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Exhibit EE.
BIDCO Site
Wetlands Delineation Report

Wetland Delineation Report

CSRS, Inc.
BIDCO Site Wetland Delineation
Union Parish, Louisiana

File No. 27366-001-01
October 31, 2024

Prepared for:

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Attention: Mr. Elliott Boudreaux

BIDCO SITE
Wetlands Delineation Report

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GeoEngineers

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1.0 Executive Summary

GeoEngineers, Inc. (GeoEngineers) conducted a wetland delineation on the proposed BIDCO Site in Union Parish, Louisiana. The Site is currently being used for silviculture and recreational purposes. There is also an abandoned baseball field located on the property. GeoEngineers concludes that there are no United States Army Corps of Engineers (USACE) jurisdictional wetlands on the approximately 150-acre project site. However, a pond was observed on the property encompassing approximately 0.83-acres and three ephemeral streams (main stream is Dry Creek with two tributaries) were also mapped on the property encompassing 1.25-acres.

In GeoEngineers professional opinion, the property does not contain any USACE jurisdictional wetlands. However, Dry Creek and its tributaries are jurisdictional Waters of the United States (WOTUS).

This delineation was prepared using current applicable guidance and methodology, and it represents the best professional judgement of GeoEngineers. As a professional opinion only, it does not represent final agency approval of the delineated features, and we recommend submitting this information to the USACE for review and verification to prevent unavoidable impacts to WOTUS.

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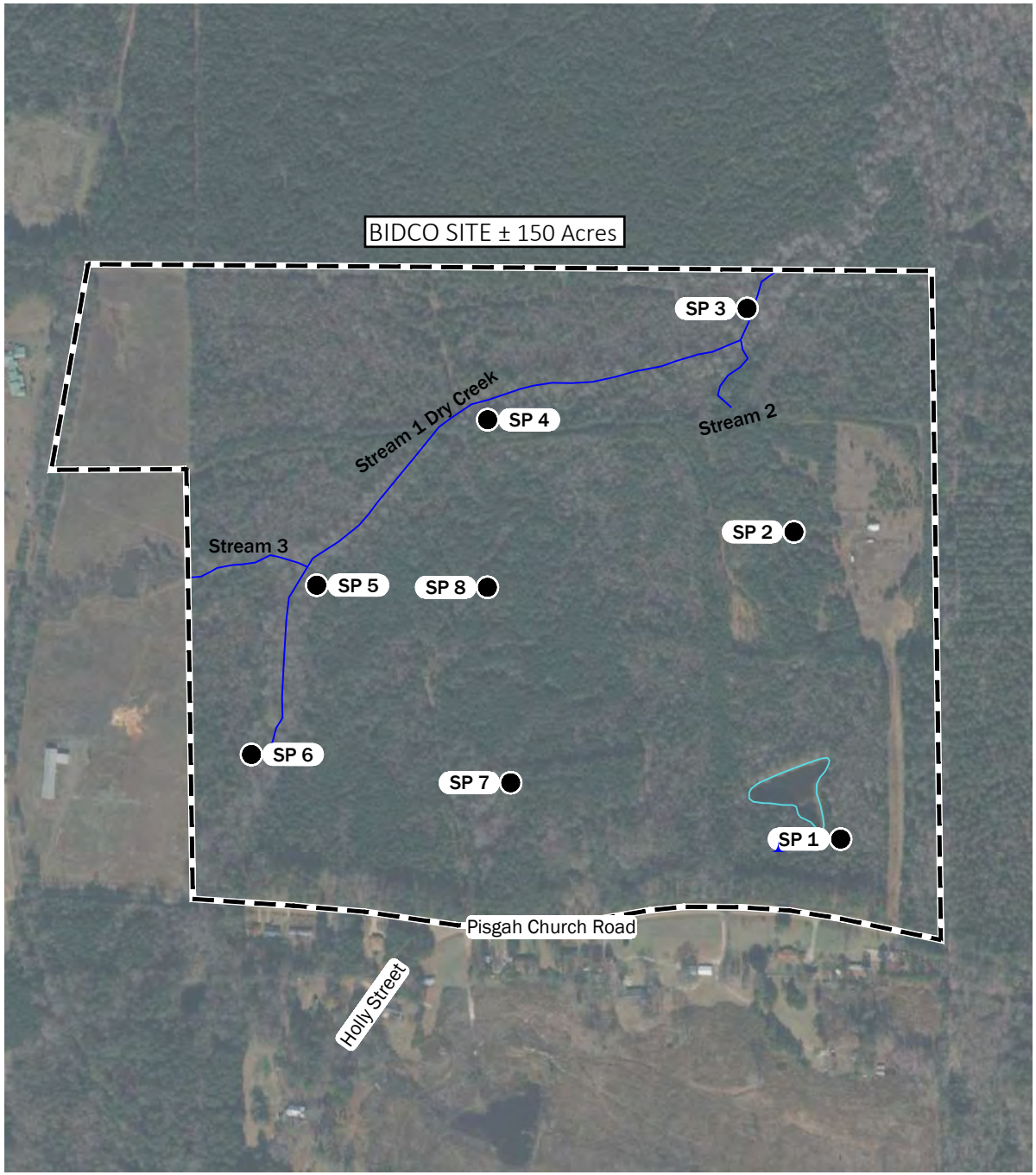

Legend

- Site Boundary
- Sample Plots
- Ephemeral Streams 1.25 Acres
- Pond 0.83 Acres

N

0 600

Feet

Source(s):

- Aerial from Microsoft Bing

Coordinate System: Louisiana State Plane, Northern Zone, NAD83, US Foot

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Wetland Delineation Map

BIDCO Site
Union Parish, Louisiana

GeoEngineers

Figure 6

1.0 Introduction

This document describes the results of a wetland delineation investigation of the proposed BIDCO Site (Site). Based on information provided by CSRS, Inc. (CSRS), GeoEngineers, Inc. (GeoEngineers) understands that the study is being conducted to support the requirements to meet the Louisiana Economic Development (LED) site certification process.

2.0 Project Location/General Setting

The project Site is approximately 150-acre and is located in Union Parish, Louisiana. Figures 1 and 6 depict the general vicinity of the Site and the Site as delineated, respectively. GeoEngineers staff assessed the proposed project Site for potential jurisdictional wetlands and will apply for an Approved Jurisdictional Determination from the United States Army Corps of Engineers (USACE) upon approval by the landowner.

3.0 Scope of Services

GeoEngineers was retained by CSRS to conduct a wetland delineation of the proposed Site for the LED site certification process. The scope of services associated with this wetland delineation included:

1. **Literature Review/Field Preparation**: GeoEngineers reviewed appropriate reference materials pertinent to the Site, including United States Fish and Wildlife Service (USFWS); National Wetland Inventory (NWI) maps; United States Geological Survey (USGS) topographic maps; United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Web Soil Survey for Union Parish, Louisiana; recent aerial photographs; and other readily available background information.

2. **Field Delineation/Assessment**: GeoEngineers mobilized to the Site to conduct wetland delineation activities within project boundaries on October 22, 2024. Wetland boundaries were determined after consideration of three wetland parameters: (1) vegetation; (2) soils; and (3) hydrology in accordance with the USACE Wetland Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plains Region, Version 2.0, dated November 2010. Soil pits were hand excavated at the project site, as needed and appropriate, to record soil conditions relative to hydric indicators. GeoEngineers assessed the vegetative cover near each soil pit and estimated the relative abundance of hydrophytic species.

