DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS LA 70118-3651

August 7, 2023

Regulatory Division
Special Projects and Policy Team

Project Manager:
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Application #: MVN-2023-00280-MG

PUBLIC NOTICE

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [ ] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [**X**] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344), and/or [ ] Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 408).

MAUREPAS COASTAL MITIGATION BANK IN LIVINGSTON PARISH

NAME OF APPLICANT: JMB Partnership, L.L.C., 205 Sage Glenn Lane, Lafayette, Louisiana 70508.

LOCATION OF WORK: Located in Livingston Parish, located 14.7 miles southwest of Ponchatoula, Louisiana, (lat. 30.290331, long. -90.618117), as shown within the enclosed drawings. (Hydrologic Unit Code 08090203, East Louisiana Coastal, within the Lake Pontchartrain Basin).

CHARACTER OF WORK: Mechanical removal of loblolly pine plantation, chemical treatment of invasive species, and planting of appropriate Pine-Hardwood Flatwood species to develop the Maurepas Coastal Mitigation Bank in Livingston Parish. The project will be located on a 500.0 acre tract of land located approximately 14.7 miles southwest of Ponchatoula, Louisiana and will impact approximately 66.3 acres of jurisdictional pine plantation habitat through timber management activities.

The comment period on the requested Department of the Army Permit will close **30 days** from the date of this public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit request, and must be submitted so

as to be received before or by the last day of the comment period. Letters and/or comments concerning the subject permit application must reference the Applicant's Name and the Permit Application Number and can be preferably emailed to the Corps of Engineer's project manager listed above or forwarded to the Corps of Engineers at the address above, **ATTENTION: REGULATORY DIVISION, RG, Brandon Gaspard.** Individuals or parties may also request an extension of time in which to comment on the proposed work by mail or preferably by emailing the specified project manager listed above. Any request for an extension of time to comment must be specific and substantively supportive of the requested extension and received by this office prior to the end of the initial comment period. The Branch Chief will review the request and the requester will be promptly notified of the decision to grant or deny the request. If granted, the time extension will be continuous and inclusive of the initial comment period and will not exceed a total of 30 calendar days. This public notice is also available for review online at https://go.usa.gov/xennJ

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 possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. As deemed necessary, copies of this public notice will be sent to the State Archeologist, State Historic Preservation Officer, and federally listed tribes 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. Based on the Information Planning and Consultation (IPaC) tool for Endangered Species in Louisiana, as signed on January 27, 2020, between the U.S. Army Corps of Engineers, New Orleans and the U.S. Fish and Wildlife Service, it has been determined that the project would have no effect to any listed species.

Our initial finding is that the proposed work would have no effect on any species listed as endangered by the U.S. Department of Commerce, nor affect any habitat designated as critical to the survival and recovery of any such species.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal may result in the destruction, alteration, and/or disturbance of **0.0 acres** 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 Louisiana Department of Environmental Quality before a Department of the Army permit could be issued.*

Any person may request 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, and can be preferably emailed to the USACE project manager listed above or mailed to the address listed above.

You are invited 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 Division

Enclosures

Prospectus 2.0 for the Maurepas Coastal Mitigation Bank MVN-2023-00280-MG

Livingston Parish, Louisiana

JMB Partnership, LLC

July 28, 2023

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List of Attachments

1.0 INTRODUCTION

JMB Partnership, LLC (JMB and/or Sponsor), submits this Prospectus to the U.S. Army Corps of Engineers - New Orleans District (CEMVN) and the CEMVN Mitigation Banking Interagency Review Team (IRT) in sponsorship of establishing Maurepas Coastal Mitigation Bank (MCMB and/or Bank). The Sponsor has prepared this Prospectus in accordance with 33 CFR § 332.8(d)(2). The purpose of MCMB is to compensate for unavoidable impacts to Waters of the United States, including wetlands that result from activities authorized by the Department of the Army pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act.

MCMB is currently comprised of Cattle Pasture, Managed Timber Plantation, Fresh Water Marsh, Cypress Swamp, Managed Pine Plantation, and Chinese Tallow Forest habitats. (Attachment A: Figure 15). MCMB has the potential to be restored to bottomland hardwoods (BLH), cypress swamp (CS), and freshwater marsh (FM) habitats through the implementation of re-establishment, rehabilitation, enhancement, and preservation Mitigation Types as defined in the CEMVN Louisiana Wetland Rapid Assessment Method Version 2.0 (LRAM) and the *LRAM Version 2.0 Excel Worksheet*. The Sponsor will restore 90.1 acres to BLH wetlands, 75.8 acres to CS wetlands, and 11.4 acres to uplands and also preserve 17.5 acres of FM wetlands, and 305.2 acres of CS wetlands for a total of 500.0 acres (Attachment B: LRAMs BLH, FM, and CS; Attachment A: Figure 16; and Table 1). MCMB will have long-term protection through financial assurances with long-term escrow accounts and the institution of a conservation servitude.

1.1 Site Location

The property is located approximately 14.7 miles southwest of Ponchatoula, Louisiana (Attachment A: Figure 01). The center point of MCMB is located at latitude 30.290331º and longitude -90.618117º in Livingston Parish, Louisiana (Attachment A: Figure 02). The location includes all or portions of Sections 04 and 05 of Township 09 South, Range 06 East. MCMB is in the Hydrologic Unit Code (HUC) 08090203, East Louisiana Coastal within the Lake Pontchartrain Basin (Attachment A: Figure 17).

State and Federal jurisdictional boundaries that encompass MCMB include the following: the Louisiana Office of Coastal Management (OCM) Deltaic Region of the Louisiana Coastal Zone, the Natural Resources Conservation Service (NRCS), Mississippi Delta Cotton and Feed Grains Land Resource Region (LRR O). The MCMB also lies in the Environmental Protection Agency (EPA) designated Mississippi Alluvial Plain (73) Level III Ecoregion, and the Inland Swamps (73n) Level IV Ecoregion. According to the Federal Emergency Management Agency (FEMA), portions of MCMB are within the 100-year flood zone.

1.2 Driving Directions

From I-55 in Ponchatoula, head West on LA-22 W for 5.2 miles toward Springfield. Turn left onto Main Street, continuing for 0.4 Miles. Turn right onto LA-22 W and continue for 11.7 miles to Martin Rd. Turn left onto Martin Rd., the property will be located on the left.

2.0 PROJECT GOALS AND OBJECTIVES

The goal of MCMB is the cumulative re-establishment of 5.5 acres of bottomland hardwood (BLH), the rehabilitation of 84.6 acres of BLH and 75.8 acres of CS, the preservation of 305.2 acres of CS, the preservation of 17.5 acres of FM, and the restoration of 11.4 acres of upland in the Lake Pontchartrain watershed (HUC:08090203). The total acreage of MCMB is 500.0. The current and proposed habitat types, proposed mitigation types, and acreage are listed in Table 1 & Attachment A: Figures 16.

The objectives of the Bank are diverse. MCMB is well situated in the Lake Pontchartrain Basin and is capable of restoring and improving a range of physical, hydrological, biogeochemical, biotic, and atmospheric functions to the watershed. These objectives are as follows:

- Re-establish the current Dirt Logging Road and portions of the Managed Timber Plantation by removing planted pine and eliminating Chinese tallow (*Triadica* sebifera) then reforesting back to a native pine-hardwood flatwood forested wetland (BLH). Restoring wetland vegetation will positively affect the physical structure of the area and restore wetland biogeochemical processes in the soil considerably via additional plant and invertebrate detritus.

- Rehabilitate current portions of Managed Pine Plantation and Managed Timber by removing planted pine and eliminating Chinese tallow (*Triadica* sebifera) then reforesting back to a native pine-hardwood flatwood forested wetland (BLH).

- Rehabilitate current portions of Managed Pine Plantation and Chinese Tallow Forest habitat to a native cypress swamp wetland through the reforestation of native species by first removing planted pine and eliminating Chinese tallow (*Triadica sebifera)*.

- Preserve and protect existing fresh marsh and cypress swamp by instituting a conservational servitude and a long-term protection plan.

- Restoring the upland buffer by planting native pine-hardwood flatwood trees will preserve the topography of this area and reduce adverse impacts to wetland functions from adjacent development. Restoration will reduce these impacts by moderating stormwater runoff, stabilizing soil to prevent erosion, providing habitat for wetland associated species, reducing direct human impact/access to a wetland, and by filtering suspended solids, nutrients, and toxic substances. Restoring the site will provide improved biotic conditions and create habitat for a multitude of mammals, reptiles, insects, and hundreds of species of migratory birds.

- Restoring MCMB's natural vegetative habitats to institute reclamation of the organic material to the system's soil, and filter sediment deposition runoff into the Amite River and Lake Maurepas.

- Ensuring the quality of MCMB habitat through annual vegetation monitoring, noxious invasive species control, and adaptive management if necessary.

- Providing long-term protection through financial assurances with long-term escrow accounts and the institution of a conservation servitude.

As defined by *The Natural Communities of Louisiana* published in 2009 by the Louisiana Department of Wildlife and Fisheries (LDWF) and the Louisiana Natural Heritage program (LNHP): Pine-Hardwood Flatwoods is a natural mixed forest community indigenous to the western Florida parishes in southeast Louisiana. This community occupies poorly drained flats, depressional areas and small drainages that lie in a mosaic with higher, non-wetland areas. Hardwoods usually dominate the forest composition, but spruce pine can dominate areas within the stand.

As defined by *The Natural Communities of Louisiana* published in 2009 by the Louisiana Department of Wildlife and Fisheries (LDWF) and the Louisiana Natural Heritage program (LNHP): bald cypress (*Taxodium distichum*) Swamps are forested, alluvial swamps growing on intermittently exposed soils. The soils are inundated or saturated by surface water or groundwater on a nearly permanent basis throughout the growing season except during periods of extreme drought. Bayous commonly intersect these wetlands. There is a low floristic diversity. *Taxodium distichum* (bald cypress) is the dominant overstory species. Many aquatic food webs depend on the input of allochthonous material in the form of leaf litter or other organic debris that the wetland forest provides. Net primary productivity of swamp forests seems to be increased by periodic flooding or increased water flow and decreased by slow water movement or stagnation.

As defined by *The Natural Communities of Louisiana* published in 2009 by the Louisiana Department of Wildlife and Fisheries (LDWF) and the Louisiana Natural Heritage program (LNHP): Freshwater Marsh is normally located adjacent to Intermediate Marsh along the northern most extent of the coastal marshes, although it may occur beside coastal Bays where freshwater is entering the bay (e.g., Atchafalaya Bay). Small pools or ponds may be scattered. The floristic composition of these sites is quite heterogeneous and is variable from site to site. Frequency and duration of flooding which are intimately related to microtopography seem to be the primary factors governing species distributions. Substrate, current flow, salinity, competition, and allelopathy are also important in determining species distribution patterns. Freshwater Marsh has the greatest plant diversity and highest soil organic matter content of any marsh type. Wildlife populations are generally the highest in this marsh type. Like the other marsh types, Freshwater Marsh acts as an important nursery area for the young of many aquatic species.

Table 1: Mitigation Plan Summary Proposed Mitigation and Habitat Type

Current Habitat	Proposed Habitat	Proposed Mitigation Type	Acres
Managed Timber Plantation	Bottomland Hardwoods	Re-Establishment	1.7
Managed Timber Plantation and Managed Pine Plantation	Bottomland Hardwoods	Rehabilitation	2.2
Managed Timber Plantation, Managed Pine Plantation, and Dirt Logging Road	Bottomland Hardwoods LDNR	Re-Establishment	3.8
Managed Pine Plantation, Managed Timber Plantation, and Chinese Tallow Forest	Bottomland Hardwoods LDNR	Rehabilitation	82.4
		BLH Habitat:	**90.1**
Chinese Tallow Forest	Cypress Swamp LDNR	Rehabilitation	75.8
Cypress Swamp	Cypress Swamp	Preservation	305.2
		CS Habitat:	**381.0**
Fresh water marsh	Freshwater Marsh	Preservation	17.5
		FM Habitat:	**17.5**
Managed Timber Plantation and Cattle Pasture	Hardwoods	Upland Restoration	11.4
		Upland Buffer:	**11.4**

Subtotal Non-Mitigation Acreage: 11.4
Subtotal Mitigation Acreage: 488.6

TOTAL MITIGATION BANK ACREAGE: 500.0

3.0 ECOLOGICAL SUITABILITY OF SITE/BASELINE CONDITIONS

This section describes the ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the Bank site and how that site will support the planned types of aquatic resources and functions, as stated in 33 CFR 332.8(d)(2)(vii)(B). This section provides the baseline/current site conditions on and adjacent to the proposed site.

3.1 Land Use

3.1.1 Historic Land Use

Prior to hydrologic modifications by the European settlers, MCMB was hydrologically influenced by riverine flooding, meandering from the Mississippi and Amite Rivers, rainfall, sheet flow, and the ebb and flow of tides. It is believed the original cypress and the pine-hardwood flatwoods forest were first logged around the turn of the 19th century. Timber sale documents from 1910 and 1946 provide evidence that some portions of the property were harvested during the 1900's. The 1952 historical aerial photograph shows a dense pine and oak habitat on the natural ridge surrounded by a vast cypress forest (Attachment A: Figure 02A). In 1982 the pine-hardwood flatwoods forest and the cypress forest appear to be relatively unchanged since 1952 and the fresh marsh areas to the south are visible (Attachment A: Figure 02B). Sometime between 1998 and 2000 the natural ridge of the project area started to be managed as a commercial pine plantation. The 2004 imagery depicts the majority of the oaks and pine on the natural ridge have been clear-cut and the current Managed Timber Plantation within in the northwest corner of the project boundary appears to have been selectivity cut (Attachment A: Figure 02C). Following the harvest in 2000, the current Managed Pine Plantation and Managed Timber Plantation was then sprayed with herbicide, site prep, burned, and then hand planted using loblolly pine (*Pinus taeda)* seedlings. However, the northeast portion of the current Chinese Tallow Forest habitat was not planted after this harvest. Because of the lack of competition, this area is now dominated by Chinese tallow (*Triadica sebifera).* This area was managed differently because it was owned by a separate landowner at the time. The 2009 imagery depicts the 2000 planted pine as the dominant tree species in the Managed Pine Plantation and in the Managed Timber Plantation (Attachment A: Figure 02D). Field investigation reveals the 2000 planted pine has not been thinned as typically performed to pine stands. It is assumed that the site's wet conditions and lack of markets for pine pulpwood in the local are the main reasons the pine stand has not had a first thinning timber operation performed on it. Although the pine has not been thinned, there is evidence that the pine has been burned. Charred logs left over from prescribed burns are found throughout the managed pine plantation. Although there are few mid-story oak trees within the Managed Pine Plantation, some mature oaks species are present within the Managed Timber Plantation because this area was selectively harvested and not clear-cut. Because the current Chinese tallow forest was clear-cut this area is now dominated by Chinese tallow.

3.1.2 Existing/Current Land Use

Currently, the following habitats occur within MCMB: 0.4 acres of Cattle Pasture, 9.8 acres of Managed Timber Plantation, 17.5 acres of Fresh Water Marsh, 305.2 acres of Cypress Swamp, 66.3 acres of Managed Pine Plantation, and 99.1 acres of Chinese Tallow Forest. (Attachment A: Figures 02F and Figure 15). The land use surrounding a one-mile radius of MCMB consists of 4944.9 acres of the following land use types: 1.8 acres of Developed High Intensity land, 74.8 acres of Developed Low Intensity land, 19.6 acres of Developed Medium Intensity land, 46.9 acres of Developed Open Space land, 555.3 acres of

Emergent Herbaceous Wetlands, 29.7 acres of Evergreen Forest, 4.4 acres of Grasslands/Herbaceous land, 4.4 acres of Mixed Forest, 141.7 acres of Open Water, 80.2 acres of Pasture/Hay land, 2.4 acres of Shrub/Scrub land, and 3983.7 acres of Woody Wetlands. This one-mile radius also includes protected land located within the High Point Mitigation Bank and the Maurepas Wildlife Management Area (Attachment A: Figure 4).

3.2 Soils

According to Soil Survey of Livingston Parish Louisiana (1984) and USDA Web Soil Survey of the subject property, the following soils are found to occur:

- Barbary muck 0 to 1 percent slopes (BA). The Barbary series consists of very deep, very poorly drained, very slowly permeable soils. These soils formed in recent, slightly fluid to very fluid clayey sediments that have been deposited in water and are continuously saturated and flooded. These soils are mainly on low, broad, ponded backswamps of the lower Mississippi River Alluvial Plain. Slope is less than 1 percent.

- Colyell silt loam 0 to 1 percent slopes (Co). This component is on stream terraces, fluviomarine terraces. The parent material consists of thin silty loess over late pleistocene silty and clayey fluviomarine deposits over late pleistocene silty and clayey marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low.

- Colyell Springfield Silt Loam (Cy). The Colyell component is on stream terraces, fluviomarine terraces. The parent material consists of thin silty loess over late pleistocene silty and clayey fluviomarine deposits over late pleistocene silty and clayey marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low.

  The Springfield component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on terraces on river valleys. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low.

Table 2: NRCS Soil Survey of Livingston Parish, Louisiana MCMB Data

Map Unit Symbol	Soil Name	Natural Drainage	Hydric Rating	Acres in Project Area
BA	Barbary muck, 0 to 1 percent slopes, frequently flooded	Very poorly drained	Hydric	308.4
Co	Colyell Silt Loam, 1 to 3 Percent Slopes, Rarely Flooded	Somewhat poorly drained	Predominantly non-hydric	11.6

Cy	Colyell Springfield Silt Loam, Frequently Flooded	poorly drained	Predominantly Hydric	180.0

3.3 Hydrology

3.3.1 Contributing Watershed

The 1,700,000-acre Pontchartrain Basin is an abandoned delta generally bounded by the Pleistocene Terrace on the north and west, by Chandeleur Sound on the east, and by the Mississippi River and the disposal area of the Mississippi River Gulf Outlet (MRGO) on the south. Portions of nine parishes lie within the Basin: Ascension, St. James, St. John the Baptist, St. Charles, Jefferson, Orleans, St. Bernard, St. Tammany, and Livingston. The Basin is divided into six distinct areas: the upper, middle, lower, and Pearl basins, and the Lake Maurepas/Pontchartrain and Lake Pontchartrain/Borgne land bridges. The major hydrologic features of the Basin are Lakes Maurepas, Pontchartrain, Borgne, and Chandeleur Sound. Lake Pontchartrain is connected to Lake Maurepas to the west and Lake Borgne to the east by passes through interlaying land bridges. The Inner Harbor Navigation Canal (IHNC) and the MRGO provide a direct link between Lake Pontchartrain and the Gulf of Mexico. Currently fresh water enters the Basin through leaks in the Bonnet Carr Spillway, through the IHNC Lock, the Violet Siphon, numerous small rivers and bayous (totaling approximately 9,500 cfs), and from direct rainfall. Urban stormwater discharges from the New Orleans metropolitan area also enter Lake Pontchartrain (The Pontchartrain Basin: CWPPRA) (Attachment A: Figures 10 and 10A).

Livingston Parish has a humid, subtropical, marine climate. Livingston Parish's average annual total precipitation is about 64 inches. Of this, about 34 inches, or 53 percent, usually falls in April through September. In winter, the average temperature is 51°F, and the average daily minimum temperature is 40°F. In summer, the average temperature is 81°F and the average daily maximum temperature is 92°F. The sun shines 70 percent of the time in summer and 50 percent in winter (Soil Survey of Livingston Parish). Watershed sources include direct precipitation, surface runoff, high water tables, and tidal flooding.

3.3.2 Historic Hydrology and Drainage Patterns

The Pontchartrain basin complex was formed by Mississippi River deposits between 3,000 and 4,000 years ago (Frazier 1967). Historically, freshwater entered the Pontchartrain Basin through Bayou Manchac (until its closure in 1812) and from natural crevasses from the Mississippi River (until the construction of the Mississippi River levees in the 1930s) (The Pontchartrain Basin: CWPPRA). Historically, the hydrological influences of MCMB were the freshwater inputs from the Mississippi and Amite rivers, backwater flooding, direct precipitation, and high-water tables.

3.3.3 Existing/Current Hydrology and Drainage Patterns

MCMB topography is generally flat, with a natural ridge running through the center of the property. A gradual slope runs eastward from the natural ridge, which eventually flattens to a floodplain. Elevations derived from state-sponsored LIDAR data range from 0.0' to 8.0' relative to the NAVD88 datum, with elevations between 0' and 6' within the proposed wetland areas (Attachment A: Figure 07). Currently, there are 15.2 acres over the 5' contour within the MCMB boundary (Attachment A: Figure 08).

Although the vegetated habitat of MCMB has been significantly altered, the topography of MCMB has remained natural. The primary hydrological feature of the Managed Pine Plantation, Managed Timber Plantation, and Chinese Tallow Forest are precipitation, sheet flow, high water tables, and occasionally tidal flooding. The primary hydrological features of the Cypress Forest are surface runoff from neighboring ridges, precipitation, sheet flow, tidal flooding, and ebb and flow of the Pontchartrain Basin. These areas currently function as a wetland and have no manmade or natural hydrological hinderance. Excess waters from the natural ridge sheet flow down gradient form the top of the natural ridges towards the surrounding Cypress Forest. Water then slowly moves west through the surrounding cypress forest toward Lake Maurepas into the greater Pontchartrain basin. (Attachment A: Figure 13).

