix 1, Figure 6).
- According to the USDA-NRCS Web Soil Survey (Appendix I, Figure 3), the PSA consists of the following soil map units: Rita muck (Ra) and Schriever clay, 0 to 1 percent slopes, rarely flooded (Sk). Both of the aforementioned soils are listed as hydric soils on the USDA-NRCS National Hydric Soils List for Lafourche Parish, Louisiana.
- The USFWS NWI map of the PSA (Appendix I, Figure 4) depicts a Riverine Wetland feature along the western PSA boundary. This feature is classified as Riverine, Unknown Perennial, Unconsolidated Bottom, Excavated, Non-Tidal, Permanently Flooded, (R5UBFx). No WOTUS features are depicted within the PSA. The PSA is located in the Eastern Louisiana Coastal Watershed and is classified as Hydrologic Unit Code (HUC) 08090203.
- The FEMA Flood Insurance Rate Maps (FIRMs), Panel 22051C0425F (dated February 2, 2018) (Appendix I, Figure 5) indicates the PSA is located in unshaded Zone X. These areas are determined to be outside the 0.2% Annual Chance Floodplain.
- ECS reviewed the National Atmospheric and Oceanic Administration (NOAA) Light Detection and Ranging (LiDAR) Digital Elevation Model (DEM) within the PSA (Appendix I, Figure 6). The DEM's, utilizing dark red, yellow, and light green shading to depict high to low elevations, respectively, to assist with identifying potential wetland areas and non-wetland waters.

### 3.2 Field Investigation Findings

ECS personnel conducted the field investigation on November 16, 2023. During the reconnaissance, the PSA was observed for evidence of potential ponds, streams, and wetlands. A total of five potentially jurisdictional non-wetland WOTUS features (streams), totaling approximately 10,146 linear feet (LF), and six potentially jurisdictional wetland areas, totaling approximately 23.1 acres, were observed within the PSA.

The potentially jurisdictional areas were field-located using a Trimble GeoXH™ hand-held GPS unit capable of sub-meter accuracy, and the data downloaded to produce a Potential Waters of the US Delineation Map (Appendix I, Figure7). The potential features identified by ECS during the wetland delineation study are summarized in the table below:

The findings have not been verified by the USACE are subject to change. Figure 7 should be used for preliminary planning purposes.

**Table 1: Potential WOTUS Summary Table**

Feature ID	GPS Coordinates (decimal degrees)	Approximate Acreage	Approximate Square Footage	Approximate Linear Feet (if applicable)
Wetland W1	29°26'8.25"N 90°16'23.38"W	1.6	69,696	N/A
Wetland W2	29°26'15.17"N 90°16'20.49"W	1.0	43,560	N/A
Wetland W3	29°26'13.78"N 90°16'14.60"W	0.7	30,492	N/A
Wetland W4 (Low Potential)	29°26'25.19"N 90°16'21.43"W	12.0	522,720	N/A
Wetland W5 (Moderate Potential)	29°26'24.95"N 90°16'25.16"W	7.4	322,344	N/A
Wetland W6	29°26'14.64"N 90°16'24.85"W	0.41	17,860	N/A
Stream S1	29°26'44.02"N 90°16'28.08"W	N/A	N/A	5,490 LF
Stream S2	29°26'55.56"N 90°16'25.23"W	N/A	N/A	411 LF
Stream S3	29°26'41.55"N 90°16'24.27"W	N/A	N/A	411 LF
Stream S4	29°26'21.61"N 90°16'18.03"W	N/A	N/A	2,268 LF
Stream S5	29°26'1.32"N 90°16'15.37"W	N/A	N/A	1,579 LF

### 3.2.1 Wetland Summary

ECS observed six potential wetland areas during the field visit:

- The potential wetland areas W1, W3, and W6 exhibited both primary and secondary wetland hydrology indicators, as well as hydric soils during site reconnaissance. Primary hydrology indicators included oxidized rhizospheres (C3), while secondary indicators included a positive FAC-Neutral test (D5). Based on the wetland characteristics review during the field visit, Wetland (W1), (W3), and (W6) are classified as Palustrine, Emergent, Persistent (PEM1) wetland habitat, totaling approximately 2.71 acres. The wetland areas and data point (DP) locations are depicted on the Potential Waters of the U.S. Delineation Map (Appendix I, Figure 7). Photographs of the potential wetlands and WOTUS features are presented in Appendix II.
- The potential wetland area W2 exhibited both primary and secondary wetland hydrology indicators, as well as hydric soils during site reconnaissance. Primary hydrology indicators included oxidized rhizospheres (C3), while secondary indicators included a positive FAC-Neutral test (D5). Based on the wetland characteristics exhibited during the field visit, Wetland W2 is classified as Palustrine, Emergent, Persistent (PEM1) wetland habitat totaling approximately 1.0 acre.
- Desktop Review Features - The potential wetland areas W4 and W5 were not accessible for field observation during site reconnaissance due to unnavigable terrain. These areas consisted of felled trees and an extremely dense growth of sawtooth blackberry (*Rubus argutus*). These conditions are most likely due to Hurricane Ida or other potential storms, which would make landfall in Port Fourchon, Louisiana located approximately 19.3 miles to the south. The removal of the tree canopy gave rise to uninhibited growth to subcanopy vegetation, and sawtooth blackberry was observed throughout the entire 55-acre woodland. After notifying the client of the conditions described above, it was determined that an acceptable course of action was to assess potential wetland areas within this wooded portion of the PSA from a desktop review perspective. ECS utilized publicly available historic aerials and topographic maps, USDA-NRCS soils maps, NOAA LiDAR elevation data, FIRM maps, and NWI maps to best determine which areas may be classified as potential wetlands. These areas were characterized by type and listed as either moderate- or low-potential wetlands. Wetland area W5 (moderate-potential) totals approximately 7.4 acres, and wetland area W4 (low-potential) totals approximately 12 acres.

### 3.2.2 Stream Summary

Five potentially jurisdictional non-wetland WOTUS features (streams), totaling approximately 10,146 linear feet (LF), were observed within the PSA. The potential streams S1 - S4 within the PSA were determined to be intermittent, while stream S5 was determined to be perennial. All streams observed during the field reconnaissance appear to provide drainage within the PSA. Each potential stream feature had well defined bed and bank features, an ordinary high water mark, and a silty substrate. The potential stream features varied from approximately four to twelve feet in width and approximately two to six feet in depth. The potential stream features are depicted on the Potential Waters of the U.S. Delineation Map (Appendix I, Figure 7). Photographs of the streams are presented in Appendix II.

## 4.0 REGULATORY DISCUSSION

After review of the findings in the report and at the client's request, ECS can coordinate with the USACE to acquire a jurisdictional determination and conduct a field visit, if necessary. The timeline of this process is dependent on the availability of the regulatory agency. ECS recommends receipt of the formal jurisdictional determination letter from the necessary agencies prior to conducting any land-disturbance activities.

Non-wetland WOTUS are regulated by Sections 401 and 404 of the Clean Water Act. State and Federal law dictates that any disturbance to WOTUS must be permitted through the appropriate agencies. If any potential impacts are proposed, we can assist you with permitting options and support to complete the process. As part of the permitting process, we will conduct a preliminary review of state and federal agency records pertaining to Section 7 (Federal Endangered Species Act) and Section 106 (National Historic Preservation Act). If deemed necessary, we can assist you with targeted species surveys and cultural investigations to satisfy the requirements of the Nationwide Permit (NWP), Individual Permit (IP), or General Permit conditions.