   Wetland boundaries were delineated in the field. Boundaries and sample data plots were marked in the field using a global positioning system (GPS).

3. **Report Preparation**: GeoEngineers prepared this wetland delineation report in accordance with the appropriate regulatory requirements and guidance, as referenced. The report includes documentation of the upland areas, wetland areas, and intermittent streams, with supporting illustrations, photographs, and reference citations, as applicable. Map excerpts and appropriate appendices are also presented in Appendix A and Appendix B to support GeoEngineers' findings and conclusions.

4.0 Methods

4.1. LITERATURE REVIEW

GeoEngineers researched existing information on wetlands, streams, ditches, and other man-made aquatic features documented within the project boundary prior to conducting the site visit. The list below includes publicly available reviewed literature:

- USGS Topographic Map;
- USFWS NWI maps;
- USDA/NRCS Web Soil Survey for Union Parish Louisiana; and
- Current and historical aerial photographs.

4.2. WETLAND DELINEATION

The wetland delineation and assessment were conducted in accordance with the guidance set forth in the 1987 USACE Wetland Delineation Manual (Environmental Laboratory 1987) and the 2010 Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plains Region, Version 2.0 (USACE 2010). These manuals follow a three-parameter approach for conducting wetland determinations. This approach documents: (1) the presence of hydrophytic vegetation; (2) hydric soils; and (3) wetland hydrology, all of which are described in further detail below. Except for wetlands with special characteristics, the presence of all three criteria is required for a given area to be classified as a wetland under these two guidance documents.

4.2.1. Field Methods

Prior to visiting the Site, a health and safety briefing was completed, field gear and travel plans were prepared, and a communications protocol for the field crew was established. A GeoEngineers wetlands scientist conducted the field assessment on October 22, 2024.

Based on site observations relative to topography, hydrology, and vegetation, wetland boundaries are estimated for subsequent testing to compare upland and wetland characteristics within the depressional and adjacent areas. Soil pits were hand dug to approximately 16-18 inches below ground surface (bgs). Soil pits were advanced within and outside a given wetland boundary to assess soil conditions in wetland and upland areas. Soils in each pit were evaluated for texture, matrix color, presence, or absence of redoximorphic features or gleying, and depth of saturation. This information was used to determine the presence/absence of hydric soils and to assist in the development of wetland boundaries. Details regarding soils evaluation methodology are described in the “Soils” section below.

Wetland hydrology indicators, including drainage patterns, presence of surface water, depth of groundwater within soil pits, and vegetation community were also noted at sample plots surrounding soil pits (approximate 50-foot radius). Vegetation, soil, and hydrologic information collected during the field study are presented on the Standard 2010 Regional Supplemental to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plains Region, Version 2.0 wetland delineation data forms, which are included in Appendix B.

Wetland boundaries are delineated and mapped in the field. A photographic record of site conditions during our field study is provided in Appendix A, Site Photographs.

4.2.2. Vegetation

The USACE 2010 Regional Supplement: Atlantic and Gulf Coastal Plains Region, Version 2.0, defines hydrophytic vegetation as, "the community that is within areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to exert a controlling influence on the plant species present" (USACE 2010). Hydrophytic plant species can grow, compete, and establish in areas where anaerobic conditions exist due to the presence of surface water and/or groundwater. In 1988, the USACE and USFWS (Reed 1988) developed plant indicator categories that describe the probability of vegetation species to occur in wetlands. Each plant species observed within a given on-site sample plot was categorized according to the USACE 2022 National Wetland Plant List (USACE, 2022). Table 1 provides summarized definitions of the indicator status categories.

TABLE 1. PLANT INDICATOR STATUS CATEGORIES

Indicator Status	Indicator Symbol	Description
Obligate Wetland Plants	OBL	Plants that occur in wetlands, under natural conditions, greater than 99 percent of the time.
Facultative Wetland Plants	FACW	Plants that occur in wetlands, under natural conditions, between 67 to 99 percent of the time.
Facultative Plants	FAC	Plants that occur in wetlands, under natural conditions, between 34 to 66 percent of the time.
Facultative Upland Plants	FACU	Plants that occur in wetlands, under natural conditions, between 1 to 33 percent of the time.
Obligate Upland Plants	UPL	Plants that occur in wetlands, under natural conditions, less than 1 percent of the time.
No Indicator	NI	Indicator status has not been identified for the species.
No Occurrence	NO	No known occurrence of the plant in the region.

The prevalence of wetland vegetation is characterized by the dominant species comprising the plant community within a wetland. A dominant species is considered any plant species that represents 20 percent or greater total aerial coverage for each vegetative stratum (tree, shrub, herbaceous or aquatic bed). If more than 50 percent of the dominant plant species in an area were categorized as OBL, FACW, or FAC, the plant community is classified as hydrophytic and, therefore, meets that wetland indicator parameter. On-site wetland vegetation communities, identified by field scientists, were classified according to the Cowardin Classification System (Cowardin, et al. 1979).

4.2.3. Hydrology

Hydrologic patterns that may create wetlands can be influenced by precipitation, stratigraphy, topography, soil permeability, plant cover, and human disturbance. Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Primary and secondary hydrologic indicators used by field biologists to assist in the identification of potential wetlands included the following (USACE 2010):

- Surface water or inundation;
- High water table or saturated soil within 12 inches of the ground surface for 14 or more consecutive days at a minimum frequency of 5 years out of 10;

- Water marks;
- Sediment and drift deposits;
- Algal mat or crust;
- Iron deposits;
- Surface soil cracks;
- Salt crust;
- Inundation visible on aerial photography;
- Sparsely vegetated concave surface;
- Aquatic invertebrates;
- Water-stained leaves;
- Hydrogen sulfide odor;
- Oxidized rhizospheres along living roots;
- Presence of reduced iron; and
- Stunted or stressed plants.

Secondary indicators include (USACE 2008):

- Drainage patterns;
- Dry-season water table;
- Saturation visible on aerial photography;
- Geomorphic position;
- Shallow aquitard;
- FAC-neutral test; and
- Crayfish burrows.

The growing season for a region is dependent upon climate, precipitation, and topography. Hydrology must be present for at least 14 consecutive days and within 12 inches of the ground surface during the growing season to be considered a wetland.

4.2.4. Soils

Hydric soils are formed under conditions of saturation, flooding, or ponding for a period long enough during the growing season that anaerobic conditions develop in the upper soil strata (0 to 20 inches commonly) (USACE 2010). These anaerobic conditions can result in certain soil characteristics that can be identified in the field while investigating (confirm or deny) the hydric soil wetland parameter. Prolonged anaerobic soil conditions eventually lead to a chemically reduced state where soil components (iron, manganese, sulfur, and carbon compounds) develop soil colors and other physical characteristics indicative of hydric status. These chemically reduced soil components persist when the soil is either wet or dry. Specific hydric soil characteristics used by GeoEngineers' wetland scientist to identify hydric soils include:

- Reduced iron resulting in a soil color that is known as gley (bluish-gray or greenish-gray);
- Loss of iron resulting in a soil color that is known as redox depletion (gray or reddish gray);
- Loss of iron resulting in concentrated soil patches known as redoximorphic concretions (orange or red);
- Sulfidic odor; or
- High organic matter content (peat or muck) in the upper 32 inches of the soil profile.