3.3.4 Jurisdictional Wetlands

The Sponsor conducted a wetland delineation of the property that includes MCMB, which was submitted for approval by the CEMVN as a preliminary jurisdictional determination (PJD) MVN-2023-00280 on December 12, 2022 (Attachment A: Figure 18). The Sponsor is awaiting a reference number, and approval of said PJD, at this time. The wetland delineation includes additional acreage not within the proposed MCMB boundary. CEMVN has not yet made a preliminary jurisdictional determination on the recently sent wetland delineation. The wetland delineation reveals the MCMB boundary contains approximately 483.0 acres of wetlands and 17.0 acres of uplands (Attachment A: Figure 18).

3.4 Vegetation

3.4.1 Historic Plant Community

Historic plant communities for MCMB are based on comparison to reference sites with similar soil, geology, topography, and potentially similar historical/current habitat type, such as the adjacent High Point Mitigation Bank and Maurepas Swamp WMA (Attachment A: Figures 19). According to the Natural Communities of Louisiana (LDWF 2009), prior to use as a Loblolly pine plantation, MCMB would have likely consisted of Pine-hardwood flatwoods (bottomland hardwoods) and cypress swamp habitats. USFWS lists five different NWI habitat classifications within the Project Area: palustrine forested broad-leaved deciduous temporary flooded (PFO1A), palustrine forested Needle-Leaved Evergreen temporarily flooded (PFO4A), palustrine forested needle-leaved deciduous/broad-leaved deciduous semi permanently (PFO2/1F), palustrine forested broad-leaved deciduous/Needle-Leaved Evergreen temporarily flooded (PFO1/4A), and palustrine emergent persistent semi permanently flooded (PEM1F) (Attachment A: Figure 11).

3.4.2 Existing Plant Community

Multiple habitats were found to occur at MCMB. Habitat investigations and data from the Sponsor-performed wetland delineation revealed the following habitats at MCMB (Attachment A: Figure 15).

The area defined as "Cattle Pasture" was observed to have non-wet conditions. This area is currently being heavily managed for cattle grazing. Dominant vegetative species observed within the herb stratum include ryegrass (*Lolium perenne L.*), FACU.

The area defined as "Dirt Logging Road" was observed to have non-wet conditions. This road remains a remnant of past logging activities in the area. Dominant vegetative species observed within the herb stratum include carex species (Carex spp.), bermudagrass

(Cynodon dactylon) FACU, lamp rush (Juncus effusus) FACW, and basketgrass (Oplismenus hirtellus) FAC.

The area defined as "Managed Pine Plantation" was observed to have some non-wet conditions in higher elevations and mostly wet conditions in lower elevation areas. This area was clear-cut for timber in 2000. Following the harvest, this area was then sprayed with herbicide, site prep, burned, and then hand planted in rows using loblolly pine (*Pinus taeda)* seedlings. Due to timber management, this area is primarily a loblolly pine monoculture as the tree stratum exceeds 95% relative cover of loblolly species with little to no mid-story oak trees. Chinese tallow trees are beginning to emerge in locations where trees were downed by Hurricane Ida in 2021. Dominant vegetative species observed within the tree stratum include loblolly pine (*Pinus taeda*), FAC; spruce pine (*Pinus glabra),* FACW; and Chinese tallow (*Triadica sebifera), FAC*. Dominant vegetative species observed within the herb stratum include: dwarf palmetto (*Sabal minor*), FACW; and frank's sedge (*Carex frankii*) OBL.

The area defined as "Managed Timber Plantation" was observed to have non-wet conditions in higher elevation and wet conditions in lower elevation areas. This area was selective harvested in 2004. Therefore, more oak trees are present in the canopy and mid-story than in the Managed Pine Plantation. This habitat also contains areas with over 55% absolute cover of Chinese tallow trees where mature trees were downed by Hurricane Ida in 2021. Dominant vegetative species observed within the tree stratum include: loblolly pine (*Pinus taeda*), FAC; Chinese tallow (*Triadica sebifera)*, FAC; and water oak (*Quercus nigra)* FAC. Dominant vegetative species observed within the shrub stratum include: yaupon (*Ilex vomitoria*), (FAC); spruce pine (*Pinus glabra),* FAWC; Chinese tallow (*Triadica sebifera)*, and FAC; swamp chestnut oak (*Quercus michauxii*), (FACW). Dominant vegetative species observed within the herb stratum include: dwarf palmetto (*Sabal minor*), FACW; and Raven-foot sedge (*Carex crus-corvi*) OBL.

The area defined as "Chinese Tallow Forest" was observed to have wet conditions and over 70% absolute cover of Chinese tallow trees. This area was clear-cut for timber in 2000. Areas adjacent to the Cypress Forest and the Managed Timber Plantation were planted with loblolly pine following the timber harvest. But because of wetter conditions the loblolly pine in these specific areas did not establish, and Chinese tallow become the dominant tree species. The northeast portion of this area was not planted with loblolly pine after the timber harvest. Wetter conditions and reduced competition after clear-cutting allowed the Chinese tallow to proliferate. Dominant vegetative species observed within the tree stratum include: Chinese tallow (*Triadica sebifera),* FAC and sweetgum *(Liquidambar styraciflua*), FAC. Dominant vegetative species observed within the shrub stratum include Chinese tallow (*Triadica sebifera),* FAC; spruce pine (*Pinus glabra),* FACW; and loblolly pine (*Pinus taeda*), FAC. Dominant vegetative species observed within the herb stratum include: dwarf palmetto (*Sabal minor*), FACW; Raven-foot sedge (*Carex crus-corvi*) OBL; and maiden-cane (Panicum hemitomon), OBL.

The area defined as "Freshwater Marsh" was observed to have wet conditions. This habitat was observed to be a functioning freshwater marsh. Dominant vegetative species observed within the herb stratum include giant cut grass (*Zizaniopsis miliacea*), OBL; cattail (*Typha latifolia*), OBL; green flatsedge (*Cyperus virens*), FACW; and large-flower primrose-willow (*Ludwigia grandiflora*), OBL.

The area defined as "Cypress Swamp" was observed to have wet conditions. The habitat was observed to be a healthy and thriving cypress swamp with an average of 60 percent

canopy coverage. The hydrology in this area is directly connected to the Gulf of Mexico tidal flux via its connections to the Amite River and Lake Maurepas. Dominant vegetative species observed within the tree stratum include bald cypress (*Taxodium distichum*), OBL and red maple (*Acer rubrum var. drummondii*), FAC. Dominant vegetative species observed within the herb stratum include lizard's tail (*Saururus cernuus*), OBL; pickerelweed (*Pontederia cordata*), OBL; and cattail (*Typha latifolia*), OBL.

3.5 General Bank Need

Through the reforestation of silviculture production land, management of invasive Chinese tallow trees, and planting of desirable vegetation, the proposed Bank is expected to provide, enhance, and restore specific biogeochemical processes, including attenuation, transformation, and storage of pollutants, ultimately returning the property into a naturally forested wetland. Wetland ecological benefits to the watershed from natural re-forestation include increased nesting, feeding, foraging, denning, and loafing habitat functions for wetland and aquatic species through desirable canopy re-establishment and increased desirable native wetland vegetative cover within the ground cover and shrub/sapling strata. The preservation of the surrounding cypress forest and fresh marsh habitat will further protect this vital habitat.

The proposed MCMB will directly address several identified needs, which include the following:

Natural Communities of Louisiana (Louisiana Department of Wildlife and Fisheries)

- Spruce Pine-Hardwood Flatwood occurs in a very narrow range in Livingston, East Baton Rouge and perhaps Ascension Parishes. Presettlement acreage is estimated at 50,000 to 100,000 acres with only 10 % currently remaining.

The Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) *Basin Plan*:

- Supporting short-term strategy is to consider site-specific, small-scale projects in all subbasins where there is a critical need for wetlands protection or restoration, or a significant opportunity for wetlands creation. In the short-term, demonstration and pilot projects must also be conducted to develop, or test methods and approaches needed for implementing long-term strategies.
- Achieving no net loss of wetlands in the Basin.

Coastal Protection and Restoration Authority of Louisiana: Louisiana's Comprehensive Master Plan for a Sustainable Coast (2017).

- Promote a sustainable coastal ecosystem by harnessing the natural processes of the system.
- Providing a sustainable long-term solution for coastal protection and restoration.

The Lake Pontchartrain Basin Restoration Program (the Lake Pontchartrain Basin Restoration Act of 2000; Clean Water Act, Section 121)

- To restore the ecological health of the Basin.

4.0 ESTABLISHMENT OF THE MITIGATION BANK

This section describes how the mitigation bank will be established, as stated in 33 CFR 332.8(d)(2) (ii); the technical feasibility of the proposed mitigation bank, as stated in 33

CFR 332.8(d)(2) (iv); and the assurance of sufficient water rights to support the long-term sustainability of the mitigation bank, as stated in 33 CFR 332.8(d)(2)(vii)(A).

4.1 Site Restoration Plan

This section provides information on the proposed soils, hydrologic, and vegetative work that was determined to be necessary for restoration, enhancement, and/or preservation of the proposed site.

This Bank will provide the cumulative re-establishment of 5.5 acres of BLH, the rehabilitation of 84.6 acres of BLH and 75.8 acres of CS, the preservation of 305.2 acres of CS and 17.5 acres of FM, and the restoration of 11.4 acres of upland buffer in the Lake Pontchartrain watershed (HUC 08090203). The current and proposed habitat types, proposed mitigation types, and acreages are listed in Attachment A: Table 1 & Attachment A: Figures 15 & 16. In order to achieve the goals and objectives of the Bank, and to meet all requirements stated in 33 CFR 332.8; in summary, the Sponsor will remove planted pine and chemically control invasive species throughout the property, chemically dispose of invasive tree species within the Chinese Tallow Forest, allow for the natural recruitment of wet herbaceous plants, reforest historical BLH CS habitat, preserve CS swamp and FM habitats, and restore and maintain upland buffer habitat along the western boundary. Also, the Sponsor will implement effective short-term and long-term management strategies.

4.1.1 Soils/Hydrologic Work

First, the Remnant barbed wire fence will be removed to allow for uninhibited wildlife access. Also, the existing debris and trash will be removed from the mitigation area.

Although the vegetation habitat of MCMB has been significantly altered, the topography of MCMB has remained natural. MCMB's restoration areas exhibit hydric soils and wetland hydrology. Therefore, no hydrological restoration or soil work is required to sustain wetland functions at MCMB. The Sponsor anticipates no long-term structural management requirements will be needed to ensure sustained hydrology and wetland functions at MCMB (Attachment A: Figures 12, 12A, 12B, 12C and 14).

There are 15.2 acres over the 5' contour within the MCMB boundary. No dirt work or elevation change is required to restore MCMB, and the proposed site restoration will not change existing elevations at MCMB. After restoration, MCMB will contain 1.7 acres of BLH re-establishment, 2.2 acres of BLH rehabilitation, and 11.4 acres of upland restoration for a total of 15.3 acres over the 5' contour (Attachment A: Figure 08).

4.1.2 Vegetative Work

Over the course of the land's conversion from its natural state to a managed pine plantation, timber plantation, and a Chinese tallow forest, modifications such as timber harvesting, pine plantings, burnings, and lack of invasive species control have drastically changed MCMB. To restore this area's natural habitat and meet the objectives of MCMB, timber management must be stopped, pine tree monoculture must be removed, and invasive species must be eliminated (Attachment A: Figures 12, 12A, 12B, and 12C).

To rehabilitate the current Managed Pine Plantation and Managed Timber Plantation, planted loblolly pine (*Pinus taeda*) trees will be mechanically cut and hauled off-site to a timber mill. Trees downed by Hurricane Ida in 2021 will also be removed from the project area. Loblolly stumps will remain to deteriorate naturally within the system. To preserve the existing desirable tree species, where appropriate, naturally occurring spruce pine

(*Pinus glabra)* and desirable hard mast species will not be harvested. Harvesting will occur during the dry season to ensure ruts from mechanical equipment do not alter hydrology. However, if ruts happen the Sponsor will utilize the existing soil to backfill to natural grade.

Rehabilitating the current Chinese Tallow Forest will require at least two herbicide treatments before the initial planting. First, existing Chinese tallow will be treated with herbicides via the hack and squirt method and aerial spraying. Second, after the growing season following the initial herbicide treatment, any remaining Chinese tallow trees will be treated with herbicides; treated trees will be left to deteriorate naturally within the system. There is no vegetation work proposed within the Preservation Cypress Swamp or Freshwater Marsh

The restoration of MCMB vegetative habitats is expected to institute the reclamation of the organic material to the system's soil and to filter sediment deposition runoff into the surrounding watershed. Also, rebuilding BLH and CS habitats with native wetland trees and emergent species will positively affect the physical structure of the area and will restore biogeochemical processes in the soil considerably via additional plant and invertebrate detritus.

Bottomland Hardwoods

The Sponsor intends to re-establish 5.5 acres BLH and rehabilitate 84.6 acres of BLH by conducting Pine-Hardwood Flatwood habitat tree plantings and allowing the natural recruitment of appropriate emergent tree species within the mitigation areas (Attachment A: Figures 16 and 20). The Pine-Hardwood Flatwood plantings will be conducted during the first planting season (December 15 to March 15) following the completion of all soil/hydrological work. Due to the existing forested conditions on site, the Sponsor is not anticipating the presence of a hard pan and has not proposed the use of a subsoiling implement within the BLH mitigation areas. BLH mitigation type and Pine-Hardwood Flatwood habitat locations and species composition were determined by analyzing lidar data, hydrologic data, soil data, LDWF Natural Communities of Louisiana, CRMS data, and species composition of reference sites. The composition of Pine-Hardwood Flatwood species chosen will match species to the closest extent possible to those on adjacent wetlands with similar soil types. Commercial Pine-Hardwood Flatwood species will be chosen where appropriate to tolerate the same hydrological conditions as those on the adjacent lands and according to elevations on the proposed site (Attachment C: BLH & UPR Species List). All seedlings must be obtained from a registered, licensed Louisiana nursery grower. The contractor must obtain and provide to DNR/OCM certification from the contracting nursery that plant materials are of a Louisiana ecotype species and have been acclimated to Louisiana climatic and habitable conditions for at least 90 days prior to planting. Bare-root seedlings of mixed Pine-Hardwood Flatwood species will be planted within BLH re-establishment and rehabilitation tracts at approximately 9' X 9' spacing at a minimum initial stand density of 538 stems per acre (Attachment A: Figure 12C). Because of the anticipated natural recruitment of soft mast species, MCMB will be planted at a 75:25 hard to soft mast ratio. Hard mast species within Pine-Hardwood Flatwood areas shall comprise of no less than 60 percent or greater than 80 percent of seedlings overall. No individual species will represent more than 20 percent of the vegetative plantings.

Upland Restoration

The 11.4 acres of upland restoration buffer at MCMB will be planted with seedlings of mixed BLH species, at approximately 9' X 9' spacing at a minimum initial stand density of 538 stems per acre (Attachment C: BLH & UPR Species List).

Cypress Swamp (Rehabilitation)
The Sponsor intends to rehabilitate 75.8 acres of CS by conducting tree plantings and allowing the natural recruitment of appropriate emergent species within the mitigation areas. There will be no plantings within the preservation area (Attachment A: Figures 16 and 20). The CS planting will be conducted during the first planting season (December 15 to March 15) following the completion of all soil/hydrological work. Due to the existing forested conditions on site, the Sponsor is not anticipating the presence of a hard pan and has not proposed the use of a subsoiling implement within the CS mitigation areas. CS habitat locations and species composition were determined by analyzing lidar data, hydrology data, soil data, LDWF Natural Communities of Louisiana, CRMS data and species composition of reference sites. The composition of CS species chosen will match species to the closest extent possible to those on adjacent wetlands with similar soil types. Commercial CS species were chosen to tolerate the same hydrological conditions as those on the adjacent lands and according to elevations on the proposed site (MWP Attachment C: CS Species List). All seedlings will be obtained from a registered, licensed Louisiana nursery grower. The contractor must obtain, and provide to DNR/OCM, certification from the contracting nursery that plant materials are of a Louisiana ecotype species and have been acclimated to Louisiana climatic and habitable conditions for at least 90 days prior to planting. Seedlings of mixed CS species, where appropriate, will be planted at approximately 12' X 12' spacing at a minimum initial stand density of 302 stems per acre (Attachment A: Figure 12C).

Cypress Swamp (Preservation)
No vegetation work will be performed within this area.

Fresh Marsh (Preservation)
No vegetation work will be performed within this area.

4.1.3 Invasive and Exotic Plant Control

The Sponsor intends to use chemical methods to eliminate existing invasive/exotic vegetation present such as Chinese tallow (*Triadica sebiferum*) at MCMB. This may include, but is not limited to, spray on application by helicopter as well as hand spraying by ground field crews. Prior to planting, all Chinese tallow within and immediately surrounding the mitigation boundary will be chemically treated with herbicides and eliminated. The treated tree stems will be left in place to deteriorate naturally within the system. If needed, aerial or ground application of annual/perennial grasses and broadleaf weed herbicides will be used to effectively reduce competition for planted seedlings in re-establishment and rehabilitation areas.

In addition, the Sponsor will control these undesirable/exotic species as part of the maintenance and monitoring plan. Monitoring for exotic and invasive species will occur annually and control techniques will be implemented as needed to sustain long-term undesirable/exotic species presence to 3 percent per acre or less. This may include, but is not limited to, spray on application by helicopter as well as hand spraying by ground field crews. As the Bank matures, monitoring will continue but exotic species control measures are expected to decline as a steady-state, self-perpetuating natural ecosystem is established. Funding will be available for any of the above stated maintenance until long-term success criteria are met.

4.2 Technical Feasibility

The construction work required to develop the Bank is routine in nature and feasible. The mitigation activities involve primarily reforestation using bare-root seedlings. These activities have long been utilized in wetland restoration and mitigation projects and are proven methods. The Sponsor has the necessary funds and personnel to successfully implement the proposed vegetative plantings. A more specific examination of the technical restoration methods is presented in Section 4.0 of this Prospectus.

4.3 Current Site Risk

Currently there are no right-of-way/servitudes, liens, or oil and gas leases within the Bank boundary. In preparation for this project design the Sponsor has reviewed a preliminary title. A title opinion and survey plat will be provided with the anticipated Draft MBI submittal.

All the listed right-of-ways (ROW) below are adjacent to the MCMB boundary. Please see Attachment A: Figure 9 for easement locations.

The ROW adjacent to MCMB, along Martin Road, is designated for a powerline. The power line belongs to Dixie Electric Company. This ROW is maintained by bush hogging and limb trimming typically once a year to prevent the growth of woody species. This ROW also extends parallel with the MCMB boundary along the curve of Highway 22. The ROW will not negatively affect the hydrologic goals of MCMB. The topography within this ROW is currently at natural grade. The existing power lines will not adversely affect the success of MCMB.

East Ascension Telephone Company has a ROW running parallel to MCMB. The ROW specifies that any phone lines must be constructed within 10 (ten) feet of the Highway 22 ROW. The MCMB boundary has been offset approximately 15 (fifteen) feet from the outside edge of this ROW to ensure there are no adverse effects from potential activities within the ROW. This ROW will have no negative effects on the success of MCMB.

4.4 Long-Term Sustainability of the Site

Due to its location and project design, the proposed Mitigation Bank has a very high likelihood of success. MCMB will be restored to the types of communities that were historically present in the project area. Long-term viability and sustainability of MCMB will be ensured through active annual monitoring, adaptive management, invasive species control, and long-term maintenance. No weirs or structures will be required to maintain the MCMB post-restoration hydrologic regime, so structural maintenance will not be an issue. Similarly, the reliance on the system's natural hydrology will ensure that the restored habitats are subject to a regionally appropriate, natural hydro-period. A long-term management plan will be included within the mitigation banking instrument. It will detail a long-term management plan and the associated costs, as well as identify a funding mechanism in accordance with 33 CFR 332.7(d).

5.0 PROPOSED SERVICE AREA

Due to MCMB location within the Lake Pontchartrain Basin, the Sponsor suggests the primary service area be the Lake Pontchartrain Basin. The Lake Pontchartrain Basin is made up of the East Louisiana Coastal (HUC: 08090203). This service area will provide offsets for unavoidable impacts to wetlands and "Waters of the United States". Use of

MCMB beyond this area will be determined by the CEMVN on a case-by-case basis (Attachment A: Figure 17).

6.0 OPERATION OF THE MITIGATION BANK

This section describes how the proposed Bank will be operated, as required by 33 CFR 332.8(d)(2)(ii), and provides details on the proposed ownership arrangements and long-term management strategy for the mitigation bank, as required by 33 CFR 332.8(d)(2) (v).

6.1 Project Representatives

6.1.1 Sponsor and Operations Manager

JMB Partnership, LLC
203 Main Street
Franklin, Louisiana 70538
POC: Aaron C. Landry
(337) 205-6285
aaron@jmbcompanies.com

6.1.2 Landowner

Southern States Land and Timber, L.L.C.
203 Main Street
Franklin, Louisiana 70538
POC: Aaron C. Landry
(337) 205-6285
aaron@jmbcompanies.com

6.2 Qualifications of the Sponsor

The Sponsor, JMB Partnership, LLC is a subsidiary of the JM Burguieres Co., Limited, which is a family legacy partnership established in 1877. The Sponsor has 146 years of land management experience in Louisiana, Texas, and Florida that includes wetland mitigation banking, conservation mitigation banking, sugarcane production, mineral mining, and cattle ranching. The Sponsor's established mitigation banking business currently manages ten wetland mitigation banks in Louisiana: Cypremort-Teche, Cypress Creek, Bee Bayou, Kilgore Plantation, Marine Bayou, Nabours "No Hope", Big Darbonne Bayou, Cedar Grove, Bull Island, and Cedar Grove Amendment One. JMB also currently manages five wetland mitigation banks in Florida: Emeralda, Kissimme Ridge, Mangrove Point, Wiggins Prairie, and Trails End. The Sponsor also manages three conservation mitigation banks in Florida: Lake Wales Ridge, Lake Wales Ridge Sullivan Tract, and Arbuckle Creek. JMB has a qualified technical staff that has multiple years of experience in wetland science, land management, and permitting.

6.3 Proposed Long-Term Ownership and Management Representatives

Southern States Land and Timber, L.L.C will own the property encompassing the 500.0-acre MCMB. JMB Partnership, LLC will serve as the mitigation service provider (Sponsor) and the long-term steward of MCMB. The implementation as a mitigation bank (i.e., Conservation Servitude filing and implementation of the mitigation work plan) will be completed by the Sponsor.

6.4 Site Protection

Pursuant to the Louisiana Conservation Servitude Act, R.S. 9:1271 et seq., a perpetual conservation servitude will be placed on the 500.0-acre MCMB. This servitude will be held by a conservation-oriented 501(c)(3) organization to be determined. The conservation servitude will be binding to and run with the title of the property. This conservation servitude will prohibit activities that would reduce the quality and quantity of the restored/enhanced wetlands, such as clear cutting, the discharge of fill, construction activities, cattle grazing, or other agricultural activities.

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

6.5 Long-Term Strategy

A long-term maintenance and protection escrow account will provide funding for long-term boundary maintenance and site protection in accordance with 33 CFR § 332.7 (d) into perpetuity. These long-term maintenance and site protection activities will be conducted by the Sponsor. The conservation easement will protect the site from any activities that would diminish the quality of restored wetlands on the site. No structures are proposed or would be necessary to assure hydrologic or vegetative restoration.

7.0 REFERENCES

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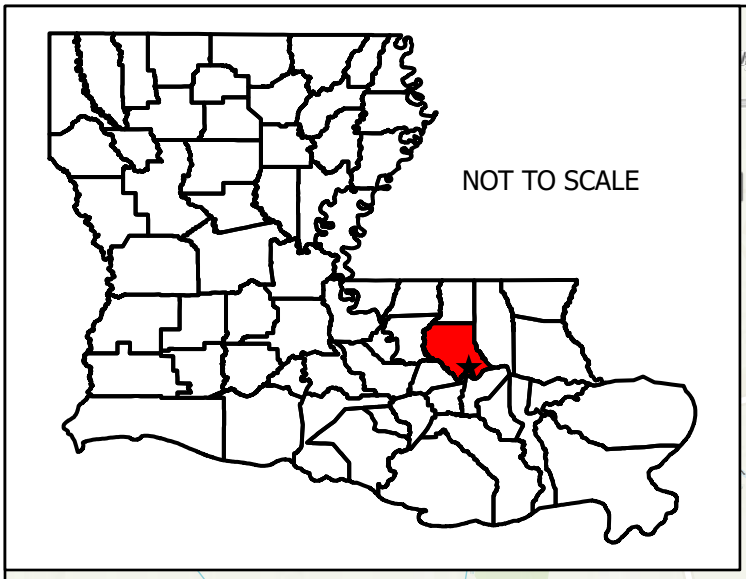
Attachment A:
Maps and Exhibits



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MAUREPAS COASTAL MITIGATION BANK

VICINITY EXHIBIT

LIVINGSTON PARISH, LA

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Vertical Datum: NAVD88 Feet	**Author:** CTG

FIGURE 01

JMB

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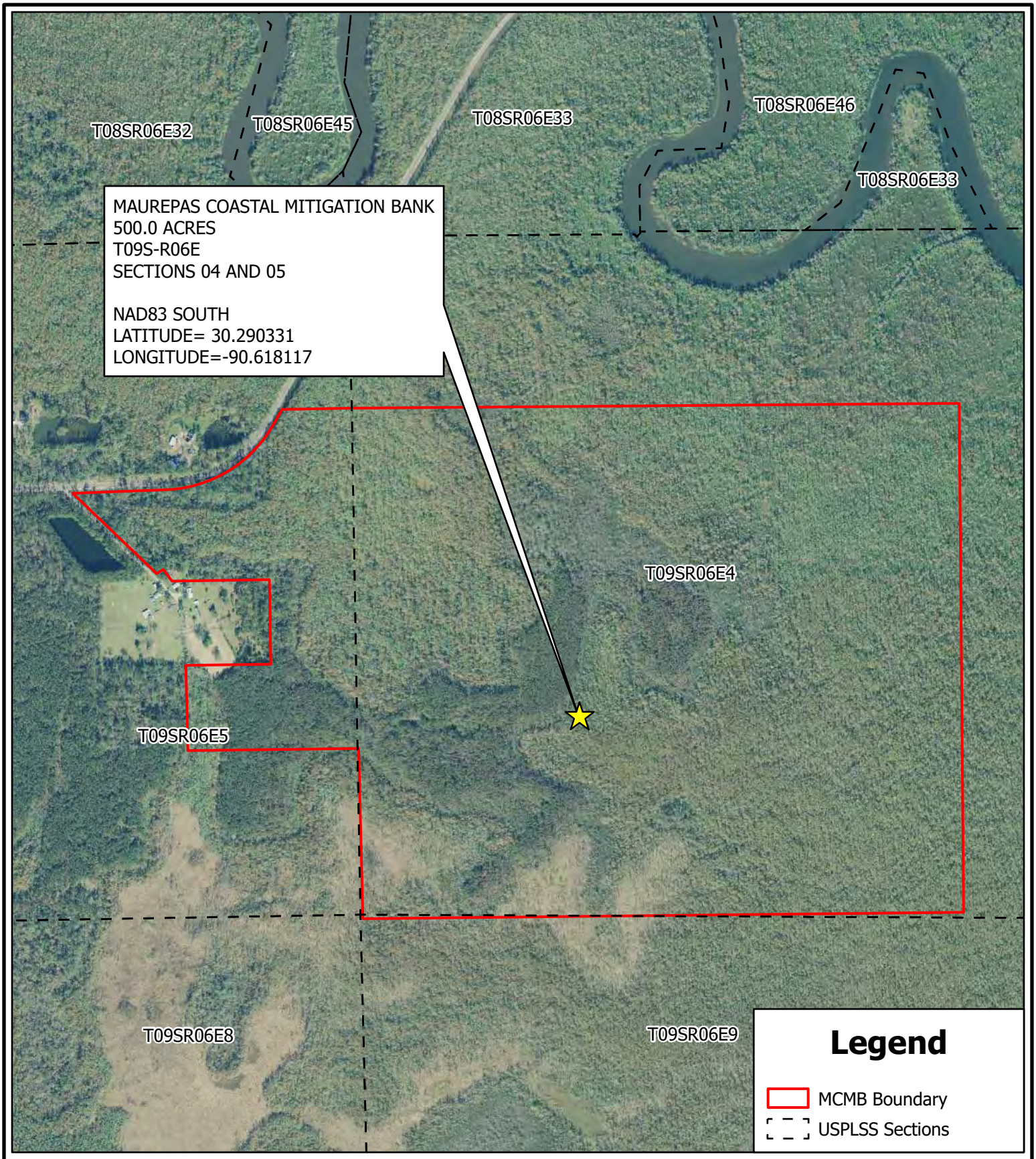

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MAUREPAS COASTAL MITIGATION BANK

BOUNDARY EXHIBIT

LIVINGSTON PARISH, LA

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FIGURE 02

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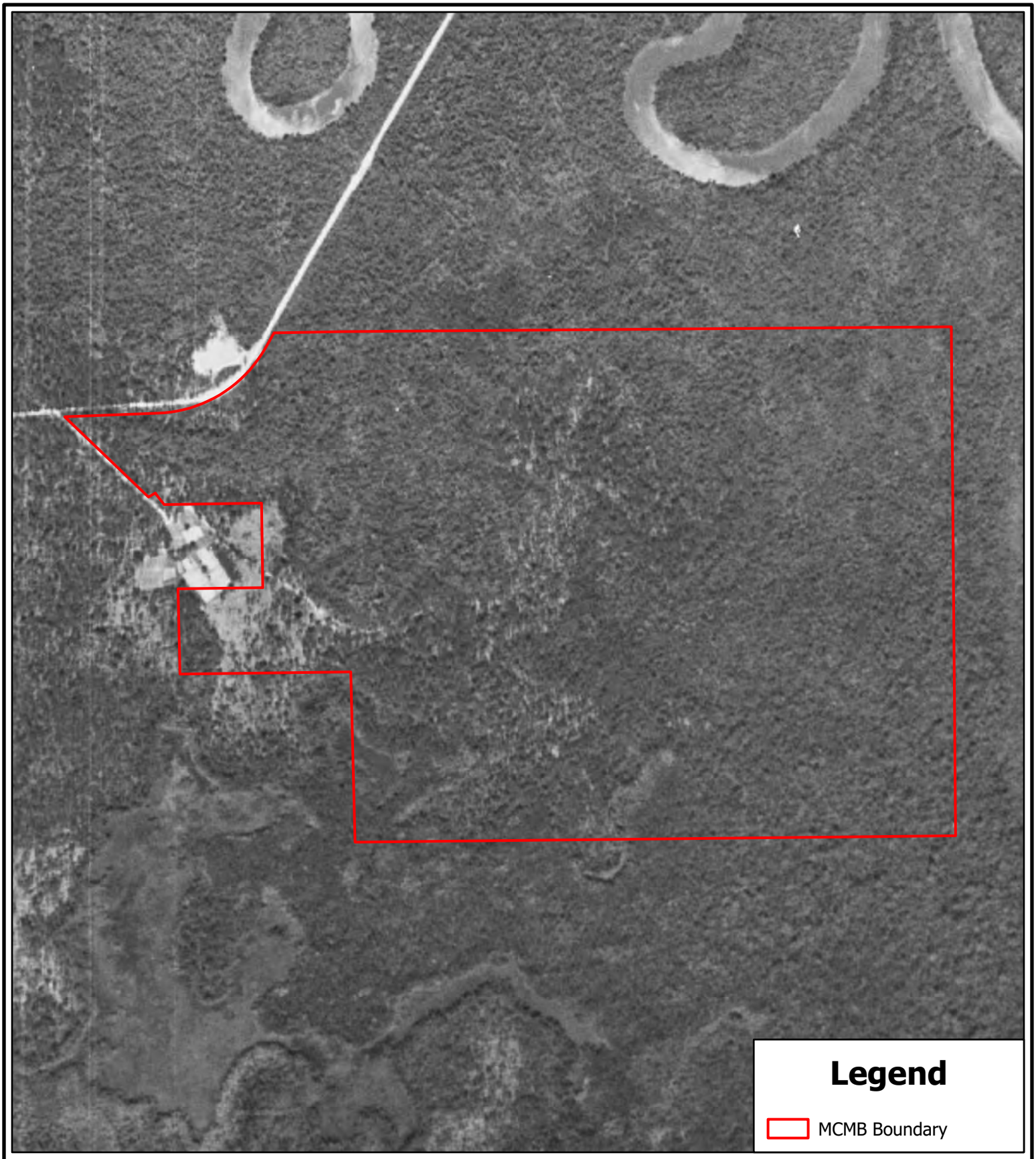

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MAUREPAS COASTAL MITIGATION BANK

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FIGURE 02A

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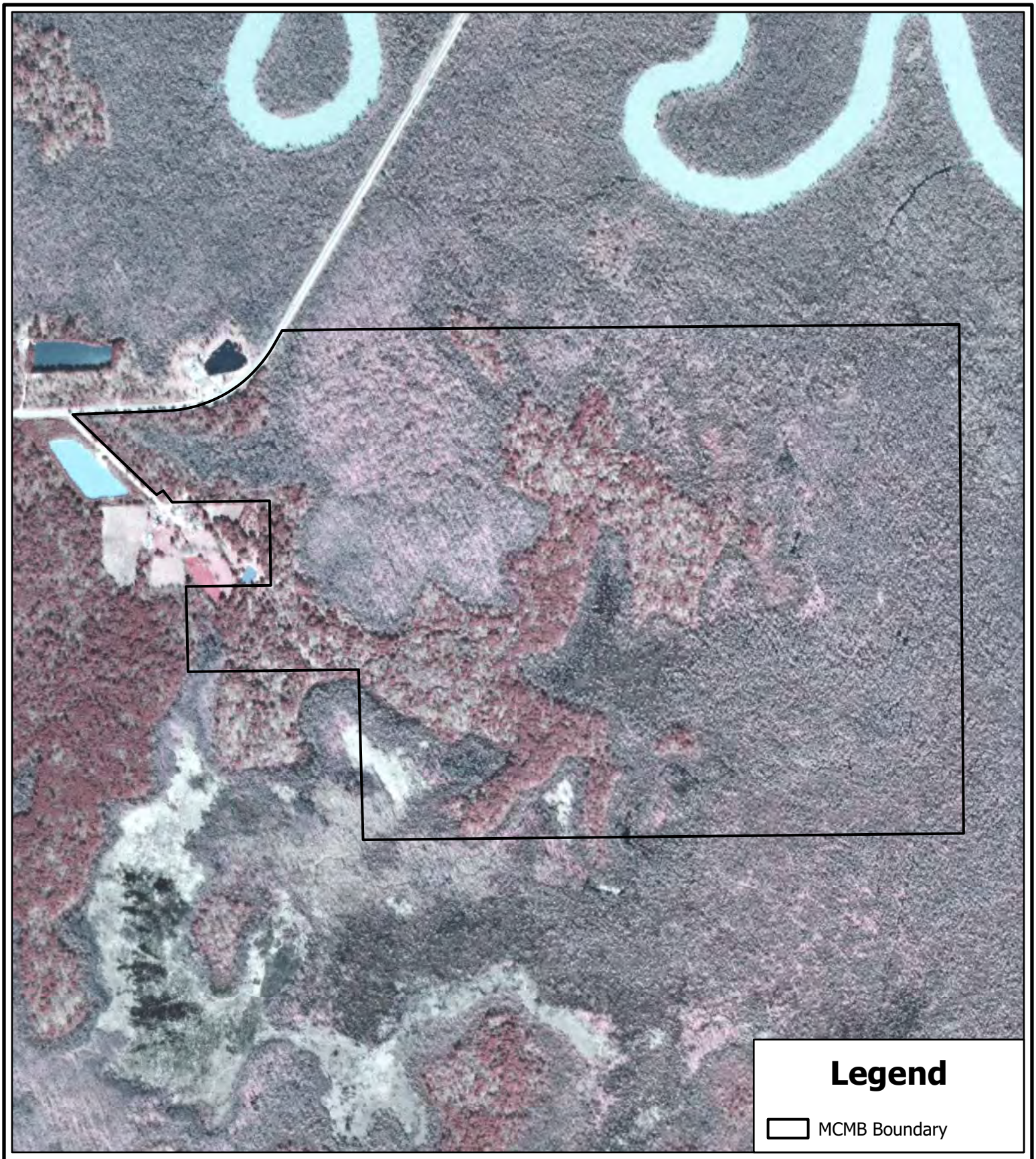

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MAUREPAS COASTAL MITIGATION BANK

1982 HISTORIC IMAGERY EXHIBIT

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FIGURE 02B

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MAUREPAS COASTAL MITIGATION BANK

2004 HISTORIC IMAGERY EXHIBIT

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FIGURE 02C

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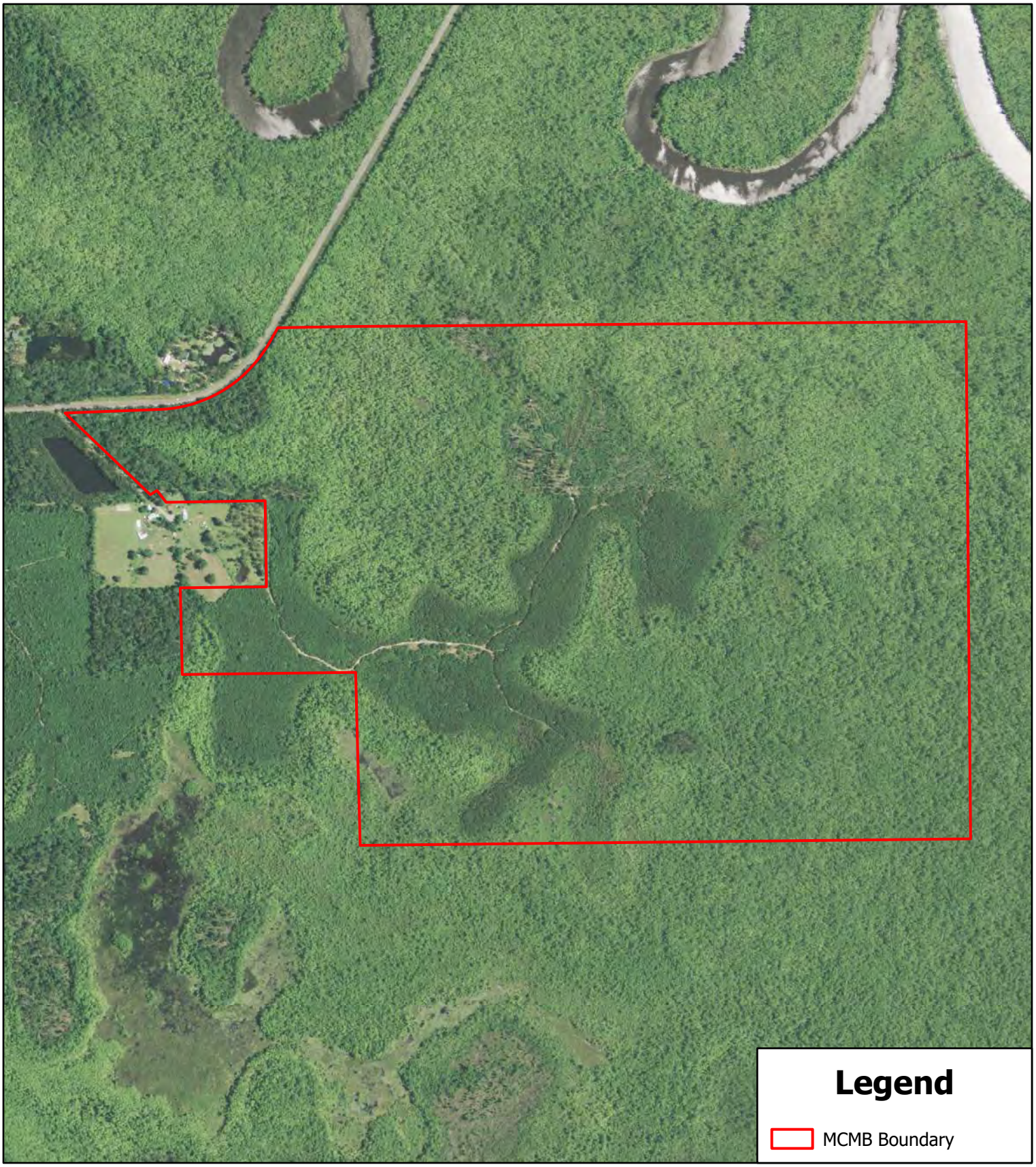

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MAUREPAS COASTAL MITIGATION BANK