Section 404 of the Clean Water Act regulates the discharge of dredge and fill materials into waters of the United States (lakes, rivers, ponds, streams, etc.), including wetlands. Waters of the United States include territorial seas, navigable coastal and inland lakes, rivers, perennial streams, intermittent streams, and wetlands. The EPA and the U.S. Army Corps of Engineers jointly administer the Section 404 program. Section 401 of the Clean Water Act grants each state the authority to approve, condition, or deny any Federal permits that could result in a discharge to State waters. Mitigation and stormwater management plans will be a condition of permits issued for the Site. Buffers may be required adjacent to streams and water bodies. In general, the mitigation requirements and thresholds for Louisiana are 0.5 acre or more of wetland/WOTUS impacts. The mitigation credits may be estimated by linear feet (LF) and acreage, state specific calculation worksheets, or other methods utilized in that state or USACE district.

For impacts to 0.5-acre or more of wetlands/WOTUS, an IP may be required. An IP may also be required to authorize impacts if wetlands and/or streams are located in a floodplain. An IP requires a habitat analysis, alternative site analysis, project justification, plans to avoid and minimize impacts, and a proposed mitigation plan. Depending on the habitat analysis and the extent of impacts, and Environmental Impact Statement may be required by the USACE. An IP allows for a public comment period and the timeline ranges from 4 to 18 months to obtain depending on the conditions that may arise during the USACE review and public comment period.

## 5.0 WATERSHED CLASSIFICATION/BUFFER REQUIREMENTS

### 5.1 State Riparian Buffer Requirements

According to the Louisiana Department of Environmental Quality (LDEQ), the PSA occurs in the East Central Louisiana Coast Watershed. To ECS' knowledge, there are no known state-mandated riparian buffer requirements to warrant the protection of adjacent wetlands and riparian areas beyond the limits of construction. However, it is recommended by LDEQ that best management



practices outlined in LDEQ's Stormwater Construction General Permit guidelines be employed during construction activities to limit downstream translocation of sediment into adjacent wetlands and riparian areas.

## 5.2 Local Buffer Requirements

ECS contacted the Lafourche Parish Planning Department to determine if mandatory vegetative buffers and/or riparian buffers are required for streams, wetlands, or other waters in Lafourche Parish. According to the St. James Parish Planning Department, there are no additional riparian buffer requirements in addition to the state recommended practices for general construction and stormwater management.

ECS recommends consultation with a civil engineer to determine if mandatory vegetative buffers and/or regulated development (impervious surfaces) setbacks are required for the site in addition to those mentioned above.

## 6.0 CONCLUSIONS


Six potentially jurisdictional wetland areas, totaling approximately 23.1 acres, and five potentially jurisdictional streams, totaling approximately 10,146 LF, were identified and delineated within the PSA. The locations and boundaries of the potentially jurisdictional Waters are illustrated on the attached Waters of the U.S. Delineation Map (Appendix I, Figure 7).

The findings summarized in this report represent our best professional judgment concerning the presence of potential jurisdictional aquatic resources in the PSA at the time of the study. These findings are only to be considered preliminary and are for planning purposes only, as they have not yet been verified by the regulatory agencies and are, therefore, subject to change pending their review. ECS cannot guarantee that field conditions and/or WOTUS boundaries will not change over time.

Prior to conducting construction-related activities onsite, ECS recommends requesting a Jurisdictional Determination from the USACE for verification of these results to satisfy the requirements of Section 404 of The Clean Water Act (33 U.S.C. 1344). No earth-disturbing activities should be conducted within the PSA until a USACE Determination has been issued.

# **Appendix I: Figures**

**Legend**

 Project Study Area



Client:



Project:

PROPOSED  
SOUTH LAFOURCHE  
AIRPORT  
NORTH SITE

AIRPORT ROAD,  
GALLIANO,  
LAFOURCHE PARISH,  
LOUISIANA

Title:

**SITE LOCATION  
MAP**

**LAFOURCHE PARISH**



Drawn By:

BMB

Scale:

1" = 2,000'

Approved By:

PMS

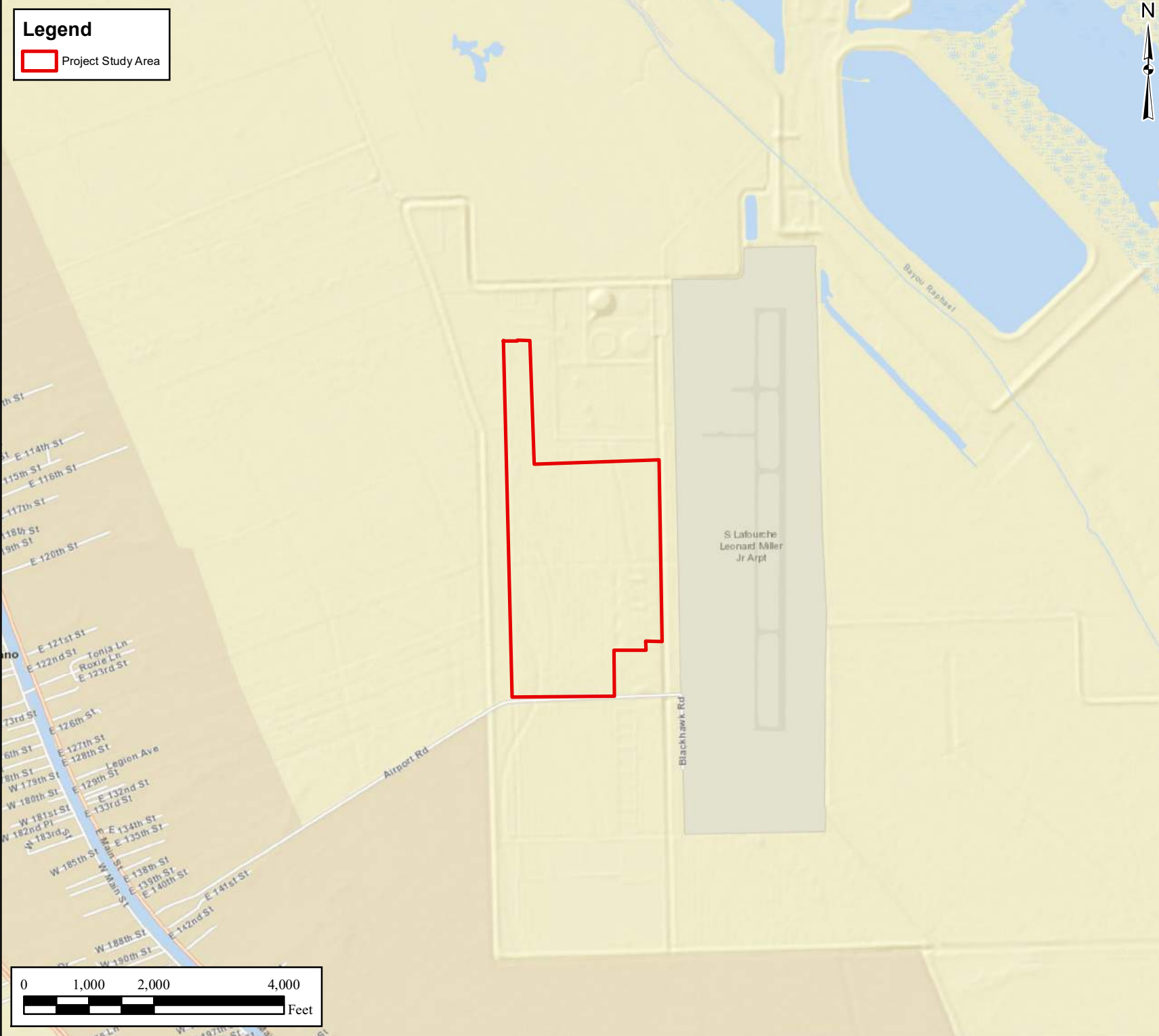
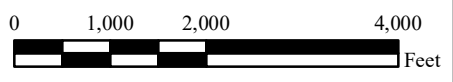
Date:

11/13/2023

ECS Project No.