GeoEngineers' methods for identifying hydric soils included digging soil pits wherever drainage patterns, ponded areas, or indicators of water presence was observed. Soil pits were hand dug to approximately 16-18 inches bgs (as described previously in Field Methods) along a transect perpendicular to the predicted wetland boundary in a gradient from dry to wet. Soils obtained from each soil pit were observed for color profile, odor, and redoximorphic condition. Hydric soil conditions must be met within 12 inches of the ground surface to consider the soil types hydric.

Soil colors were determined using Munsell® Soil Color Charts (Gretag/Macbeth 2000) and their appropriate Hue: spectral colors (e.g., 10YR), Value: degree of lightness (e.g., 2/), and Chroma: strength or purity of the color (e.g., /1). Soil profiles must have a dominant chroma of 2 or less or the layer with dominant chroma of more than 2 must be less than 6 inches thick to meet any hydric soil indicators. Hydric soil indicators commonly found in wetlands are identified in the technical document — Field Indicators of Hydric Soils in the United States, a Field Guide for Identifying and Delineating Hydric Soils, Version 7.0 (USDA 2010).

4.3. WETLAND CHARACTERIZATION

The areas delineated in this study were characterized according to the Cowardin classification (Cowardin et al. 1979), which categorizes wetlands and deep-water habitats according to five separate systems: Marine, Estuarine, Riverine, Lacustrine, and Palustrine. These systems are then stratified into subsystems based on plant community types and are further stratified into classes and subclasses from substrate material. Each class and subclass are then annotated with specific modifiers for water regimes, water chemistry, soil, and other special modifiers. The USFWS uses this classification system in the development of their NWI maps.

Site features were also identified according to their hydrogeomorphic (HGM) classification to determine their location and function within the watershed. HGM classifications include the following:

- Depressional;
- Riverine;
- Lake-fringe;
- Slope;
- Flats; and
- Freshwater tidal.

4.3.1. Ordinary High-Water Mark Identification

The USACE (2018) New Orleans District defines the Ordinary High Water Mark (OHWM) as the line on the shores established by the fluctuations of water and indicated by physical characteristics such as:

- A clear natural line impressed on the bank;
- Shelving;
- Changes in the character of the soil;
- Destruction of terrestrial vegetation;
- The presence of litter and debris; or
- Other appropriate means that consider the characteristics of the surrounding areas.

The USACE (2005) further defines the OHWM as follows:

The term "OHWM" means that line on the shore established by the fluctuations of weather and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

5.0 Results

5.1. LITERATURE REVIEW

5.1.1. Soils

The Union Parish, Louisiana NRCS Web Soils Soil Survey (USDA 2024) identified the following soil types potentially within the project right-of-way (ROW) (NRCS Soils Map, Figure 3):

- An-Angie very fine sandy loam, 1 to 5 percent slopes;
- Br-Briley loamy fine sand, 1 to 5 percent slopes;
- ID-Iuka-Dela complex, 0 to 1 perfect slopes, frequently flooded;
- Rs-Ruston fine sandy loam, 1 to 5 percent slopes;
- W-Water; and
- Wc-Warnock fine sandy loam, 1 to 5 percent slopes.

5.1.2. NWI Map

The USFWS NWI map (USFWS 2024) identified the following habitat types potentially within the project boundary (National Wetlands Inventory Map, Figure 4). It is important to note that the information below is taken from publicly available databases and then surveyed in the field for accuracy.

- Freshwater Ponds.

5.2. FIELD INVESTIGATION

5.2.1. Wetland Delineation/Assessment

The project Site consisted of approximately a 150-acre parcel of predominantly forested land currently utilized for silviculture purposes. At the time of the field visit, the area had been recently logged. The topography generally consisted of gently rolling hills containing a mix of bottomland hardwoods and pine

habitat. Much of the Site was convex in nature slopping and draining towards the three ephemeral streams that run through the property. Elevation changes were due to 3 to 5 percent slopes from the identified upland features. GeoEngineers determined that there were no potentially jurisdictional wetlands on the property. A man-made pond was observed on the property encompassing approximately 0.83-acres and three ephemeral streams (main stream 1.25-acres with two tributaries). These features were mapped out and recorded in Figure 6, Wetland Delineation Site Map.

5.2.2. Soil and Hydrology

GeoEngineers established eight sample plots (SP 1 through SP 8) within the project Site and is illustrated in Figure 6, Wetland Delineation Site Map. Table 2 below provides a summary of soil and hydrology data conditions encountered during the delineation/assessment.

TABLE 2. SOIL/HYDROLOGY DATA SUMMARY

Soil Pit ID	Approximate Depth (inches bgs)	Hue, Value, Chroma	Redox Features	Hue, Value, Chroma	Soil Description	Hydric Soils Present? (Yes / No)	Other
SP-1	0-16	10YR6/2	C M	10YR4/6	Silty Loam	Y	N/A
SP-2	0-5 5-16	10YR6/4 5YR4/6	N/A	N/A	Silty Clay Silty Clay	N	N/A
SP-3	0-16	10YR6/4	N/A	N/A	Silt Loam	N	N/A
SP-4	0-16	10YR5/4	N/A	N/A	Silty Loam	N	N/A
SP-5	0-16	10YR5/4	N/A	N/A	Silty Loam	N	N/A
SP-6	0-16	10YR6/3	N/A	N/A	Silty Clay Loam	N	N/A
SP-7	0-16	10YR6/3	N/A	N/A	Silty Clay Loam	N	N/A
SP-8	0-16	10YR5/3	RM M	10YR5/8	Silt Loam	N	N/A

A photographic record of the soil pit conditions is provided in Appendix A. The wetland determination data forms are provided in Appendix B.

5.2.3. General Vegetation

Vegetation was characterized based on general dominant species observed within approximately 50-foot-diameter sample plot surrounding each soil pit. Dominant vegetation consisted of Water oak (*Quercus nigra*), Sweetgum (*Liquidambar styraciflua*), American elm (*Ulmus americana*) and Black tupelo (*Nyssa sylvatica*). A more detailed species list can be viewed in Appendix B on the Wetland Determination Data Forms.

6.0 Summary and Conclusions

6.1. WETLANDS AND WATERS OF THE UNITED STATES

GeoEngineers conducted a wetland delineation on the proposed BIDCO Site property in Union Parish, Louisiana. The Site is comprised of forested land used for silviculture and recreation purposes.

A total of eight sample plots were established within the Site. None of the eight exhibited hydric soil, hydrology, and vegetation consistent with USACE or U.S. Environmental Protection Agency (EPA) wetland criteria. GeoEngineers concludes that there are approximately zero acres of potentially jurisdictional wetlands within the total150-acre project Site. However, one man-made pond was observed on the property encompassing approximately 0.83-acres. Three ephemeral streams, Dry Creek with two tributaries, also exist on the property encompassing 1.25-acres. Dry Creek and its tributaries are considered jurisdictional WOTUS. This delineation was prepared using current applicable guidance and methodology, and it represents the best professional judgement of GeoEngineers. As a professional opinion only, it does not represent final agency approval of the delineated features, and we recommend submitting this information to the USACE for review and verification to prevent unavoidable impacts to the WOTUS.

