



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
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Operations Division  
Special Project and Policy Team  
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SUBJECT: Proposed Upper Comite Flats Umbrella Mitigation Bank

**PUBLIC NOTICE**

**Public Notice Purpose:** Pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403) and Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344), the U.S. Army Corps of Engineers, New Orleans District, Regulatory Branch is soliciting comments from all interested parties on the development, utilization and long-term management of a proposed mitigation bank. The purpose of this mitigation bank is to provide compensatory mitigation for unavoidable impacts to wetland resources, including other waters of the United States, that result from projects authorized through the Department of the Army permit program.

**PROPOSED UPPER COMITE FLATS UMBRELLA MITIGATION BANK  
IN EAST BATON ROUGE PARISH**

**NAME OF APPLICANT:** Upper Comite Flats Mitigation Area, LLC, c/o Ecosystem Renewal, LLC, 4520 S. Sherwood Forest Blvd #104-241, Baton Rouge, Louisiana 70816 ATTN: Danny Moran.

**LOCATION OF WORK:** The proposed project areas are in five locations all easterly from Zachary, Louisiana, in East Baton Rouge Parish in the Lake Pontchartrain Basin, USGS Hydrologic Unit 08070202.

MVN-2020-00324	Blackwater Site:	Lat. 30.632396	Long. -91.066101
MVN-2020-00518	Cooper Site:	Lat. 30.704443	Long. -90.926545
MVN-2020-00323	Joor Rd. Site:	Lat. 30.616929	Long. -91.045349
MVN-2020-00322	Milldale Rd. Site (phase 1):	Lat. 30.646808	Long. -91.057306
MVN-2020-00322	Milldale Rd. Site (phase 2):	Lat. 30.643967	Long. -91.053446

**CHARACTER OF WORK:** The Sponsor proposes restoration and/or enhancement and preservation of each of these sites. The individual sites vary in size from 40 acres to 101.6 acres. Ownership of the sites varies. The scope of work includes plugging drains and field ditches, and reforestation with bottomland species. The location and scope of work for each site is identified in the attached mitigation banking prospectus.

The Corps of Engineers is soliciting written comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties. The comment period will close **30 days** from the date of this public notice advertisement. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this prospectus. Letters must reference the applicant's name and the subject number, be addressed and mailed to the above address.

### **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.

Utilizing the Information & Planning Consultation for Endangered Species in Louisiana (IPaC), dated January 27, 2020, between the U.S. Army Corps of Engineers, New Orleans and U.S. Fish and Wildlife Service, Ecological Services Office, the Corps has determined that the proposed activity would have no effect on any species listed as endangered by the U.S. Department of the Interior.

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.

Martin S. Mayer  
Chief, Regulatory Branch

Attachment



Prospectus for the Proposed  
Upper Comite Flats Umbrella Mitigation Bank  
East Baton Rouge Parish & East Feliciana Parish, Louisiana

Sponsor:

Upper Comite Flats Mitigation Area, LLC.  
4520 S. Sherwood Forest Blvd #104-241  
Baton Rouge, LA 70816

Agent:

Ecosystem Renewal, LLC.  
4520 S. Sherwood Forest Blvd #104-241  
Baton Rouge, LA 70816





Prospectus for the Proposed  
*Upper Comite Flats Umbrella Mitigation Bank*  
*(Permit Number: unassigned)*

East Baton Rouge Parish, Louisiana

April 2021

Sponsor:

Upper Comite Flats Mitigation Area, LLC

Danny Moran, Manager

4520 S. Sherwood Forest Blvd.

#104-241

Baton Rouge, LA 70816

Agent:



Danny Moran, Managing Director

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Baton Rouge, LA 70816

## Table of Contents

<b>Table of Contents.....</b>	<b>2</b>
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 Physiography.....	1
1.2 Site Location.....	2
<b>2. PROJECT GOALS AND OBJECTIVES .....</b>	<b>3</b>
2.1 Project Goals .....	3
2.2 Project Objectives .....	4
<b>3. ECOLOGICAL SUITABILITY OF THE SITES/BASELINE CONDITIONS.....</b>	<b>5</b>
3.1 Land Use.....	5
3.1.1 Historical Land Use.....	5
3.1.2 Existing / Current Land Use.....	5
3.2 Soils .....	6
3.2.1 Bank Site Soils .....	6
3.2.2 Soil Descriptions.....	6
3.3 Hydrology.....	7
3.3.1 Contributing Watershed .....	7
3.3.2 Historical Hydrology and Drainage patterns.....	7
3.3.3 Existing / Current Hydrology and Drainage Patterns .....	7
3.3.4 Jurisdictional Wetlands .....	7
3.4 Vegetation.....	8
3.4.1 Historical Plant Community .....	8
3.4.2 Existing Plant Community .....	8
3.5 General Need for the Project in this Area.....	9
<b>4. ESTABLISHMENT OF THE MITIGATION BANK .....</b>	<b>10</b>
4.1 Site Restoration Plan.....	10
4.1.1 Soils/Hydrologic Work.....	10
4.1.2 Vegetative Work .....	11
4.2 Technical Feasibility .....	15
4.3 Current Site Risks .....	15
4.4 Long-Term Sustainability of the Site .....	16
<b>5. PROPOSED SERVICE AREA .....</b>	<b>16</b>
<b>6. OPERATION OF THE MITIGATION BANK.....</b>	<b>16</b>
6.1 Project Representatives .....	16
6.2 Qualifications for the Sponsor .....	17
6.3 Proposed Long-Term Ownership and Management Representatives.....	18
6.4 Site Protection.....	18
6.5 Long-Term Strategy.....	18
<b>7. REFERENCES .....</b>	<b>19</b>

## Tables

Table 1	Existing Habitat Types
Table 2	Site Locations
Table 3	Proposed Habitat Types (post-restoration)
Table 4	Species Proposed for Re-establishment and Rehabilitation Areas
Table 5	UCF-UMB Species Associations by Planting Zones

## Figures

Figure 1	Location Map	Figure 8c	Joor LIDAR Map
Figure 2	Vicinity Map	Figure 8d	Milldale LIDAR Map
Figure 3a	Blackwater Current Site Aerial	Figure 9a	Blackwater Current Drainage
Figure 3b	Cooper Current Site Aerial	Figure 9b	Cooper Current Drainage
Figure 3C	Joor Current Site Aerial	Figure 9c	Joor Current Drainage
Figure 3d	Milldale Current Site Aerial	Figure 9d	Milldale Current Drainage
Figure 4a	Blackwater 1941 Historic Aerial	Figure 10a	Blackwater Proposed Hydrologic Restoration
Figure 4b	Cooper 1941 Historic Aerial	Figure 10b	Cooper Proposed Hydrologic Restoration
Figure 4c	Joor 1941 Historic Aerial	Figure 10c	Joor Proposed Hydrologic Restoration
Figure 4d	Milldale 1941 Historic Aerial	Figure 10d	Milldale Proposed Hydrologic Restoration
Figure 5a	Land Use Map 1	Figure 11	Typical Cross-sections
Figure 5b	Land Use Map 2	Figure 12a	Blackwater Mitigation Types
Figure 6a	Blackwater Soils Map	Figure 12b	Cooper Mitigation Types
Figure 6b	Cooper Soils Map	Figure 12c	Joor Mitigation Types
Figure 6c	Joor Soils Map	Figure 12d	Milldale Mitigation Types
Figure 6d	Milldale Soils Map		
Figure 7	Proposed Service Area		
Figure 8a	Blackwater LIDAR Map		
Figure 8b	Cooper LIDAR Map		

## Attachments

Attachment A	Preliminary Wetland Determinations
Attachment B	Photographic Documentation
Attachment C	Sit Property Boundary Coordinates

## 1. INTRODUCTION

Upper Comite Flats Mitigation Area, LLC (UCF) – the Sponsor and EcoSystem Renewal, LLC (ECO) - the Agent have prepared this prospectus in accordance with 33 CFR § 332.8(d) (2) to establish and operate the Upper Comite Flats Umbrella Mitigation Bank (UCF-UMB). The bank is a cumulative  $\pm 401.6$ -acre proposed umbrella mitigation bank comprised of 4 distinct sites/sites to provide compensatory mitigation for unavoidable impacts to “Waters of the United States” authorized through the issuance of Department of the Army (DA) Permits by the U.S. Army Corps of Engineers (USACE) New Orleans (CEMVN) pursuant to Sections 9 and 10 of the rivers and Harbors Act of 1899 and Section 404 of the Clean water Act of 1972.

The current owners of the UCF-UMB properties are Victor Womack sites consisting of approximately 40-acre **Blackwater Site**, and 106.1-acre **Joor Site**, Forbes Family Trust 99.3-acre **Milldale Phase 1 Site** and Harp Family Trust 96.9-acre **Milldale Phase 2 Site** located east of Zachary, Louisiana and the Joseph **Cooper Site** consisting of approximately 59.5 acres located near Greenwell Springs, Louisiana. The current owners intend to protect the UCF-UMB project areas by granting conservation servitudes as required by the USACE-MVN. UCF will be the sponsor and as such will construct, operate, monitor, and manage the bank through its Agent, ECO. The sites are in East Baton Rouge Parish, Louisiana.

### 1.1 Physiography

The sites are located in the Mississippi Valley Loess Plains Level III Ecoregion, and in the Baton Rouge Terrace, and Southern Rolling Plains Level IV Ecoregions (74d, 74c; Environmental Protection Agency [EPA] 2003; Omernik 1987), the South Atlantic and Gulf Slope Cash Crops, Forest, and Livestock Land Resource Region (LRR P), and the Southern Mississippi Valley Loess Major Land Resource Area (MLRA 134; Natural resources Conservation Service [NRCS] 2006). The restoration sites are located in the Mississippi Alluvial Plain Section of MLRA 134 and is typically characterized by fertile, medium-textured mineral soils, smooth to undulating topography, and a long growing season. Some convex areas exist as narrow rolling intervening ridges with broad and flat interfluves. Stream valleys are typically narrow in the upper reaches but broaden rapidly downstream and have wide, flat flood plains and meandering stream channels. Other features include natural levees and undulating terraces and spoil banks from the natural and artificial deepening of drainageways across the landscape.

The sites lie within the confluence of the Amite Watershed (United States Geological Survey (USGS) Hydrologic Unit Code (HUC 08070202). The Amite River drains to Lake Maurepas and Lake Pontchartrain. Natural elevations on the bank sites range from approximately 70 to 99 feet NAVD (Figures 4a-4d). Portions of the **Joor Rd Site** and **Milldale Rd Sites** are located within the 100-year flood zone per the Federal emergency Management Agency (FEMA) Flood insurance Rate Map.

The proposed umbrella bank sites consist of approximately  $\pm 4.2$  acres of other surface waters of the US that makes up cattle ponds and drainage ways on the sites,  $\pm 361.6$  acres of improved pasture, and  $\pm 35.8$  acres of forested area including existing hardwood flats wetlands. The current conditions of the sites are maintained by systems of swales through the site and the current farming and cattle raising practices in place. A Preliminary Jurisdictional Determination was issued by CEMVN for each of the project sites

between 2019 and 2020 confirming the extent of existing wetlands on the properties and are included as **Attachment A. Table 2** shows the existing habitat currently on each of the sites.

<b>Table 1</b>				
<b>Existing Habitat Types</b>				
<b>Habitat</b>	<b>Blackwater</b>	<b>Cooper</b>	<b>Joor</b>	<b>Milldale</b>
Improved Pasture	39.9	57.3	104.4	160
Forested Hardwoods	0	1.7	0	34.1
Other Surface Waters	0.1	0.5	1.7	1.9
<b>Total Site Area</b>	<b>40</b>	<b>59.5</b>	<b>106.1</b>	<b>196</b>

### 1.2 Site Location

The Section, Township, and Range of each of the sites is depicted in the attached figures. The acreage and latitude and longitude of the central location for each site is shown in **Table 1**.

<b>TABLE 2</b>			
<b>Site Locations and Acres</b>			
<b>Site</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Acres</b>
Blackwater Site	30.632396	-91.066101	40
Cooper Site	30.704443	-90.926545	59.5
Joor Site	30.616929	-91.045349	106.1
Milldale Rd Phase I Site	30.646808	-91.057306	99.3
Milldale Rd Phase II Site	30.643967	-91.053446	96.9
<b>Total</b>			<b>401.6</b>

The general location of the sites and their relative proximity to each other are depicted **Figure 1 and 2** of this report. The perimeter of each of the sites are defined in the tables included in **Attachment C**. The restoration sites are located in East Baton Rouge Parish and are accessible through state highways and local roads as follows:

The **Blackwater Site** is located east of Zachary, Louisiana traveling east on LA-64 E/Main St/Zachary Deerford Rd from Zachary (2.5 miles), then south onto Blackwater Rd. The site is 0.5 miles south on the east side of the road. The **Cooper Site** is located near Baywood, Louisiana and can be reached by traveling east from Zachary, Louisiana on LA-64 E/Main St/Zachary, then north on Tucker Rd., west on Jackson Rd. and north on LA-409 N continuing onto Pride-Baywood Rd traveling 3.1 miles to the site. The **Joor Site** is located east of Zachary, Louisiana and is accessible by traveling east on LA-64 E/Main St/Zachary Deerford Rd from Zachary (3.8 miles), then south onto Joor Road. The site is 0.9 miles south on the east side of the road. The **Milldale Rd Phase I and II Sites** are located by traveling east on LA-64 E/Main St/Zachary Deerford Rd from Zachary, Louisiana (2.6 miles). Then turning north onto Peairs Rd. and the site is approximately 0.8 miles on the north side of the road.

## 2. PROJECT GOALS AND OBJECTIVES

### 2.1 Project Goals

The majority of the acreage of each site consists of pastureland managed for the purpose of commercial cattle production. The goal of the UCF-UMB is the rehabilitation, re-establishment, preservation and enhancement of bottomland hardwood and hardwood flatwood forested wetland ecosystems as described by the Louisiana Department of Wildlife and Fisheries (LDWF) Natural Heritage Program (LNHP 2009). Existing areas of non-hydric soils and uplands will be restored along with the forested wetlands but will be classified as restored buffers and/or upland inclusions. Features such as access trails and set aside (reserved) areas will be maintained as non-mitigation acreage within the bank. The UCF-UMB planned restoration activities will include plugging man-made drains and field ditches at each site which will restore *more natural, historic water regime* and surface hydrology. The UCF-UMB proposes to preserve, enhance, and restore the following wetland habitat types and acreages, as outlined below in **Table 3**. The mitigation area subtotal presented below in **Table 3** does not include upland acres or the existing ponds and surface waters located on each of the sites. These areas are included in the non-mitigation acreage in **Table 3** below.

<b>Table 3</b>			
<b>Proposed Habitat Type (post-restoration)</b>			
<b>Site</b>	<b>Habitat Type</b>	<b>Mitigation Method</b>	<b>Acres</b>
Blackwater Site	BLH	Re-establishment	16.4
	BLH	Rehabilitation	18.7
	<b>Total Mitigation Acres</b>		<b>35.1</b>
	Upland Inclusion		4.9
	<b>Non-Mitigation Acres</b>		<b>4.9</b>
Cooper Tract	BLH	Re-establishment	24.7
	BLH	Enhancement	1.5
	BLH	Rehabilitation	11.7
	<b>Total Mitigation Acres</b>		<b>37.9</b>
	Upland Inclusion		20.9
	Water		0.7
	<b>Non-Mitigation Acres</b>		<b>21.6</b>
Joor Site	BLH	Re-establishment	48.6
	BLH	Rehabilitation	46.9
	BLH	Enhancement	1.9
	<b>Total Mitigation Acres</b>		<b>97.4</b>
	Upland Inclusion		6.2
	Water and non-mitigation area		2.5

<b>Table 3</b>			
<b>Proposed Habitat Type (post-restoration)</b>			
<b>Site</b>	<b>Habitat Type</b>	<b>Mitigation Method</b>	<b>Acres</b>
	<b>Non-Mitigation Acres</b>		<b>8.7</b>
Milldale Phase I	BLH	Re-establishment	49.4
	BLH	Rehabilitation	30.6
	BLH	Preservation	15.9
	<b>Total Mitigation Acres</b>		<b>95.9</b>
	Water and non-mitigation area		<b>3.4</b>
	<b>Non-Mitigation Acres</b>		<b>3.4</b>
Milldale Phase II	BLH	Re-establishment	29.2
	BLH	Rehabilitation	41.9
	BLH	Preservation	20.2
	<b>Total Mitigation Acres</b>		<b>91.3</b>
	Water and non-mitigation area		<b>5.3</b>
	<b>Non-Mitigation Acres</b>		<b>5.3</b>
<b>UCF UMB Total Mitigation Acreage</b>			<b>357.6</b>

The sponsor proposes to restore hydrology to the sites with the placement of ditch blocks, backfilling, and the removal of drainage culverts where appropriate for each of the sites. The swales and bayous currently overtop and flood the adjacent pastures during high rain events or high-water events and redirect sheet water flow across some areas of the sties, and the removal of the function of the swales will increase the frequency of inundation and duration of drawdown of the fields within the project boundaries.

The areas surrounding the banks are primarily pasture and agricultural lands with some existing forested lands, making the proposed bank valuable for water quality and wildlife. The vegetative and hydrologic restoration of the sites will increase habitat for wildlife and improve water quality by filtering and eliminating agricultural discharges and reducing nutrient runoff into nearby waterways. Existing areas of uplands will be restored along with the forested wetlands but will be classified as restored upland inclusions. Features such as access trails and set aside (reserved) areas will be maintained as non-mitigation acreage within the bank. The purposes of these are to provide wildlife openings and to facilitate monitoring/maintenance activities associated with bank establishment, long-term management and continued recreational use of the property. The details of the UCF-UMB proposed bank restoration are described in Section 4.1 of this prospectus.

## 2.2 Project Objectives

The site restoration plan that is conceptually detailed in Section 4.1 is intended to increase wetland and aquatic habitat hydrological, ecological and wildlife functions. These increased functions are defined in terms of the following project objectives:

- Increase biodiversity by providing improvements in species movement (corridor function) and in nesting/spawning/breeding/feeding and loafing habitat.
- Provide habitat for wildlife, including threatened and endangered species by improving habitat functions, values and utilization through the re-establishment, preservation, and enhancement of native wetland community types.
- Provide for water quality enhancement through the re-establishment of overland flow, and uptake of nutrients from re-established, and enhanced wetland community types.
- Provide for nutrient attenuation and sediment retention by eliminating livestock grazing on the bank.
- Provide for increased flood storage and attenuation through the removal of internal ditching to allow overland flow of water.

### 3. ECOLOGICAL SUITABILITY OF THE SITES/BASELINE CONDITIONS

#### 3.1 Land Use

##### 3.1.1 Historical Land Use

Based on the physiographic characteristics of the sites and remnant natural forests present within the region, the sites and adjacent lands were historically deciduous forested wetlands with some upland deciduous forest. The site historically supported floodplain forested wetland and was converted to improved pasture prior to the 1980s. The historical aerial photographs are attached as **Figures 4 and 5**. Clearing of forested communities for agricultural use at the **Milldale Sites** occurred prior to the first available aerial images from 1941. Historic aerials taken at the same time of the **Blackwater Site, Cooper Site** and **Joor Site** show that these areas were mostly forested and later cleared sometime prior to 1989. Alterations made to these sites occurred during these time periods as well. These alterations included the clearing of forested areas, establishment of drainage ditches, addition of drainage culverts and excavation of farm ponds. Pre-impact hydrology was primarily attributed to backwater flooding from the Taber Creek, Beaver Bayou and Hub Bayou respectively, and rainfall and sheet flow.

##### 3.1.2 Existing / Current Land Use

The major land use on UCF-UMB sites consist primarily of agricultural fields used for the grazing of cattle and hay production. Currently the cattle on the bank sites are raised for beef production. Prior utilization included active dairy farming and milk production. Adjacent to and within one mile of each site land uses include Mixed Forest, Forested Wetlands, Hay/Pasture, Low Intensity Developed, and Open Water. See **Figure 6** for the existing and surrounding land uses of the site. Representative photographic documentation of the site is provided as **Attachment B**.



## 3.2 Soils

### 3.2.1 Bank Site Soils

USDA GIS mapped hydric soils for East Baton Rouge Parish represent the majority of the each of the proposed mitigation sites for the UCF-UMB. These soils mainly consist of the hydric soil series: Gilbert Silt Loam, (GeA); Gilbert Silt Loam, occasionally flooded (GtA); Oprairie Silt, 0 to 1 percent slopes (OpA); Ouachita, Ochlockonee, and Guyton soils (OUA), Toulasilt loam, 1 to 3 percent slopes (TuB), and Deerford Verдум complex, 0 to 2 percent slopes. There is a small portions of the Milldale and Blackwater sites that are mapped as non-hydric Deerford-Verдум complex, 0 to 2 percent slopes (DaA) however the majority of these areas currently contains mapped wetlands based on the Jurisdictional Determinations made for each site. The soils for each of the sites are depicted in **Figures 6a-6d**.

### 3.2.2 Soil Descriptions

**Gilbert silt loam soils (GeA, 85% hydric rating):** The USDA soil series description characterizes this series as consisting of very deep, poorly drained, slowly permeable soils formed from mixed loess and loamy sediments of late Pleistocene Age. These soils are predominately located in level or nearly level areas and depressions. Slopes range from 0 to 1 percent. These soils exhibit slow runoff and permeability. A perched water table typically occurs during the winter and early spring at ground surface to a depth of 1.5 feet below the surface. Historically, these soils series were wooded with typical bottomland hardwood species of oaks, elm, sweetgum, honey locust and pine, most likely loblolly. These soils now occur in predominately cleared areas used for cropland or pasture lands. Unless limed, these soils are medium to very strongly acidic in the A-horizon.

**Oprairie soils (OpA, 2 % hydric rating):** This soils series is described by the USDA as somewhat poorly drained soils formed in loess deposits. These soils are typically located on silty upland terraces of the Pleistocene age and distribution is throughout southeast Louisiana in southern Mississippi Valley silty uplands. Slopes range from 0 to 3 percent. These soils exhibit low to medium runoff and low permeability and are used for pasture or urban development.

**Deerford-Verdon soils (DaA, 10% hydric rating):** The Deerford series consists of very deep, somewhat poorly drained, slowly permeable soils that are high in exchangeable sodium. These soils formed in silty Coastal Plain sediments with low sand content on late Pleistocene age terraces. Slopes range from 0 to 2 percent.

**Ouachita, Ochlockonee, and Guyton soils (OUA, 65 % hydric rating):** The Ouachita series consists of deep, well drained, moderately slowly permeable soils that formed in loamy alluvium. These, level to nearly level, soils are on flood plains and natural levees along streams in the Western Coastal Plains. Slopes range from 0 to 3 percent. GEOGRAPHICALLY ASSOCIATED SOILS: These include the Amy, Guyton and Ochlockonee. Guyton soils, which occur on lower flood plains, have an argillic horizon and are poorly drained. Ochlockonee soils, which occur on similar landscape positions, are in a coarse-loamy particle size class.

### 3.3 Hydrology

#### 3.3.1 Contributing Watershed

The bank receives backwater flooding from the surrounding bayous and wetlands. Much of this area sits in a low, flat ridge perched above surrounding swamps and other wetlands. As such, most of the contributing hydrologic contribution is from rainfall. The low, flat ridge helps the area retain rainfall and does not allow for the rapid exodus of rainwater through surface runoff. The bank sites are located within the Amite watershed within the Lake Ponchartrain Basin. All drainage within the bank sites is toward the Amite River via its tributaries and eventually into Lake Maurepas. The **Milldale Sites** include the head waters to Hub Bayou that drains south to the Amite River. The **Joor Site** is also traversed by Beaver Bayou that also drains south to the Amite River, and the **Cooper Site** is dissected by Taber Creek. Refer to **Figure 1** for the location of the restoration sites and **Figure 7** for the proposed service area of the bank which depicts the hydrologic units the UCF-UMB will support.

#### 3.3.2 Historical Hydrology and Drainage patterns

Alterations to the hydrologic function of the sites of the UCF-UMB have occurred prior to 1941 and are maintained to the present day. Had the sites not been converted to agricultural use and pastureland, they likely would have remained forested as bottomland hardwoods and hardwood flats. Based on the elevation obtained from Louisianan State University Dept. of Geography & Anthropology's online Atlas Lidar resource, the historic hydrologic flow of the sites consisted of sheet flow across the sites **Figures 8a-8b** depicts the LIDAR elevations of each site. The current drainage flow of each site is depicted in **Figures 9a-d**.

#### 3.3.3 Existing / Current Hydrology and Drainage Patterns

Surface hydrology in the bank is primarily driven from precipitation and surface flow from adjacent properties. Alterations to each of the sites natural drainage patterns have occurred through construction of ditches and swales that direct waterflow into the above-mentioned waterways or nearby offsite bayous and streams. During periods of high rain events portions of each site experience flooding from overflowing swales and bayous but is drained from the site due to these alterations.

#### 3.3.4 Jurisdictional Wetlands

The CEMVN has issued preliminary jurisdictional determinations for the four UCF-UMB sites. The determinations were used in determining the acreage of the proposed restoration activities for each of the sites. Please refer to **Attachment B** of this document for the specific wetland acres described in the PJD for each site of the proposed bank.

### 3.4 Vegetation

#### 3.4.1 Historical Plant Community

As evidenced by surrounding, and on-site bottomland hardwood wetlands, the UCF-UMB sites will be restored predominately to the historic bottomland hardwood wetlands that likely occurred prior to being converted to agricultural use. Lower elevations of the Sites will be re-established with, elm-ash sugarberry, overcup oak-bitter pecan, and cypress bottomland hardwood forested wetlands, with a diversity of predominant species characteristic of these habitat types and species associations. Bottomland hardwood forests are an important habitat type within the Eastern Gulf Coastal Plain and occurred historically on each of the sites. Bottomland hardwood forests are alluvial wetlands that occupy broad floodplain areas associated with river systems. These wetlands experience fluctuating water level ecosystem characterized by a hydrologic regime of alternating wet and dry periods. They are important habitats for the maintenance of water quality and provide productive habitat for a variety of flora and fauna.

As described in the LNHP *Natural Communities of Louisiana*, common over story trees bottomland hardwoods, and hardwood flatwoods wetland habitats include loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*), willow oak (*Quercus phellos*), laurel oak (*Quercus laurifolia*), overcup oak (*Quercus lyrata*), Pignut hickory (*Carya glabra*), shagbark hickory (*Carya ovata*), green ash (*Fraxinus pennsylvanica*), Carolina ash (*Fraxinus caroliniana*), American elm (*Ulmus Americana*), cedar elm (*Ulmus crassifolia*), hackberry (*Celtis laevigata*), American beech (*Fagus grandifolia*), southern magnolia (*Magnolia grandiflora*), sweet gum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), swamp blackgum (*Nyssa biflora*), black gum (*Nyssa sylvatica*), cherrybark oak (*Quercus pagoda*), swamp chestnut oak (*Quercus michauxii*). Within the midstory, swamp privet (*Forestiera acuminata*), planar tree, or water elm (*Planera aquatica*), swamp dogwood (*Cornus foemina*), mayhaw (*Crataegus opaca*), greenhaw (*Crataegus viridis*), persimmon (*Diospyros virginiana*), snowbell (*Styrax Americana*), elderberry (*Sambucus canadensis*), wax myrtle (*Myrica cerifera*) and in wetter areas buttonbush (*Cephalanthus occidentals*) are common. Palmetto (*Sabal minor*) can be thick in the under story. Many species of vines are also common such as muscadine (*Vitis rotundifolia*), trumpet creeper (*Campsis radicans*), and greenbrier (*Smilax* spp.) are also quite abundant. Important herbaceous ground cover and fern plants including netted chain fern (*Woodwardia areolata*), southern shield fern (*Thelypteris palustris*), royal fern (*Osmunda regalis*), spider lily (*Hymenochallis liriosome*), trailing yellow loosestrife (*Lysimachus radicans*), lizard's tail (*Saururus cernuus*), coastal rose gentian (*Sabatia calycina*) low spearwort (*Ranunculus pusillus*) and ironweed (*Vernonia gigantea*).

#### 3.4.2 Existing Plant Community

Most of the existing plant community on these sites consists of pasture grasses such as Bahia grass (*Paspalum notatum*), smut grass (*Sporobolus indicus*), Bermuda grass (*Cynodon dactylon*), dog-fennel (*Eupatorium capillifolium*), bull thistle (*Cirsium vulgare*) and white clover (*Trifolium repens*), and the areas

of wet pasture included obligate and facultative wet species such as lamp rush (*Juncus effusus*) torpedo grass (*Panicum repens*), rusty flat sedge (*Cyperus odoratus*), seaside goldenrod (*Solidago sempervirens*) and marsh pennywort (*Hydrocotyle umbellata*) etc.

The existing BLH forest are dominated by willow oak (*Quercus phellos*), green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), Chinese tallow (*Triadica sebifera*), American elm (*Ulmus americana*), bitter pecan (*Carya aquatica*), and water oak (*Quercus nigra*). The midstory and understory are dominated by holly (*Ilex decidua*), dwarf palmetto (*Sabal minor*), lizard's tail (*Saururus cernuus*), broom-like sedge (*Carex bromoides*), poison ivy (*Toxicodendron radicans*), trumpet-creeper (*Campsis radicans*), etc. Due to the landscape position and elevation, the transition areas between the pasture areas and BLH forests are dominated by Chinese tallow.

### 3.5 General Need for the Project in this Area

In addition to providing compensation for unavoidable impacts associated with commercial, residential, and industrial developments; the proposed bank will serve to mitigate for potential impacts associated with linear projects such as pipelines and roadways in the already highly industrialized and populated Lake Pontchartrain Basin. In addition to these impacts, the CEMVN currently has three separate projects within the Lake Pontchartrain Basin that will require BLH and bald cypress swamp (Swamp) mitigation by April 2023. The proposed Comite River Diversion Project will require a minimum of 690 acres of BLH mitigation and is expected to be completed by February 2022. The proposed East Baton Rouge Flood Risk Reduction Project will require a minimum of 430 acres of BL mitigation and is expected to be complete by February 2023. The proposed West Shore Lake Pontchartrain project will require a minimum of 150 acres of BLH mitigation and a minimum of 2,020 acres of Swamp mitigation and is anticipated to be complete in April 2023. These three projects combined will need a minimum 1,270 acres of BLH and 2,020 acres of Swamp mitigation within the next four to five years.

Local, state, and federal officials announced August 7, 2019 they had come up with a way to complete a long-discussed but never-funded plan to dredge and widen 66 miles of waterways and reduce the flooding risk along five main drainage canals in East Baton Rouge Parish.<sup>1</sup>

The state of Louisiana and the cities of Baton Rouge and Central will supply about \$65 million in local matching funds necessary to tap federal dollars for the \$225 million U.S. Army Corps of Engineers project. The work will begin next year and take four years to complete.

The parish's Flood Risk Reduction Project will involve dredging, widening, and upgrading portions of Bayou Fountain, Beaver Bayou, Blackwater Bayou, Jones Creek and Ward Creek.

Development of wetland restoration sites such as the UCF-UMB bank sites in an area of increasing development and urbanization will provide an important resource for storm water retention and flood

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storage. Major soil resource concerns exist in this area due to the generally unconsolidated nature of loess sediments from which the landscape is formed. These concerns include water erosion, maintenance of organic matter content and productivity, and management of soil moisture. Water erosion is a hazard in sloping areas that are bare due to livestock-induced erosion and timber harvest operations. Though many of the soils in the region remain wet or have a high-water table for some or most of the year, forested wetland restoration projects such as the proposed bank serve to increase the amount of precipitation interception and increase flood/storm water retention time. These functions serve to reduce potential erosion hazards and aid in the accumulation and maintenance of soil organic matter (carbon sequestration).

The restoration and reforestation of the bank near larger sites of forested lands will provide benefit to various species of wildlife such as nearctic-neotropical migrant birds. Twedt et al (1999) lists 14 forest breeding species of high concern. The planting and management of densely spaced seedlings will provide structural diversity within large forested landscapes, which is an identified strategy for recruiting breeding populations of scrub-dwelling (thamnic) and silvicolous (woodland) bird species (Twedt et al 1999; Twedt et al 2010).

#### 4. ESTABLISHMENT OF THE MITIGATION BANK

##### 4.1 Site Restoration Plan

The bank sites will provide 168.3 acres of re-established BLH, 149.8 acres of rehabilitation BLH, 3.4 acres of BLH enhancement, 36.1 acres of BLH preservation, and 32.0 acres of forested upland inclusion restoration to compensate for unavoidable wetland impacts within the Lake Pontchartrain Basin watershed. To accomplish this task, the Sponsor shall complete the following soils/hydrologic and habitat work.

##### 4.1.1 Soils/Hydrologic Work

The current man-made ditch system on each site is designed to facilitate drainage of water off the property. In order to restore wetland conditions as well as historic hydrologic characteristics, we are proposing to backfill to surround grade, select drainage ditches located on each site, the removal through backfilling of smaller drainageways, and the removal of culverts within the sites (**Figures 10a-d**). These alterations will impede runoff from the property, restore the sheet flow regime, and re-establish the historic saturated to slightly inundated hydroperiods typical of bottomland hardwood wetlands. The hydrologic restoration plan (**Figures 10a-d**) depicts locations where hydrologic alterations are proposed.

Backfilling and blocking of minor field ditches will eliminate drainage of runoff through these conveyances off-site, thus distributing runoff more evenly across the site and resulting in the re-creation of historic overland flow conditions. By ditch blocking, the amount and force of the water currently

discharging from these ditches will be dispersed over a broad area, resulting in increased water storage in the on-site depressional areas and slower movement of water across the site via overland flow, thereby increasing retention of water on-site for longer periods and providing for greater biological treatment of runoff from the site. Typical profiles for ditch backfill areas and ditch blocks are provided in **Figure 11**. No backfilling or ditch blocks will occur in any naturally occurring conveyance of the sites.

All hydrologic modifications will be constructed to match the surrounding natural grade on either side of the ditches using materials currently stockpiled on-site around the man-made cattle watering ponds or existing spoil present along the ditches. Any additional materials for backfilling beyond those provided by existing on-site spoil will be scraped from the upland areas as needed. No offsite material will be imported into the floodplain of any sites. The minor ditches to be backfilled will also be completed to match the natural grade surrounding the ditches to facilitate sheet flow. A Department of the Army (DA) 404 permit application for the proposed ditch blocks and backfilling of ditches will be submitted simultaneously with the submission of this prospectus.

#### 4.1.2 Vegetative Work

The vegetative restoration of the UCF-UMB will be accomplished by planting of appropriate and desirable wetland tree species typical of the targeted mitigation types (**Figures 12a-d**), control of nuisance and exotic invasive species, and through natural recruitment. After hydrologic restoration has occurred on the site vegetative restoration plantings of appropriate wetland vegetation for the intended habitat type will occur during the winter months (December, January, and/or February). Nuisance and exotic invasive species control will occur as needed during the development of the bank, with treatments generally taking place in late summer to early fall months (August-October). Additional details for each proposed habitat type are presented below.

##### 4.1.2a Bottomland Hardwood Re-establishment and Rehabilitation

Approximately 357.6 acres of hardwood wetlands are proposed for restoration between each site of the UCF-UMB (**Figure 12a-d**). This includes 168.3 acres of re-establishment, 149.8 acres of rehabilitation, 36.1 acres of preservation, and 3.4 acres of enhancement. The existing pasture ditches will be backfilled and leveled to allow for appropriate ground elevations for the establishment of appropriate hardwood wetland species (**Table 4**) and associated hydrophytic herbaceous species. The ditch blocks that will occur on the sites of the bank will similarly be leveled to match surrounding ground elevations to allow for the establishment of wetland species on the earthen ditch blocks. Additional site preparation and plantings for vegetative restoration are outlined below:

- Prior to planting, the sites will be prepared as needed (burning, subsoiling, mowing, disking, or herbicide application) to facilitate planting. To the maximum extent practicable ruts shall be removed in order to restore natural surface contours. Resultant ground elevations will be appropriate for the establishment and maintenance of wetland vegetation.

- Restoration activities will be through planting an appropriate species mixture characteristic of Hardwood Flatwood and Bottomland Hardwood Forest community types during the planting season from December to February.
- Seedlings will be planted on 9-foot centers for an initial stand density of at least 538 seedlings per acre. The anticipated schedule for planting is the 2021-2022 planting season. A mixture of at least 60 percent hard-mast and a maximum of 40 percent soft-mast-producing commercially available species identified by a registered forester or biologist as having a high probability of survival will be selected and planted from the species list outlined in **Table 4**. Bald cypress will also be utilized for planting, as commercially available, within the pond areas.

Major species' associations typical of wet hardwood flatwoods, and bottomland hardwood community types and their topographic position are the basis for the suggested planting zones outlined in **Table 5**. The topographic positions of the various proposed planted species are intended to mimic the natural landscape, composition and spatial distribution associated with each species' physiology as well as their saturation/inundation preference for this region. Sound guidelines for restoring bottomland hardwood forests authored by Allen et al. (2001) were published through the United States Geological Survey technical report series and were recently revised in 2004. This guidance was referenced for determining species placement per topographic zone relative to their flood/saturation tolerance.

Determination of species and planting zones were also based on community descriptions for bottomland hardwood wetlands, and wet hardwood flatwoods from the *Natural Communities of Louisiana* electronically published by the LDWF and LNHP. Species composition for planting will be chosen from those species listed below in **Table 4**. Planting zone establishment on each bank, as well as planting zone acreage calculations and plant quantities per species will be developed and presented during the creation of the mitigation work plan for the Mitigation Banking Instrument (MBI).

Table 4 Species Proposed for Rehabilitation and Re-establishment Areas		
Common Name	Scientific Name	AGCP Wetland Indicator Status
<b>Hard Mast Species</b>		
Nuttal Oak	<i>Quercus texana</i>	FACW
Bitter Pecan/Water Hickory	<i>Carya aquatica</i>	OBL
Overcup Oak	<i>Quercus lyrata</i>	OBL
Willow Oak	<i>Quercus phellos</i>	FACW
Cherrybark Oak	<i>Quercus pagoda</i>	FACW
Laurel Oak	<i>Quercus laurifolia</i>	FACW
<b>Soft Mast Species</b>		
Bald cypress	<i>Taxodium distichum</i>	OBL
Green Ash	<i>Fraxinus pennsylvanica</i>	FACW
American Elm	<i>Ulmus americana</i>	FAC
Common Persimmon	<i>Diospyros virginiana</i>	FAC
Sugarberry	<i>Celtis laevigata</i>	FACW
Sweetgum	<i>Liquidambar styraciflua</i>	FAC

#### 4.1.2b Bottomland Hardwood Enhancement

The UCF-UMB **Cooper Site** contains approximately 1.5 acres of currently wooded area along the banks of Taber Creek that contains some exotic species such as Chinese tallow. Minimal to no earth work will occur in this area to avoid impacts to any desirable vegetation present. This area will be cleared of nuisance/exotic vegetation such as Chinese tallow and interspersely planted with appropriate bottomland hardwood wetland species (**Table 4**).

#### 4.1.2c Bottomland Hardwood Preservation

There are approximately 36.1 acres within the **Milldale Phase 1 & 2 Sites** that are currently forested bottomland hardwood and hardwood flats and are proposed for preservation (**Figure 12a-d**). These areas consist of mature hardwood species with land elevations that will support the existing habitat type after hydrologic restoration of the UCF-UMB site occurs. These areas are largely clear of nuisance/exotic vegetation. However, if identified in these areas, undesirable and nuisance/exotic vegetation will be cleared to reduce competition with desirable species. Efforts will be made to limit and/or exclude mechanical work within this portion of the site to avoid impacts to the current conditions of the area.



#### 4.1.2d Upland Inclusions

The areas of each site that are currently delineated as upland inclusions, either because of topographic relief, location, or underlying soils will be vegetatively restored along with the other habitat types throughout the sites. These upland areas total 32.0 acres between the **Blackwater, Cooper, and Joor Sites** of the proposed UCF-UMB and will be planted with species from **Table 4** with a wetland indicator status of FAC or FACU. This area will include the planting of FACU species such as white oak (*Quercus alba*).

#### 4.1.2e Planting Zones and Species Associations

**Table 5** lists the dominant and subdominant hardwood species and associates that will be planted, as commercially available, within each planting zone. Hardwood species that are better adapted to prolonged inundation or have a higher tolerance to greater flooding frequency will be planted within the elm-ash-sugarberry and overcup oak-bitter pecan zones bordering the natural drain and within the current wetland areas on the south end of the property. Species that thrive best in semi-permanently to permanently inundated and or saturated conditions such as bald cypress will be planted within the re-graded surface water pond areas within the cypress planting zone. Planting zone locations and acreage establishment will be developed within the mitigation work plan of the MBI.

Table 5 UCF-UMB Species Associations by Planting Zones			
Planting Zone	Dominant Species	Subdominant Species	Acres
Elm-Ash-Sugarberry	American Elm	Nuttall Oak	
	Green Ash	Bitter Pecan	
	Sugarberry	Common Persimmon	
Overcup Oak - Bitter Pecan	Overcup Oak	Green Ash	
	Bitter Pecan	Nuttall Oak	
		Common Persimmon	
Red Oaks - White Oaks Mixed	Laurel Oak	Sweetgum	
	Cherrybark Oak	Nuttall Oak	
	Willow Oak	Wax Myrtle	
Upland	Cherrybark Oak		
	White Oak	Wax Myrtle	

Additional considerations that will be made for the vegetative restoration of the UCF-UMB sites are listed below:

- In the event that seedling availability that renders a discrepancy of more than five (5) percent from the desired mixture of hard mast to soft mast species, CEMVN approval to modify the plan will be requested.

- Tree Species Composition: Approximately 60% hard mast to 40% soft mast ratio shall be planted.
- Planting requirements: To the extent possible, one to two-year old seedlings grown from locally acquired seed will be used. Seedlings will be stored and handled appropriately and will be planted during the non-growing season (December 15 to March 15).
- Site Management Following Planting: a) Competing vegetation in the immediate vicinity of seedlings will be controlled, as needed, using chemical and/or mechanical means, for the first two years following planting. b) Chemical and/or mechanical control of nuisance or exotic invading noxious tree and shrub species, such as Chinese tallow, Chinese privet, *Baccharis halimifolia* (salt bush), locust and black willow shall be undertaken on an ongoing basis after planting but may be discontinued when the planted community reaches an appropriate stage of development.

#### 4.2 Technical Feasibility

The construction work required to develop the proposed bank is based on experience and currently accepted restoration methods and is technically feasible. The construction work for the bank sites will consist of 1) site preparation (invasive and exotic species control), 2) dirt work, and 3) reforestation. The relatively low landscape position and the presence of hydric soils indicate that minimal soil work will be required for successful restoration of wetland hydrology and forested wetlands in the areas currently being used as cattle and hay pastures. The existence of forested wetlands within and adjacent to the bank also suggests a high potential for successful restoration. Once artificial drainage modifications are rendered ineffective through restoration efforts, a more natural, historic water regime will be restored.

Each site will have its own construction schedule and corresponding release schedule based upon achievement of defined performance standard for each site. The approach of utilizing different sites within an umbrella banking instrument allows a more efficient flow and flexibility to complete these projects and minimize risk with regard to logistical issues such as equipment and labor availability; seedling availability and weather-related factors which can affect the timing of construction on a large scale. Any phasing plans for a given site will be further identified in the Mitigation Work Plan of the MBI.

#### 4.3 Current Site Risks

Because of the UCF-UMB location and proximity to rapidly developing communities such as the cities of Central and Zachary there is the immediate threat of conversion of the property to a more intensive land use such as residential or commercial development on the sites. Existing agricultural and conservation land uses on adjacent properties are expected to continue. The proposed use of the UCF-UMB for wetland restoration and conservation purposes is consistent with existing, adjacent land uses. No known zoning or existing ordinances are present that could affect the proposed bank or operation. There is no proposed

development of lands adjacent to the bank that the Sponsor has knowledge of. Known powerline or natural gas line right of ways that transect the site that would need to be excluded from the restoration activities are shown on the respective individual Mitigation Type Map, Figures 12a through 12 d.

#### 4.4 Long-Term Sustainability of the Site

The proposed hydrologic restoration at the UCF-UMB is self-sustaining with inspections of the hydrologic modifications of the sites being performed on a regular basis in conjunction with vegetative monitoring activities. Any repairs to these modifications that may be required will be performed immediately after discovery to ensure the integrity and the successful functioning of the restoration effort. Water monitoring devices or piezometers will be placed within the project site to monitor the water retention of the restored areas and ensure that the hydrology of the site is developing as intended. The location of these gauges will be chosen, with consultation of the IRT, and installed prior to vegetative restoration of the site. Periodic treatment of nuisance/exotic species will occur to ensure the site is meeting the performance measures required in the UBI.

#### 5. PROPOSED SERVICE AREA

The UCF-UMB sites are located within the Amite River Basin USGS 8-digit hydrologic cataloguing unit (HUC 08070202). The proposed service area (**Figure 7**) was determined using a watershed and ecoregion approach per existing DEMVN policy in the recently published Louisiana Rapid Assessment Method 2.0 (LRAM). When considering offsets to bottomland hardwood, bald cypress/tupelo swamp and pine flatwoods savannah, the CEMVN utilizes the Louisiana watershed basins, as defined by the LDEQ source data (LOSCO, 2004). The UCF-UMB location within the Amite River Basin HUC falls within the LDEQ-defined Ponchartrain Watershed.

#### 6. OPERATION OF THE MITIGATION BANK

##### 6.1 Project Representatives

Sponsors:

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Agent:

*Ecosystem Renewal, LLC.  
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Baton Rouge, Louisiana, 70816  
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*Landowners:*                    *Joy & Virgil Womack*  
*21833 Noble Reames Rd.*  
*Zachary, LA 70791*  
*(225) 933-8323*

*The Donald & Virginia Forbes Living Trust*  
*23845 Reames Rd*  
*Zachary, LA 70791*  
*(225) 931-4042*

*The Harp Family Trust*  
*22980 Tucker Rd*  
*Zachary, LA 70791*  
*(225) 405-9415*

*Joseph Cooper*  
*19067 Pride Baywood Dr*  
*Greenwell Springs, LA 70739*  
*(225) 931-1680*

## 6.2      Qualifications for the Sponsor

Members of the UCF and ECO team have over 30 years of combined experience in ownership and operation of mitigation banks in the New Orleans, Vicksburg, and Galveston Districts of the Corps of Engineers. The principals, members, and managers of UCF and Ecosystem Renewal, LLC have extensive experience in environmental services, ecological restoration, engineering, construction, silviculture, and business management. EcoSystem Renewal, to date, has restored over 1,000 acres of bottomland hardwood wetlands in the form of both mitigation banks and large permittee-responsible mitigation areas, and created and maintained four sites within the New Orleans district under the Zachary Umbrella Mitigation Banking Instrument that have reached interim success criteria, long-term success criteria, and are approaching their long-term credit releases. EcoSystem Renewal also currently manages and operates two bottomland hardwood banks in the Vicksburg District--Missouri Loop and Shreveport Mitigation Banks. Ecosystem Renewal currently has one other bottomland hardwood and stream bank in process in the USACE Galveston District. EcoSystem Renewal designed, permitted, and constructed the 1,980-acre Gulf Coastal Plains Wetland Mitigation Bank (GCPWMB) just north of East Bay and south of Winnie, TX. The GCPWMB is the first coastal prairie and tidally influenced intermediate/brackish marsh and freshwater marsh mitigation bank permitted and operating in the USACE Galveston District USACE.

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

UCF will serve as the sponsor represented by its agent, EcoSystem Renewal, LLC. Each property owner of the five UCF-UMB bank sites will be the long-term owners of their respective properties. However, the Sponsor may appoint a long-term steward if such appointment is approved by the IRT. The anticipated long-term management will consist of monitoring, invasive species control, forest management, boundary maintenance, and site protection.

### 6.4 Site Protection

The UCF-UMB will be protected in perpetuity by a Conservation Servitude held by a non-profit conservation group (pursuant to the Louisiana Conservation Servitude Act, R.S. 9:1271 et. seq.) on the entirety of the restoration sites. A copy of the Conservation Servitude will be filed in the real estate records of the Mortgage and Conveyance Office of the respective Parish the property is located within and shall be provided to the USACE for review and approval prior to filing. The proposed holder of the servitude is US Land Conservancy, LLC. After filing, a copy of the recorded Conservation Servitude, clearly showing the book, page, and date of filing, will be provided to the USACE.

### 6.5 Long-Term Strategy

Long-term management will consist of monitoring, vegetation management, invasive species control, boundary maintenance, site protection, and the funding of such activities. The forest will be managed to maintain or increase the biological, chemical, and physical wetland functions and to achieve and maintain the desired forest conditions, which will provide forested habitat capable of supporting populations for priority wildlife species. A long-term management plan will be included with the Draft Mitigation Banking Instrument, which will detail long-term management needs and costs, and identify a funding mechanism. The Sponsor or Long-term Steward will be responsible for protecting lands contained within the UCF-UMB in perpetuity. An interest-bearing long-term management account will be established to ensure adequate funding is available to cover the costs of these activities in the future.

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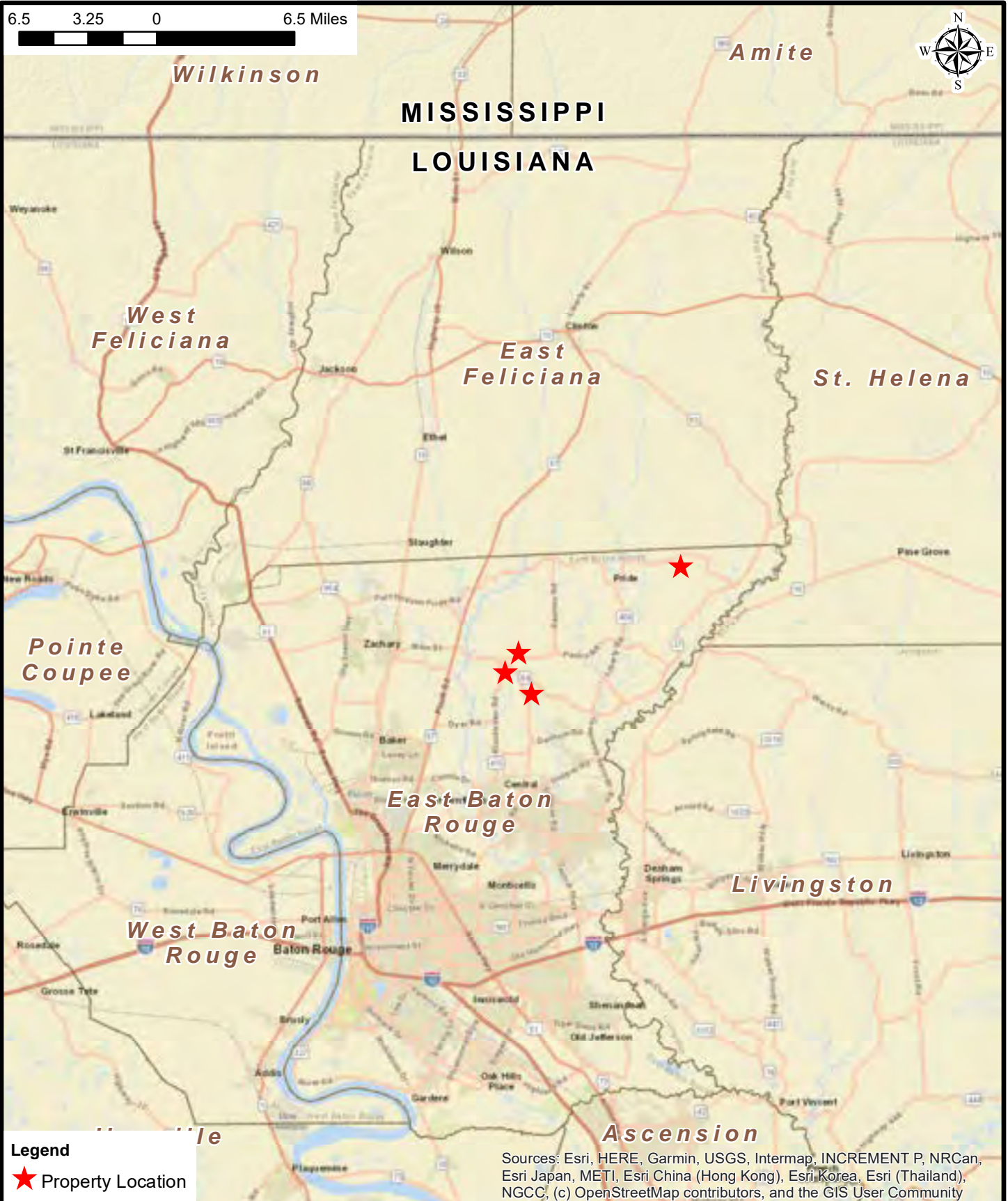
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# FIGURES



6.5 3.25 0 6.5 Miles



**Legend**

★ Property Location

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

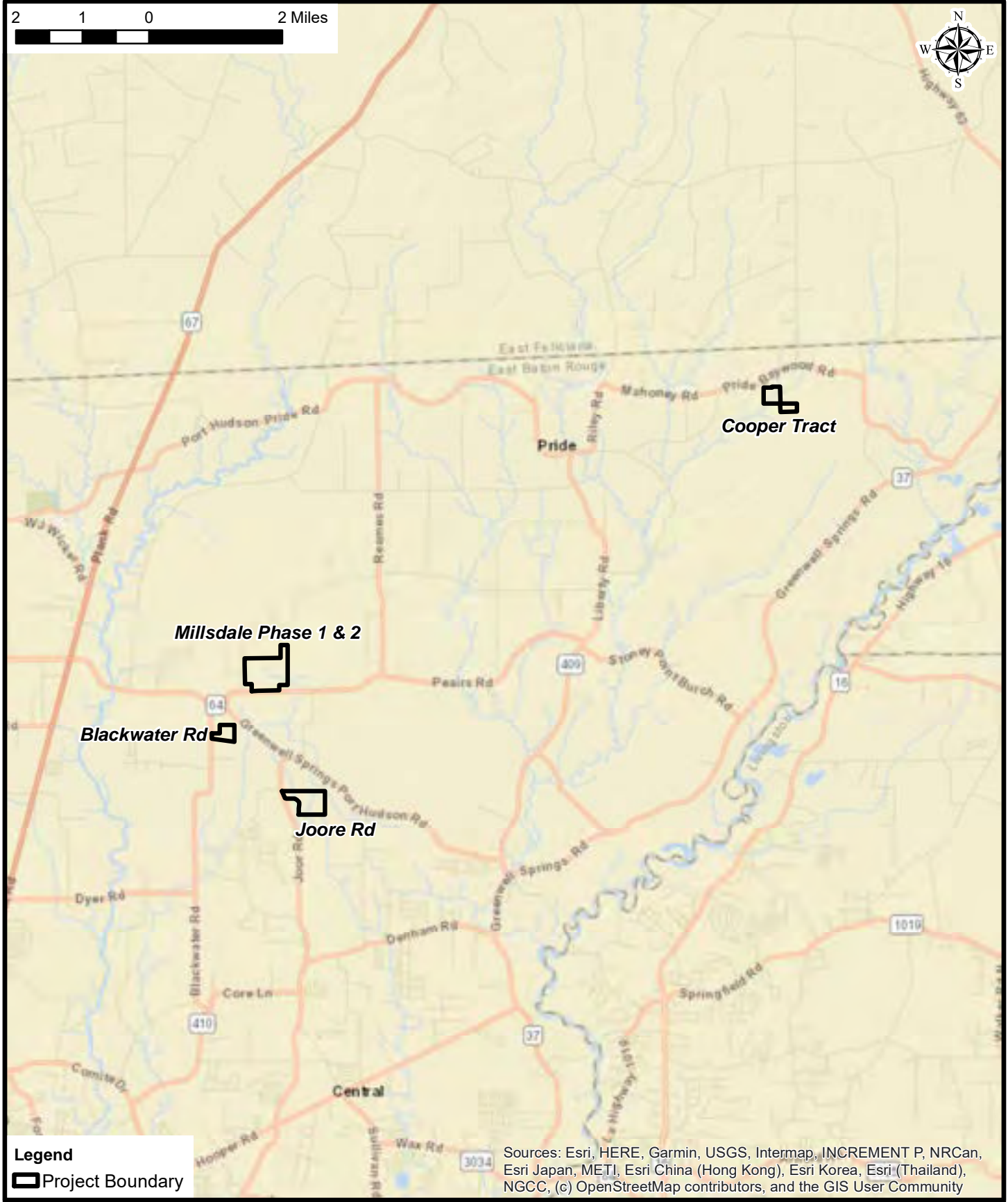
**ecosystem**  
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Upper Comite Flats  
Umbrella Mitigation Bank**  
East Baton Rouge Parish, Louisiana

**Property  
Location  
Map**  
Scale: 1" = 6 Miles  
Date: 10-13-20

Figure  
**1**

Date: 10/13/2020 Time: 8:29:22 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Umbrella Mitigation Bank\MXDs\Figure 2\_Vicinity Map\_Upper Comite Flats Umb\_Prospectus Report.mxd



**Legend**  
 Project Boundary

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

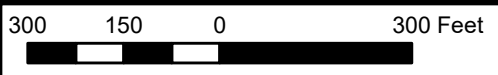
**ecosystem**  
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 office: 225 928-5678  
 cell: 504 577-5741

**Upper Comite Flats  
 Umbrella Mitigation Bank**  
 East Baton Rouge Parish, Louisiana

**Vacinity  
 Map**  
 Scale: 1" = 2 Miles  
 Date: 10-13-20

Figure  
**2**





**Legend**  
 Project Boundary (40.0 Ac)

Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Blackwater Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6323, Long: -91.0662  
 T5S-R1E, Section 12  
 East Baton Rouge Parish, Louisiana

**Current Site Aerial**  
 Scale: 1" = 300 feet  
 Date: 06-03-20

Figure  
**3a**

400 200 0 400 Feet



Pride Bay

Cotton Creek

Pond

Hanna Creek

Taber Creek

Unnamed Stream

**Legend**

Project Boundary (59.5 Ac)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Cooper Tract**  
**Upper Comite Flats Mitigation Bank**

Lat: 30.7048, Long: -90.9267  
 T4S-R3E, Section 17  
 East Baton Rouge Parish, Louisiana

Current Site	Aerial
Scale:	1 " = 400 feet
Date:	05-26-20

Figure


**3b**



500 250 0 500 Feet



**Legend**

 Project Boundary (106.1 Ac)

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

  
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Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
Lat: 30.6174, Long: -91.0543  
T5S-R2E, Section 18  
East Baton Rouge Parish, Louisiana

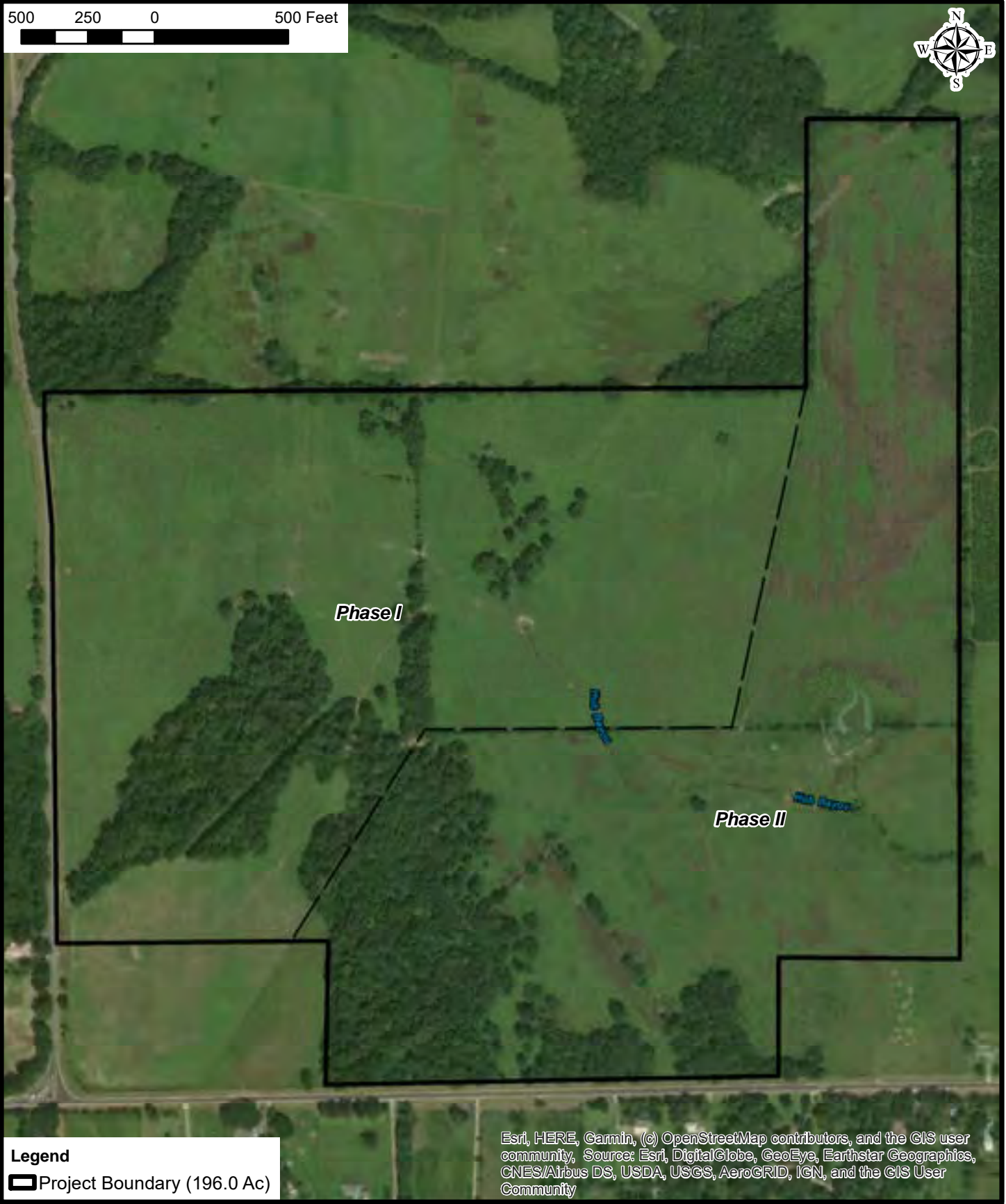
<b>Current Site Aerial</b>
Scale: 1" = 500 feet
Date: 05-29-20

Figure  
**3c**

Date: 5/29/2020 Time: 8:56:27 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXD\Prospectus Report\_Joor Rd Property\Figure 2\_Aerial Image Map\_Joor Rd Property\_Prospectus Report.mxd

Date: 6/2/2020 Time: 8:37:02 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXD\MXDs\_Millsdale Rd Property\Prospectus Report\_Millsdale Rd Property\_Image Map\_Millsdale Rd Property\_Prospectus Report.mxd


500 250 0 500 Feet



*Phase I*

*Phase II*

**Legend**

 Project Boundary (196.0 Ac)

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4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

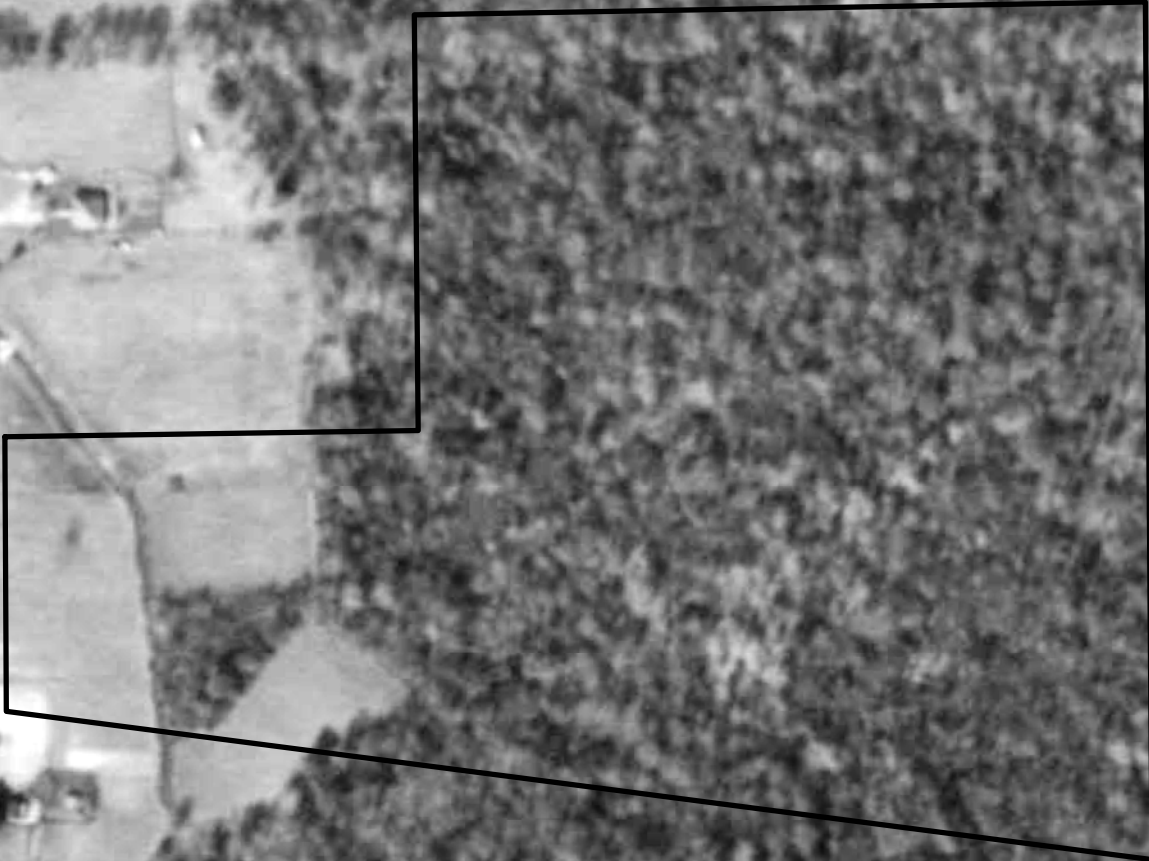
**Milldale Rd Property**  
**Upper Comite Flats Mitigation Bank**  
Lat: 30.6458, Long: -91.0555  
T4S-R2E-Section 31, T5S-R1E-Section 1, T5S-R2E-Section 6  
East Baton Rouge Parish, Louisiana

**Current Site Aerial**  
Scale: 1" = 500 feet  
Date: 06-02-20

Figure  
**3d**



300 150 0 300 Feet



**Legend**

 Blackwater Rd

  
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Blackwater Rd Property  
Upper Comite Flats Mitigation Bank**

East Baton Rouge Parish, Louisiana

**1941 Historical  
Aerial Map**

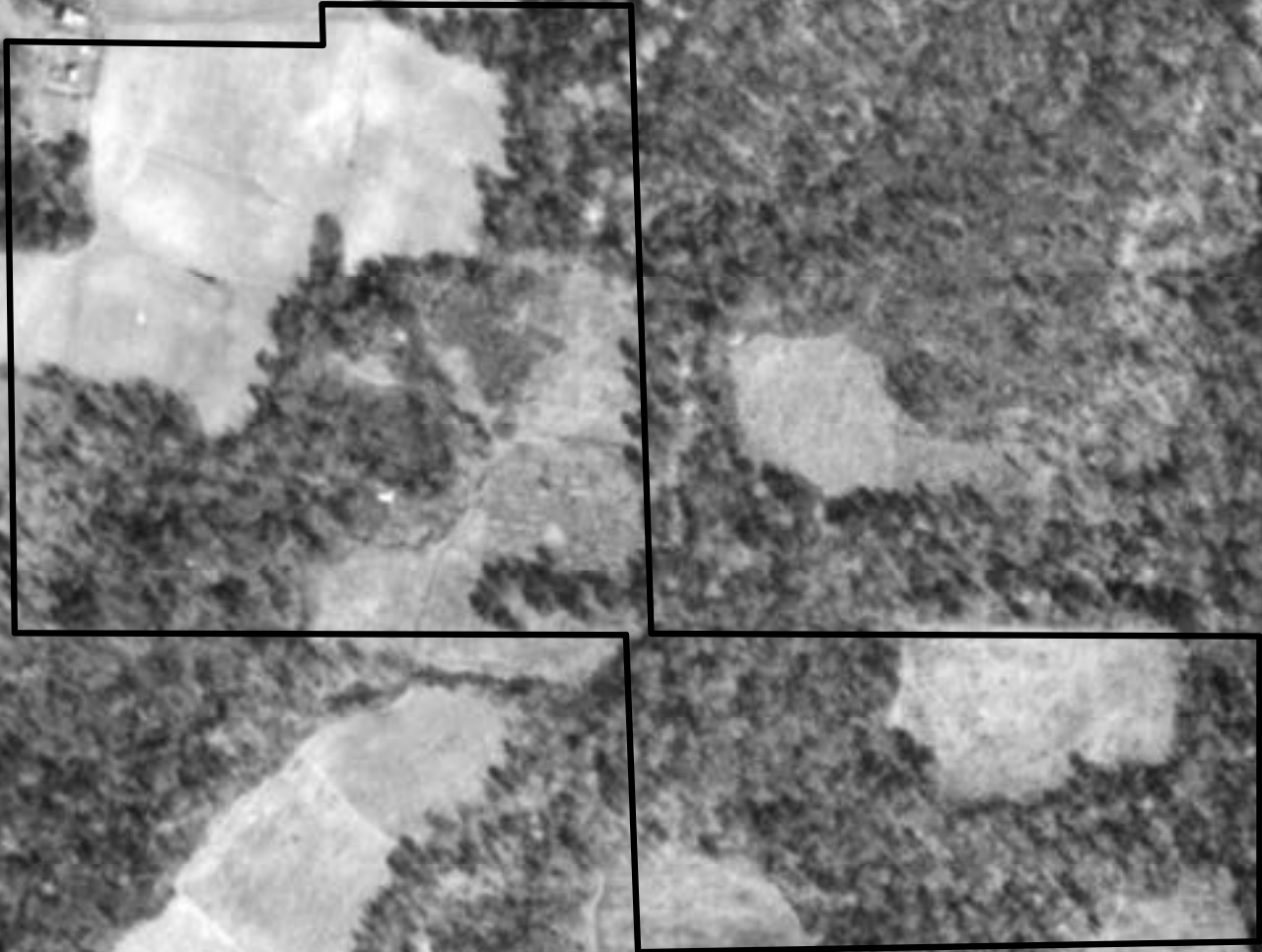
Scale: 1" = 300 feet

Date: 06-10-20

Figure


**4a**

400 200 0 400 Feet



Date: 11/7/2020 Time: 3:23:28 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Cooper Tract\MXD\Figure 4b\_1941 Historical Aerial Map\_Cooper Tract.mxd

**Legend**

 Project Boundary (59.5 Ac)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

  
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Cooper Tract**  
Lat: 30.7048, Long: -90.9267  
T4S-R3E, Section 17  
East Baton Rouge Parish, Louisiana

**1941 Historical Aerial Map**  
Scale: 1" = 400 feet  
Date: 11-02-20

Figure  
**4b**




500 250 0 500 Feet



Date: 6/10/2020 Time: 5:24:20 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXDs\WXDs\_Millsdale-Joore-Blackwater Combination\Figure 3\_1941 HistAerialMap\_JooreRd\_Upper Comite Flats Umbrella Mit Bank.mxd

**Legend**

 Joore Rd

  
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

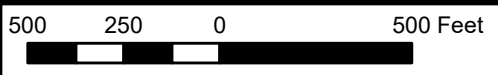
**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
East Baton Rouge Parish, Louisiana


**1941 Historical  
Aerial Map**  
Scale: 1" = 500 feet  
Date: 06-10-20

Figure  
**4c**



Date: 6/16/2020 Time: 12:02:36 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXDs\MXDs\_Millsdale-Joore-Blackwater\_Combination\Figure 3\_1941\_HistAerialMap\_Upper Comite Flats Umbrella Mit Bank.mxd



**Legend**  
 Millsdale Rd

  
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

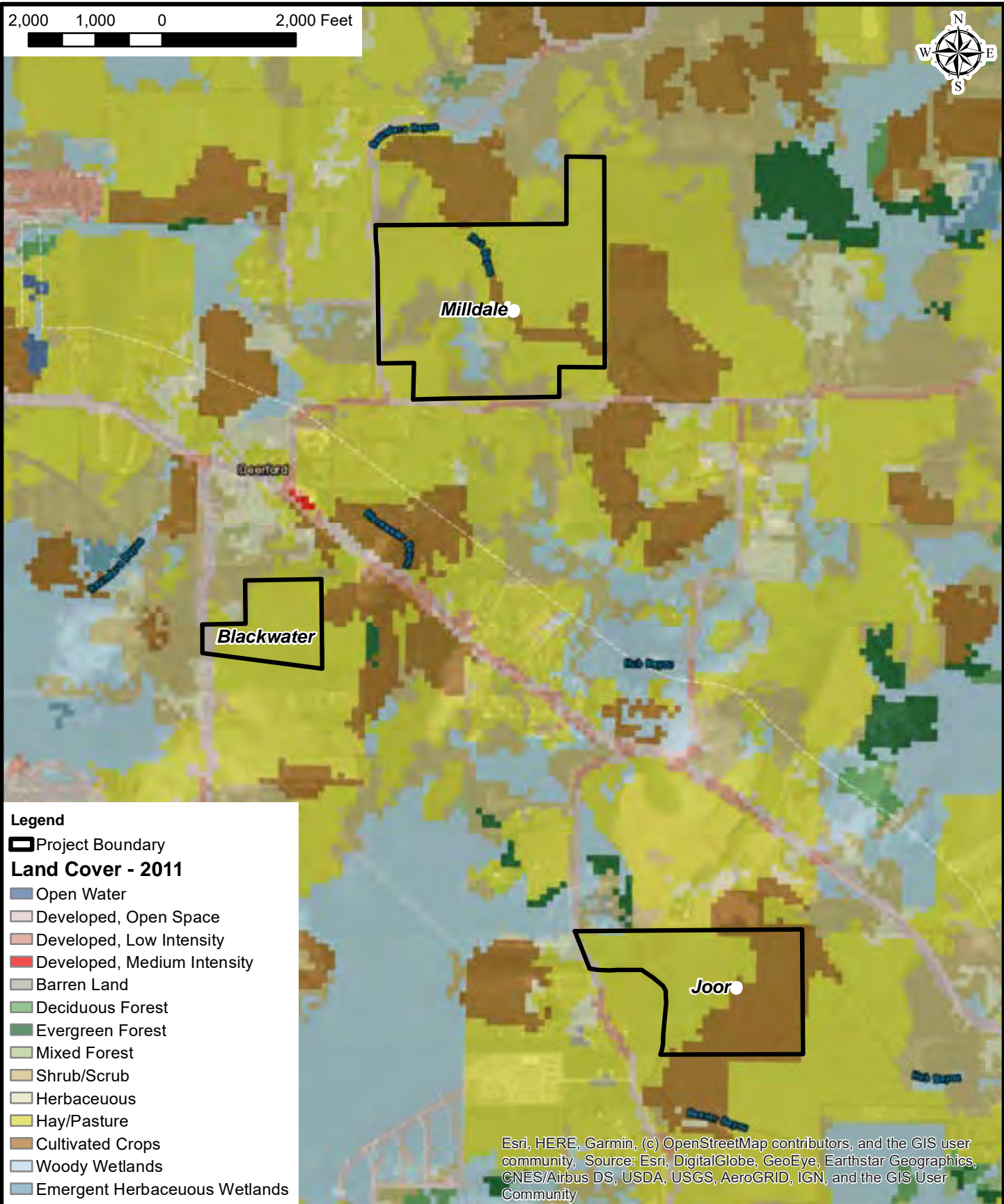
**Milldale Rd Property - Phases I & II**  
**Upper Comite Flats Mitigation Bank**  
East Baton Rouge Parish, Louisiana

**1941 Historical Aerial Map**  
Scale: 1" = 500 feet  
Date: 06-16-20

Figure  
**4d**



2,000 1,000 0 2,000 Feet



**Legend**

- Project Boundary
- Land Cover - 2011**
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Herbaceous
- Hay/Pasture
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Date: 10/12/2020 Time: 11:46:18 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Umbrella Mitigation Bank\MXDs\Figure X\_Land Use Map\_Milldale-Joor-Blackwater.mxd

**ecosystem**  
RENEWAL  
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

Blackwater Rd, Joor Rd  
& Milldale Properties  
Upper Comite Flats Umbrella Mitigation Bank  
East Baton Rouge Parish, Louisiana

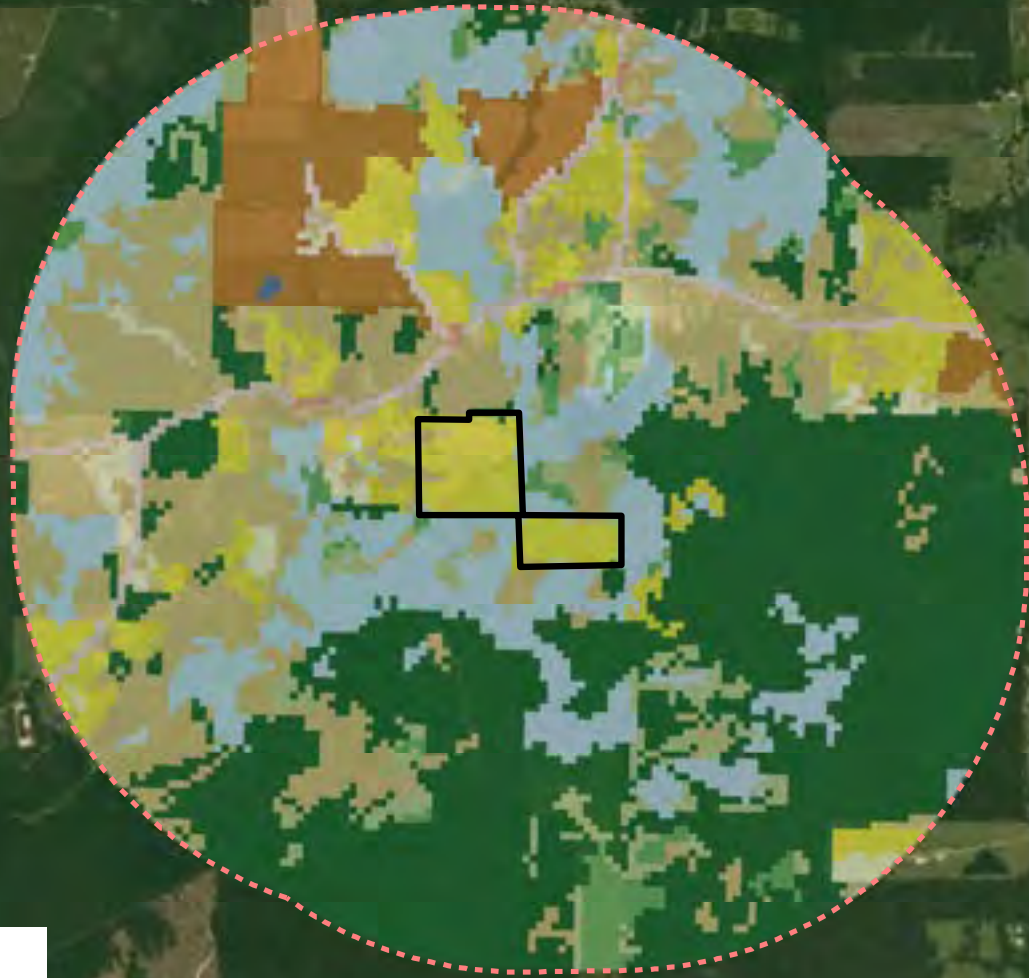
**Land Use  
Map**

Scale: 1" = 2,000 feet

Date: 10-12-20

Figure  
**5a**

2,400 1,200 0 2,400 Feet



**Legend**

Project Boundary (59.5 Ac)

**Land Cover - 2011**

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Hay/Pasture
- Cultivated Crops
- Woody Wetlands

Date: 10/12/2020 Time: 11:49:52 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Cooper Tract\MXDS\Figure 4\_Land Use Map\_Cooper Tract.mxd

4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Cooper Tract**

Lat: 30.7048, Long: -90.9267  
 T4S-R3E, Section 17  
 East Baton Rouge Parish, Louisiana

**Land Use Map**

Scale: 1" = 2,500 feet

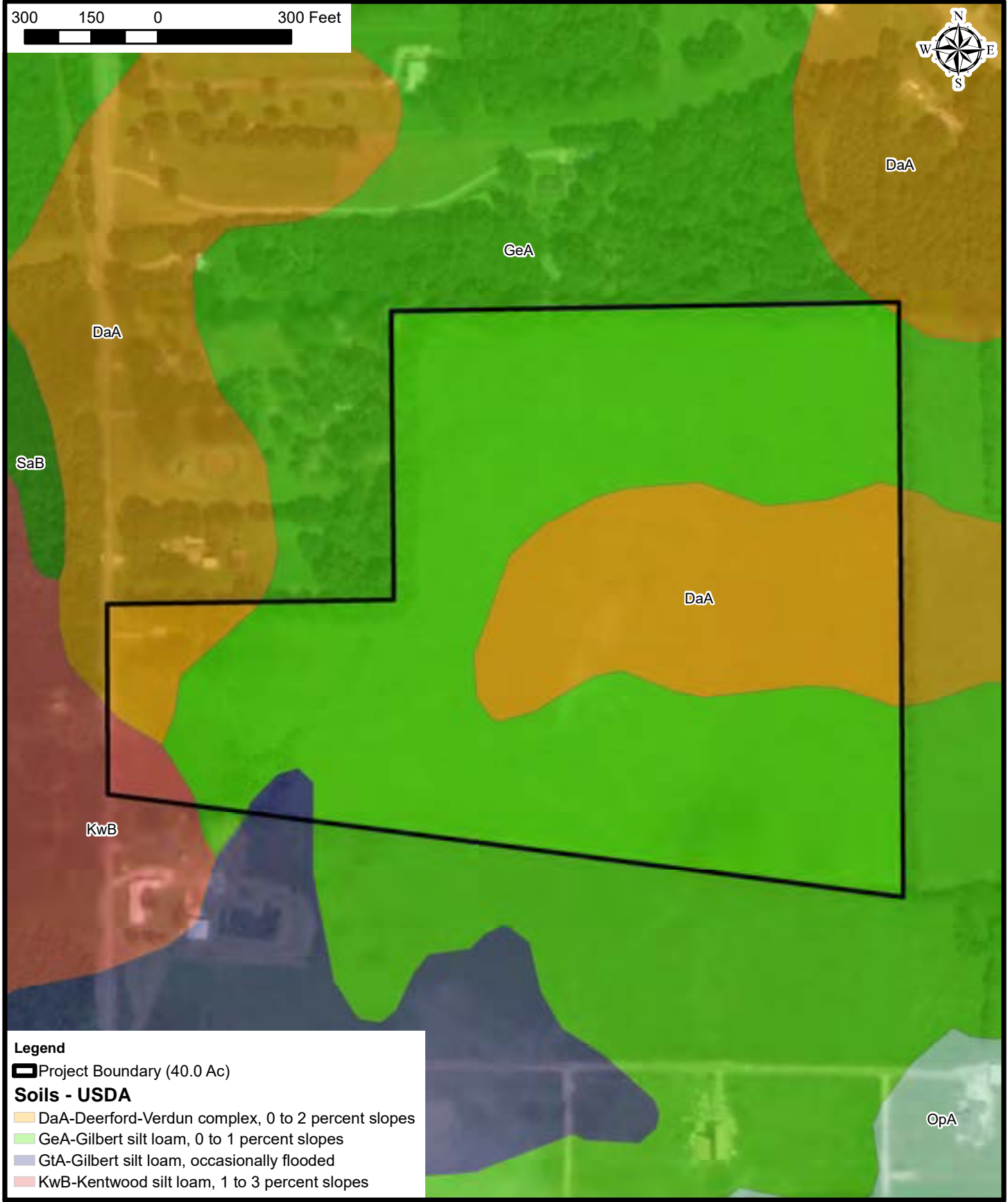
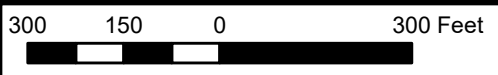
Date: 10-12-20

Figure

**5b**



Date: 6/3/2020 Time: 1:56:52 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXD\Blackwater Rd Property\Prospectus Report.mxd



**Legend**

- Project Boundary (40.0 Ac)
- Soils - USDA**
- DaA-Deerford-Verdun complex, 0 to 2 percent slopes
- GeA-Gilbert silt loam, 0 to 1 percent slopes
- GtA-Gilbert silt loam, occasionally flooded
- KwB-Kentwood silt loam, 1 to 3 percent slopes

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

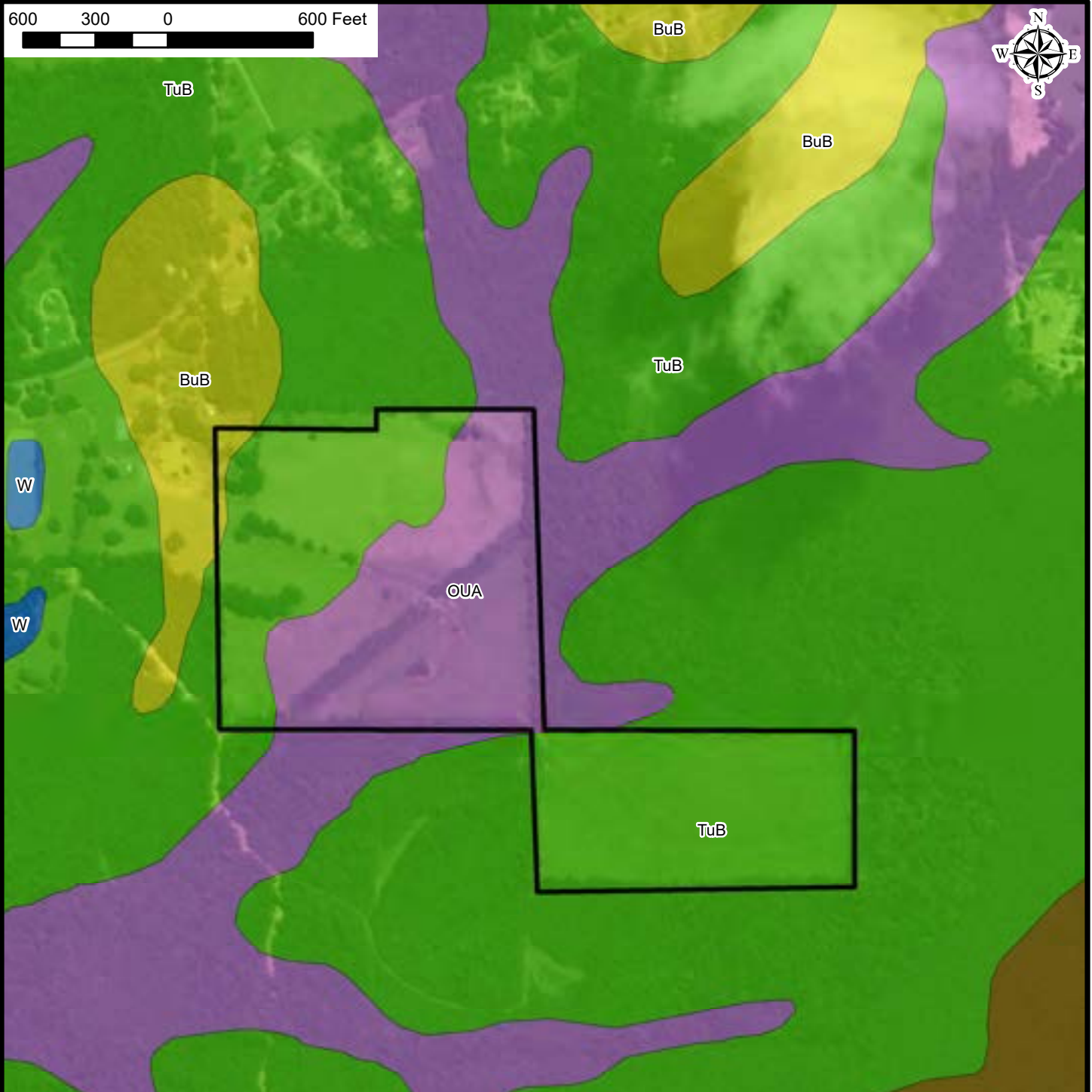
**Blackwater Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6323, Long: -91.0662  
 T5S-R1E, Section 12  
 East Baton Rouge Parish, Louisiana

**Soils Map**

Scale:	1" = 300 feet
Date:	06-03-20

Figure  
**6a**

600 300 0 600 Feet



**Legend**

Project Boundary (59.53 Ac)

**Soils - USDA**

BuB-Bude silt loam, 0 to 2 percent slopes

DaA-Deerford-Verdun complex, 0 to 2 percent slopes

OUA-Ouachita, Ochlockonee, and Guyton soils, nearly level to undulating, frequently flooded

TuB-Toula silt loam, 1 to 3 percent slopes

W-Water

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Date: 4/28/2020 Time: 9:53:00 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Cooper Tract\MXD\MXDs\_ID Report\Figure 2\_-\_Soils Map\_Cooper Tract.mxd

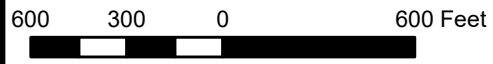
4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Cooper Tract**  
**Upper Comite Mitigation Bank**  
Lat: 30.7048, Long: -90.9267  
T4S-R3E, Section 17  
East Baton Rouge Parish, Louisiana

**Soils Map**  
Scale: 1" = 600 feet  
Date: 04-28-20

Figure  
**6b**

Date: 5/29/2020 Time: 9:51:11 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXDs\Joore Rd Property\Prospectus Report\Joore Rd Property\_Map\_Joore Rd Property\_Prospectus Report.mxd



**Legend**

- Project Boundary (106.1 Ac)
- GeA-Gilbert silt loam, 0 to 1 percent slopes
- OpA-Oprairie silt, 0 to 1 percent slopes
- SnA-Scotlandville silt, 0 to 1 percent slopes
- SnB-Scotlandville silt, 1 to 3 percent slopes

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6174, Long: -91.0543  
 T5S-R2E, Section 18  
 East Baton Rouge Parish, Louisiana

**Soils Map**

Scale: 1" = 600 feet  
 Date: 05-29-20

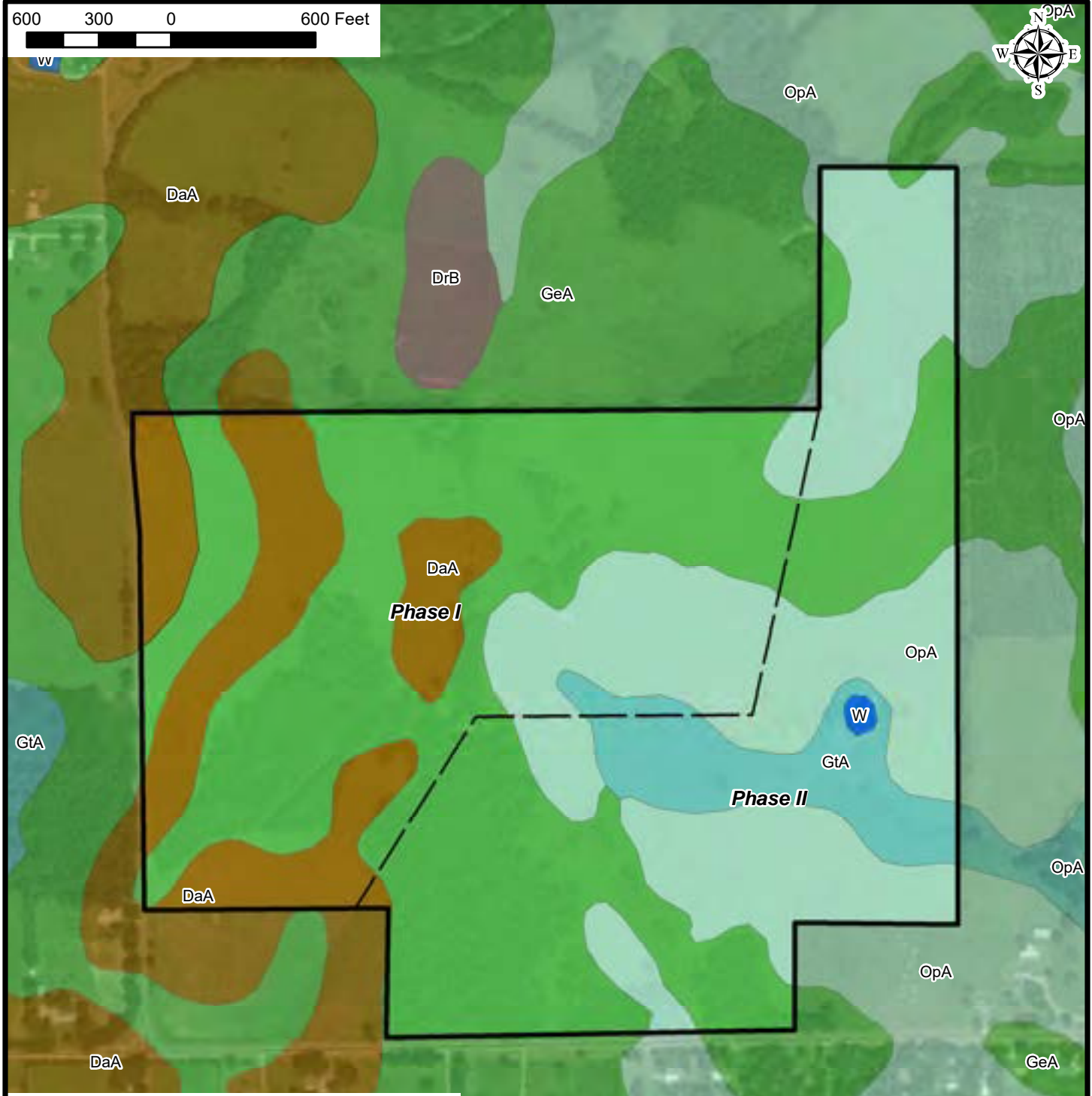
Figure  
6c



600 300 0 600 Feet



Date: 6/2/2020 Time: 8:43:16 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXDs\MXDs\_Millsdale Rd Property\Prospectus Report\_3\_Soils Map\_Millsdale Rd Property\_Prospectus Report.mxd



**Legend**

Project Boundary (196.0 Ac)

**Soils - USDA**

- DaA-Deerford-Verdun complex, 0 to 2 percent slopes
- GeA-Gilbert silt loam, 0 to 1 percent slopes
- GtA-Gilbert silt loam, occasionally flooded
- OpA-Oprairie silt, 0 to 1 percent slopes
- W-Water

4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Milldale Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6458, Long: -91.0555  
 T4S-R2E-Section 31, T5S-R1E-Section 1, T5S-R2E-Section 6  
 East Baton Rouge Parish, Louisiana

**Soils Map**

Scale: 1" = 600 feet

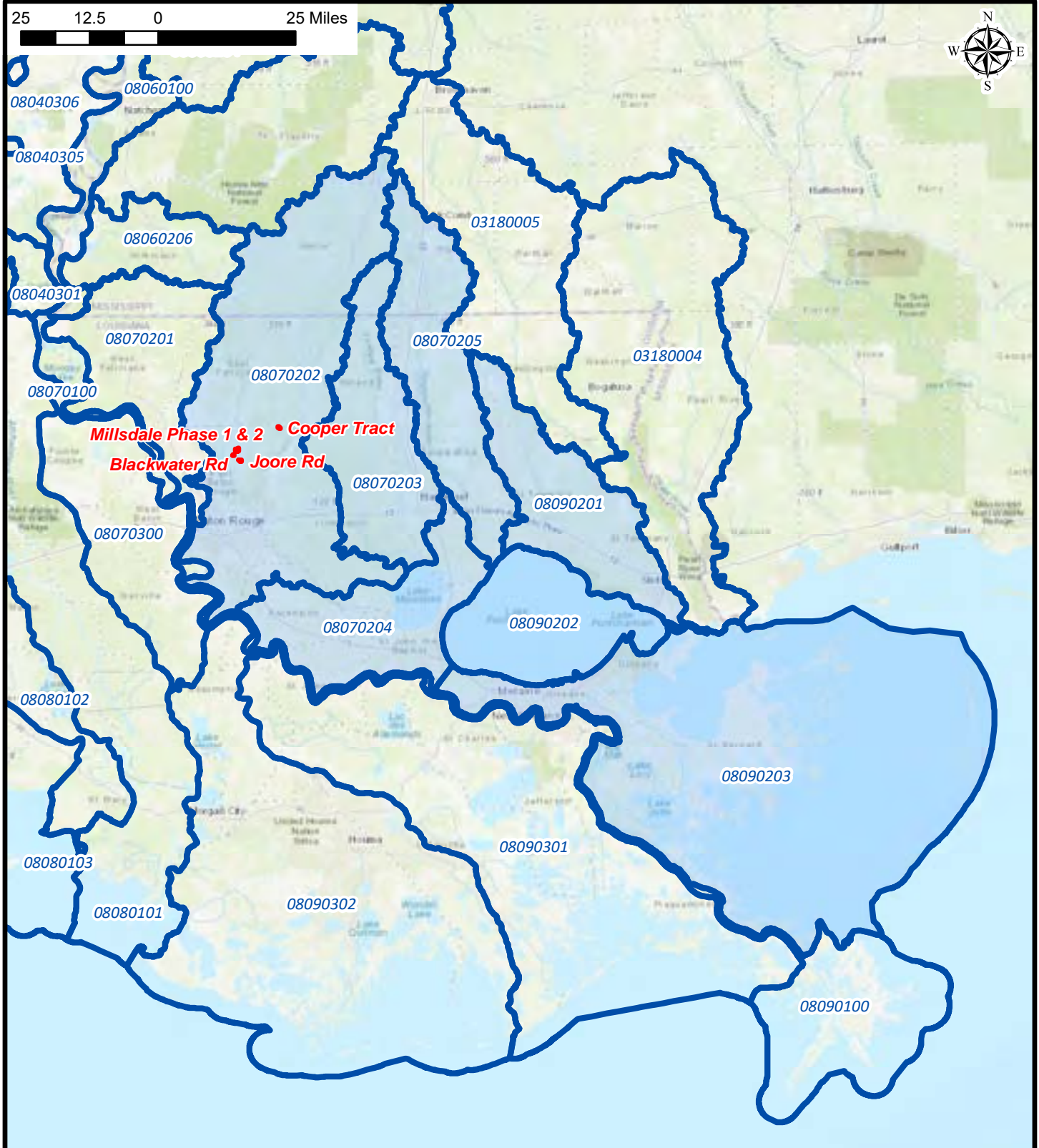
Date: 06-02-20

Figure

**6d**



Date: 10/13/2020 Time: 8:38:41 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Umbrella Mitigation Bank\Map\XPS\Figure 7\_Service Area Map\_Upper Comite Flats UMB\_Prospetus Report.mxd



**Legend**

- Service Area
- Property Boundary

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Upper Comite Flats  
 Umbrella Mitigation Bank**  
 East Baton Rouge Parish, Louisiana

**Service Area  
 Map**

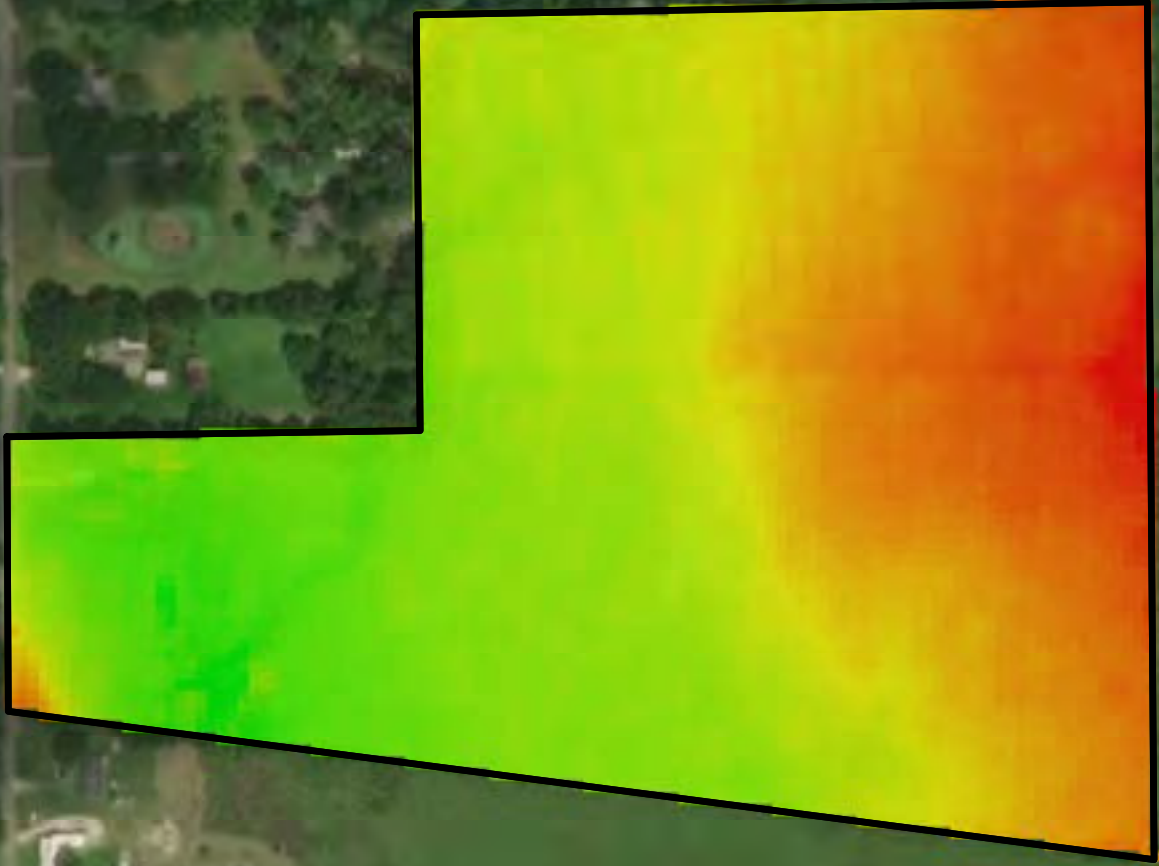
Scale: 1" = 25 miles

Date: 10-13-20

Figure  
7

Date: 6/3/2020 Time: 1:57:20 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXDs\Blackwater Rd Property\Prospectus Report.mxd

300 150 0 300 Feet



**Legend**

Project Boundary (40.0 Ac)

**LIDAR Elevation**

91 ft

83 ft

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Blackwater Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6323, Long: -91.0662  
 T5S-R1E, Section 12  
 East Baton Rouge Parish, Louisiana

**LIDAR Map**

Scale: 1" = 300 feet

Date: 06-03-20

Figure


**8a**



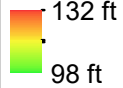
400 200 0 400 Feet



**Legend**

 Project Boundary (59.5 Ac)

**LIDAR Elevation**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Date: 11/7/2020 Time: 2:08:09 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Cooper Tract\MXD\Figure 8b\_LIDAR Map\_Cooper Tract.mxd

  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Cooper Tract**  
 Lat: 30.7048, Long: -90.9267  
 T4S-R3E, Section 17  
 East Baton Rouge Parish, Louisiana

**LIDAR Map**  
 Scale: 1" = 400 feet  
 Date: 11-02-20

Figure  
**8b**

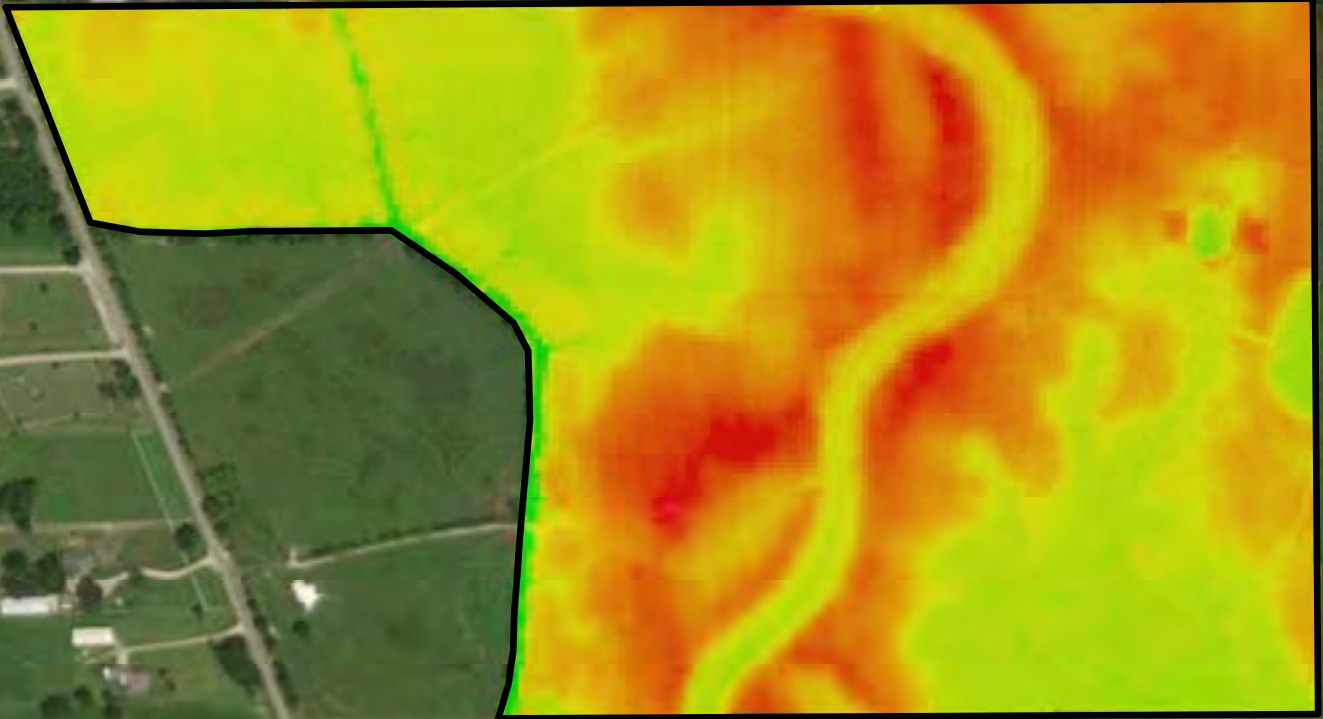
500 250 0 500 Feet



er Bayou

Hub Bayou Hub Bayou

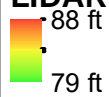
Beaver Bayou



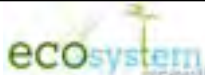
**Legend**

Project Boundary (106.1 Ac)

**LIDAR Elevation**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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Baton Rouge, LA 70816  
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cell: 504 577-5741

**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
Lat: 30.6174, Long: -91.0543  
T5S-R2E, Section 18  
East Baton Rouge Parish, Louisiana

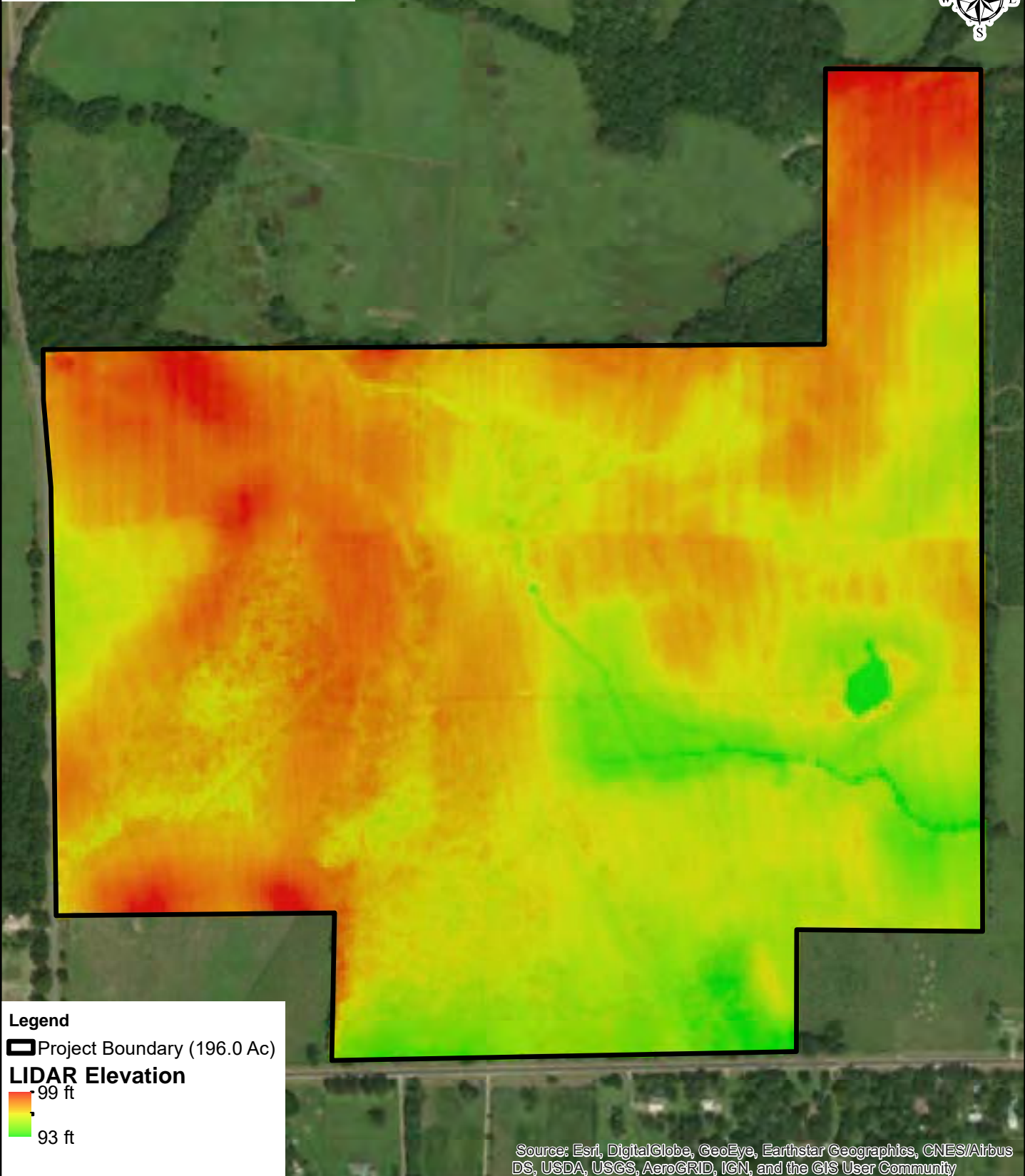
**LIDAR Map**  
Scale: 1" = 500 feet  
Date: 06-01-20

Figure  
**8c**



Date: 6/1/2020 Time: 12:45:15 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Mitigation Bank\MXD's\_Millsdale Rd Property\MXD's\_Prospectus Report\_Millsdale Rd Property\Figure 4\_LIDAR Map\_Millsdale Rd Property\_Prospectus Report\_copy.mxd

500 250 0 500 Feet



**Legend**

Project Boundary (196.0 Ac)

**LIDAR Elevation**

99 ft

93 ft

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Milldale Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6458, Long: -91.0555  
 T4S-R2E-Section 31, T5S-R1E-Section 1, T5S-R2E-Section 6  
 East Baton Rouge Parish, Louisiana

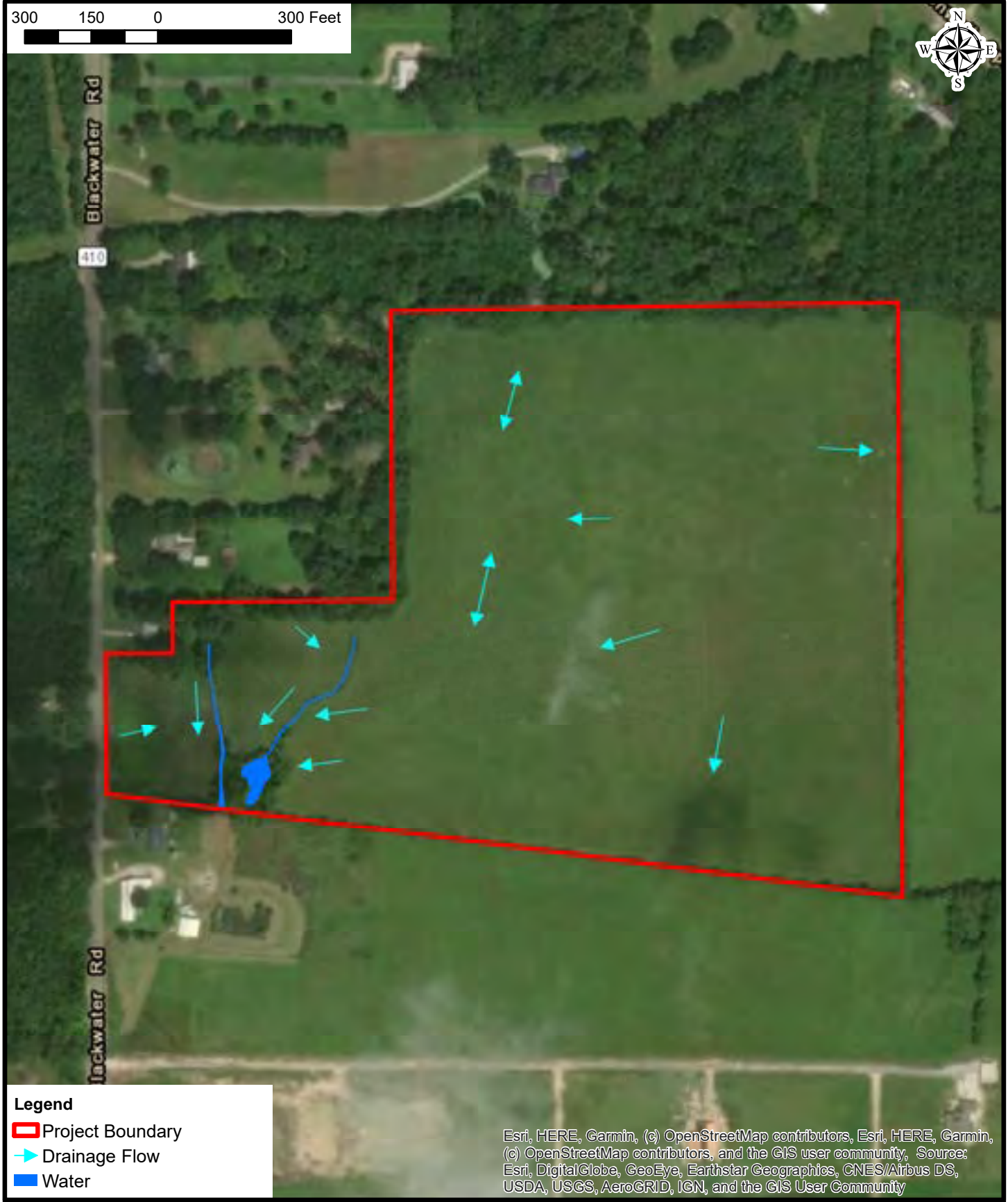
**LIDAR Map**

Scale: 1" = 500 feet

Date: 06-01-20

Figure

**8d**



**Legend**

- ▭ Project Boundary
- ➔ Drainage Flow
- ▭ Water

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**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Blackwater Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6323, Long: -91.0662  
 T5S-R1E, Section 12  
 East Baton Rouge Parish, Louisiana

**Current Drainage Map**

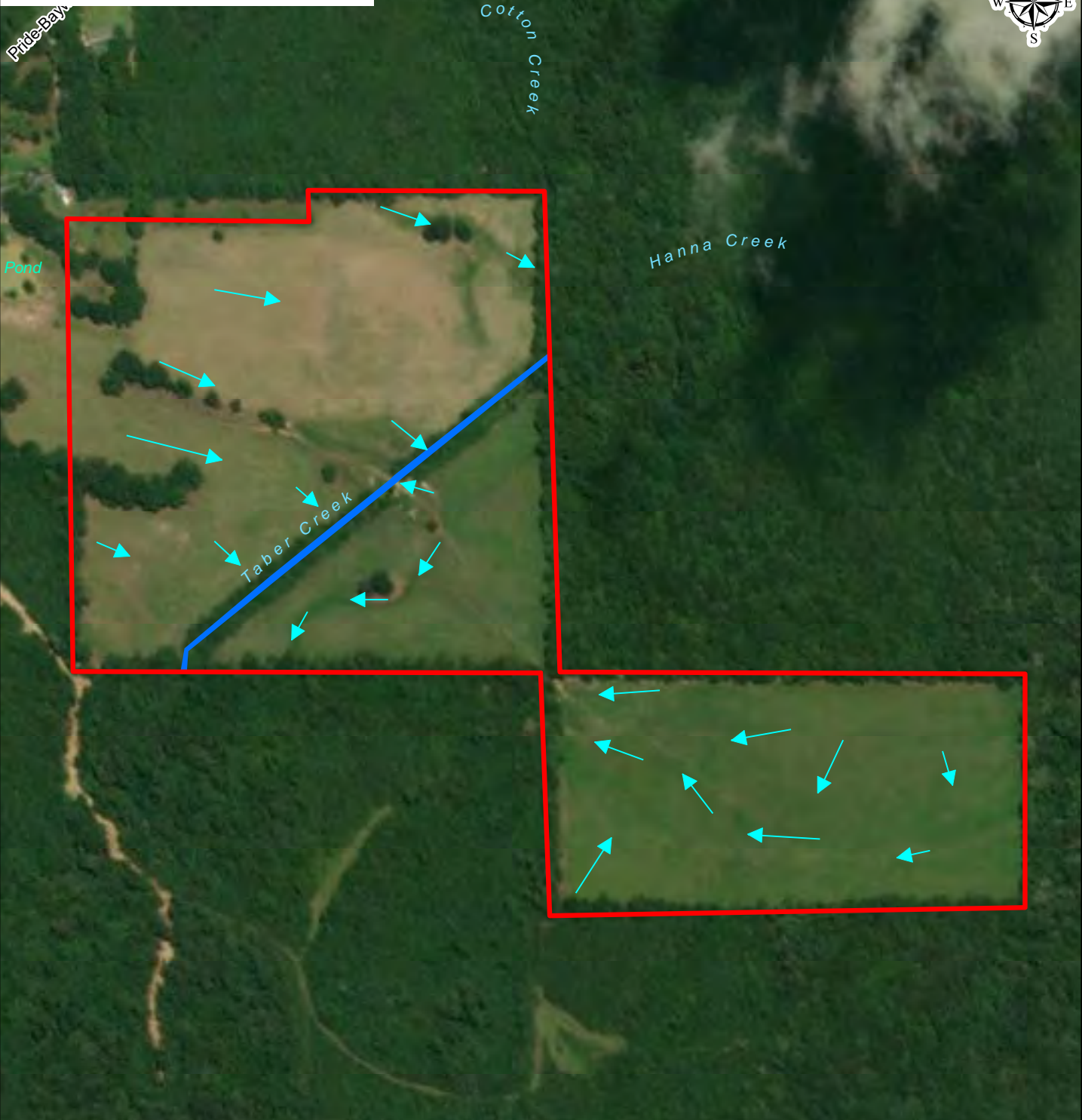
Scale: 1" = 300 feet

Date: 02-10-21

Figure  
9a



400 200 0 400 Feet



**Legend**

- Project Boundary
- ➔ Drainage Flow
- Water

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Date: 2/10/2021 Time: 3:45:19 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Cooper Tract\MXD\Figure 9a-d\_Current Drainage Map\_Cooper Tract.mxd

**ecosystem**  
RENEWAL LLC

4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Cooper Tract**

Lat: 30.7048, Long: -90.9267  
T4S-R3E, Section 17  
East Baton Rouge Parish, Louisiana

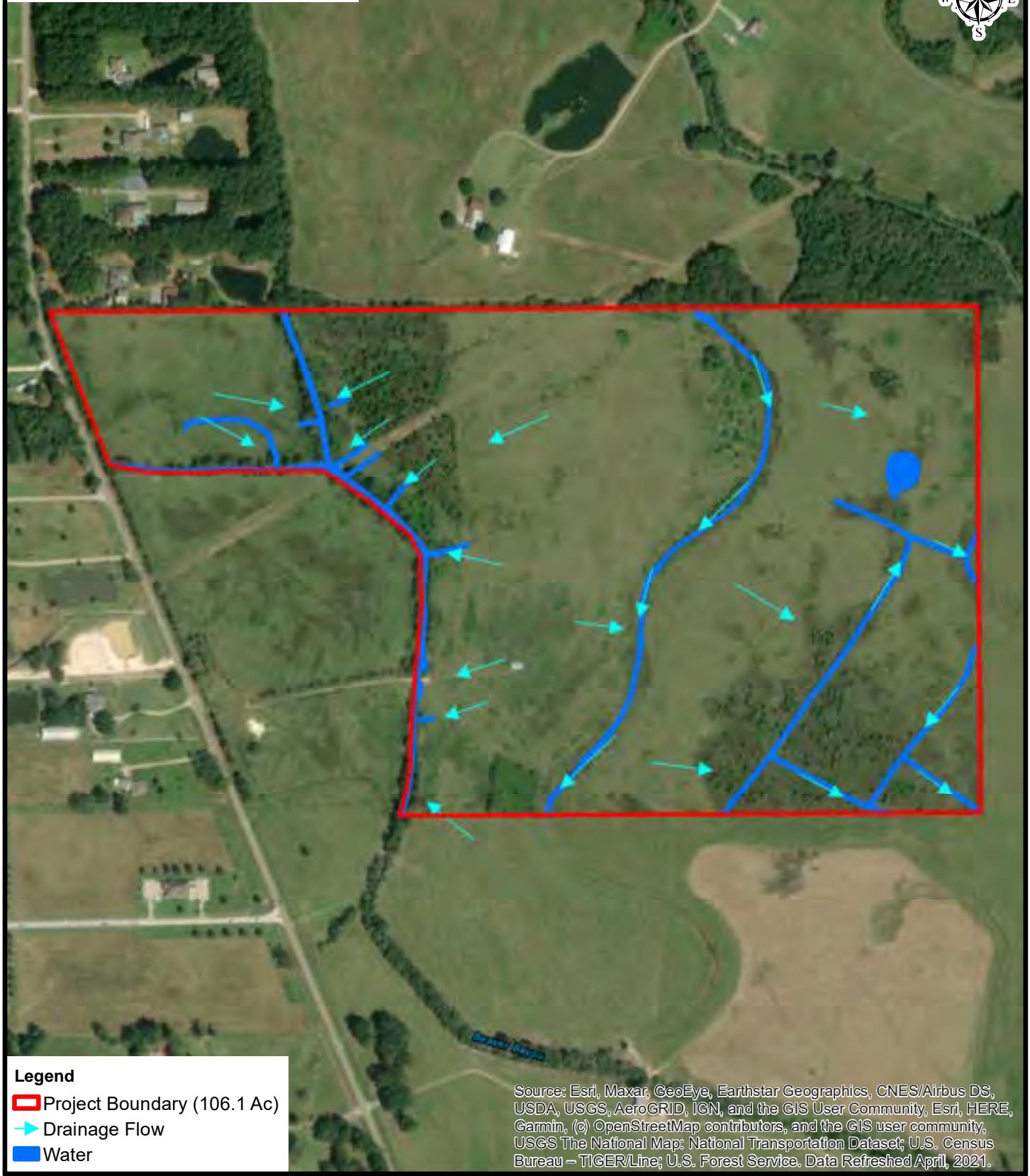
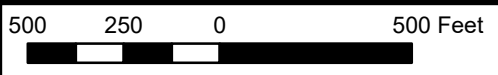
**Current Drainage Map**

Scale: 1" = 400 feet

Date: 02-10-21

Figure  
**9b**

Date: 4/19/2021 Time: 1:24:04 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Umbrella Mitigation Bank\MXDs\MXDs\_Joor Rd Property\Prospectus Report\_Joor Rd Property\Figure 9a-d\_Current Drainage Map\_Joor Rd Property\_PR.mxd



**Legend**

- Project Boundary (106.1 Ac)
- ➔ Drainage Flow
- Water

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, USGS The National Map: National Transportation Dataset; U.S. Census Bureau – TIGER/Line; U.S. Forest Service. Data Refreshed April, 2021.

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

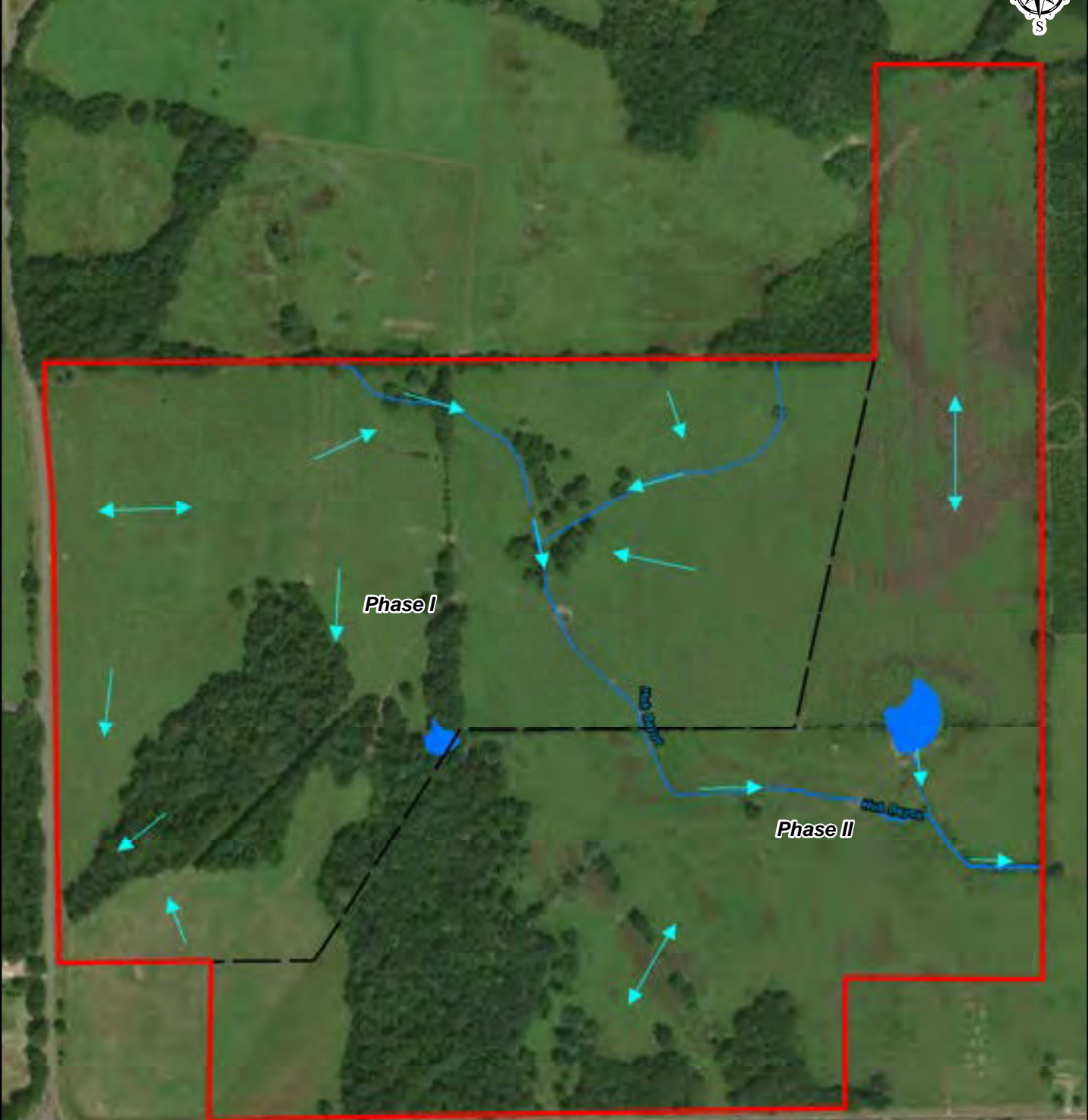
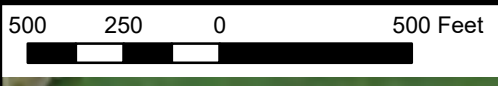
**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6174, Long: -91.0543  
 T5S-R2E, Section 18  
 East Baton Rouge Parish, Louisiana

**Current Drainage Map**

Scale:	1" = 500 feet
Date:	04-19-21

Figure  
9c





**Legend**

- ▭ Project Boundary
- ➔ Drainage Flow
- Water

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Milldale Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6458, Long: -91.0555  
 T4S-R2E-Section 31, T5S-R1E-Section 1, T5S-R2E-Section 6  
 East Baton Rouge Parish, Louisiana

**Current Drainage Map**

Scale: 1" = 500 feet

Date: 02-10-21

Figure  
9d

300 150 0 300 Feet






Blackwater Rd

410

Blackwater Rd



**Legend**

-  Project Boundary
-  Drainage Flow
-  Backfill

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Blackwater Rd Property  
 Upper Comite Flats Mitigation Bank**

Lat: 30.6323, Long: -91.0662  
 T5S-R1E, Section 12  
 East Baton Rouge Parish, Louisiana

**Proposed  
 Hydrologic  
 Map**

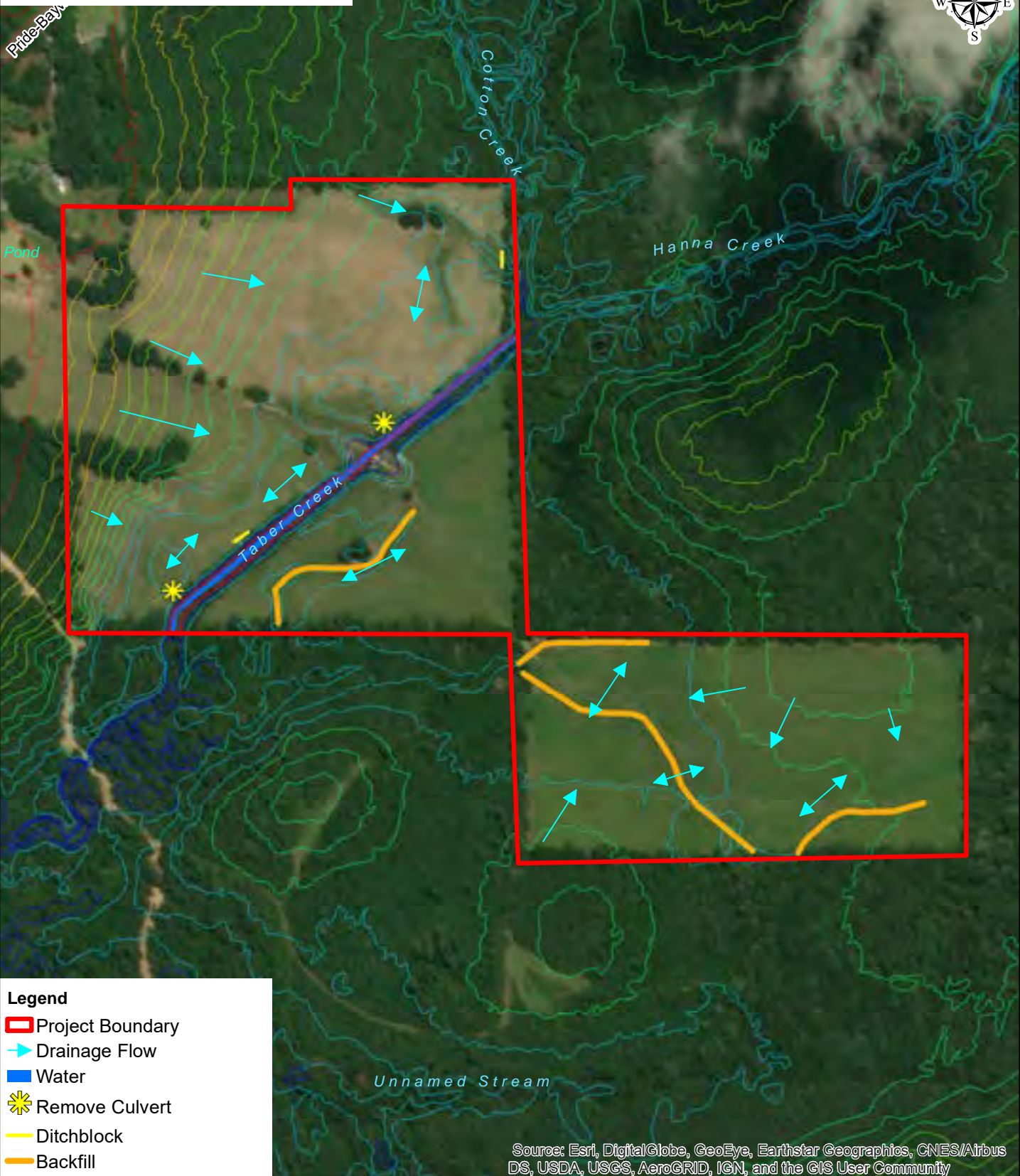
Scale: 1" = 300 feet  
 Date: 04-19-21

Figure

**10a**



400 200 0 400 Feet



**Legend**

- Project Boundary
- Drainage Flow
- Water
- Remove Culvert
- Ditchblock
- Backfill

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Date: 2/10/2021 Time: 3:44:52 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Cooper Tract\MXDs\Figure 10a-d\_Proposed Hydrologic Map\_Cooper Tract.mxd

**ecosystem**  
RENEWAL

4520 S. Sherwood Forest Blvd, #104-241  
Baton Rouge, LA 70816  
office: 225 928-5678  
cell: 504 577-5741

**Cooper Tract**

Lat: 30.7048, Long: -90.9267  
T4S-R3E, Section 17  
East Baton Rouge Parish, Louisiana

**Proposed  
Hydrologic  
Map**

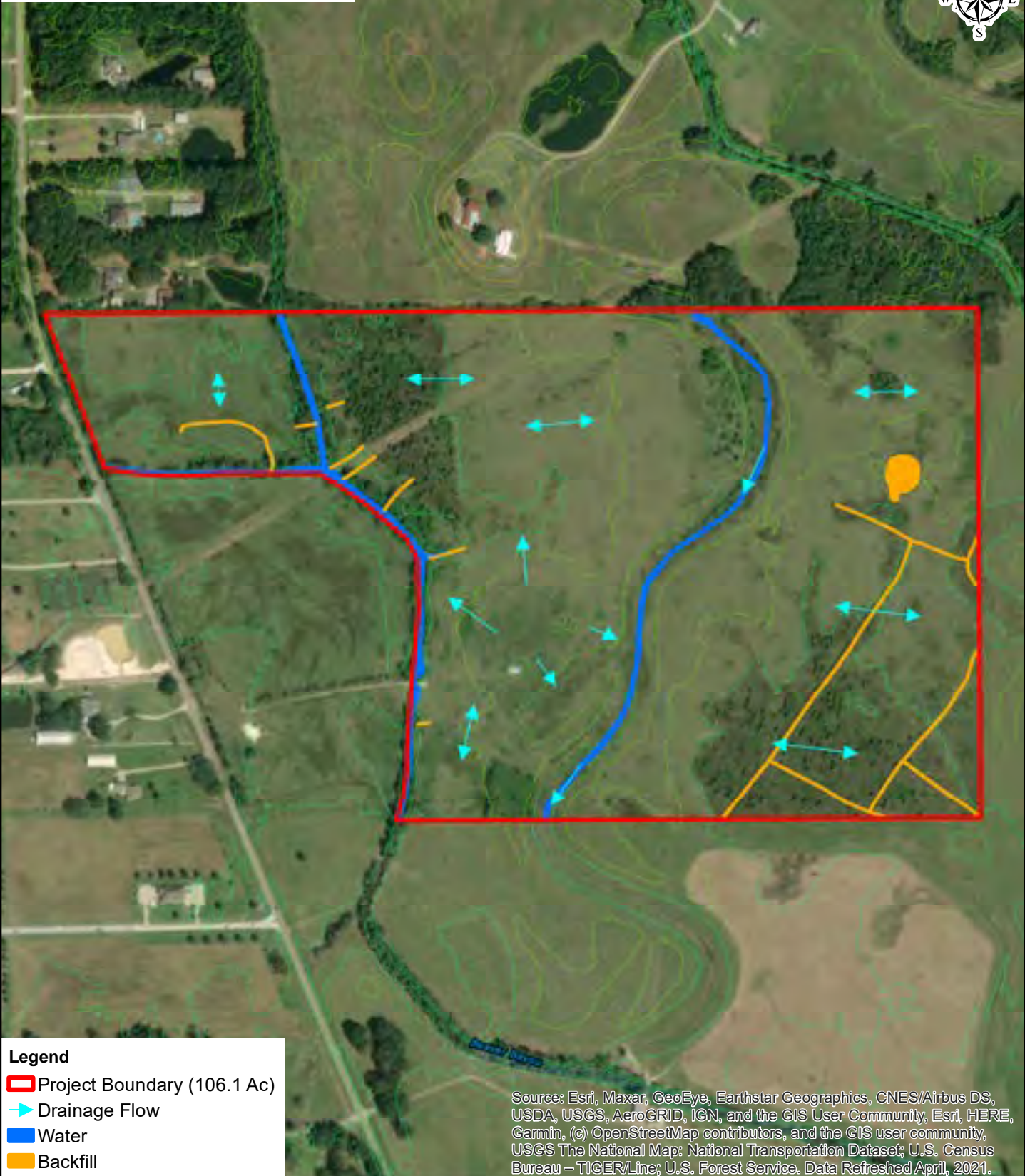
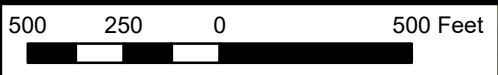
Scale: 1" = 400 feet

Date: 02-10-21

Figure  
**10b**



Date: 4/19/2021 Time: 1:36:31 PM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Umbrella Mitigation Bank\MXD\MXDs\Joor Rd Property\Prospectus Report\_Joor Rd Property\Map\_Joor Rd Property\_PR.mxd



**Legend**

- Project Boundary (106.1 Ac)
- ↔ Drainage Flow
- Water
- Backfill

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, USGS The National Map: National Transportation Dataset; U.S. Census Bureau – TIGER/Line; U.S. Forest Service. Data Refreshed April, 2021.

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6174, Long: -91.0543  
 T5S-R2E, Section 18  
 East Baton Rouge Parish, Louisiana

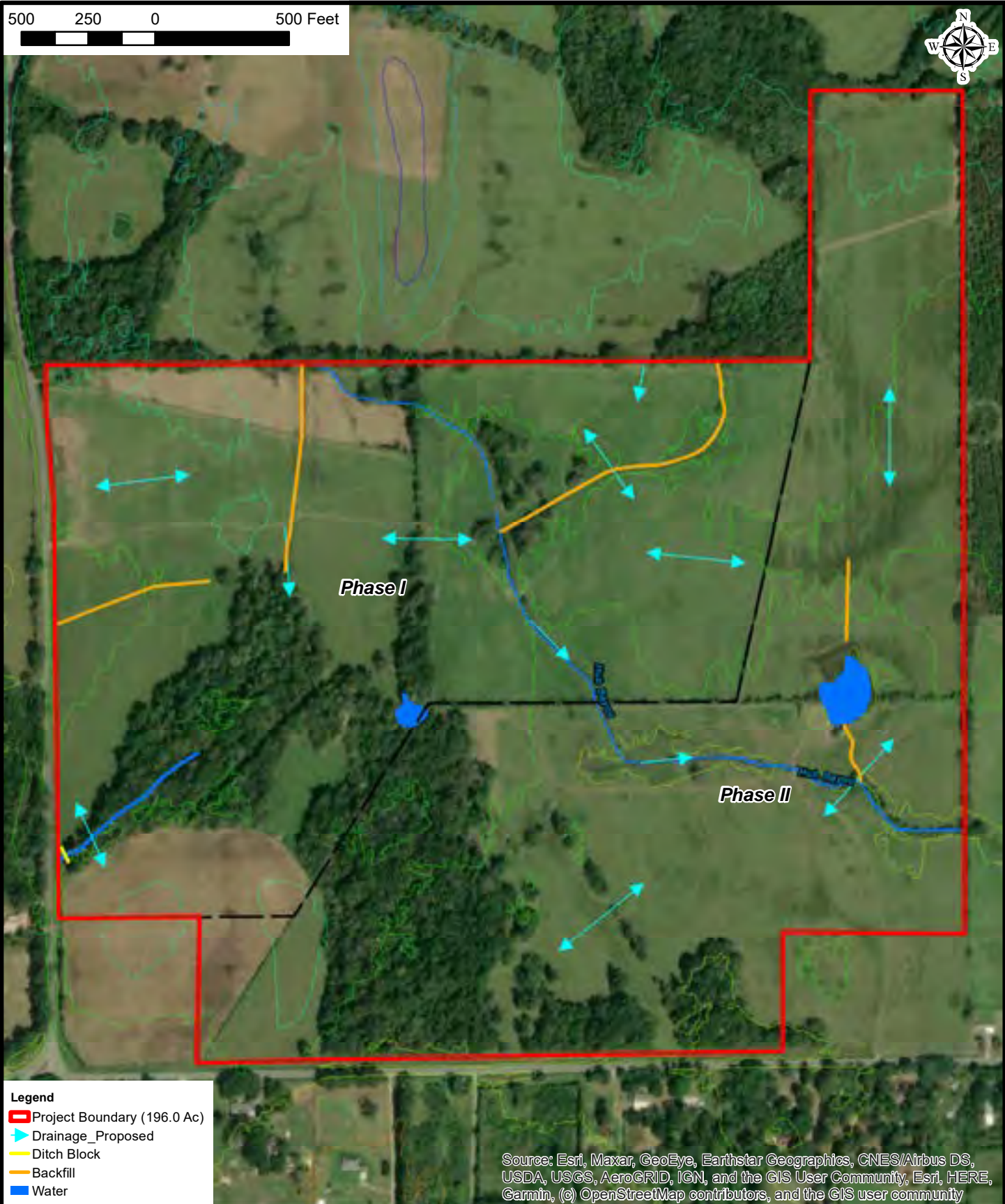
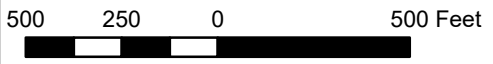
**Proposed Hydrologic Map**

Scale: 1" = 500 feet

Date: 04-19-21

Figure  
10c





- Legend**
- Project Boundary (196.0 Ac)
  - Drainage\_Proposed
  - Ditch Block
  - Backfill
  - Water

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

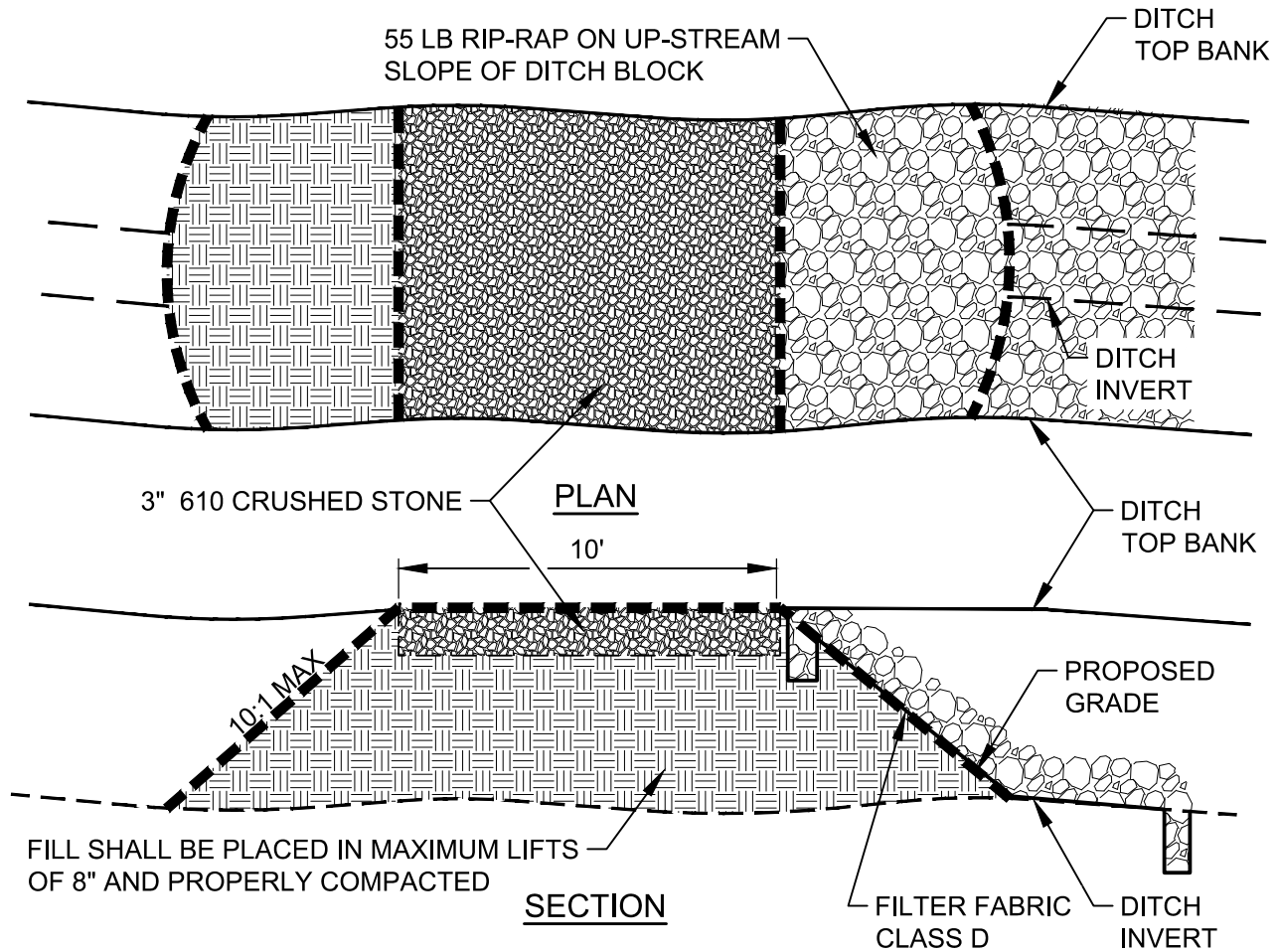
**Millsdale Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6458, Long: -91.0555  
 T4S-R2E-Section 31, T5S-R1E-Section 1, T5S-R2E-Section 6  
 East Baton Rouge Parish, Louisiana

**Proposed  
 Hydrologic  
 Map**

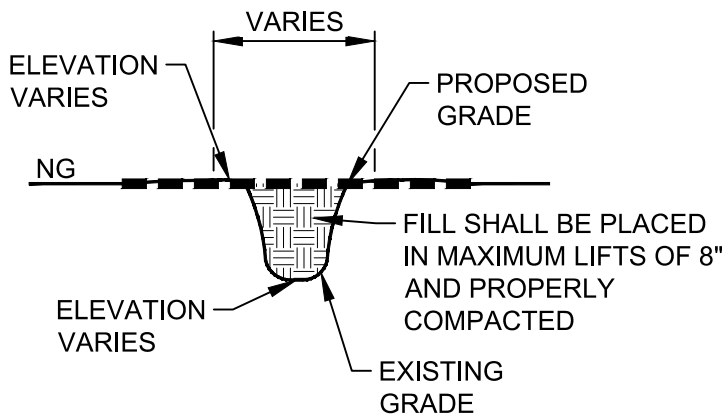
Scale: 1" = 500 feet  
 Date: 04-21-21

Figure  
10d

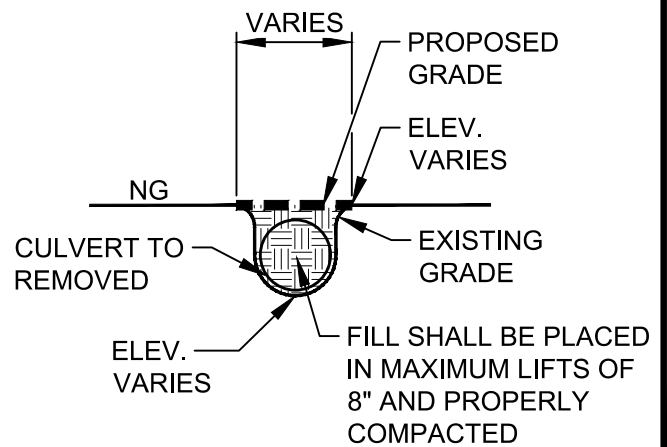
M:\11792 - ECOSYSTEM RENEWAL - SURVEYING SERVICES - ZACHARY WETLAND MITIGATION BANKS\DESIGN\SHEETS\DESIGN-COMITE BASIN UMBRELLA MITIGATION BANK.DWG



**DITCH BLOCK  
TYPICAL SECTION 1-1**



**FILL IN DITCH  
TYPICAL SECTION 2-2**



**CULVERT REMOVAL  
TYPICAL SECTION 3-3**

**PRELIMINARY:**

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES, OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT.  
THOMAS C. DAVID, JR., PLS # 4539  
PAN AMERICAN ENGINEERS, LLC

PAN AMERICAN ENGINEERS, LLC  
P.O. BOX 8599  
1717 JACKSON STREET  
ALEXANDRIA, LA 71306  
(318) 473-2100



**UPPER COMITE FLATS  
UMBRELLA  
MITIGATION BANK**

East Baton Rouge Parish, Louisiana

UPPER COMITE FLATS  
UMBRELLA  
MITIGATION BANK

Scale: NTS

Date: 2/2021

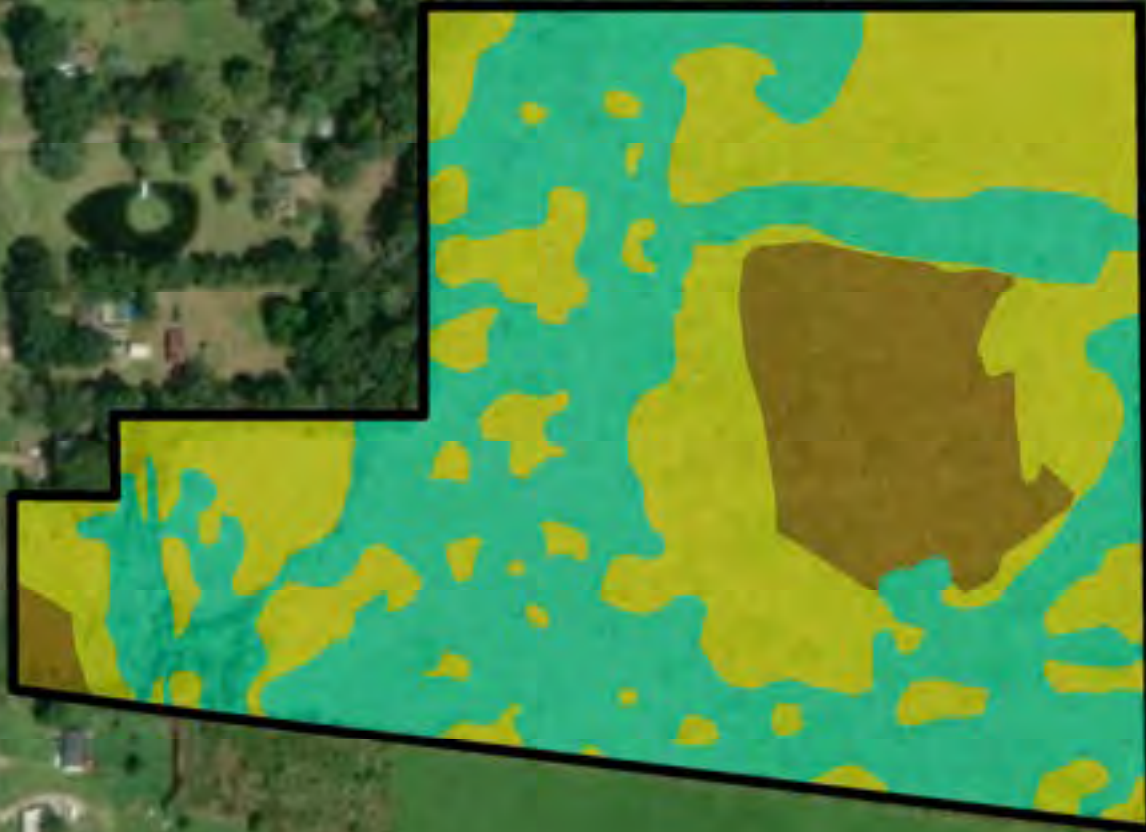
Figure No.

**1**







300 150 0 300 Feet

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Legend**

-  Project Boundary (40.0 Ac)
-  Re-establishment (16.4 Ac)
-  Rehabilitation (18.7 Ac)
-  Upland Inclusion (4.9 Ac)

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Blackwater Site**  
**Upper Comite Flats Mitigation Bank**

Lat: 30.6323, Long: -91.0662  
 T5S-R1E, Section 12  
 East Baton Rouge Parish, Louisiana

<b>Mitigation Types Map</b>	
Scale:	1" = 300 feet
Date:	04-21-21







Figure

**12a**

400 200 0 400 Feet



**Legend**

-  Project Boundary (59.5 Ac)
-  Enhancement (1.5 Ac)
-  Re-Establishment (24.7 Ac)
-  Upland Inclusion (20.9 Ac)
-  Open Water (0.7 Ac)
-  Rehabilitation (11.7 Ac)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Cooper Tract**

Lat: 30.7048, Long: -90.9267  
 T4S-R3E, Section 17  
 East Baton Rouge Parish, Louisiana

**Proposed Mitigation Types Map**

Scale: 1" = 400 feet

Date: 02-05-21

Figure

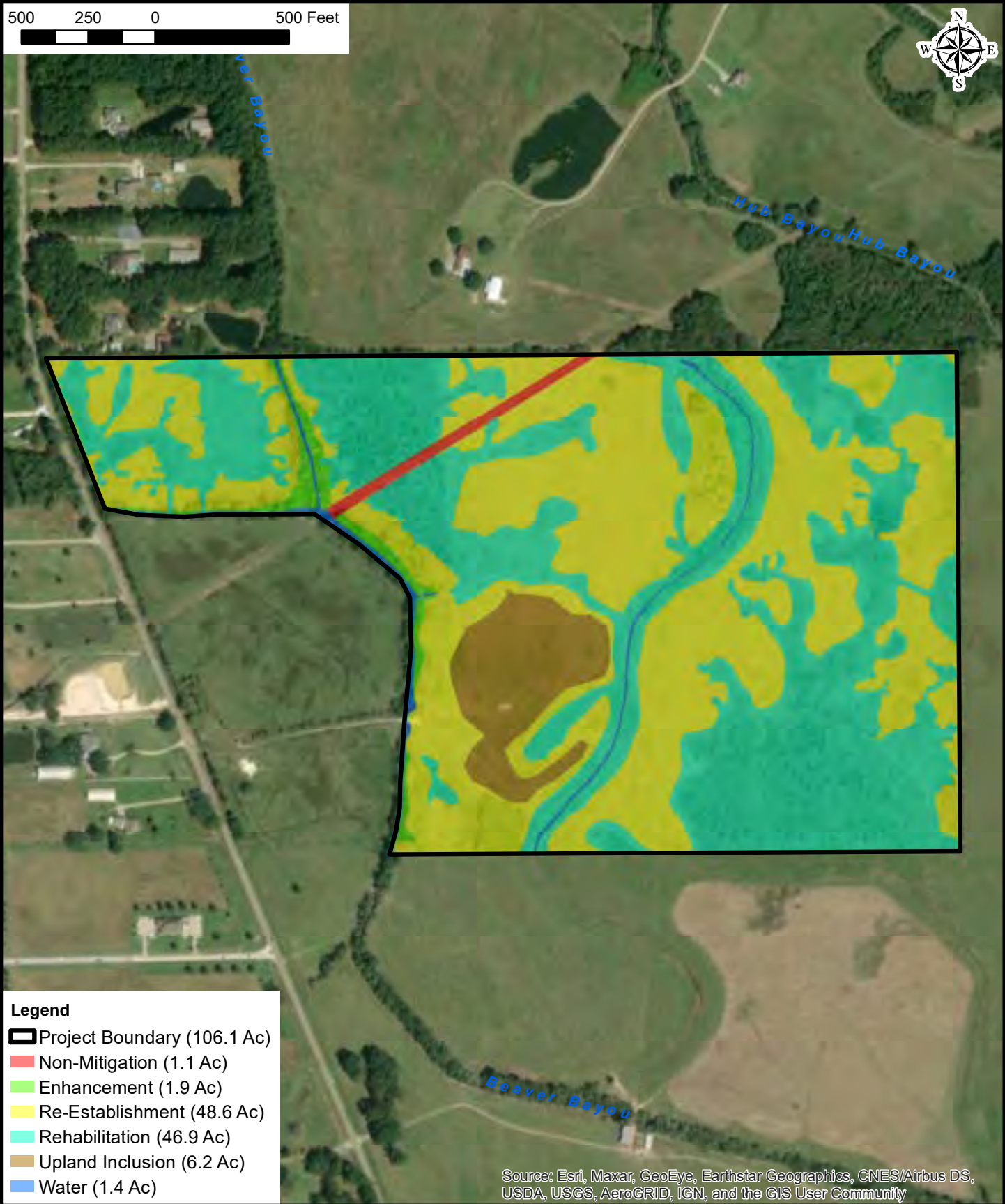
**12b**



500 250 0 500 Feet



Date: 4/22/2021 Time: 10:06:50 AM Document Path: S:\Projects\EcoSystem Renewal LLC\Upper Comite Flats Umbrella Mitigation Bank\MXDs\Joore Rd Property\Prospectus Report\Joore Rd Property\Map\_Joor Rd Property\_PR.mxd



**Legend**

- Project Boundary (106.1 Ac)
- Non-Mitigation (1.1 Ac)
- Enhancement (1.9 Ac)
- Re-Establishment (48.6 Ac)
- Rehabilitation (46.9 Ac)
- Upland Inclusion (6.2 Ac)
- Water (1.4 Ac)

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Joor Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6174, Long: -91.0543  
 T5S-R2E, Section 18  
 East Baton Rouge Parish, Louisiana

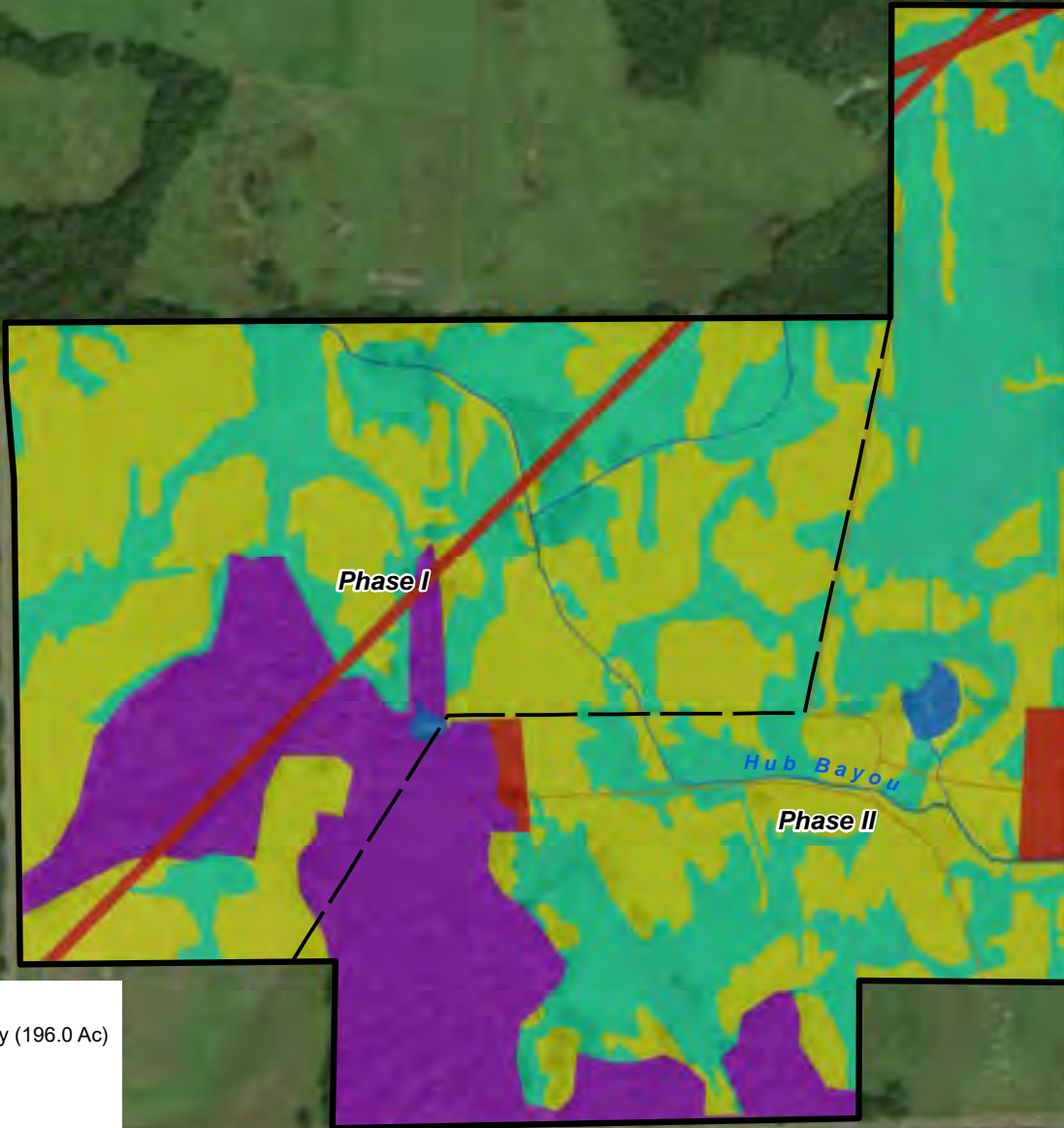
**Mitigation  
Types  
Map**

Scale: 1" = 500 feet

Date: 04-22-21

Figure  
**12c**

600 300 0 600 Feet



**Legend**

- Project Boundary (196.0 Ac)
- Non-Mitigation
  - 2.7 Ac - Phase I
  - 3.4 Ac - Phase II
- Trails
  - 0.0 Ac - Phase I
  - 0.8 Ac - Phase II
- Preservation
  - 15.9 Ac - Phase I
  - 20.2 Ac - Phase II
- Rehabilitation
  - 30.6 Ac - Phase I
  - 41.9 Ac - Phase II
- Re-Establishment
  - 49.4 Ac - Phase I
  - 29.2 Ac - Phase II
- Water
  - 0.7 Ac - Phase I
  - 1.1 Ac - Phase II

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**ecosystem**  
 4520 S. Sherwood Forest Blvd, #104-241  
 Baton Rouge, LA 70816  
 office: 225 928-5678  
 cell: 504 577-5741

**Millsdale Rd Property**  
**Upper Comite Flats Mitigation Bank**  
 Lat: 30.6458, Long: -91.0555  
 T4S-R2E-Section 31, T5S-R1E-Section 1, T5S-R2E-Section 6  
 East Baton Rouge Parish, Louisiana

**Mitigation  
Types  
Map**

Scale: 1" = 600 feet

Date: 02-17-21

Figure  
**12d**

# **ATTACHMENT A**

## **Approved Preliminary Jurisdictional Determinations**



# US Army Corps of Engineers Preliminary Jurisdictional Determination



**Inland Property, L.L.C.**  
 Lot A-1 - Womack Blackwater Road Property  
**Jurisdictional Wetlands Map**  
 East Baton Rouge Parish, Louisiana

**D & S  
 ENVIRONMENTAL SERVICES, INC.**

Project No.: 25-2019-JDM Date: date Figure No.: 2

MAP APPROVED BY:  
 David C. Templet, Jr., PWS, RF  
 President/Professional Wetland  
 Scientist/Registered Forester

D&S Environmental Services, Inc.  
 P.O. Box 510  
 French Settlement, Louisiana 70733-0510  
 Business: 225-698-3552  
 Mobile: 225-413-4317

**USACE**  
 IH, 04-May-2020

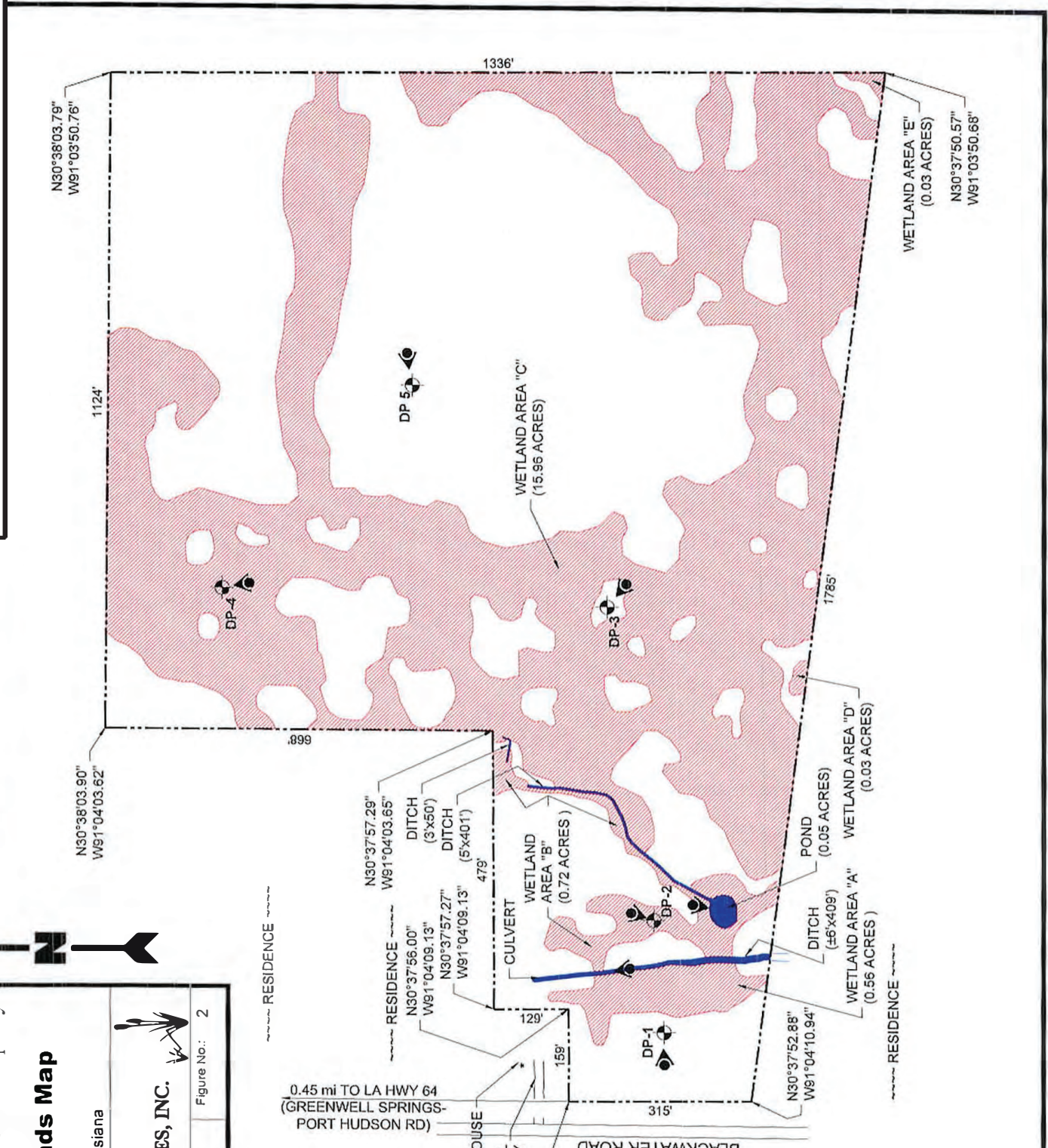
**BOTANIST** Glenn Dobson  
**FOR** David C. Templet Jr.

**ACCOUNT #** MVN-2020-00324-5D

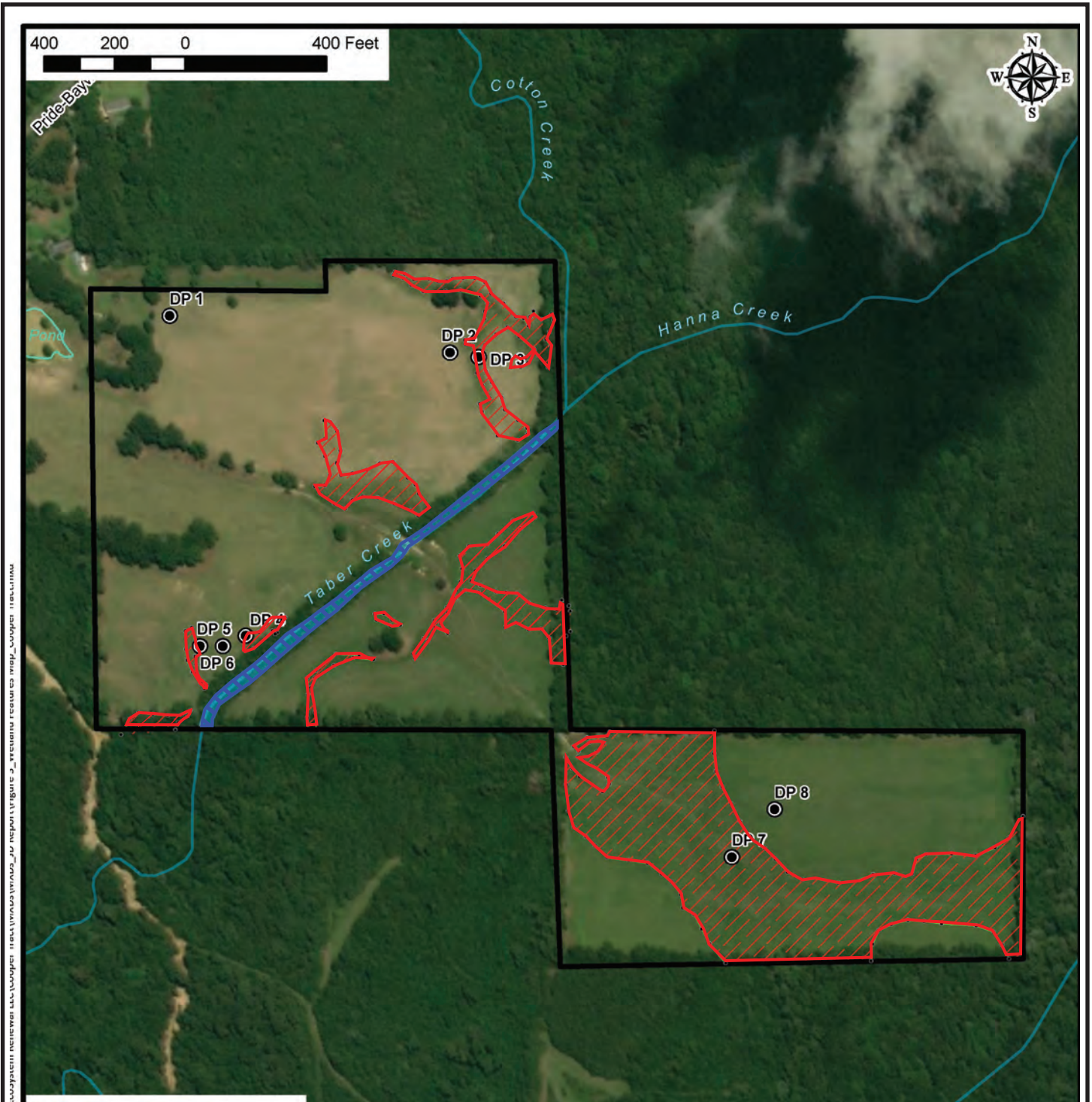
**Wetlands**

**Non-wetland waters**

**Review Area**







**USACE** **PRELIMINARY**  
 JURISDICTIONAL DETERMINATION

**IH:** JUNE 23, 2020      **FSV:** JUNE 17, 2020

**BOTANIST:** CHRISTINE THIBODEAUX

**FOR:** JAMES, JACOB OBO UPPER COMITE FLATS, LLC.

**#MVN-2020-00518-ST**

**PROJECT SITE**

**WETLAND**

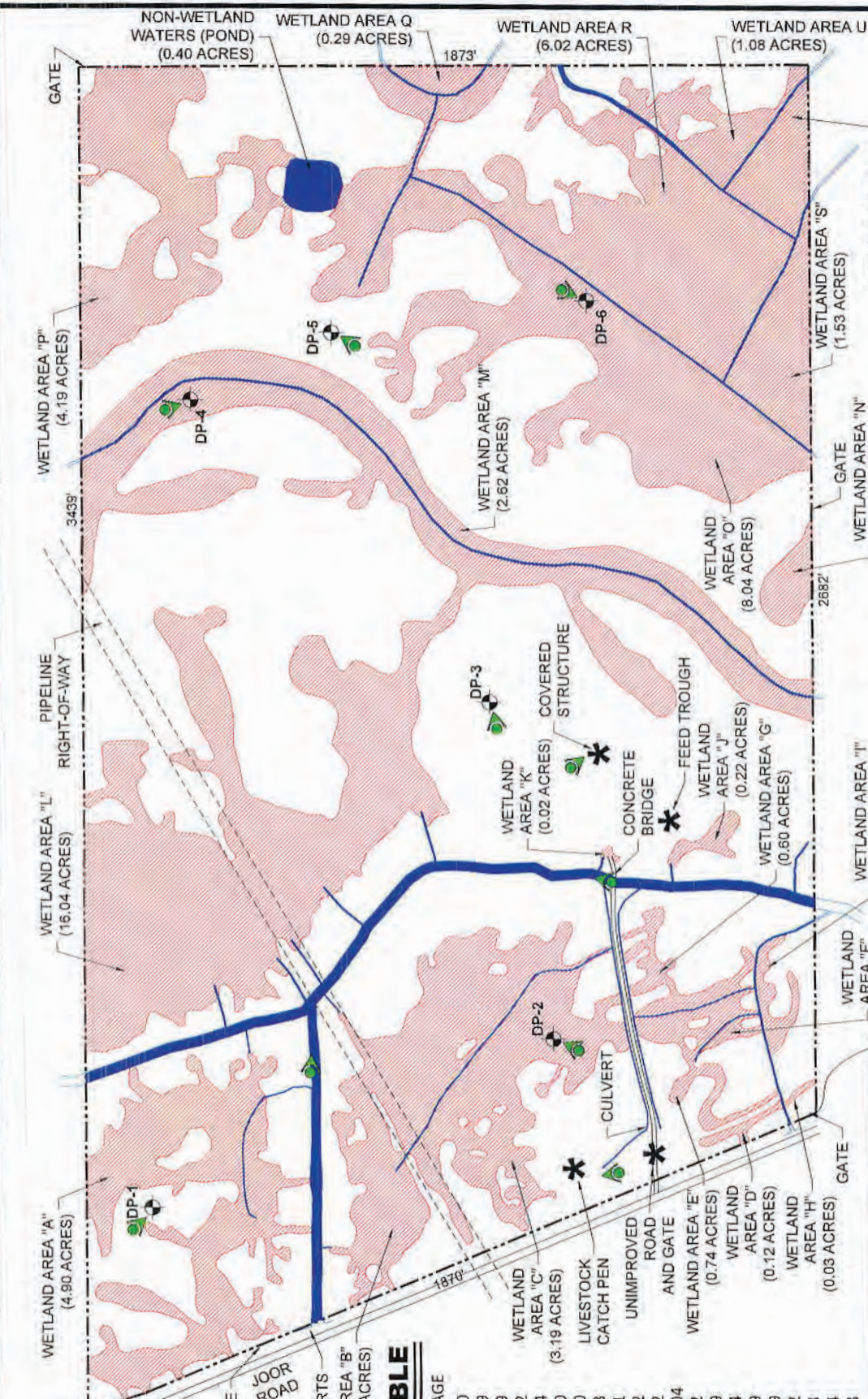
**NON WETLAND WATERS**

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Upper Tract 3, Long: -90.9267 E, Section 17 ge Parish, Louisiana	<b>Jurisdictional Wetlands Map</b>	<b>Figure 3</b>
	Scale: 1" = 400 feet	
	Date: 06-22-20	



0.58 mi TO  
LA HWY 64  
(GREENWELL  
SPRINGS/  
PORT HUDSON RD)



**ACREAGE TABLE**

AREA	ACREAGE
WETLAND AREA A	4.90
WETLAND AREA B	4.49
WETLAND AREA C	3.19
WETLAND AREA D	0.12
WETLAND AREA E	0.74
WETLAND AREA F	0.10
WETLAND AREA G	0.60
WETLAND AREA H	0.03
WETLAND AREA I	0.31
WETLAND AREA J	0.22
WETLAND AREA K	0.02
WETLAND AREA L	16.04
WETLAND AREA M	2.62
WETLAND AREA N	0.49
WETLAND AREA O	8.04
WETLAND AREA P	4.19
WETLAND AREA Q	0.29
WETLAND AREA R	6.02
WETLAND AREA S	1.53
WETLAND AREA T	1.04
WETLAND AREA U	1.08

**Inland Property, L.L.C.**

Lot A - Womack Joor Road Property

**Overall**

**Jurisdictional Wetlands Map**

East Baton Rouge Parish, Louisiana

**D & S**  
**ENVIRONMENTAL SERVICES, INC.**



Project No.: 24-2019-JDM

Date: 12-12-2019

Figure No.: 2

U.S. ARMY CORPS OF ENGINEERS

**PRELIMINARY**

JURISDICTIONAL DETERMINATION

70733-0510  
Business: 225-698-3552  
Mobile: 225-413-4317

Horizontal Scale: 1" = 400'



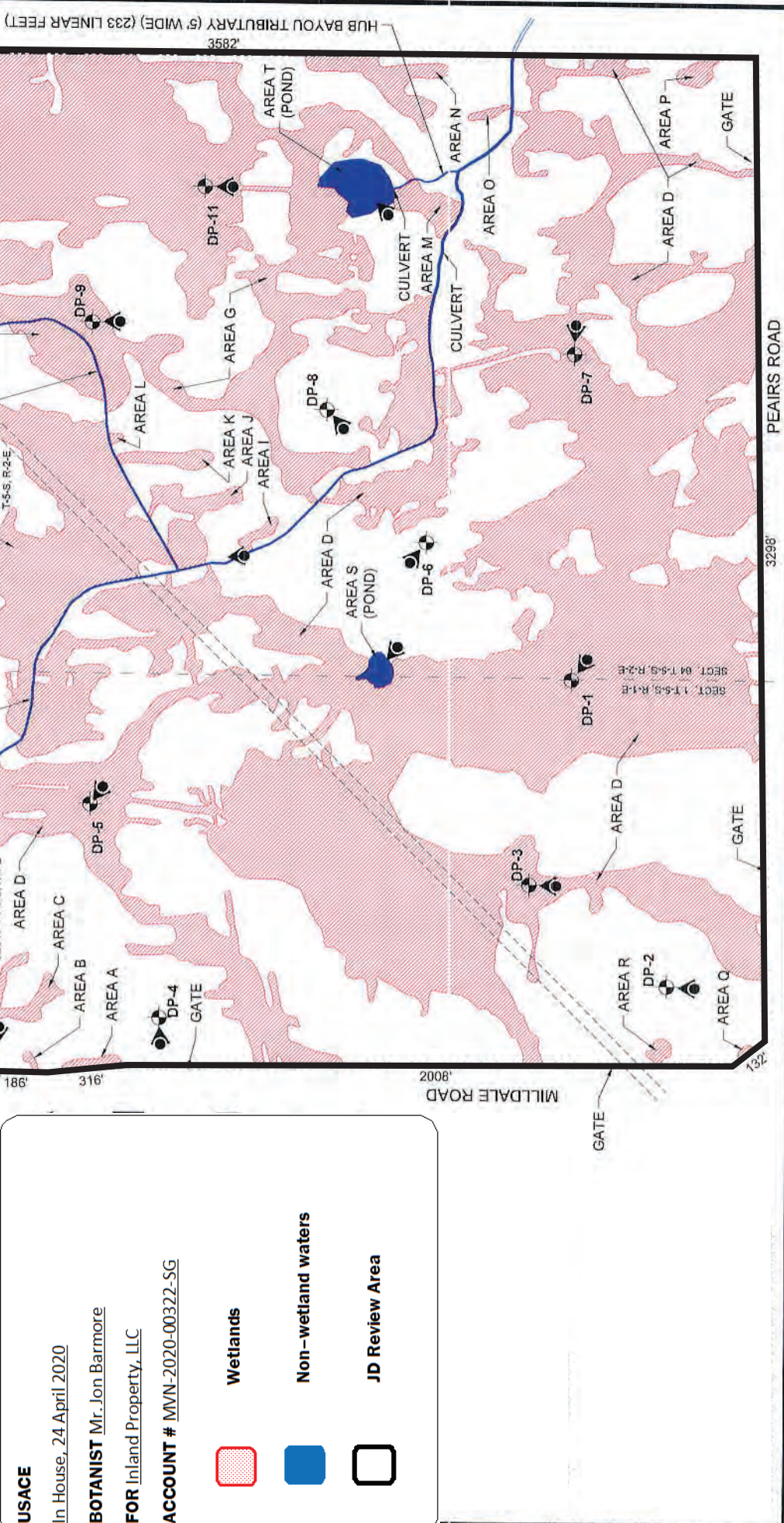
**USACE**  
FSV / (H) Date: 4/14/2020  
Botanist: **OBERLIES**  
Requestor: **TEMPLET**  
# **MVN-2020-00323-SY**

- JD REVIEW AREA  
 - WETLAND  
 - NON-WETLAND WATERS




waiver granted  
Section  
P Data Plot  
Data Plots  
Picture Location & Direction



# US Army Corps of Engineers Preliminary Jurisdictional Determination



**USACE**  
 In House, 24 April 2020  
**BOTANIST** Mr. Jon Barmore  
 FOR Inland Property, LLC  
**ACCOUNT #** MVN-2020-00322-SG

	<b>Wetlands</b>
	<b>Non-wetland waters</b>
	<b>JD Review Area</b>

# **ATTACHMENT B**

## **Photographic Documentation**



**Blackwater Tract:**



Photo 1: Overview of site from center point, facing west.



Photo 2: Overview of site from center point, facing east.



### Cooper Site



Photo 3: Overview of site from center, facing north.



Photo 4: Overview of site from center, facing southeast.





Photo 5: Overview of south field area of site, facing southeast.

### Joor Site



Photo 6: Overview of site and bayou, facing north.





Photo 7: Overview of site from north border, facing southeast.

**Milldale Phase 1 and Phase 2 sites**



Photo 8: Overview of site from center of Phase 2, facing north.





Photo 9: Overview of site from center of Phase 2, facing south.



Photo 10: Overview of site from center of Phase 2: facing west.

# **ATTACHMENT C**

## **Property Boundary Coordinates Table**

**Upper Comite Flats UMB Property Boundary Coordinates**

Site Name	Position	Latitude	Longitude	Site Name	Position	Latitude	Longitude
Blackwater	1	30.634394°	-91.064068°	Milldale Phase 1	1	30.648947°	-91.052388°
	2	30.630714°	-91.064045°		2	30.645443°	-91.053273°
	3	30.631353°	-91.069742°		3	30.645430°	-91.056883°
	4	30.632522°	-91.069731°		4	30.643270°	-91.058500°
	5	30.632567°	-91.067682°		5	30.643242°	-91.061288°
	6	30.634334°	-91.067694°		6	30.648887°	-91.061429°
Cooper	1	30.707736°	-90.926165°	Milldale Phase 2	1	30.651694°	-91.050549°
	2	30.704104°	-90.926027°		2	30.643066°	-91.050533°
	3	30.704072°	-90.921951°		3	30.643043°	-91.052698°
	4	30.702311°	-90.921944°		4	30.641850°	-91.052717°
	5	30.702265°	-90.926102°		5	30.641785°	-91.058119°
	6	30.704096°	-90.926184°		6	30.643234°	-91.058095°
	7	30.704124°	-90.930297°		7	30.643267°	-91.058487°
	8	30.707551°	-90.930332°		8	30.645433°	-91.056910°
	9	30.707554°	-90.928225°		9	30.645449°	-91.053276°
	10	30.707775°	-90.928218°		10	30.648947°	-91.052388°
Joor	1	30.619929°	-91.041239°		11	30.651706°	-91.052341°
	2	30.614817°	-91.041216°				
	3	30.614823°	-91.047974°				
	4	30.618289°	-91.048877°				
	5	30.618317°	-91.051332°				
	6	30.619886°	-91.052007°				