**49: 21690**

**FIGURE 1**



**Legend**

Project Study Area



Client:

**SLEC**  
 South Louisiana Economic Council  
 Assumption • Lafourche • St. Mary • Terrebonne

Project:

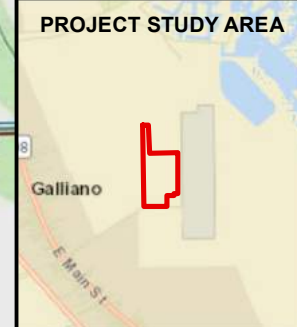
PROPOSED  
 SOUTH LAFOURCHE  
 AIRPORT  
 NORTH SITE

AIRPORT ROAD,  
 GALLIANO,  
 LAFOURCHE PARISH,  
 LOUISIANA

Title:

**USGS TOPOGRAPHIC  
 MAP**

**GOLDEN MEADOW,  
 LA QUADRANGLE  
 DATED: 2015**

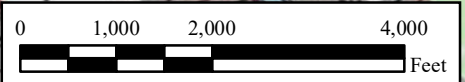
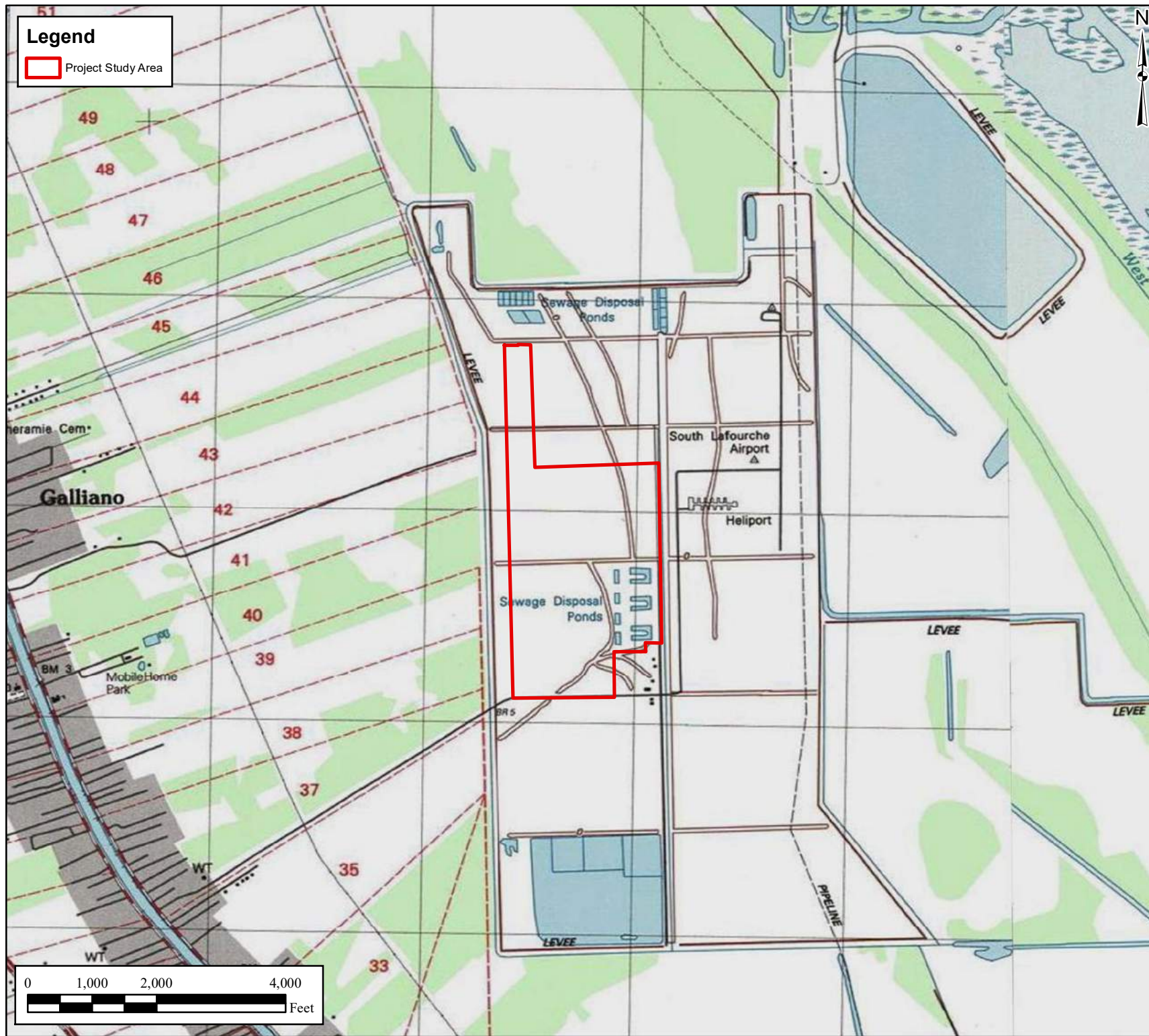


Drawn By: BMB  
 Scale: 1" = 2,000'

Approved By: PMS  
 Date: 11/13/2023

ECS Project No.  
**49: 21690**


**FIGURE 2**




**Legend**

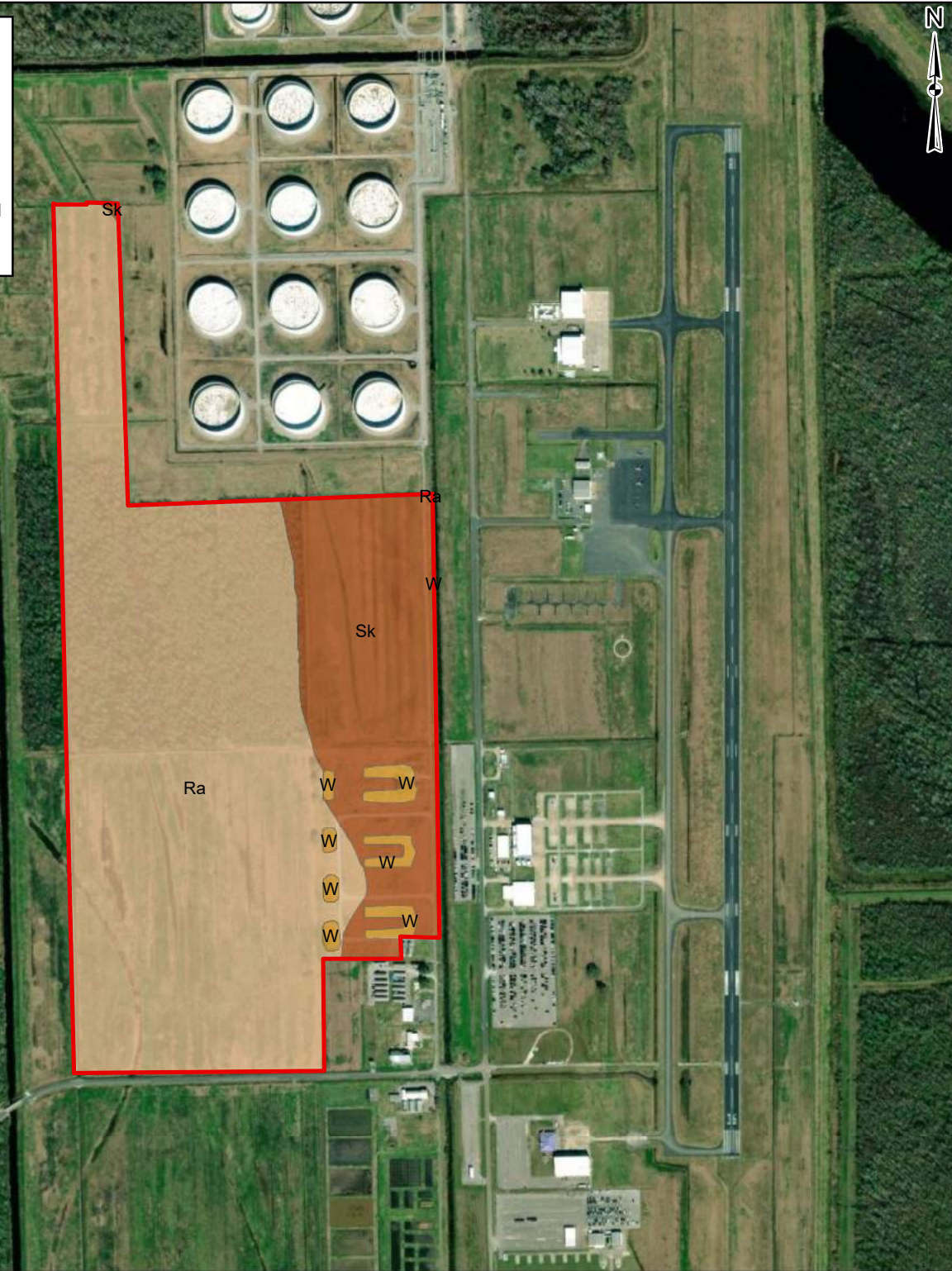
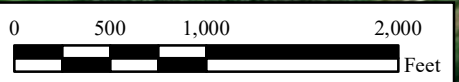
 Project Study Area