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FIGURE 02D

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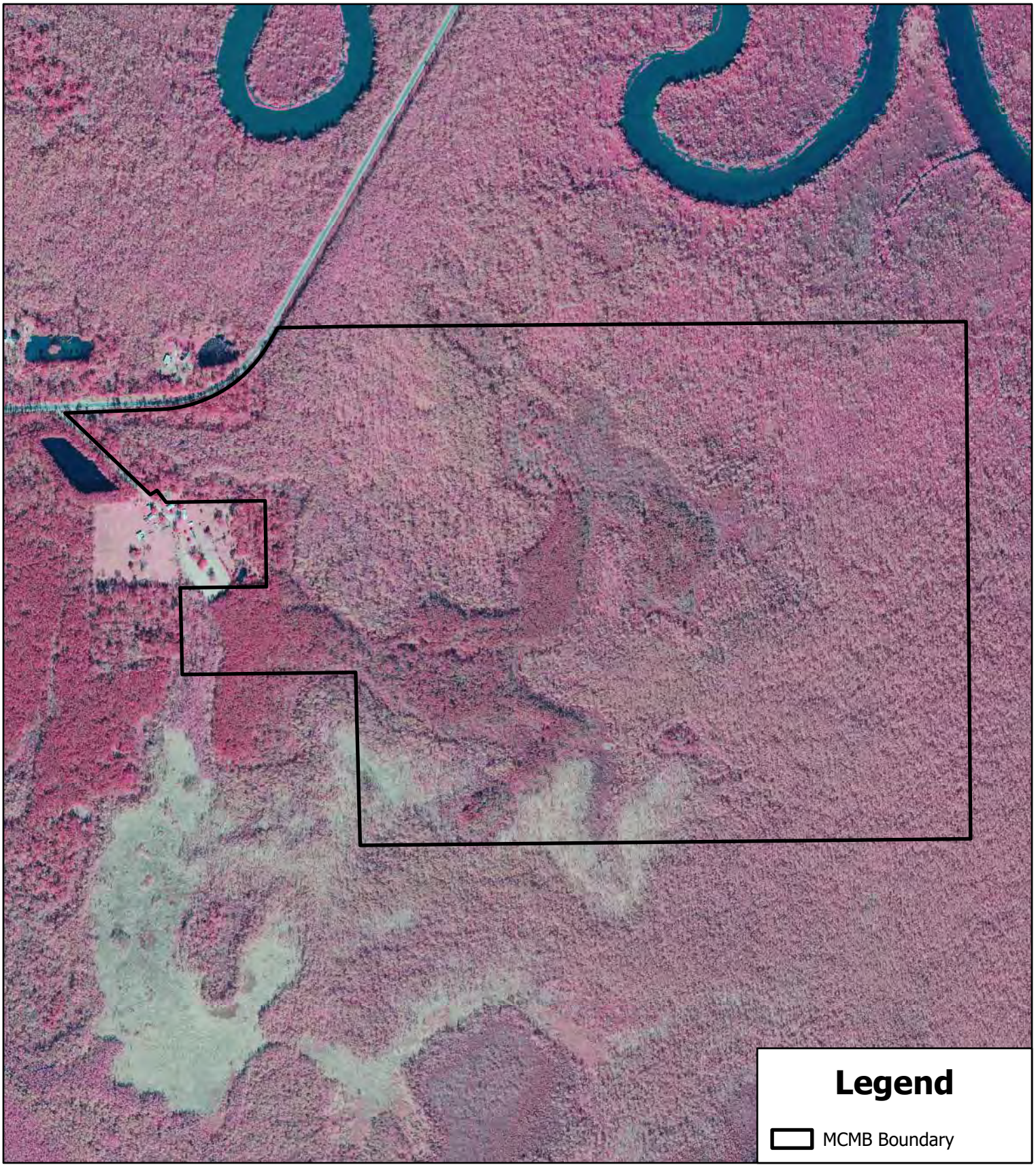

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MAUREPAS COASTAL MITIGATION BANK

2021 COLOR INFRARED IMAGERY EXHIBIT

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FIGURE 02E

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MAUREPAS COASTAL MITIGATION BANK

2021 IMAGERY EXHIBIT

LIVINGSTON PARISH, LA

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FIGURE 02F

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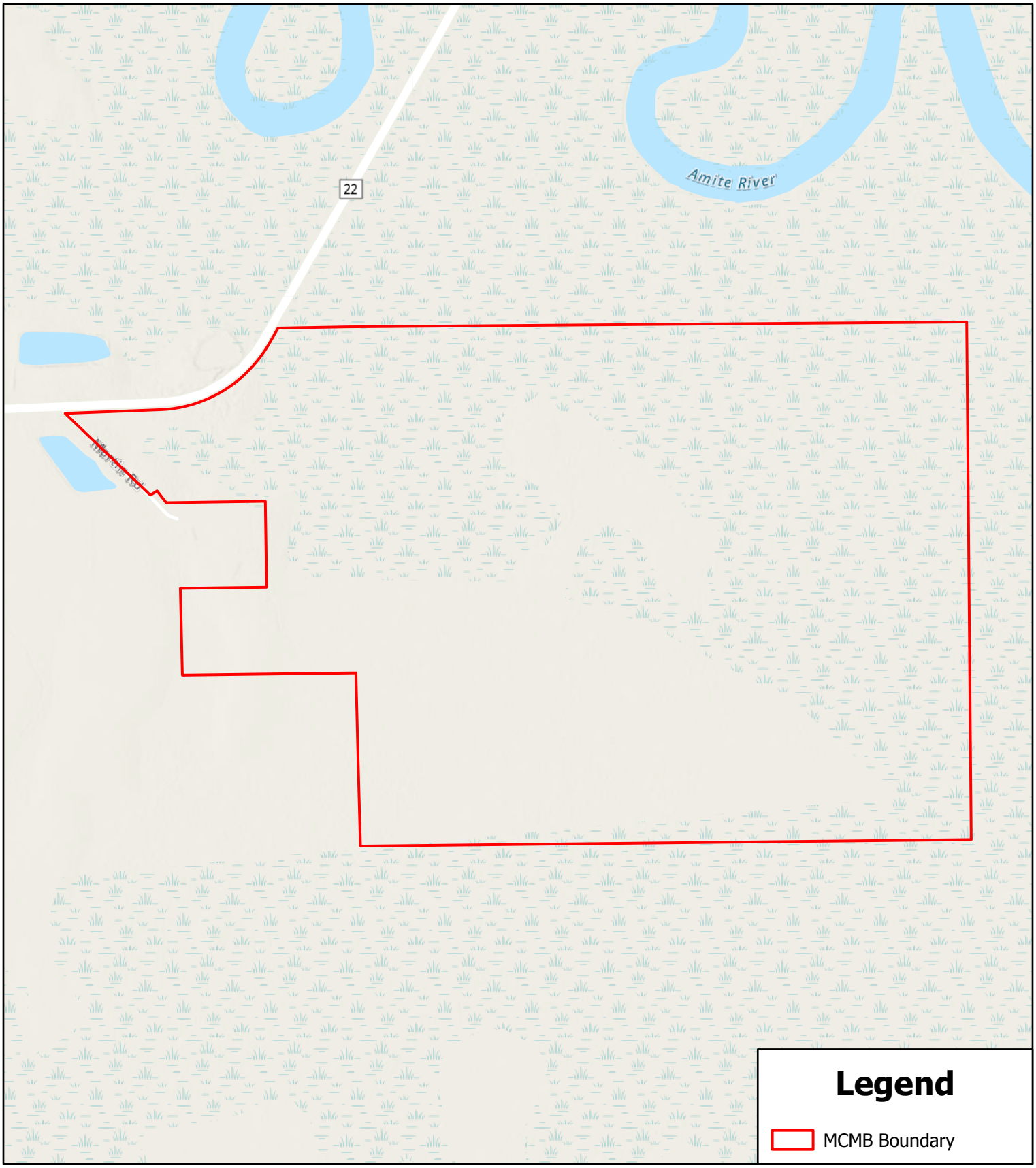

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MAUREPAS COASTAL MITIGATION BANK

USGS TOPOGRAPHIC EXHIBIT

LIVINGSTON PARISH, LA

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Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 03

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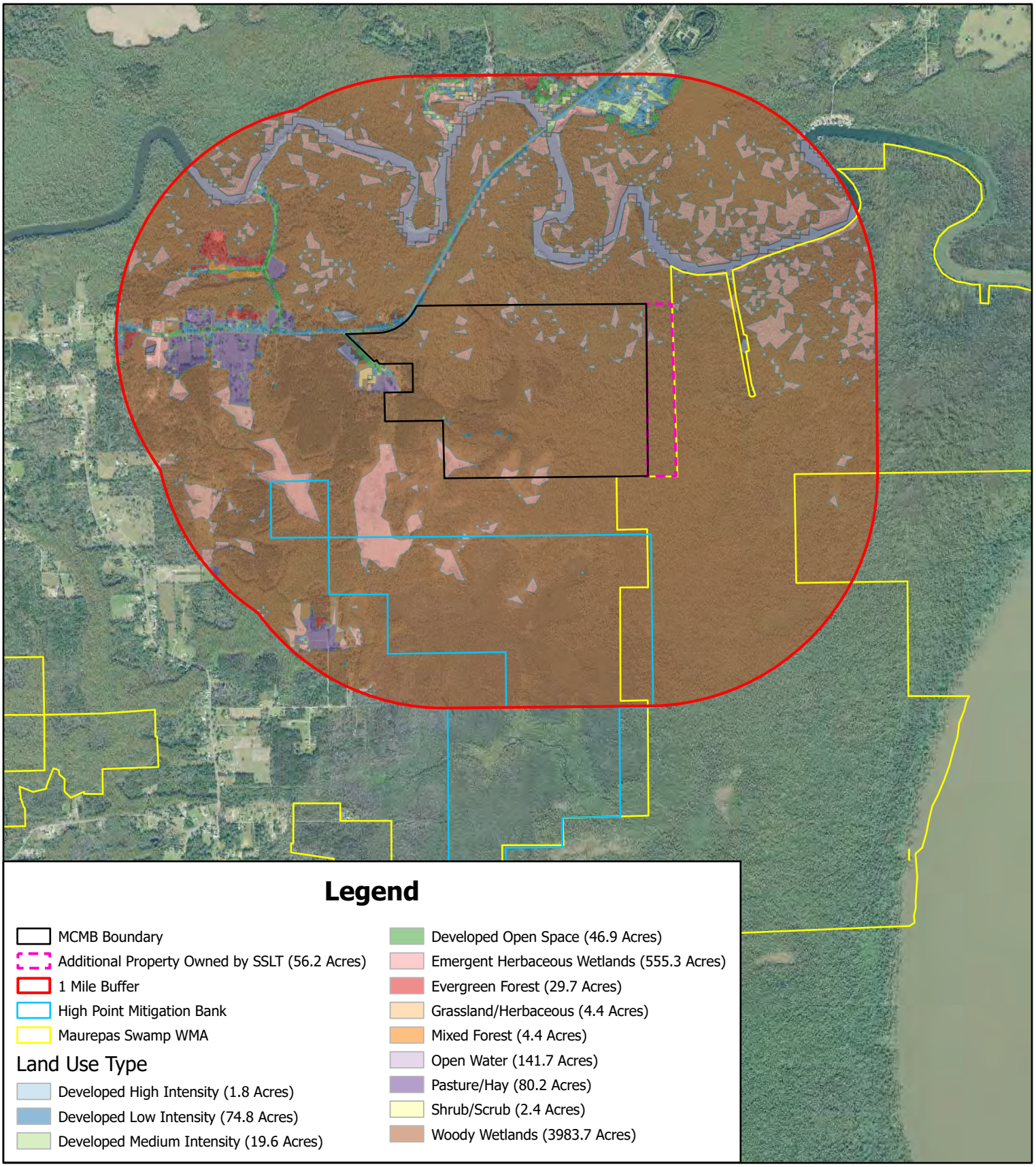

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MAUREPAS COASTAL MITIGATION BANK

LAND USE/LAND COVER WITHIN 1 MILE RADIUS EXHIBIT

LIVINGSTON PARISH, LA

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FIGURE 04

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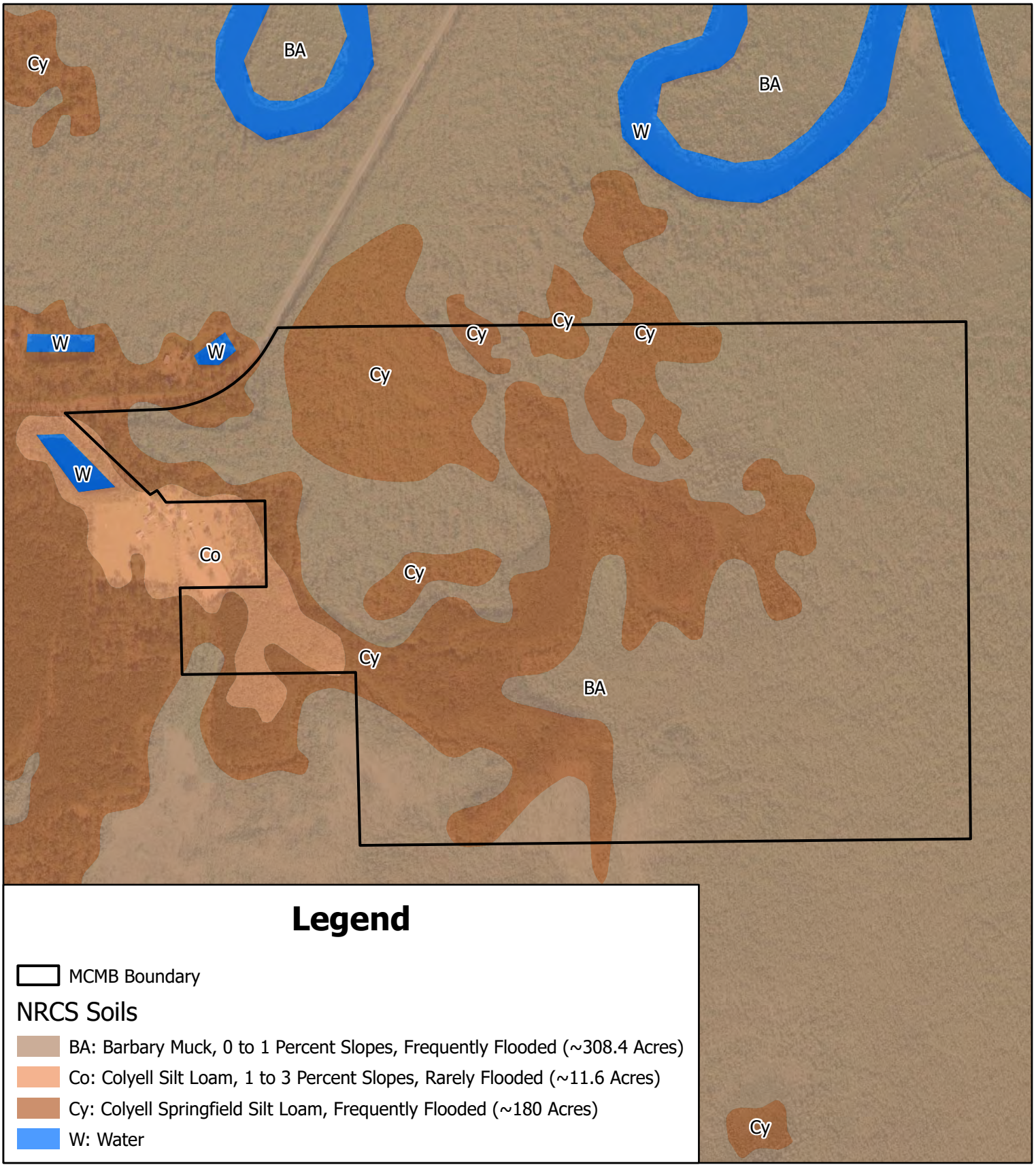


Legend

MCMB Boundary

NRCS Soils

- BA: Barbary Muck, 0 to 1 Percent Slopes, Frequently Flooded (~308.4 Acres)
- Co: Colyell Silt Loam, 1 to 3 Percent Slopes, Rarely Flooded (~11.6 Acres)
- Cy: Colyell Springfield Silt Loam, Frequently Flooded (~180 Acres)
- W: Water

0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

NRCS SOILS EXHIBIT

LIVINGSTON PARISH, LA

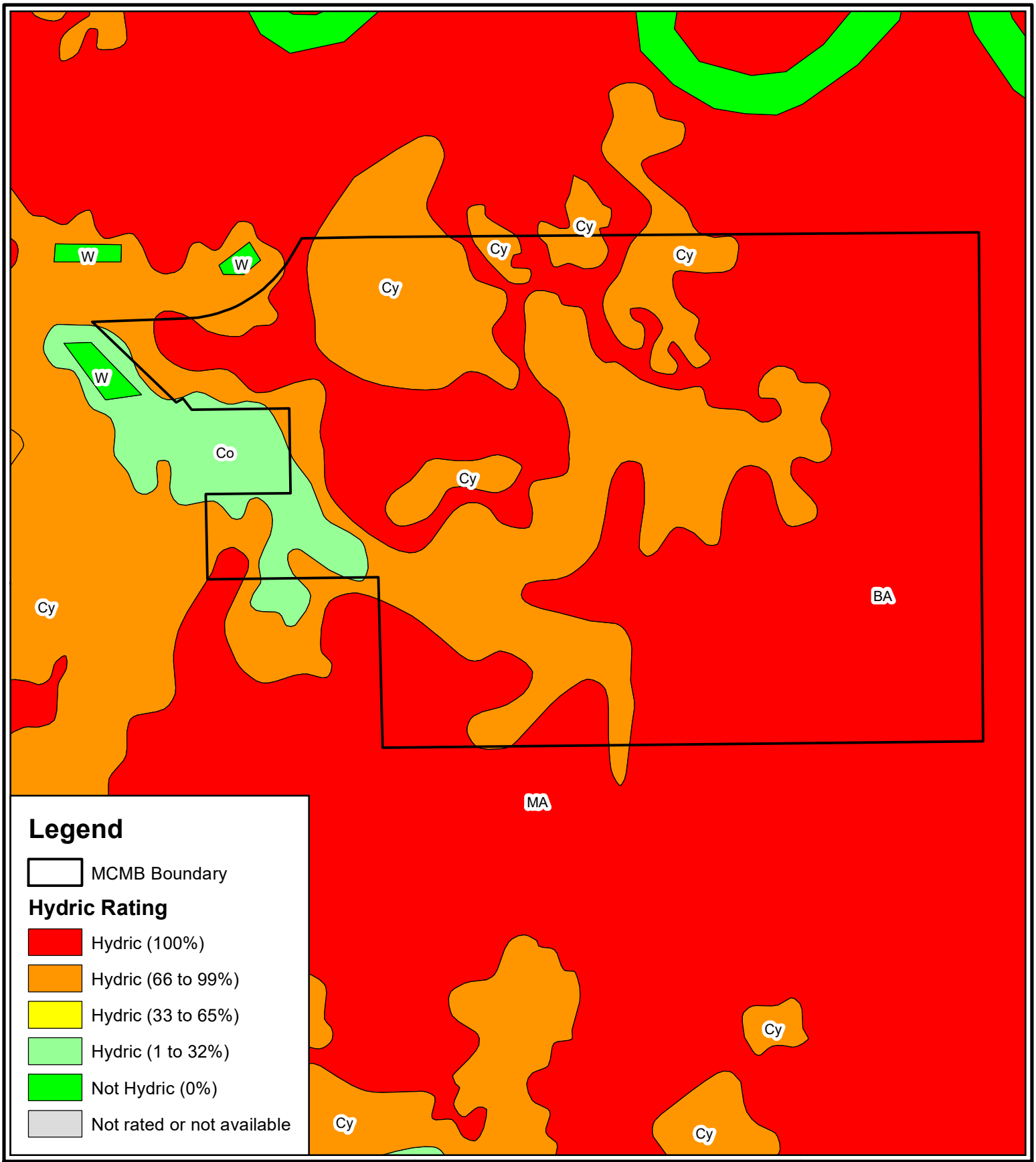
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/3/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 05

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000

Feet 1 in = 1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

HYDRIC RATING EXHIBIT

LIVINGSTON PARISH, LA

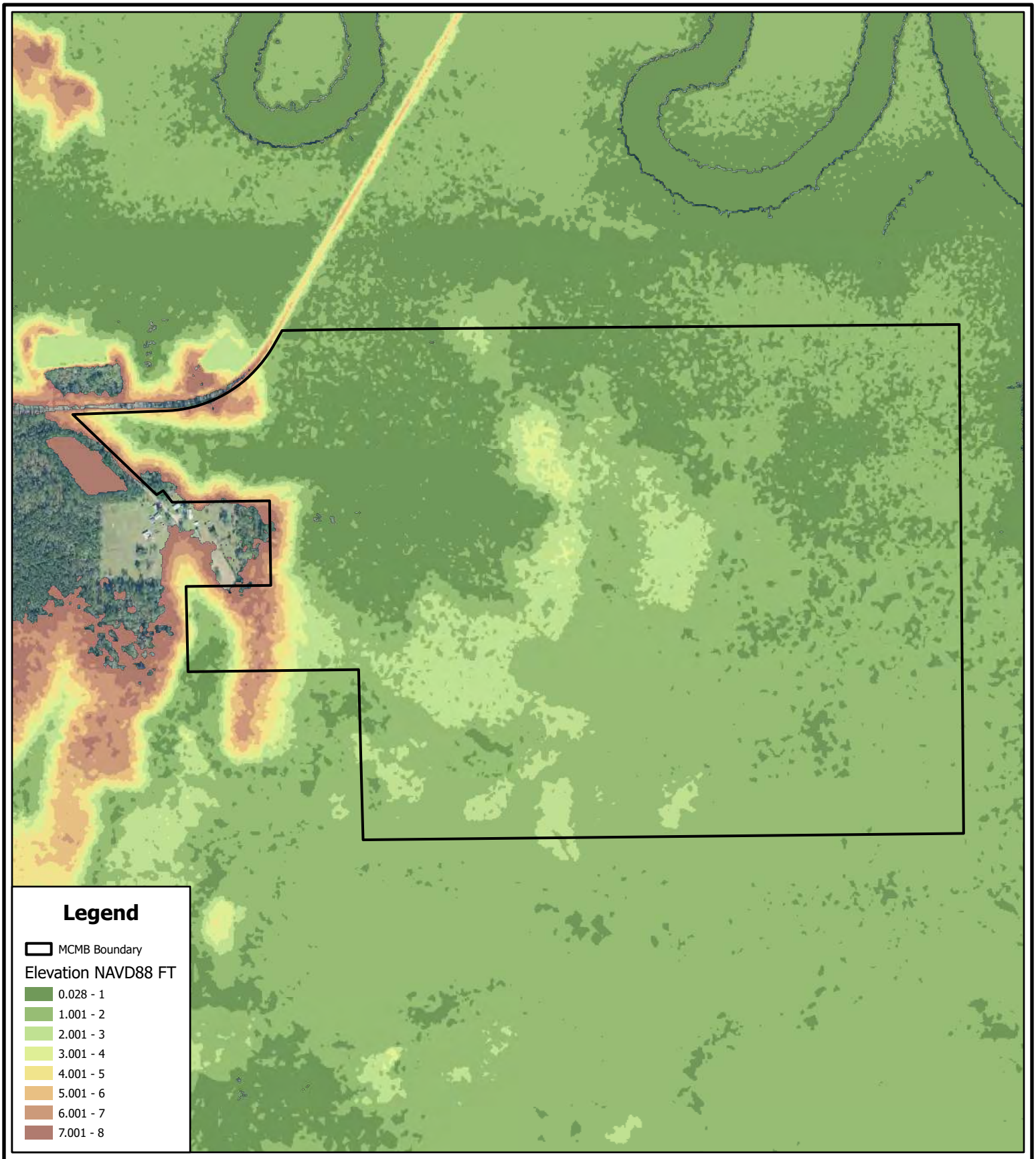
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/3/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 06