7.0 Limitations

GeoEngineers has prepared this wetland delineation report in accordance with the scope and limitations of our proposal. Within the limitations of scope, schedule and budget, our services have been executed in accordance with the generally accepted practices for wetland delineation in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

This report has been prepared for exclusive use by CSRS and their authorized agents following the described methods and information available at the time of our services. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. The information contained herein should not be applied for any purpose or project except the one originally contemplated.

The applicant is advised to contact all appropriate regulatory agencies (local, state, and federal) prior to design or construction of any development to obtain necessary permits and approvals. Wetland boundaries, classifications and discussions are based on our understanding of the local, state, and federal regulations, and site conditions at the time of our work. The final wetland boundary determinations and wetland classification is to be made or verified by the appropriate jurisdictional agency.

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7.1. INFORMATION PROVIDED BY OTHERS

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

8.0 References

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Figures

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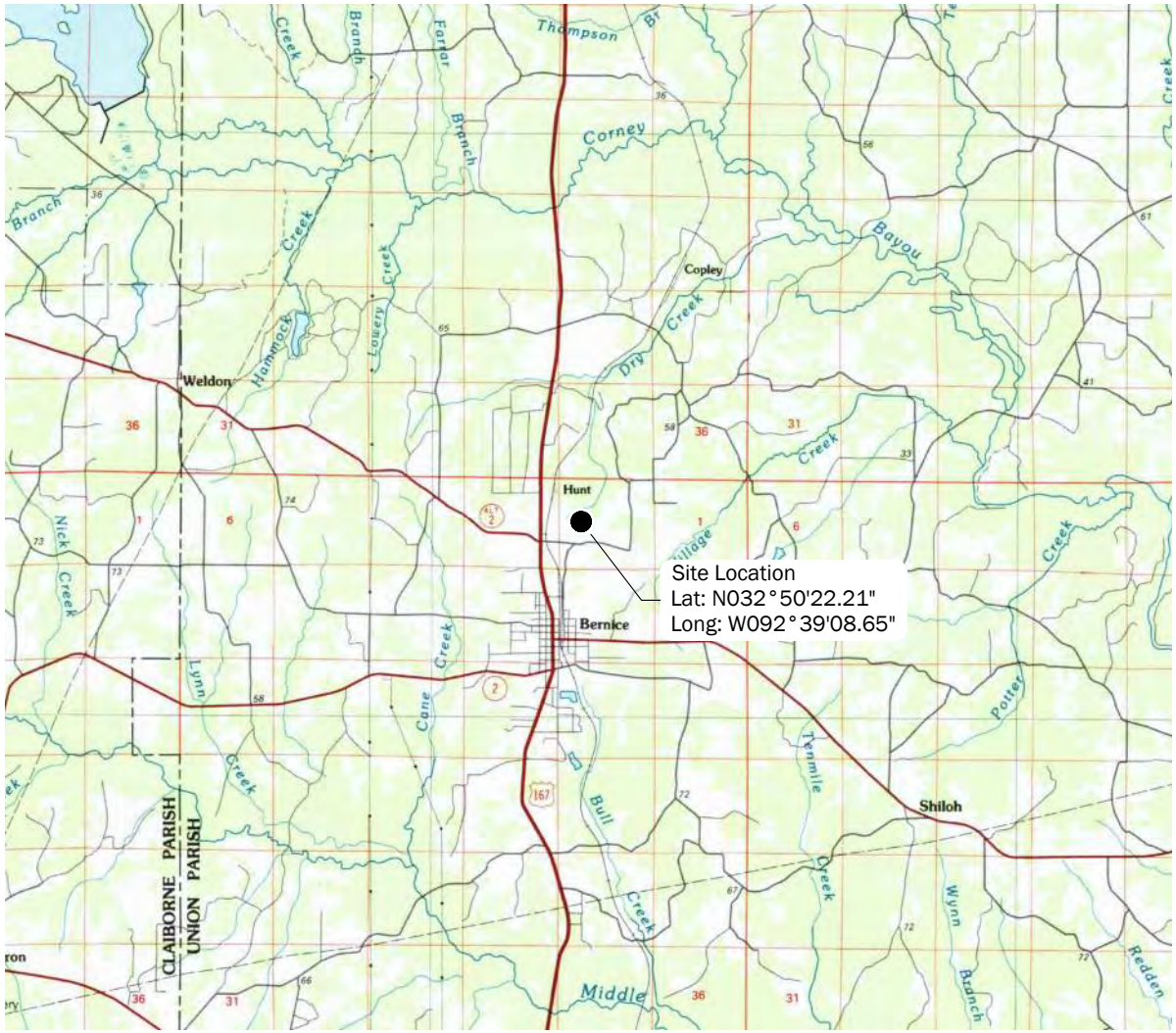

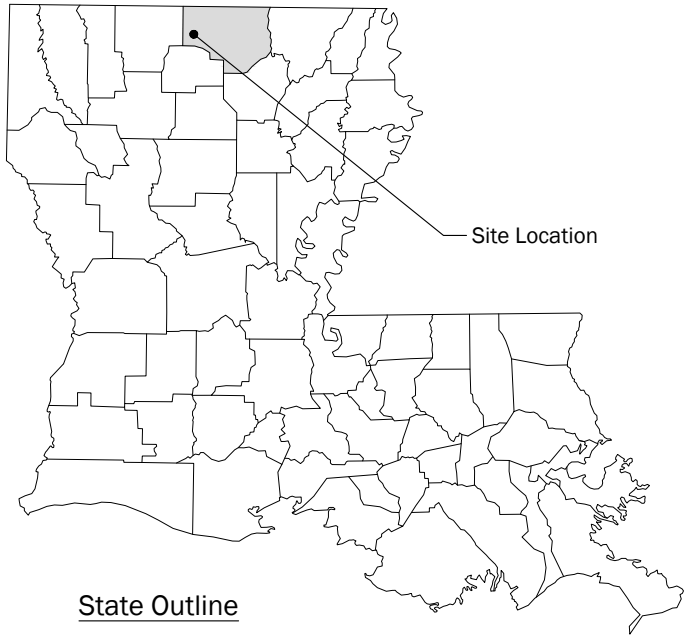

State Outline

Source: Topographic Image was taken from USGS, Quad: Monroe North, dated 1985

Coordinate System: Louisiana State Plane, North Zone, NAD83, US Foot

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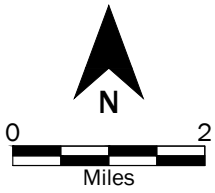

