



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

REPLY TO
ATTENTION OF

APR 27 2012

Operations Division
Surveillance and Enforcement Section

Exhibit II. Waterloo Site Jurisdictional Determination & Wetlands Delineation Report

Dear Mr. Patterson:

Reference is made to your request, on behalf of Barber Brothers Construction, for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Section 10, Township 10 South, Range 2 East and Section 48, Township 9 South, Range 2 East, Ascension Parish, Louisiana (enclosed map). Specifically, this property is identified as the 177.14 acre site on and northeast of Louisiana Highway 75 and in the Mississippi River batture near Mississippi River Mile 186.

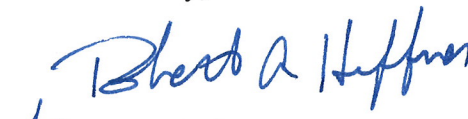
Based on review of recent maps, aerial photography, soils data, information provided with your request, and a brief site visit conducted on January 24, 2012, we have determined that part of the property is wetland and subject to Corps' jurisdiction. The approximate limits of the wetland are designated 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 this wetland. A DA permit will also be required if you propose to deposit dredged or fill material into New River and its tributaries, designated in blue on the map. Additionally, the Mississippi River is a navigable waterway and subject to Corps' jurisdiction under Section 10 of the Rivers and Harbors Act. A DA Section 10 permit will be required prior to any work in the Mississippi River and areas below the ordinary high water of the Mississippi River, designated in blue crosshatch on the map.

You 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 and to the appropriate regional office of the Louisiana Department of Transportation and Development (LA DOTD) or the Office of Coastal Protection and Restoration (OCPR) 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 both of these reviewing agencies. For additional information, please contact Ms. Amy Powell at (504) 862-2241.

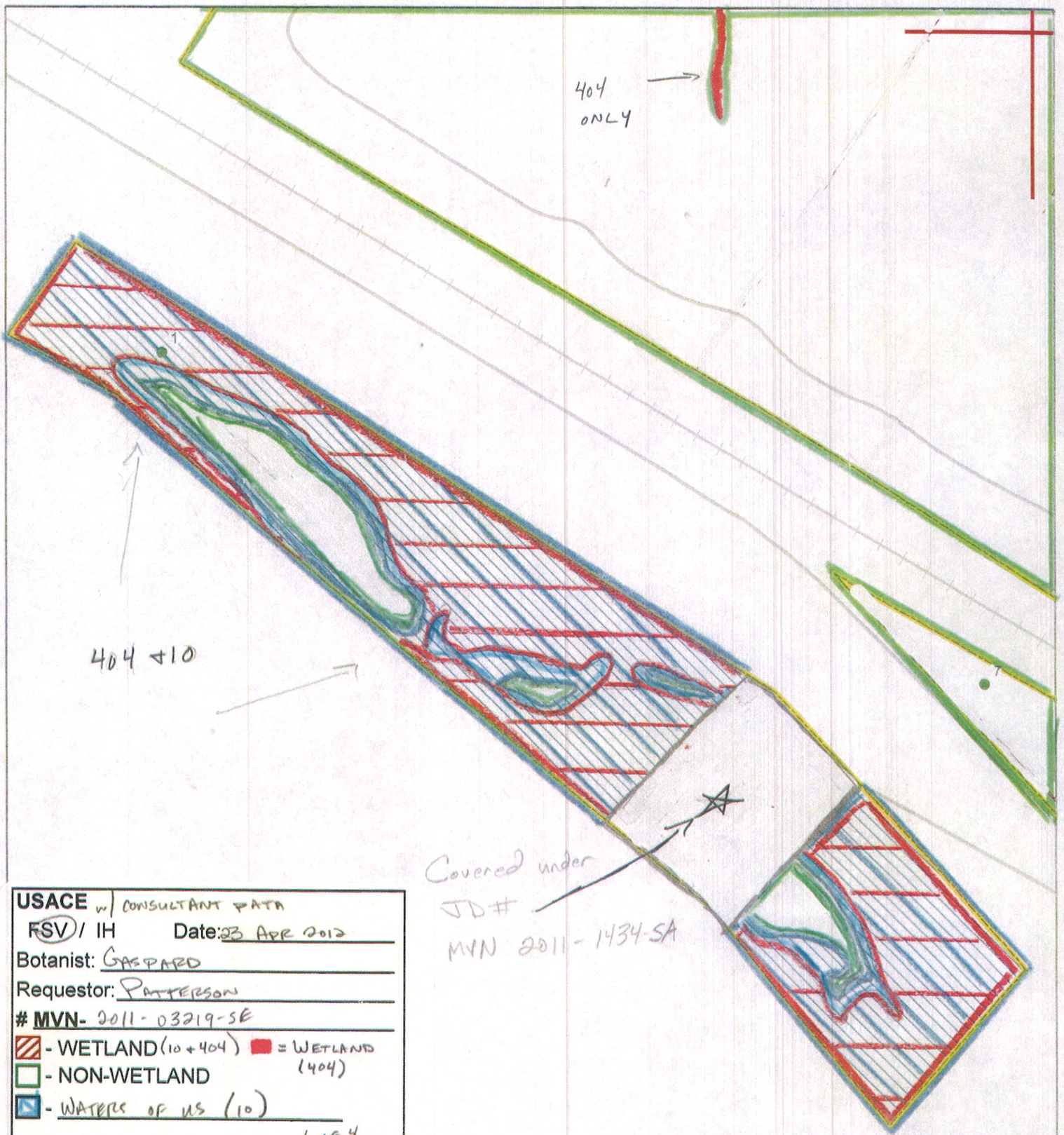
You and your client are advised that this approved jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific 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. Brandon Gaspard at (504) 862-1280 and reference our Account No. MVN 2011-03219-SE. 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,


for Pete J. Serio
Chief, Regulatory Branch

Enclosures



250 125 0 250 Feet



NRP

APPROVED

JURISDICTIONAL DETERMINATION



Lee Barber

Geismar, LA

WETLAND MAP

ASCENSION PARISH, LOUISIANA

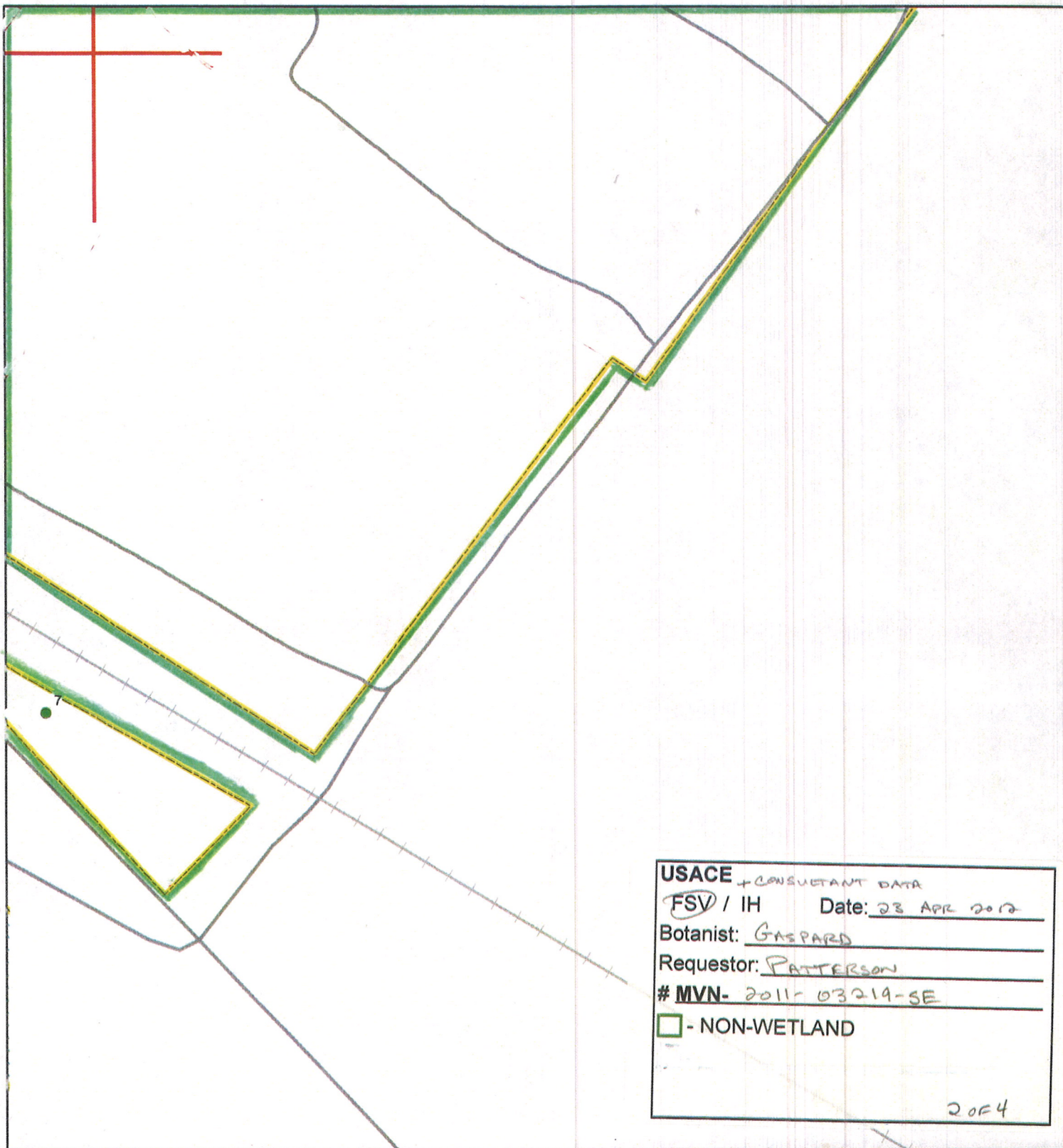
Created: ELP/ArcView

Approved: SPN

Date: 12/7/2011

Map No.: WD11102001-03

FIGURE 3



250 125 0 250 Feet



NRP

APPROVED
JURISDICTIONAL DETERMINATION



Lee Barber

Geismar, LA
WETLAND MAP

ASCENSION PARISH, LOUISIANA

Created : ELP/ArcView

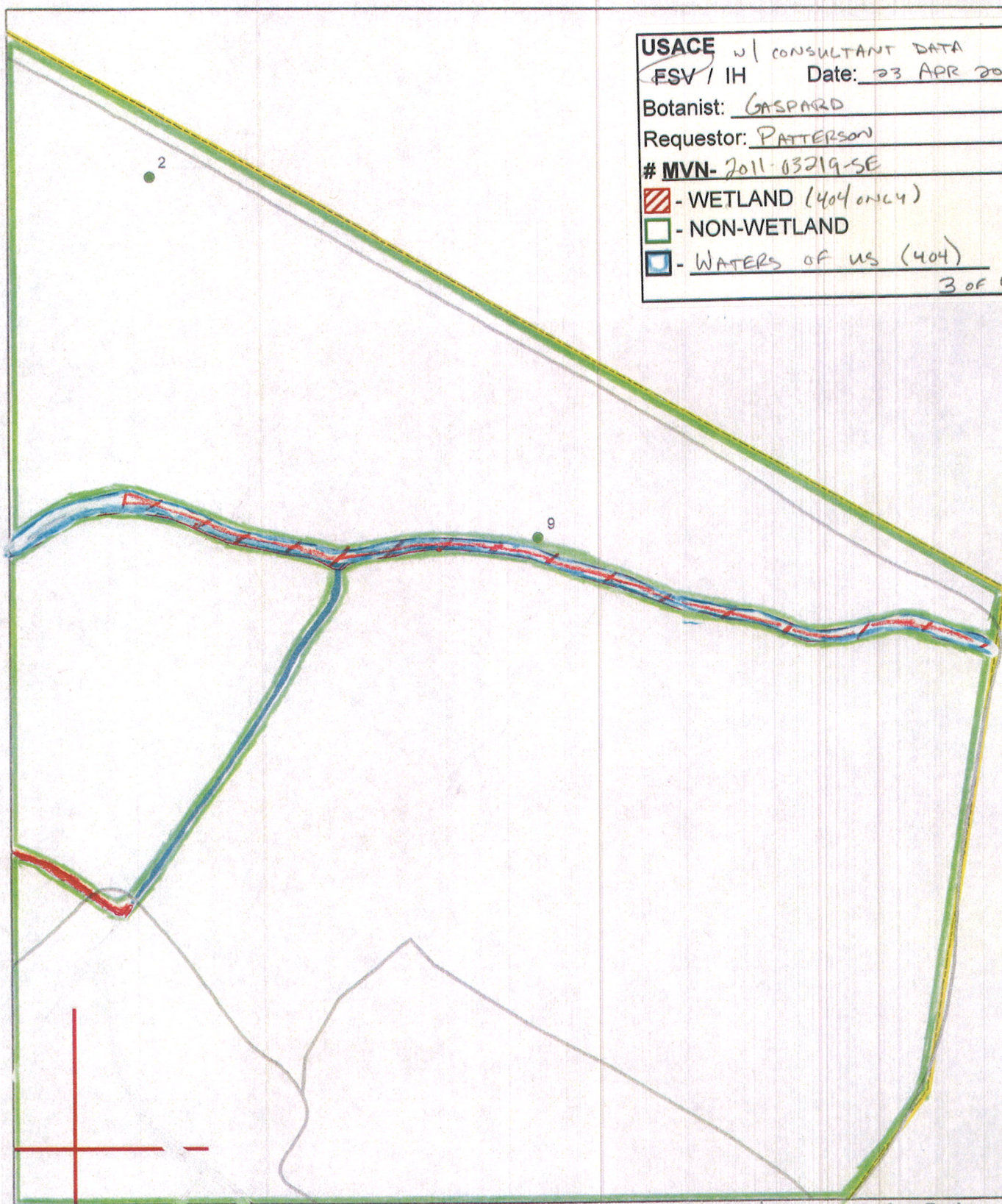
Approved : SPN

Date : 12/7/2011

Map No. : WD11102001-05

FIGURE 5

USACE w/ CONSULTANT DATA
 FSV / IH Date: 23 APR 2012
 Botanist: GASPARD
 Requestor: PATTERSON
 # MVN- 2011-03219-SE
 - WETLAND (404 only)
 - NON-WETLAND
 - WATERS OF US (404)
 3 of 4



250 125 0 250 Feet



APPROVED
 JURISDICTIONAL DETERMINATION



Lee Barber

Geismar, LA
 WETLAND MAP

ASCENSION PARISH, LOUISIANA

Created : ELP/ArcView

Approved : SPN

Date : 12/7/2011

Map No. : WD11102001-07

FIGURE 7

USACE

w/ CONSULTANT DATA

FSV / IH

Date: 23 APR 2012

Botanist: CASPARD

Requestor: PATTERSON

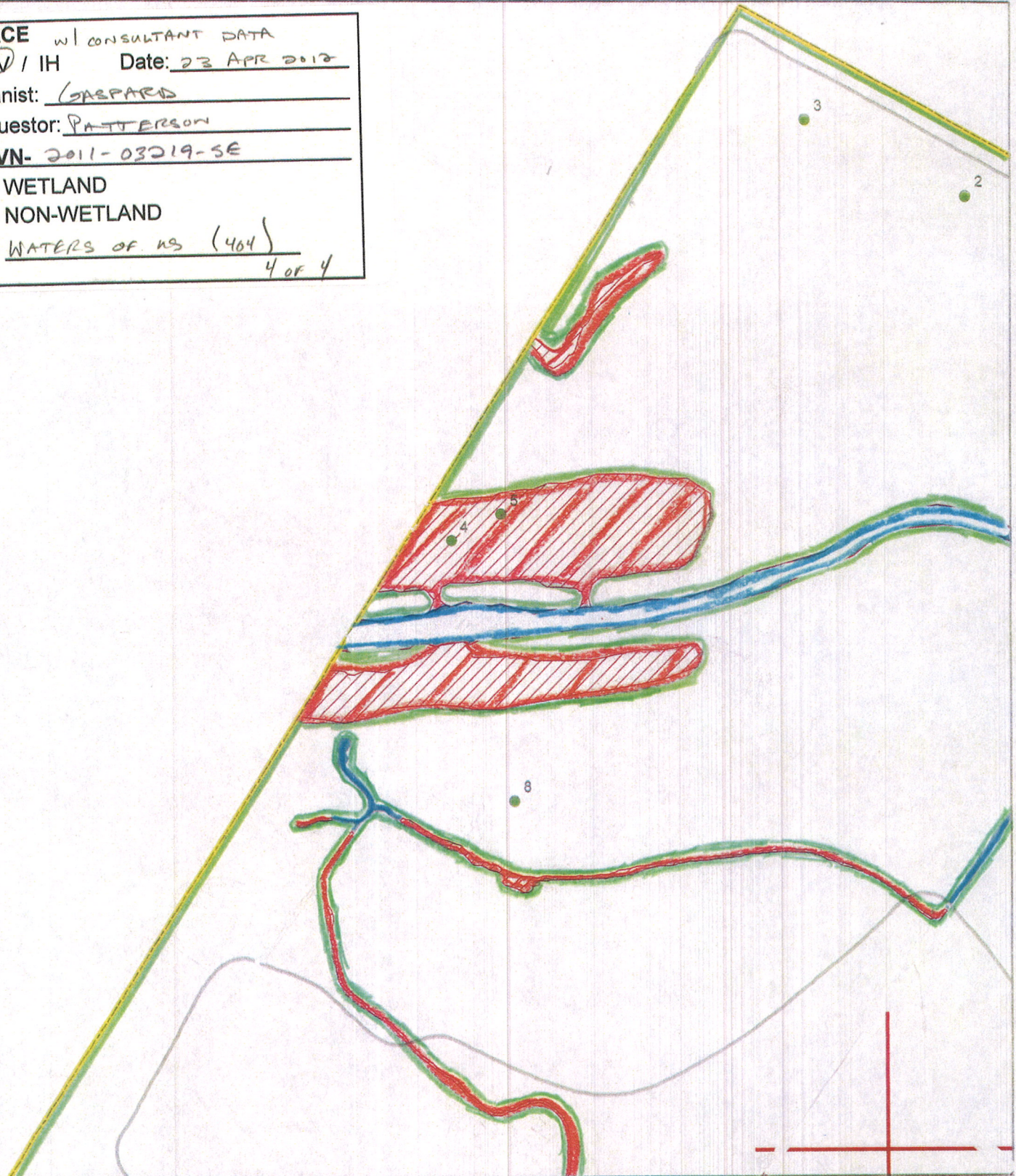
MVN- 2011-03219-SE

WETLAND

NON-WETLAND

WATERS OF US (404)

4 of 4



250 125 0 250 Feet



NRP

APPROVED

JURISDICTIONAL DETERMINATION

Lee Barber

Geismar, LA

WETLAND MAP

ASCENSION PARISH, LOUISIANA

Created : ELP/ArcView

Approved : SPN

Date : 12/7/2011

Map No. : WD11102001-09

FIGURE 9

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 23 April 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: New Orleans, Patterson, MVN 2011-03219-SE

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: **LA** County/parish/borough: **Ascension** City: _____
Center coordinates of site (lat/long in degree decimal format): Lat. **30.209865° N**, Long. **91.027877° W**.
Universal Transverse Mercator: _____

Name of nearest waterbody: **Mississippi River, New River**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Mississippi River, New River**

Name of watershed or Hydrologic Unit Code (HUC): **08070204 - Lake Maurepas. LA**

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: **23 April 2012**

☒ Field Determination. Date(s): **5 January 2012, 24 January 2012, 5 April 2012**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☒ Waters subject to the ebb and flow of the tide.

☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: The Mississippi River is currently used in the transportation of interstate and foreign commerce.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☒ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: **2700** linear feet: **40** width (ft) and/or **13** acres.

Wetlands: **20** acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): _____

2. Non-regulated waters/wetlands (check if applicable):³

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: _____

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input type="checkbox"/> Sands	<input type="checkbox"/> Concrete
<input type="checkbox"/> Cobbles	<input type="checkbox"/> Gravel	<input type="checkbox"/> Muck
<input type="checkbox"/> Bedrock	<input type="checkbox"/> Vegetation. Type/% cover:	
<input type="checkbox"/> Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Pick List

Estimate average number of flow events in review area/year: Pick List

Describe flow regime:

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings:

☐ Dye (or other) test performed:

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	
<input type="checkbox"/> OHWM ⁶ (check all indicators that apply):	
<input type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> shelving	<input type="checkbox"/> the presence of wrack line
<input type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> sediment sorting
<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> scour
<input type="checkbox"/> sediment deposition	<input type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> water staining	<input type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	
<input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

<input type="checkbox"/> High Tide Line indicated by:	<input type="checkbox"/> Mean High Water Mark indicated by:
<input type="checkbox"/> oil or scum line along shore objects	<input type="checkbox"/> survey to available datum;
<input type="checkbox"/> fine shell or debris deposits (foreshore)	<input type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☒ TNWs: linear feet width (ft), Or, 13 acres.
☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: **Flow was verified during all FSVs in un-named tributaries. New River is indicated as perennial on USGS Topos and NRCS Soil Survey and is tidal in its lower reaches (offsite).**
- ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters:

☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

☐ Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource:

☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource:

☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall 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: **Wetland delineation report provided by applicant.**

☒ 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: **08070204.**

☐ USGS NHD data.

☒ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: **1:24000 Carville.**

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **WSS [Sc, CV, Sa].**

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

☐ State/Local wetland inventory map(s):

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): **1998, 2004, 2008, 2010.**

or ☐ Other (Name & Date):

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

☐ Applicable/supporting case law:

☐ Applicable/supporting scientific literature:

☒ Other information (please specify): **LIDAR, Mississippi River LIDAR, USGS river gauge data.**

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Barber Brothers Construction	File Number: MVN-2011- 03219-SE	Date: APR 27 2012
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 checked="" type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input 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.

**Lee Barber
Barber Brothers Construction
177.14-ACRE PROJECT AREA**

**WETLAND DATA REPORT
ASCENSION PARISH, LOUISIANA**

December, 2011

Prepared by:

Natural Resource Professionals, LLC
4664 Jamestown Avenue, Suite 420
Baton Rouge, Louisiana 70808
225.928.5333

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**WETLAND DATA REPORT
BARBER BROTHERS CONSTRUCTION
177.14-ACRE PROJECT AREA
ASCENSION PARISH, LOUISIANA**

1.0 INTRODUCTION

The following report summarizes a wetland delineation on a 177.14-acre project area in Livingston Parish, Louisiana. The purpose of the report is to identify areas that contain wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act (33 U.S.C 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Jurisdictional wetlands are regulated by the United States Army Corps of Engineers (USACE). The project area is located in Section 10, Township 10 South, and Range 2 East in Ascension Parish, Louisiana (Figure 1). The project area center coordinates of site are Lat: 30.2112° N & Long: 91.0274° W.

The wetland delineation was conducted in accordance with the U.S. Army Corps of Engineers, *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and *Interim Regional Supplemental to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Regional Supplemental 2008). Wetlands are defined as “areas that are inundated or saturated at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Three mandatory technical criteria for determining the presence of a wetland are, with exceptions, (1) hydric soils, (2) hydrophytic vegetation, and (3) wetland hydrology. A hydric soil is defined as one that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part [National Resource Conservation Service. 2006b(2006b NRCS)]. Hydrophytic vegetation is defined herein as the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation. The term “wetland hydrology” encompasses the sum total of wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation (USACE 1987).

Deepwater aquatic habitats are “areas that are permanently inundated at mean annual water depths greater than 6.6 feet or permanently inundated areas, less than or equal to 6.6 feet in depth that do not support rooted-emergent or woody plant species” (USACE 1987) are referred to as “Other waters of the United States” in this report. Navigable waters are “those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce” (33 CFR 329.4).

2.0 SITE DESCRIPTION

The project area is located in Geismar, LA northwest of Highway 73. It is separated into three parts. The southernmost section is bordered on the south side by the Mississippi River and the north side by the levee. It is mostly wooded with the exception of a cargo loading area. The smallest of the three areas is located between River Road and the railroad tracks. The largest is bordered on both the north and south sides by pipeline right of ways. Much of the area is in commercial and agricultural use, but the area surrounding New River is forested. The general site elevation ranges from 7 to 32 feet North American Vertical Datum (NAVD).

3.0 METHODS

The wetland delineation followed *on-site routine* field procedures as outlined by the USACE (1987), subsequent Regulatory Guidance Letters (RGL) and the regional supplemental (2010). Natural Resource Professionals, LLC (NRP) conducted site visits on November 7, 9, 21 and 28, 2011 to determine the extent of potential wetlands and “waters of the United States” within the project area.

NRP personnel established data collection sites randomly throughout the project area according to plant community and topography. Observation of soils, vegetation, and hydrology were recorded at each data point (Appendix A). Soil samples were obtained by excavating an approximate 16-inch deep soil pit. Soil color was recorded by matching soil samples to color chips contained in a Munsell soil color chart. Hydric soil criteria were met when soil samples indicated a matrix chroma of 2 or less in mottled soils or a matrix chroma of 1 or less in unmottled soils.

Dominant vegetative species accounting for greater than 20% of vegetation present in each data plot were recorded for each of the following vertical strata: tree canopy or individual trees; sapling or shrub layer; herbaceous layer; and woody vine layer. Percent cover for each dominant species was determined by ocular estimation. Plant communities met hydrophytic vegetation criteria if greater than 50% of the dominant species from all strata were classified as obligatory, facultative-wet, or facultative species (U.S. Fish and Wildlife Service 1988; NRCS 2006).

Wetland hydrology criteria were assessed based on observation of primary and/or secondary field indicators. The hydrology criteria were met if one primary field indicator was observed (i.e., inundation, soil saturation within 12 inches of the soil surface, water marks, drift lines, and drainage patterns) or at least two secondary indicators were observed (e.g., drainage patterns and FAC-Neutral test).

Data points, other waters, roads and potential wetlands within the project areas were mapped with a Trimble Geo XT®, map grade Differential Global Positioning System (DGPS) with real-time correction. Acreage was obtained using the DGPS unit and ESRI software. Digital photographs were taken of project area, plants, and soils. (Appendix B).

4.0 RESULTS

4.1 Soils

The soils mapped within the project area are listed as Convent soils, frequently flooded and Sharkey Clay. Both Convent soils and Sharkey Clay are mapped as hydric (Web soil survey, 2011).

4.2 Vegetation

The project area consists of agricultural fields, forested areas in the batcher and surrounding New River, and several drainage features. Different vegetative communities preside over each of these locations. All scientific names are from the official NRCS Plants Data Base web site (2011).

The dominant tree species within the batcher include eastern cottonwood (*Populus deltoides*), sugarberry (*Celtis laevigata*), sweet pecan (*Carya illinoensis*), and American sycamore (*Platanus occidentalis*). Virginia dayflower (*Commelina virginica*) is dominant within the herbaceous stratum in this area. There are also a number of woody vine species that are very abundant in this area: dewberry (*Rubus trivialis*), muscadine (*Vitis rotundifolia*), trumpet creeper (*Campsis radicans*), and American buckwheat vine (*Brunnichia ovata*).

The dominant tree species in the forested areas around New River include: sugarberry, water hickory (*Carya aquatica*), water oak (*Quercus nigra*), and American elm (*Ulmus americana*). Most of New River and the adjacent back swamp are almost completely covered in torpedo grass (*Panicum repens*). The slightly higher elevation areas around the swamp are very densely covered with ragweed (*Ambrosia trifida*).

4.2 Hydrology

The project area is located in HUC 8070202. All the potential wetlands mapped within the project area were situated in or adjacent to drainage features or in elevation depressions. The batcher is elevated high enough above the river to facilitate relatively fast drainage. The remainder of the project is drained efficiently by a series of ditches that empty into New River. There are back swamp areas to the north and south of New River on the eastern side of the project area. These areas are connected to the river, but still hold a lot of water. The potential wetland contained at least one primary indicator, (inundation, saturation in upper 12 inches, a high water table). Non-wetland areas lacked primary hydrological indicators or contained only one secondary indicator.

5.0 CONCLUSION

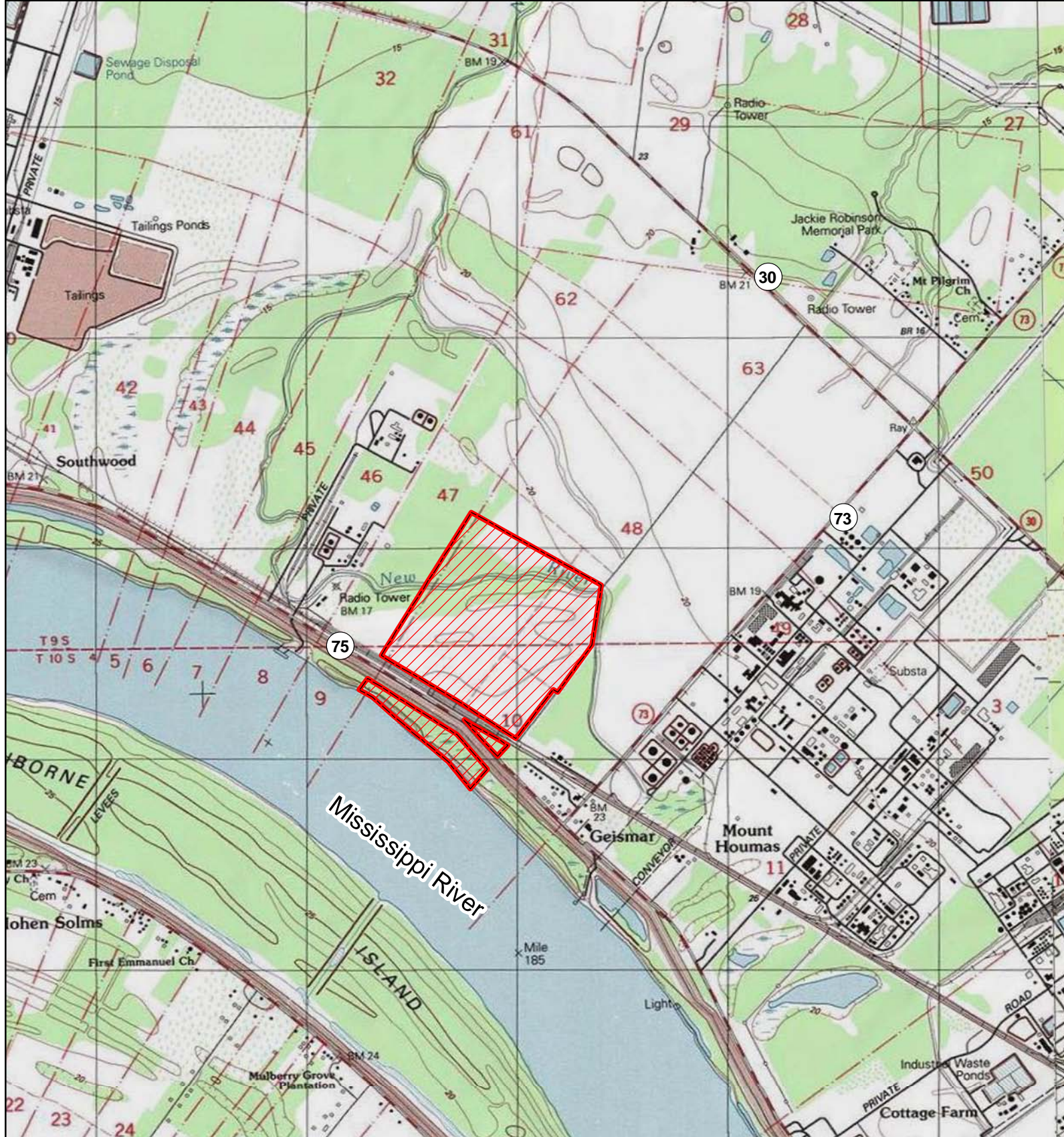
Based on the field investigation, with observations of the soil, hydrology and vegetation NRP personnel mapped 6.64 acres of potential wetlands and 19.89 acres of “Other Waters” (17.62 acres of which are located within the batcher) within the 177.14-acre project area (Figures 2-9).

The USACE under the authority of the Clean Water Act, Section 404 and the Rivers and Harbor Act, Section 10 has the responsibility to make the final determination of the location and extent of jurisdictional wetlands and navigable waters on this property, respectively. This report represents the opinion of the investigators and should be considered preliminary until final concurrence is obtained from the New Orleans Army Corps of Engineers office.


6.0 LITERATURE CITED

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- U.S. Army Corps of Engineers. (2010). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*. Ed J.S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

FIGURES



Legend

 Property Boundary (177.14 acres)

Map Notes:

1. The boundary shown is based on the boundary survey provided by the client.



Lee Barber

**Geismar, LA
VICINITY MAP**

ASCENSION PARISH, LOUISIANA

Created : ELP/ArcView

Approved : SPN

Date : 12/7/2011

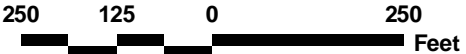
Map No. : WD11102001-01

FIGURE 1

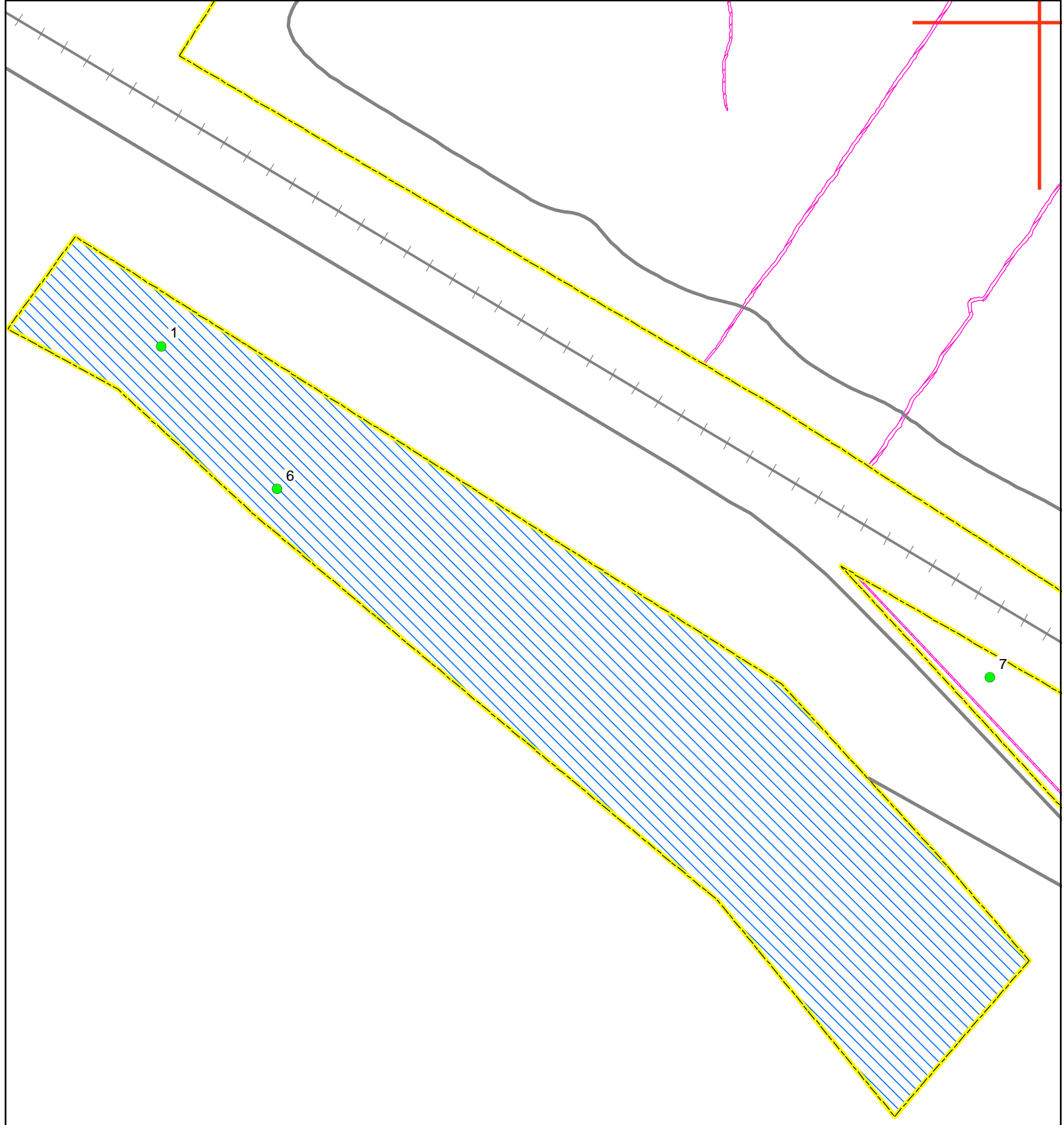


- Legend**
- Property Boundary (177.14 acres)
 - Wetlands (6.64 acres)
 - Other Waters (2.27 acres)
 - Other Waters Within The Batcher (17.62 acres)
 - Data Points
 - Break Lines









Map Notes:
1. The boundary shown is based on the boundary survey provided by the client.



Lee Barber	
Geismar, LA	
WETLAND MAP	
ASCENSION PARISH, LOUISIANA	
Created :	ELP/ArcView
Approved :	SPN
Date :	12/7/2011
Map No. :	WD11102001-02
FIGURE 2	



Legend

-  Railroad
-  Road
-  Property Boundary (177.14 acres)
-  Wetlands (6.64 acres)
-  Other Waters (2.27 acres)
-  Other Waters Within The Batcher (17.62 acres)
-  Data Points
-  Break Lines

Map Notes:

1. The boundary shown is based on the boundary survey provided by the client.



NRP



Lee Barber

**Geismar, LA
WETLAND MAP**

ASCENSION PARISH, LOUISIANA

Created : ELP/ArcView

Approved : SPN

Date : 12/7/2011

Map No. : WD11102001-03

FIGURE 3



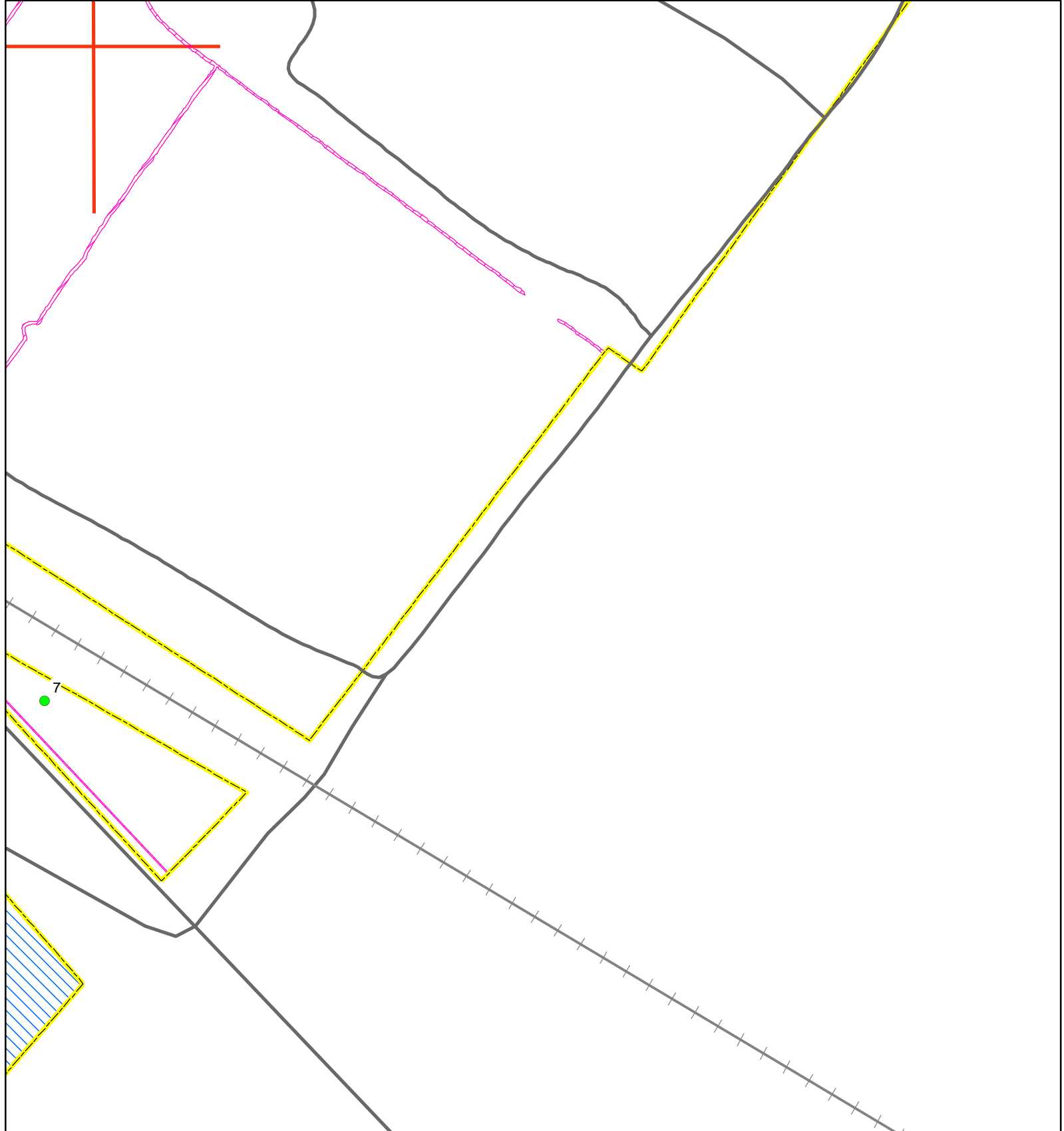
- Legend**
- Property Boundary (177.14 acres)
 - Wetlands (6.64 acres)
 - Other Waters (2.27 acres)
 - Other Waters Within The Batcher (17.62 acres)
 - Data Points
 - Break Lines

Map Notes:

1. The boundary shown is based on the boundary survey provided by the client.



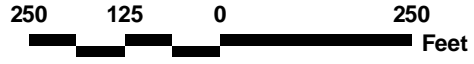
Lee Barber	
Geismar, LA	
WETLAND MAP	
ASCENSION PARISH, LOUISIANA	
Created :	ELP/ArcView
Approved :	SPN
Date :	12/7/2011
Map No. :	WD11102001-04
FIGURE 4	



- Legend**
- Railroad
 - Road
 - Property Boundary (177.14 acres)
 - ▨ Wetlands (6.64 acres)
 - ▨ Other Waters (2.27 acres)
 - ▨ Other Waters Within The Batch (17.62 acres)
 - Data Points
 - Break Lines

Map Notes:

1. The boundary shown is based on the boundary survey provided by the client.

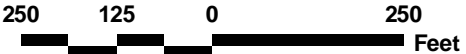


Lee Barber	
Geismar, LA	
WETLAND MAP	
ASCENSION PARISH, LOUISIANA	
Created :	ELP/ArcView
Approved :	SPN
Date :	12/7/2011
Map No. :	WD11102001-05
FIGURE 5	

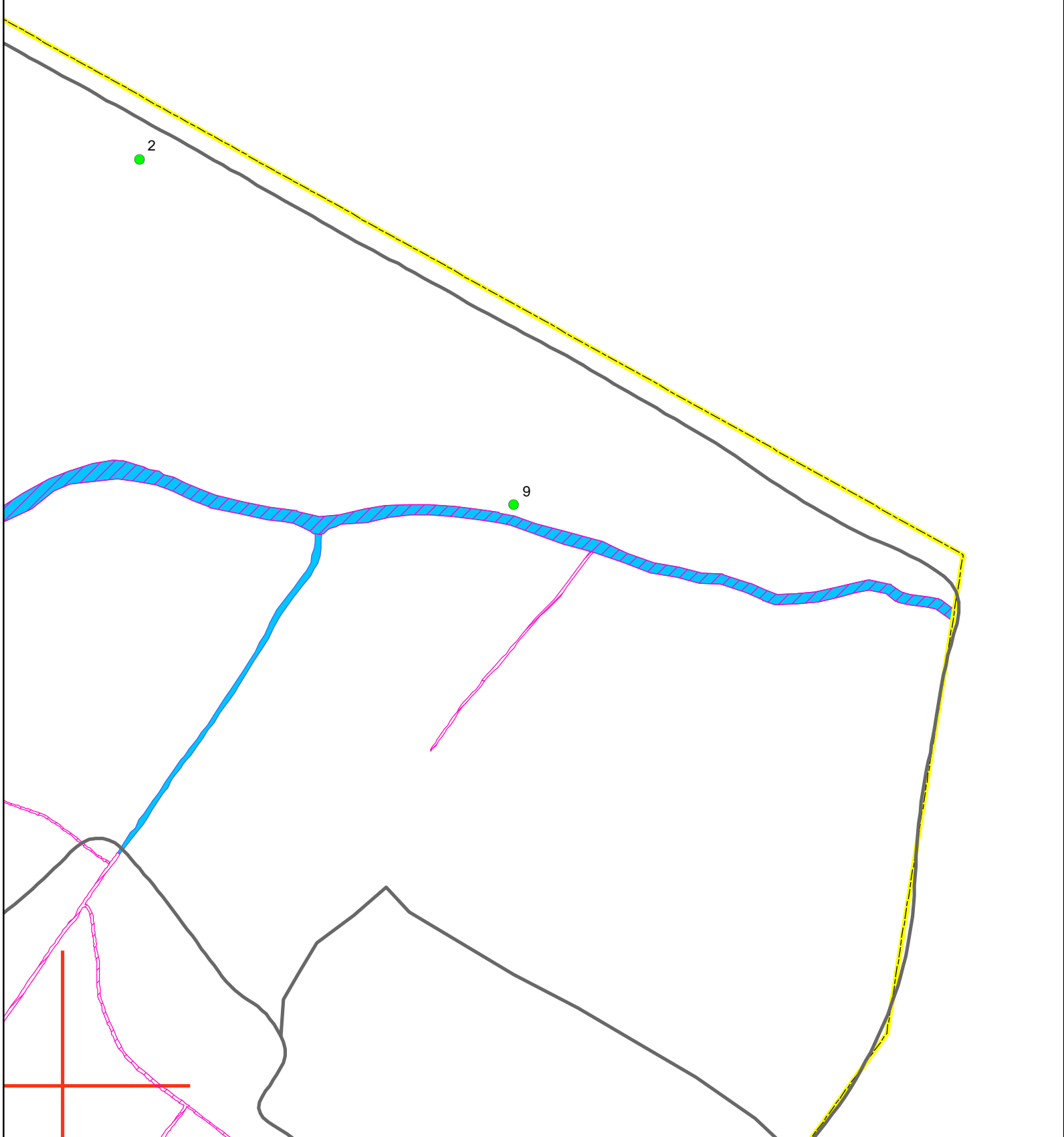


- Legend**
- Property Boundary (177.14 acres)
 - Wetlands (6.64 acres)
 - Other Waters (2.27 acres)
 - Other Waters Within The Batcher (17.62 acres)
 - Data Points
 - Break Lines

Map Notes:
1. The boundary shown is based on the boundary survey provided by the client.



Lee Barber	
Geismar, LA	
WETLAND MAP	
ASCENSION PARISH, LOUISIANA	
Created :	ELP/ArcView
Approved :	SPN
Date :	12/7/2011
Map No. :	WD11102001-06
FIGURE 6	



Legend

- Railroad
- Road
- Property Boundary (177.14 acres)
- Wetlands (6.64 acres)
- Other Waters (2.27 acres)
- Other Waters Within The Batcher (17.62 acres)
- Data Points
- Break Lines

Map Notes:

1. The boundary shown is based on the boundary survey provided by the client.

250 125 0 250 Feet



NRP



Lee Barber

**Geismar, LA
WETLAND MAP**

ASCENSION PARISH, LOUISIANA

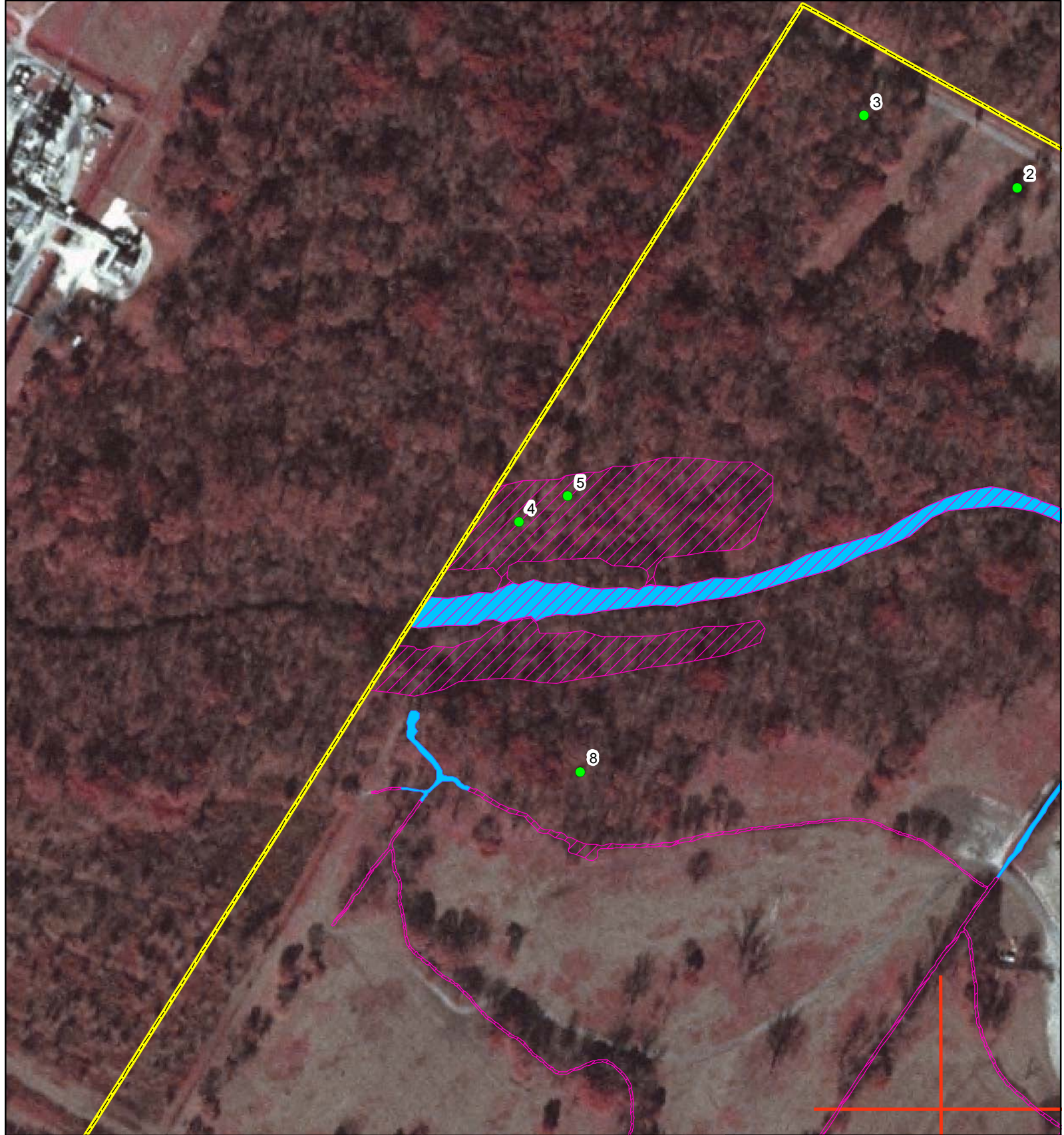
Created : ELP/ArcView

Approved : SPN

Date : 12/7/2011

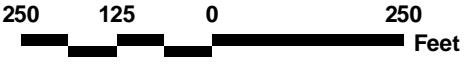
Map No. : WD11102001-07

FIGURE 7



- Legend**
- Property Boundary (177.14 acres)
 - Wetlands (6.64 acres)
 - Other Waters (2.27 acres)
 - Other Waters Within The Batcher (17.62 acres)
 - Data Points
 - Break Lines









Map Notes:
1. The boundary shown is based on the boundary survey provided by the client.



Lee Barber	
Geismar, LA	
WETLAND MAP	
ASCENSION PARISH, LOUISIANA	
Created :	ELP/ArcView
Approved :	SPN
Date :	12/7/2011
Map No. :	WD11102001-08
FIGURE 8	



Legend

-  Railroad
-  Road
-  Property Boundary (177.14 acres)
-  Wetlands (6.64 acres)
-  Other Waters (2.27 acres)
-  Other Waters Within The Batcher (17.62 acres)
-  Data Points
-  Break Lines

Map Notes:

1. The boundary shown is based on the boundary survey provided by the client.

250 125 0 250
Feet



NRP



Lee Barber

**Geismar, LA
WETLAND MAP**

ASCENSION PARISH, LOUISIANA

Created : ELP/ArcView

Approved : SPN

Date : 12/7/2011

Map No. : WD11102001-09

FIGURE 9

**APPENDIX A:
ROUTINE WETLAND DETERMINATION
DATA SHEETS**

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/7/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 1
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): batcher Local relief (concave, convex, none): CONVEX Slope (%): 5
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2085 Long: W 91.0330 Datum: NAD83
 Soil Map Unit Name: Convent soils, frequently flooded 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Backside of levee within batcher	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) (LRR U) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks)		<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)
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? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: 1

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Celtis laevigata</u>	<u>60</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Carya illinoensis</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Acer negundo</u>	<u>15</u>	<u>no</u>	<u>FACW</u>	
4. <u>Ulmus americana</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	
5. <u>Populus deltoides</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
6. <u>Salix nigra</u>	<u>5</u>	<u>no</u>	<u>OBL</u>	
7. _____	_____	_____	_____	
<u>120</u> = Total Cover				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 = _____
Sapling Stratum (<u>32</u>)				
1. <u>Celtis laevigata</u>	<u>3</u>	<u>yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>3</u> = Total Cover				
Shrub Stratum (<u>32</u>)				
1. <u>Acer negundo</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Herb Stratum (<u>32 ft</u>)				
1. <u>Commelina virginica</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>10</u> = Total Cover				
Woody Vine Stratum (_____)				
1. <u>Rubus trivialis</u>	<u>70</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Brunnichia ovata</u>	<u>40</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Toxicodendron radicans</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. <u>Ampelopsis arborea</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
5. <u>Campsis radicans</u>	<u>2</u>	<u>no</u>	<u>FAC</u>	
<u>120</u> = Total Cover				

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

SOIL

Sampling Point: 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		
0-5	10YR4/2	99	7.5YR4/4	1	RM	M	SL	
5-16	10YR4/2						SiCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (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) (LRR O)
☐ 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 Soils³:

☐ 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) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/9/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 2
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): _____
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2151 Long: W 91.0270 Datum: NAD83
 Soil Map Unit Name: Sharkey clay 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: mowed area adjacent to sunflower field	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) (LRR U) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks)		<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)
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 – Use scientific names of plants.

 Sampling Point: 2

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Celtis laevigata</u>	<u>35</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																
2. <u>Quercus virginiana</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>																	
3. <u>Quercus nigra</u>	<u>5</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>60</u>		= Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species <u>1</u></td> <td>x 2 = <u>2</u></td> </tr> <tr> <td>FAC species <u>4</u></td> <td>x 3 = <u>12</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>7</u> (A)</td> <td><u>22</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.14</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species <u>1</u>	x 2 = <u>2</u>	FAC species <u>4</u>	x 3 = <u>12</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species _____	x 5 = _____	Column Totals: <u>7</u> (A)	<u>22</u> (B)	Prevalence Index = B/A = <u>3.14</u>	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species <u>1</u>	x 2 = <u>2</u>																			
FAC species <u>4</u>	x 3 = <u>12</u>																			
FACU species <u>2</u>	x 4 = <u>8</u>																			
UPL species _____	x 5 = _____																			
Column Totals: <u>7</u> (A)	<u>22</u> (B)																			
Prevalence Index = B/A = <u>3.14</u>																				
Sapling Stratum (<u>32</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
Shrub Stratum (<u>32</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
Herb Stratum (<u>32 ft</u>)																				
1. <u>Paspalum notatum</u>	<u>85</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes 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 _____ No <u>✓</u>																
2. <u>Ambrosia trifida</u>	<u>10</u>	<u>no</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>95</u>		= Total Cover																		
Woody Vine Stratum (_____)																				
1. <u>Toxicodendron radicans</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>																	
2. <u>Smilax sp.</u>	<u>5</u>	<u>no</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>20</u>		= Total Cover																		

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

SOIL

Sampling Point: 2

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	10YR3/1							
3-14	10YR5/1	65	10YR5/4	35				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (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) (LRR O)
☐ 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 Soils³:

- ☐ 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) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/9/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 3
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2155 Long: W 91.0279 Datum: NAD83
 Soil Map Unit Name: Sharkey clay 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 _____ 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: Forested area adjacent to field and road	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) (LRR U) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks)		<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)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ 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 – Use scientific names of plants.

 Sampling Point: 3

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Liquidambar styraciflua</u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86</u> (A/B)
2. <u>Celtis laevigata</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Gleditsia triacanthos</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			= Total Cover	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 = _____
Sapling Stratum (<u>32</u>)				
1. <u>Celtis laevigata</u>	<u>15</u>	<u>yes</u>	<u>FACW</u>	
2. <u>Ulmus americana</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	
Shrub Stratum (<u>32</u>)				
1. <u>Quercus nigra</u>	<u>25</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Acer negundo</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	
3. <u>Ulmus americana</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
4. <u>Liquidambar styraciflua</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			= Total Cover	
Herb Stratum (<u>32 ft</u>)				
1. <u>Microstegium vimineum</u>	<u>50</u>	<u>yes</u>	_____	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
2. <u>Chasmanthium laxum</u>	<u>15</u>	<u>no</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
			= Total Cover	
Woody Vine Stratum (_____)				
1. <u>Toxicodendron radicans</u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Campsis radicans</u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Lygodium japonicum</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. <u>Rubus trivialis</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
5. <u>Smilax sp.</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
			= Total Cover	

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

Sampling Point: 3

US Army Corps of Engineers Atlantic and Gulf Coastal Plain Region – Interim Version

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/9/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 4
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): Slight depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2133 Long: W 91.0301 Datum: NAD83
 Soil Map Unit Name: Sharkey clay 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 <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____		
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____			
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ (includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: 4

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Celtis laevigata</u>	<u>55</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Ulmus americana</u>	<u>40</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Quercus nigra</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	
4. <u>Carva aquatica</u>	<u>20</u>	<u>yes</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>155</u> = Total Cover				
Sapling Stratum (<u>32</u>)				
1. _____	_____	_____	_____	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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Shrub Stratum (<u>32</u>)				
1. <u>Acer negundo</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Liqustrum senense</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (<u>32 ft</u>)				
1. <u>Panicum repens</u>	<u>85</u>	<u>yes</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes 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 <input checked="" type="checkbox"/> No _____
2. <u>Ambrosia trifida</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	
3. <u>Quercus nigra</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>105</u> = Total Cover				
Woody Vine Stratum (_____)				
1. <u>Rubus trivialis</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Smilax sp.</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
3. <u>Toxicodendron radicans</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>23</u> = Total Cover				
Remarks: (If observed, list morphological adaptations below). 				

SOIL

Sampling Point: 4

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		
0-16	10YR4/1	95	10YR3/4	5	RM	M	C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (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) (LRR O)
☐ 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 Soils³:

- ☐ 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) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/9/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 5
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2135 Long: W 91.0298 Datum: NAD83
 Soil Map Unit Name: Sharkey clay 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 <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____		
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: 5

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																																					
1. <u>Celtis laevigata</u>	<u>75</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																																																				
2. <u>Carva aquatica</u>	<u>25</u>	<u>yes</u>	<u>OBL</u>																																																					
3. <u>Quercus nigra</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>																																																					
4. _____	_____	_____	_____																																																					
5. _____	_____	_____	_____																																																					
6. _____	_____	_____	_____																																																					
7. _____	_____	_____	_____																																																					
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Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>					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 = _____																																					
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Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present.																																																								
Definitions of Vegetation Strata: <p>Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).</p> <p>Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.</p> <p>Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.</p> <p>Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.</p> <p>Woody vine – All woody vines, regardless of height.</p>																																																								
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																																								
Herb Stratum (<u>32 ft</u>) <table style="width: 100%;"> <tr> <td>1. <u>Panicum repens</u></td> <td><u>95</u></td> <td><u>yes</u></td> <td><u>FACW</u></td> </tr> <tr> <td>2. <u>Ambrosia trifida</u></td> <td><u>15</u></td> <td><u>no</u></td> <td><u>FAC</u></td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>4. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>5. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>6. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>7. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>8. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>9. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>10. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>11. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>12. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="2"><u>110</u> = Total Cover</td> <td colspan="2"></td> </tr> </table>					1. <u>Panicum repens</u>	<u>95</u>	<u>yes</u>	<u>FACW</u>	2. <u>Ambrosia trifida</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	3. _____	_____	_____	_____	4. _____	_____	_____	_____	5. _____	_____	_____	_____	6. _____	_____	_____	_____	7. _____	_____	_____	_____	8. _____	_____	_____	_____	9. _____	_____	_____	_____	10. _____	_____	_____	_____	11. _____	_____	_____	_____	12. _____	_____	_____	_____	<u>110</u> = Total Cover			
1. <u>Panicum repens</u>	<u>95</u>	<u>yes</u>	<u>FACW</u>																																																					
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6. _____	_____	_____	_____																																																					
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Woody Vine Stratum (_____) <table style="width: 100%;"> <tr> <td>1. <u>Smilax sp.</u></td> <td><u>3</u></td> <td><u>yes</u></td> <td><u>FAC</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>4. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>5. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="2"><u>3</u> = Total Cover</td> <td colspan="2"></td> </tr> </table>					1. <u>Smilax sp.</u>	<u>3</u>	<u>yes</u>	<u>FAC</u>	2. _____	_____	_____	_____	3. _____	_____	_____	_____	4. _____	_____	_____	_____	5. _____	_____	_____	_____	<u>3</u> = Total Cover																															
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5. _____	_____	_____	_____																																																					
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Remarks: (If observed, list morphological adaptations below). 																																																								

SOIL

Sampling Point: 5

[illegible]

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/21/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 6
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): batcher Local relief (concave, convex, none): convex Slope (%): _____
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2077 Long: W 91.0323 Datum: NAD83
 Soil Map Unit Name: Convent soils, frequently flooded 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Batcher adjacent to river	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) (LRR U) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks)		<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)
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 – Use scientific names of plants.

 Sampling Point: 6

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)																
2. <u>Platanus occidentalis</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>																	
3. <u>Carva illinoensis</u>	<u>10</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>65</u>	= Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
Sapling Stratum (<u>32</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		_____	= Total Cover	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																
Shrub Stratum (<u>32</u>)																				
1. <u>Albizia julibrissin</u>	<u>15</u>	<u>yes</u>	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>15</u>	= Total Cover	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes 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 <input checked="" type="checkbox"/> No _____																
Herb Stratum (<u>32 ft</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		_____	= Total Cover																	
Woody Vine Stratum (_____)																				
1. <u>Vitis rotundifolia</u>	<u>35</u>	<u>yes</u>	_____																	
2. <u>Campsis radicans</u>	<u>20</u>	<u>yes</u>	_____																	
3. <u>Ampelopsis arborea</u>	<u>10</u>	<u>no</u>	_____																	
4. <u>Rubus trivialis</u>	<u>5</u>	<u>no</u>	_____																	
5. _____	_____	_____	_____																	
		<u>70</u>	= Total Cover																	

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

Sampling Point: 6

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/21/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 7
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2079 Long: W 91.0279 Datum: NAD83
 Soil Map Unit Name: Sharkey Clay 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Wooded area between road and railroad tracks	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) (LRR U) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks)		<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)
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 – Use scientific names of plants.

 Sampling Point: 7

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Quercus nigra</u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Carya illinoensis</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>70</u> = Total Cover																		
Sapling Stratum (<u>32</u>)																		
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	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)
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)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Shrub Stratum (<u>32</u>)																		
1. <u>Ligustrum senense</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u>Acer negundo</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>															
3. <u>Carpinus caroliniana</u>	<u>5</u>	<u>no</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>65</u> = Total Cover																		
Herb Stratum (<u>32 ft</u>)																		
1. <u>Solidago sp.</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
Woody Vine Stratum (_____)																		
1. <u>Campsis radicans</u>	<u>30</u>	<u>yes</u>	<u>FAC</u>															
2. <u>Rubus trivialis</u>	<u>10</u>	<u>no</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
<u>40</u> = Total Cover																		

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

SOIL

Sampling Point: 7

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	10YR3/2						C	
4-14	10YR4/2						C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	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"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<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.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/28/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 8
 Investigator(s): NRP-LP Section, Township, Range: T10SR02E10
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2120 Long: W 91.0298 Datum: NAD83
 Soil Map Unit Name: Sharkey Clay 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: Wooded area between road and railroad tracks	

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

VEGETATION – Use scientific names of plants.

 Sampling Point: 8

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Celtis laevigata</u>	<u>60</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. <u>Gleditsia triacanthos</u>	<u>15</u>	<u>no</u>	<u>FAC</u>																	
3. <u>Carva illinoensis</u>	<u>10</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>85</u>	= Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
Sapling Stratum (<u>32</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present.																
Shrub Stratum (<u>32</u>)																				
1. <u>Cornus drummondii</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>																	
2. <u>Sabal minor</u>	<u>5</u>	<u>no</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.																
Herb Stratum (<u>32 ft</u>)																				
1. <u>Ambrosia trifida</u>	<u>70</u>	<u>yes</u>	<u>FAC</u>																	
2. <u>Carex sp.</u>	<u>10</u>	<u>no</u>	<u>OBL</u>																	
3. <u>Sambucus canadensis</u>	<u>5</u>	<u>no</u>	<u>FACW</u>																	
4. <u>Carva illinoensis</u>	<u>3</u>	<u>no</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Woody Vine Stratum (_____)																				
1. <u>Smilax sp.</u>	<u>25</u>	<u>yes</u>	<u>FAC</u>																	
2. <u>Lonicera japonica</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>																	
3. <u>Toxicodendron radicans</u>	<u>15</u>	<u>no</u>	<u>FAC</u>																	
4. <u>Rubus trivialis</u>	<u>10</u>	<u>no</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
		<u>70</u>	= Total Cover																	

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

SOIL

Sampling Point: 8

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		
0-8	10YR4/2						C	
8-16	10YR5/1	90	10YR4/6	10	RM	M	C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (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) (LRR O)
☐ 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 Soils³:

- ☐ 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) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Barber City/County: Geismar Sampling Date: 11/28/2011
 Applicant/Owner: Lee Barber State: LA Sampling Point: 9
 Investigator(s): NRP-LP Section, Township, Range: T09SR02E48
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): 134-SMVL Lat: N 30.2132 Long: W 91.0247 Datum: NAD83
 Soil Map Unit Name: Sharkey Clay 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 _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Wooded area north of New River	

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

 Sampling Point: 9

Tree Stratum (Plot sizes: <u>32 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Celtis laevigata</u>	<u>45</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>9</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Ulmus americana</u>	<u>30</u>	<u>yes</u>	<u>FACW</u>															
3. <u>Quercus nigra</u>	<u>15</u>	<u>no</u>	<u>FAC</u>															
4. <u>Gleditsia triacanthos</u>	<u>10</u>	<u>no</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>100</u> = Total Cover																		
Sapling Stratum (<u>32</u>)																		
1. <u>Celtis laevigata</u>	<u>5</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	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)
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)																	
2. <u>Acer negundo</u>	<u>5</u>	<u>yes</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
Shrub Stratum (<u>32</u>)																		
1. <u>Acer negundo</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u>Sambucus canadensis</u>	<u>2</u>	<u>no</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>12</u> = Total Cover																		
Herb Stratum (<u>32 ft</u>)																		
1. <u>Carex sp.</u>	<u>15</u>	<u>yes</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes 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 <input checked="" type="checkbox"/> No _____														
2. <u>Eupatorium capillifolium</u>	<u>7</u>	<u>no</u>	<u>FAC</u>															
3. <u>Quercus texana</u>	<u>2</u>	<u>no</u>	<u>OBL</u>															
4. <u>Quercus nigra</u>	<u>2</u>	<u>no</u>	<u>FAC</u>															
5. <u>Acer rubrum var. drummondii</u>	<u>1</u>	<u>no</u>	<u>OBL</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>27</u> = Total Cover																		
Woody Vine Stratum (_____)																		
1. <u>Vitis rotundifolia</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>															
2. <u>Rubus trivialis</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>															
3. <u>Toxicodendron radicans</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>															
4. <u>Smilax sp.</u>	<u>7</u>	<u>no</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
<u>42</u> = Total Cover																		

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

SOIL

Sampling Point: 9

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		
0-16	10YR4/2	90	10YR4/3	10			C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (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) (LRR O)
☐ 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 Soils³:

☐ 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) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

Redox concentrations faint

APPENDIX B: PHOTOS



Forested Area Within Batcher





Mississippi River Bank





Agricultural Fields





Drainage Feature in Agricultural Area





Drainage Ditch





New River

