

October 2014

Exhibit CC. Angel Ranch Site
Wetland Delineation Report

**WETLAND DELINEATION REPORT
ANGEL RANCH 751 ACRES
POINTE COUPEE PARISH, LOUISIANA**

Prepared for



Baton Rouge Area Chamber
Baton Rouge, Louisiana

Prepared by



Baton Rouge, Louisiana

WETLAND DELINEATION REPORT ANGEL RANCH 751 ACRES POINTE COUPEE PARISH, LOUISIANA

GEC Project Number: 0013.2122014.012

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WETLAND DELINEATION REPORT

WETLAND DELINEATION REPORT ANGEL RANCH 751 ACRES POINTE COUPEE PARISH, NEW ROADS, LOUISIANA

INTRODUCTION

G.E.C., Inc. (GEC) recently conducted a wetland delineation on Angel Ranch a 751-acre site located within sections 22, 23 and 24 of Township 4 South, Range 10 East in Pointe Coupee Parish, Louisiana, for the Baton Rouge Area Chamber (Figure 1). The property fronts the Mississippi River at approximate river mile 266, while along the protected side of the Mississippi River Protection Levee the property fronts Ferry Road, which was the old LA Highway 10. The rerouted Louisiana Highway 10 traverses through the southern end of the property.

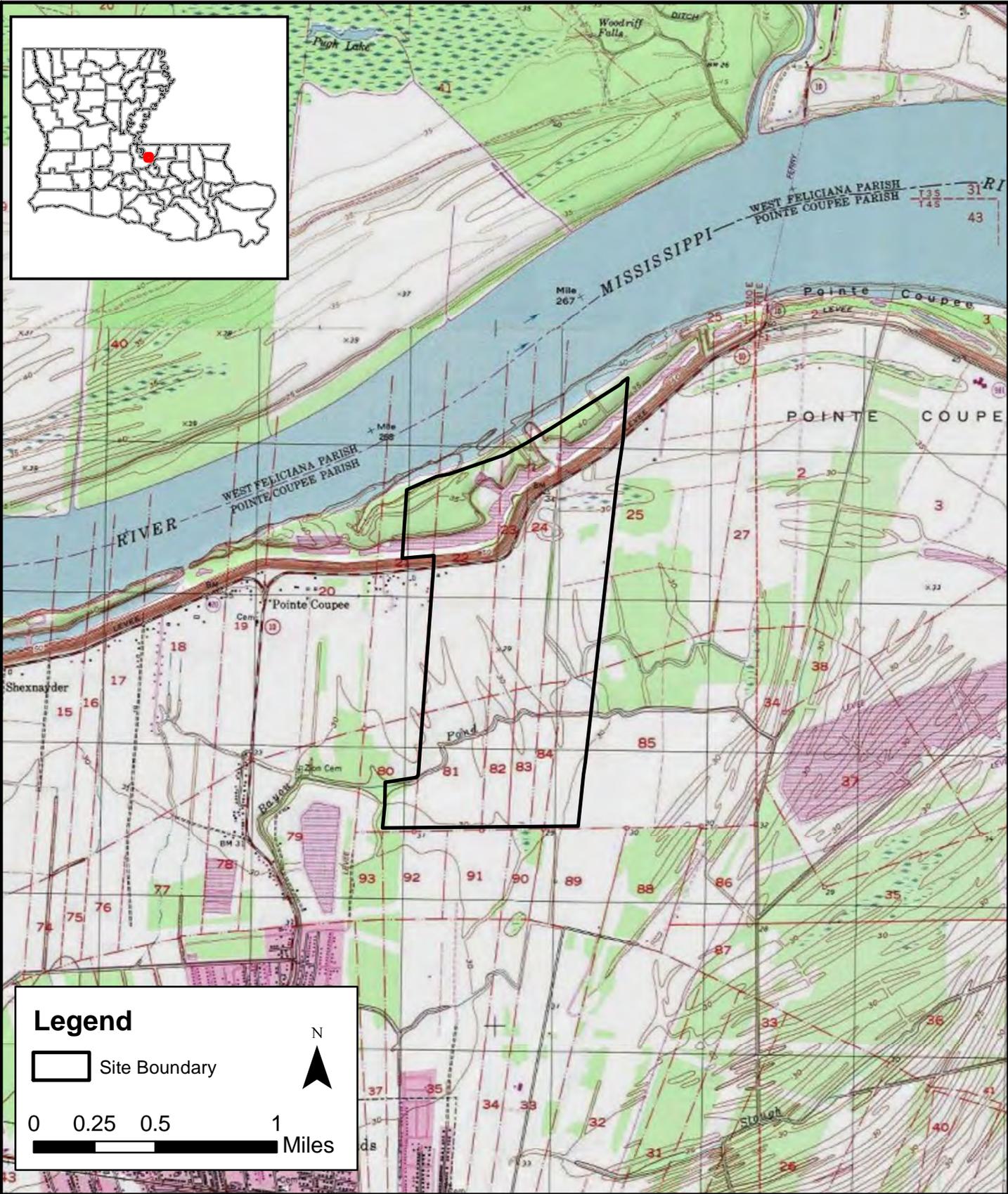
Within the protection levee the property consist of forested habitat and open water borrow pits. The remaining portion of the property is majority pasture or fallow field habitat with small patches of trees along with ponds, drainage ditches/swales and bayous (Figure 2). The purpose of this delineation was to determine the wetland boundaries within the approximately 751-acre site.

METHODOLOGY

GEC conducted the wetland delineation in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual as well as the Atlantic and Gulf Coastal Plains Regional Supplement. Aerial photography, Natural Resources Conservation Service (NRCS) Pointe Coupee Parish soil survey map, and U.S. Geological Survey (USGS) topographic quadrangle maps were reviewed prior to the initiation of field work to identify the potential extent of wetlands present on the subject property.

Routine Wetland Delineation Data Forms (Appendix A), as approved by Headquarters, U.S. Army Corps of Engineers (USACE) 10/08, were completed for various vegetative communities encountered within the project area. These data forms contain sufficient information regarding the presence or absence of hydric soils, hydrophytic vegetation, and wetland hydrology, to support the demarcation of a wetland boundary. The location of each sample plot along with mapped wetlands and other waters are shown in Figure 3. Figure 4 provide the same information but without the aerial background for a black and white reproducible figure.

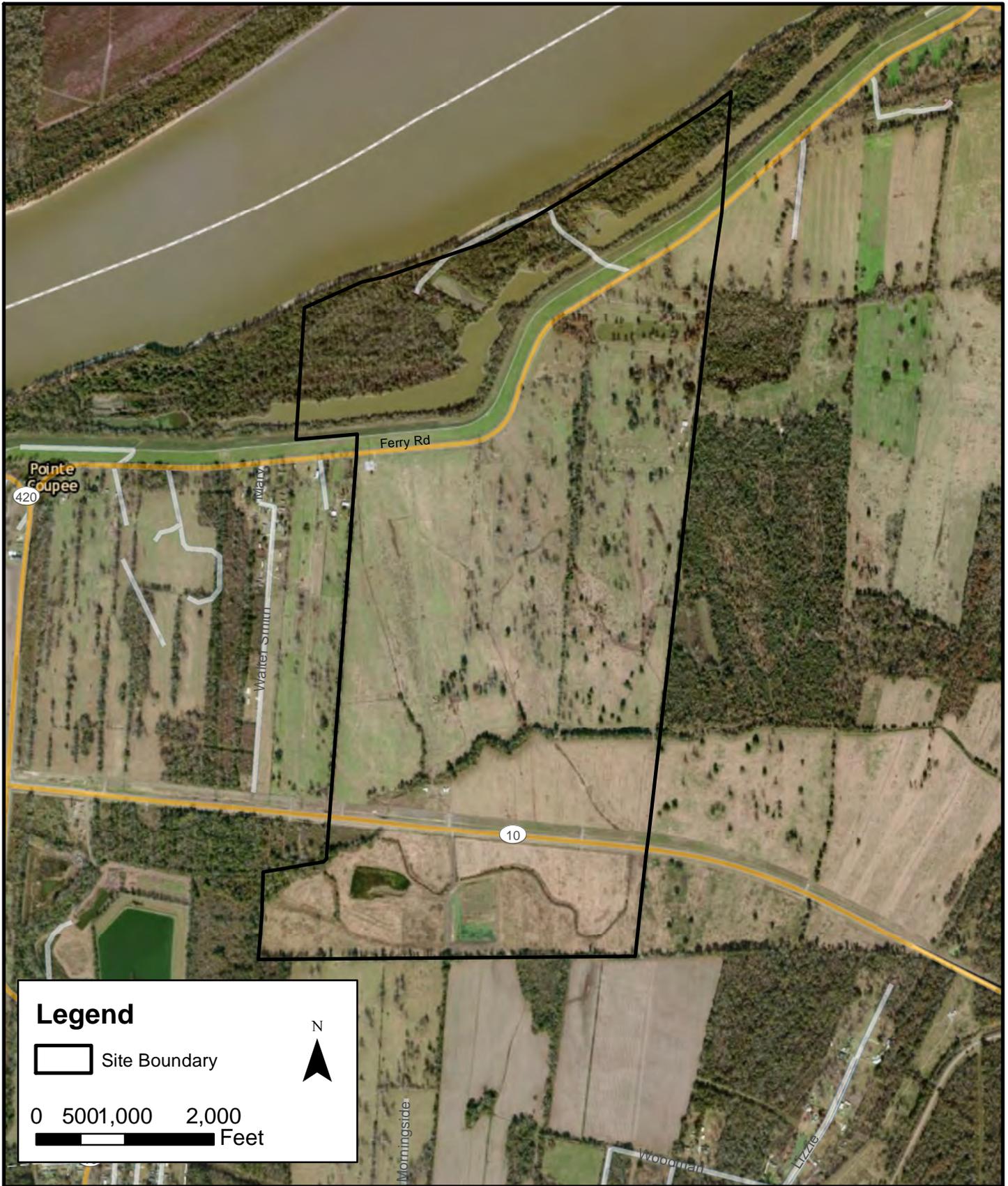
Dominant vegetation was recorded on the data forms along with the indicator status as listed in the *National List of Plant Species Occurring in Wetlands (Region 2)* released by USACE in May 2012 (Release no. 12-005). Once dominant vegetation was recorded and evaluated, if more than 50 percent of the dominant vegetation had an indicator status of FAC, FACW, or OBL or **the prevalence index was ≤ 3.0 , the hydrophytic vegetation criterion was met.**



SITE LOCATION MAP
 Wetland Delineation
 Angel Ranch - 751 Acres
 Baton Rouge Area Chamber
 Pointe Coupee Parish, Louisiana

Figure: 1
Date: October 2014
Scale: 1:35,000
Source: ESRI/GEC
Map ID: 00132122014012-3151

Service Layer Credits: Copyright © 2013 National Geographic Society, iCubed



Legend

 Site Boundary

 N

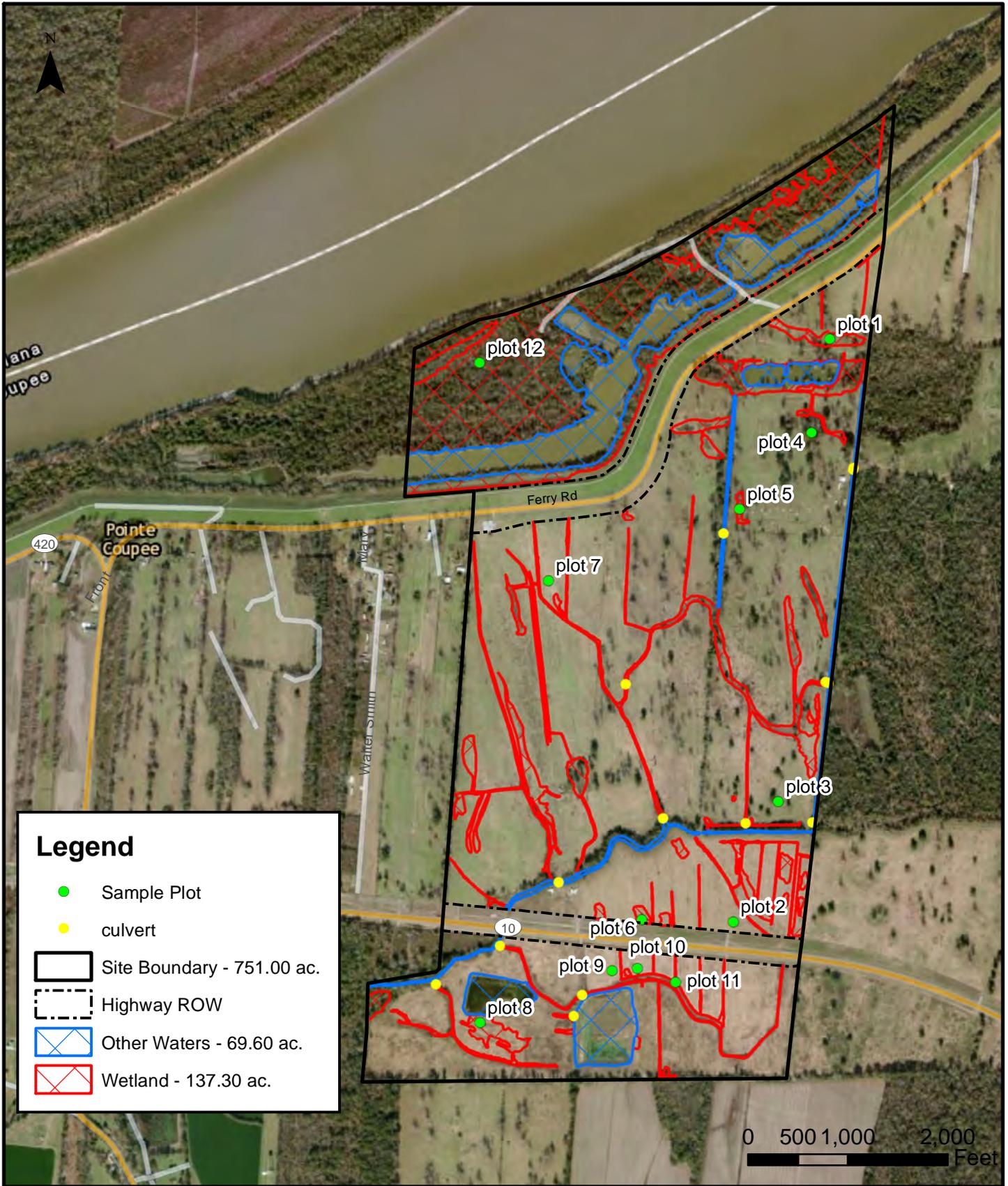
0 500 1,000 2,000
 Feet

SITE VICINITY MAP
 Wetland Delineation
 Angel Ranch - 751 Acres
 Baton Rouge Area Chamber
 Pointe Coupee Parish, Louisiana



Figure: 2
Date: October 2014
Scale: 1:18,000
Source: ESRI/GEC
Map ID: 00132122014012-3151

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Esri, HERE, DeLorme, TomTom, Mapbox, and the GIS user community



Legend

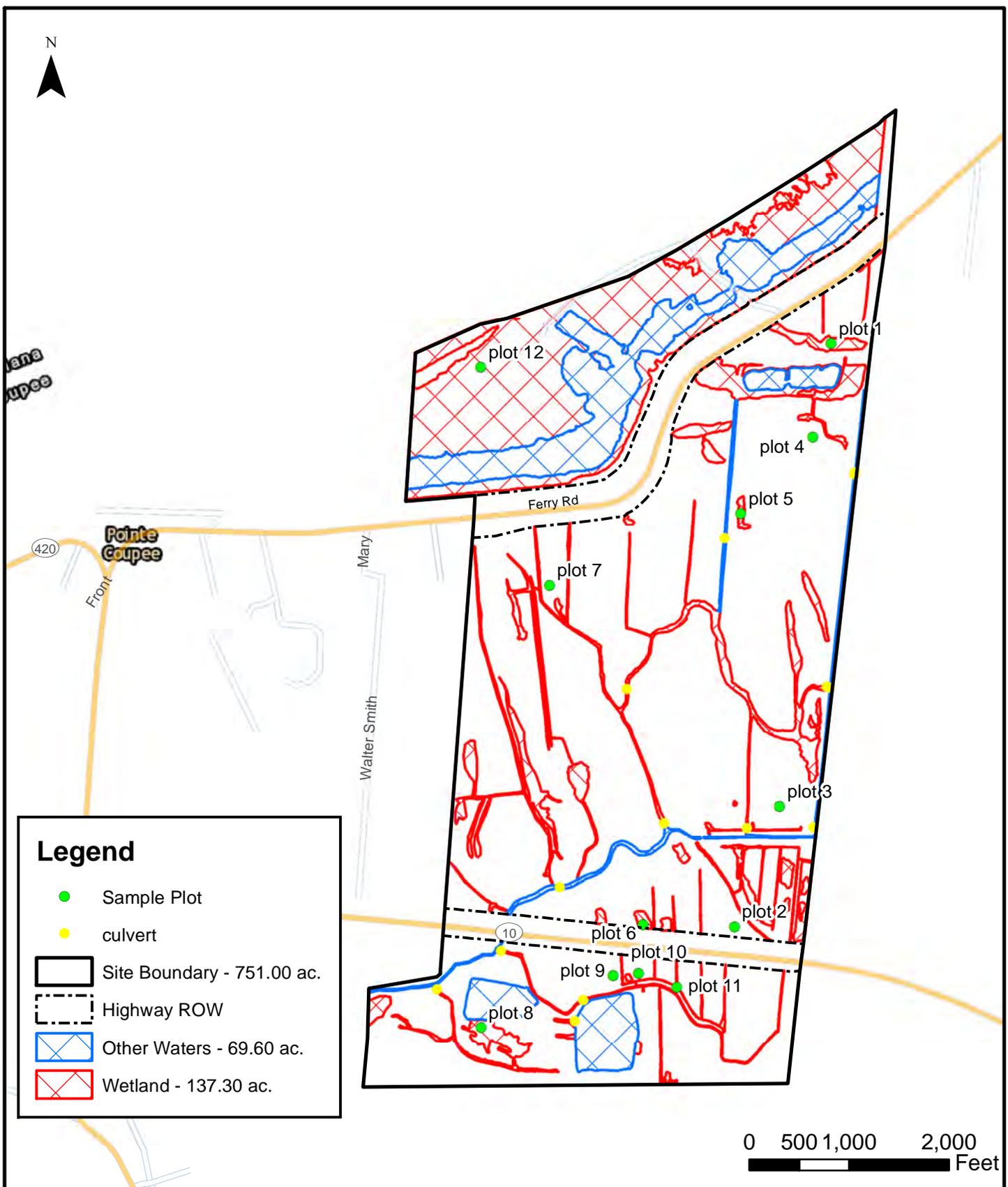
- Sample Plot
- culvert
- Site Boundary - 751.00 ac.
- Highway ROW
- Other Waters - 69.60 ac.
- Wetland - 137.30 ac.

WETLAND MAP
 Wetland Delineation
 Angel Ranch - 751 Acres
 Baton Rouge Area Chamber
 Pointe Coupee Parish, Louisiana



Figure: 3
Date: October 2014
Scale: 1:16,000
Source: ESRI/GEC
Map ID: 00132122014012-3151

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEK, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



Legend

- Sample Plot
- culvert
- Site Boundary - 751.00 ac.
- Highway ROW
- Other Waters - 69.60 ac.
- Wetland - 137.30 ac.

0 500 1,000 2,000
Feet

WETLAND MAP - JD
Wetland Delineation
Angel Ranch - 751 Acres
Baton Rouge Area Chamber
Pointe Coupee Parish, Louisiana

Service Layer Credits: Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



Figure: 4
Date: October 2014
Scale: 1:16,000
Source: ESRI/GEC
Map ID: 00132122014012-3151

A soil pit was excavated to a depth of approximately 18 inches at each sample plot. The pit remained open for at least 15 minutes to allow the pit to fill with water, if present. Soils were sampled along the exposed stratum. Information recorded on the data forms included soil colors (hue, value, and chroma as per the 1992 revised edition of the Munsell Color Chart), size, color, abundance, and depth of mottles, as well as soil texture. Soil texture was determined **using the "texture by feel" analysis**. Figure 5 depicts the soils mapped by the NRCS within the project area.

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

Photographs were taken at each sample plot where a data form was completed. These photographs show a representative soil profile, as well as overviews of the sample plots (Appendix B).

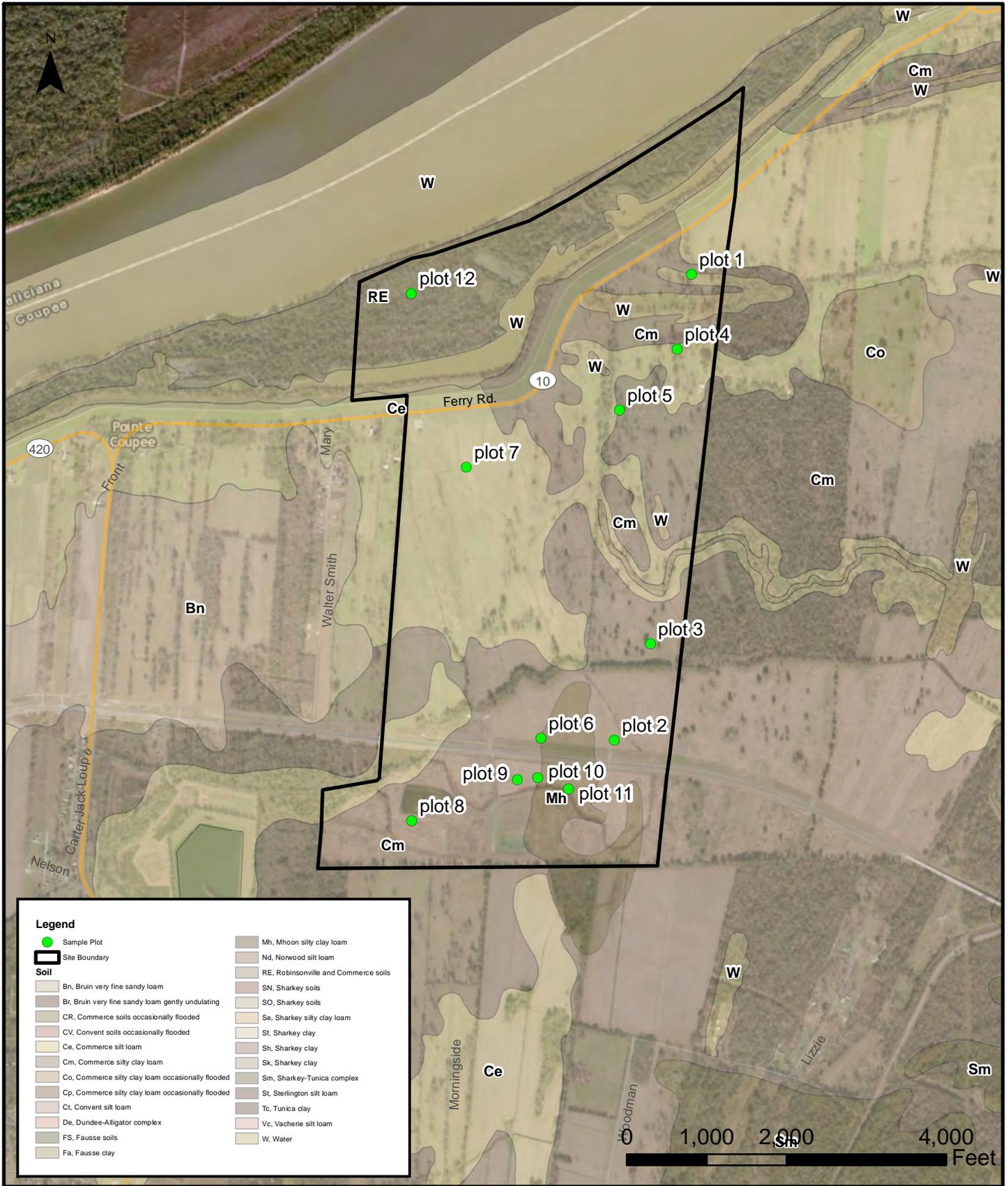
RESULTS

The following subsections provide descriptions of each of the samples plots taken during the field survey. Descriptions of vegetation, soil characteristics, and hydrology indicators at each sample plot recorded are provided.

Sample Plot - 1: Sample Plot 1 is located within a herbaceous depression situated in the northeast corner of the property just south of Ferry Road (Figure 3). Dominant vegetation within this habitat includes Savannah panic grass (*Phanopyrum gymnocarpon*), redtop panic grass (*Panicum rigidulum*), short-bristle beakrush (*Rhynchospora corniculata*), and creeping spotflower (*Spilanthes americana*). Non-dominant plants observed at the sample plot include Louisiana blackberry (*Rubus louisianus*), **lizard's tail** (*Saururus cernuus*), and northern spider-lily (*Hymenocallis occidentalis*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within this sample plot are mapped as Commerce silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field investigations determined that the soils exhibit hydric soil indicators for a depleted matrix; therefore, the soils are considered hydric. Oxidized rhizospheres on living roots are the only primary indicator of wetland hydrology recorded at the site. However, secondary indicators include saturation visible on aerial imagery (C9), geomorphic position (D2), and a positive FAC-Neutral test (D5). The wetland hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of all three wetland parameters (see Data Form Plot - 1).

Sample Plot - 2: Sample Plot 2 is located at the southern end of the property within pasture habitat just north of LA Highway 10 and along the eastern side of the property (Figure 3). This sample plot is dominated by Bermuda grass (*Cynodon dactylon*), southern carpet grass (*Axonopus affinis*), and Santa Maria feverfew (*Parthenium hysterophorus*). Other herbaceous species observed include marshpepper smartweed (*Polygonum hydropiper*), spiny amaranth (*Amaranthus spinosus*), annual sumpweed (*Iva annua*), arrow-leaf sida (*Sida rhombifolia*), Carolina nightshade (*Solanum carolinense*), Virginia button-weed (*Diodia virginiana*), and rough



SOILS MAP
 Wetland Delineation
 Angel Ranch - 751 Acres
 Baton Rouge Area Chamber
 Pointe Coupee Parish, Louisiana



Figure: 5
 Date: October 2014
 Scale: 1:20,000
 Source: ESRI/GEC
 Map ID: 00132122014012-3151

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
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cockle-bur (*Xanthium strumarium*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within this sample plot are mapped as Commerce silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field investigations determined that the soils exhibited hydric soil indicators for a depleted matrix. Therefore, the hydric soils are present within this habitat. There are no primary or secondary indicators of hydrology recorded at this sample. It is GEC's opinion that this sample plot is not within a wetland, based on the absence of wetland hydrology (see Data Form Plot - 2).

Sample Plot - 3: Sample Plot 3 is located along the east side of the property just north of LA Highway 10 within a pasture (Figure 3). The dominant herbaceous species recorded in this sample plot include marshpepper smartweed and annual sumpweed. Other non-dominant species occurring within the sample plot are Bermuda grass, creeping spotflower, Virginia button-weed, southern carpet grass, lance-leaf frog-fruit (*Phyla lanceolata*), chain-leaf aster (*Aster adnatus*), and Carolina nightshade. The hydrophytic vegetation criterion is met within this sample plot.

The soils within this sample plot are mapped as Commerce silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field investigations determined that the soils exhibited hydric soil indicators for a depleted matrix. Therefore, the hydric soils are present at this sample plot. The wetland hydrology criterion is not met at this plot due to the lack of any primary and only one secondary hydrology indicator, a positive FAC-Neutral test. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology within the plot (see Data Form Plot - 3).

Sample Plot - 4: Sample Plot 4 is located along the east side of the property at the northern end within a stand of mature trees (Figure 3). The dominant trees within this sample plot include cherry-bark oak (*Quercus pagoda*), hickory pecan (*Carya illinoensis*), and American elm (*Ulmus americana*). Water oak (*Quercus nigra*) was also present but was not dominant. The herbaceous stratum was dominated by Bermuda grass and marshpepper smartweed. Occurrences of other non-dominant species present include arrow-leaf sida, Indian heliotrope (*Heliotropium indicum*), chamberbitter (*Phyllanthus urinaria*), and Carolina elephant-foot (*Elephantopus carolinianus*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within this sample plot are mapped as Commerce silt loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field investigations determined that the soils exhibited hydric soil indicators for a depleted matrix. Therefore, the hydric soils are present at this sample plot. The wetland hydrology criterion is not met at this plot due to the lack of any primary and only one secondary hydrology indicator, a positive FAC-Neutral test. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology indicators within the plot (see Data Form Plot - 4).

Sample Plot - 5: Sample Plot 5 is located in the northeastern portion of the property within a herbaceous depression with a few trees around the perimeter (Figure 3). The dominant trees were pecan hickory and sugarberry (*Celtis laevigata*). The dominant herbaceous species recorded within this habitat is marshpepper smartweed. Other species recorded but less

abundant are creeping spotflower, blunt spikerush (*Eleocharis obtuse*), annual sumpweed, blunt broom sedge (*Carex tribuloides*), green flatsedge (*Cyperus virens*), and soft rush (*Juncus effusus*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within this sample plot are mapped as Commerce silty clay loam. These series are both listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. Primary wetland hydrology indicators include saturation (A3), water-stained leaves (B9), and oxidized rhizospheres on living roots (C3). Secondary wetland hydrology indicators observed and recorded at the sample plot are crayfish burrows (C8) and a positive FAC-Neutral test (D9). The wetland hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydrophytic vegetation, hydric soils and wetland hydrology within the plot (see Data Form Plot - 5).

Sample Plot - 6: Sample Plot 6 is located in the southern portion of the property just north of LA Highway 10 within pasture habitat (Figure 3). The dominant species within this herbaceous depression include annual sumpweed and marshpepper smartweed. Other less abundant species observed within this habitat include chain-leaf aster, lance-leaf frog-fruit, creeping spotflower, and green flatsedge. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Mhoon silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. Oxidized rhizospheres is the only primary wetland hydrology indicator recorded at the sample plot. Secondary indicators include crayfish burrows (C8) and a positive FAC-Neutral test. The wetland hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydrophytic vegetation, hydric soils and wetland hydrology within the plot (see Data Form Plot - 6).

Sample Plot - 7: Sample Plot 7 is located within pasture habitat in the northwestern portion of the property just south of LA Highway 981 (Figure 3). This habitat was dominated by Bermuda grass, marshpepper smartweed, and annual sumpweed. Other less abundant species recorded within this sample plot include Pennsylvania smartweed (*Polygonum pennsylvanicum*), lance-leaf frog-fruit, creeping spotflower, Virginian button-weed, white clover (*Trifolium repens*), rough cockle-bur, and chain-leaf aster. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Commerce silt loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. There were no primary wetland hydrology indicators observed at this plot and the only secondary indicator recorded was a positive FAC-Neutral test. The wetland hydrology criterion is not met at this plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology within the plot (see Data Form Plot - 7).

Sample Plot - 8: Sample Plot 8 is located in the southwestern portion of the property within a herbaceous habitat adjacent to a pond (Figure 3). This herbaceous habitat is dominated by

lance-leaf frog-fruit, green flatsedge, and blunt broom sedge. Additional species recorded but less abundant include creeping spotflower, chain-leaf aster, Virginia button-weed, Iria flatsedge (*Cyperus iria*), annual sumpweed, Florida Paspalum (*Paspalum floridanum*), Brazilian vervain (*Verbena brasiliensis*), and rough cockle-bur. The hydrophytic vegetation criterion is met within this sample plot.

The soils within this plot are mapped as Commerce silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. Oxidized rhizospheres on living roots, is the only primary wetland hydrology indicator that was observed and recorded at the sample site. The only secondary indicator recorded was a positive FAC-Neutral test. The wetland hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 8).

Sample Plot - 9: Sample Plot 9 is located in the southern portion of the property south of LA Highway 10 within a fallow field. Dominant vegetation within this field is yellow foxtail (*Setaria pumila*) and Bermuda grass. Less dominant vegetation observed within the sample plot includes great ragweed (*Ambrosia trifida*), blunt broom sedge, Virginia button-weed, Canada golden-rod (*Solidago canadensis*), chain-leaf aster, yellow thistle (*Cirsium horridulum*), Carolina nightshade, Brazilian vervain, and annual sumpweed. The hydrophytic vegetation criterion is not met within this sample plot.

The soils within this plot are mapped as Commerce silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. There were no primary or secondary wetland hydrology indicators recorded within this sample plot. Therefore, the wetland hydrology criterion is not met at this sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydrophytic vegetation and wetland hydrology within the plot (see Data Form Plot - 9).

Sample Plot - 10: Sample Plot 10 is located in the southern portion of the property just south of LA Highway 10 within a fallow field. The dominant vegetation within this sample plot consists of chain-leaf aster and Virginia button-weed. Scattered occurrences of great ragweed, yellow foxtail, and Canada golden-rod were also recorded within this sample plot. The hydrophytic vegetation criterion is met within this sample plot.

The soils within this plot are mapped as Commerce silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. Primary wetland hydrology indicators are lacking from this sample plot and only one secondary indicator, a positive FAC-Neutral test (D5) was documented. Therefore, the wetland hydrology criteria is not met within this sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology within the plot (see Data Form Plot - 10).

Sample Plot - 11: Sample Plot 11 is located in the southern portion of the property just south of LA Highway 10 within a shallow drainage swale traversing through the fallow field. These drainage swales are dominated by green flatsedge, creeping spotflower, and winged loosestrife (*Lythrum alatum*). Other less abundant species include soft rush, marshpepper smartweed, annual sumpweed, vasey grass (*Paspalum urvillei*), lance-leaf frog-fruit, and Canada golden-rod. The hydrophytic vegetation criterion is met within this sample plot.

The soils within this plot are mapped as Mhoon silty clay loam. This series is listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. Primary wetland hydrology indicators recorded within this sample plot include water-stained leaves (B9) and oxidized rhizospheres on living roots (C3). Additionally, drainage patterns (B10), crayfish burrows (C8), and a positive FAC-Neutral test (D5) were also recorded within the sample plot as secondary hydrology indicators. Therefore, the wetland hydrology criteria is met within this sample plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 11).

Sample Plot - 12: Sample Plot 12 is located in the northwestern portion of the property on the river side of the protection levee within the forested batture (Figure 3). The dominant trees within this sample plot include pecan hickory and sugarberry. Other trees occurring but less abundant include common persimmon (*Diospyros virginiana*) and water-locust (*Gleditsia aquatica*). The shrub stratum was dominated by common buttonbush (*Cephalanthus occidentalis*) and swamp privet (*Forestiera acuminata*). Dominant herbaceous vegetation includes small-spike false-nettle (*Boehmeria cylindrical*), redvine (*Brunnichia cirrhosa*), and white heath aster (*Aster pilosus*). The dominant woody vine species include river-bank grape (*Vitis riparia*), trumpet creeper (*Campsis radicans*), and poison ivy (*Toxicodendron radicans*). Saw greenbrier (*Smilax bona-nox*) was also present but was not a dominant. The hydrophytic vegetation criterion is met within this sample plot.

The soils within this plot are mapped as Robinsonville and Commerce series. Both of these series are listed on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this plot based on the presence of hydric soil indicators for a depleted matrix. Primary wetland hydrology indicators recorded within this sample plot include water marks (B1), drift deposits (B3), and water-stained leaves (B9). The secondary indicators recorded for this sample plot include drainage patterns (B10), geomorphic position (D2), and a positive FAC-Neutral test (D5). Therefore, the wetland hydrology criteria is met within this sample plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 12).

CONCLUSIONS

GEC conducted the field investigations of the property on September 30, October 1, 7, 8, 9, and 15, 2014. The portion of the property located on the river side of the protection levee is highly impacted and influenced by the fluctuation of the river level. The habitat is predominantly forested habitat with some herbaceous and scrub/shrub habitat associated with the many open water borrow ponds located along the toe of the levee. In order to identify the areas of this

portion of the property that would be considered wetlands and other waters under Section 10 of the Rivers and Harbors Act, the ordinary high water elevation was obtained from the Corps of Engineers and any property at or below this elevation was mapped as wetlands or other waters. The ordinary high water elevation for this area is 44 feet, which encompasses 90.8 acres of wetlands and 45.9 acres of other waters. There are a few relatively high ridges paralleling the river that are above the ordinary high water elevation and; therefore, are designated as non-wetland habitat. Additional non-wetland habitat is generally associated with the protection levee as maintained fields. A detailed map of this portion of the property is provided on Figure 3.

The remaining portion of the property south of the protection levee is predominantly pasture or fallow field (south of LA Highway 10). The portion between Ferry Road and LA Highway 10 is utilized for cattle grazing and consists of open field with areas of clustered trees. This area contains many small, narrow wetland drains traversing through the property and several herbaceous wetland depressions, which all encompass approximately 39.3 acres. A long narrow pond encompassing approximately four acres is located in the northeastern portion of the property and associated with this pond and to the west is a ponded forested wetland with bald cypress (*Taxodium distichum*) as the dominant tree and common buttonbush (*Cephalanthus occidentalis*) in the shrub stratum. While surveying the property, field biologists observed the excavation of a drainage canal traversing south from this forested wetland through the approximate center of the property along the path of what appeared to be an existing drainage feature. Designated as an other waters and encompassing one acre, this feature is part of an ongoing relief well installation project for the Mississippi River by the Corps of Engineers and Pointe Coupee Parish. Photograph 41 in Appendix B provides a view of this excavated drainage canal facing south from the forested wetland. Another drainage canal designated as other waters and encompassing approximately one acre, traverses along the eastern property boundary to the south where it drains into Bayou Pond. Bayou Pond then meanders west across the property and eventually crosses under LA Highway 10 and cuts across the northwest corner of the property south of LA Highway 10. The portion of Bayou Pond north of LA Highway 10 encompasses 2.3 acres.

The property south of LA Highway 10 is primarily fallow field with two large ponds, a central wetland drain traversing east to west through the property and several smaller wetland drainage swales scattered over the property. The western most pond encompasses 5.1 acres and the eastern pond encompasses 9.7 acres. The wetland drain along with the scattered wetland drainage swales and wetland depressions encompass approximately 7.2 acres. Bayou Pond also cuts through the northwest portion of this property and encompasses 0.6 acres.

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

Appendix A

DATA FORMS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Sep 30, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 1
 Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Pasture (Depression) Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°44'26.9" N Long: 91°24'34.9" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
50 % of total cover:	<u>0</u>	20 % of total cover:	<u>0</u>	
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
50 % of total cover:	<u>0</u>	20 % of total cover:	<u>0</u>	
Herb Stratum (Plot size: 30' Radius)				
1. <u>Phanopyrum gymnocarpon</u> (Grass,savannah panic)	50	Y	OBL	
2. <u>Panicum rigidulum</u> (Grass,red-top panic)	40	Y	FACW	
3. <u>Rhynchospora corniculata</u> (Beakrush,short-bristle)	30	Y	OBL	
4. <u>Spilanthes americana</u> (Spotflower,creeping)	30	Y	FACW	
5. <u>Rubus louisianus</u> (Blackberry,louisiana)	20		FAC	
6. <u>Saururus cernuus</u> (Tail,lizard's)	20		OBL	
7. <u>Hymenocallis occidentalis</u> (Spider-lily,northern)	5		OBL	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>195</u>	= Total Cover		
50 % of total cover:	<u>97.5</u>	20 % of total cover:	<u>39</u>	
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
50 % of total cover:	<u>0</u>	20 % of total cover:	<u>0</u>	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

3 – Prevalence Test is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	99	10YR 3-6	1	C	M	Clay	
3-8	2.5Y 4/1	99	10YR 3/6	1	C	M	Clay	
8-18+	2.5Y 4/1	97	10YR 3/6	3	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Sep 30, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 2
 Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.) Pasture Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'29.3" N Long: 91°24'45.7" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
	<u>0</u>	= Total Cover		
50 % of total cover:	<u>0</u>	20 % of total cover:	<u>0</u>	
Sapling/Shrub Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
	<u>0</u>	= Total Cover		
50 % of total cover:	<u>0</u>	20 % of total cover:	<u>0</u>	
Herb Stratum (Plot size: 30' Radius)				
1.	<u>Cynodon dactylon (Grass,bermuda)</u>	80	Y	FACU
2.	<u>Axonopus affinis (Grass,southern carpet)</u>	40	Y	FACW
3.	<u>Parthenium hysterophorus (Santa maria feverfew)</u>	40	Y	FAC
4.	<u>Polygonum hydropiper (Smartweed,marshpepper)</u>	30		OBL
5.	<u>Amaranthus spinosus (Amaranth,spiny)</u>	20		FACU
6.	<u>Iva annua (Sumpweed,annual)</u>	20		FAC
7.	<u>Sida rhombifolia (Sida,arrow-leaf)</u>	20		FACU
8.	<u>Solanum carolinense (Nightshade,carolina)</u>	20		FACU
9.	<u>Diodia virginiana (Button-weed,virginia)</u>	15		FACW
10.	<u>Xanthium strumarium (Cockle-bur,rough)</u>	15		FAC
11.	_____			
12.	_____			
	<u>300</u>	= Total Cover		
50 % of total cover:	<u>150</u>	20 % of total cover:	<u>60</u>	
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
	<u>0</u>	= Total Cover		
50 % of total cover:	<u>0</u>	20 % of total cover:	<u>0</u>	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 1, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 3
 Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Pasture Depression Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'41.2" N Long: 91°24'40.7" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Sapling/Shrub Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>30'</u> Radius)				
1.	<u>Polygonum hydropiper (Smartweed,marshpepper)</u>	<u>65</u>	<u>Y</u>	<u>OBL</u>
2.	<u>Iva annua (Sumpweed,annual)</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>
3.	<u>Cynodon dactylon (Grass,bermuda)</u>	<u>40</u>		<u>FACU</u>
4.	<u>Spilanthes americana (Spotflower,creeping)</u>	<u>20</u>		<u>FACW</u>
5.	<u>Diodia virginiana (Button-weed,virginia)</u>	<u>15</u>		<u>FACW</u>
6.	<u>Axonopus affinis (Grass,southern carpet)</u>	<u>10</u>		<u>FACW</u>
7.	<u>Phyla lanceolata (Frog-fruit,lance-leaf)</u>	<u>10</u>		<u>FACW</u>
8.	<u>Aster adnatus (Chain-leaf aster)</u>	<u>5</u>		<u>FACW</u>
9.	<u>Solanum carolinense (Nightshade,carolina)</u>	<u>5</u>		<u>FACU</u>
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>107.5</u>		20 % of total cover: <u>43</u>		
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100			N/A	N/A	Clay Loam	
2-6	2.5Y 3/1	97	7.5YR 5/8	1	C	M	Clay	
			10YR 4/6	2	C	M	Clay	
6-18	2.5Y 3/1	94	7.5YR 5/8	4	C	M	Clay	
			10YR 4/6	2	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 1, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 4
 Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.) Pasture Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°44'17.5" N Long: 91°24'36.7" W Datum: NAD 83
 Soil Map Unit Name: Commerce silt loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' Radius)				
1. <u>Quercus pagoda (Oak,cherry-bark)</u>	50	Y	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
2. <u>Carya illinoensis (Hickory,pecan)</u>	40	Y	FAC	
3. <u>Ulmus americana (Elm,american)</u>	30	Y	FACW	
4. <u>Quercus nigra (Oak,water)</u>	25		FAC	
5. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
6. _____				
7. _____				
8. _____				
_____ = Total Cover 50 % of total cover: <u>72.5</u> 20 % of total cover: <u>29</u>				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Indicators: ___ 1 – Rapid Test for Hydrophytic Vegetation <u>X</u> 2 – Dominance Test is > 50% ___ 3 – Prevalence Test is ≤ 3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____				
3. _____				
4. _____				
5. _____				Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
6. _____				
7. _____				
8. _____				
_____ = Total Cover 50 % of total cover: <u>0</u> 20 % of total cover: <u>0</u>				
Herb Stratum (Plot size: 30' Radius)				
1. <u>Cynodon dactylon (Grass,bermuda)</u>	50	Y	FACU	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Polygonum hydropiper (Smartweed,marshpepper)</u>	40	Y	OBL	
3. <u>Sida rhombifolia (Sida,arrow-leaf)</u>	20		FACU	
4. <u>Elephantopus carolinianus (Elephant-foot,carolina)</u>	10		FAC	
5. _____				Footnote: ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.
6. _____				
7. _____				
8. _____				
_____ = Total Cover 50 % of total cover: <u>60</u> 20 % of total cover: <u>24</u>				
Woody Vine Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____				
3. _____				
4. _____				
5. _____				Footnote: ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.
6. _____				
7. _____				
8. _____				
_____ = Total Cover 50 % of total cover: <u>0</u> 20 % of total cover: <u>0</u>				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 3/1				N/A	N/A	Silt Loam	
1-8	10YR 4/1	98	10YR 4/6	2	C	M	Clay	
8-18+	10YR 3/1	97	10YR 4/6	1	C	M	Clay	
			10YR 3/6	2	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

³Indicators 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: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 1, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 5
 Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Pasture Depression Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°44'10" N Long: 91°24'45" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ____ Surface Water (A1) ____ Aquatic Fauna (B13) ____ High Water Table (A2) ____ Marl Deposits (B15) (LRR U) <u>X</u> Saturation (A3) ____ Hydrogen Sulfide Odor (C1) ____ Water Marks (B1) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) ____ Sediment Deposits (B2) ____ Presence of Reduced Iron (C4) ____ Drift Deposits (B3) ____ Recent Iron Reduction in Tilled Soils (C6) ____ Algal Mat or Crust (B4) ____ Thin Muck Surface (C7) ____ Iron Deposits (B5) ____ Other (Explain in Remarks) ____ Inundation Visible on Aerial Imagery (B7) <u>X</u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ____ Surface Soil Cracks (B6) ____ Sparsely Vegetated Concave Surface (B8) ____ Drainage Patterns (B10) ____ Moss Trim Lines (B16) ____ Dry-Season Water Table (C2) <u>X</u> Crayfish Burrows (C8) ____ Saturation Visible on Aerial Imagery (C9) ____ Geomorphic Position (D2) ____ Shallow Aquitard (D3) <u>X</u> FAC-Neutral Test (D5) ____ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes ____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes ____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No ____ Depth (inches): <u>0-6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' Radius</u>)			
1. <u>Carya illinoensis (Hickory,pecan)</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2. <u>Celtis laevigata (Sugar-berry)</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>60</u> = Total Cover		
50 % of total cover: <u>30</u>	20 % of total cover: <u>12</u>		

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

	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>30' Radius</u>)			
1. <u>Polygonum hydropiper (Smartweed,marshpepper)</u>	<u>85</u>	<u>Y</u>	<u>OBL</u>
2. <u>Spilanthes americana (Spotflower,creeping)</u>	<u>20</u>		<u>FACW</u>
3. <u>Eleocharis obtusa (Spikerush,blunt)</u>	<u>10</u>		<u>OBL</u>
4. <u>Iva annua (Sumpweed,annual)</u>	<u>10</u>		<u>FAC</u>
5. <u>Carex tribuloides (Sedge,blunt broom)</u>	<u>5</u>		<u>FACW</u>
6. <u>Cyperus virens (Flatsedge,green)</u>	<u>5</u>		<u>FACW</u>
7. <u>Juncus effusus (Rush,soft)</u>	<u>5</u>		<u>FACW</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>140</u> = Total Cover		
50 % of total cover: <u>70</u>	20 % of total cover: <u>28</u>		

	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u> = Total Cover		
50 % of total cover: <u>0</u>	20 % of total cover: <u>0</u>		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	98	10YR 4/6	2	C	M	Clay	
2-8	N 4/	89	5YR 4/6	8	C	M	Clay	
			10YR 4/6	3	C	M	Clay	
8-18+	2.5Y 3/1	95	7.5YR 3/4	5	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 8, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 6
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Pasture Depression Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'29.3" N Long: 91°24'56.2" W Datum: NAD 83
 Soil Map Unit Name: Mhoon silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
	<u>0</u> = Total Cover			
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
	<u>0</u> = Total Cover			
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Herb Stratum (Plot size: 30' Radius)				
1. <u>Iva annua</u> (Sumpweed,annual)	60	Y	FAC	
2. <u>Polygonum hydropiper</u> (Smartweed,marshpepper)	55	Y	OBL	
3. <u>Aster adnatus</u> (Chain-leaf aster)	40		FACW	
4. <u>Phyla lanceolata</u> (Frog-fruit,lance-leaf)	30		FACW	
5. <u>Spilanthes americana</u> (Spotflower,creeping)	30		FACW	
6. <u>Cyperus virens</u> (Flatsedge,green)	10		FACW	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>225</u> = Total Cover			
50 % of total cover: <u>112.5</u>		20 % of total cover: <u>45</u>		
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>0</u> = Total Cover			
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

3 – Prevalence Test is ≤ 3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 8, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 7
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.) Pasture Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°44'3.1" N Long: 91°25'7" W Datum: NAD 83
 Soil Map Unit Name: Commerce silt loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover					
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover					
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>			
Herb Stratum (Plot size: <u>30' Radius</u>)				Hydrophytic Vegetation Indicators: ___ 1 – Rapid Test for Hydrophytic Vegetation <u>X</u> 2 – Dominance Test is > 50% ___ 3 – Prevalence Test is ≤ 3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.	
1. <u>Cynodon dactylon (Grass,bermuda)</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>		
2. <u>Polygonum hydropiper (Smartweed,marshpepper)</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>		
3. <u>Iva annua (Sumpweed,annual)</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>		
4. <u>Phyla lanceolata (Frog-fruit,lance-leaf)</u>	<u>25</u>		<u>FACW</u>		
5. <u>Spilanthes americana (Spotflower,creeping)</u>	<u>20</u>		<u>FACW</u>		
6. <u>Diodia virginiana (Button-weed,virginia)</u>	<u>10</u>		<u>FACW</u>		
7. <u>Trifolium repens (Clover,white)</u>	<u>10</u>		<u>FACU</u>		
8. <u>Xanthium strumarium (Cockle-bur,rough)</u>	<u>5</u>		<u>FAC</u>		
9. <u>Aster adnatus (Chain-leaf aster)</u>	<u>3</u>		<u>FACW</u>		
_____ = Total Cover					
50 % of total cover: <u>106.5</u>		20 % of total cover: <u>42.6</u>			
Woody Vine Stratum (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>			
Hydrophytic Vegetation Present? Yes <u>X</u> No _____					

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100			N/A	N/A	Clay Loam	
2-10	2.5Y 3/1	98	7.5YR 4/6	2	C	M	Clay	
10-18+	2.5Y 3/1	96	7.5YR 4/6	4	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 9, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 8
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Fallow Field Depression Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'19.2" N Long: 91°25'14.9" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

HYDROLOGY

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

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

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

Herb Stratum (Plot size: 30' Radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phyla lanceolata</u> (Frog-fruit,lance-leaf)	<u>65</u>	<u>Y</u>	<u>FACW</u>
2. <u>Cyperus virens</u> (Flatsedge,green)	<u>60</u>	<u>Y</u>	<u>FACW</u>
3. <u>Carex tribuloides</u> (Sedge,blunt broom)	<u>40</u>	<u>Y</u>	<u>FACW</u>
4. <u>Spilanthes americana</u> (Spotflower,creeping)	<u>25</u>	_____	<u>FACW</u>
5. <u>Aster adnatus</u> (Chain-leaf aster)	<u>20</u>	_____	<u>FACW</u>
6. <u>Diodia virginiana</u> (Button-weed,virginia)	<u>15</u>	_____	<u>FACW</u>
7. <u>Cyperus iria</u> (Flatsedge,iria)	<u>10</u>	_____	<u>FACW</u>
8. <u>Iva annua</u> (Sumpweed,annual)	<u>10</u>	_____	<u>FAC</u>
9. <u>Paspalum floridanum</u> (Paspalum,florida)	<u>10</u>	_____	<u>FACW</u>
10. <u>Verbena brasiliensis</u> (Vervain,brazilian)	<u>10</u>	_____	<u>FAC</u>
11. <u>Xanthium strumarium</u> (Cockle-bur,rough)	<u>5</u>	_____	<u>FAC</u>
12. _____	_____	_____	_____
	<u>270</u> = Total Cover		
50 % of total cover: <u>135</u>	20 % of total cover: <u>54</u>		

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u> = Total Cover		
50 % of total cover: <u>0</u>	20 % of total cover: <u>0</u>		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/2	99	10YR 4/6	1	C	M	Clay	
2-18+	2.5Y 4/1	96	10YR 4/6	2	C	M	Clay	
			10YR 4/4	2	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 15, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 9
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Fallow Field Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'24.2" N Long: 91°24'59.8" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks:	

HYDROLOGY

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

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

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

Herb Stratum (Plot size: 30' Radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Setaria pumila</u> (yellow foxtail)	<u>70</u>	<u>Y</u>	<u>FAC</u>
2. <u>Cynodon dactylon</u> (Grass,bermuda)	<u>60</u>	<u>Y</u>	<u>FACU</u>
3. <u>Ambrosia trifida</u> (Ragweed,great)	<u>30</u>		<u>FAC</u>
4. <u>Carex tribuloides</u> (Sedge,blunt broom)	<u>20</u>		<u>FACW</u>
5. <u>Diodia virginiana</u> (Button-weed,virginia)	<u>20</u>		<u>FACW</u>
6. <u>Solidago canadensis</u> (Golden-rod,canada)	<u>15</u>		<u>FACU</u>
7. <u>Aster adnatus</u> (Chain-leaf aster)	<u>10</u>		<u>FACW</u>
8. <u>Cirsium horridulum</u> (Thistle,yellow)	<u>10</u>		<u>FAC</u>
9. <u>Solanum carolinense</u> (Nightshade,carolina)	<u>10</u>		<u>FACU</u>
10. <u>Verbena brasiliensis</u> (Vervain,brazilian)	<u>10</u>		<u>FAC</u>
11. <u>Iva annua</u> (Sumpweed,annual)	<u>5</u>		<u>FAC</u>
12. _____	_____	_____	_____
	<u>260</u> = Total Cover		
50 % of total cover: <u>130</u>	20 % of total cover: <u>52</u>		

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	<u>0</u> = Total Cover		
50 % of total cover: <u>0</u>	20 % of total cover: <u>0</u>		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>50</u>	X 2 = <u>100</u>
FAC species <u>125</u>	X 3 = <u>375</u>
FACU species <u>85</u>	X 4 = <u>340</u>
UPL species <u>0</u>	X 5 = <u>0</u>
Column Totals: <u>260</u> (A)	<u>815</u> (B)

Prevalence Index = B/A = 3.13

Hydrophytic Vegetation Indicators:

1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100			N/A	N/A	Clay Loam	
3-7	10YR 4/2	98	10YR 5/8	1	C	M	Clay	
			10YR 3/6	1	C	M	Clay	
7-18+	10YR 4/1	97	10YR 5/8	2	C	M	Clay	
			10YR 4/6	1	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

³Indicators 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: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 15, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 10
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Fallow Field Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'24.6" N Long: 91°24'56.9" W Datum: NAD 83
 Soil Map Unit Name: Commerce silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Sapling/Shrub Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Herb Stratum (Plot size: 30' Radius)				
1.	<u>Aster adnatus</u> (Chain-leaf aster)	80	Y	FACW
2.	<u>Diodia virginiana</u> (Button-weed, virginia)	40	Y	FACW
3.	<u>Ambrosia trifida</u> (Ragweed, great)	20		FAC
4.	<u>Setaria pumila</u> (yellow foxtail)	15		FAC
5.	<u>Solidago canadensis</u> (Golden-rod, canada)	3		FACU
6.	_____			
7.	_____			
8.	_____			
9.	_____			
10.	_____			
11.	_____			
12.	_____			
_____ = Total Cover				
50 % of total cover: <u>79</u>		20 % of total cover: <u>31.6</u>		
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100			N/A	N/A	Clay Loam	
2-6	10YR 4/2	99	10YR 4/6	1	C	M	Clay	
6-18+	10YR 4/1	98	10YR 5/8	2	C	M	Clay	
			10YR 4/6	1	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 15, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 11
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Drainage Swale Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 30°43'23.2" N Long: 91°24'52.6" W Datum: NAD 83
 Soil Map Unit Name: Mhoon silty clay loam NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Sapling/Shrub Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>30'</u> Radius)				
1.	<u>Cyperus virens (Flatsedge,green)</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>
2.	<u>Spilanthes americana (Spotflower,creeping)</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>
3.	<u>Lythrum alatum (Loosestrife,winged)</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
4.	<u>Juncus effusus (Rush,soft)</u>	<u>20</u>	_____	<u>FACW</u>
5.	<u>Polygonum hydropiper (Smartweed,marshpepper)</u>	<u>20</u>	_____	<u>OBL</u>
6.	<u>Iva annua (Sumpweed,annual)</u>	<u>15</u>	_____	<u>FAC</u>
7.	<u>Paspalum urvillei (Grass,vasey)</u>	<u>15</u>	_____	<u>FAC</u>
8.	<u>Phyla lanceolata (Frog-fruit,lance-leaf)</u>	<u>15</u>	_____	<u>FACW</u>
9.	<u>Solidago canadensis (Golden-rod,canada)</u>	<u>10</u>	_____	<u>FACU</u>
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>107.5</u>		20 % of total cover: <u>43</u>		
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
_____ = Total Cover				
50 % of total cover: <u>0</u>		20 % of total cover: <u>0</u>		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	98	10YR 4/6	1	C	M	Clay	
			10YR 5/8	1	C	M	Clay	
3-8	10YR 4/1	97	10YR 5/8	1	C	M	Clay	
			10YR 4/6	2	C	M	Clay	
8-18+	10YR 4/1	95	10YR 4/6	2	C	M	Clay	
			10YR 3/6	3	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Angel Ranch 751 Acres City/County: Pointe Coupee Sampling Date: Oct 15, 2014
 Applicant/Owner: BRAC State: Louisiana Sampling Point: 12
 Investigator(s): B. McCoy Section, Township, Range: Sec 22, 23, & 24; T-4-S; R-10-E
 Landform (hillslope, terrace, etc.): Forested Batture Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR or MLRA): LRR O Lat: 30°44'24.7" N Long: 91°25'14.9" W Datum: NAD 83
 Soil Map Unit Name: Robinsonville and Commerce series NWI Classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

HYDROLOGY

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

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' Radius</u>)			
1. <u>Carya illinoensis (Hickory,pecan)</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>
2. <u>Celtis laevigata (Sugar-berry)</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>
3. <u>Diospyros virginiana (Persimmon,common)</u>	<u>20</u>		<u>FAC</u>
4. <u>Gleditsia aquatica (Water-locust)</u>	<u>15</u>		<u>OBL</u>
5. _____			
6. _____			
7. _____			
8. _____			
	<u>135</u> = Total Cover		
50 % of total cover: <u>67.5</u>	20 % of total cover: <u>27</u>		
Sapling/Shrub Stratum (Plot size: <u>30' Radius</u>)			
1. <u>Cephalanthus occidentalis (Buttonbush,common)</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>
2. <u>Forestiera acuminata (Privet,swamp)</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
	<u>20</u> = Total Cover		
50 % of total cover: <u>10</u>	20 % of total cover: <u>4</u>		
Herb Stratum (Plot size: <u>30' Radius</u>)			
1. <u>Boehmeria cylindrica (False-nettle,small-spike)</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
2. <u>Brunnichia cirrhosa (Redvine)</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
3. <u>Aster pilosus (Aster,white heath)</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	<u>45</u> = Total Cover		
50 % of total cover: <u>22.5</u>	20 % of total cover: <u>9</u>		
Woody Vine Stratum (Plot size: <u>30' Radius</u>)			
1. <u>Vitis riparia (Grape,river-bank)</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
2. <u>Campsis radicans (Trumpet-creeper)</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
3. <u>Toxicodendron radicans (Ivy,poison)</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
4. <u>Smilax bona-nox (Greenbrier,saw)</u>	<u>5</u>		<u>FAC</u>
5. _____			
	<u>50</u> = Total Cover		
50 % of total cover: <u>25</u>	20 % of total cover: <u>10</u>		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

 3 – Prevalence Test is ≤ 3.0¹

 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

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

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

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 12

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100			N/A	N/A	Clay Loam	
2-10	10YR 4/2	95	10YR 3/6	1	C	M	Clay	
			7.5YR 4/6	4	C	M	Clay	
10-18+	10YR 4/1	94	10YR 4/2	2	C	M	Clay	
			10YR 3/4	4	C	M	Clay	

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

Hydric Soil Indicators:

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

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

Indicators for Problematic Hydric Soils³:

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

³Indicators 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



Photograph 1. Soil Profile Observed at Plot 1



Photograph 2. Soil Profile Observed at Plot 2



**Photograph 3. Overview of the Habitat Observed at Plot 2,
Facing North**



**Photograph 4. Overview of the Habitat Observed at Plot 2,
Facing Southwest**



Photograph 5. Soil Profile Observed at Plot 3



**Photograph 6. Overview of the Habitat Observed at Plot 3,
Facing Northwest**



**Photograph 7. Overview of the Habitat Observed at Plot 3,
Facing Southwest**



Photograph 8. Soil Profile Observed at Plot 4



**Photograph 9. Overview of the Habitat Observed at Plot 4,
Facing South**



**Photograph 10. Overview of the Habitat Observed at Plot 4,
Facing North**



Photograph 11. Soil Profile Observed at Plot 5



**Photograph 12. Overview of the Habitat Observed at Plot 5,
Facing South**



**Photograph 13. Overview of the Habitat Observed at Plot 5,
Facing North**



Photograph 14. Soil Profile Observed at Plot 6



**Photograph 15. Overview of the Habitat Observed at Plot 6,
Facing East**



**Photograph 16. Overview of the Habitat Observed at Plot 6,
Facing North**



Photograph 17. Soil Profile Observed at Plot 7



Photograph 18. Overview of the Habitat Observed at Plot 7, Facing North



**Photograph 19. Overview of the Habitat Observed at Plot 7,
Facing East**



Photograph 20. Soil Profile Observed at Plot 8



**Photograph 21. Overview of the Habitat Observed at Plot 8,
Facing East**



**Photograph 22. Overview of the Habitat Observed at Plot 8,
Facing North**



Photograph 23. Soil Profile Observed at Plot 9



Photograph 24. Overview of the Habitat Observed at Plot 9, Facing East



**Photograph 25. Overview of the Habitat Observed at Plot 9,
Facing West**



Photograph 26. Soil Profile Observed at Plot 10



**Photograph 27. Overview of the Habitat Observed at Plot 10,
Facing South**



**Photograph 28. Overview of the Habitat Observed at Plot 10,
Facing North**



Photograph 29. Soil Profile Observed at Plot 11



**Photograph 30. Overview of the Habitat Observed at Plot 11,
Facing Northwest**



Photograph 31. Overview of the Habitat Observed at Plot 11, Facing Southeast



Photograph 32. Soil Profile Observed at Plot 12



**Photograph 33. Overview of the Habitat Observed at Plot 12,
Facing South**



**Photograph 34. Overview of the Habitat Observed at Plot 12,
Facing East**



Photograph 35. Large Pond at Northeast Portion of Property Just South of LA Highway 981



Photograph 36. Drainage Canal Along the East Side of the Property, Facing North



Photograph 37. Drainage Canal Along the East Side of the Property, Facing South



Photograph 38. Large Pond South of LA Highway 10, Facing Southeast



**Photograph 39. Smaller Pond South of LA Highway 10,
Facing West**



**Photograph 40. Wetland Drain Traversing Through the Center of the
Property South of LA Highway 10, Facing East**



Photograph 41. Excavated Drainage Canal Traversing the Center of the Property, Facing South