**Soil Map Units**

 Ra-Rita muck

 Sk-Schriever clay, 0-1% slopes, Rarely Flooded

 W-Water



Client:



Project:

PROPOSED  
SOUTH LAFOURCHE  
AIRPORT  
NORTH SITE  
  
AIRPORT ROAD,  
GALLIANO,  
LAFOURCHE PARISH,  
LOUISIANA

Title:

**USDA-NRCS  
SOIL-SURVEY  
MAP  
SPATIAL SURVEY  
DATED:  
09/11/2019**

**PROJECT STUDY AREA**



Drawn By:

BMB

Scale:

1" = 1,000'

Approved By:

PMS

Date:


11/13/2023

ECS Project No.

**49: 21690**


**FIGURE 3**

# Legend

 Project Study Area

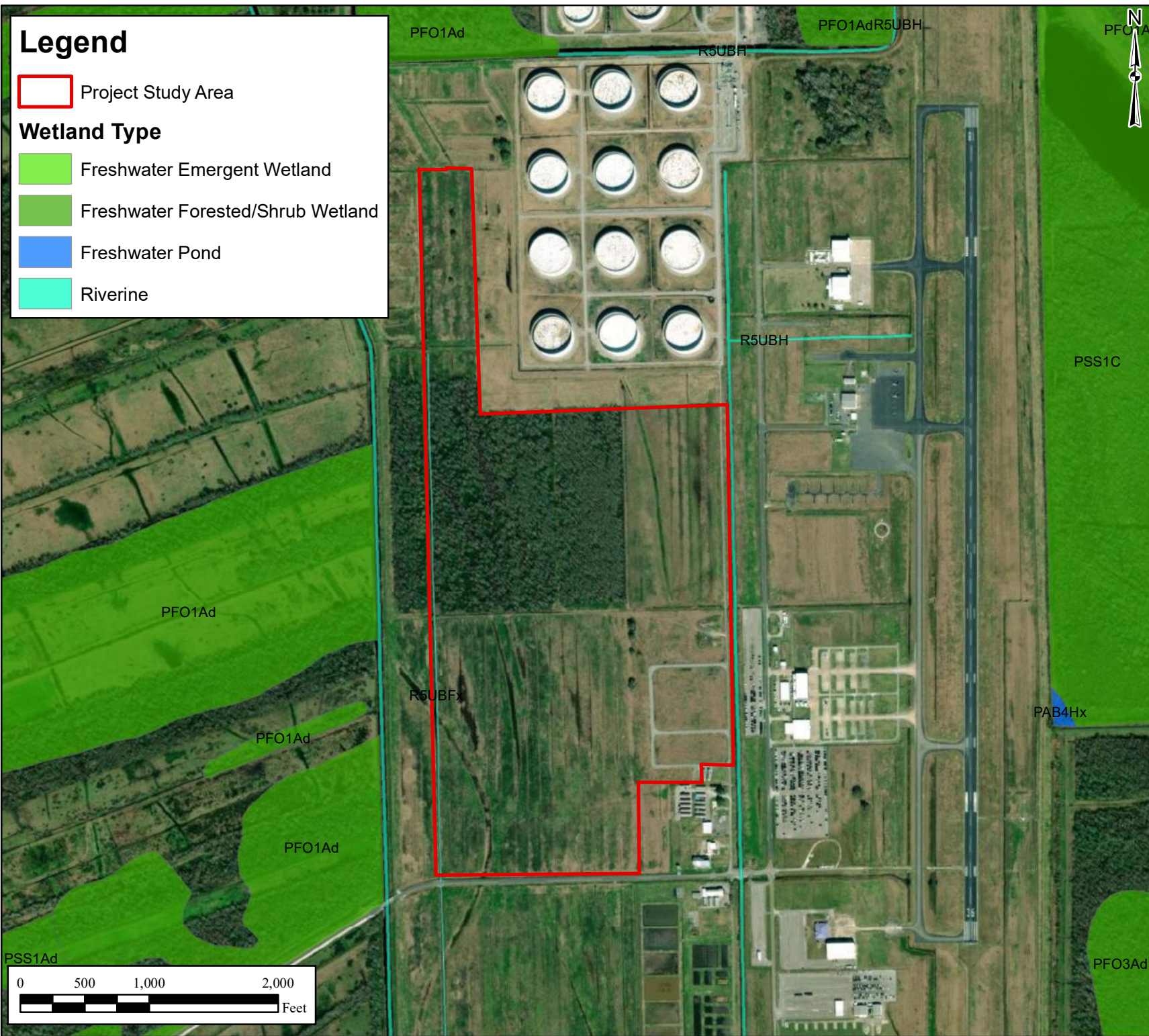
## Wetland Type

 Freshwater Emergent Wetland

 Freshwater Forested/Shrub Wetland

 Freshwater Pond

 Riverine



Client:



Project:

PROPOSED  
SOUTH LAFOURCHE  
AIRPORT  
NORTH SITE  
  
AIRPORT ROAD,  
GALLIANO,  
LAFOURCHE PARISH,  
LOUISIANA

Title:

**USFWS  
NATIONAL  
WETLAND  
INVENTORY  
MAP**

PROJECT STUDY AREA



Drawn By:

BMB

Scale:

1" = 1,000'

Approved By:

PMS

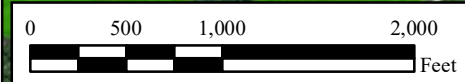
Date:

11/13/2023


ECS Project No.

**49: 21690**

**FIGURE 4**











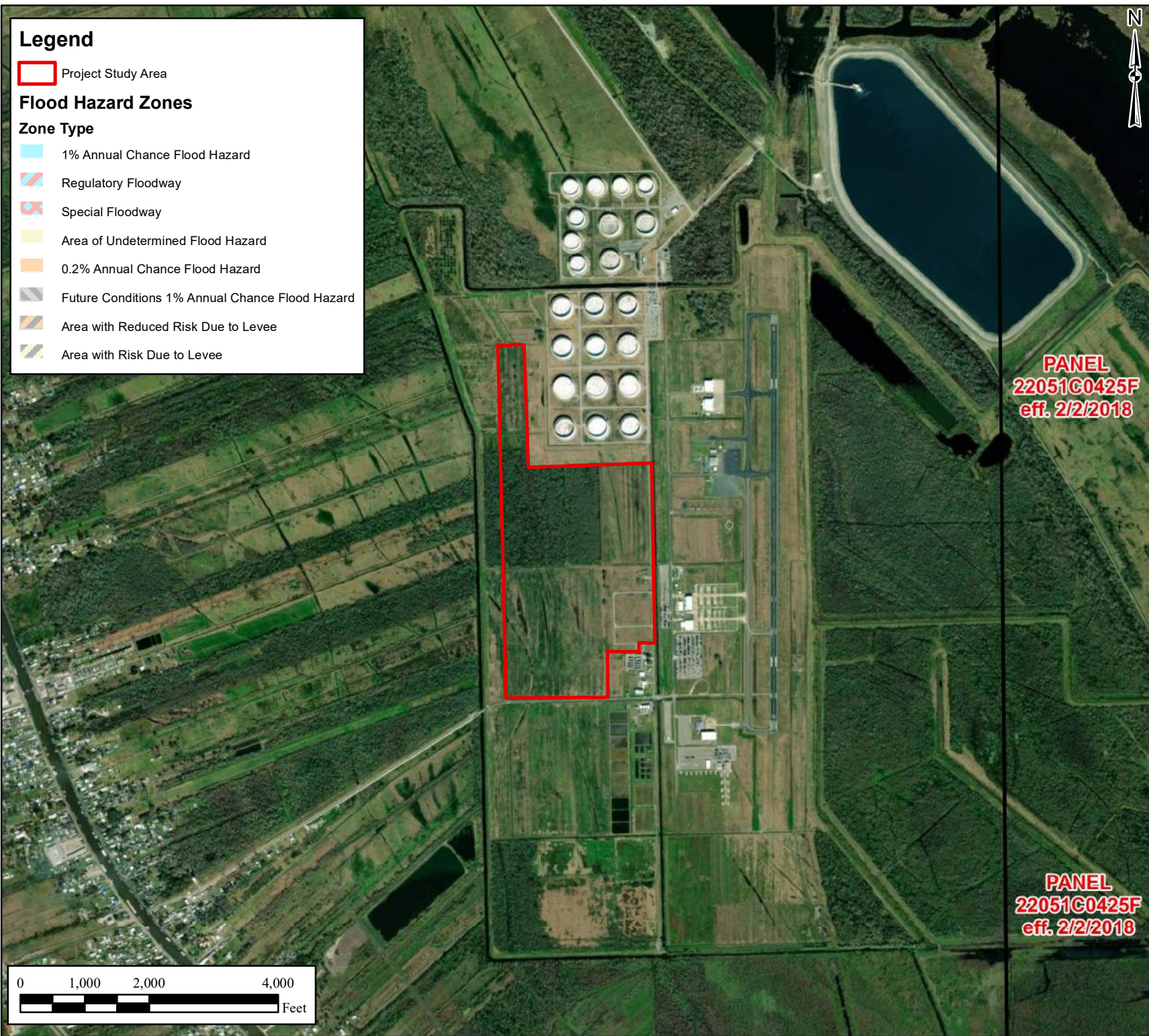
**Legend**

 Project Study Area

**Flood Hazard Zones**

**Zone Type**

-  1% Annual Chance Flood Hazard
-  Regulatory Floodway
-  Special Floodway
-  Area of Undetermined Flood Hazard
-  0.2% Annual Chance Flood Hazard
-  Future Conditions 1% Annual Chance Flood Hazard
-  Area with Reduced Risk Due to Levee
-  Area with Risk Due to Levee



Client:

**SLEC**  
 South Louisiana Economic Council  
 Assumption • Lafourche • St. Mary • Terrebonne

Project:

PROPOSED  
 SOUTH LAFOURCHE  
 AIRPORT  
 NORTH SITE

AIRPORT ROAD,  
 GALLIANO,  
 LAFOURCHE PARISH,  
 LOUISIANA

Title:

**FEMA FLOOD  
 HAZARD ZONE  
 MAP**



**PANEL  
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 eff. 2/2/2018**

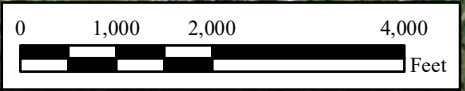
**PANEL  
 22051C0425F  
 eff. 2/2/2018**

Drawn By:	Scale:
BMB	1" = 2,000'

Approved By:	Date:
PMS	11/13/2023

ECS Project No.  
**49: 21690**

**FIGURE 5**





**Legend**

Project Study Area

**Elevation Above Mean Sea Level (Ft.)**

**Value**

High : 11.6916

Low : -9.91952



**Client:**

**SLEC**  
 South Louisiana Economic Council  
 Assumption • Lafourche • St. Mary • Terrebonne

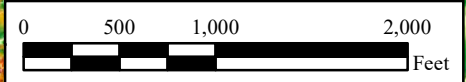
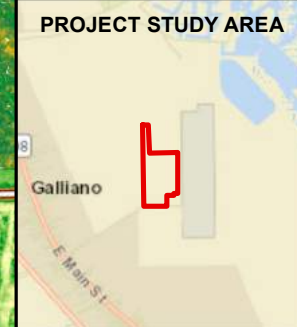
**Project:**

PROPOSED  
 SOUTH LAFOURCHE  
 AIRPORT  
 NORTH SITE

AIRPORT ROAD,  
 GALLIANO,  
 LAFOURCHE PARISH,  
 LOUISIANA

**Title:**

**NOAA LIDAR  
 ELEVATION  
 MAP**



**Drawn By:** BMB      **Scale:** 1" = 1,000'

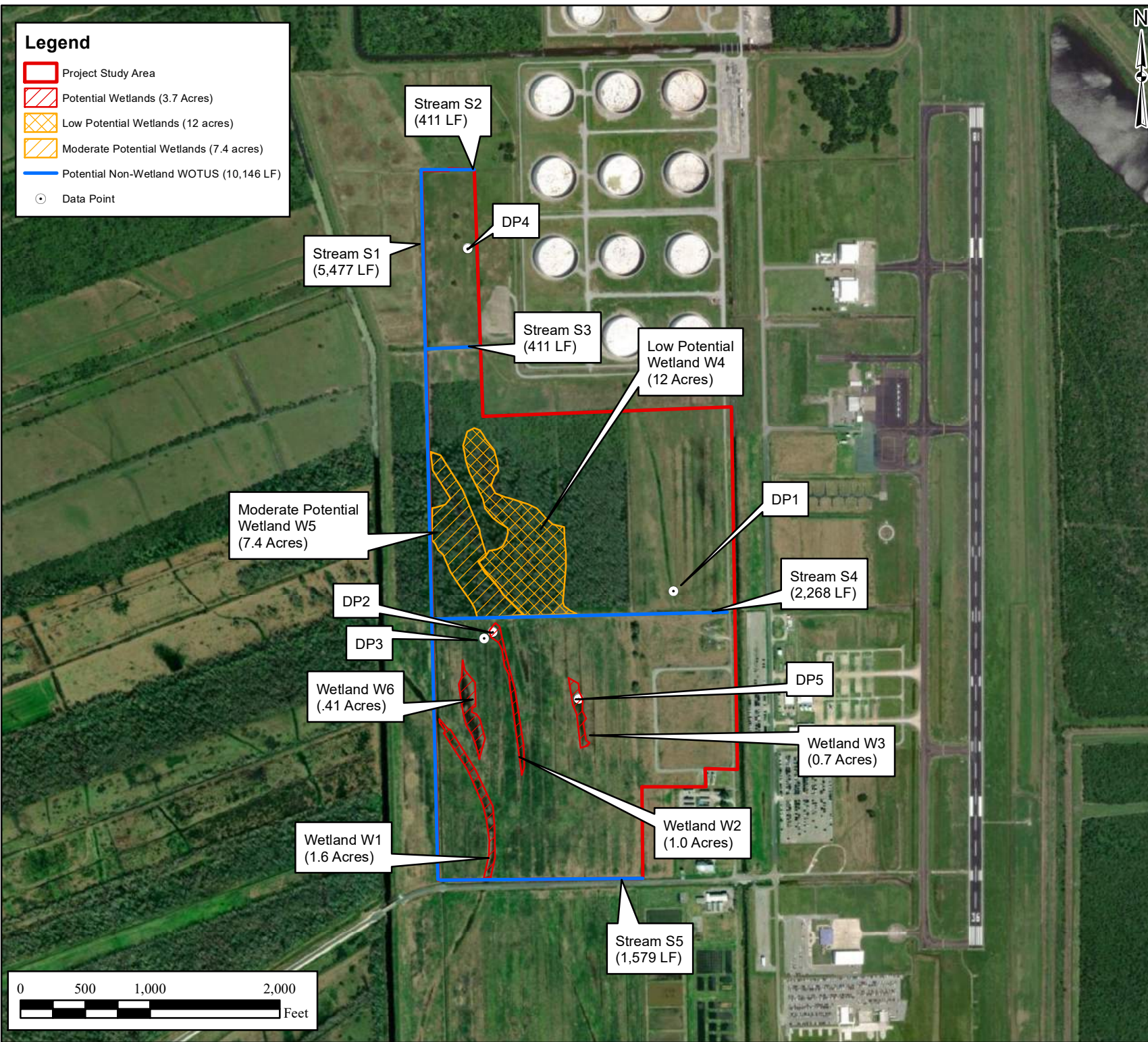
**Approved By:** PMS      **Date:** 11/13/2023

**ECS Project No.**  
**49: 21690**

**FIGURE 6**

**Legend**

- Project Study Area
- Potential Wetlands (3.7 Acres)
- Low Potential Wetlands (12 acres)
- Moderate Potential Wetlands (7.4 acres)
- Potential Non-Wetland WOTUS (10,146 LF)
- Data Point



Client:



Project:

PROPOSED  
SOUTH LAFOURCHE  
AIRPORT  
NORTH SITE  
  
AIRPORT ROAD,  
GALLIANO,  
LAFOURCHE PARISH,  
LOUISIANA

Title:

**POTENTIAL WATERS  
OF THE U.S.  
MAP**

NOTES:

1. POTENTIALLY JURISDICTIONAL WATERS OF THE U.S. WERE OBSERVED BY ECS ON NOVEMBER 16, 2023.
2. FINDINGS DEPICTED ON THIS MAP HAVE NOT BEEN VERIFIED BY THE USACE AND/OR LDEQ AND ARE SUBJECT TO CHANGE.
3. THIS MAP SHOULD BE USED FOR PRELIMINARY PLANNING ONLY.

Drawn By:

BMB

Scale:

1" = 1,000'

Approved By:

PMS

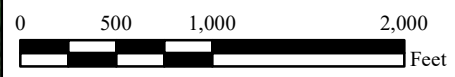
Date:

11/30/2023

ECS Project No.

**49: 21690**

**FIGURE 7**



# **Appendix II: Photographic Log**



1 - Soil profile at DP1.



2 - Overview at DP1, facing north.



3 - Overview at DP1, facing east.



4 - Overview at DP1, facing south.



5 - Overview at DP1, facing west.



6 - Soil profile at DP2



7 - Overview of DP2, facing north.



8 - Overview of DP2, facing east.



9 - Overview of DP2, facing south.



10 - Overview of DP2, facing west.



11 - Soil profile at DP3.



12 - Overview of DP3, facing north.



13 - Overview of DP3, facing east.



14 - Overview of DP3, facing south.



15 - Overview of DP3, facing West.



16 - Soil profile at DP4.



17 - Overview of DP4, facing north.



18 - Overview of DP4, facing east.



19 - Overview of DP4, facing west.



20 - Overview of DP4, facing south.



21 - Soil profile at DP5.



22 - Overview of DP5, facing north.



23 - Overview of DP5, facing east.



24 - Overview of DP5, facing south.



25 - Overview of DP5, facing west.



26 - Overview of Stream S3, facing east.



27 - Overview of Stream S3, facing east.



28 - Overview of confluence of S3 and S1, facing south toward culvert.



29 - Overview of Stream S1, facing south.



30 - Overview of Streams S5 and S1 confluence, facing south.



31 - Overview of intermittent Stream S1, facing north.



32 - Overview of Stream S4, facing east.



33 - Overview of Stream S5, facing east.



34 - Overview of Wetland W1, facing north.



35 - Overview of Stream S5, facing west.



36 - Overview of Wetland W1, facing south.

# **Appendix III: USACE Wetland Data Forms and Stream Data Forms**

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET - Atlantic and Gulf Coastal Plain Region**

See ERDC/EL TR-07; the proponent agency is CECW-CO-R

Project/Site South Lafourche Airport North Site City/County: Galliano / Lafourche Sampling Date: 11/16/2023  
 Applicant/Owner: South Louisiana Economic Council State: LA Sampling Point: DP1  
 Investigator(s): C. Schaeffer Section, Township, Range: Sec. 22, T 19, R 22  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Convex Slope (%): <1  
 Subregion (LRR or MLRA) LRR-T Lat: 29°58'25.75"N Long: 90°44'37.31"W Datum: NAD83  
 Soil Map Unit Name Ra - Rita muck NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **No**  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal circumstances" present? **Yes**  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in remarks.)

**SUMMARY OF FINDING! -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic vegetation present? <u>Yes</u>	<b>Is the Sampled Area within a Wetland? No</b>
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>No</u>	
Remarks:  Regional drought.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Moss Trim Lines (B16)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
	<input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>

<b>Field Observations:</b>	<b>Wetland Hydrology Present? No</b>
Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_  
 \_\_\_\_\_

Remarks:  
 Photos - Soil:3527, N:3528, E:3529, S:3530, W:3531  
 FAC-Neutral test - 0:1

**VEGETATION** -- Use scientific names of plants.

Sampling Point: DP1

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Sapling/Shrub Stratu	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Herb stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Cynodon dactylon</i>	40	Y	FACU
2	<i>Rumex crispus</i>	20	Y	FAC
3	<i>Paspalum urvillei</i>	20	Y	FAC
4	<i>Sorghum halepense</i>	8	N	FACU
5	<i>Verbena hastata</i>	5	N	FAC
6	<i>Acemella repens</i>	3	N	FACW
7	<i>Ludwigia octovalvis</i>	3	N	OBL
8	<i>Symphotrichum tenuifolium</i>	3	N	OBL
9				
10				
11				
12				
		<u>102</u> = Total Cover		
50% of total cover: <u>51</u>		20% of total cover: <u>20.4</u>		

Woody vine stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

**Dominance Test Work: ##**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>6</u>	x 1 =	<u>6</u>
FACW species	<u>3</u>	x 2 =	<u>6</u>
FAC species	<u>45</u>	x 3 =	<u>135</u>
FACU species	<u>48</u>	x 4 =	<u>192</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>102</u> (A)		<u>339</u> (B)

Prevalence Index = B/A = 3.32

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Five Vegetation Strata**

**Tree-** Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.

**Sapling/Shrub -** Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

**Herb -** All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine -** All woody vines, regardless of height.

**Hydrophytic Vegetation Present? Yes**

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

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	terrace	Loc**		
0-5	10 YR 4/2	100					Silty Clay	
6-16	10 YR 2/1	98	7.5 YR 4/6	2	C	M	Silty Clay	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.      \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) **(LRR P, T, U)**
- 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- Muck Presence (A8) **(LRR U)**
- 1 cm Muck (A9) **(LRR P, T)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) **(MLRA 150A)**
- Sandy Mucky Mineral (S1) **(LRR O, S)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) **(LRR P, S, T, U)**

- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Reduced Vertic(F18) **(outside MLRA 150A,B)**
- Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?      Yes**

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET - Atlantic and Gulf Coastal Plain Region**

See ERDC/EL TR-07; the proponent agency is CECW-CO-R

Project/Site South Lafourche Airport North Site City/County: Galliano / Lafourche Sampling Date: 11/16/2023  
 Applicant/Owner: South Louisiana Economic Council (SLEC) State: LA Sampling Point: DP2  
 Investigator(s): C. Schaeffer Section, Township, Range: Sec. 22, T 19, R 22  
 Landform (hillslope, terrace, etc.): shallow depression Local relief (concave, convex, none): convex Slope (%): <1  
 Subregion (LRR or MLRA) LRR-T Lat: 29°26'20.01"N Long: 90°16'22.08"W Datum: NAD83  
 Soil Map Unit Nam Ra-Rita muck NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **No**  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal circumstances" present? **Yes**  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in remarks.)

**SUMMARY OF FINDING: -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic vegetation present? <u>Yes</u>	<b>Is the Sampled Area within a Wetland? Yes</b>
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>Yes</u>	

Remarks:  
 Regional Drought.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b>	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present? Yes</b>
Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_

Remarks:  
 Photos - Soil:3539, N:3540, E:3541, S:3542, W:3543  
 FAC-Neutral test - 2:1

**VEGETATION** -- Use scientific names of plants.

Sampling Point: DP2

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Sapling/Shrub Stratu	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Herb stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Alternanthera philoxeroides</i>	35	Y	OBL
2	<i>Persicaria hydropiperoides</i>	35	Y	OBL
3	<i>Paspalum urvillei</i>	10	N	FAC
4	<i>Rumex crispus</i>	8	N	FAC
5	<i>Cynodon dactylon</i>	8	N	FACU
6	<i>Verbena hastata</i>	6	N	FAC
7	<i>Symphotrichum subulatum</i>	3	N	OBL
8				
9				
10				
11				
12				
		<u>105</u> = Total Cover		
50% of total cover: <u>52.5</u>		20% of total cover: <u>21</u>		

Woody vine stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Rubus argutus</i>	5	Y	FAC
2				
3				
4				
5				
		<u>5</u> = Total Cover		
50% of total cover: <u>2.5</u>		20% of total cover: <u>1</u>		

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>73</u>	x 1 =	<u>73</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>29</u>	x 3 =	<u>87</u>
FACU species	<u>8</u>	x 4 =	<u>32</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>110</u> (A)		<u>192</u> (B)

Prevalence Index = B/A = 1.75

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Five Vegetation Strata**

**Tree-** Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.

**Sapling/Shrub -** Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

**Herb -** All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine -** All woody vines, regardless of height.

**Hydrophytic Vegetation Present? Yes**

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

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-3	10 YR 2/1	85	7.5 YR 4/6	15	C	PL	Silty Clay	
3-16	10 YR 4/1	90	7.5 YR 4/6	10	C	PL	Silty Clay	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.      \*\*Location: PL = Pore Lining, M = Matrix

<p><b>Hydric Soil Indicators:</b></p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) <b>(LRR P, T, U)</b></p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) <b>(LRR P, T, U)</b></p> <p><input type="checkbox"/> Muck Presence (A8) <b>(LRR U)</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) <b>(LRR P, T)</b></p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) <b>(MLRA 150A)</b></p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) <b>(LRR O, S)</b></p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) <b>(LRR P, S, T, U)</b></p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) <b>(LRR S, T, U)</b></p> <p><input type="checkbox"/> Thin Dark Surface (S9) <b>(LRR S, T, U)</b></p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) <b>(LRR U)</b></p> <p><input type="checkbox"/> Depleted Ochric (F11) <b>(MLRA 151)</b></p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) <b>(LRR O, P, T)</b></p> <p><input type="checkbox"/> Umbric Surface (F13) <b>(LRR P, T, U)</b></p> <p><input type="checkbox"/> Delta Ochric (F17) <b>(MLRA 151)</b></p> <p><input type="checkbox"/> Reduced Vertic (F18) <b>(MLRA 150A, 150B)</b></p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) <b>(MLRA 149A)</b></p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) <b>(MLRA 149A, 153C, 153D)</b></p>	<p><b>Indicators for Problematic Hydric Soils:</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) <b>(LRR O)</b></p> <p><input type="checkbox"/> 2 cm Muck (A10) <b>(LRR S)</b></p> <p><input type="checkbox"/> Reduced Vertic(F18) <b>(outside MLRA 150A,B)</b></p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) <b>(LRR P, S, T)</b></p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) <b>(MLRA 153B)</b></p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p><b>Restrictive Layer (if observed):</b></p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p><b>Hydric Soil Present?      Yes</b></p>
--	---

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET - Atlantic and Gulf Coastal Plain Region**

See ERDC/EL TR-07; the proponent agency is CECW-CO-R

Project/Site South Lafourche Airport North Site City/County: Galliano / Lafourche Sampling Date: 11/16/2023  
 Applicant/Owner: South Louisiana Economic Council (SELC) State: LA Sampling Point: DP3  
 Investigator(s): C. Schaeffer Section, Township, Range: Sec. 22, T 19, R 22  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): <1  
 Subregion (LRR or MLRA) LRR-T Lat: 29°26'19.54"N Long: 90°16'23.15"W Datum: NAD83  
 Soil Map Unit Name Ra-Rita muck NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **No**

Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal circumstances" present? **Yes**

Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in remarks.)

**SUMMARY OF FINDING: -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic vegetation present? <u>No</u>	<b>Is the Sampled Area within a Wetland? No</b>
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>No</u>	

Remarks:

Regional Drought.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b>	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks) _____	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>

**Field Observations:**

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____

**Wetland Hydrology Present? No**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Photos - Soil:3444, N:3445, E:3446, S:3447, W:3448  
 FAC-Neutral test - 0:2

**VEGETATION** -- Use scientific names of plants.

Sampling Point: DP3

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Sapling/Shrub Stratu	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Herb stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Cynodon dactylon</i>	55	Y	FACU
2	<i>Sorghum halepense</i>	35	Y	FACU
3	<i>Verbena hastata</i>	12	N	FAC
4	<i>Rumex crispus</i>	2	N	FAC
5				
6				
7				
8				
9				
10				
11				
12				
		<u>104</u> = Total Cover		
50% of total cover: <u>52</u>		20% of total cover: <u>20.8</u>		

Woody vine stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>14</u>	x 3 =	<u>42</u>
FACU species	<u>90</u>	x 4 =	<u>360</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>104</u> (A)		<u>402</u> (B)

Prevalence Index = B/A = 3.87

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Five Vegetation Strata**

**Tree-** Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.

**Sapling/Shrub -** Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

**Herb -** All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine -** All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** **No**

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

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-7	10 YR 2/2	100					SIL	
7-9	10 YR 4/2	90	7.5 YR 4/6	10	C	M	SICL	
9-16	10 YR 4/1	95	7.5 YR 4/6	5	C	M	SICL	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.      \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic(F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?      Yes**

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET - Atlantic and Gulf Coastal Plain Region**

See ERDC/EL TR-07; the proponent agency is CECW-CO-R

Project/Site South Lafourche Airport North Site City/County: Galliano / Lafourche Sampling Date: 11/16/2023  
 Applicant/Owner: South Louisiana Economic Council (SELC) State: LA Sampling Point: DP4  
 Investigator(s): C. Schaeffer Section, Township, Range: Sec. 22, T 19, R 22  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): <1  
 Subregion (LRR or MLRA) LRR-T Lat: 29°26'49.17"N Long: 90°16'24.83"W Datum: NAD83  
 Soil Map Unit Name Ra-Rita muck NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **No**  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal circumstances" present? **Yes**  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in remarks.)

**SUMMARY OF FINDING: -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic vegetation present? <u>No</u>	<b>Is the Sampled Area within a Wetland? No</b>
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>No</u>	
Remarks:  Regional Drought.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b>	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks) _____	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>

<b>Field Observations:</b>		<b>Wetland Hydrology Present? No</b>
Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		
Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		
Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_

Remarks:  
 Photos - Soil:3558, N:3559, E:3560, S:3561, W:3562  
 FAC-Neutral test - 0:2

**VEGETATION** -- Use scientific names of plants.

Sampling Point: DP4

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		No <u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Sapling/Shrub Stratu	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Herb stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Solidago simplex</i>	30	Y	FACU
2	<i>Paspalum urvillei</i>	20	Y	FAC
3	<i>Verbena hastata</i>	12	N	FAC
4	<i>Sorghum halepense</i>	5	N	FACU
5	<i>Coleataenia rigidula</i>	1	N	FACW
6				
7				
8				
9				
10				
11				
12				
		<u>68</u> = Total Cover		
50% of total cover: <u>34</u>		20% of total cover: <u>13.6</u>		

Woody vine stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Ampelopsis arborea</i>	80	Y	FAC
2	<i>Rubus trivialis</i>	30	Y	FACU
3				
4				
5				
		<u>110</u> = Total Cover		
50% of total cover: <u>55</u>		20% of total cover: <u>22</u>		

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>1</u>	x 2 =	<u>2</u>
FAC species	<u>112</u>	x 3 =	<u>336</u>
FACU species	<u>35</u>	x 4 =	<u>140</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>148</u> (A)		<u>478</u> (B)

Prevalence Index = B/A = 3.23

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Five Vegetation Strata**

**Tree-** Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.

**Sapling/Shrub -** Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

**Herb -** All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine -** All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** **No**

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

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	terrace	Loc**		
0-4	10 YR 2/1	100					SIL	
4-16	10 YR 4/1	85	7.5 YR 4/8	15	C	M	CL	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.      \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) **(LRR P, T, U)**
- 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- Muck Presence (A8) **(LRR U)**
- 1 cm Muck (A9) **(LRR P, T)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) **(MLRA 150A)**
- Sandy Mucky Mineral (S1) **(LRR O, S)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) **(LRR P, S, T, U)**

- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Reduced Vertic(F18) **(outside MLRA 150A,B)**
- Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?      Yes**

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET - Atlantic and Gulf Coastal Plain Region**

See ERDC/EL TR-07; the proponent agency is CECW-CO-R

Project/Site South Lafourche Airport North Site City/County: Galliano / Lafourche Sampling Date: 11/16/2023  
 Applicant/Owner: South Louisiana Economic Council (SELC) State: LA Sampling Point: DP5  
 Investigator(s): C. Schaeffer Section, Township, Range: Sec. 22, T 19, R 22  
 Landform (hillslope, terrace, etc.): shallow depression Local relief (concave, convex, none): convex Slope (%): <1  
 Subregion (LRR or MLRA) LRR-T Lat: 29°26'14.64"N Long: 90°16'14.96"W Datum: NAD83  
 Soil Map Unit Nam Ra-Rita muck NWI Classification: N/A

Are climatic/hydrologic conditions of the site typical for this time of the year? **No**

Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal circumstances" present? **Yes**

Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in remarks.)

**SUMMARY OF FINDING: -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic vegetation present? <u>Yes</u>	<b>Is the Sampled Area within a Wetland? Yes</b>
Hydric soil present? <u>Yes</u>	
Indicators of wetland hydrology present? <u>Yes</u>	

Remarks:  
 Regional Drought.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

Secondary Indicators (minimum of two required)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                                   | <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b>                    | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                            | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Water Marks (B1)                          | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)                         | <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)            | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                                | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Other (Explain in Remarks) _____                      | <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |
|  |  | <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>      |

**Field Observations:**

Surface water present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water table present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present? Yes**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_

Remarks:  
 Photos - Soil:3563, N:3565, E:3565, S:3566, W:3567  
 FAC-Neutral test - 2:0

**VEGETATION** -- Use scientific names of plants.

Sampling Point: DP5

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Sapling/Shrub Stratu	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

Herb stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1	<i>Alternanthera philoxeroides</i>	35	Y	OBL
2	<i>Symphotrichum subulatum</i>	30	Y	OBL
3	<i>Eleocharis obtusa</i>	15	N	OBL
4	<i>Persicaria hydropiperoides</i>	12	N	OBL
5	<i>Phalaris arundinacea</i>	5	N	OBL
6				
7				
8				
9				
10				
11				
12				
		<u>97</u> = Total Cover		
50% of total cover: <u>48.5</u>		20% of total cover: <u>19.4</u>		

Woody vine stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		<u>0</u> = Total Cover		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>97</u>	x 1 =	<u>97</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>97</u>	(A)	<u>97</u> (B)

Prevalence Index = B/A = 1

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Five Vegetation Strata**

**Tree-** Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6 cm) DBH.

**Sapling/Shrub -** Woody plants, excluding vines, less than 3 in. DBH and greater than 3.26 ft (1m) tall

**Herb -** All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine -** All woody vines, regardless of height.

**Hydrophytic Vegetation Present? Yes**

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

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Flow depress	Loc**		
0-4	10 YR 2/2	100					SICL	
4-16	10 YR 4/1	85	7.5 YR 4/6	15	C	PL	CL	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.      \*\*Location: PL = Pore Lining, M = Matrix

<p><b>Hydric Soil Indicators:</b></p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) <b>(LRR P, T, U)</b></p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) <b>(LRR P, T, U)</b></p> <p><input type="checkbox"/> Muck Presence (A8) <b>(LRR U)</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) <b>(LRR P, T)</b></p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) <b>(MLRA 150A)</b></p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) <b>(LRR O, S)</b></p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) <b>(LRR P, S, T, U)</b></p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) <b>(LRR S, T, U)</b></p> <p><input type="checkbox"/> Thin Dark Surface (S9) <b>(LRR S, T, U)</b></p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) <b>(LRR U)</b></p> <p><input type="checkbox"/> Depleted Ochric (F11) <b>(MLRA 151)</b></p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) <b>(LRR O, P, T)</b></p> <p><input type="checkbox"/> Umbric Surface (F13) <b>(LRR P, T, U)</b></p> <p><input type="checkbox"/> Delta Ochric (F17) <b>(MLRA 151)</b></p> <p><input type="checkbox"/> Reduced Vertic (F18) <b>(MLRA 150A, 150B)</b></p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) <b>(MLRA 149A)</b></p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) <b>(MLRA 149A, 153C, 153D)</b></p>	<p><b>Indicators for Problematic Hydric Soils:</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) <b>(LRR O)</b></p> <p><input type="checkbox"/> 2 cm Muck (A10) <b>(LRR S)</b></p> <p><input type="checkbox"/> Reduced Vertic(F18) <b>(outside MLRA 150A,B)</b></p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) <b>(LRR P, S, T)</b></p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) <b>(MLRA 153B)</b></p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p> <p style="font-size: small; margin-top: 10px;">*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
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<p><b>Restrictive Layer (if observed):</b></p> <p>Type: _____</p> <p style="padding-left: 40px;">Depth (inches): _____</p>	<p><b>Hydric Soil Present?      Yes</b></p>
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Remarks: