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LOUISIANA ECONOMIC DEVELOPMENT CERTIFIED SITE

Exhibit EE.
Martial Farms Wetlands Delineation Report

ONEACADIANA

LAFAYETTE ECONOMIC DEVELOPMENT AUTHORITY

BROUSSARD ECONOMIC DEVELOPMENT CORPORATION

Entergy®

Routine Wetland Delineation Report

Martial Farms Wetland Delineation Report

Lafayette Parish, LA

March 2021

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1.0 INTRODUCTION

A routine wetland delineation was conducted by Blue Ox Enterprises, LLC (Blue Ox) on February 4th, 2021 at the approximate 32.8 acre Martial Farm tract, in Broussard, LA (Site). The purpose of the wetland delineation was to determine the presence/absence of wetlands at the Site. The Site is situated on a tract that is in active agricultural use for sugar cane production. There is a small fallow portion on the northwestern portion of the tract that is not in active agriculture production. Based on the data collected, it is Blue Ox's professional opinion that no jurisdictional wetlands or non-wetland waters exist on the Site.

The Site is located in Section 35, T10S-E05E & Section 2, T11S-R05E. Geographically, the Site is located 2 miles southeast from Broussard, in Lafayette Parish. The location of the Site is illustrated on the maps in **Appendix C**.

2.0 METHODOLOGY

A review of the project site was conducted with the following tools to identify potential wetland indicators according to the 1987 Wetland Delineation Manual and Regional Supplement:

- USGS 7.5-minute topographic quadrangle maps,
- National Wetlands Inventory Maps
- Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979);
- The PLANTS Database (USDA / NRCS);
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Web Soil Survey
- USGS National Hydrography Dataset (NHD);
- Remote Sensing Aerial Photography including National Agricultural Imagery Program (NAIP) natural color and color infrared aerial photography;
- FEMA Floodplain Maps

Data sources were utilized as appropriate, findings were summarized, and a preliminary evaluation was conducted to determine potential existence of wetland indicators in the project area. After considering the preliminary data, a routine delineation method level was selected.

Per the 1987 Wetland Delineation Manual, the complexity of the project area and the quality and quantity of available information will be the influences governing the Routine Wetland Delineation Level. The three levels are as follows:

- Level 1 – An onsite inspection is unnecessary because existing information is sufficient for making a determination for the entire project area.
- Level 2 – An onsite inspection is necessary because insufficient information is available to characterize the vegetation, soils, and hydrology of the entire project area.
- Level 3 - An onsite inspection is necessary because sufficient information is available for a portion, but not all, of the project area.

This routine wetland delineation is a Level 2 Delineation. The delineators evaluated the three technical criteria: vegetation, hydrology, and soils in accordance with the 1987 U.S. Army Corps of Engineers (COE) Wetlands Delineation Manual, and the Gulf Coastal Plain Regional Supplement to the 1987 manual. All three criteria must be present in order to be a potentially jurisdictional wetland. The absence of any of these criteria could exclude an area from being a wetland under the jurisdiction of the Corps of Engineers. As per the 1987 U.S. Army Corps of Engineers (COE) Wetlands Delineation Manual, and the Gulf Coastal Plain Regional Supplement to the 1987 manual, the methodology for the delineation of the Site.

3.0 FINDINGS

A total of four Sample Plots, along with three Observation Points were documented on the Site. The Sample Plot locations were selected based on visual observations of changes in vegetation and/or topography. Recorded data forms are presented in **Appendix A**. Photographs are presented in **Appendix B**. The photographs illustrate typical conditions that were observed at the plots and various locations. Locations of the sample plots relative to the Site can be referenced in **Appendix C**.

3.1 Hydrology

3.1.1 General Site Characteristics

The Site exists on a gently sloping landform. Generally, slopes range from 0-4%. Surface saturation or inundation was not observed on referenced infrared images. The site is in active sugar cane production with several farm roads that traverse through the site. There is a small area approximately 1.8 acres in size in northwestern portion of the site that is out of production and contains historical evidence of land farming practices. A vegetated drain was observed within the Site. The feature appears to be man-made field drain with no observed connections to potentially jurisdictional wetlands or waters. See Aerial and Soil Map in **Appendix C** for location.

3.1.2 Sample Plot Data

Sample Plots did not meet the criteria for the presence of wetland hydrology. The wetland hydrology indicators, remarks, and determinations can be reviewed in detail on the data sheets located in **Appendix A**.

3.2 Vegetation

3.2.1 General Site Characteristics

The site consisted of primarily of sugar cane production. The small fallow area out of agricultural production contained primarily herbaceous with some scrub-shrub communities. Since the Site is currently under agriculture use, the vegetation was primarily comprised of sugar cane with some herbaceous species in uncultivated areas.

3.2.2 Sample Plot Data

Only Sample Plot 1 met the criteria for presence of wetland vegetation. The vegetation for all Sample Plots is noted in **Appendix A**. Dominance/Prevalence calculations, vegetation, criteria determination can be referenced in the corresponding data sheets. Photos can be found in **Appendix B**.

3.3 Soils

3.3.1 General Site Characteristics

According to the Lafayette Parish Soil Survey, the Site contains the following NRCS mapped soil types (**Appendix C**):

Map Symbol	Soil Name	Hydric Rating
CoB	Coteau silt loam, 0 to 1 percent slopes	10% hydric
MbC	Memphis silt loam, 1 to 5 percent slopes	0% hydric
MbA	Memphis silt loam, 0 to 1 percent slopes	5% hydric
FrA	Frost silt loam, 0 to 1 percent slopes, occasionally flooded	90% hydric

The site is located within the above listed NRCS-mapped soil units, the Site is comprised predominately of non-hydric soils according to the hydric ratings.

3.3.2 Sample Plot Data

There were no Sample Plots recorded that met the criteria for the presence of hydric soil for a wetland. Soil characteristics associated with each plot can be found in the corresponding data sheets located in **Appendix A**.

