

# JOINT PUBLIC NOTICE

November 17, 2014

United States Army  
Corps of Engineers  
New Orleans District  
Regulatory Branch  
Post Office Box 60267  
New Orleans, La. 70160-0267

(504) 862-2548/ FAX (504) 862-2574  
Jacqueline.R.Farabee@usace.army.mil  
Project Manager  
Jacqueline Farabee  
Permit Application Number  
MVN-2014-01336 MR

State of Louisiana  
Department of Environmental Quality  
Post Office Box 4313  
Baton Rouge, La. 70821-4313  
Attn: Water Quality Certifications

(225) 219-3225/FAX (225) 325-8250  
Project Manager  
Elizabeth Johnson  
WQC Application Number  
WQC # 141117-02

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [ ] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [ X ] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, for a Water Quality Certification (WQC) in accordance with statutory authority contained in Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L.95-17).

## **DORIS N RANCH MITIGATION BANK IN TERREBONNE PARISH**

**NAME OF APPLICANT:** JMB, LLC, Attn: Russell Walters, 203 Main St., Franklin, LA 70538

**LOCATION OF WORK:** The site is located approximately 13 miles southeast of Houma, Louisiana off of Hwy 659 in Terrebonne Parish, as shown on enclosed drawings (Latitude: 29.57835555 N, Longitude:-90.502891666 W). The Project is located within the West Central Louisiana Coastal Basin, Hydrologic Unit 08090302.

**CHARACTER OF WORK:** Removal of eleven 16-inch culverts, one flap gate with a 24" culvert, gapping of existing elevated road and levee, and construction of a low water crossing with redistribution of approximately 1,753.8 cubic yards of excavated material on the site. All work is being done to restore natural hydrology to the area for the purpose of constructing a mitigation bank.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **30 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. **Similar letters concerning the**

**Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.**

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

### **Corps of Engineers Permit Criteria**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the U.S. Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources.

Our initial finding is that the proposed work would neither affect any species listed as endangered by the U.S. Departments of Interior or Commerce, nor affect any habitat designated as critical to the survival and recovery of any endangered species.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of N/A acre(s) of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interested in the matter.

Martin S. Mayer  
Chief, Regulatory Branch

Enclosure

# Draft Prospectus for the Proposed Doris N Mitigation Bank

Terrebonne Parish, Louisiana



October 06, 2014

JMB Doris N Ranch, LLC  
P.O. Box 333  
Franklin, Louisiana 70538  
(337) 828-7090  
POC: Mr. Russell Walters  
russell@jmbcompanies.com

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## **1.0 INTRODUCTION**

JMB Doris N Ranch, LLC (JMB), submits this Prospectus to the U.S. Army Corps of Engineers - New Orleans District (CEMVN) and the CEMVN Mitigation Banking Interagency Review Team (IRT) in sponsorship of establishing Doris N Mitigation Bank (DNMB). The project area is located in Terrebonne Parish, approximately 5 miles east of Houma within the Louisiana Coastal Zone Boundary. DNMB is intended to provide compensatory mitigation for wetland impacts within the mitigation service areas of the Terrebonne Basin and the Louisiana Coastal Zone Boundary (Figures 1.0 and 2.0).

DNMB is comprised of approximately 915.1 acres of cattle pasture and impounded marsh (Figure 2.1). The project area has potential to be restored to high quality fresh marsh (FM), cypress-tupelo (CT), and bottomland hardwoods (BLH). DNMB will be preserved and protected by a Conservation Servitude. Through the implementation of re-establishment, rehabilitation, and enhancement Mitigation Types as defined in the Corps of Engineers, New Orleans District (CEMVN) Modified Charleston Method (MCM), *Guidebook for the Use of the Excel Workbook* (March 2013), the Sponsor will restore and enhance 911.0 acres of wetlands.

### **1.1 Site Location**

The project area is located on Louisiana Highway 659, South of the Gulf Intracoastal Waterway (GIWW), and 5 miles east of Houma, Louisiana. More specifically, the project area is located in Sections 05, 06, 27, 28, 29, 30, 31, 37, and 38; T-17-S; R-18-E in Terrebonne Parish, Louisiana NAD83, Louisiana South 1702 X=3,502,425.1 ft.; Y=392,833.9 ft. To reach the site, from US Highway 90, take Exit 210 (Louisiana Highway 182) and turn left towards the west; proceed for approximately 3.5 miles; turn left on to Louisiana Highway 3087; proceed for approximately 4.9 miles; turn left on to Louisiana Highway 659; proceed for approximately 2.2 miles; the entrance to the property (gravel road) will be on the left. DNMB is located within the USGS Hydrologic Unit Code (HUC) 08090302 (West Central Louisiana Coastal) basin. The project area is bordered by the GIWW to the north and by fallow and productive agricultural fields and cow pastures to the east, west, and south. (Figures 1.0 and 2.0)

### **1.2 Historical Aerial Imagery**

Historical aerial imagery from 1936 reveals the project area was predominately cleared for agricultural use at that time (Figure 2.5). Tree density is currently relatively sparse; however, logging activities are known to have occurred within this area. This can be seen on the western portion of the northern half of the project area. The 1935 imagery indicates that trees are present on the ridge; however, in the 1940 imagery, the trees are no longer present. It is also known that this area has historically been utilized for cattle grazing.

## **2.0 PROJECT GOALS AND OBJECTIVES**

The goal of DNMB is the cumulative re-establishment, re-habilitation, and enhancement of approximately 230.1 acres of bottomland hardwoods (BLH), 159.6 acres of cypress-tupelo (CT) and 329.3 acres of fresh marsh (FM) (Figure 3.0). This acreage represents

actual acreage of bottomland hardwood, cypress-tupelo, and fresh marsh to be restored or enhanced. Acreage associated with non-mitigation features, existing roads, ditches and drainage areas, existing rights-of-way, and servitudes has been excluded.

**Table: 1** Mitigation Plan Summary: Habitats; Methods; and Area Affected.

Mitigation Plan Summary			
Current Habitat	Acres	Proposed Habitat	Acres
Cattle Grazing Pasture (wet)	193.5	Re-Establishment I, Bottomland Hardwoods	35.9
Cattle Grazing Pasture (non-wet)	30.7	Rehabilitation I, Emergent Fresh Marsh	6.9
Cattle Grazing Pasture (50% wet)	11.5	Rehabilitation I, Bottomland Hardwoods	194.8
Forested/Scrub Shrub Wetland	167.3	Enhancement I, Forested/Scrub Shrub	167.3
Emergent Fresh Marsh (>2.5')	159.6	Enhancement I, Cypress-Tupelo Swamp	159.6
Emergent Fresh Marsh (<2.5')	321.9	Enhancement I, Fresh Marsh	321.9
Hydrologic Features	23.5	Hydrologic Features	23.5
Roads	7	Roads	5.1
<b>Total Acreage</b>	<b>915.0</b>	<b>Total Acreage</b>	<b>915.0</b>

DNMB is strategically situated in the Terrebonne Basin and capable of reinstating a range of physical, hydrological, biogeochemical, biotic, and atmospheric functions to the watershed. Therefore the objectives of the mitigation bank area are diverse. The re-establishment and rehabilitation of fresh marsh, cypress-tupelo swamp, and bottomland hardwood habitats will positively affect the physical structure of the area by serving as a protection from storm surge from hurricanes and tropical storms. Restoration of DNMB's topography and vegetative habitats can institute reclamation of the organic material to the systems soil and filter sediment deposition runoff into the GIWW. Hydrologic restoration would restore natural hydrologic cycling and flood storage which would inundate soils and return them to their natural historic hydric process. Re-building marsh and swamp habitats can restore biogeochemical processes in the soil considerably via additional plant and invertebrate detritus. Restoration will also provide improved biotic conditions and create habitat for hundreds of species of migratory birds. All of these functions working together also provide atmospheric maintenance and natural aesthetics.

### 3.0 ECOLOGICAL SUITABILITY OF SITE

#### 3.1 Historical Ecological Characteristics of the Site

Historically, hydrology in the project area has been managed through a combination of a flap gate a large drainage ditch bisecting the property. This management has inadvertently impounded and disconnected much of the site from its natural hydrologic regime. The mechanized clearing and hydrologic alteration of this site began in the early 1900's or sooner, prior to aerial photography.

Reference sites with similar geology and similar historical/current habitat type were found onsite, adjacent forested areas, and directly across the GIWW. Habitat types found in these reference sites included Hackberry-American Elm-Green Ash Bottomland Forest, Bald cypress-Tupelo Swamp, and Freshwater Marsh.

### 3.2 Current Ecological Characteristics of the Site

#### 3.2.1 Existing Soil

According to the Terrebonne Parish Soil Survey (2001), maps of the subject property the following soils are found to occur: Allmands Muck, Aquents dredged, Fausse clay, Gramercy-Cancienne silty clay loams, Larose muck, and Schriever clay. The Soil Survey characterized approximately 57% of the restoration tracts as hydric soils, 27% as predominantly hydric soils, and 16% as partially hydric soils (Figures 5.0 and 5.1). The project area consists of low undulating topography with areas of higher elevations adjacent to the GIWW and Louisiana Highway 659. Atop the Aquent soils, concave depressions and ridges were noticed within the microtopography. These depressions are possibly due to factors such as irregularity in relic spoil settlement, livestock compaction, and root decomposition of removed trees. The various sized ridges are man-made access routes across areas of lower elevation and/or spoil from internal drainage features. Elevations, derived from LIDAR data, range from 0.0' to 9.0' relative to NAVD88 datum (Figure 2.4).

**Table 2:** Current Site Conditions: Existing Soils, Hydric Rating, and Water Table.

Summary of Soil Map Unit - Terrebonne Parish, Louisiana (LA109)						
Map Unit Symbol	Map Unit Name	Hydric Rating	Natural Drainage	Water Table Depth	Frequency Flooding	Frequency Ponding
AEA	Allemands muck, 0 to 0.2 percent slopes, very frequently flooded	100	Very Poorly Drained	0"	Very Frequent	Frequent
ATA	Aquents, dredged	85	Unspecified	> 80"	Rare	None
ATB	Aquents, dredged, 1 to 5 percent slopes, occasionally flooded	85	Unspecified	> 80"	Occasional	None
FAA	Fausse clay, 0 to 1 percent slopes, frequently flooded	100	Very Poorly Drained	0" to 6"	Frequent	Frequent
GcA	Gramercy-Cancienne silty clay loams, 0 to 1 percent slopes	45	Poorly Drained	0" to 24"	Rare	None
LRA	Larose muck, very frequently flooded	100	Very Poorly Drained	0" to 6"	Very Frequent	Frequent
ShA	Schriever clay, 0 to 1 percent slopes	98	Poorly Drained	0"	Rare	None
SIA	Schriever clay, 0 to 1% slopes, frequently flooded	100	Very Poorly Drained	0"	Freequent	Occasional
SrA	Schriever clay, occasionally flooded	95	Poorly Drained	0" to 24"	Occasional	None

#### 3.2.2 Existing Vegetation

USFWS lists ten different NWI habitat classifications within project area (Figure 2.5). The majority of the area is classified as Palustrine emergent persistent seasonally flooded (PEM1C). The remaining nine classifications consist of: Palustrine forested broad-leaved deciduous (PFO1As and PFO1R), Palustrine forested broad-leaved deciduous/needle-leaved deciduous (PFO1/2R), Palustrine scrub shrub broadleaved deciduous (PSS1A, PSS1C, PSS1R, PSS1Rs, and PSS1T), and Palustrine aquatic bed floating vascular (PAB4H).

Within the freshwater emergent wetland (PEM1C), dominant species include: Cattail (*Typha sp.*) and Maidencane (*Panicum hemitomom*). Within the forested wetlands (PFO1), dominant species include: Sugarberry (*Celtis laevigata*), American elm (*Ulmus*

*americana*), and Black Willow (*Salix nigra*). Within the scrub shrub areas (PSS1) dominant species include: Maidencane (*Panicum hemitomon*) and Black Willow (*Salix nigra*). Within the areas hydrologically managed, dominant species included:

#### **100% Wet Areas**

Herbaceous: Needle Rush (*Juncus roemerianus*), Cutgrass (*Leersia oryzoides*), Giant Cutgrass (*Zizaniopsis miliacea*), Yellow Nutsedge (*Cyperus esculentus*), Spikerush (*Eleocharis montana*), Alligatorweed (*Alternanthera philoxeroides*), White Clover (*Trifolium repens*), and Pennywort (*Hydrocotyle verticillata*)

Tree: Chinese Tallow (*Triadica sebifera*) and American Elm (*Ulmus americana*)

#### **50% Wet Areas**

Herbaceous: Bahiagrass (*Paspalum notatum*), White Clover (*Trifolium repens*), St. Augustine Grass (*Stenotaphrum secundatum*) and Common Carpetgrass (*Axonopus fissifolius*)

#### **Non Wet Areas**

Herbaceous: Bermudagrass (*Cynodon dactylon*), White Clover (*Trifolium repens*), St. Augustine Grass (*Stenotaphrum secundatum*), Common Carpetgrass (*Axonopus fissifolius*), Cherokee Sedge (*Carex cherokeensis*), and Barbed Bristlegrass (*Setaria viridis*)

Tree: Chinese Tallow (*Triadica sebifera*), Black Elderberry (*Sambucus nigra*), and Sugarberry (*Celtis laevigata*).

### **3.2.3 Existing Hydrology**

The Terrebonne Basin is bordered by Bayou Lafourche on the east, the Atchafalaya Basin floodway on the west, and the Gulf of Mexico on the south. The Terrebonne Basin is divided into four subbasins -- Timbalier, Penchant, Verret, and Fields. The basin includes all of Terrebonne Parish, and parts of Lafourche, Assumption, St. Martin, St. Mary, Iberville, and Ascension parishes. The Terrebonne Basin covers approximately 1,712,500 acres of southern Louisiana, including about 728,700 acres of wetlands (CWPPRA).

The average annual rainfall over the Terrebonne Basin ranges is approximately 63.70 inches. Of this, about 53.87 inches (or 85 percent) usually falls in February through November. During the year, July is the wettest month and October is the driest (NRCS). Watershed sources include inputs from surface runoff and direct precipitation.

### **3.2.4 Hydrological Influences**

The project area is located within the of West Central Louisiana Coastal hydrologic basin (USGS HUC 08090302). Site hydrology has been manipulated historically for cattle grazing with internal drainages located between fields that eventually drain, via flap gate, into the tidally influenced GIWW (Figure 2.2). Surface water inputs include rainfall and occasional high water from drainages connected to the GIWW. During the field investigation, portions of the site displayed a high water table and soil saturation.

### **3.2.5 Jurisdictional Determination**

Based on the routine field investigation and wetland delineation conducted by JMB in June 2014, the site contains approximately 871.4 acres of potential jurisdictional wetlands. With the exception of those areas at a higher elevation, all soils displayed hydric characteristics. Elevation and microtopography appear to influence hydrology within the project area significantly. Due to the variable microtopography, visual observations were utilized to establish a percentage of the area that could be determined as jurisdictional wetlands. The final jurisdictional determination (JD) is currently under review by the CEMVN (Figure 2.3).

### **3.3 General Bank Need**

DNMB will primarily serve the USGS HUC 08090302 (West Central Louisiana Coastal) basin. Within this primary service area, the current capacity of existing mitigation banks is critically low and has recently been forcing impacts to be mitigated outside of the impacted service area. DNMB will provide 910.9 acres of mitigation potential to this service area across three habitat types (BLH, CT, and FM).

### **3.4 Technical Feasibility**

The construction work required to develop the bank is routine in nature and feasible. The mitigation activities primarily involve the reestablishment of a more natural hydrologic regime and reforestation using bare-root seedlings. These proven methods have long been utilized successfully in wetland restoration and mitigation projects. The Sponsor has the necessary funds and personnel to successfully implement the proposed vegetative plantings. A more detailed discussion of the technical restoration methods is presented in Section 4.0.

## **4.0 ESTABLISHMENT OF THE MITIGATION BANK**

### **4.1 Site Restoration Plan**

In order to achieve the goals and objectives of the mitigation bank, the Sponsor proposes to reestablish and restore certain hydrologic and soil conditions and to conduct the necessary seedling plantings (Figure 3.0).

#### **4.1.1 Hydrologic**

During the process of conversion and management as pasture land, certain man-made hydrologic features were put in place. In order to restore the area to a more natural hydrologic state, these man-made hydrologic features must be removed. To that end, spoil banks along a large drainage ditch will be degraded to allow for exchange between this ditch and the impounded wetlands associated with it. All culverts and flap gates on the property will be removed and replaced with low-waters crossings. (Figure 3.2)

The area selected to be included in the proposed mitigation bank has an average elevation of less than +5.0 feet NAVD88, based upon State sponsored LIDAR data (Figure 2.4). Water levels in the GIWW (USGS 07381331 GIWW at Houma, LA) range seasonally from +1.0 to -1.0 feet NAVD88. It is believed that this will allow tidal movement of waters within the project area and will restore the natural ratio of wet and dry periods. This will promote the establishment of a functional BLH, CT, and FM ecosystems. (Figure 2.4 and 3.2)

**4.1.2 Soil Preparation**

Soil preparation has been shown to significantly increase reforestation success in BLH and CT restoration (Lockhart et al., 2003). Prior to the initiation of hydrologic restoration work, soils within the restoration tracts will be mechanically prepared to receive vegetative plantings. The soil surface will be disk plowed. Subsequently, sub-soiling using a ripping implement will be used at a depth of 18 inches to alleviate soil compaction and encourage air and water pore space for root growth (Allen et al., 2004). If needed, aerial application of herbicides will be used to control weeds and reduce competition for seedlings.

**4.1.3 Vegetative Plantings**

The Sponsor intends to reestablish the original BLH and CT wetland vegetation in former cattle grazing areas by conducting plantings within the mitigation areas. Based on the established FM currently on DNMB, FM areas will be subjected to a one-time prescribed burn and allowed to regenerate naturally (with no plantings). The BLH and CT plantings will be conducted during the first planting season, approximately December 15 to March 15. The site will first be prepared by conducting mowing, grading, and applying of herbicides. The goal is to match plant species to the closest extent possible to those species on adjacent wetlands. Commercial species will be chosen (where appropriate) to tolerate the same hydrological conditions as those on the adjacent lands and according to elevations on the proposed site. Appropriate seedlings of mixed BLH species or CT, (where appropriate) will then be planted at approximately 9' X 9' spacing at a minimum initial stand density of 538 stems per acre. Hard mast species for the BLH areas shall be comprised of not less than 50% or greater than 80% of the planted seedlings.

**Table 3:** Representative Species Suitable for DNMB:

CYPRESS TUPELO AREAS	SOFTMAST
Bald cypress ( <i>Taxodium distichum</i> )	x
Tupelogum ( <i>Nyssa aquatica</i> )	x
Drummond Maple ( <i>Acer rubrum var Drummondii</i> )	x
Green Ash ( <i>Fraxinus pennsylvanica</i> )	x

BOTTOMLAND HARDWOOD SPECIES	SOFTMAST	HARDMAST
Willow Oak ( <i>Quercus phellos</i> )		X
Overcup Oak ( <i>Q. Lyrata</i> )		X
Nuttall Oak ( <i>Q. nuttallii</i> )		X
Water Oak ( <i>Q. nigra</i> )		X
Bitter Pecan ( <i>Carya aquatica</i> )		X
Sweetgum ( <i>Liquidambar styraciflua</i> )	X	
Hackberry ( <i>Celtis laevigata</i> )	X	
American Elm ( <i>Ulmus americana</i> )	X	
Drummond Maple ( <i>Acer rubrum var Drummondii</i> )	X	
Red Mulberry ( <i>Morus rubra</i> )	X	
Green Ash ( <i>Fraxinus pennsylvanica</i> )	X	

#### 4.1.4 Noxious Plant Control

The Sponsor intends to use all prudent efforts, physical, chemical, or mechanical, to eliminate existing undesirable/exotic vegetation present such as Chinese tallow (*Triadica sebiferum*) on the site. These noxious plants will be treated with herbicide to reduce long-term presence to 1% per acre or less. In addition, following the planting in the reestablishment, rehabilitation, and enhancement areas of the Bank, the Sponsor will control these undesirable/exotic species as part of the maintenance and monitoring plan.

#### 4.2 Current Site Risk

Environmental threats associated with DNMB are extensive flooding from the GIWW and the erosion of banklines of the GIWW (due to heavy barge and tugboat traffic). Estimated erosion rates along the GIWW are approximately 2 feet per year. These estimations are based on comparisons of 1935 digitized shoreline and 2013 digitized shoreline. The current boundary of the proposed DNMB has been offset a minimum of 80 feet from the current shoreline to account for potential erosion.

Salinity data from USGS Stations (07381331, GIWW at Houma, LA and 07381355, Company Canal at Salt Barrier near Lockport, LA, Figure 4.1) shows that there were spikes in salinity; however, the duration was short termed even during major hurricanes. There were no occurrences in which high salinity was combined with high water events (> 1' NAVD88) associated with this area (Figure 4.2). As a good management practice, JMB will consult with approved forestry consultants to create a mix of tree species that could handle a spike in salinity and prolonged ponding conditions, to help the long term sustainability and success of the habitat.

Currently, the encumbrances located on the property are a pipeline right-of-way and a CEMVN dredged spoil disposal easement adjacent to the GIWW. The pipeline right-of-way will not be included in the Conservation Servitude easement. The Sponsor has been working with the CEMVN Real Estate Section to release the disposal easement. There are no mortgages, liens, or oil/gas leases on the property. The mineral estate is owned by Exxon and is held from prescription by a producing well outside of the proposed mitigation north of the GIWW. Exxon did not respond when contacted about a

surface access waiver. After consulting with J. Farabee (USACE), JMB feels that since the majority of the proposed site is jurisdictional wetlands, Exxon would be required to get a 404 permit for any proposed surface impacts related to exploration of the mineral interest. Due to the advances in directional drilling and the close proximity of non-wetland areas for surface locations, there appears to be no risk of future impacts from oil and gas activity. Also, there is no zoning in the area, and there are no plans of development adjacent to the proposed bank site.

### **4.3 Long-Term Sustainability of the Site**

Due to its location and project design, the proposed mitigation bank has a very high likelihood of success. DNMB will be restored to the types of communities that were historically present in the project area. The natural hydrologic and landscape processes that have been altered for drainage and agriculture will be reversed by a hydrological connection to the GIWW, tying them into the region's natural hydrologic processes. No weirs or structures will be required to maintain the DNMB's post-restoration hydrologic regime; therefore, structural maintenance will not be required. Similarly, the reliance on the system's natural vs. engineered hydrology will ensure that the restored habitats are subject to a regionally-appropriate, natural hydro-period. All existing culverts used to support an existing right-of-way will be replaced with low-water crossings. Additionally, if (after a period of time) the implementation of a culvert for access is deemed necessary for long-term management of the site, appropriate action will be taken to obtain IRT approval.

## **5.0 PROPOSED SERVICE AREA**

The proposed service area for DNMB will be primarily the USGS HUC 08090302 (West Central Louisiana Coastal) basin. DNMB will secondarily service the Terrebonne Basin encompassing USGS HUC 08070300 and 08090301 basins. DNMB is located within the coastal zone boundary set by Louisiana Department of Natural Resources (DNR) and as such will provide mitigation for impacts occurring within the Coastal Zone portions of DNMB's defined services area (Figure 4.0).

## **6.0 OPERATION OF THE MITIGATION BANK**

### **6.1 Project Representatives**

#### **6.1.1 Sponsor and Operations Manager**

JMB Doris N Ranch, LLC  
203 Main Street  
Franklin, Louisiana 70538  
(337) 828-7090  
POC: Russell Walters  
(337) 522-7207  
[russell@jmbcompanies.com](mailto:russell@jmbcompanies.com)

#### **6.1.2 Landowner**

Robert Neil

852 Argon Road  
Montegut, Louisiana 70377  
(337) 522-7207

## **6.2 Qualifications of the Sponsor**

JMB Doris N Ranch, LLC is a wholly owned subsidiary of The JM Burguières Co. Limited which is a family legacy partnership established in 1877. The Sponsor has 113 years of land management experience in Louisiana, including raising sugarcane and cattle ranching. JMB also has an established mitigation banking business and is currently managing six mitigation banks in Louisiana: Cypremort-Teche Mitigation Bank, Cypress Creek Mitigation Bank, Bee Bayou Mitigation Bank, Kilgore Plantation Mitigation Bank, Nabours “No Hope” Farms Mitigation Bank and Marine Bayou Mitigation Bank. JMB currently has a staff of qualified scientists that each have multiple years’ experience in wetland science and land management. An essential element of the family vision is rehabilitating and preserving its land holdings, as practicable, in first-class condition. Mitigation banking fits this vision.

## **6.3 Proposed Long-Term Ownership and Management Representatives**

The property encompassing the proposed 915.1 acre DNMB is currently owned by Mr. Robert Neil, who will remain the legal owner upon implementation as a mitigation bank (i.e., Conservation Servitude filing and implementation of the mitigation work plan). JMB Doris N Ranch, LLC will serve as the mitigation service provider (Sponsor) and the long-term steward of DNMB.

## **6.4 Site Protection**

Pursuant to the Louisiana Conservation Servitude Act, R.S. 9:1271 et seq., a perpetual Conservation Servitude will be placed on the 915.1 acre DNMB. This servitude will be held by a conservation-oriented 501(c)(3) organization (to be determined). The Conservation Servitude will be binding to and run with the title of the property. This Conservation Servitude will prohibit activities that would reduce the quality and quantity of the restored/enhanced wetlands, such as clear cutting, the discharge of fill, construction activities, and cattle grazing (or other agricultural activities).

The servitude will also specify permissive activities such as hunting, fishing, recreational use, and mineral exploration - given that the activity does not negatively affect the functions and values of the rehabilitated, reestablished, and enhanced wetlands.

## **6.5 Long-Term Strategy**

The amount of the required short and long term financial assurances shall be determined by the CEMVN in consultation with JMB Doris N Ranch, LLC.

In determining the assurance amount, the CEMVN may consider the following:

1. Cost of providing replacement mitigation;
2. Including costs for land acquisition;

3. Planning and engineering;
4. Legal fees;
5. Mobilization; and
6. Construction and monitoring.

It is JMB's plan to establish a Letter of Credit with a suitable banking institution for the Short-Term Financial Assurances. The Long-Term Financial Assurances will be in the form of an Escrow Account funded either annually or as credits are sold. This will be defined in the mitigation banking instrument (MBI). These funds will generate annual interest (revenues) based on anticipated maintenance and management costs, which shall be entitled to the long-term steward of the mitigation bank.

## 7.0 REFERENCES

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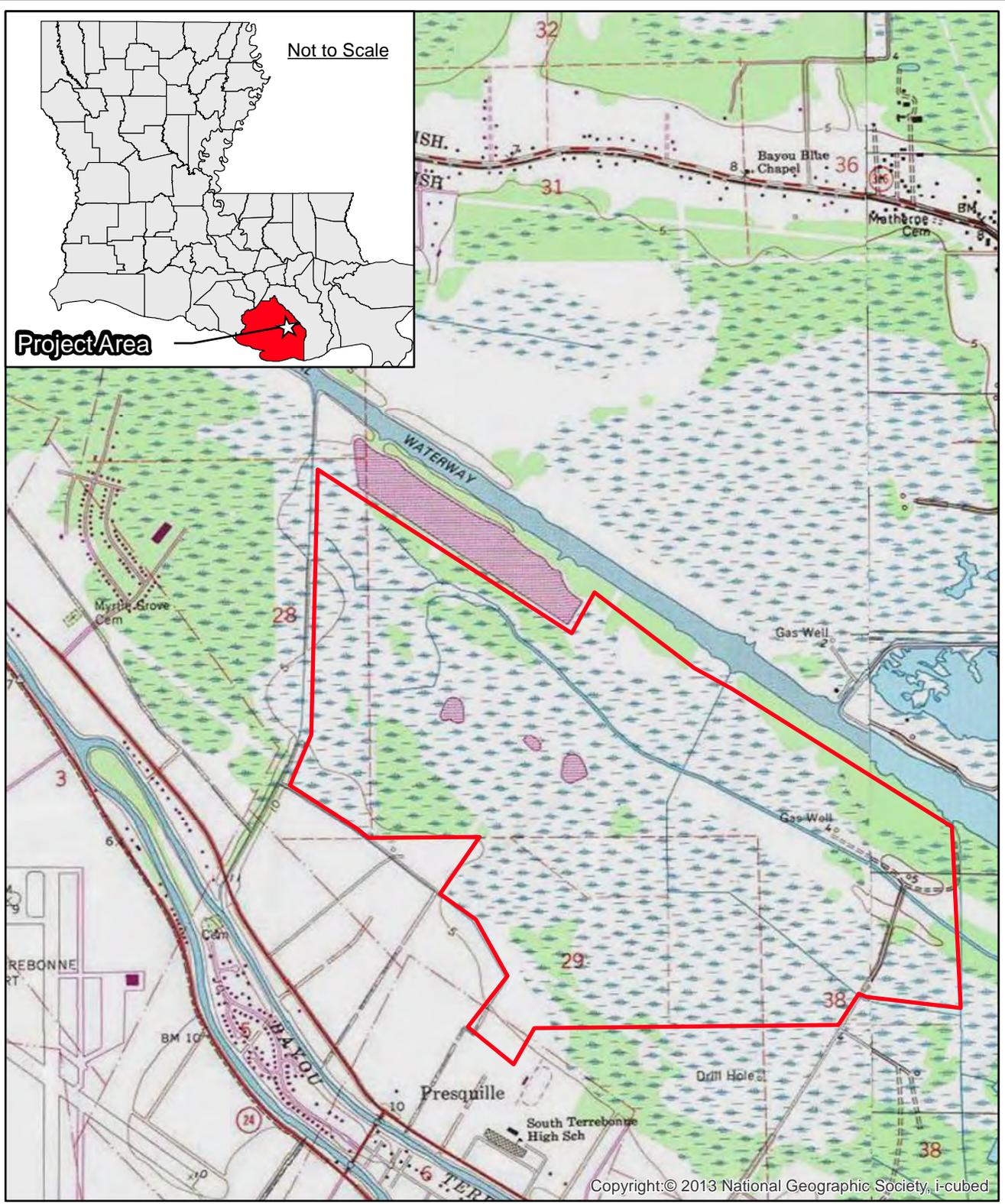
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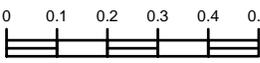
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**Legend**

 Project Boundary

0 0.1 0.2 0.3 0.4 0.5  
  
 Miles



**PROPOSED DORIS N RANCH  
 MITIGATION BANK  
 VICINITY EXHIBIT  
 TERREBONNE PARISH, LA**

Date: 06/23/14 Author: BDS

**FIGURE 1.0**



**J.M. Burguières Co., LTD**

**PROPOSED DORIS N RANCH MITIGATION BANK**

Approximately 915.1 Acres  
T17S-R18E, Sec. 05, 06, 27, 28, 29, 30, 31, 37 and 38

NAD83, LOUISIANA SOUTH 1702

X = 3,502,425.1 ft

Y = 392,833.9 ft

WGS84

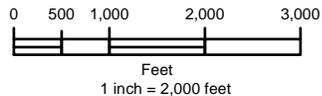
LONG = 090° 38' 10.41" W

LAT = 29° 34' 42.08" N

Not to Scale

**Legend**

 Project Boundary



**PROPOSED DORIS N RANCH  
MITIGATION BANK**

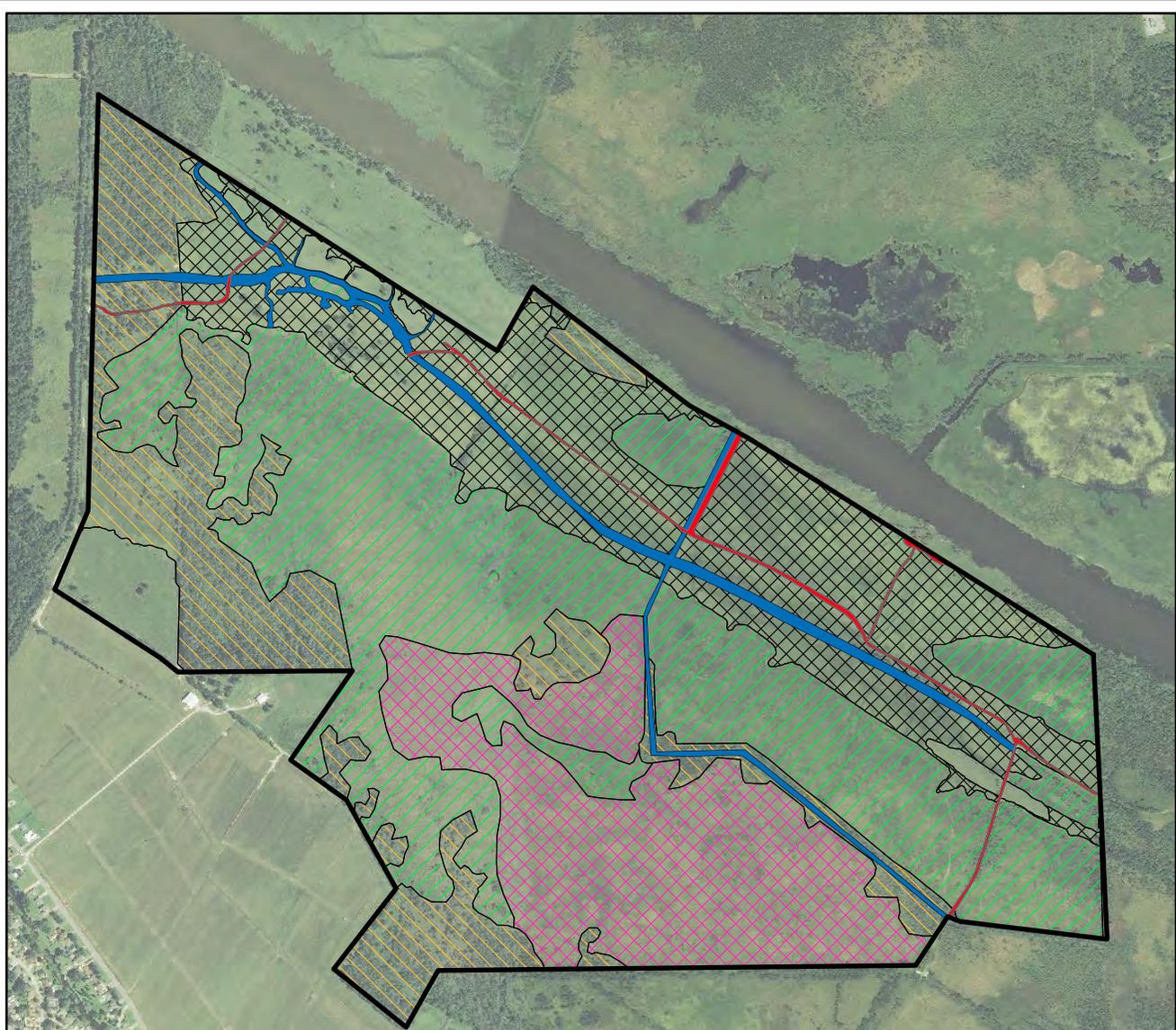
PROJECT BOUNDARY EXHIBIT  
TERREBONNE PARISH, LA

Date: 08/27/14

Author: BDS

FIGURE 2.0





**Legend**

Project Boundary (915.1 Acres)

**CURRENT LAND USE**

CATTLE GRAZING WET (205.0 Acres)

CATTLE GRAZING NON-WET (30.7 Acres)

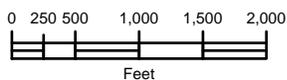
EMERGENT FRESH MARSH: <2.5 FT ELEVATION (321.9 Acres)

EMERGENT FRESH MARSH: >2.5 FT ELEVATION (159.6 Acres)

FORESTED/SCRUB SHRUB WETLAND (167.3 Acres)

Road (7.0 Acres)

WATER FEATURE (23.5 Acres)



1 inch = 1,500 feet



**PROPOSED DORIS N RANCH  
MITIGATION BANK**

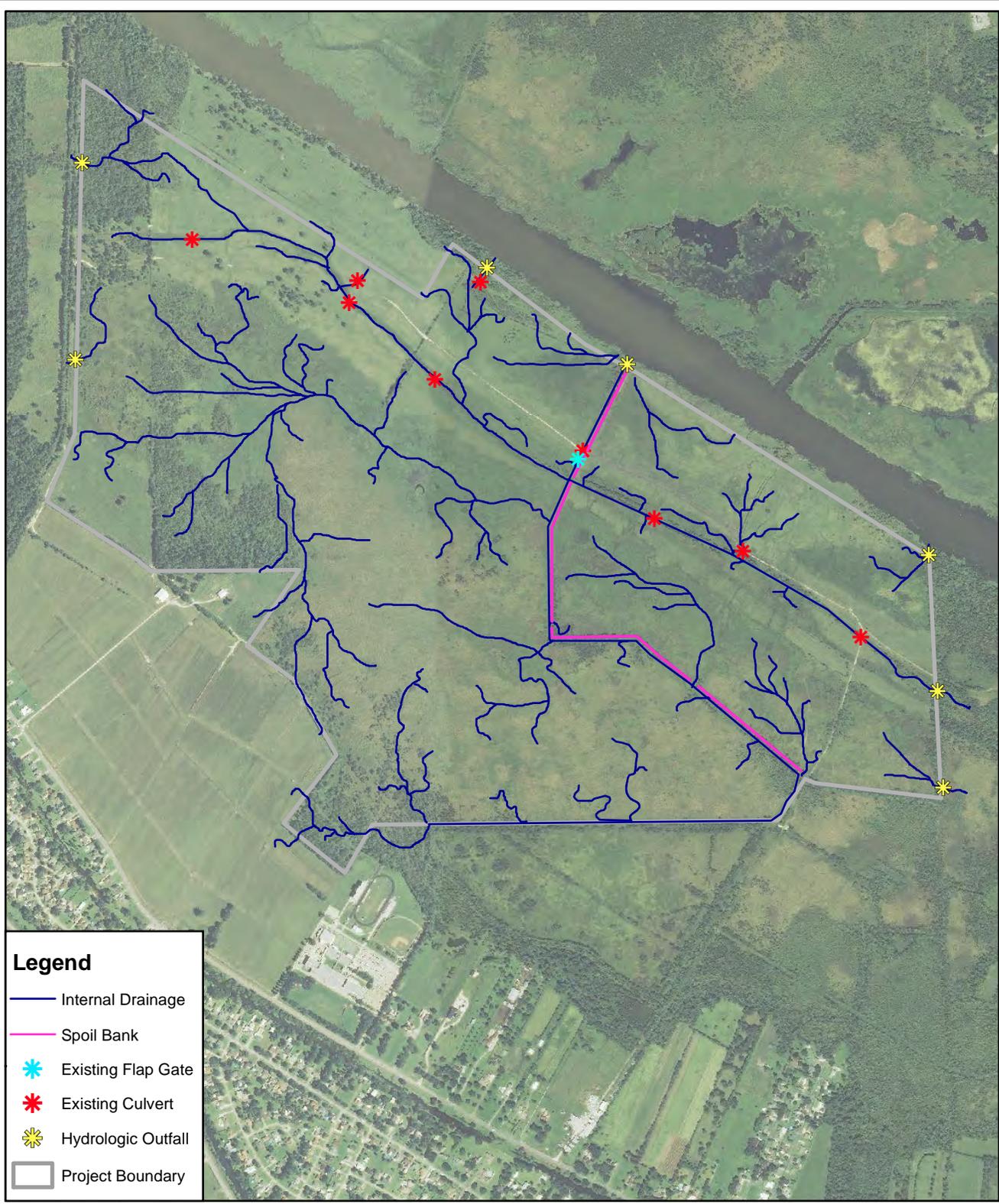
CURRENT LAND USE EXHIBIT  
TERREBONNE PARISH, LA

Date: 10/01/14

Author: BDS

**FIGURE 2.1**





**Legend**

- Internal Drainage
- Spoil Bank
- ✱ Existing Flap Gate
- ✱ Existing Culvert
- ✱ Hydrologic Outfall
- Project Boundary

0 250 500 1,000 1,500 2,000

Feet

1 inch = 1,500 feet

**PROPOSED DORIS N RANCH  
MITIGATION BANK**

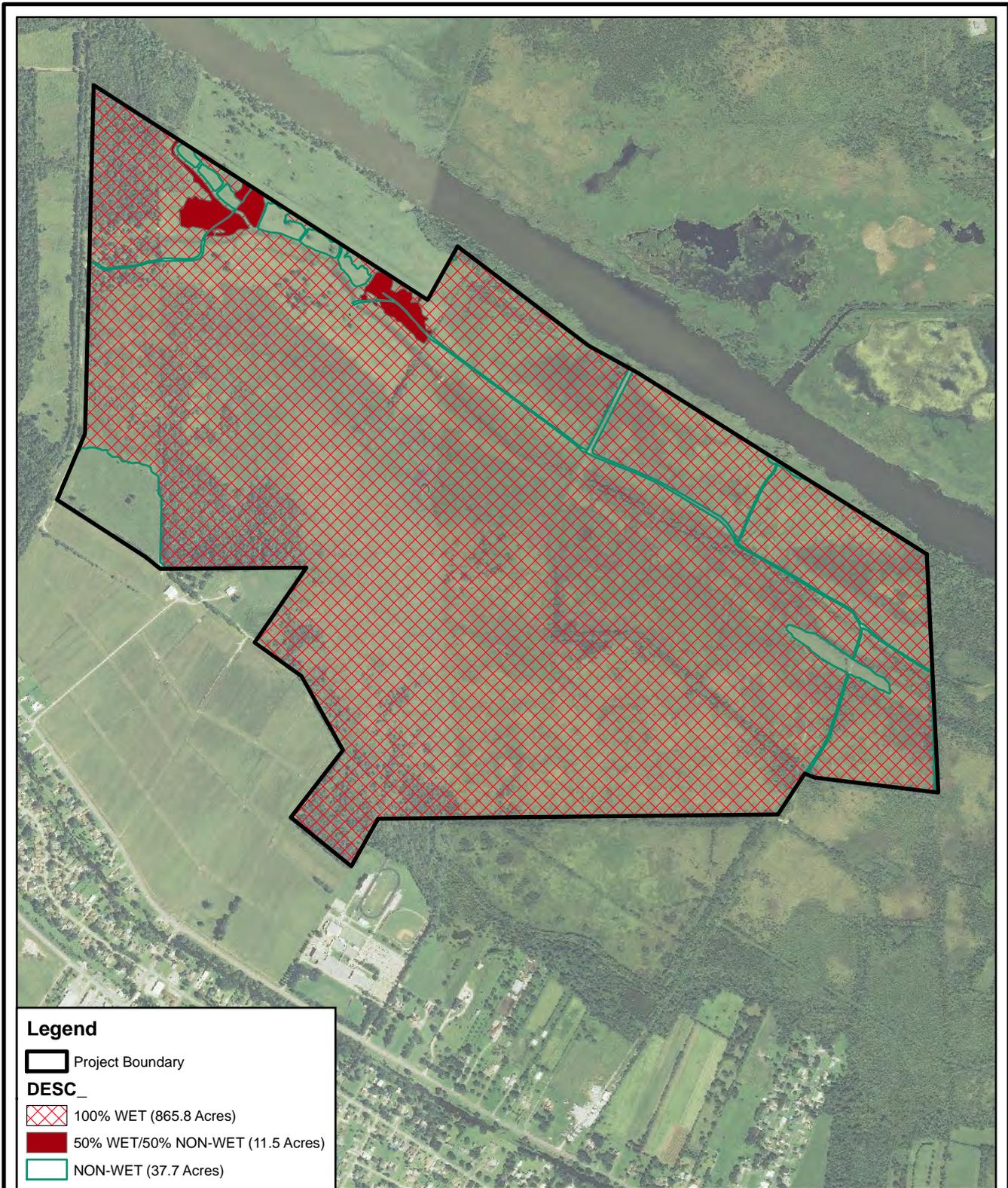
CURRENT HYDROLOGY EXHIBIT  
TERREBONNE PARISH, LA

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Date: 09/09/14 Author: BDS

**FIGURE 2.2**

**J.M. Burguières Co., LTD**



**Legend**

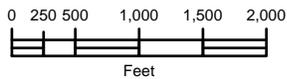
 Project Boundary

**DESC\_**

 100% WET (865.8 Acres)

 50% WET/50% NON-WET (11.5 Acres)

 NON-WET (37.7 Acres)



1 inch = 1,500 feet



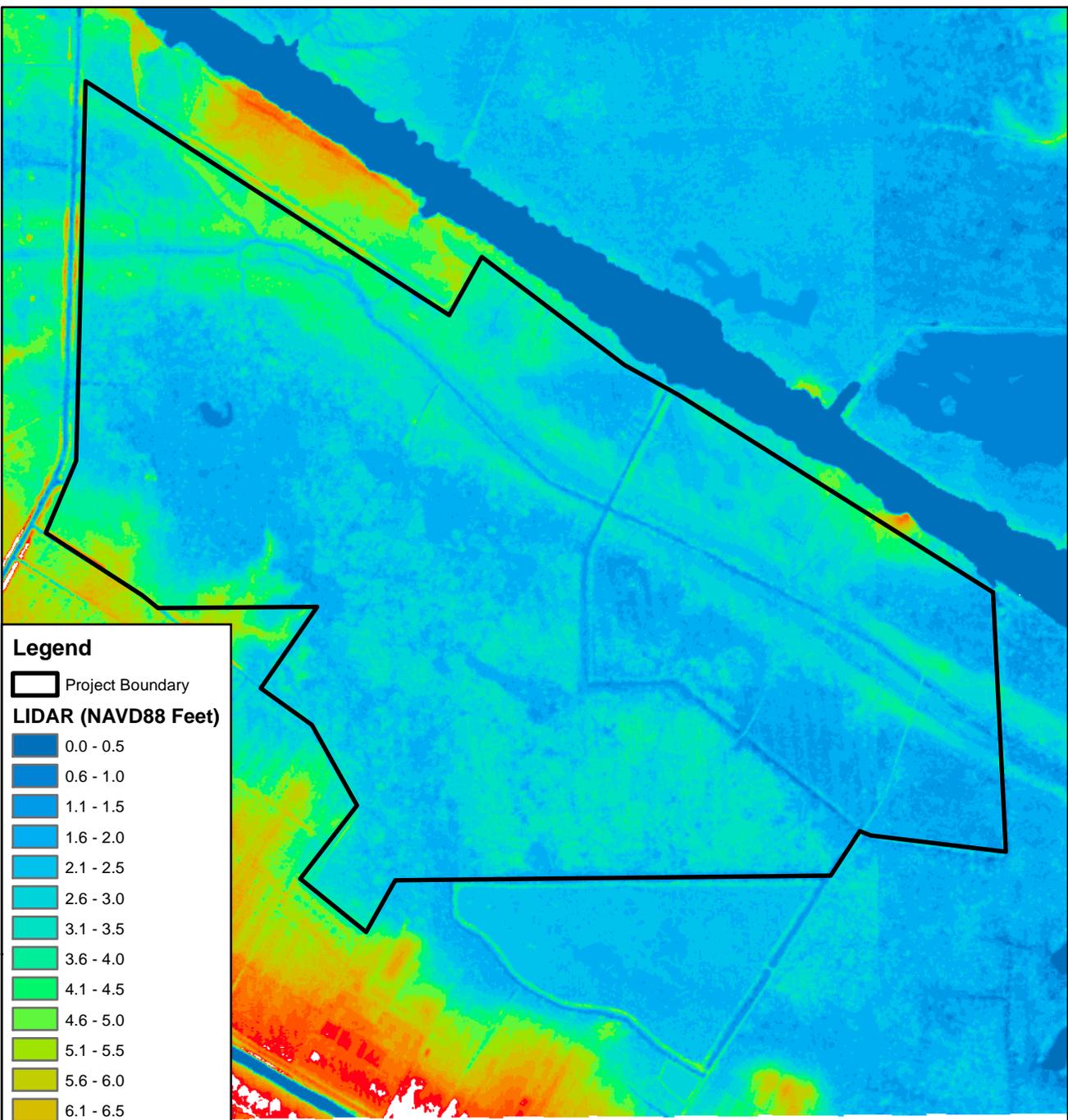
**PROPOSED DORIS N RANCH  
MITIGATION BANK**  
PRELIMINARY WETLAND JD EXHIBIT  
TERREBONNE PARISH, LA

Date: 09/30/14

Author: BDS

**FIGURE 2.3**



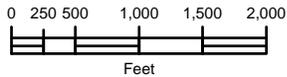


**Legend**

Project Boundary

**LIDAR (NAVD88 Feet)**

	0.0 - 0.5
	0.6 - 1.0
	1.1 - 1.5
	1.6 - 2.0
	2.1 - 2.5
	2.6 - 3.0
	3.1 - 3.5
	3.6 - 4.0
	4.1 - 4.5
	4.6 - 5.0
	5.1 - 5.5
	5.6 - 6.0
	6.1 - 6.5
	6.6 - 7.0
	7.1 - 7.5
	7.6 - 8.0
	8.1 - 8.5
	8.6 - 9.0



1 inch = 1,500 feet



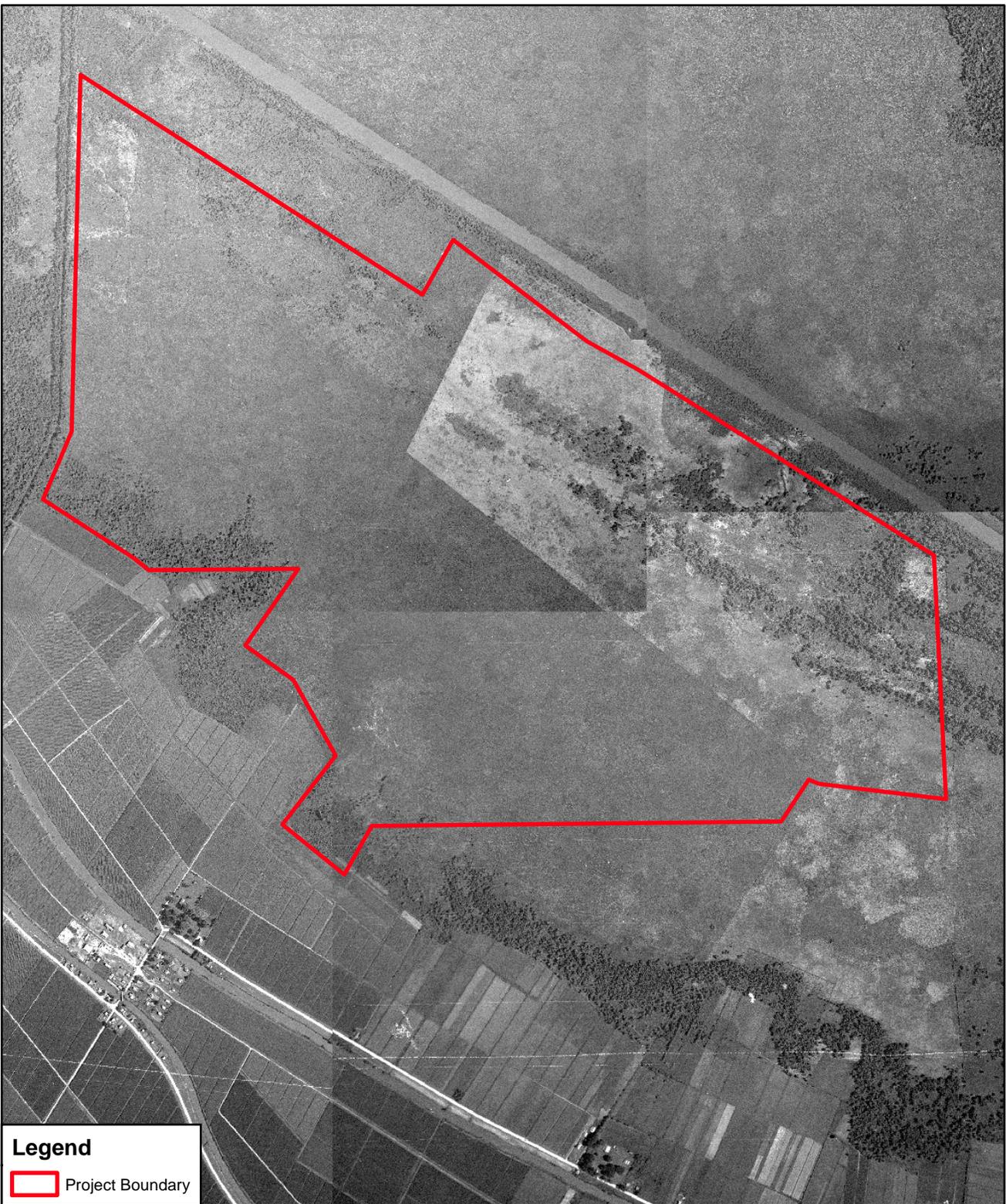
**PROPOSED DORIS N RANCH  
MITIGATION BANK**  
LIDAR EXHIBIT  
TERREBONNE PARISH, LA

Date: 08/27/14

Author: BDS

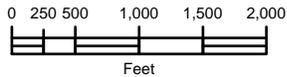
**FIGURE 2.4**





**Legend**

 Project Boundary



1 inch = 1,500 feet



**PROPOSED DORIS N RANCH  
MITIGATION BANK**

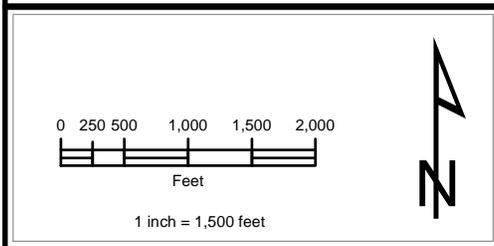
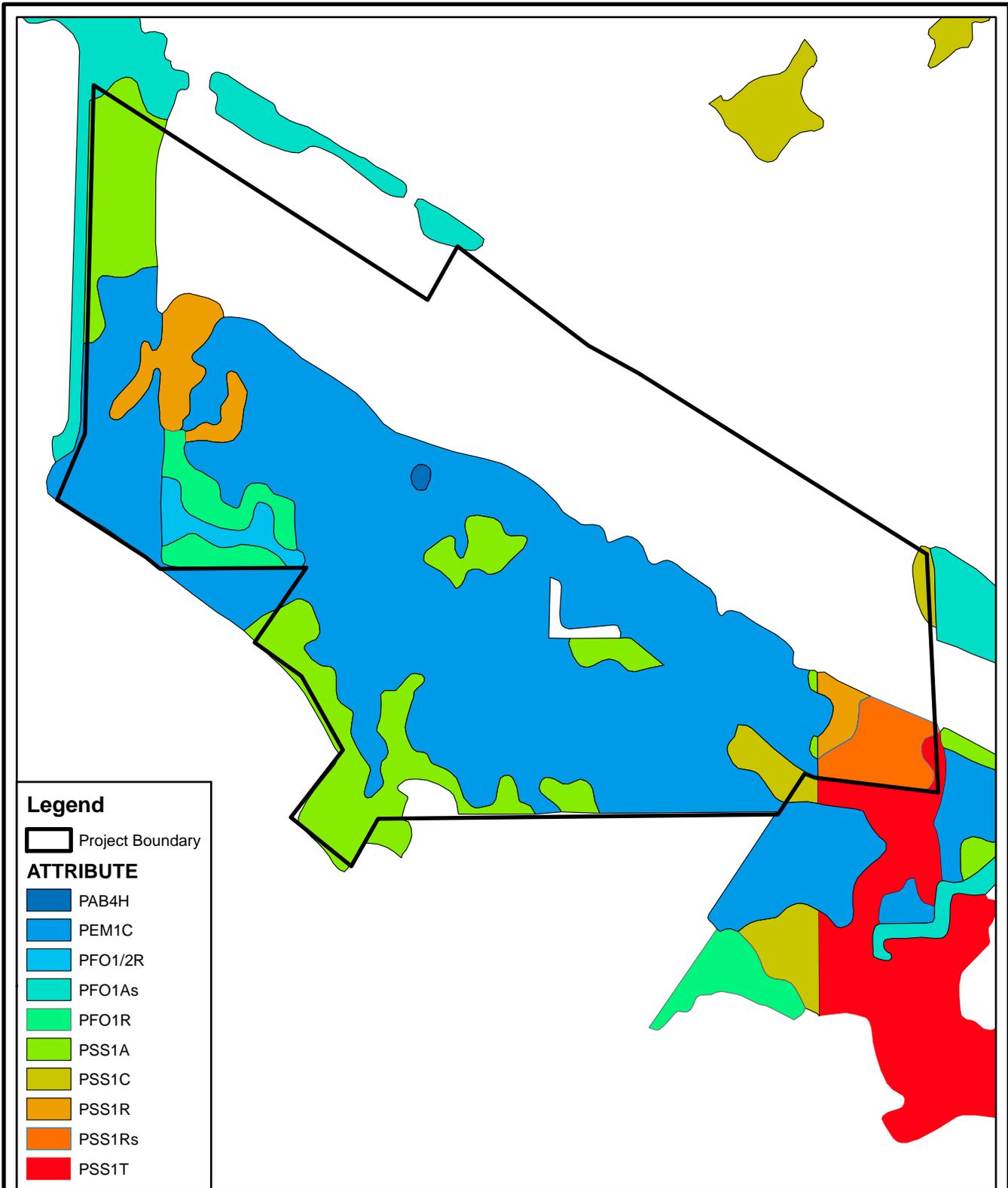
1936 AERIAL IMAGERY EXHIBIT  
TERREBONNE PARISH, LA

Date: 09/08/14

Author: BDS

**FIGURE 2.5**





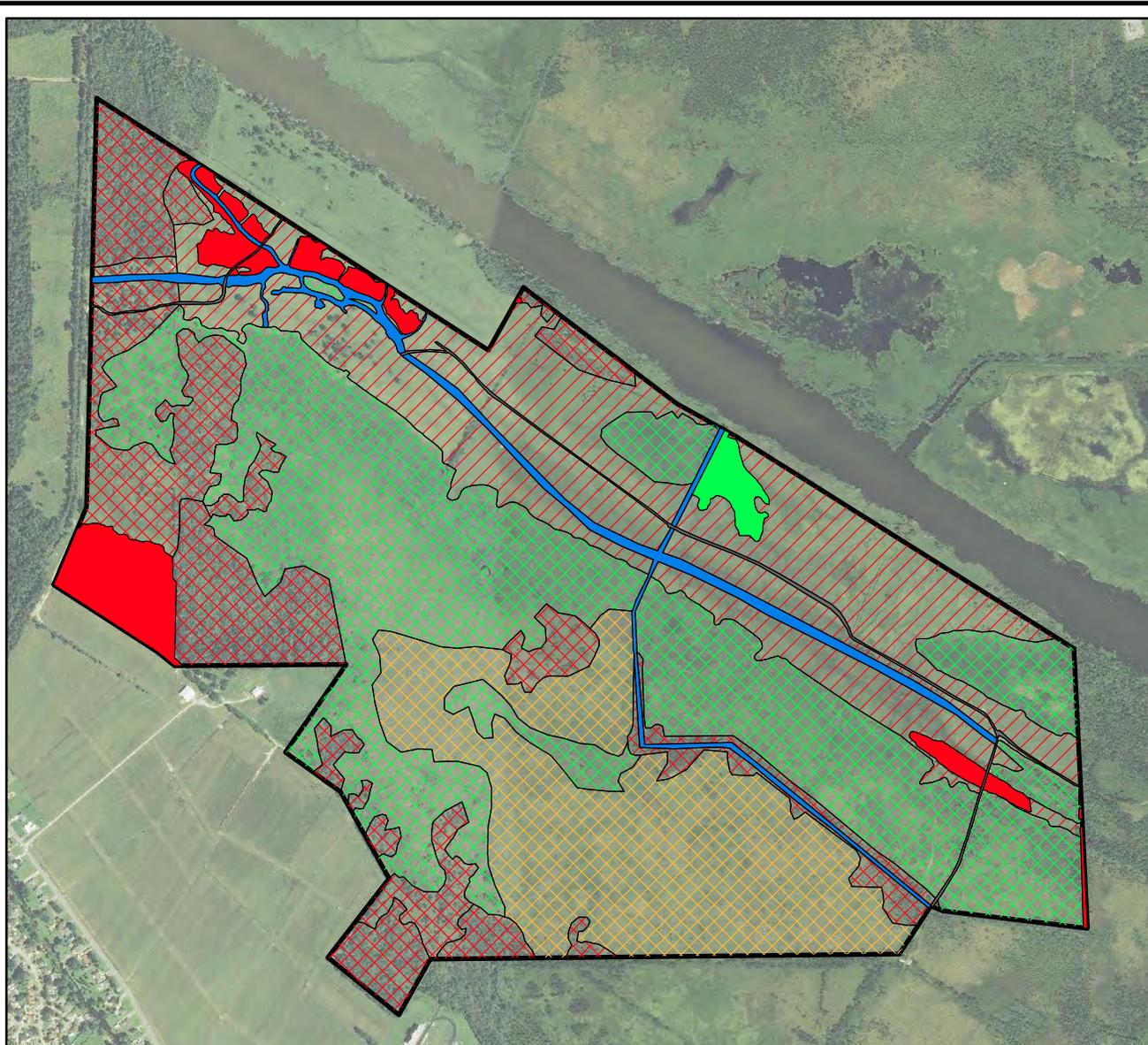
**PROPOSED DORIS N RANCH  
MITIGATION BANK**  
NWI EXHIBIT  
TERREBONNE PARISH, LA

---

Date: 10/06/14 Author: BDS

**FIGURE 2.6**





**Legend**

-  PROJECT BOUNDARY
- PROPOSED MITIGATION TYPE**
-  RE-ESTABLISHMENT I, PROPOSED BOTTOMLAND HARWOODS (36.1 Acres)
-  REHABILITATION I, PROPOSED EMERGENT FRESH MARSH (6.9 Acres)
-  REHABILITATION I, PROPOSED BOTTOMLAND HARWOODS (195.0 Acres)
-  ENHANCEMENT I, PROPOSED CYPRESS SWAMP (159.6 Acres)
-  ENHANCEMENT I, EMERGENT FRESH MARSH (321.6 Acres)
-  ENHANCEMENT I, FORESTED/SCRUB SHRUB WETLAND (167.2 Acres)
-  HYDROLOGIC FEATURE (23.5 Acres)
-  ROADS (5.1 Acres)

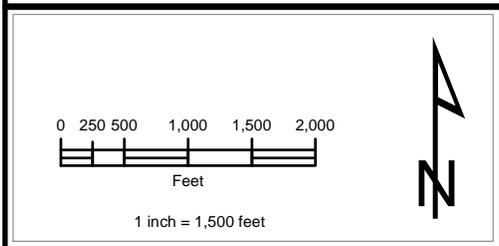
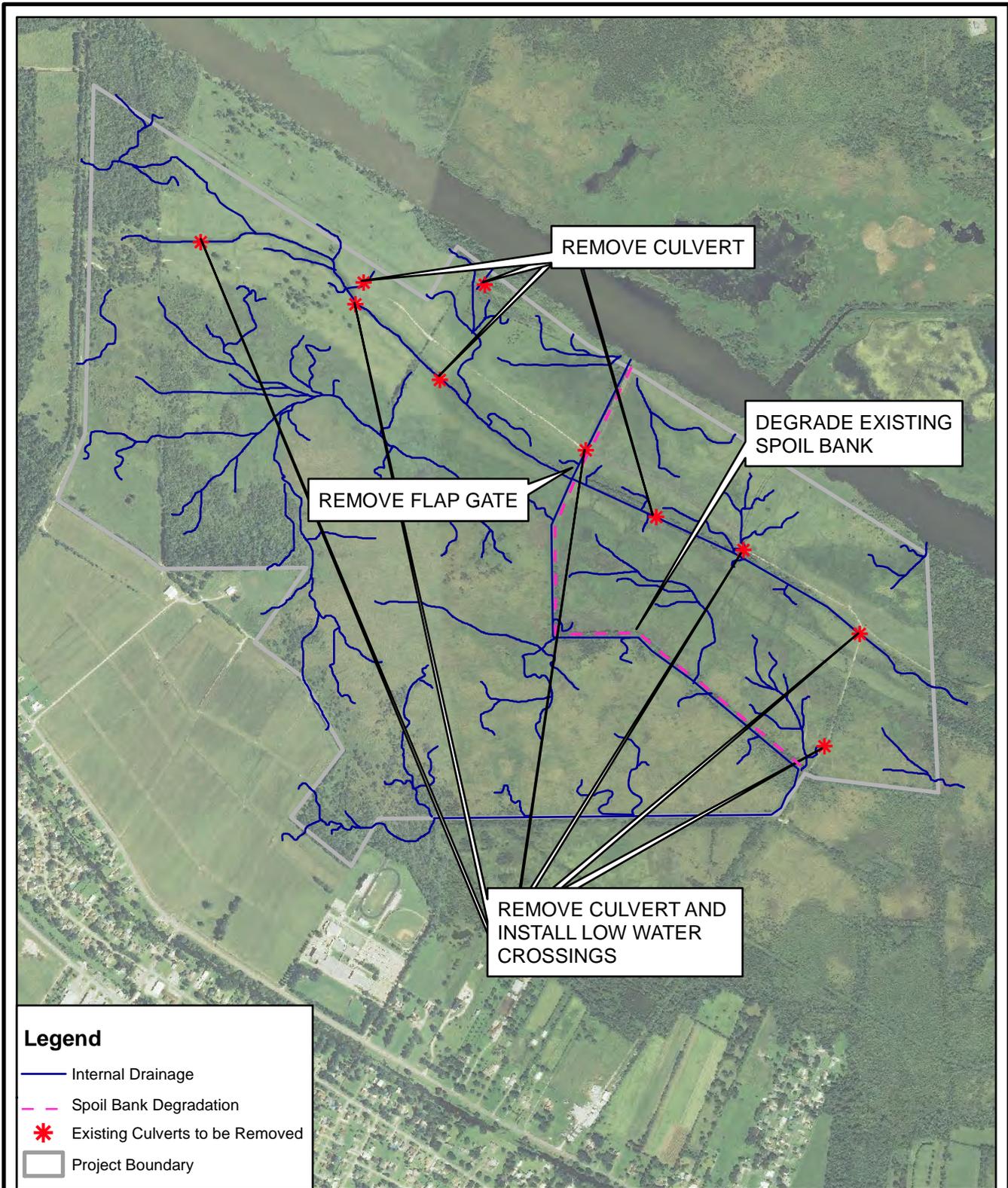
**PROPOSED DORIS N RANCH  
MITIGATION BANK**

PROPOSED MITIGATION TYPE EXHIBIT  
TERREBONNE PARISH, LA

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Date: 10/08/14 Author: BDS

**FIGURE 3.0**

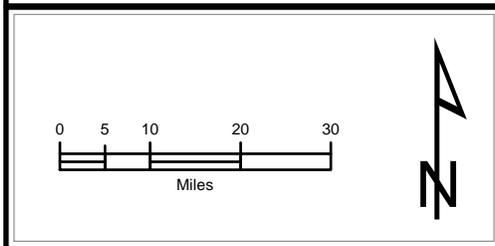
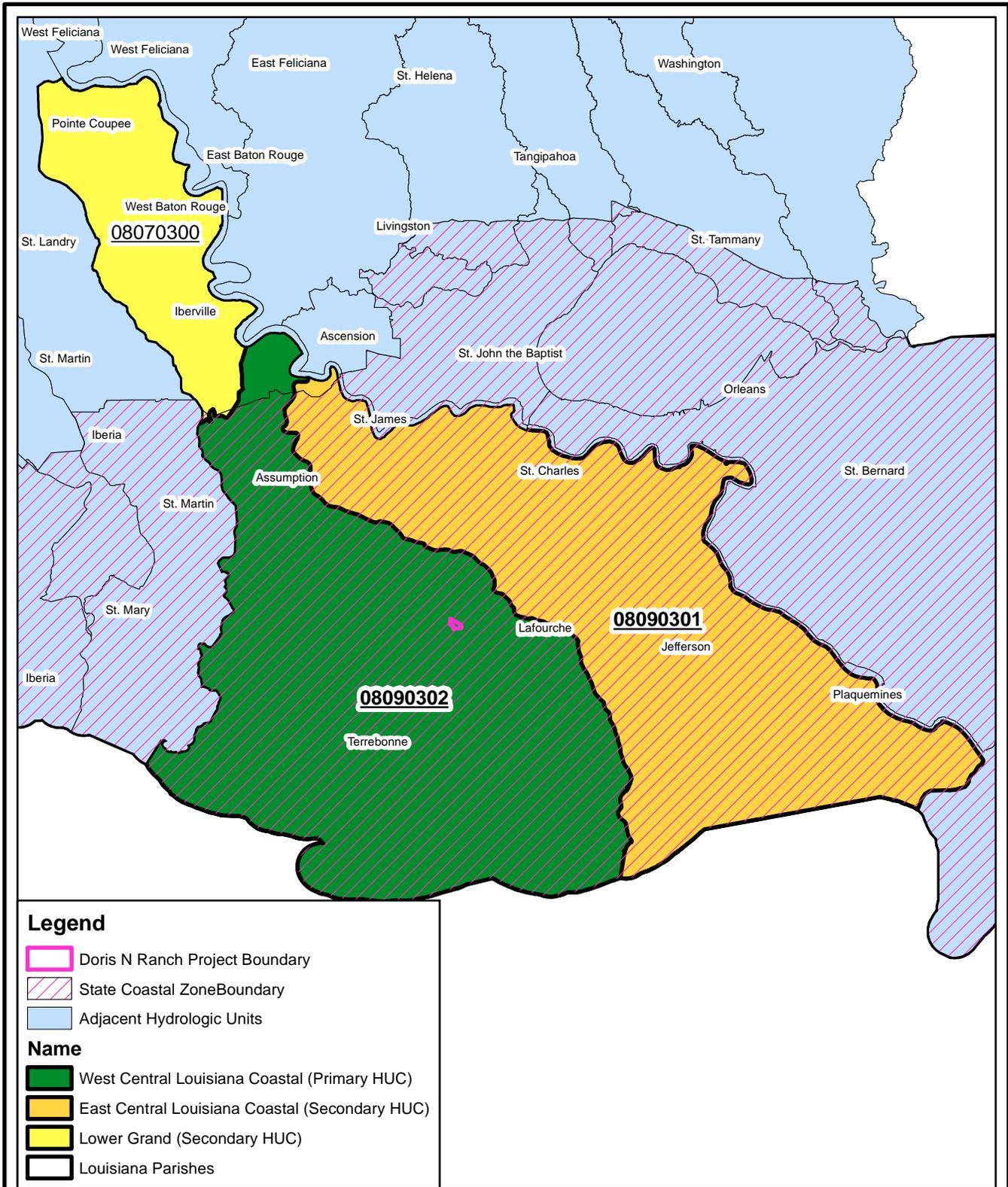


**PROPOSED DORIS N RANCH  
MITIGATION BANK**  
HYDROLOGY MODIFICATION EXHIBIT  
TERREBONNE PARISH, LA

Date: 09/09/14 Author: BDS

**FIGURE 3.1**





**PROPOSED DORIS N RANCH  
MITIGATION BANK**

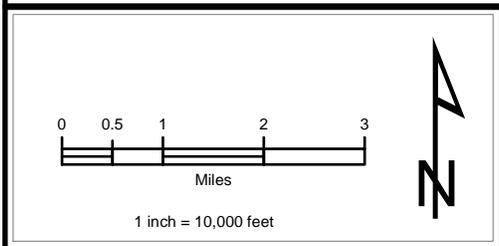
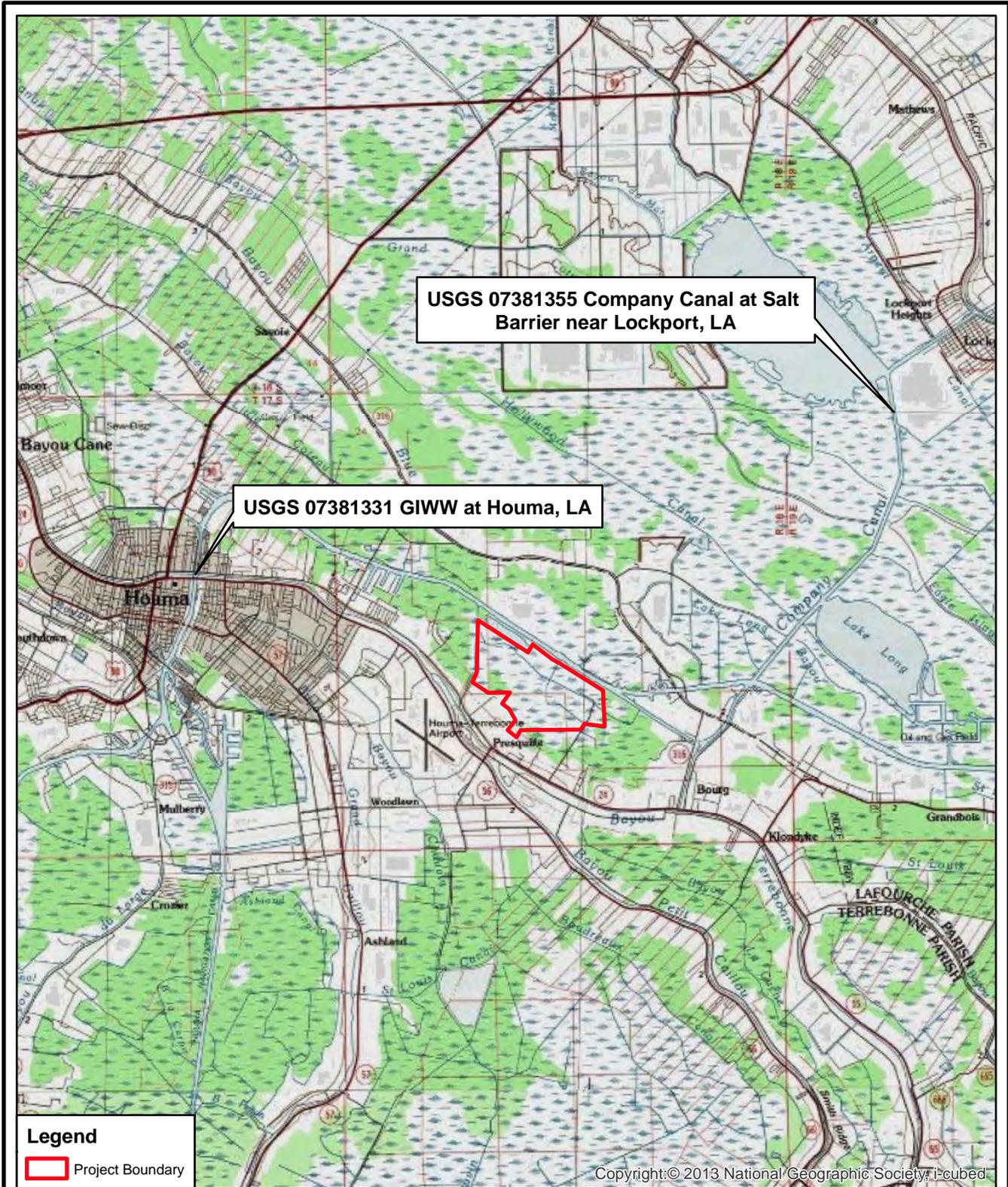
HYDROLOGIC UNIT EXHIBIT  
TERREBONNE PARISH, LA

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Date: 08/27/14 Author: BDS

**FIGURE 4.0**





**PROPOSED DORIS N RANCH  
 MITIGATION BANK**  
 SALINITY GAUGE LOCATION EXHIBIT  
 TERREBONNE PARISH, LA

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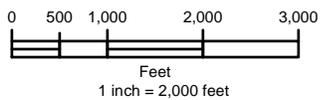
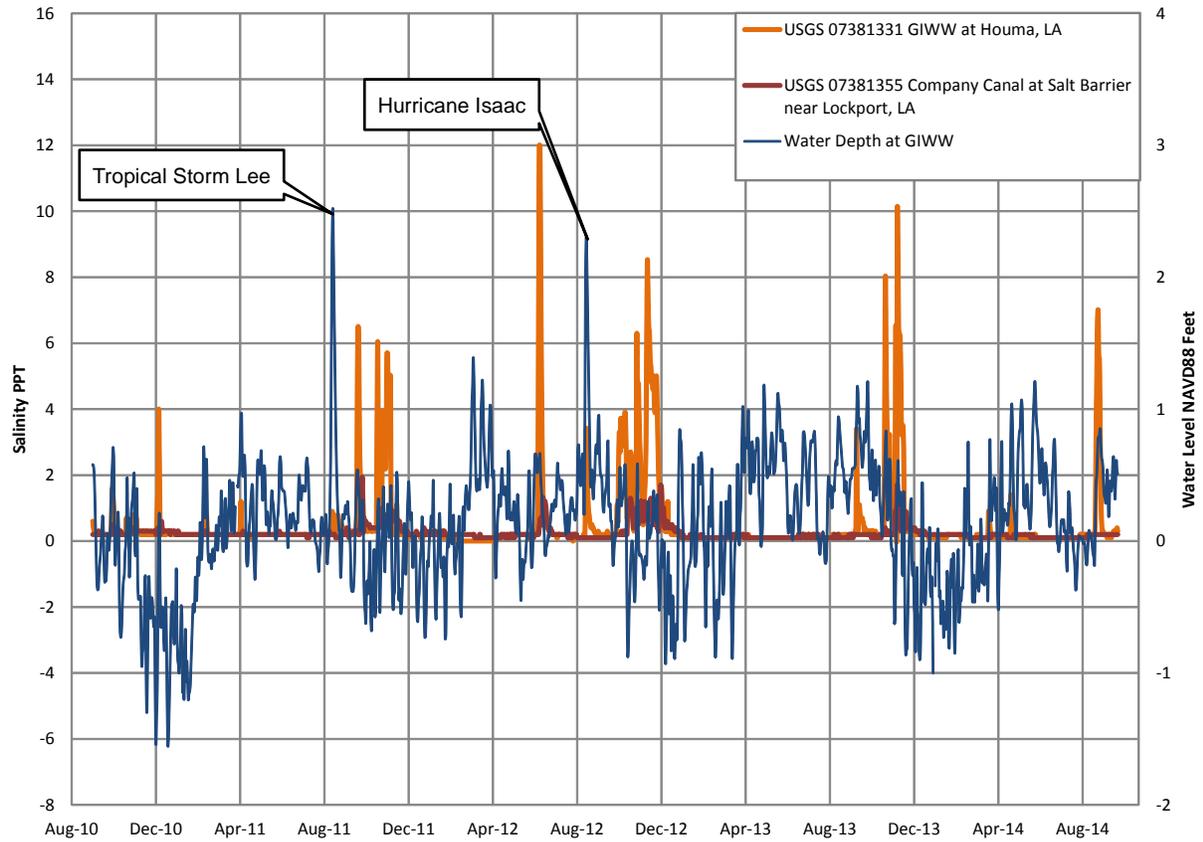
Date: 09/08/14 Author: BDS

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**FIGURE 4.1**



### Salinity near Dorris "N" Ranch



**PROPOSED DORIS N RANCH  
MITIGATION BANK  
SALINITY EXHIBIT  
TERREBONNE PARISH, LA**

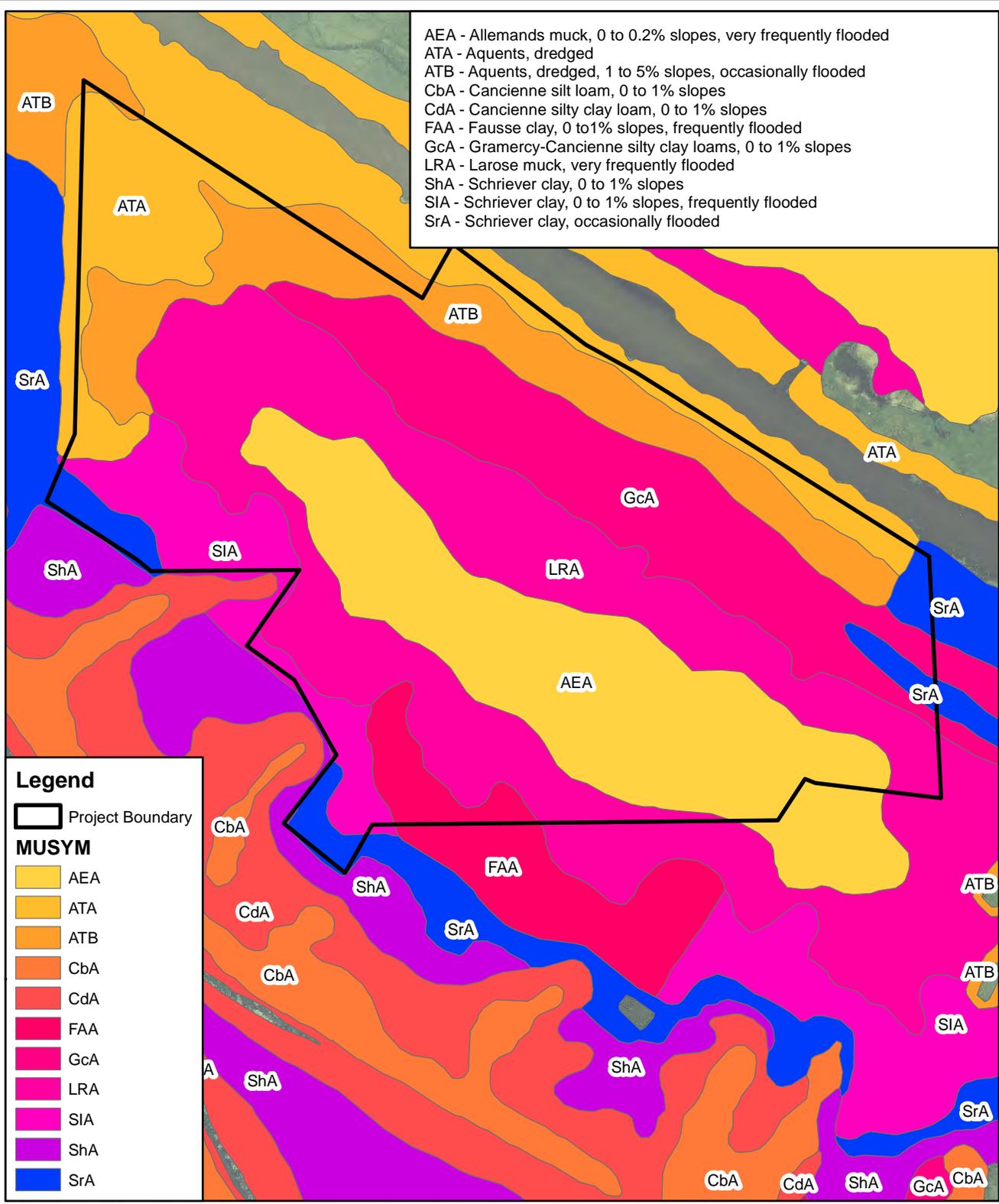
Date: 10/06/14

Author: BDS

**FIGURE 4.2**



AEA - Allemands muck, 0 to 0.2% slopes, very frequently flooded  
 ATA - Aquets, dredged  
 ATB - Aquets, dredged, 1 to 5% slopes, occasionally flooded  
 CbA - Cancienne silt loam, 0 to 1% slopes  
 CdA - Cancienne silty clay loam, 0 to 1% slopes  
 FAA - Fausse clay, 0 to 1% slopes, frequently flooded  
 GcA - Gramercy-Cancienne silty clay loams, 0 to 1% slopes  
 LRA - Larose muck, very frequently flooded  
 ShA - Schriever clay, 0 to 1% slopes  
 SIA - Schriever clay, 0 to 1% slopes, frequently flooded  
 SrA - Schriever clay, occasionally flooded

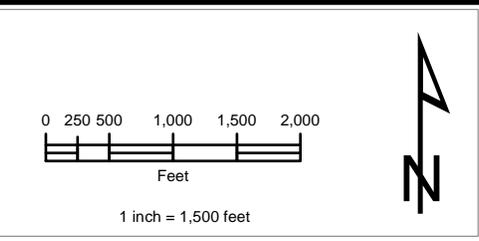


**Legend**

Project Boundary

**MUSYM**

- AEA
- ATA
- ATB
- CbA
- CdA
- FAA
- GcA
- LRA
- SIA
- ShA
- SrA

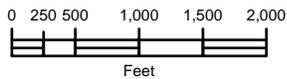
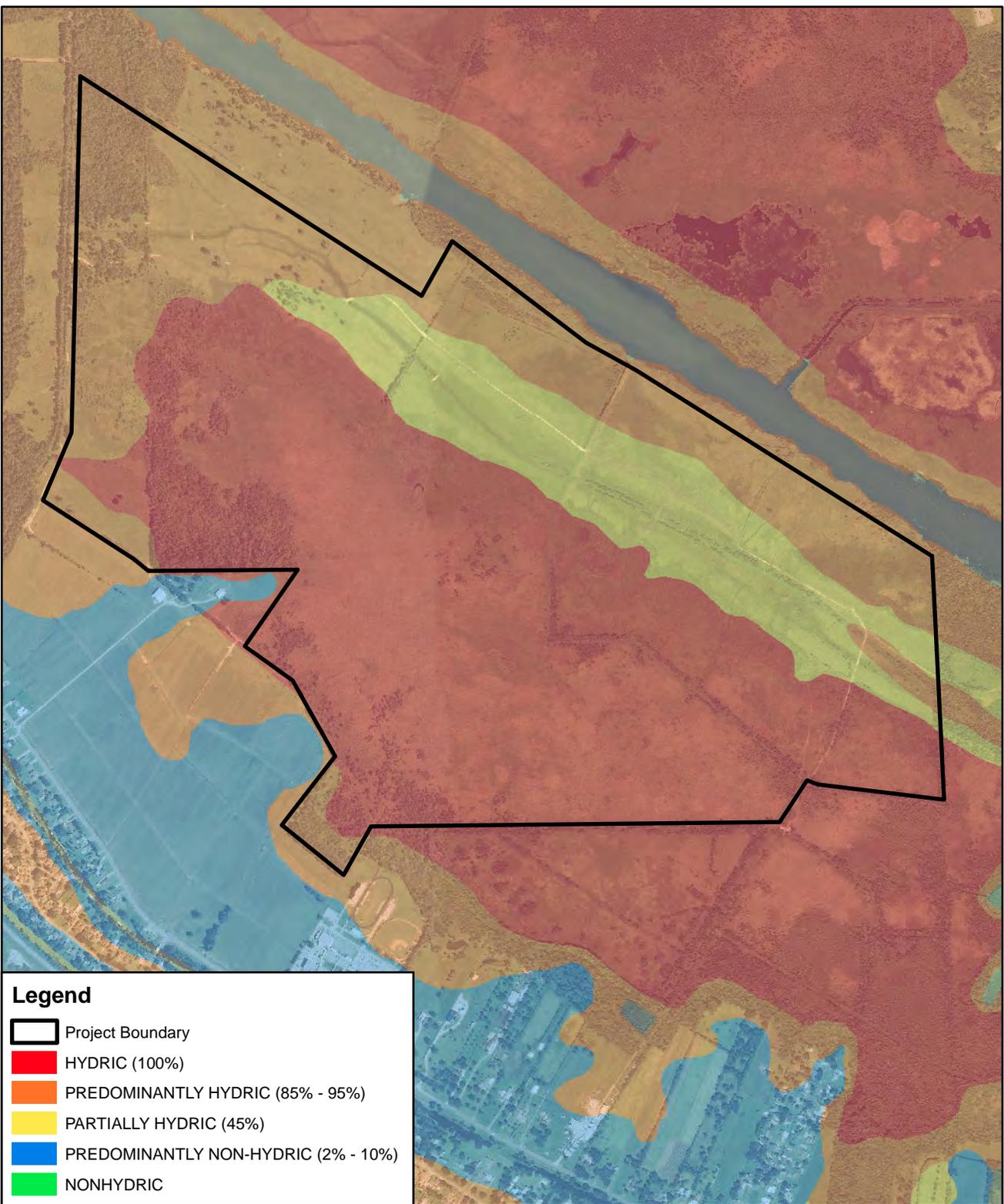


**PROPOSED DORIS N RANCH  
 MITIGATION BANK**  
 NRCS SOILS EXHIBIT  
 TERREBONNE PARISH, LA

Date: 08/27/14 Author: BDS

**FIGURE 5.0**





1 inch = 1,500 feet



**PROPOSED DORIS N RANCH  
MITIGATION BANK**

NRCS HYDRIC SOILS EXHIBIT  
TERREBONNE PARISH, LA

Date: 08/27/14

Author: BDS

**FIGURE 5.1**

