



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

MAY 21 2013

Operations Division
Surveillance and Enforcement Section

Exhibit CC. Grace Farms West P. Jurisdictional
Determination & Wetlands Delineation Report

Mr. Leonard McCauley
G.E.C. Inc.
9357 Interline Avenue
Baton Rouge, Louisiana 70809

Dear Mr. McCauley:

Reference is made to your request, on behalf of Baton Rouge Area Chamber, for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Sections 56, 57, 58, 59, and 60, Township 7 South, Range 9 East, and Sections 61 and 62, Township 8 South, Range 9 East, Iberville Parish, Louisiana (enclosed map). Specifically, this property is identified as Grace Farms East: 514.6 acre tract north of I-10, west of LA-3000 in Maringouin.

Based on review of recent maps, aerial photography, soils data, and the information provided with your request, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the United States. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into other waters subject to Corps' jurisdiction. Other waters that may be subject to Corps' jurisdiction are indicated in blue on the map.

You and your client are advised that you must obtain a permit from a local assuring agency, usually a Levee Board or Parish Council, for any work within 1500 feet of a federal flood control structure such as a levee. You must apply by letter to the appropriate agency including full-size construction plans, cross sections, and details of the proposed work. Concurrently with your application to the assuring agency, you must also forward a copy of your letter and plans to Ms. Amy Powell, Operations Manager for Completed Works of the Corps, the Coastal Protection and Restoration Authority (CPRA), and/or the Louisiana Department of Transportation and Development (LADOTD) for their review and comments concerning the proposed work. The assuring agency will not issue a permit for the work to proceed until they have obtained letters of no objection from these reviewing agencies. For additional information, please contact Ms. Amy Powell at (504) 862-2241.

This delineation/determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in your request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If the property owner or tenant is a USDA farm participant, or anticipates participation in USDA programs, a certified wetland determination should be requested from the local office of the Natural Resources Conservation Service prior to starting work.

You and your client are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Should there be any questions concerning these matters, please contact Mr. Brian Oberlies at (504) 862-2275 and reference our Account No. MVN-2013-01013-SY. If you have specific questions regarding the permit process or permit applications, please contact our Central Evaluation Section at (504) 862-2577. The New Orleans District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please complete the survey on our web site at <http://per2.nwp.usace.army.mil/survey.html>.

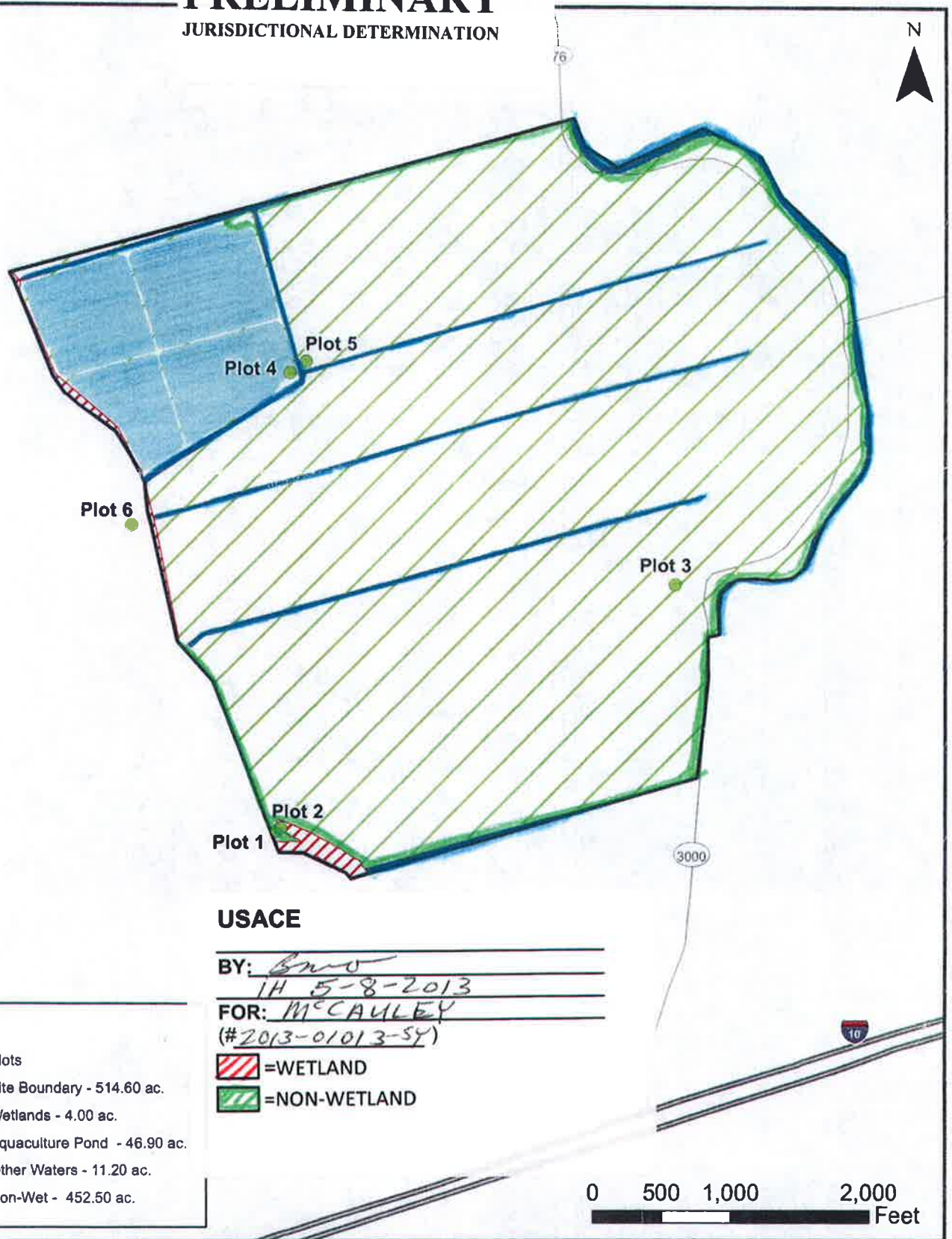
Sincerely,

A handwritten signature in blue ink that reads "William R. Hetherly".

for Martin S. Mayer
Chief, Regulatory Branch

Enclosures

US ARMY CORPS OF ENGINEERS
PRELIMINARY
JURISDICTIONAL DETERMINATION



WETLAND MAP

Grace Farms West
Iberville Parish, Louisiana



Figure: 4

Date: March 2013

Scale: 1:12,000

Source: GEC

Map ID: 132122013002-3061

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office New Orleans District File/ORM # MVN-2013-01013-SY PJD Date: May 8, 2013

State LA City/County Iberville

Nearest Waterbody: Bayou Maringouin

Location: TRS, LatLong or UTM: Sec. 56-60, T7S, R9E; Sec. 61 & 62, T8S, R9E
30.412169 N -91.511036 W

Name/
Address of
Person
Requesting
PJD
Mr. Leonard McCauley
G.E.C. Inc.
9357 Interline Avenue
Baton Rouge, Louisiana 70809

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters:

linear ft width 58 acres Stream Flow:

Wetlands: 4 acre(s) Cowardin Palustrine, scrub-shrub

Name of Any Water Bodies Tidal:
on the Site Identified as
Section 10 Waters: Non-Tidal:

☒ Office (Desk) Determination
☐ Field Determination:

Date of Field Trip:

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: G.E.C., Inc.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps

☐ Corps navigable waters' study:

☒ U.S. Geological Survey Hydrologic Atlas:

☐ USGS NHD data.

☒ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite quad name: Maringouin 1:24k

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS web soil survey

☐ National wetlands inventory map(s). Cite name:

☐ State/Local wetland inventory map(s):

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is:

☒ Photographs: ☒ Aerial (Name & Date): 08, 04, 05, 08, 10

☐ Other (Name & Date):

☐ Previous determination(s). File no. and date of response letter:

☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

B. Abel 5-8-13
Signature and Date of Regulatory Project Manager
(REQUIRED)

Requested by agent
Signature and Date of Person Requesting Preliminary JD
(REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Baton Rouge Area Chamber	File Number: MVN-2013-01013-SY	Date: MAY 21 2013
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input checked="" type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

March 26, 2013

U.S. Army Engineer District, New Orleans
Regulatory Branch
ATTN: Martin Mayer
7400 Leake Avenue
New Orleans, LA 70118

RE:
WETLAND DELINEATION REPORT
514.6-ACRE GRACE FARMS WEST
IBERVILLE PARISH, LOUISIANA

Dear Mr. Mayer:

On behalf of, the Baton Rouge Area Chamber, GEC is pleased to forward one copy of the 514.6-acre Grace Farms West Wetland Delineation Report. The enclosed document presents the habitat data gathered and a delineation of the wetland habitats within the study area.

GEC is requesting a **Jurisdictional Determination** on behalf of the Baton Rouge Area Chamber.

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

Sincerely,



Leonard McCauley

Enclosures

March 2013

514.6-ACRE GRACE FARMS WEST IBERVILLE PARISH, LOUISIANA

WETLAND DELINEATION REPORT

Prepared for

**Baton Rouge Area Chamber
564 Laurel Street
Baton Rouge, Louisiana 70801**

Prepared by



Baton Rouge, Louisiana

GRACE FARMS WEST IBERVILLE PARISH, LOUISIANA

WETLAND DELINEATION REPORT

Prepared by



8282 Goodwood Blvd
Baton Rouge, Louisiana 70806
Phone – 225/612-3000

GEC Project No. 0013.2122013.001

TABLE OF CONTENTS

TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION	1
2.0 METHODOLOGY	1
3.0 RESULTS	6
3.1 Plot 1	7
3.2 Plot 2	12
3.3 Plot 3	17
3.4 Plot 4	22
3.5 Plot 5	27
3.6 Plot 6	32
4.0 CONCLUSIONS	37
5.0 DISCLAIMER	37

LIST OF FIGURES

Number		Page
1	Site Vicinity	2
2	Soil Map	3
3	Wetland Map	4
4	Wetland Map (Black & White)	5

LIST OF PHOTOGRAPHS

Photograph	Page
1 Soil Profile Observed at Plot 1.....	8
2 Overview of Plot 1	8
3 Soil Profile Observed at Plot 2.....	13
4 Overview of Plot 2	13
5 Soil Profile Observed at Plot 3.....	18
6 Overview of Plot 3	18
7 Soil Profile Observed at Plot 4.....	23
8 Overview of Plot 4	23
9 Soil Profile Observed at Plot 5.....	28
10 Overview of Plot 5	28
11 Soil Profile Observed at Plot 6.....	33
12 Overview of Plot 6	33

WETLAND DELINEATION REPORT

GRACE FARMS WEST IBERVILLE PARISH, LOUISIANA

1.0 INTRODUCTION

G.E.C., Inc. (GEC), on behalf of the Baton Rouge Area Chamber, recently conducted a wetland delineation within the proposed site boundary. The purpose of this delineation was to determine wetland and stream boundaries within the site boundary. Figures 1 through 3 provide an overview of the site boundary and the features identified during the survey. More detailed descriptions and figures of each site are provided in Section 3.0 of this report.

2.0 METHODOLOGY

GEC conducted the wetland delineation in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual. Prior to the initiation of field work to identify the potential extent of wetlands present on the subject property, the following were reviewed: aerial photography; Natural Resources Conservation Service (NRCS), Iberville Parish, soil survey map; and U.S. Geological Survey (USGS) topographic quadrangle maps.

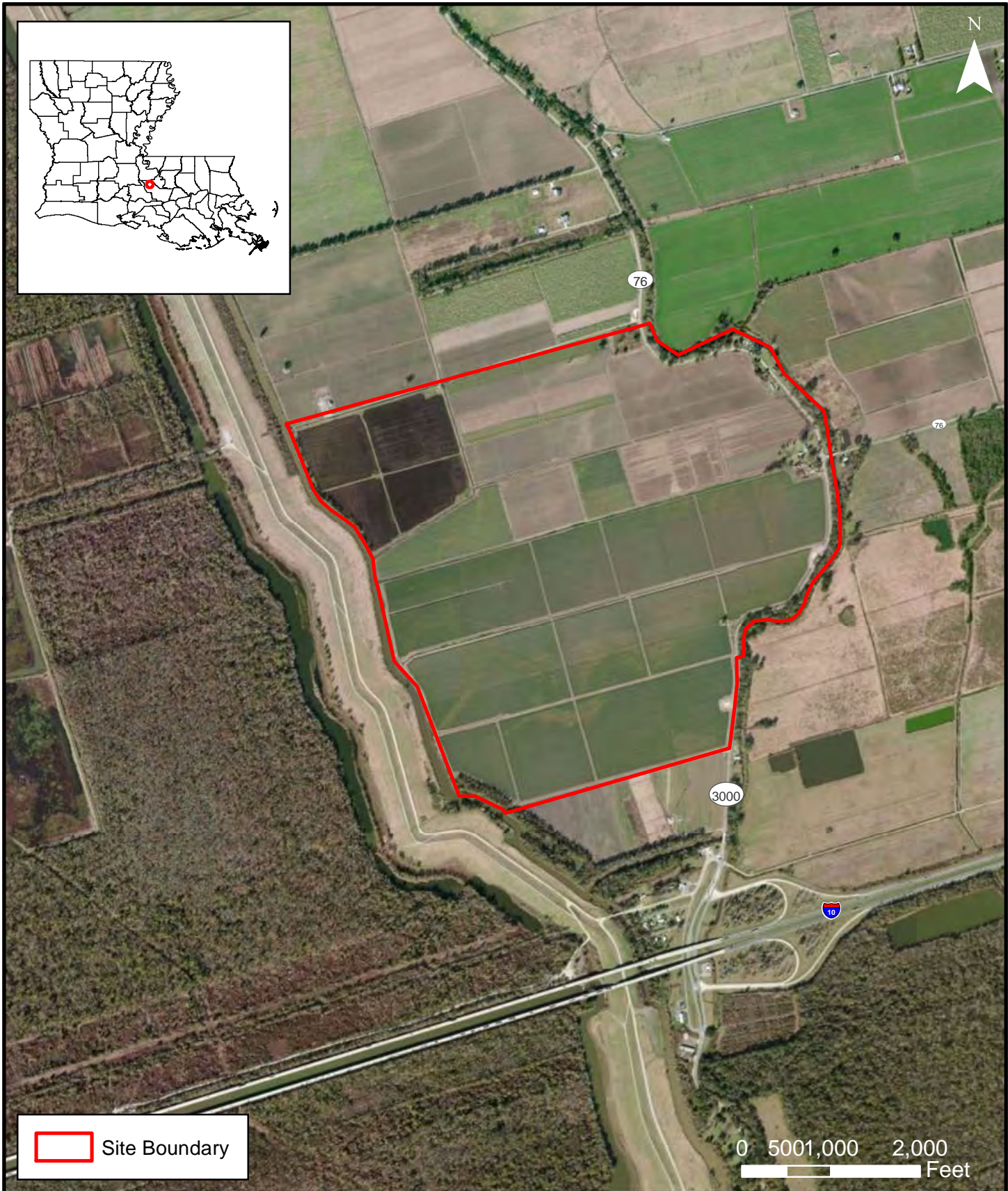
Regional Supplement Data forms for the Southeast, as approved by Headquarters, U.S. Army Corps of Engineers (USACE) 10/2008, were completed for each vegetation community encountered at each identified feature. These data forms contain sufficient information regarding the presence or absence of hydric soils, hydrophytic vegetation, and wetland hydrology to support the demarcation of a wetland or other waters boundary.

Dominant vegetation was recorded on the data forms, along with the indicator status as listed in the *National List of Plant Species Occurring in Wetlands (Region 2)* published by the U.S. Fish and Wildlife Service. Once vegetation was recorded and evaluated, if more than 50 percent of the dominant vegetation had an indicator status of facultative (FAC), facultative wet (FACW), or obligate (OBL), the hydrophytic vegetation criterion was recorded as being met.

A soil pit was excavated to a depth of approximately 15 inches at each plot. The pit remained open for at least 15 minutes to allow the pit to fill with water, if present. Soils were sampled at 10 inches. Information recorded on the data forms included soil colors (hue, value, and chroma as per the 1992 revised edition of the Munsell Color Chart), size, color, abundance, and depth of mottles, as well as soil texture. Soil texture was determined using the “texture by feel” analysis.

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

Photographs were taken at each sample site where a data form was completed. These photographs show a representative soil profile as well as an overview of the sample site from the plot center and are provided after each of the site descriptions.



SITE VICINITY

Grace Farms West, Iberville Parish

Data Source: ESRI Bing Maps Aerial



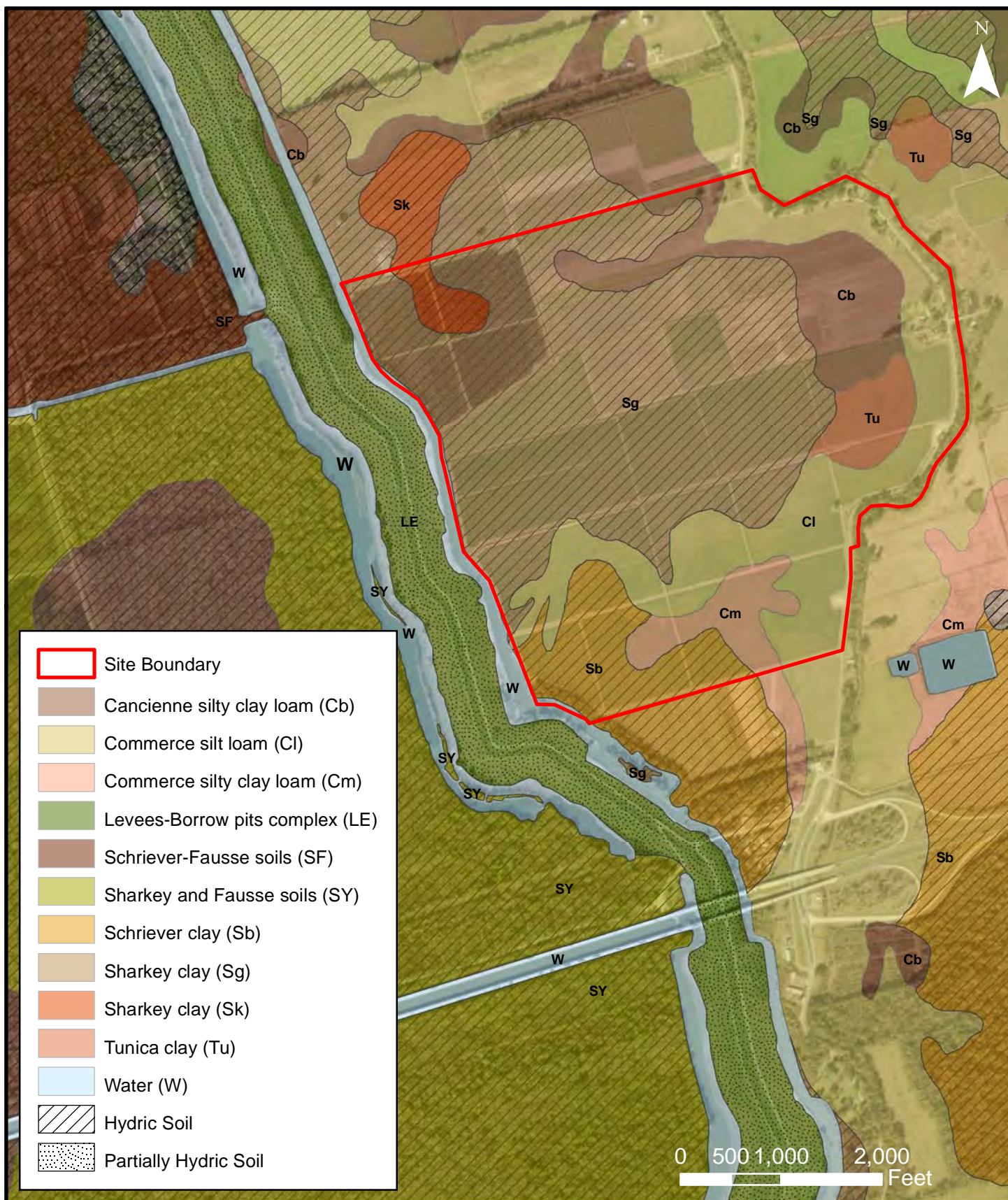
Figure: 1

Date: March 2013

Scale: 1:18,000

Source: GEC/Bing

Map ID: 132122013002-3061



SOILS MAP

Grace Farms West
Iberville Parish, Louisiana

Data Source: ESRI Bing Maps Aerial



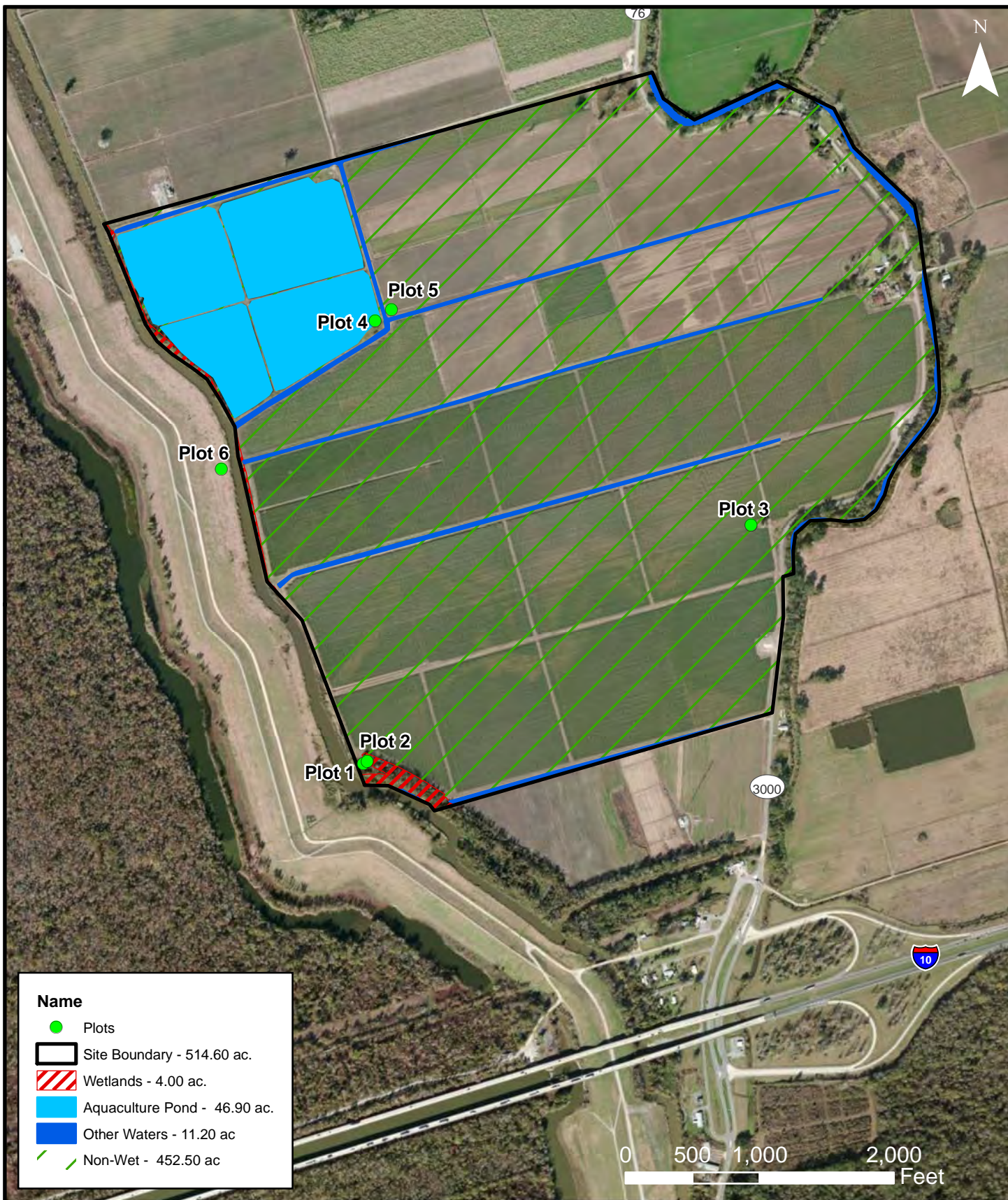
Figure: 2

Date: March 2013

Scale: 1:16,000

Source: GEC/NRCS

Map ID: 132122013002-3061



WETLAND MAP

Grace Farms West
Iberville Parish, Louisiana

Data Source: ESRI Bing Maps Aerial



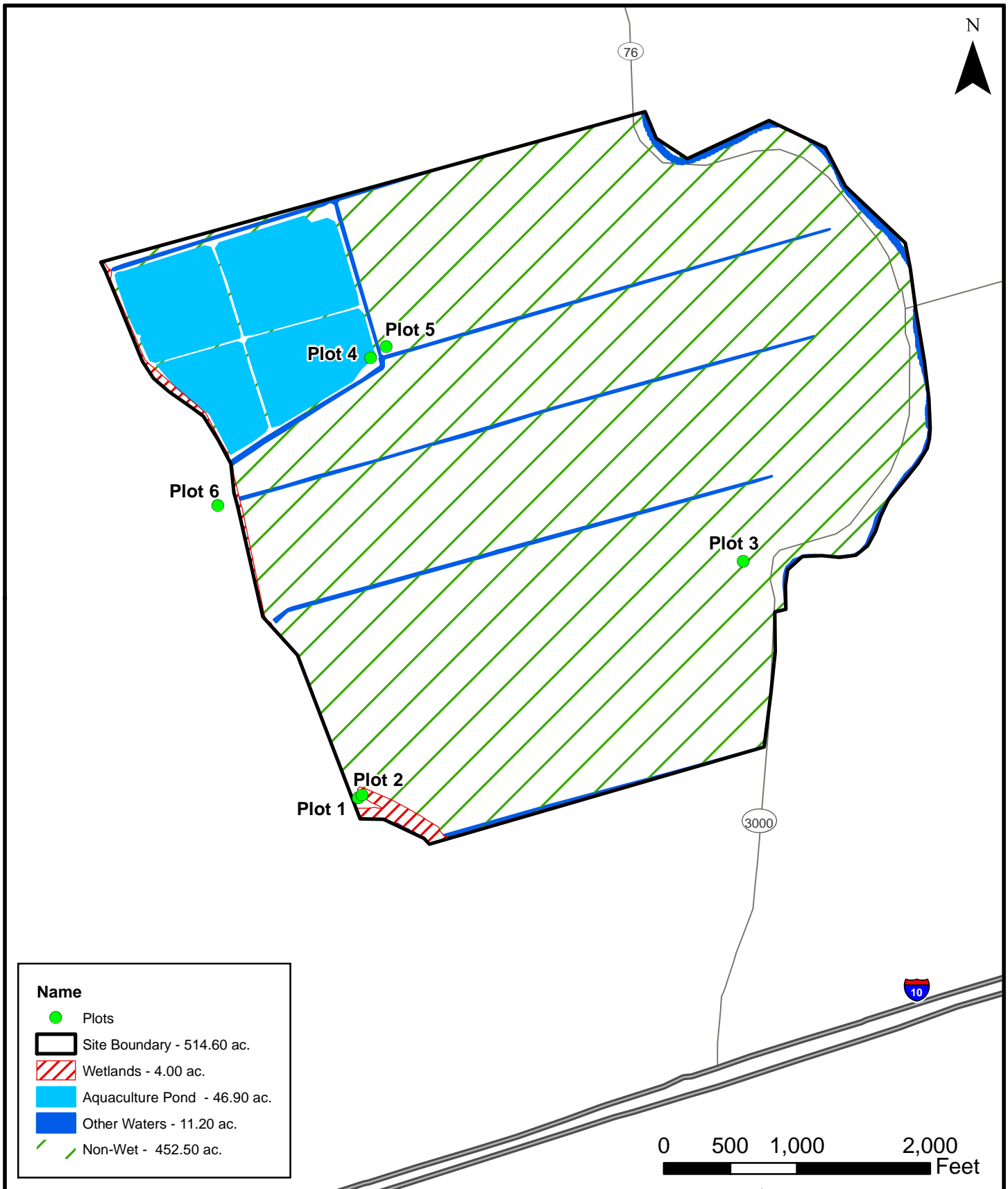
Figure: 3

Date: March 2013

Scale: 1:12,000

Source: GEC/Bing

Map ID: 132122013002-3061



WETLAND MAP

Grace Farms West
Iberville Parish, Louisiana



Figure: 4

Date: March 2013

Scale: 1:12,000

Source: GEC

Map ID: 132122013002-3061

3.0 RESULTS

The following subsections provide descriptions of each of the plots investigated during the field survey. Descriptions of vegetation, soil characteristics, and hydrology indicators at each sample plot recorded are provided, along with photographs of the sites and a map depicting the location, shape, and size of the features mapped.

The site consists of agricultural land, non-wetland habitats, and wetland habitats. A total of six plots were taken within the site boundary, to characterize the different wetland and upland habitats within the site boundary.

3.1 Plot 1

Sample Plot 1 consists of a ridge between a canal and a hardwood forest. This plot is located at 30.4059 N and 91.5163 W. The location of this plot is presented in Figure 4.

The tree stratum was dominated by sugarberry (*Celtis laevigata*), roughleaf dogwood (*Cornus drummondii*), and sweet gum (*Liquidambar styraciflu*). Shrub/sapling stratum was dominated by roughleaf dogwood (*Cornus drummondii*). Southern dewberry (*Rubus trivialis*) dominated the herbaceous stratum, while the woody vines noted at the site included balloon vine (*Cardiospermum halicacabum*) and poison ivy (*Toxicodendron radicans*). The hydrophytic vegetation criteria were met at this site.

The soil series mapped by the NRCS at Plot 1 as Schriever clay; field investigations confirm this soil type. No wetland hydrology indicators were noted. It is GEC's opinion that this feature does not meet the criteria for a wetland based on all three parameters not being met. Photographs 1 and 2 depict the soil profile and an overview of the plot location.



Photograph 1. Soil Profile Observed at Plot 1



Photograph 2. Overview of Plot 1

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Grace Farms West City/County: Ramah/Iberville Parish Sampling Date: 3/4/2013
 Applicant/Owner: BRAC State: LA Sampling Point: Plot 1
 Investigator(s): J. Avant Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-1
 Subregion (LRR or MLRA): LRR O Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Plot taken on ridge between the canal and BLH	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</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) (LRR U)	<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 along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<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) (LRR T, U)
Field Observations:		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point: Plot 1

Tree Stratum (Plot size: 30 ft rad.)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Celtis laevigata</u>	30	yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	
2. <u>Cornus drummondii</u>	5	no	FAC	Total Number of Dominant Species Across All Strata: 5 (B)	
3. <u>Liquidambar styraciflua</u>	3	no	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)	
4. _____				Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: _____ Multiply by: _____ </div> 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 = NaN	
5. _____					
6. _____					
7. _____					
8. _____					
38 = Total Cover					
50% of total cover: 19 20% of total cover: 7.6					
Sapling/Shrub Stratum (Plot size: 30 ft rad.)					
1. <u>Cornus drummondii</u>	45	yes	FAC		
2. <u>Celtis laevigata</u>	7	no	FACW		
3. <u>Sambucus nigra</u>	5	no	FACW		
4. <u>Quercus nigra</u>	2	no	FAC		
5. <u>Ligustrum japonicum</u>	1	no	FAC		
6. _____					
7. _____					
8. _____					
60 = Total Cover					
50% of total cover: 30 20% of total cover: 12					
Herb Stratum (Plot size: 30 ft rad.)					
1. <u>Rubus trivialis</u>	60	yes	FACU		
2. <u>Nemophila aphylla</u>	15	no	FACW		
3. <u>Galium aparine</u>	7	no	FACU		
4. <u>Symphotrichum pilosum</u>	3	no	FACW		
5. <u>Viola villosa</u>	1	no	FACU		
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
86 = Total Cover					
50% of total cover: 43 20% of total cover: 17.2					
Woody Vine Stratum (Plot size: 30 ft rad.)					
1. <u>Cardiospermum halicacabum</u>	7	yes	FAC		
2. <u>Toxicodendron radicans</u>	2	yes	FAC		
3. _____					
4. _____					
5. _____					
9 = Total Cover					
50% of total cover: 4.5 20% of total cover: 1.8					
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sampling Point: Plot 1

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 ¹	Loc ²		
0-4	10 YR 4/2	100					C	
4-12	10 YR 5/1	80	7.5 YR 4/6	20	C	M	C	
12-18	10 YR 4/3	95	7.5 YR 4/6	5	C	M	C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>None observed</u> Depth (inches): <u>N/A</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--

Remarks:

3.2 Plot 2

Sample Plot 2 consists of a depression adjacent to a canal. This plot is located at 30.4059 N and 91.5162 W. The location of this plot is presented in Figure 4.

The tree stratum was dominated by sugarberry (*Celtis laevigata*) and boxelder (*Acer negundo*). Shrub/sapling stratum was dominated by roughleaf dogwood (*Cornus drummondii*). Southern dewberry (*Rubus trivialis*) dominated the herbaceous stratum, while the only woody vine noted at the site was saw greenbrier (*Smilax bona-nox*). The hydrophytic vegetation criteria were met at this site.

The soil series mapped by the NRCS at Plot 2 as Schriever clay; field investigations confirm this soil type. The primary wetland hydrology indicator was high water table and saturation. It is GEC's opinion that this feature does meet the criteria for a wetland based on all three parameters being met. Photographs 3 and 4 depict the soil profile and an overview of the plot location.



Photograph 3. Soil Profile Observed at Plot 2



Photograph 4. Overview of Plot 2

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Grace Farms West City/County: Ramah/Iberville Parish Sampling Date: 3/4/2013
 Applicant/Owner: BRAC State: LA Sampling Point: Plot 2
 Investigator(s): J. Avant Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR O Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Plot taken in a depression adjacent to the canal			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" 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 checked="" type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <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 checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8-18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>7-8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point: Plot 2

Tree Stratum (Plot size: 30 ft rad.)				Absolute % Cover		Dominant Species?		Indicator Status	
1. <u>Celtis laevigata</u>	45	yes	FACW						
2. <u>Acer negundo</u>	15	yes	FAC						
3. <u>Salix nigra</u>	5	no	OBL						
4. _____									
5. _____									
6. _____									
7. _____									
8. _____									
				65 = Total Cover					
				50% of total cover: 32.5		20% of total cover: 13			
Sapling/Shrub Stratum (Plot size: 30 ft rad.)				Absolute % Cover		Dominant Species?		Indicator Status	
1. <u>Cornus drummondii</u>	20	yes	FAC						
2. <u>Sambucus nigra</u>	5	no	FACW						
3. <u>Ulmus americana</u>	2	no	FAC						
4. <u>Quercus nigra</u>	1	no	FAC						
5. _____									
6. _____									
7. _____									
8. _____									
				28 = Total Cover					
				50% of total cover: 14		20% of total cover: 5.6			
Herb Stratum (Plot size: 30 ft rad.)				Absolute % Cover		Dominant Species?		Indicator Status	
1. <u>Rubus trivialis</u>	30	yes	FACU						
2. <u>Viola villosa</u>	5	no	FACU						
3. _____									
4. _____									
5. _____									
6. _____									
7. _____									
8. _____									
9. _____									
10. _____									
11. _____									
12. _____									
				35 = Total Cover					
				50% of total cover: 17.5		20% of total cover: 7			
Woody Vine Stratum (Plot size: 30 ft rad.)				Absolute % Cover		Dominant Species?		Indicator Status	
1. <u>Smilax bona-nox</u>	3	yes	FAC						
2. _____									
3. _____									
4. _____									
5. _____									
				3 = Total Cover					
				50% of total cover: 1.5		20% of total cover: 0.6			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

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 = NaN

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: Plot 2

[illegible]

3.3 Plot 3

Sample Plot 3 consists of an agricultural field used for sugarcane production. This plot is located at 30.4108 N and 91.5072 W. The location of this plot is presented in Figure 4.

The herbaceous stratum was dominated by sugarcane (*Saccharum officinarum*) and bermudagrass (*Cynodon dactylon*). The hydrophytic vegetation criteria was not met at this site.

The soil series mapped by the NRCS at Plot 3 as Commerce silt clay loam; field investigations confirm this soil type. No wetland hydrology indicator was noted. It is GEC's opinion that this feature does not meet the criteria for a wetland based on lack of sufficient wetland vegetation and hydrology. Photographs 5 and 6 depict a soil profile and an overview of the plot location.



Photograph 5. Soil Profile Observed at Plot 3



Photograph 6. Overview of Plot 3

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Grace Farms West City/County: Ramah/Iberville Parish Sampling Date: 3/4/2013
 Applicant/Owner: BRAC State: LA Sampling Point: Plot 3
 Investigator(s): J. Avant Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Agriculture field Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Plot taken in a sugar cane field	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres along Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: Plot 3

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Saccharum officinarum</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Cynodon dactylon</u>	<u>2</u>	<u>no</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>13.5</u> 20% of total cover: <u>5.4</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: _____ (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 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 height.

Hydrophytic Vegetation Present? Yes _____ No ✓

SOIL

Sampling Point: Plot 3

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 ¹	Loc ²		
0-2	10 YR 3/2	100					C	
2-7	10 YR 3/1	90	5 YR 3/3	10	C	PL	C	
7-18	10 YR 4/2	90	7.5 YR 4/6	10	C	M	C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>None observed</u> Depth (inches): <u>N/A</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--

Remarks:

3.4 Plot 4

Sample Plot 4 consists of an agricultural field currently flooded for crawfish production. This plot is located at 30.4149 N and 91.5156 W. The location of this plot is presented in Figure 4.

The herbaceous stratum was dominated by bigpod sesbania (*Sesbania exaltata*) and black willow (*Salix nigra*). The hydrophytic vegetation criteria were met at this site.

The soil series mapped by the NRCS at Plot 4 as Sharkey clay; field investigations confirm this soil type. The primary wetland hydrology indicator was surface water and saturation. It is GEC's opinion that this feature does meet the criteria for a wetland based on all three parameters being met. Photographs 7 and 8 depict a soil profile and an overview of the plot location.



Photograph 7. Soil Profile Observed at Plot 4



Photograph 8. Overview of Plot 4

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Grace Farms West City/County: Ramah/Iberville Parish Sampling Date: 3/4/2013
 Applicant/Owner: BRAC State: LA Sampling Point: Plot 4
 Investigator(s): J. Avant Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Agricultural field Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Plot taken in an agricultural field flooded for crawfish production			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along 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 checked="" 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 checked="" type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4-18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: Plot 4

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Sesbania exaltata</u>	<u>30</u>	<u>yes</u>	<u>FACW</u>	
2. <u>Salix nigra</u>	<u>10</u>	<u>yes</u>	<u>OBL</u>	
3. <u>Xanthium strumarium</u>	<u>7</u>	<u>no</u>	<u>FAC</u>	
4. <u>Packera glabella</u>	<u>2</u>	<u>no</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>24.5</u> 20% of total cover: <u>9.8</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Remarks: (If observed, list morphological adaptations below).				

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% (A/B)

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 = NaN

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

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 height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: Plot 4

[illegible]

3.5 Plot 5

Sample Plot 5 consists of an agricultural field used for sugarcane production. This plot is located at 30.4152 N and 91.5157 W. The location of this plot is presented in Figure 4.

The herbaceous stratum was dominated by sugarcane (*Saccharum officinarum*). The hydrophytic vegetation criteria were not met at this site.

The soil series mapped by the NRCS at Plot 5 as Sharkey clay; field investigations confirm this soil type. No wetland hydrology indicators were noted. It is GEC's opinion that this feature does not meet the criteria for a wetland based on lack of all three parameters being met. Photographs 9 and 10 depict a soil profile and an overview of the plot location.



Photograph 9. Soil Profile Observed at Plot 5



Photograph 10. Overview of Plot 5

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Grace Farms West City/County: Ramah/Iberville Parish Sampling Date: 3/4/2013
 Applicant/Owner: BRAC State: LA Sampling Point: Plot 5
 Investigator(s): J. Avant Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Agricultural field Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Plot taken in an agricultural field used for sugar cane production	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</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) (LRR U)	<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 along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<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) (LRR T, U)
Field Observations:		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: Plot 5

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Saccharum officinarum</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 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 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

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 height.

Hydrophytic Vegetation Present? Yes No ✓

SOIL

Sampling Point: Plot 5

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 ¹	Loc ²							
0-12	10 YR 3/3	100											
12-18	10 YR 4/1	85	7.5 YR 5/8	15	C	M	C						
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.						
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					Indicators for Problematic Hydric Soils³:								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)					<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)					<input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)			
					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if observed):													
Type: <u>None observed</u>													
Depth (inches): <u>N/A</u>							Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Remarks:													

3.6 Plot 6

Sample Plot 6 consists of a canal edge. This plot is located at 30.4119 N and 91.5197 W. The location of this plot is presented in Figure 4.

The herbaceous stratum was dominated by Pennsylvania smartweed (*Polygonum pensylvanicum*) and spinyfruit buttercup (*Ranunculus muricatus*). The hydrophytic vegetation criteria were met at this site.

The soil series mapped by the NRCS at Plot 6 as Sharkey clay; field investigations confirm this soil type. The primary wetland hydrology indicators were high water table and saturation. It is GEC's opinion that this feature does meet the criteria for a wetland based on all three parameters being met. Photographs 11 and 12 depict a soil profile and an overview of the plot location.



Photograph 11. Soil Profile Observed at Plot 6



Photograph 12. Overview of Plot 6

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Grace Farms West City/County: Ramah/Iberville Parish Sampling Date: 3/4/2013
 Applicant/Owner: BRAC State: LA Sampling Point: Plot 6
 Investigator(s): J. Avant Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR O Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Plot taken in strip of land next to canal			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" 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 checked="" type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>7-18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>7</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

 Sampling Point: Plot 6

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ 0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ 0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Polygonum pensylvanicum</u>	<u>15</u>	<u>yes</u>	<u>FACW</u>	
2. <u>Ranunculus muricatus</u>	<u>15</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Iva annua</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. <u>Rubus trivialis</u>	<u>2</u>	<u>no</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ 37 = Total Cover				
50% of total cover: <u>18.5</u> 20% of total cover: <u>7.4</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ 0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Remarks: (If observed, list morphological adaptations below).				

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% (A/B)

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 = NaN

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

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 height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: Plot 6

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 ¹	Loc ²		
0-3	10 YR 4/1	100					C	
3-6	10 YR 4/1	90	7.5 YR 3/3	10	C	M	C	
6-14	10 YR 5/1	90	7.5 YR 4/4	10	C	M	ZC	
14-18	7.5 YR 4/4	75	GLAY 1 5/N	25	D	M	ZC	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>None observed</u> Depth (inches): <u>N/A</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:

4.0 CONCLUSIONS

Data was gathered at six plots within the 514.6 acre site, three of which were found to meet all three parameters of a wetland. Three plots failed to be classified as wetlands due to lack of one or more wetland criteria.

Total acreage of wetland areas within the site based on this delineation is approximately 4.0 acres. Approximately 11.2 acres of other water and 46.9 acres of shallow aquaculture ponds surrounded by small levees (crawfish ponds) were also identified within the site boundary.

5.0 DISCLAIMER

Although GEC uses the same criteria and methodology as that of the USACE, due to the degree of subjectivity associated with studies of this type, there may be some degree of variance in the demarcation of the wetland boundary. Consequently, GEC's opinion may not necessarily reflect that of the USACE, nor does it relieve our client of any legal obligations to consult with the USACE for wetland verification and, if necessary, obtain a Department of the Army Section 404 permit prior to performing any dredging, filling, and/or construction operations in waters of the United States, including wetlands.