Vicinity Map

BIDCO Site
Union Parish, Louisiana

GeoEngineers

Figure 1

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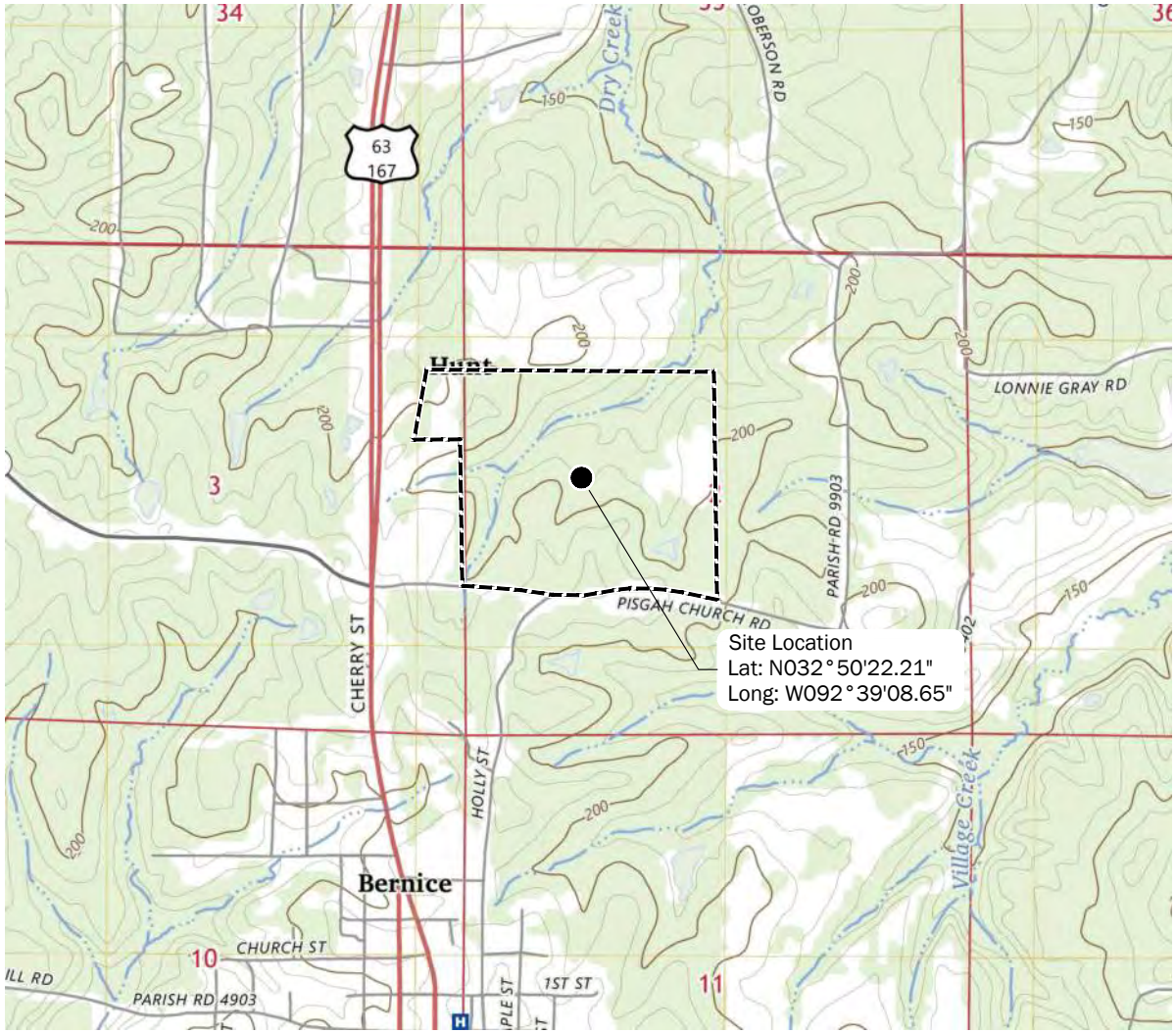

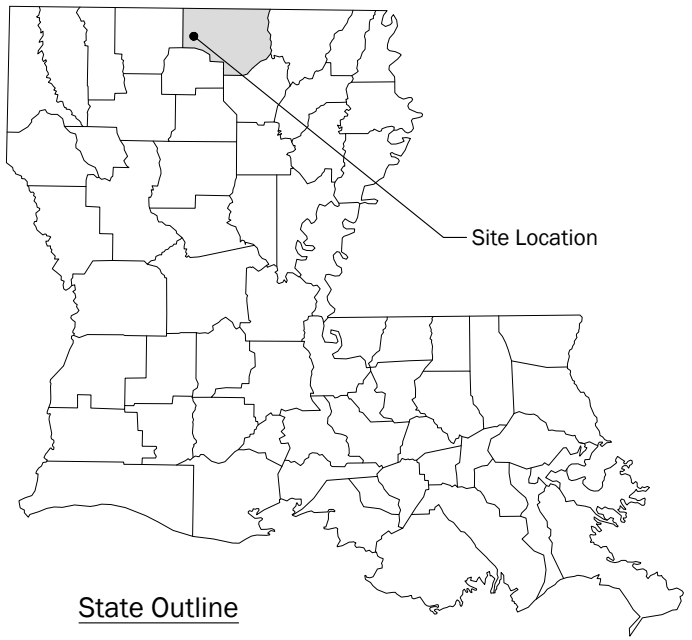

Source: Topographic Image was taken from USGS, Quad: Bernice, dated 2024

Coordinate System: Louisiana State Plane, North Zone, NAD83, US Foot

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Feet

Site Topographic Map

BIDCO Site
Union Parish, Louisiana

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Figure 2

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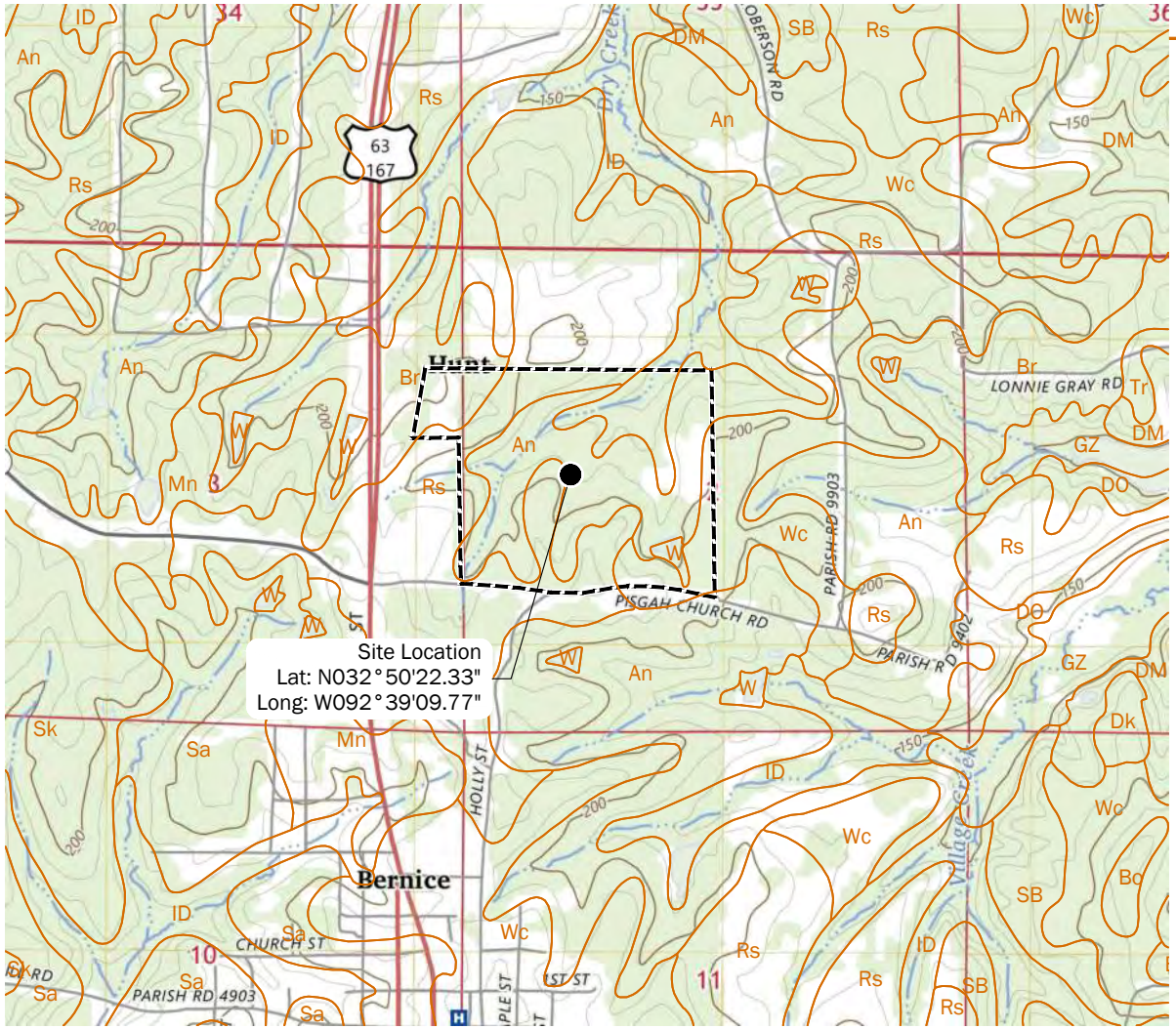

Legend

	Soil Map Unit Polygons
W	Water
An	Angie very fine sandy loam, 1 to 5 percent slopes
Bo	Boykin loamy fine sand, 1 to 5 percent slopes
Br	Briley loamy fine sand, 1 to 5 percent slopes
DK	Darley gravelly fine sandy loam, 1 to 5 percent slopes
DM	Darley gravelly fine sandy loam, 5 to 12 percent slopes
DO	Darley gravelly fine sandy loam, 12 to 30 percent slopes
GZ	Guyton-Ouachita silt loams, 0 to 1 percent slopes, frequently flooded
ID	Iuka-Dela complex, 0 to 1 percent slopes, frequently flooded
Ma	Mahan fine sandy loam, 1 to 5 percent slopes
Mn	Malbis fine sandy loam, 1 to 5 percent slopes
Rs	Ruston fine sandy loam, 1 to 5 percent slopes
Sa	Sacul very fine sandy loam, 1 to 5 percent slopes
SB	Sacul very fine sandy loam, 5 to 12 percent slopes
Sk	Sawyer silt loam, 1 to 5 percent slopes
Tr	Trep loamy fine sand, 1 to 5 percent slopes
Wc	Warnock fine sandy loam, 1 to 5 percent slopes

Soils in Project Area

An	Angie very fine sandy loam, 1 to 5 percent slopes
ID	Iuka-Dela complex, 0 to 1 percent slopes, frequently flooded
Rs	Ruston fine sandy loam, 1 to 5 percent slopes
Wc	Warnock fine sandy loam, 1 to 5 percent slopes

Source: Topographic Image was taken from USGS, Quad: Bernice, dated 2024
Soil Data from Natural Resources Conservation Service, Dated 2024

Coordinate System: Louisiana State Plane, Northern Zone, NAD83, US Foot

N

0 2000

Feet

NCRS Soils Map

BIDCO Site
Union Parish, Louisiana

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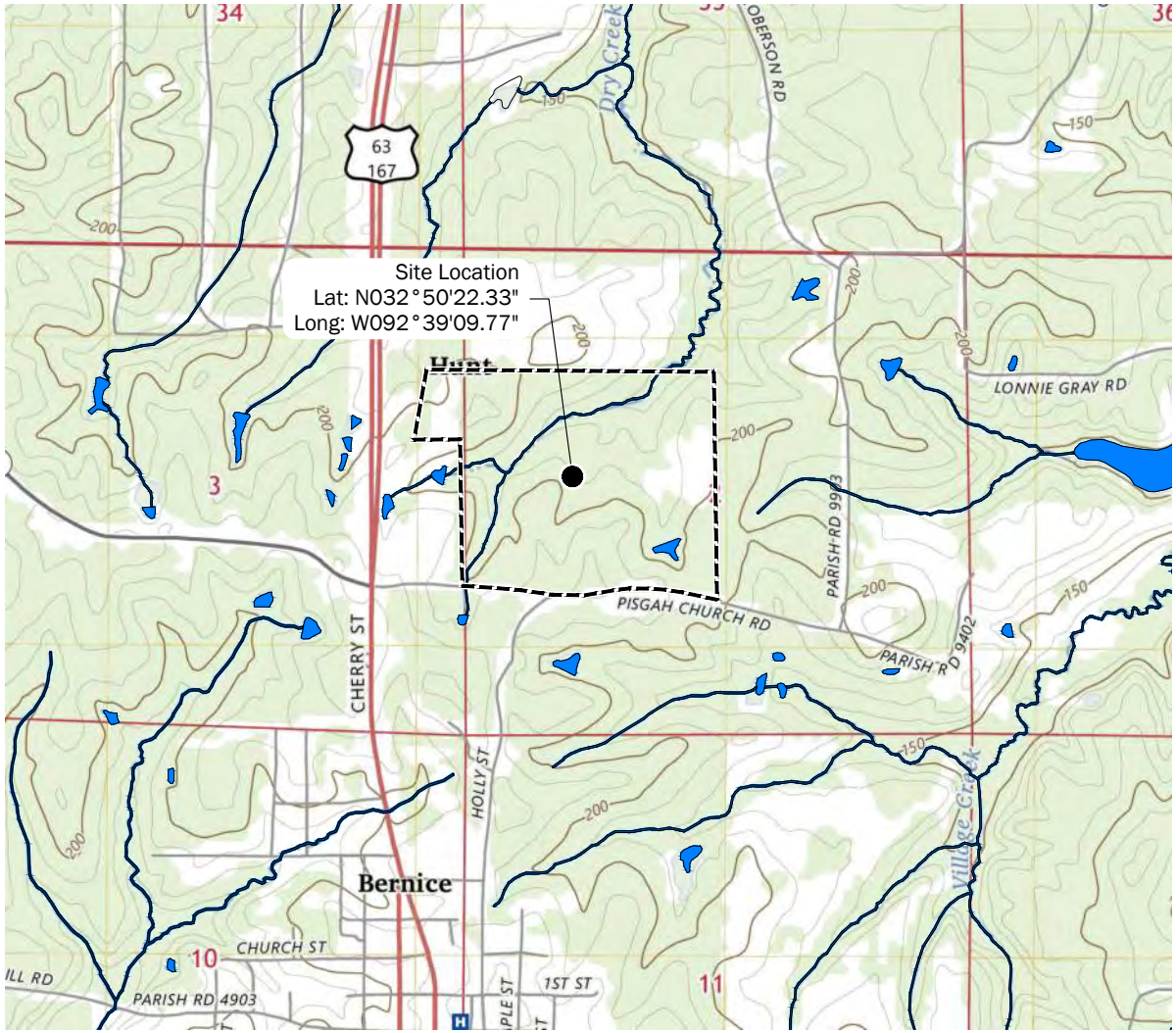
Figure 3