4.0 SUMMARY AND CONCLUSIONS

4.1 Data Summary

Sample Plots did not meet all three technical criteria of a wetland. The following table illustrates the results of the sample plot data:

Data Plot	Hydrology	Vegetation	Soils
Plot 1	N	Y	N
Plot 2	N	N	N
Plot 3	N	N	N
Plot 5	N	N	N

4.2 Conclusion

Based on the data collected, it is Blue Ox's professional opinion that **no** jurisdictional wetlands or non-wetland waters exist on the Site. The Site is illustrated in the maps of **Appendix C** and represented by the wetland determination forms of **Appendix A**.

The limits of the Site were not staked at the time of the delineation. It is recommended that any mechanized land clearing, or redistribution of earthen material outside the limits of the area depicted in this report, the Site may require additional data collection and determinations. Mechanized land clearing, tracking, soil disturbance or other temporary or permanent fill within wetlands or other waters would require a USACE permit.

A jurisdictional wetland determination can only be made by the U.S. Corps of Engineers (USACE). Consultants such as Blue Ox can perform wetland delineations, and submit data collected in the prescribed manner to the USACE along with recommendations; however, it is the USACE that makes the final determination. The New Orleans District of the USACE has jurisdiction in the area of this site.

5.0 REFERENCES

Corps of Engineers Wetlands Delineation Manual. 1987. Technical Report Y-87-1.

National List of Vascular Plants Species that Occur in Wetlands. Prepared by Ecology Section, National Wetlands Inventory, U.S. Fish and Wildlife Service.

U.S. Department of Agriculture, Natural Resources Conservation Service. 1998. Field Indicators of Hydric Soils in the United States, version 6.0. G.W. Hurt, Whited, P.M., and Pringle, R.F. (eds.). USDA, NRCS, Fort Worth, TX.

Soil Mapping Units and Hydric Soils Designations Louisiana. May 1995. Third Edition

U.S. Army Corps of Engineers. October 2008. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. Final Report

6.0 DEFINITIONS

Term	Definition
Aerobic	A situation in which molecular oxygen is a part of the environment.
Anaerobic	A situation in which molecular oxygen is absent (or effectively so) from the environment
Atypical situation	As used herein, this term refers to areas in which one or more parameters (vegetation, soil, and/or hydrology) have been sufficiently altered by recent human activities or natural events to preclude the presence of wetland indicators of the parameter.
Dominance Test	This evaluation test ranks plant species that immediately exceed 50% of the total dominance measure for a vegetation stratum, plus any additional species comprising 20% or more of the total dominance measure for that stratum. As part of the vegetation criteria, species dominance is evaluated using the "50/20 rule."
Growing season	The portion of the year when soil temperatures at 19.7 in. below the soil surface are higher than biologic zero (5 (C) (U.S. Department of Agriculture & Soil Conservation Service 1985). For ease of determination this period can be approximated by the number of frost-free days (U.S Department of the Interior 1970).
Hydric Soils	Hydric soils are defined as soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, July 13, 1994). Almost all hydric soils exhibit characteristic morphologies that are a result of repeated periods of saturation and/or inundation for more than a few days at a time. Saturation and inundation causes a depletion of oxygen in the soil when combined with anaerobic microbial activity in the soil. This anaerobiosis process results in characteristic morphologies such as the reduction, translocation, and/or the accumulation of iron. This process forms features in the soil that are called redoximorphic features that are particularly useful for identifying hydric soils. The soil investigation criterion requires the use of a soil probe or a pit excavated to a 16-inch depth in order to investigate for hydric indicators. These indicators typically include, but are not limited to: • gleyed or low-chroma colors (redoximorphic features) • mottles (redoximorphic features) • listed on the local hydric soils list • listed on the national hydric soils list • concretions (redoximorphic features).
Hydrophytic Species	Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>Hydrophytic Vegetation</td><td>In order for the vegetation to be considered hydrophytic (wet), the prevalent vegetation must consist of macrophytes that are typically adapted to areas having hydrologic and soil conditions unique to wetlands (e.g. must be hyrdophytic species). Prevalent vegetation is characterized by the dominant species comprising the plant community or communities. Dominant plant species are those that contribute more to the character of a plant community than other species present, as estimated or measured in terms of some ecological parameter or parameters. The two most commonly used estimates of dominance are basal area (trees) and percent areal cover (herbs). During a routine wetland delineation, the rapid test, dominance test, and prevalence index are predominantly used to determine if hydrophtic vegetation is present at a sample plot.</td></tr>
<tr><td>Macrophytes</td><td>Macrophytes are any plant material that can be seen without the aid of magnification.</td></tr>
<tr><td>Plant Indicator Status Categories</td><td>Categories originally developed and defined by the USFWS National Wetlands Inventory and subsequently modified by the National Plant List Panel. The three facultative categories are subdivided by (+) and (-) modifiers.
<table>
<tr><th>Indicator Category</th><th>Indicator Symbol</th><th>Definition</th></tr>
<tr><td>Obligate Wetland Plants</td><td>(OBL)</td><td>Plants that occur almost always (estimated probability >99%) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1%) in non-wetlands.</td></tr>
<tr><td>Facultative Wetland Plants</td><td>(FACW)</td><td>Plants that occur usually (estimated probability >67% to 99%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands.</td></tr>
<tr><td>Facultative Plants</td><td>(FAC)</td><td>Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands.</td></tr>
<tr><td>Facultative Upland Plants</td><td>(FACU)</td><td>Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands.</td></tr>
<tr><td>Obligate Upland Plants</td><td>(UPL)</td><td>Plants that occur rarely (estimated probability <1%) in wetlands, but occur almost always (estimate probability >99%) in non-wetlands under natural conditions.</td></tr>
</table></td></tr>
<tr><td>Prevalence Index</td><td>The prevalence index is a wetland indicator which takes into account all plant species and calculates a weighted average by assigning each indicator status category a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Plant species are also weighted by their abundance. It is a more comprehensive analysis of the hydrophytic status of a community that one based on a few dominant species. \The prevalence index ranges from 1 to 5, and a prevalence index of 3.0 or less indicates that hydrophytic vegetation is present. If, using the dominance test, the recorded plant species does not exceed 50% of the total dominance, the prevalence index shall be used to determine if hydrophytic vegetation is present.</td></tr>
<tr><td>Rapid Test for hydrophytic vegetation</td><td>The Rapid Test is intended as a quick confirmation in obvious cases that a site has hydrophytic vegetation without the need for intensive sampling. When, based on visual assessment, all dominant species across all strata are rated OBL, FACW, or a combination of these two categories, the rapid test confirms hydrophytic vegetation is present at the site.</td></tr>
<tr><td>Routine wetland determination</td><td>A type of wetland determination in which office data and/or relatively simple, rapidly applied onsite methods are employed to determine whether or not an area is a wetland. Most wetland determinations are of this type, which usually does not require collection of quantitative data.</td></tr>
</table>

Term	Definition
Sample plot	An area of land used for measuring or observing existing conditions
Transect	As used herein, a line on the ground along which observations are made at some interval
Typically Adapted	The term "typically adapted" refers to a species being normally or commonly suited to a given set of environmental conditions, due to some morphological, physiological, or reproductive adaptation. Species that have a wetland indicator status of OBL, FACW, or FAC are considered to be typically adapted for life in anaerobic soil conditions.
Under normal circumstances	As used in the definition of wetlands, this term refers to situations in which the vegetation has not been substantially altered by man's activities.
Upland	As used herein, any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, and/or hydrologic characteristics associated with wetlands. Such areas occurring within floodplains are more appropriately termed non-wetlands.
Wetlands	The Corps of Engineers and the EPA jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands have the following general diagnostic environmental characteristics: (1) Hydrophytic Vegetation (2) Hydric Soils (3) Wetland Hydrology Except in unique situations defined in the 1987 Wetland Delineation Manual and appropriate Regional Supplement, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.
Wetland boundary	The point on the ground at which a shift from wetlands to non-wetlands or aquatic habitats occurs. These boundaries usually follow contours.
Wetland determination	The process or procedure by which an area is adjudged a wetland or non-wetland by the US Army Corps of Engineers.

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>Wetland Hydrology</td><td>As defined by the 1987 COE Manual, the term “wetland hydrology” encompasses all hydrologic characteristics of areas that are periodically inundated (at mean water depths less than or equal to 6.6 feet) or have soils saturated to the surface at some time during the growing season of prevalent vegetation. Evident characteristics of wetland hydrology are generally found in areas where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions.

Wetland hydrology indicators provide evidence that the Site currently has a wetland hydrologic regime. They may not provide an abundance of information about long-term wetness conditions on a given site; however, when coupled with the presence of hydrophytic vegetation and hydric soils, hydrology indicators provide evidence of long-term as well as short-term wetland conditions. In order to meet the hydrology criteria of a wetland, a sample location must meet one primary indicator or two secondary indicators.
<table>
<tr><th>Primary Indicators include:</th><th>Secondary Indicators include:</th></tr>
<tr><td>• 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 on Living Roots (C3)
• Presence of Reduced Iron (C4)
• Recent Iron Reduction in Tilled Soils (C6)
• Thin Muck Surface (C7)
• Other (Explain in Remarks)</td><td>• 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)</td></tr>
</table>
</td></tr>
</table>

APPENDIX A – DATA SHEETS

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Martial Farms **City/County:** Broussard **Sampling Date:** 04-Feb-21

Applicant/Owner: One Acadiana **State:** LA **Sampling Point:** 1

Investigator(s): Ryne Menard **Section, Township, Range:** S 35 T 10S R 05E

Landform (hillslope, terrace, etc.): Undulating **Local relief (concave, convex, none):** concave **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR O **Lat.:** 30° 7' 39.440" N **Long.:** 91° 56' 20.482" W **Datum:** NAD83

Soil Map Unit Name: FrA-Frost silt loam, 0-1% slopes, occasionally flooded, 90% Hydric **NWI classification:**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 2 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:

Site has evidence of historic land farming activities.

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

Sampling Point: 1

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot size: 30')				
1. Baccharis halimifolia	10	☑	66.7%	FAC
2. Morella cerifera	5	☑	33.3%	FAC
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
50% of Total Cover: 7.5	20% of Total Cover: 3	15	= Total Cover	
Herb Stratum (Plot size: 30')				
1. Andropogon glomeratus	35	☑	43.8%	FACW
2. Rottboellia cochinchinensis	20	☑	25.0%	FACU
3. Rumex crispus	15	☐	18.8%	FAC
4. Baccharis halimifolia	10	☐	12.5%	FAC
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
50% of Total Cover: 40	20% of Total Cover: 16	80	= Total Cover	
Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	

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: 75.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:		
OBL species	0	x 1 =	0	
FACW species	35	x 2 =	70	
FAC species	40	x 3 =	120	
FACU species	20	x 4 =	80	
UPL species	0	x 5 =	0	
Column Totals:	95	**(A)**	270	**(B)**

Prevalence Index = B/A = 2.842

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.**

Definition of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type [1]	Loc [2]	Texture	Remarks
0-4	10YR 4/3	95	10YR 6/4	5	C	M	Clay Loam	
4-12	10YR 3/3	90	10YR 6/4	10	C	M	Clay Loam	
12-20	10YR 3/3	85	10YR 6/4	15	C	M	Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck 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: Martial Farms **City/County:** Broussard **Sampling Date:** 04-Feb-21

Applicant/Owner: One Acadiana **State:** LA **Sampling Point:** 2

Investigator(s): Ryne Menard **Section, Township, Range:** S 35 T 10S R 05E

Landform (hillslope, terrace, etc.): Undulating **Local relief (concave, convex, none):** concave **Slope:** 2.0 % / 1.1 °

Subregion (LRR or MLRA): LRR O **Lat.:** 30° 7' 37.291" N **Long.:** 91° 56' 21.316" W **Datum:** NAD83

Soil Map Unit Name: MbC-Memphis silt loam, 1 to 5 percent slopes,0% Hydric **NWI classification:**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

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

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 2 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:

Site has evidence of historic land farming activities.

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

Sampling Point: 2

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot size: 30')				
1. Andropogon glomeratus	35	☑	50.0%	FACW
2. Rottboellia cochinchinensis	15	☑	21.4%	FACU
3. Rumex crispus	10	☐	14.3%	FAC
4. Cirsium horridulum	5	☐	7.1%	FAC
5. Baccharis halimifolia	5	☐	7.1%	FAC
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
50% of Total Cover: 35	20% of Total Cover: 14	70	= Total Cover	
Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	20	x 3 =	60
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	70 **(A)**		190 **(B)**

Prevalence Index = B/A = 2.714

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.**

Definition of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 2

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
0-6	10YR	4/3	100						Clay Loam	
6-12	10YR	4/3	80	10YR	7/4	20	C	M	Clay Loam	
12-20	10YR	4/3	60	10YR	7/4	40	C	M	Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck 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: Martial Farms **City/County:** Broussard **Sampling Date:** 04-Feb-21

Applicant/Owner: One Acadiana **State:** LA **Sampling Point:** 3

Investigator(s): Ryne Menard **Section, Township, Range:** S 2 T 11S R 05E

Landform (hillslope, terrace, etc.): Undulating **Local relief (concave, convex, none):** concave **Slope:** 4.0 % / 2.3 °

Subregion (LRR or MLRA): LRR O **Lat.:** 30° 7' 27.806" N **Long.:** 91° 56' 8.507" W **Datum:** NAD83

Soil Map Unit Name: MbC-Memphis silt loam, 1 to 5 percent slopes,0% Hydric **NWI classification:**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

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

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 2 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/Four Strata) - Use scientific names of plants.

Sampling Point: 3

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot size: 30')				
1. Cynodon dactylon	20	☑	48.8%	FACU
2. Saccharum officinarum	10	☑	24.4%	FACU
3. Andropogon glomeratus	5	☐	12.2%	FACW
4. Rumex crispus	3	☐	7.3%	FAC
5. Verbena litoralis var. brevibracteata	3	☐	7.3%	UPL
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
50% of Total Cover: 20.5	20% of Total Cover: 8.2	41	= Total Cover	
Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	3	x 3 =	9
FACU species	30	x 4 =	120
UPL species	3	x 5 =	15
Column Totals:	41 (A)		154 (B)

Prevalence Index = B/A = 3.756

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.**

Definition of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 3

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
0-20	10YR	4/3	95	10YR	6/4	5	C	M	Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck 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: Martial Farms **City/County:** Broussard **Sampling Date:** 04-Feb-21

Applicant/Owner: One Acadiana **State:** LA **Sampling Point:** 5

Investigator(s): Ryne Menard **Section, Township, Range:** S 2 T 11S R 05E

Landform (hillslope, terrace, etc.): Undulating **Local relief (concave, convex, none):** concave **Slope:** 3.0 % / 1.7 °

Subregion (LRR or MLRA): LRR O **Lat.:** 30° 7' 25.469" N **Long.:** 91° 56' 15.226" W **Datum:** NAD83

Soil Map Unit Name: MbC-Memphis silt loam, 1 to 5 percent slopes,0% Hydric **NWI classification:**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

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

Hydrophytic Vegetation Present?	Yes ○ No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○ No ◉	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 2 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/Four Strata) - Use scientific names of plants.

Sampling Point: 5

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	
Herb Stratum (Plot size: 30')				
1. Medicago polymorpha	25	☑	50.0%	FACU
2. Saccharum officinarum	10	☑	20.0%	FACU
3. Cynodon dactylon	10	☑	20.0%	FACU
4. Lamium amplexicaule	5	☐	10.0%	UPL
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
50% of Total Cover: 25	20% of Total Cover: 10	50	= Total Cover	
Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
50% of Total Cover: 0	20% of Total Cover: 0	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	45	x 4 =	180
UPL species	5	x 5 =	25
Column Totals:	50 (A)		205 (B)

Prevalence Index = B/A = 4.100

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.**

Definition of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 5

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
0-6	10YR	3/2	100						Clay Loam	
6-20	10YR	4/3	80	10YR	6/4	20	C	M	Clay Loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck 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:

APPENDIX B – PHOTOGRAPHS

Photo 1: Sample Plot 1

Photo 2: Sample Plot 1, facing east

Photo 3: Sample Plot 1, facing south

Photo 4: Sample Plot 2

Photo 5: Sample Plot 2, facing north

Photo 6: Sample Plot 2, facing south

Photo 7: Sample Plot 3

Photo 8: Sample Plot 3, facing east

Photo 9: Sample Plot 3, facing south

Photo 10: Sample Plot 5

Photo 11: Sample Plot 5, facing north

Photo 12: Sample Plot 5, facing east

Photo 13: Observation Point 1

Photo 14: Observation Point 1, facing east

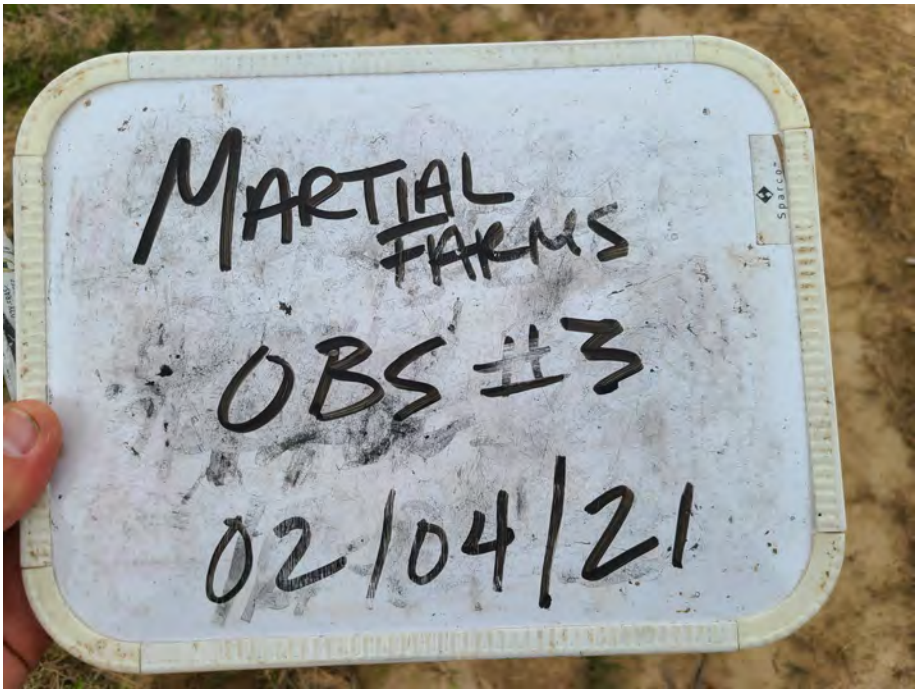


Photo 15: Observation Point 3

Photo 16: Observation Point 3, facing north

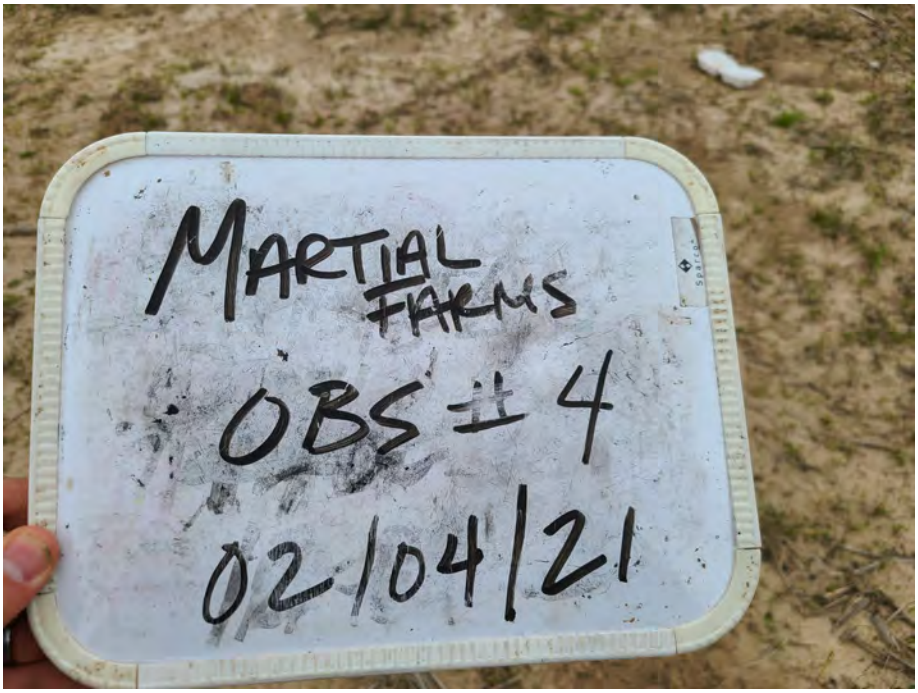
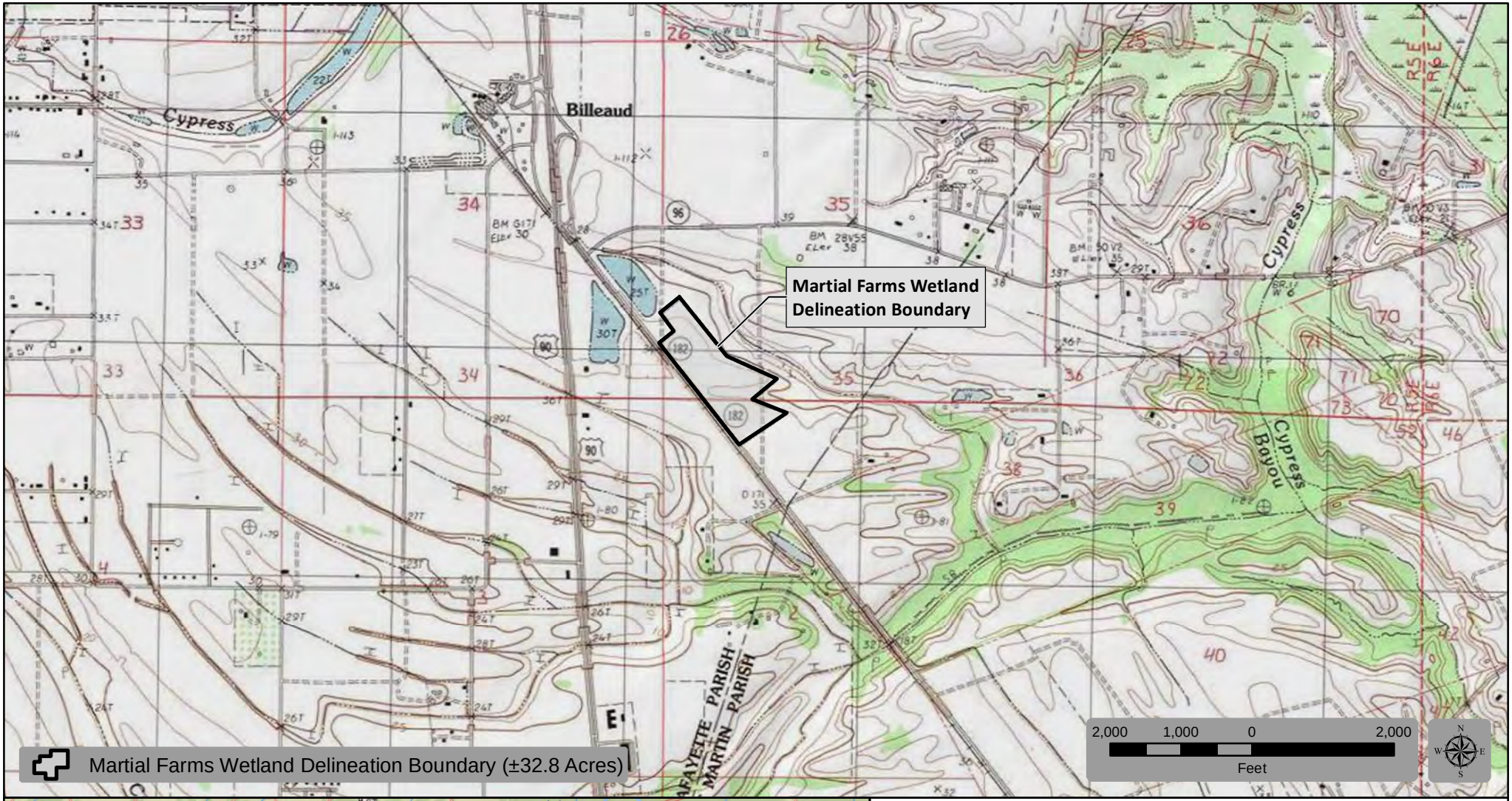


Photo 17: Observation Point 4

Photo 18: Observation Point 4, facing east

APPENDIX C – MAPS



One Acadiana

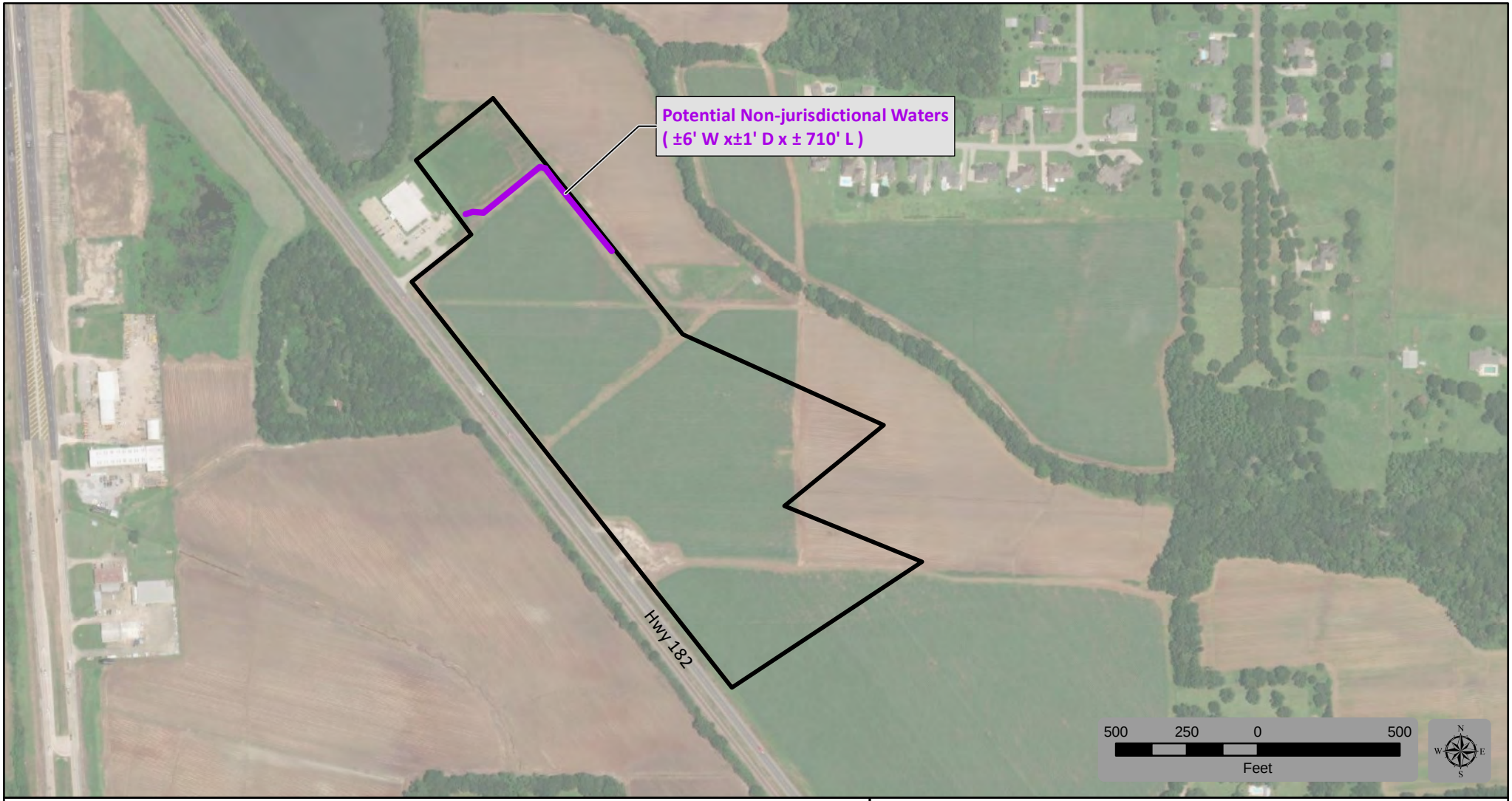
Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

FOR PERMITTING ONLY	Rev: (date:initial)	Created by:	KFM
This document is not to be used for construction, bidding, recordation, conveyance or sales.		Date:	03/10/2021
		Job #	21003
		Vicinity Map	

Data Sources

1.Background Data: Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



No wetlands observed on the site.

- Potential Non-jurisdictional Waters (± 0.10 Acres)
- Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

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		Job #	21003
		Wetland Flagging Key Map	

Data Sources

1.Background Data: Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
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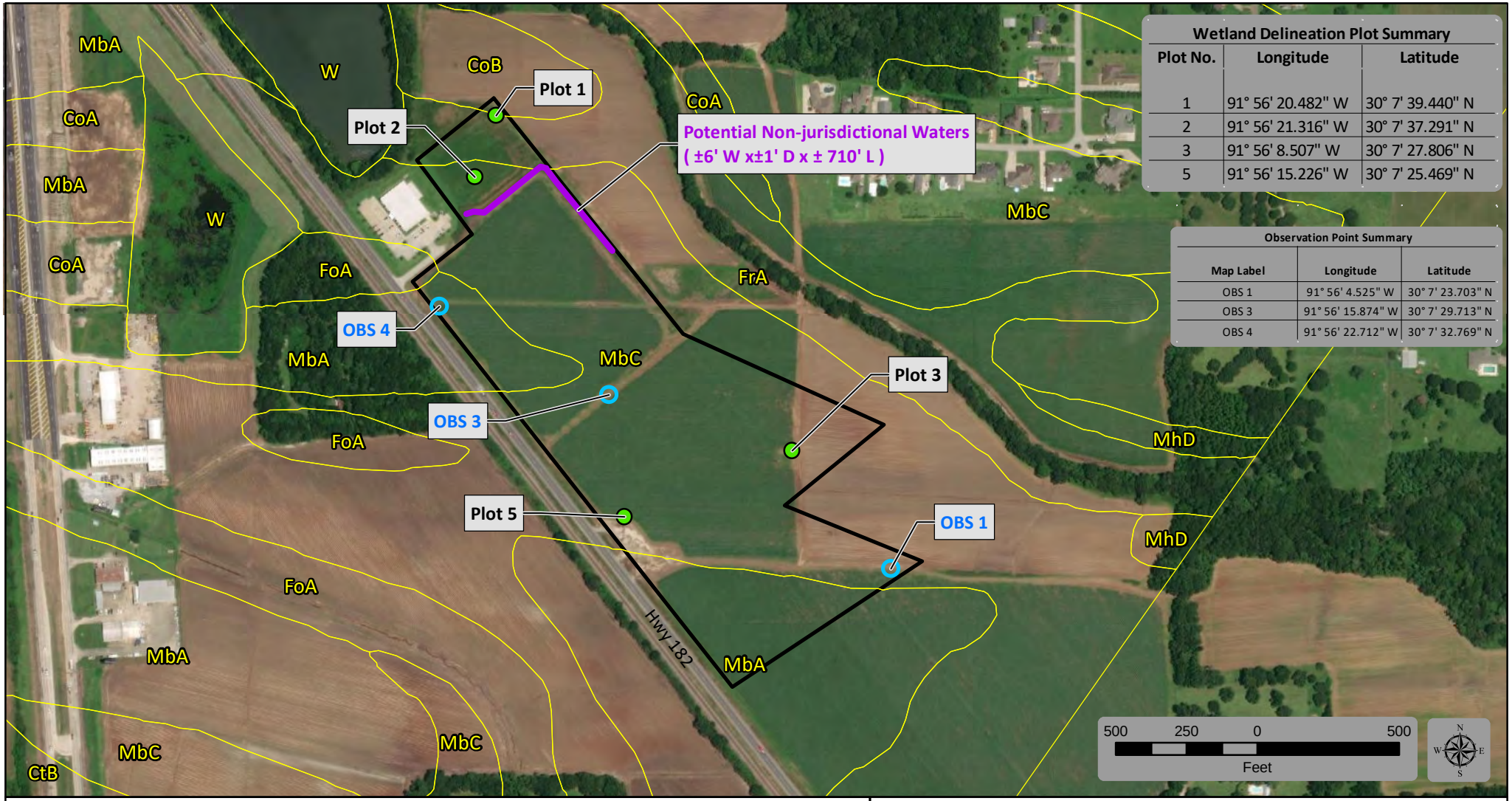

Wetland Delineation Plot Summary

Plot No.	Longitude	Latitude
1	91° 56' 20.482" W	30° 7' 39.440" N
2	91° 56' 21.316" W	30° 7' 37.291" N
3	91° 56' 8.507" W	30° 7' 27.806" N
5	91° 56' 15.226" W	30° 7' 25.469" N

Observation Point Summary

Map Label	Longitude	Latitude
OBS 1	91° 56' 4.525" W	30° 7' 23.703" N
OBS 3	91° 56' 15.874" W	30° 7' 29.713" N
OBS 4	91° 56' 22.712" W	30° 7' 32.769" N

Lafayette Parish Soils

Soil Symbol : Soil Name : Hydric Soil %

CoA:Coteau silt loam, 0 to 1 percent slopes:10%

CoB:Coteau silt loam, 1 to 3 percent slopes:10%

CtB:Coteau-Frost complex, gently undulating:35%

FoA:Frost silt loam:85%

FrA:Frost soils, occasionally flooded:90%

MbA:Memphis silt loam, 0 to 1 percent slopes:5%

MbC:Memphis silt loam, 1 to 5 percent slopes:0%

MhD:Memphis silt loam, 5 to 8 percent slopes:0%

MpB:Memphis-Frost complex, gently undulating:35%

W:Water:0%

No wetlands observed on the site

- Wetland Delineation Plot
- Observation Location
- Potential Non-jurisdictional Waters (± 0.10 Acres)
- Lafayette Parish Soils
- Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

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	Date:	03/10/2021
	Job #	21003
	Aerial & Soil Map	

Data Sources

1.Background Data: Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community (Aerial image Date: 2019)

2. Soil Data - Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for [Lafayette Parish, Louisiana]. Available online.

Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

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		Date:	03/10/2021
This document is not to be used for construction, bidding, recordation, conveyance or sales.		Job #	21003
		Aerial Map	

Data Sources

1.Background Data: Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
(Aerial image Date: 2019)

2. Soil Data - Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture.
Soil Survey Geographic (SSURGO) Database for [Lafayette Parish, Louisiana]. Available online.

Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

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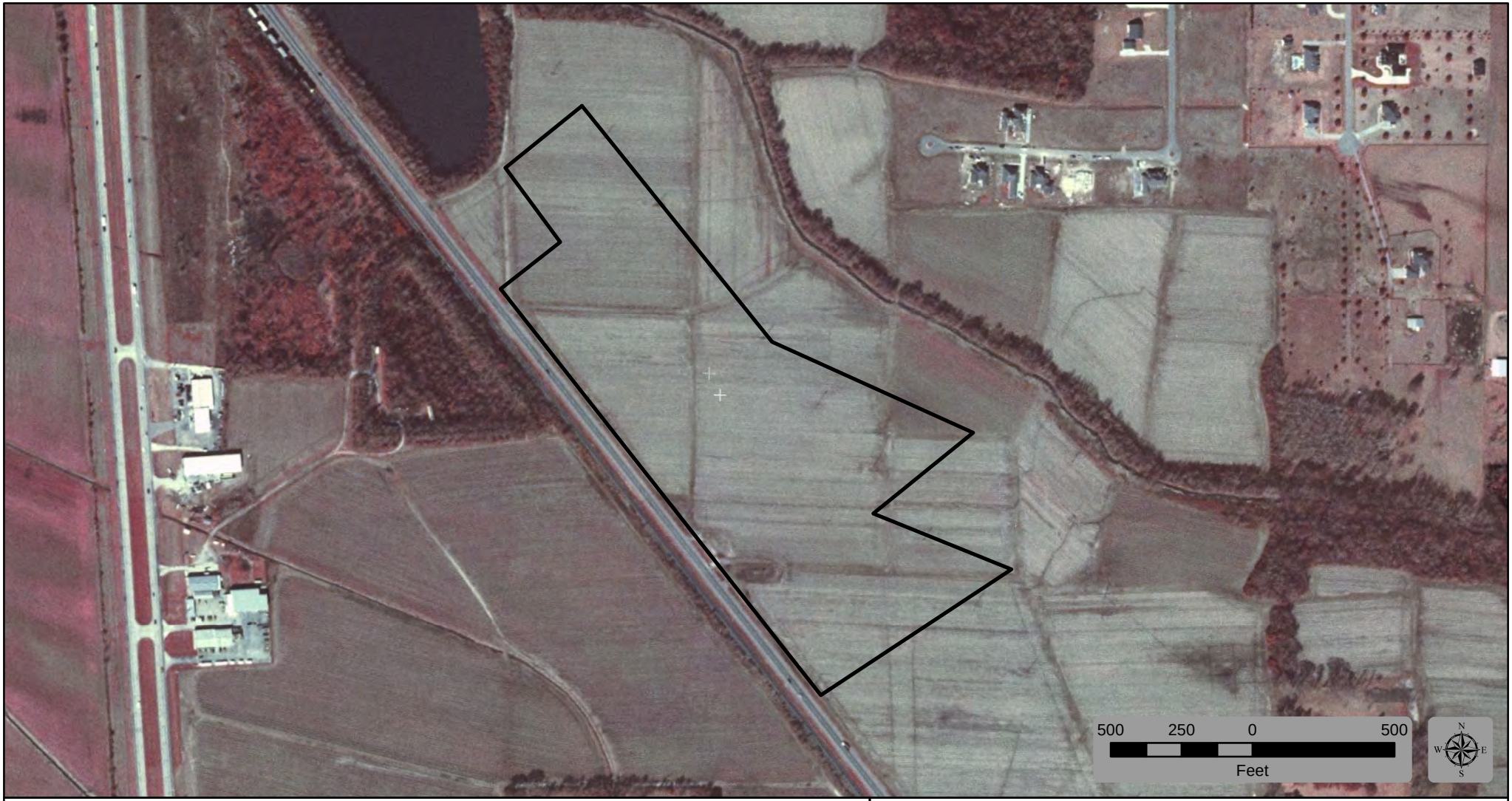
		Job #	21003
		1998 Aerial Map	

Data Sources

1.Background Data: Aerial Data - Data distributed by "Atlas: The Louisiana Statewide GIS." LSU Department of Geography and Anthropology, Baton Rouge, LA. http://atlas.lsu.edu..



Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

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		Job #	21003
		2004 Aerial Map	

Data Sources

1.Background Data: Aerial Data - Data distributed by "Atlas: The Louisiana Statewide GIS." LSU Department of Geography and Anthropology, Baton Rouge, LA. http://atlas.lsu.edu..

Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

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		Date:	03/10/2021
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		Topographic Map	

Data Sources

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2' Elevation LIDAR Contours

Martial Farms Wetland Delineation Boundary (±32.8 Acres)

One Acadiana

Martial Farms Wetland Delineation
SEC 34, 35 T10S-R05E, & SEC 02 T11S-R05E

Lafayette Parish, Louisiana

FOR PERMITTING ONLY	Rev: (date:initial)	Created by:	KFM
		Date:	03/10/2021
This document is not to be used for construction, bidding, recordation, conveyance or sales.		Job #	21003
		LIDAR Map	

Data Sources

1.Background Data: Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2. Elevation LIDAR Data distributed by "Atlas: The Louisiana Statewide GIS." LSU Department of Geography and Anthropology, Baton Rouge, LA. http://atlas.lsu.edu.