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\GIS Projects (.MXD)\prospectus maps\Figure_04_MCMB_soils_EXHIBIT.mxd



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

ELEVATION EXHIBIT

LIVINGSTON PARISH, LA

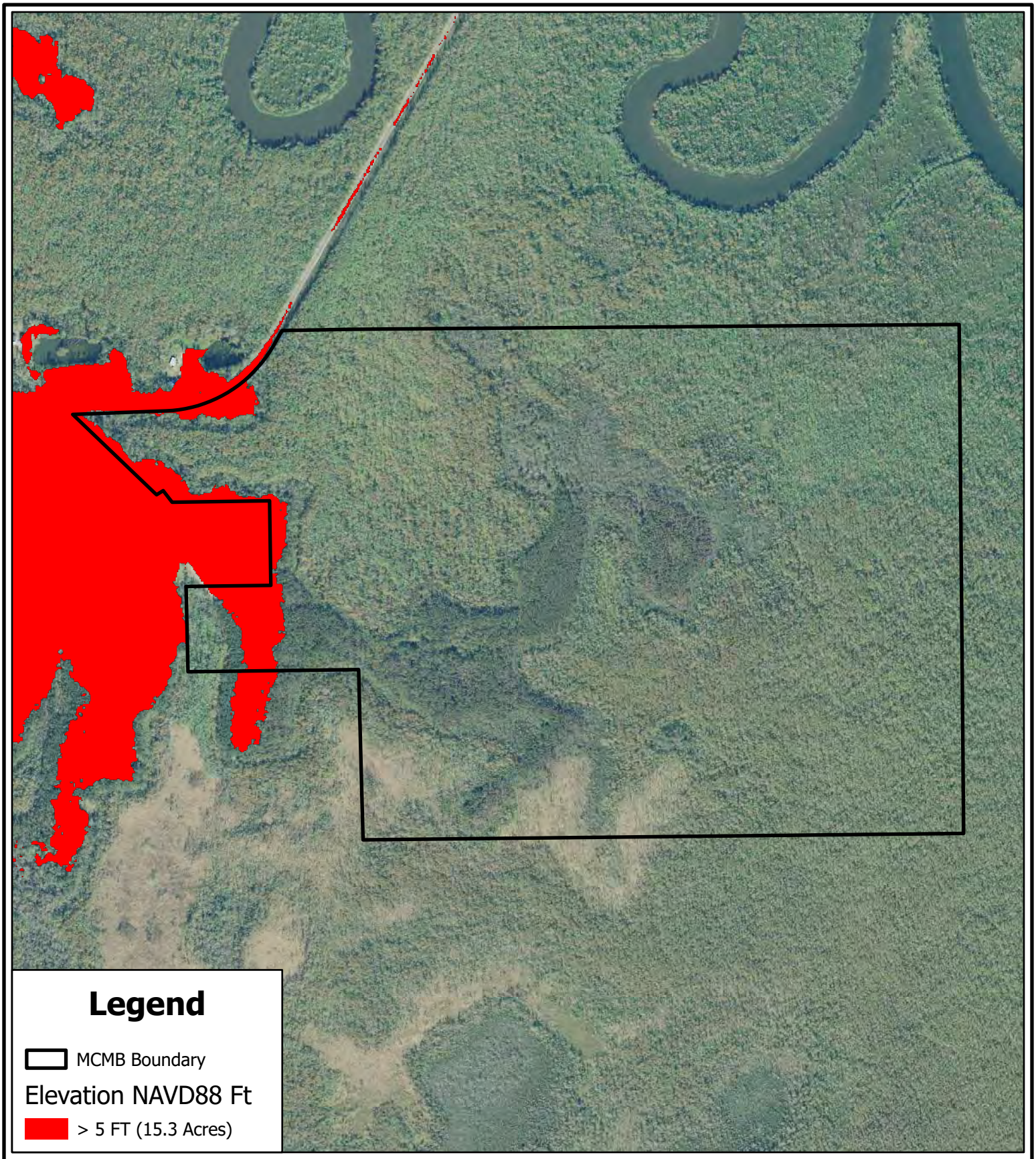
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/3/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 07

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

FIVE FOOT CONTOUR EXHIBIT

LIVINGSTON PARISH, LA

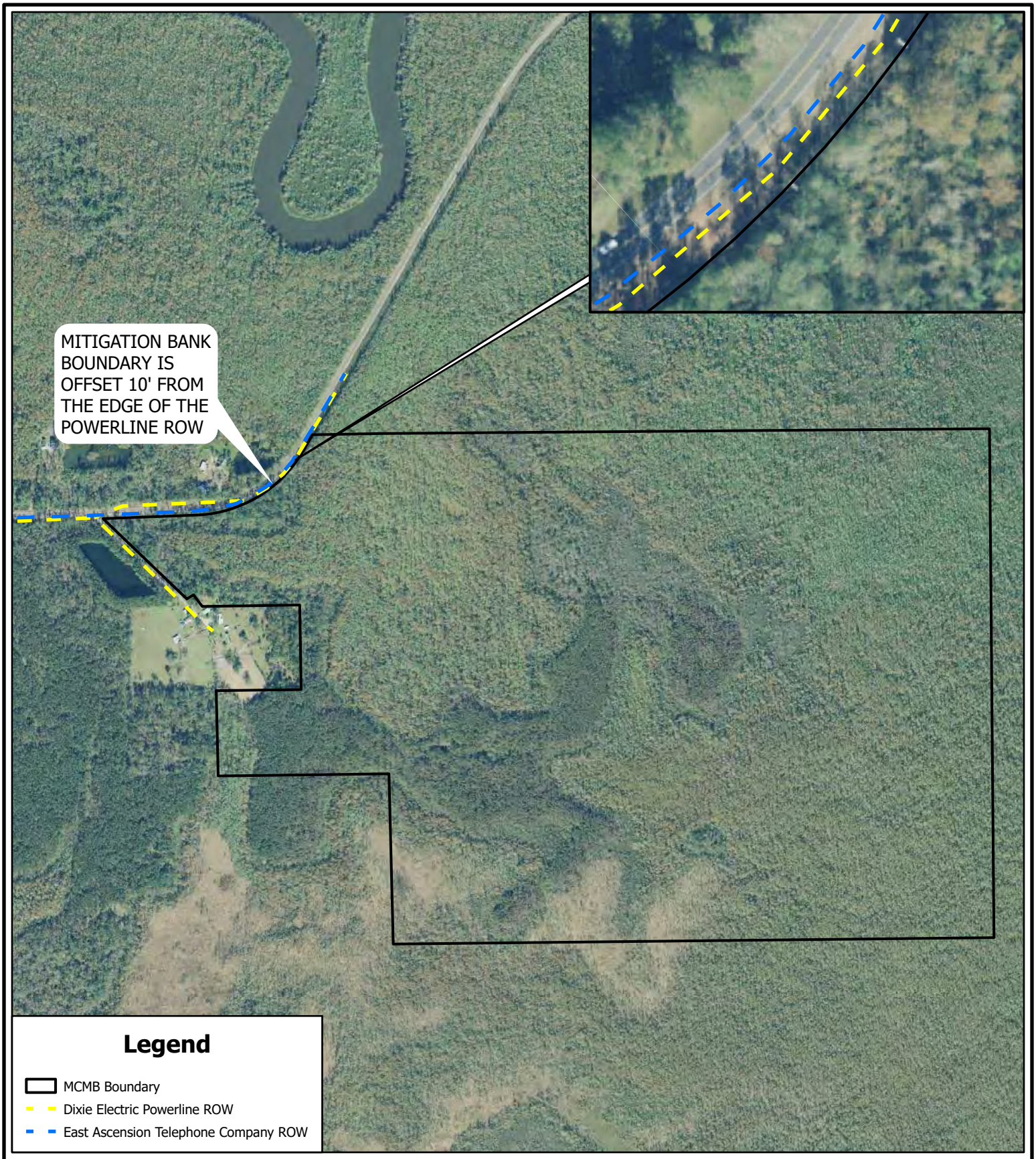
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 7/19/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 08

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

R.O.W. AND EASEMENT EXHIBIT

LIVINGSTON PARISH, LA

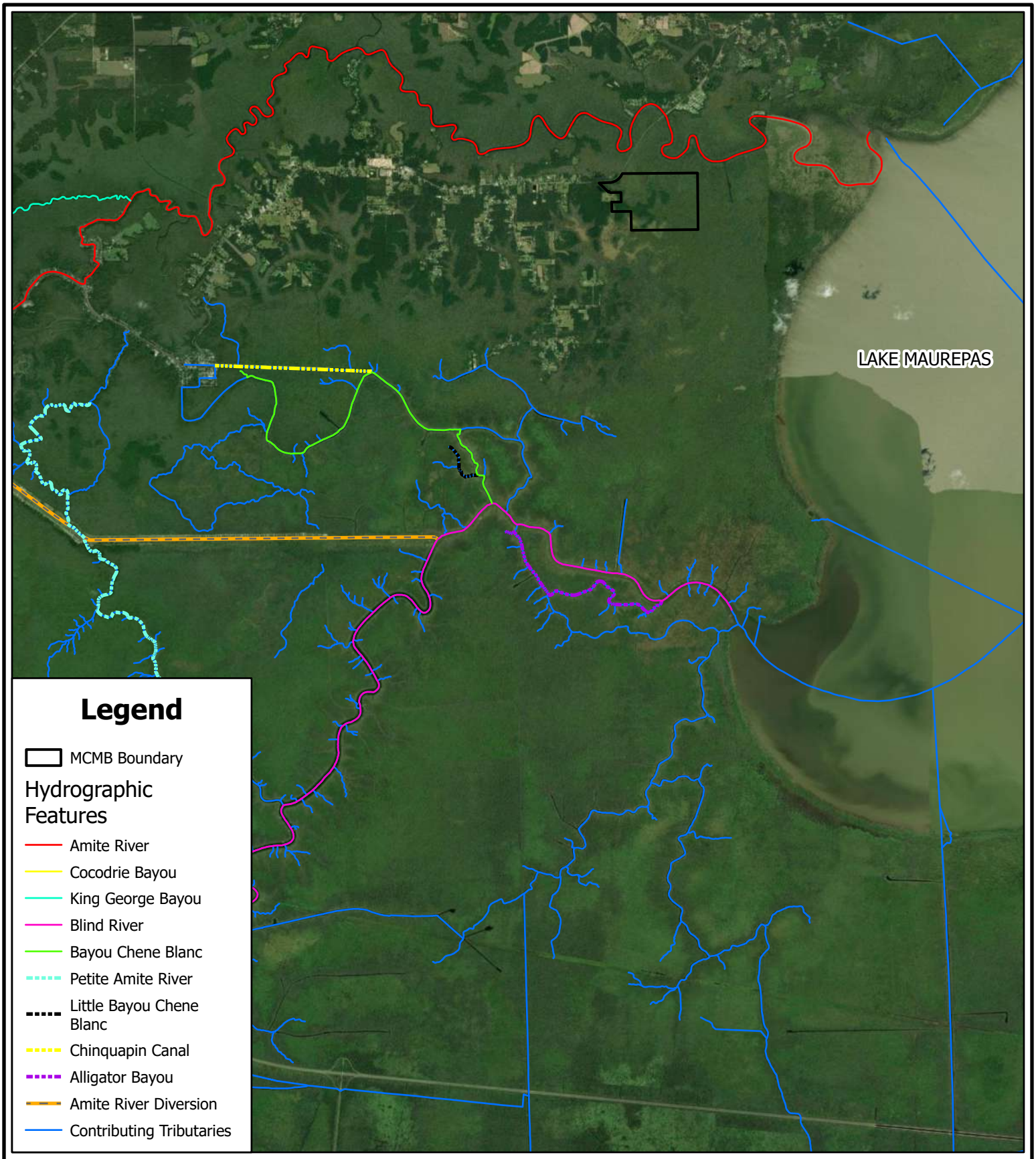
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/18/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 09

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 0.75 1.5 2.25 3 Miles

1 in =2 Miles

N

MAUREPAS COASTAL MITIGATION BANK

NATIONAL HYDROGRAPHY DATABASE EXHIBIT

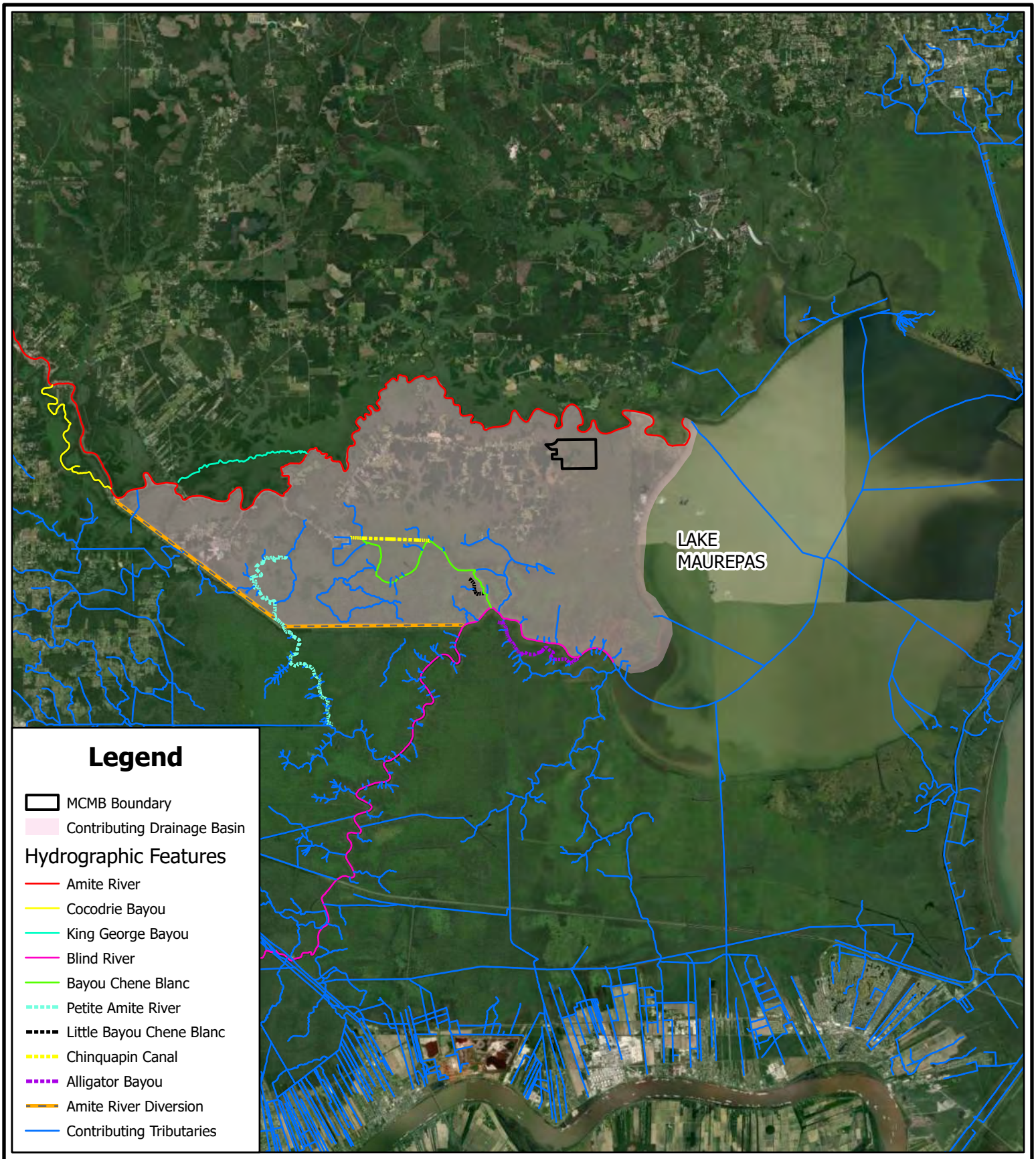
LIVINGSTON PARISH, LA

Coord Sys:	NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US	**Date:**	5/3/2023
Vertical Datum:	NAVD88 Feet	**Author:**	CTG

FIGURE 10

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 1.5 3 4.5 6 Miles

1 in =3 miles

N

MAUREPAS COASTAL MITIGATION BANK

CONTRIBUTING DRAINAGE BASIN EXHIBIT

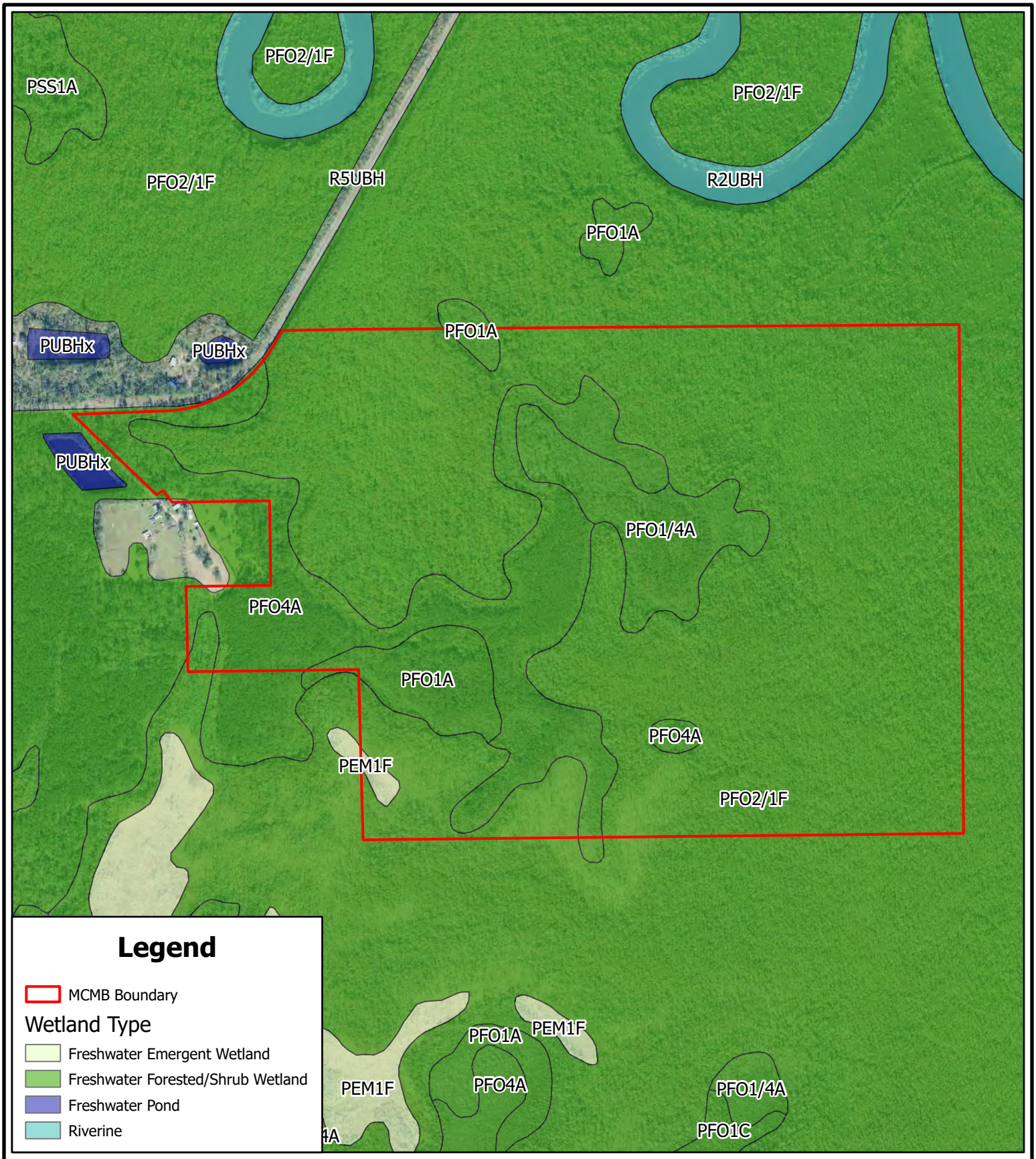
LIVINGSTON PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US	**Date:** 5/3/2023
Vertical Datum: NAVD88 Feet	**Author:** CTG

FIGURE 10A

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

NATIONAL WETLANDS INVENTORY EXHIBIT

LIVINGSTON PARISH, LA

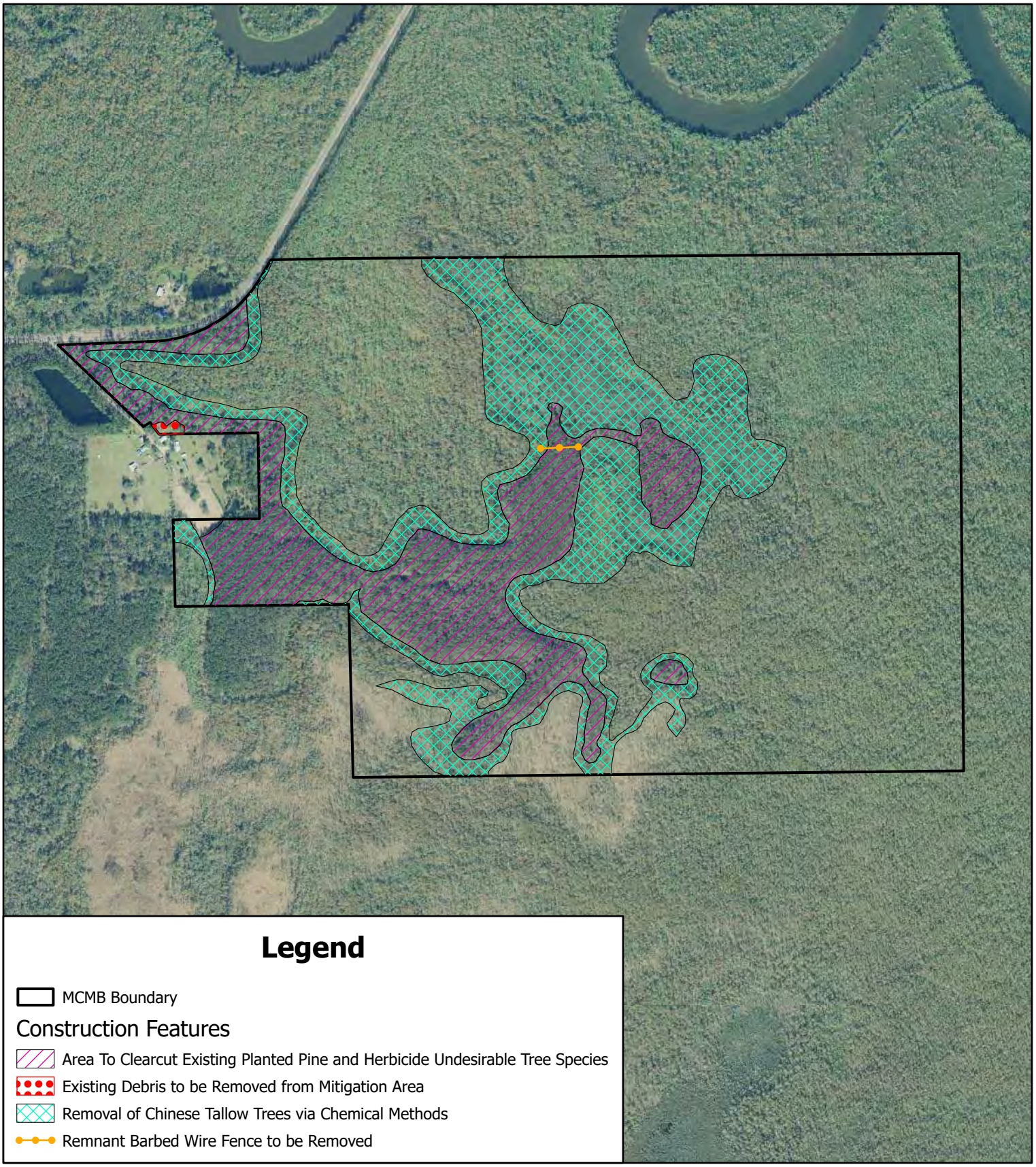
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/3/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 11

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

PROPOSED CONSTRUCTION EXHIBIT

LIVINGSTON PARISH, LA

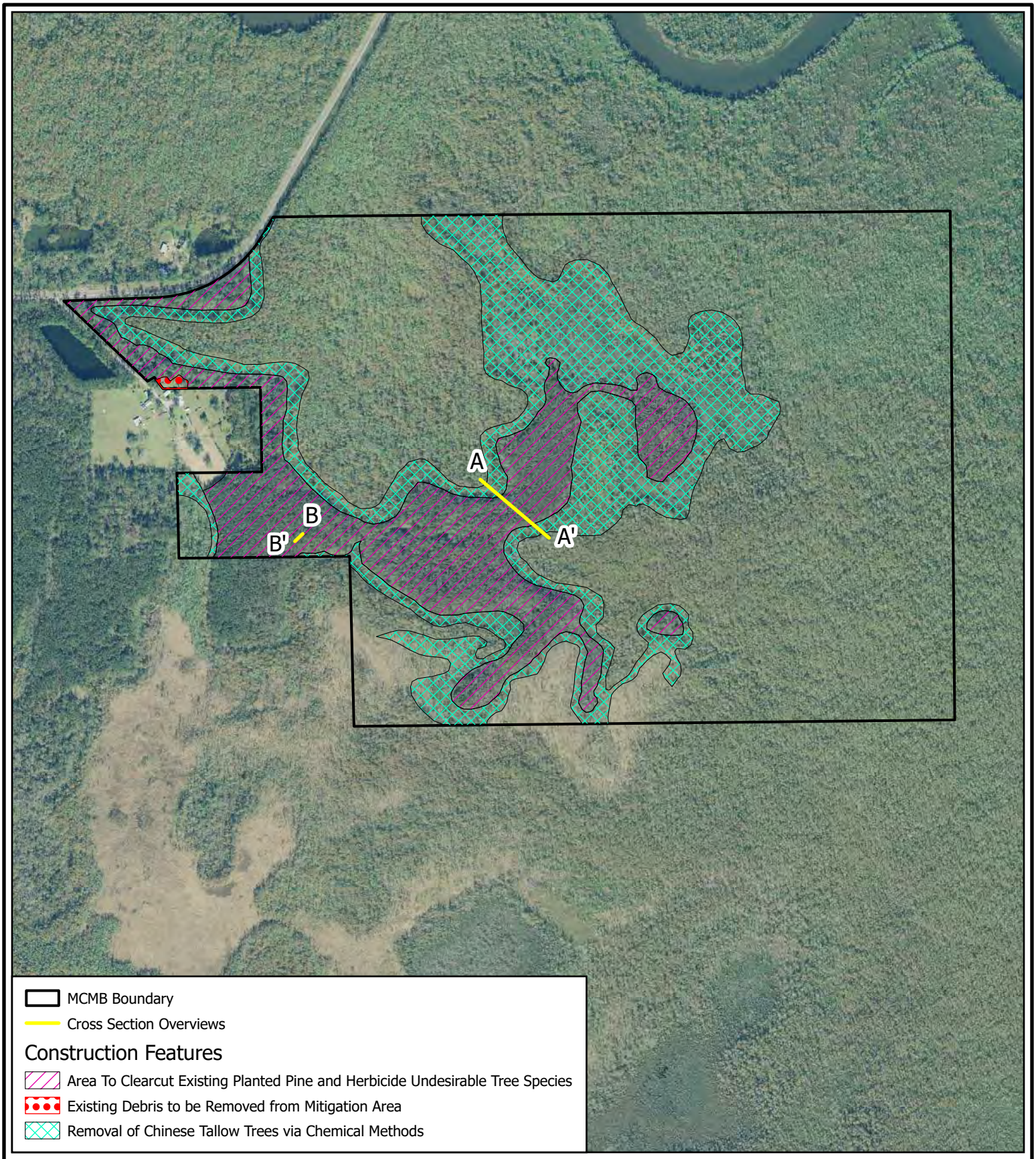
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/24/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 12

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

CROSS SECTION OVERVIEW EXHIBIT

LIVINGSTON PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 7/19/2023

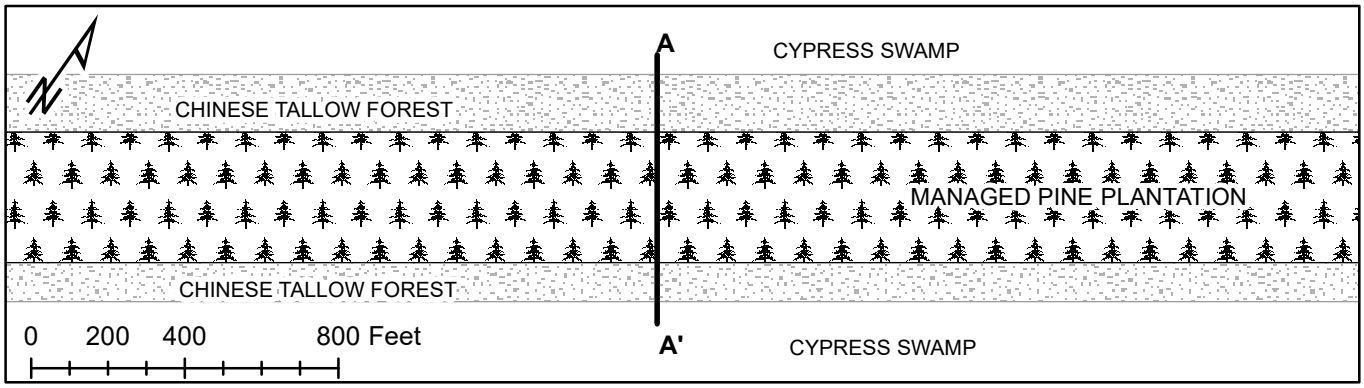
Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 12A

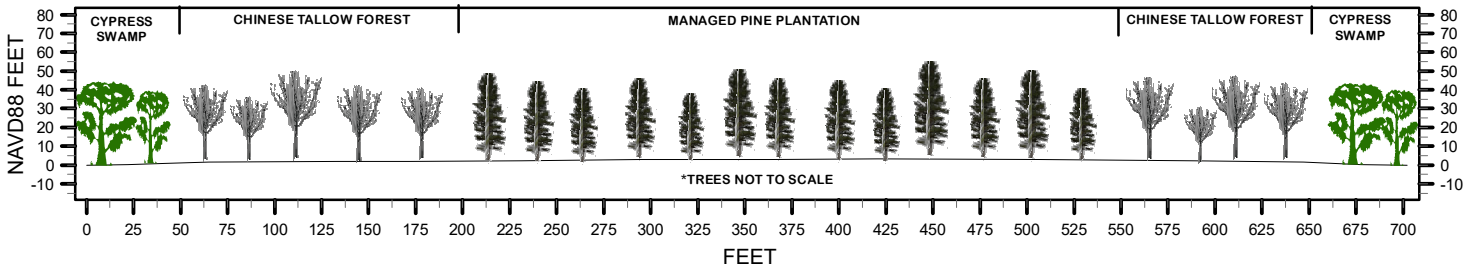
JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx

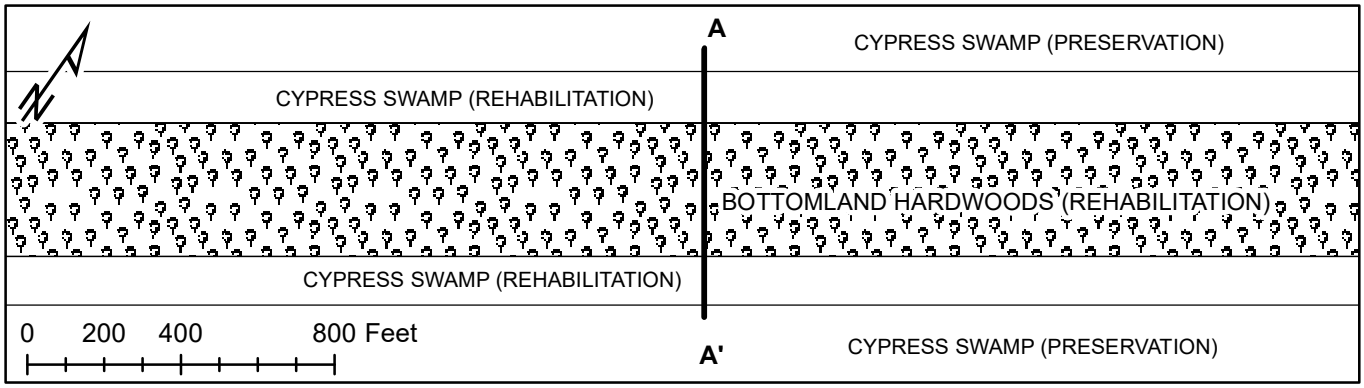
EXISTING PLAN VIEW



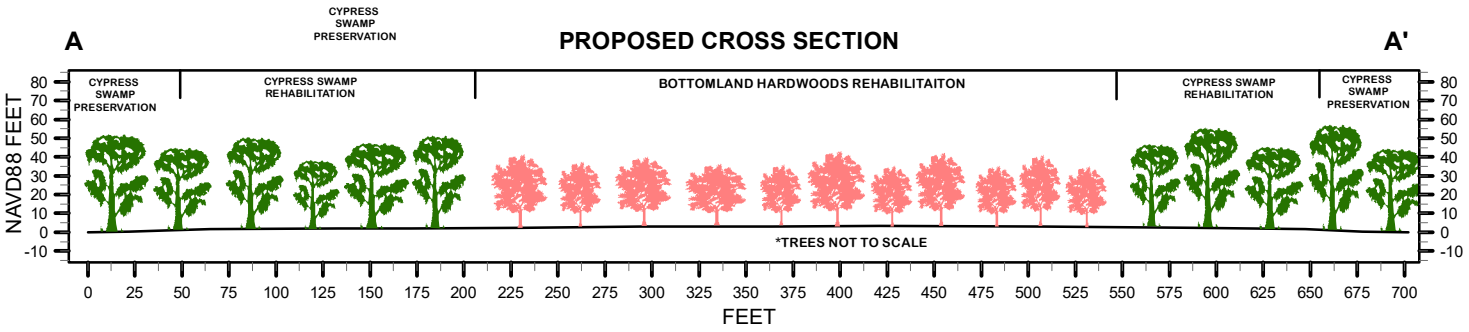
EXISTING CROSS SECTION



PROPOSED PLAN VIEW



PROPOSED CROSS SECTION



CYPRESS SWAMP AREAS TO BE PLANTED AT 12'X12' SPACING

BOTTOMLAND HARDWOOD AREAS TO BE PLANTED AT 9'X9' SPACING

MAUREPAS COASTAL MITIGATION BANK

CROSS SECTION A EXHIBIT

LIVINGSTON PARISH, LA

Drawing No.:

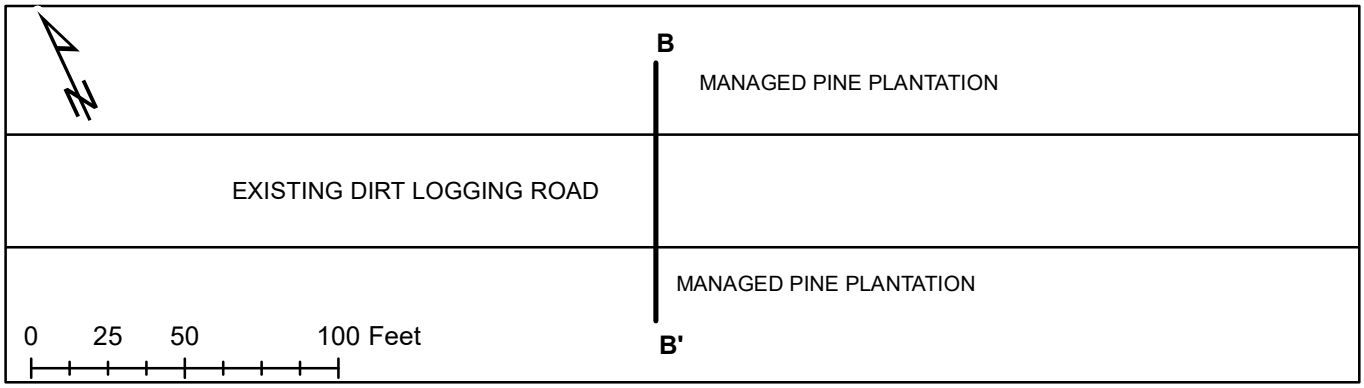
Date: 05/24/2023 Author: CTG

FIGURE 12B

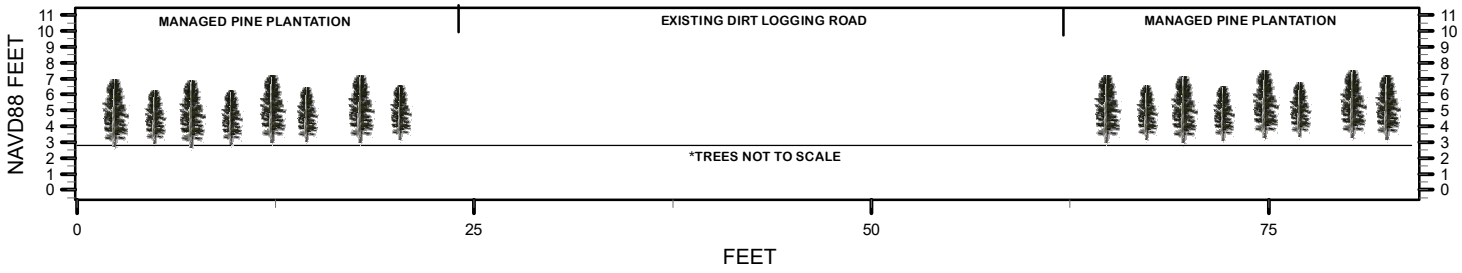
JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\GIS Projects (.MXD)\COE Plans\Figure 12B_MCMB_ XSections_A.mxd

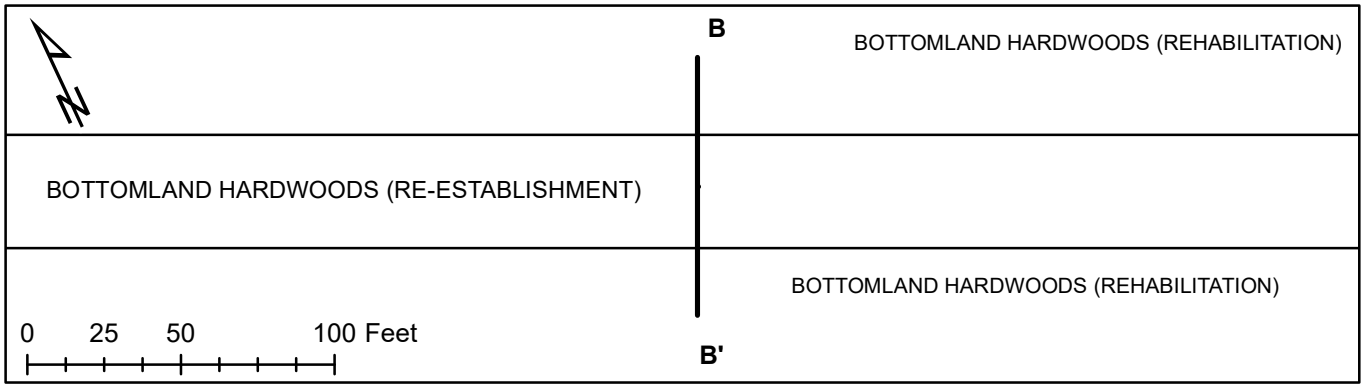
EXISTING PLAN VIEW



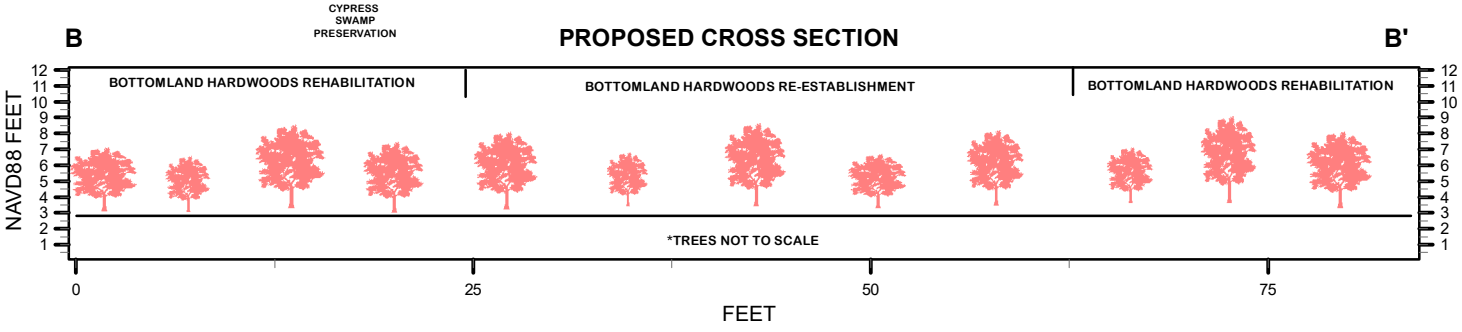
EXISTING CROSS SECTION



PROPOSED PLAN VIEW



PROPOSED CROSS SECTION



MAUREPAS COASTAL MITIGATION BANK

CROSS SECTION B EXHIBIT

LIVINGSTON PARISH, LA

Drawing No.:

Date: 05/24/2023 Author: CTG

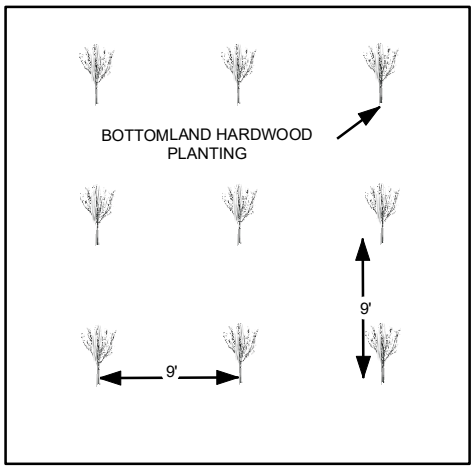
FIGURE 12C

JMB

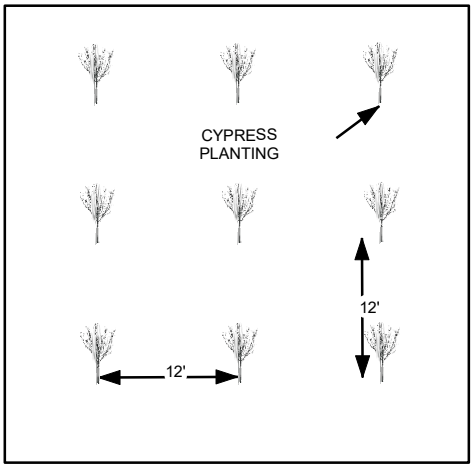
Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\GIS Projects (.MXD)\COE Plans\Figure 12C_MCMB_ XSections_B.mxd

VEGETATIVE PLANTING

BOTTOMLAND HARDWOODS



CYPRESS SWAMP



NOTES:

BOTTOMLAND HARDWOODS TO BE PLANTED AT 9 FOOT SPACING. PROPOSED TREE DENSITY IS 538 TREES PER ACRE.

CYPRESS SWAMP TO BE PLANTED AT 12 FOOT SPACING. PROPOSED TREE DENSITY IS 302 TREES PER ACRE.

MAUREPAS COASTAL MITIGATION BANK

PLANTING EXHIBIT

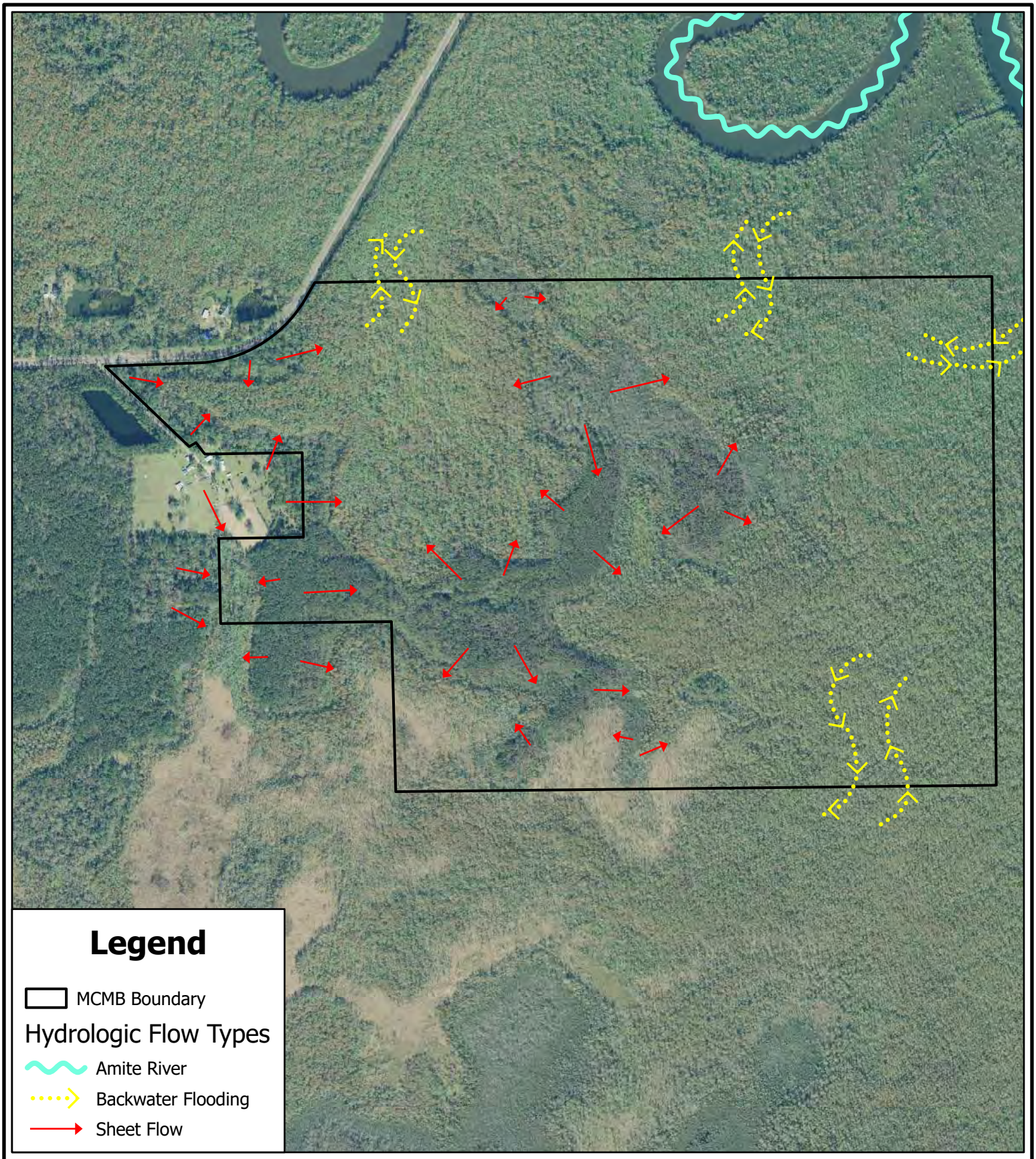
LIVINGSTON PARISH, LA

Drawing No.:

Date: 05/24/2023 Author: CTG

FIGURE 12D

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\GIS Projects (.MXD)\COE Plans\Figure_XX_COE Plans_MCMB_XSections_Planting_.mxd



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

CURRENT SITE HYDROLOGY EXHIBIT

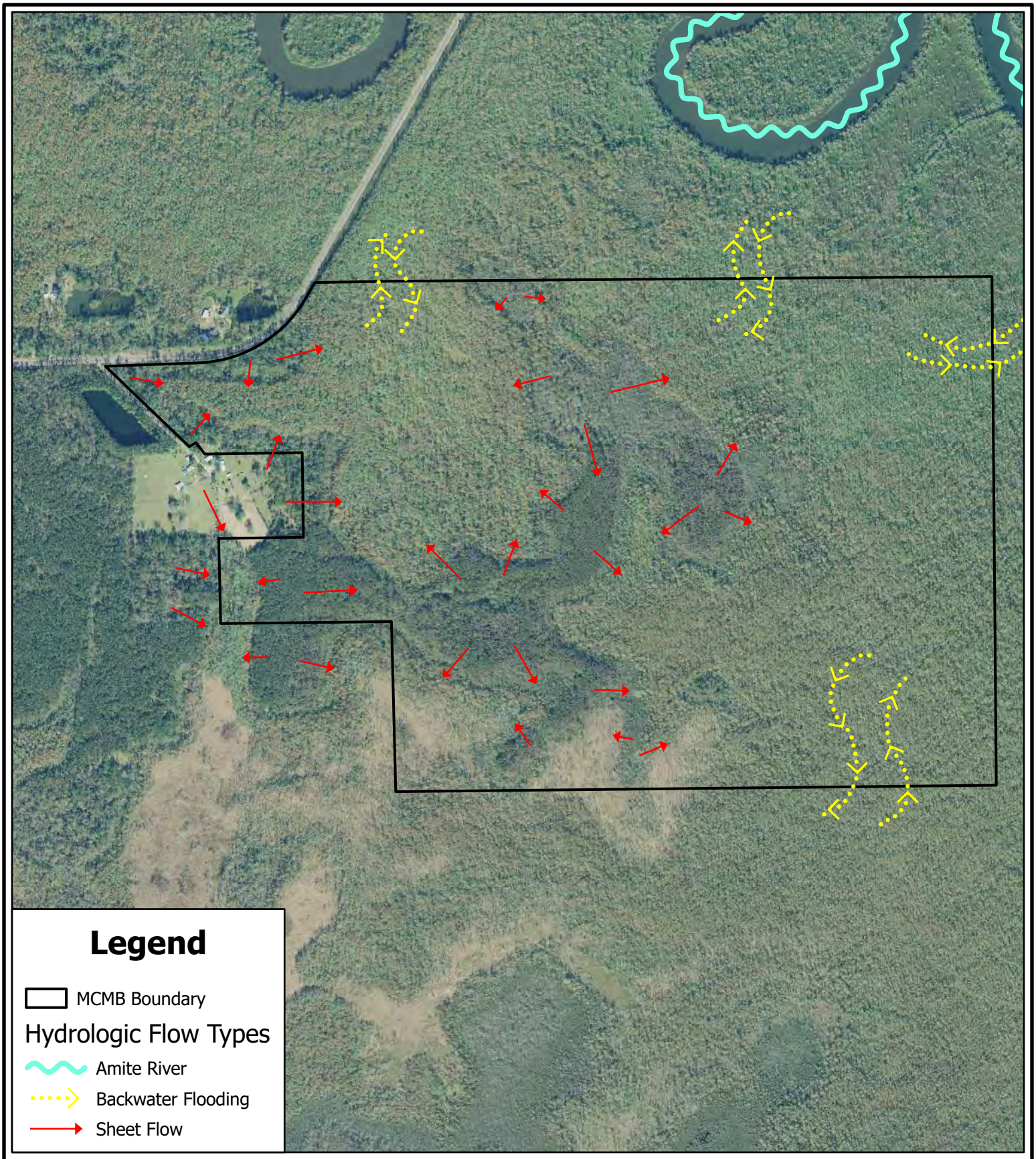
LIVINGSTON PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US	**Date:** 5/3/2023
Vertical Datum: NAVD88 Feet	**Author:** CTG

FIGURE 13

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



NO CONSTRUCTION IS PROPOSED THAT WILL ALTER HYDROLOGY

0 500 1,000 1,500 2,000

Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

PROPOSED SITE HYDROLOGY EXHIBIT

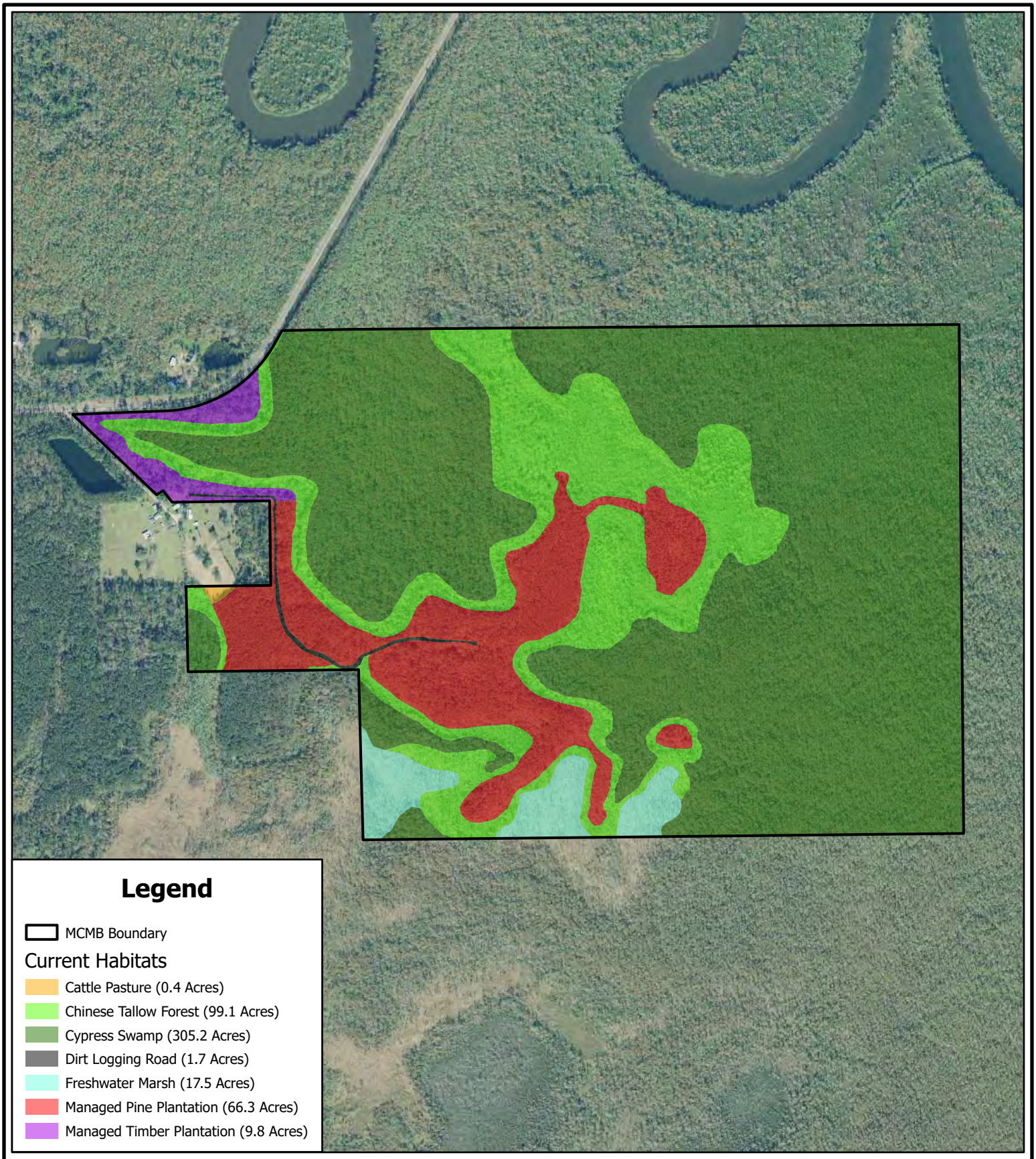
LIVINGSTON PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US	**Date:** 5/3/2023
Vertical Datum: NAVD88 Feet	**Author:** CTG

FIGURE 14

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

CURRENT HABITATS EXHIBIT

LIVINGSTON PARISH, LA

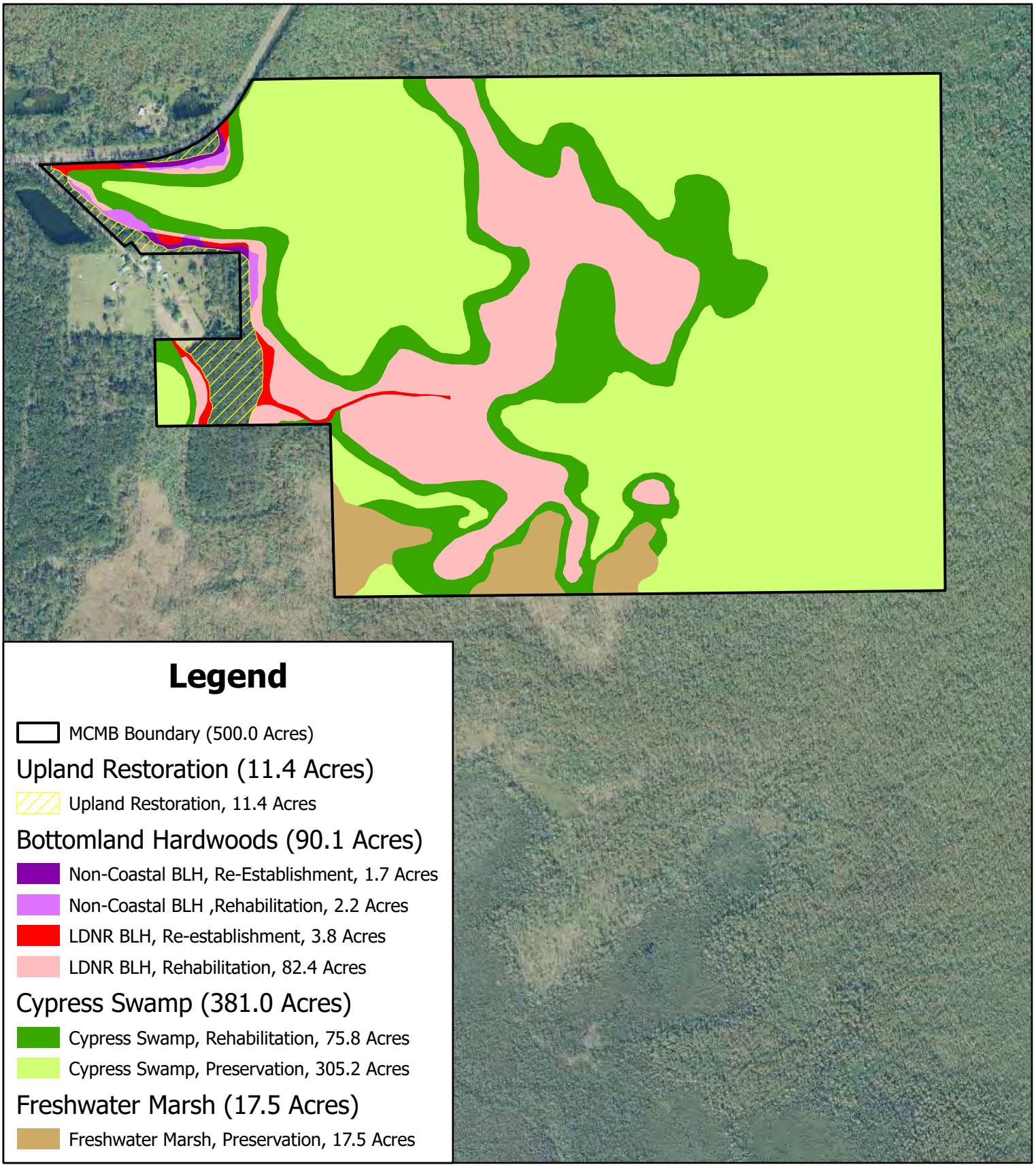
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 7/25/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 15

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

PROPOSED HABITATS EXHIBIT

LIVINGSTON PARISH, LA

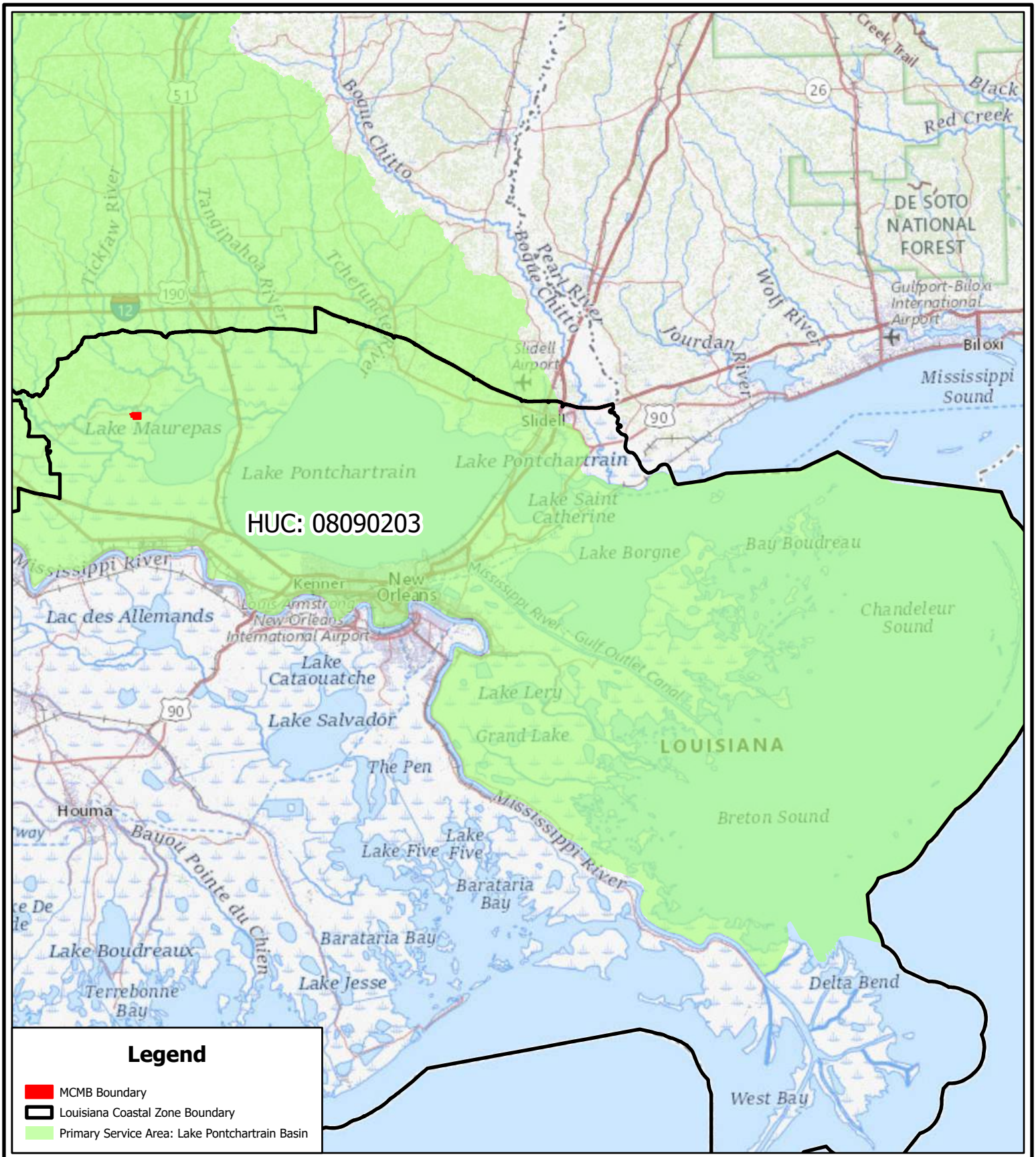
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 7/25/2023

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 16

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



MAUREPAS COASTAL MITIGATION BANK

SERVICE AREA EXHIBIT

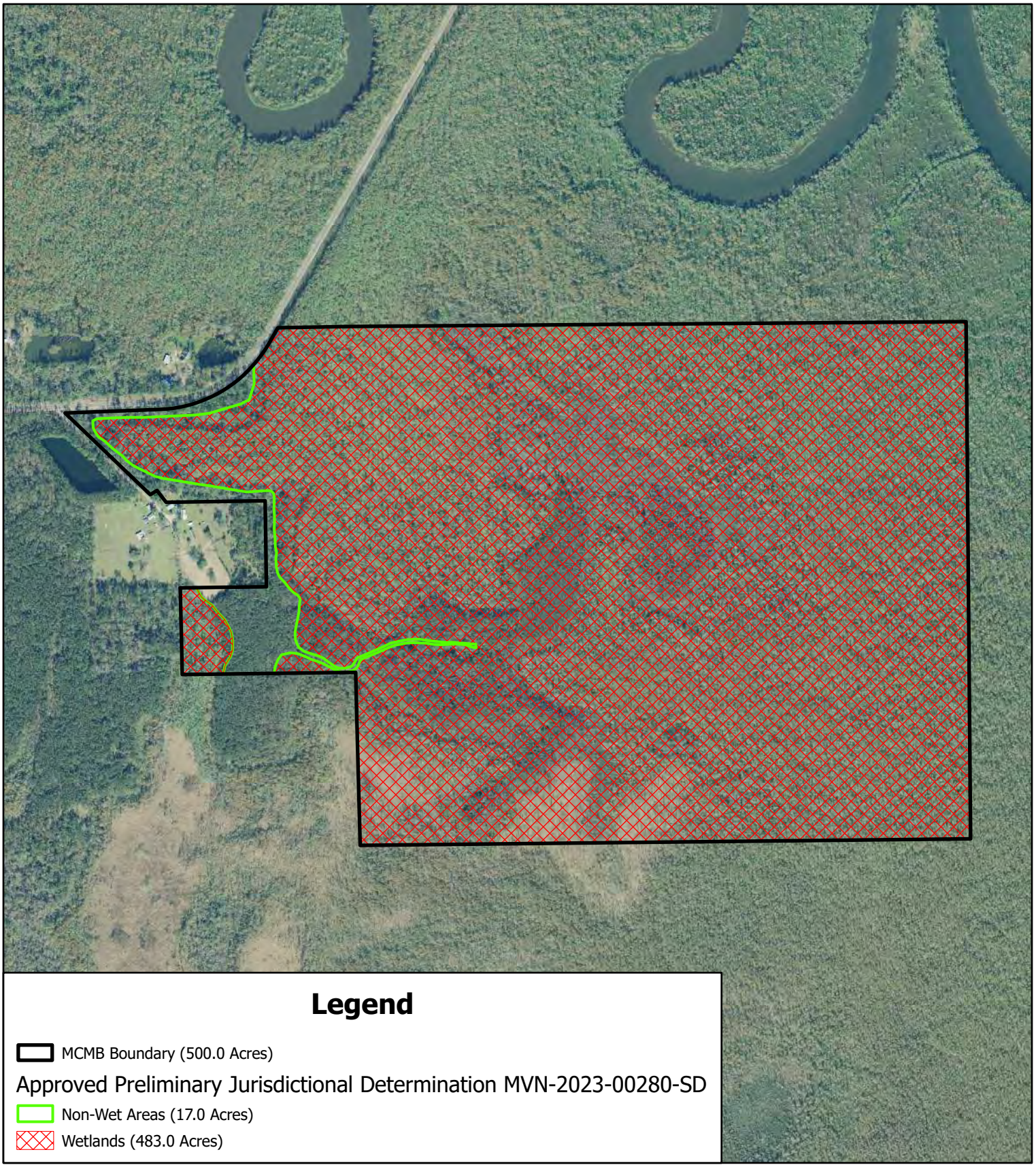
LIVINGSTON PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US	**Date:** 5/3/2023
Vertical Datum: NAVD88 Feet	**Author:** RDB

FIGURE 17

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

WETLAND DETERMINATION EXHIBIT

LIVINGSTON PARISH, LA

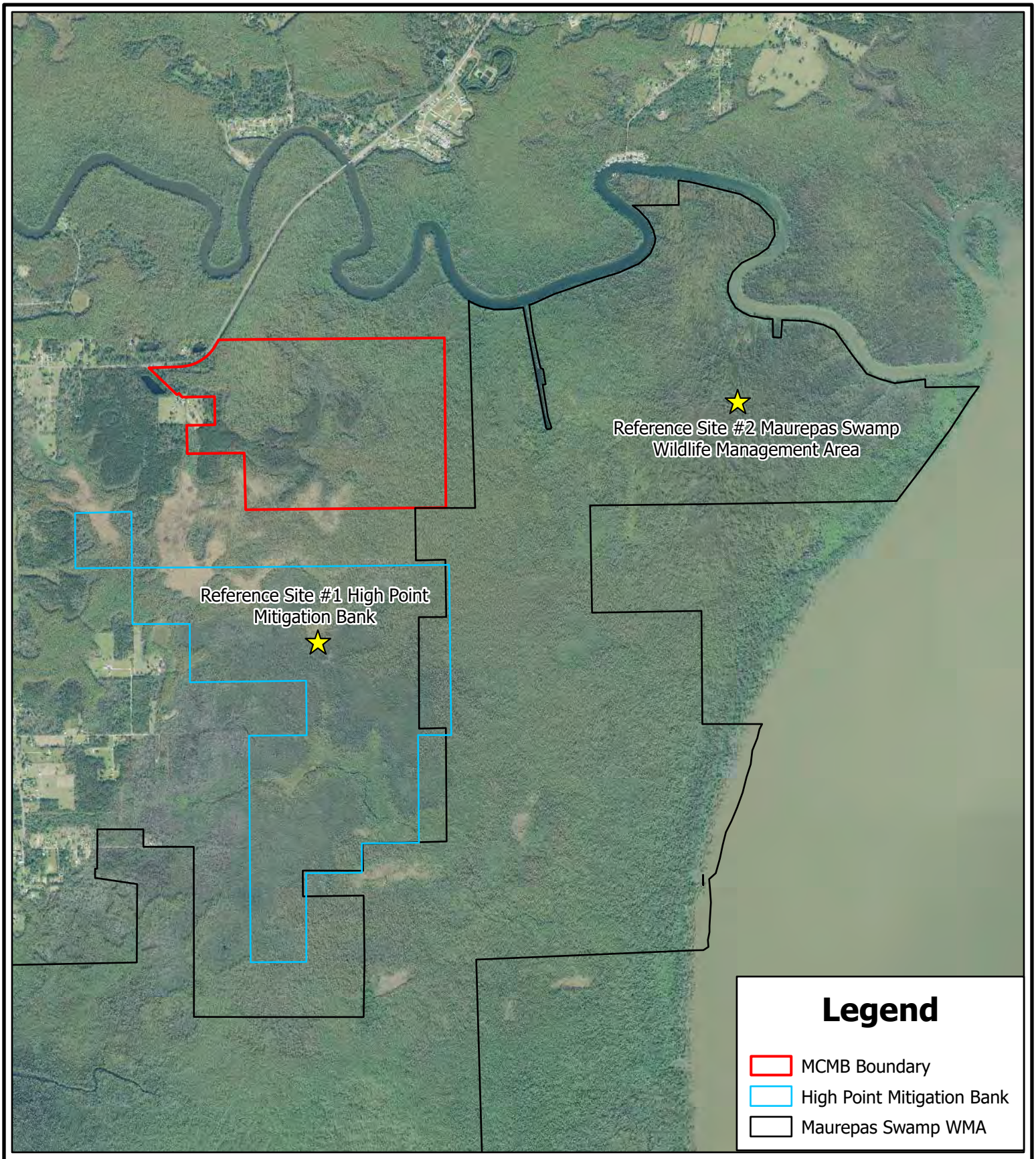
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 7/25/2023

Vertical Datum: NAVD88 Feet **Author:** RDB

FIGURE 18

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 0.25 0.5 0.75 1 Miles

1 in =1 Mile

N

MAUREPAS COASTAL MITIGATION BANK

REFERENCE SITE EXHIBIT

LIVINGSTON PARISH, LA

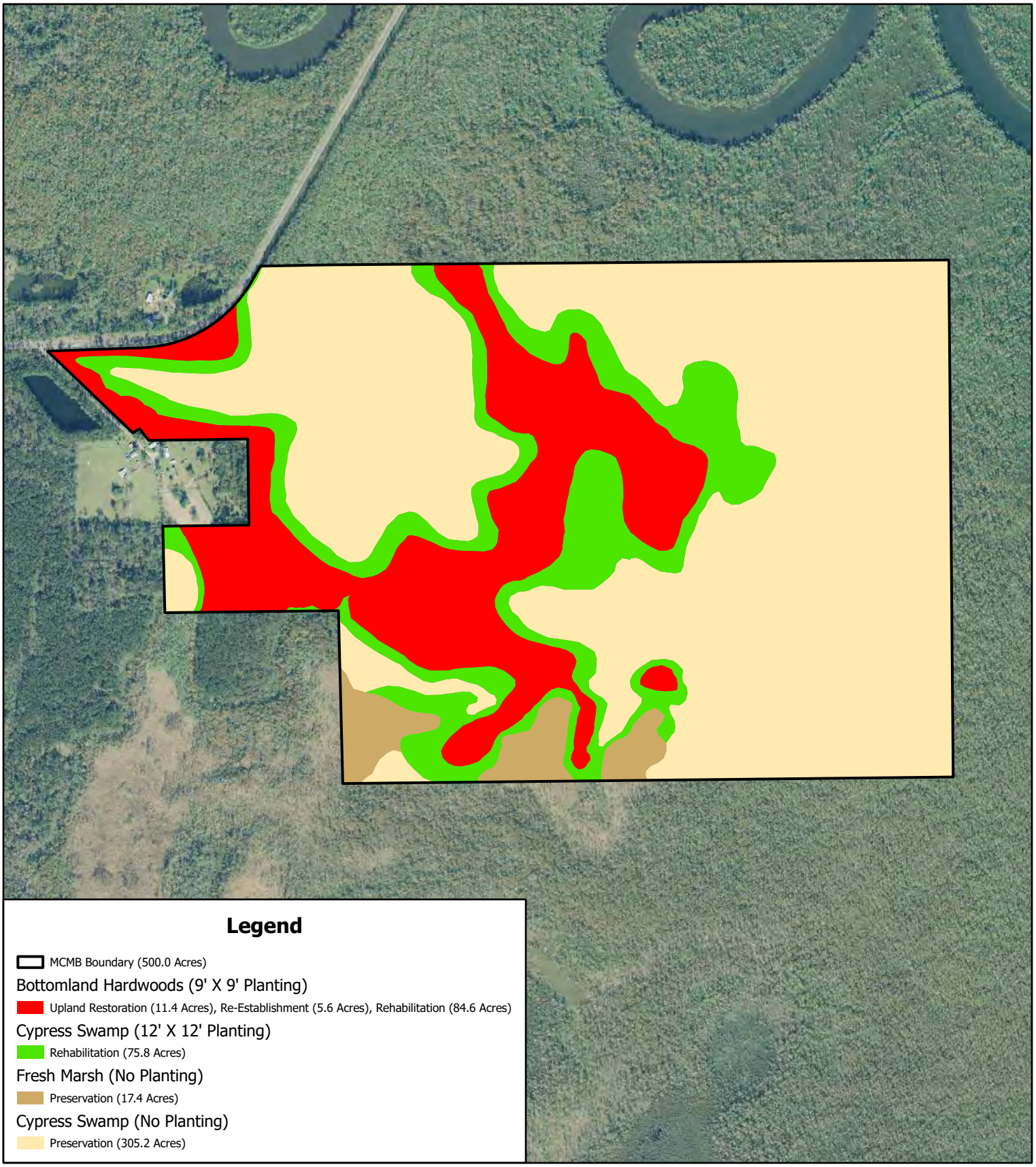
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/24/2023

Vertical Datum: NAVD88 Feet **Author:** RDB

FIGURE 19

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx



0 500 1,000 1,500 2,000 Feet

1 in =1,000 ft

N

MAUREPAS COASTAL MITIGATION BANK

PROPOSED PLANTING EXHIBIT

LIVINGSTON PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 5/3/2023

Vertical Datum: NAVD88 Feet **Author:** RDB

FIGURE 20

JMB

Document Path: N:\Mitigation Banks\Maurepas Coastal Mitigaition Bank\Mapping\Pro Projects\MCMB Prospectus Maps\MCMB Prospectus Maps.aprx

Attachment B:

Assessment Methods (LRAM)

LOUISIANA WETLAND RAPID ASSESSMENT METHOD (LRAM) 2.0

CEMVN Acct #		MVN-2023-00280-MG				Bank Name			
Acres Mitigation	90.1					Maurepas Coastal Mitigation Bank			
Watershed Basin		LakePont							

		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Re-Est	Rehab	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Management	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Size	>500	>500	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Restored	Restored	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	7.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
	Area:	5.5	84.6						
	Sum x Area Affected:	38.5	507.6	0.0	0.0	0.0	0.0	0.0	0.0

∑ Mitigation:	546.1
Mitigation Potential:	6.1

COMMENTS

Mitigation Type	Bottomland Hardwoods
Management	None: No long-term structural management requirements will be needed to assure sustained hydrology and wetland functions at MCMB.
Negative Influences	None: Habitat is adjacent to Maurepas Swamp Wildlife Management Area
Size	Mitigation bank boundary 500.0 total acres.
Buffer/Upland	Restored: 11.4 acres of upland buffer to be restored.

LOUISIANA WETLAND RAPID ASSESSMENT METHOD (LRAM) 2.0

CEMVN Acct #		MVN-2023-00280-MG				Bank Name			
Acres Mitigation		141.3				Maurepas Coastal Mitigation Bank			
Watershed Basin		LakePont							
		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Rehab	Preser	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		5.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
	Management	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Size	>500	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Restored	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	6.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
	Area:	75.8	65.5						
	Sum x Area Affected:	454.8	26.2	0.0	0.0	0.0	0.0	0.0	0.0

∑ Mitigation: 481.0

Mitigation Potential: 3.4

COMMENTS

Mitigation Type	Cypress Swamp
Management	None: No long-term structural management requirements will be needed to assure sustained hydrology and wetland functions at MCMB.
Negative Influences	None: Habitat is adjacent to Maurepas Swamp Wildlife Management Area
Size	Mitigation bank boundary 500.0 total acres.
Buffer/Upland	Restored: 11.4 acres of upland buffer to be restored.

LOUISIANA WETLAND RAPID ASSESSMENT METHOD (LRAM) 2.0

CEMVN Acct #	MVN-2023-00280-MG				Bank Name				
Acres Mitigation	17.5				Maurepas Coastal Mitigation Bank				
Watershed Basin	LakePont								

		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Preser	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Management	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Size	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Area:	17.5							
	Sum x Area Affected:	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

∑ Mitigation:	7.0
Mitigation Potential:	0.4

COMMENTS

Mitigation Type	Fresh water marsh: Preservation
Management	
Negative Influences	
Size	Mitigation bank boundary 500.0 total acres.
Buffer/Upland	

Attachment C:
BLH, CS, FM, and UPL Species

Tree Species to be Planted in Bottomland Hardwoods and Upland Restoration Areas				
Scientific Name	Common Name	Hard mast/ Soft mast	Wetland Indicator Status	Composition
Quercus phellos	willow oak	Hard mast	FACW	<20%
Quercus laurifolia	laurel oak	Hard mast	FACW	<20%
Quercus michauxii	cow oak	Hard mast	FACW	<20%
Carya aquatica	bitter pecan	Hard mast	OBL	<20%
Quercus pagoda	cherrybark oak	Hard mast	FAC	<20%
Quercus lyrata	overcup oak	Hard mast	OBL	<20%
Quercus nigra	water oak	Hard mast	FAC	<20%
Pinus taeda	loblolly pine	Soft mast	FAC	<15%
Pinus glabra	spruce pine	Soft mast	FACW	<15%
Acer rubrum	red maple	Soft mast	FAC	<15%
Liquidambar styraciflua	sweetgum	Soft mast	FAC	<15%
Fraxinus pennsylvanica	green ash	Soft mast	FAC	<15%
Diospyros virginiana	common persimmon	Soft mast	FAC	<15%

Tree Species to be Planted in Cypress Swamp Rehabilitation Areas				
Scientific Name	Common Name	Hard mast/ Soft mast	Wetland Indicator Status	Composition
Taxodium distichum	cypress	Soft mast	OBL	<80%
Nyssa sylvatica var biflora	blackgum tupelo	Soft mast	OBL	<10%
Nyssa aquatica	tupelo gum	Soft mast	OBL	<10%
Fraxinus pennsylvanica	green ash	Soft mast	FACW	<5%

Desirable Species Within the Fresh Marsh Preservation Habitat		
Scientific Name	Common Name	Wetland Indicator Status
Panicum hemitomon	maidencane	OBL
Eleocharis spp.	spikerush	OBL
Sagittaria lancifolia	broadleaf arrowhead	OBL
Phragmites communis	roseau cane	OBL
Pontederia cordata	pickerelweed	OBL
Typha spp.	cattail	OBL
Juncus effusus	needle rush	FACW
Zizaniopsis miliacea	giant cutgrass	OBL
Persicaria punctata	dotted smartweed	OBL
Leersia hexandra	southern cutgrass	OBL
Paspalum vaginatum	Seashore paspalum	OBL
Cladium jamaicense	saw grass	OBL
Cyperus virens	green flatsedge	FACW
Schenoplectus americanus	chairmaker’s bulrush	OBL

Attachment D:
Observation Pictures

Image 01: Aerial Image of Managed Pine Plantation, Cypress Swamp, and Chinese Tallow Forest

Image 02: Canopy Picture within the Chinese Tallow Forest

Image 03: Aerial Image of Managed Pine Plantation, Cypress Swamp, and Chinese Tallow Forest

Image 04: Managed Pine Plantation and Chinese Tallow Forest

Image 05: Chinese Tallow Forest

Image 06: Dirt Logging Road adjacent to Managed Pine Plantation

Image 07: Chinese Tallow Forest

Image 08: Aerial Photo of Fresh Water Marsh Surrounded by Chinese Tallow Forest and Cypress Swamp, Late Winter, Looking South from Hwy 22

Image 09: Aerial Photo of Managed Timber Plantation along Hwy 22 Adjacent to Chinese Tallow Forest and Cypress Swamp

Image 10: Aerial Photo of Cattle Pasture Adjacent to Managed Pine Plantation

Image 11: Dense Pine within the Managed Pine Plantation Habitat

Image 12: Dense Pine Canopy within the Managed Pine Plantation

Image 13: Evidence of Prescribed Burn within the Managed Pine Plantation

Image 14: Evidence of Prescribed Burn within the Managed Timber Plantation