P:\27\27342001\CAD\00\Wetland Delineation Report\2734200100_F04_National Wetlands Inventory.dwg 4 Date Exported:10/30/2024 11:23 AM - by Jackson N. Fellows



Legend

- Freshwater Pond
- Riverine

Source: Topographic Image was taken from USGS, Quad: Bernice, dated 2024
Wetland Extents was taken from National Wetlands inventory

Coordinate System: Louisiana State Plane, Northern Zone, NAD83, US Foot

N

0 2000

Feet

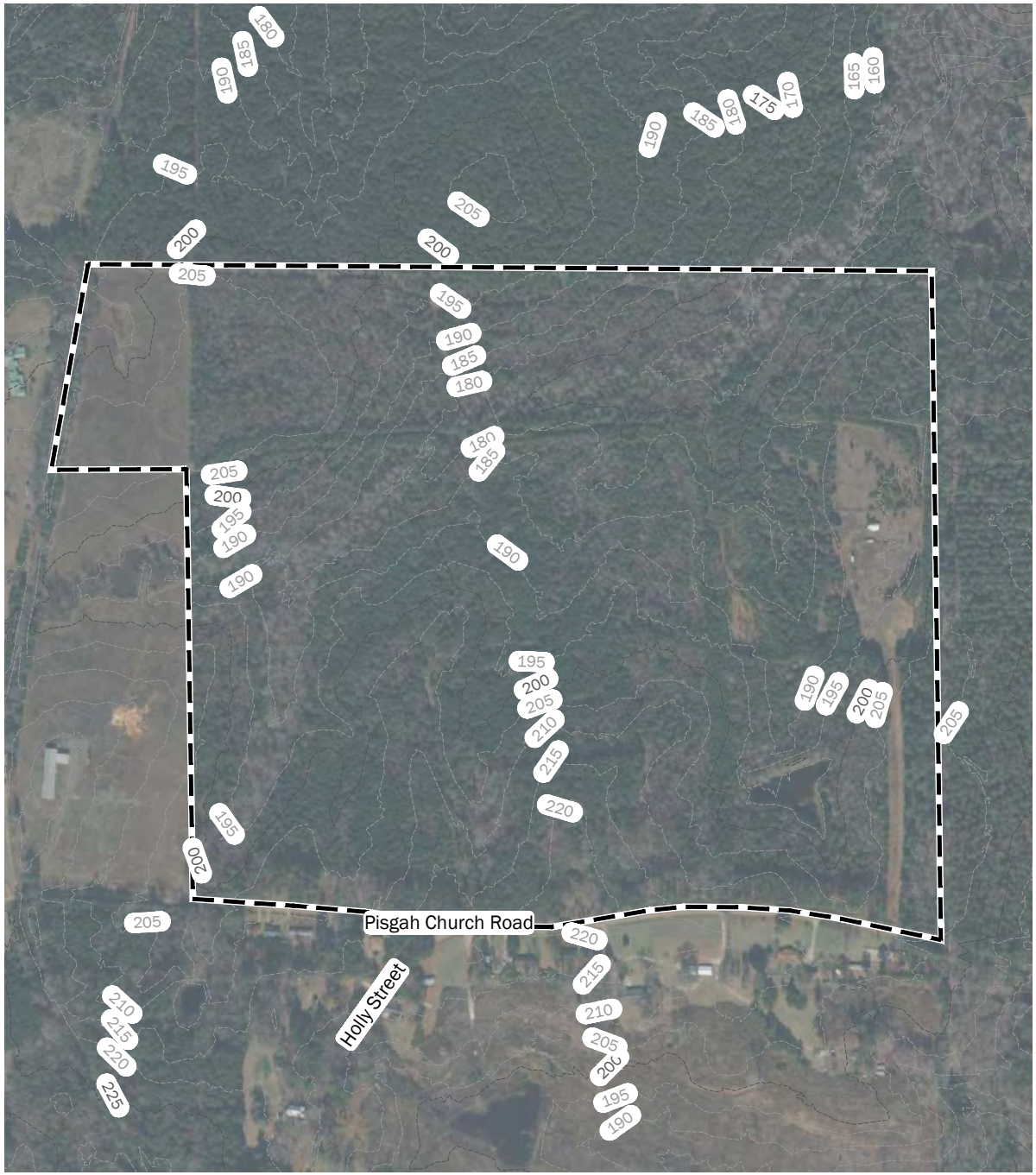
National Wetlands Inventory

BIDCO Site
Union Parish, Louisiana

GeoEngineers

Figure 4

P:\27\27342001\CAD\00\Wetland Delineation Report\2734200100_F05_Lidar Map.dwg 5 Date Exported:10/29/2024 12:20 PM - by Jackson N. Fellows



Legend

200 Major Contour Elevation (ft)

205 Minor Contour Elevation (ft)

N

0 600

Feet

Source(s):

- Aerial from Microsoft Bing

Coordinate System: Louisiana State Plane, Northern Zone, NAD83, US Foot

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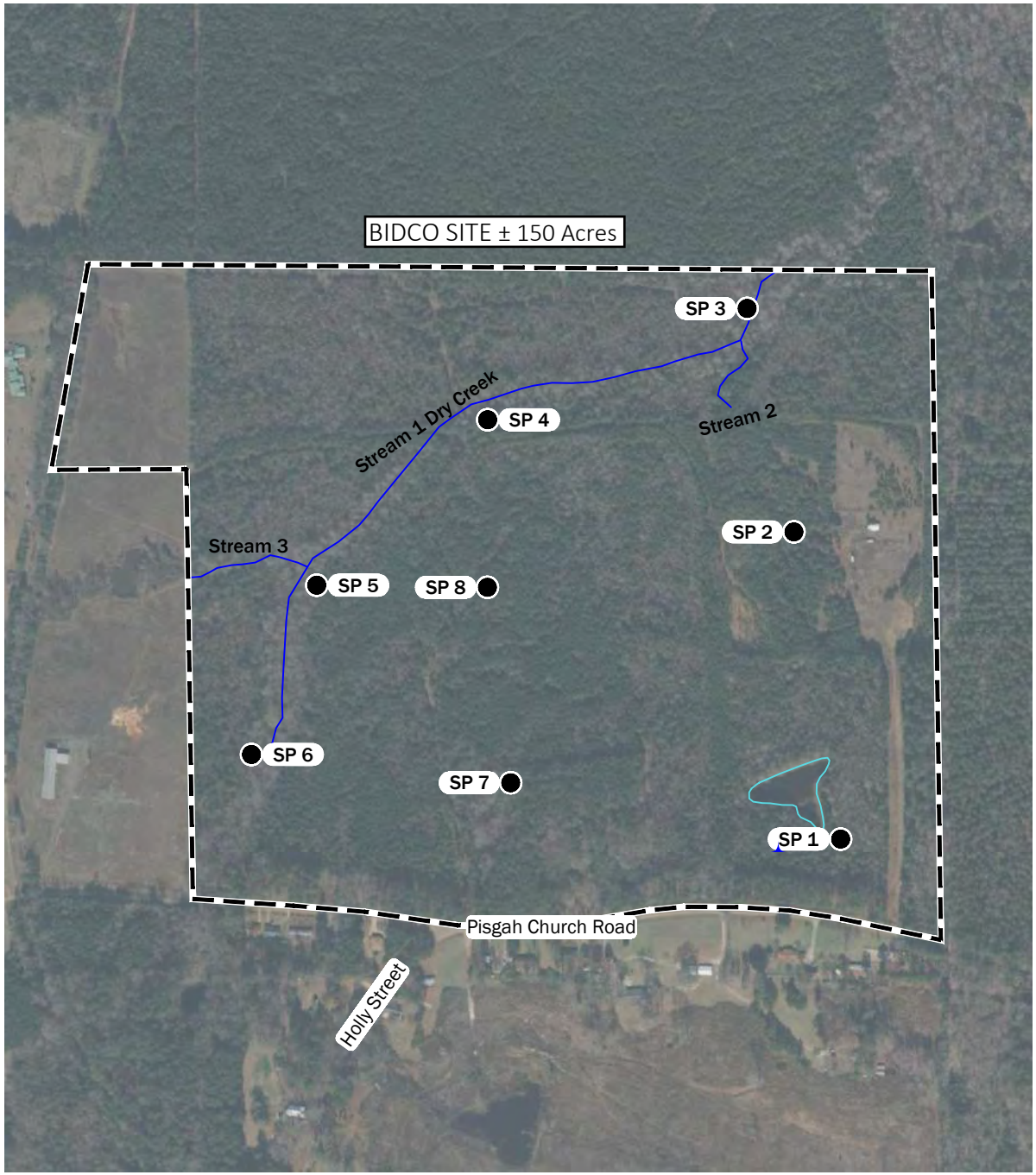
Lidar Map

BIDCO Site
Union Parish, Louisiana

GeoEngineers

Figure 5

P:\27\27342001\CAD\00\Wetland Delineation Report\2734200100_F06_Site Plan.dwg 6 Date Exported:10/29/2024 12:19 PM - by Jackson N. Fellows



Legend

- Site Boundary
- Sample Plots
- Ephemeral Streams 1.25 Acres
- Pond 0.83 Acres

N

0 600

Feet

Source(s):

- Aerial from Microsoft Bing

Coordinate System: Louisiana State Plane, Northern Zone, NAD83, US Foot

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Wetland Delineation Map

BIDCO Site
Union Parish, Louisiana

GeoEngineers

Figure 6

Appendices

Appendix A
Site Photographs

Pond Facing East

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Site Photographs

BIDCO Site Wetland Delineation,
Union Parish, Louisiana

GeoEngineers

Figure A-1

Pond Facing South

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-2

Pond Facing West

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-3

Sample Plot 1 Facing East

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-4

Sample Plot 1 Facing North

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-5

Sample Plot 1 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-6

Sample Plot 1 Facing West

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-7

Sample Plot 1 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-8

Sample Plot 2 Facing East

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-9

Sample Plot 2 Facing North

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-10

Sample Plot 2 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-11

Sample Plot 2 Facing West

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-12

Sample Plot 2 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-13

Sample Plot 3 Facing East

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-14

Sample Plot 3 Facing North

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-15

Sample Plot 3 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-16

Sample Plot 3 Facing West

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-17

Sample Plot 3 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-18

Sample Plot 4 Facing East

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-19

Sample Plot 4 Facing North

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-20

Sample Plot 4 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-21

Sample Plot 4 Facing West

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-22

Sample Plot 4 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-23

Sample Plot 5 Facing East

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-24

Sample Plot 5 Facing North

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-25

Sample Plot 5 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-26

Sample Plot 5 Facing West

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-27

Sample Plot 5 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-28

Sample Plot 6 Facing East

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-29

Sample Plot 6 Facing North

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-30

Sample Plot 6 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-31

Sample Plot 6 Facing West

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-32

Sample Plot 6 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-33

Sample Plot 7 Facing East

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-34

Sample Plot 7 Facing North

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-35

Sample Plot 7 Facing South

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-36

Sample Plot 7 Facing West

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-37

Sample Plot 7 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-38

Sample Plot 8 Facing East

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-39

Sample Plot 8 Facing North

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-40

Sample Plot 8 Facing South

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-41

Sample Plot 8 Facing West

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-42

Sample Plot 8 Soil Profile

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-43

Ephemeral Stream 1

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-44

Ephemeral Stream 1

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-45

Ephemeral Stream 1

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

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Figure A-46

Ephemeral Stream 1

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Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-47

Ephemeral Stream 2

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-48

Ephemeral Stream 2

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-49

Ephemeral Stream 3

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-50

Ephemeral Stream 3

Site Photographs

BIDCO Site Wetland Delineation
Union Parish, Louisiana

GeoEngineers

Figure A-51

Appendix B
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site City/County: Union Parish Sampling Date: 10/22/2024

Applicant/Owner: CSRS State: LA Sampling Point: SP 8

Investigator(s): Steven D. / Brandon M. Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5

Subregion (LRR or MLRA): LRR P Lat: 32°50'22.00"N Long: 92°39'11.00"W Datum: NAD 83

Soil Map Unit Name: Rs - Ruston fine sandy loam NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches): _____
Water Table Present?	Yes [ ]	No [✔]	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 8

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.	5	Y	FAC
3.	5	Y	FAC
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 4 (A)	(B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL

Sampling Point: SP 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/3	95	10YR 5/8	5	RM	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [✔]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [x]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Bidco Site | City/County: Union Parish | Sampling Date: 10/22/2024

Applicant/Owner: CSRS | State: LA | Sampling Point: SP 1

Investigator(s): Steven D. / Brandon M. | Section, Township, Range: S2 T21N R3W

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR or MLRA): LRR P | Lat: 32°50'13.00"N | Long: 92°38'56.00"W | Datum: NAD 83

Soil Map Unit Name: Wc- Warnock fine sandy loam | NWI classification: none

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 [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✔]
Hydric Soil Present?	Yes [✔]	No [✔]	
Wetland Hydrology Present?	Yes [ ]	No [✔]	

Remarks:

Area has been logged recently this year.

HYDROLOGY

Wetland Hydrology Indicators:

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

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✔]	Depth (inches):
Water Table Present?	Yes [ ]	No [✔]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✔]	Depth (inches):

Wetland Hydrology Present? Yes [ ] No [✔]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Sapling Stratum (Plot size:)			
1. Liquidambar styraciflua	10	Y	FAC
2. Quercus nigra	5	Y	FAC
3. Ulmus americana	5	Y	FAC
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Shrub Stratum (Plot size:)			
1. Liquidambar styraciflua	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size:)			
1. Croton capitatus	20	Y	N/A
2. Paspalum urvillei	10	Y	FAC
3. Cyperus esculentus	5	N	FAC
4. Eupatorium capillifolium	5	N	FACU
5. Solidago altissima	5	N	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size:)			
1. Smilax articulata	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 3	x 3 = 9
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 4 (A)	13 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

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

SOIL

Sampling Point: SP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 6/2	95	10YR 4/6	5	C	M	Silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ 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 Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☑

Remarks: