

JOINT PUBLIC NOTICE

August 15, 2016

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

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Permit Application Number
MVN-2015-02288-MR

State of Louisiana
Department of Environmental Quality
Post Office Box 4313
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Attn: Water Quality Certifications

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Project Manager
TD Wilcox
WQC Application Number
WQC # 160804-01

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

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

BLACK BAYOU MITIGATION BANK ADDENDUM I IN CALCASIEU PARISH

NAME OF APPLICANT: B.H. Mitigation Company, LLC; Attn: Will Grant, 5667 Bankers Avenue, Baton Rouge, LA 70808.

LOCATION OF WORK: The 376.4 acre site is located approximately 6.0 miles south of Iow, Louisiana, in Calcasieu Parish, as shown on enclosed drawings (Latitude: 30.1711 N, Longitude: -93.0775 W). The Project is located within the Upper Calcasieu Basin, Hydrologic Unit 08080203.

CHARACTER OF WORK: Degrade agricultural spoil banks and rice dikes, while utilizing approximately 30,000 cubic yards of in-situ earthen fill as part of the work to enhance and restore traditional surface hydrology to the site for the construction of a mitigation bank consisting of bottomland hardwoods and coastal prairie habitats.

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

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

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

Corps of Engineers Permit Criteria

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

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

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources. After receipt of comments from this public notice the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the national Historic Preservation Act, as appropriate.

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

Utilizing Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES), dated October 22, 2014, 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.

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

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

Martin S. Mayer
Chief, Regulatory Branch

Enclosure

BLACK BAYOU MITIGATION BANK – ADDENDUM I
BANKING INSTRUMENT

Based on the 2013 CEMVN Template

Coastal Prairie and Bottomland Hardwood Re-establishment Project

Calcasieu Parish, Louisiana

Sponsored By:

**B.H. Mitigation Company, LLC
Tom Spies
5667 Bankers Avenue
Baton Rouge, Louisiana 70808-2610**

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Attachments :

Attachment A- Maps

Figure 1 – Site Vicinity Map

Figure 2 – Site Boundary Map

Figure 3 – Bottomland Hardwood Service Area Boundary Map

Figure 4 – Coastal Prairie Service Area Boundary Map

Attachment B- Final Title Report/Opinion **(Not included with this submittal)**

Attachment C1- Mitigation Work Plan – Bottomland Hardwood Habitat**37**

Attachment C2- Mitigation Work Plan – Coastal Prairie Habitat

Attachment D- Acceptance Letter **(Not included with this submittal)**

MITIGATION BANKING INSTRUMENT

Black Bayou Mitigation Bank – Addendum I

This Mitigation Banking Instrument (MBI) establishing the Black Bayou Mitigation Bank – Addendum I (Bank) is made and entered into by and among B.H. Mitigation Company, LLC (Sponsor), Excalibur Land Company, LLC (Owner), and the Interagency Review Team (IRT) composed of the U.S. Army Corps of Engineers New Orleans District (CEMVN), Region VI of the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (FWS), and the Louisiana Department of Wildlife and Fisheries (LDWF). This MBI is a binding agreement among the parties and incorporates a detailed Mitigation Work Plan for each habitat type, and any other specified attachments to this MBI, as a part hereof.

I. PURPOSE OF MBI

This MBI sets forth guidelines and responsibilities for the establishment, use, operation, protection, monitoring, and maintenance of the Bank to assure the proposed work associated with the Bank produces the necessary mitigation credits to compensate for unavoidable impacts to waters of the United States, including wetlands, that result from activities authorized by the Department of the Army (DA) pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act (through DA permits), provided such activities have met all applicable requirements and are authorized by the appropriate regulatory agencies pursuant to 33 CFR 332.1 et seq. The Bank may also be used to satisfy the environmental requirements of other programs in accordance with the requirements and limitations of 33 CFR 332.3 and Section XI in this MBI and as such these environmental requirements are also subject to the requirements set forth in this MBI.

II. LOCATION AND OWNERSHIP OF BANK PROPERTY (PROPERTY)

A. *Property Location*

The Property is located at latitude 30.1711 N and longitude –93.0775 W (approximate center point) in Calcasieu Parish, Louisiana (Attachment A). This location includes all or portions of Section 22, Township 10S, and Range 7W. The Property is located approximately 6.0 miles south from Iowa, Louisiana. To reach the Property, drive west on Interstate 10 toward Lake Charles; take Exit 36 on to Louisiana Highway 397 South; proceed south for approximately 6.4 miles; turn left (east) on Louisiana Highway 14;

proceed for approximately 2.5 miles; turn left onto Leger Road; proceed for 0.3 miles; and the property will be on the right.

B. Property Ownership

The property owner is Excalibur Land Company, LLC (Owner), who/which has owned the property for 20 years.

C. Property Legal Definition

A certain parcel of land, together with all buildings and improvements thereon, and all of the rights, ways, privileges, servitudes, prescriptions, advantages, and appurtenances thereunto belonging, or in anywise appertaining, situated as stated above and more fully described as follows:

Beginning at a point marked by a set 1/2' rod in Section 22, Township 10 South, Range 7 West, Calcasieu Parish, Louisiana, having a coordinate of X= -93.071955103W, Y30.172956674N; based on Louisiana State Plane South NAD 83, US survey feet;

Thence N89°16'57"W a distance of 977.8 feet to a point,

Thence S0°02'47"W a distance of 156.3 feet to a point,

Thence S23°01'04"E a distance of 205.3 feet to a point,

Thence S46°17'54"E a distance of 336.9 feet to a point,

Thence S0°25'23"W a distance of 275.7 feet to a point,

Thence S8°45'12"E a distance of 390.7 feet to a point,

Thence S3°22'20"E a distance of 330.7 feet to a point,

Thence S23°15'10"W a distance of 776.9 feet to a point,

Thence S2°46'08"W a distance of 255.1 feet to a point,

Thence S18°01'09"E a distance of 720.7 feet to a point,

Thence S14°02'43"E a distance of 411.6 feet to a point,

Thence S0°34'45"E a distance of 402.1 feet to a point,

Thence S4°18'48"W a distance of 298.8 feet to a point,

Thence S17°53'43"E a distance of 91.2 feet to a point,
Thence S50°37'40"W a distance of 104.53 feet to a point,
Thence S23°14'53"W a distance of 217.24 feet to a point,
Thence N80°34'51"W a distance of 1,283.34 feet to a point,
Thence N87°00'26"W a distance of 710.73 feet to a point,
Thence N1°53'45"E a distance of 3,076.57 feet to a point,
Thence N0°50'27"E a distance of 1,529.11 feet to a point,
Thence N88°41'17"W a distance of 36.91 feet to a point,
Thence N0°46'36"E a distance of 1,291.22 feet to a point,
Thence N56°44'22"E a distance of 495.88 feet to a point,
Thence N47°50'24"E a distance of 939.36 feet to a point,
Thence N54°20'11"E a distance of 768.27 feet to a point,
Thence S88°36'14"E a distance of 695.25 feet to a point,
Thence S87°31'36"E a distance of 842.19 feet to a point,
Thence S27°07'15"E a distance of 290.93 feet to a point,
Thence S50°09'18"E a distance of 624.77 feet to a point,
Thence S23°49'32"W a distance of 235.24 feet to a point,
Thence S88°38'17"W a distance of 172.63 feet to a point,
Thence S58°26'20"W a distance of 460.21 feet to a point,
Thence S19°38'16"W a distance of 783.11 feet to a point,
Thence S11°40'33"W a distance of 318.27 feet to a point,
Thence S57°13'06"W a distance of 265.94 feet to a point,
Thence S5°53'01"W a distance of 324.34 feet to a point,

Thence N89°17'09"W a distance of 75.02 feet to a point being the Point of Beginning, containing 376.4 acres more or less.

The perimeter of the Property is defined by the following coordinates in decimal degrees:

Latitude 30.172956674N and Longitude-93.071955103W,
Latitude 30.172949507N and Longitude -93.075049424W,
Latitude 30.172519832N and Longitude-93.075042306W,
Latitude 30.172003790N and Longitude,-93.074779258W,
Latitude 30.171374088N and Longitude-93.073997471W,
Latitude 30.170985330N and Longitude -93.073875097W,
Latitude 30.170227263N and Longitude-93.073868289W,
Latitude 30.169168035N and Longitude -93.073661585W,
Latitude 30.168260589N and Longitude-93.073584116W,
Latitude 30.166285387N and Longitude -93.074520232W,
Latitude 30.165584413N and Longitude-93.074546968W,
Latitude 30.163709448N and Longitude -93.073808633W,
Latitude 30.162615798N and Longitude-93.073473390W,
Latitude 30.161510600N and Longitude -93.073441214W,
Latitude 30.160690464N and Longitude-93.073498003W,
Latitude 30.160453021N and Longitude -93.073405167W,
Latitude 30.1602673N and Longitude -093.0736577W,
Latitude 30.1597150N and Longitude -093.0739194W,
Latitude 30.1602395N and Longitude -093.0779351W,
Latitude 30.1603118N - and Longitude 093.0801826W,
Latitude 30.1687702N and Longitude -093.0800089W,
Latitude 30.1729748N and Longitude -093.0800116W,
Latitude 30.1729756N and Longitude -093.0801284W,
Latitude 30.1765261N and Longitude -093.0801353W,
Latitude 30.1790538N and Longitude -093.0766632W,
Latitude 30.1772912N and Longitude -093.0788363W,
Latitude 30.1803114N and Longitude -093.0747094W,
Latitude 30.1802939N and Longitude -093.0725091W,
Latitude 30.1802290N and Longitude -093.0698446W,
Latitude 30.1795226N and Longitude -093.0694125W,
Latitude 30.1784420N and Longitude -093.0678753W,
Latitude 30.1778464N and Longitude -093.0681657W,
Latitude 30.1778280N and Longitude -093.0687117W,
Latitude 30.1771494N and Longitude -093.0699411W,
Latitude 30.1751105N and Longitude -093.0707385W,
Latitude 30.1742509N and Longitude -093.0709274W,
Latitude 30.1738457N and Longitude -093.0716280W,
Latitude 30.1729572N and Longitude -093.0718992W,
Latitude 30.172956674N and Longitude-93.071955103W.

D. Recorded Liens, Encumbrances, Easements, Servitudes or Restrictions

Clear and merchantable title to the Property has been documented by a title report/opinion (Not included with this submittal) generated by Barouse & Craton, LLC which will be updated two weeks prior to execution of the Conservation Servitude.

There are no right-of-way (ROW) areas present within the Bank boundary.

Any exceptions to the real estate title not subordinated to the Conservation Servitude are listed below:

III. RESPONSIBILITIES OF PARTIES

A. The Owner

1. The Owner shall furnish satisfactory evidence of clear title prior to the execution of this MBI unless such evidence of clear title was previously provided by a former owner of the site pursuant to this MBI.
2. The Owner shall grant a perpetual Conservation Servitude over the Property in accordance with the Louisiana Conservation Servitude Act La. R.S. 9:1271 et seq., and 33 C.F.R. § 332.8(t). Upon execution of the Conservation Servitude, the Owner shall record it with an attached copy of this MBI in the conveyance records of Calcasieu Parish, unless such Conservation Servitude was previously executed and properly recorded by a former owner pursuant to this MBI. Proof of such recordation will be provided to the IRT within 15 days of filing. Mitigation credits will not be released until proof of recordation is received.
3. The Owner shall not allow any Prohibited Uses (as hereinafter defined) of the Property as set forth in this MBI and the Conservation Servitude.
4. To help ensure the long-term protection, operation, and management of the Bank, the Property is to remain free and clear of all mortgages and encumbrances, except those identified in Section II. D. above. The Owner shall not identify the Property as collateral for any loan or other encumbrance not listed above placed on or discovered to burden the Property. The Owner shall take all actions necessary to clear such encumbrance, including bringing any legal action necessary to resolve the underlying debt or dispute and to clear the exception from the Property title. If an encumbrance other than those listed above is placed on or is discovered to burden the Property, the Owner shall notify CEMVN of such encumbrance within fifteen (15) days of discovery. In the notification, the Owner shall specify a plan to clear the encumbrance from the Property title.
5. The Owner shall grant the Sponsor access to the Property. Any limitations on such access are to be a matter of contract between the Owner and the Sponsor. The Owner

will also allow access to the Property to IRT members and the Holder of the Conservation Servitude (Holder) in accordance with this MBI.

6. The Owner shall make periodic inspections of the Property of not less than once per year to verify that use of the Property is consistent with this MBI and the Conservation Servitude (and to inspect for any damage caused by flood, fire, storm, wind, accident, vandalism, negligence, or other act or event that causes damage to the Bank).

7. In the event the Owner discovers a prohibited use or any damage to the Property, it shall notify the IRT and Sponsor within 15 days of its discovery of such use or damage.

8. The Owner shall notify the Sponsor and the IRT of any proposed transfer of the Property in accordance with the provisions of this MBI.

B. The Sponsor

1. Through contractual agreement with individual permit recipients, the Sponsor agrees to provide compensation to offset wetland impacts as required in DA Permits. Sponsor commits to enhancing and restoring wetland functions and maintaining wetland habitats in accordance with 33 CFR Part 332 and the provisions of this MBI.

2. The Sponsor agrees to assume the legal responsibility for compensatory mitigation requirements of each DA permit for which it transfers credits once the permittee has secured the appropriate number and type of credits from the Sponsor. For each credit sale the Sponsor shall provide to CEMVN a signed declaration (MBI Section XI.E and Attachment D) that the Sponsor has accepted the responsibility for providing the required compensatory mitigation required by the DA Permits. The declaration shall specify the permit number and the type(s) and amount(s) of credits sold. If the Sponsor fails to provide a permit's required compensatory mitigation and/or if habitat represented by credits sold to a permittee fails to meet its success criteria and CEMVN determines that the Sponsor has failed to meet the requirements of this MBI with respect to such habitat, CEMVN may pursue enforcement measures against the Sponsor for non-compliance of the mitigation requirements of the corresponding DA permits.

3. The Sponsor agrees to perform all necessary work to establish, monitor, and maintain aquatic habitats and buffers as described in the Mitigation Work Plans (Attachments C1 and C2).

4. The Sponsor shall maintain accounting records, notify the CEMVN of credit sales, monitor the Bank for success, conduct remedial action as necessary to achieve success criteria, and provide this information to CEMVN in reports documenting Bank usage and the results of monitoring in accordance with 33 CFR Part 332 and the provisions of this MBI.

5. The Sponsor shall advise the IRT of any pending sale of the Bank or change in sponsorship at least 60 days prior to the effective date.

6. Prior to release of credits, the Sponsor shall obtain all environmental documentation, permits, approvals and authorizations necessary to establish, operate, and maintain the Bank. Approval of this MBI does not fulfill this requirement, or substitute for such authorization.

7. Unless any of the responsibilities identified above are transferred, with prior approval of CEMVN, to a long-term steward. The Sponsor shall at all times remain responsible for: 1) the compensatory mitigation requirements for any DA permits for which it sold Bank credits; and 2) the long-term management, maintenance, monitoring and protection of the habitat represented by those credits as set forth in the MBI and the Mitigation Work Plans.

C. The IRT

CEMVN will serve as the chair of the IRT. For the Federal and State agency members of the IRT, participation in the review and oversight of this Bank is voluntary and subject to existing parameters of agency authority, agency regulations, and agency funding. Concurrence with this MBI does not create any affirmative obligation to perform any specific action with respect to this Bank. Subject to the availability of staff and funds, the agencies represented on the IRT agree to:

1. Provide appropriate oversight in carrying out provisions of this MBI.
2. Provide comments on all project plans, proposed additions to land to the Bank, annual monitoring reports, credit review reports, contingency plans, and necessary permits for the Bank.
3. Review and confirm reports on evaluation of success criteria prior to approving credits or releasing escrow account funds.
4. Conduct compliance inspections as needed and recommend corrective measures (if any) to the Sponsor, until the terms and conditions of the MBI have been determined to be fully satisfied or until all credits have been sold, whichever is later.
5. Review, comment, and approve/disallow any modifications to this MBI.

D. The Holder of Conservation Servitude (Holder)

1. The Holder agrees to hold and enforce the Conservation Servitude placed on those lands within the Bank subject to recorded perpetual Conservation Servitude.
2. The Holder shall notify CEMVN within 24 to 48 hours of the discovery of prohibited use on the Property or any action taken to void or modify the Conservation Servitude. The Holder shall take all reasonable and prudent steps to cure and to clear any prohibited uses on the property.

3. The Holder shall perform yearly inspections and provide annual reports as to compliance with the terms of the Conservation Servitude, the existence of any prohibited use on the Property, and the actions taken to cure and/or to clear any identified prohibited uses.
4. The Holder may be the recipient of the financial assurance should the Sponsor be in default of this MBI and shall utilize such funds as directed by the IRT.
5. The Holder may serve as the Long-Term Steward should the Sponsor make arrangements for the Holder to act in this capacity.

E. Long-Term Steward (Steward)

Appointment of a Long-Term Steward is subject to the review and approval of CEMVN. If a Long-Term Steward is appointed, the Steward will assume the responsibilities of the Sponsor and will perform the long-term maintenance, management, monitoring, and reporting responsibilities in accordance with this MBI.

IV. GOALS AND OBJECTIVES

The Bank will provide 370.1 acres of coastal prairie and bottomland hardwood habitat to compensate for unavoidable wetland impacts for the Calcasieu Basin. Goals, objectives, and contributions to overall watershed/regional functions provided by the Bank are described in the Mitigation Work Plans (Attachments C1 and C2).

V. PERFORMANCE STANDARDS

Authorization to sell credits to satisfy compensatory mitigation requirements in DA Permits is contingent on compliance with all of the terms of this instrument, including construction and operating the Bank in accordance with the Mitigation Work Plans, adhering to the requirements of the Conservation Servitude and maintaining sufficient financial assurances.

If, at any time, CEMVN determines that Sponsor is not in compliance with the terms of this instrument, credit sales may be suspended. If, after consultation with Sponsor and the IRT, CEMVN determines that corrective action may remedy the deficiency, the Sponsor will be given the opportunity to bring the Bank into compliance with the terms of this instrument. If, after consultation, CEMVN determines either that corrective action will not be effective to cure the deficiencies or that the Sponsor's efforts at further corrective action will not be sufficient to correct the deficiencies within a reasonable time, CEMVN in its sole discretion may terminate all credit sales.

Potential "corrective actions" include but are not limited to: modification or termination of the MBI, suspending credit sales, adaptive management, revisions to the credit release schedule, decreasing available credits, increasing the amounts of

financial assurances, utilizing existing financial assurances, and/or providing alternative compensatory mitigation to satisfy any credits that have already been sold through the purchase of mitigation credits at another CEMVN approved mitigation bank. Determination of the appropriate corrective action for any particular deficiency lies solely within the discretion of the CEMVN, who will consult with the IRT and Sponsor before making the determination.

In order for the Bank to be considered acceptable for mitigating wetland impacts associated with DA permits, the Property will be restored in accordance with the Mitigation Work Plans such that it meets wetland criteria as described in the 1987 Corps of Engineers Wetland Delineation Manual (the 1987 Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Performance standards used to measure the success of the Bank are provided in the Mitigation Work Plans (Attachments C1 and C2).

VI. MONITORING PLAN AND REPORTING PROTOCOLS

A. Monitoring

The Sponsor agrees to perform all work necessary to monitor the Bank to demonstrate compliance with the success criteria established in this MBI. Monitoring guidelines are established in the Mitigation Work Plans.

B. Reporting Protocols

The Sponsor agrees to provide all monitoring reports as described in the Mitigation Work Plans.

VII. CONTINGENCIES AND REMEDIAL ACTIONS

A. Adaptive Management

In the event the CEMVN, in consultation with the IRT, determines adaptive management is needed, the Sponsor agrees to implement approved Adaptive Management Plans for each habitat type in accordance with 33 CFR 332.4(c)(12) and 33 CFR 332.7(c) and Section XII of the Mitigation Work Plans.

B. Notice of Deficiency

1. If monitoring discloses that the Bank does not meet success criteria, the Sponsor shall provide a Notice of Deficiency to CEMVN that success criteria have not been met. This notice shall be submitted with the monitoring report. Along with the notice, the Sponsor shall provide a detailed explanation of the deficiency and propose specific measures and a timetable to correct the deficiency(ies). CEMVN, in consultation with the IRT, will determine the course of action required to correct deficiencies and will

notify the Sponsor to engage in corrective actions pursuant to the Adaptive Management Plans or such other actions as CEMVN may deem necessary from time to time.

2. When a disaster (natural or man-induced) adversely affects the Bank, the Sponsor shall inspect the site and, if necessary, shall provide a Notice of Deficiency to CEMVN of such circumstance within two weeks of the event. The notice will identify the disaster and impacts to the Bank, specify measures to be taken to correct the impacts and a timetable to complete the work necessary to restore the Bank. CEMVN, in consultation with the IRT, shall review said information and determine if the disaster was beyond the control of the sponsor and if the damage is substantial. In circumstances where the disaster is determined to be beyond the control of the Sponsor and it is deemed to have caused substantial damage, the procedure outlined in Section VII.D herein shall govern. In all other instances, CEMVN will notify the Sponsor to engage in corrective actions pursuant to the Adaptive Management Plans or other action as the CEMVN, in consultation with the IRT, may warrant (See Paragraph VII.D “Catastrophic Events”, below).

C. Conditions for Suspending Credit Sales

All credit sales are contingent on meeting the standards and requirements of this instrument, adhering to the Conservation Servitude, and maintaining sufficient financial assurances.

1. Should the IRT determine that the Sponsor is in default of its obligations hereunder or the Bank is not performing in accordance with the standards and criteria set forth in this MBI, credit sales will be suspended. Sale of credits may not resume until such time as remedial action has been taken and the deficiencies have been cured to the satisfaction of CEMVN, in consultation with the IRT.

2. Sponsor’s failure to complete implementation of any corrective action or remedial measure deemed necessary by CEMVN including any adaptive management to meet performance standards within one growing season (November 1 of the following year) following notification of deficiency will result in the revocation of any remaining mitigation credits. If at any time the CEMVN, in consultation with the IRT, determines that the Bank is operating at a deficit, the Sponsor at its full cost and expense shall make-up for the credit deficit by purchasing credits at a CEMVN approved mitigation bank. The perpetual Conservation Servitude will remain in place on the Property to protect the habitat/acreage represented by credits already sold.

D. Catastrophic Events including Natural Disasters and Unlawful Acts

In the event substantial damage to the Bank caused by a natural or human-caused disaster or a deliberate and unlawful act, the CEMVN, in consultation with the Sponsor and the IRT, determines that prevention or mitigation of the disaster was beyond the control of the Sponsor, its agents, contractors, or consultants; the Sponsor

may request, and CEMVN, in consultation with the IRT, may approve changes to the construction, operation, project milestones, performance standards or crediting formula of the Bank.

A natural catastrophic event includes, but is not limited to, a flood equal to or greater in magnitude than the 100-year flood event, earthquake, drought, debilitating disease, wildfire, depredation, regional pest infestation, or fluviomorphic change. A human-caused catastrophic event includes, but is not limited to, war, insurrection, riot, or other civil disorders, spill of hazardous or toxic substance, or fire. A deliberate and unlawful act includes, but is not limited to, the dumping of a hazardous or toxic substance as well as significant acts of vandalism or arson. If any such act occurs the IRT, in consultation with the Sponsor, will determine what changes to the Bank and/or this MBI will be in the best interest of the Bank and the aquatic environment.

In the event that such a disaster causes substantial damage to the Bank, sale of credits shall be immediately suspended pending determination by CEMVN, in consultation with the IRT, of:

1. The nature and extent of damage caused to the Bank and the measures necessary to remediate such impacts will determine:

a. Whether sufficient surviving mitigation exists to accommodate credits already sold from the Bank; and

b. Whether conditions at the Property despite damage caused by the disaster are such that the sale of credits may resume.

2. The Sponsor shall implement adaptive management measures deemed necessary by CEMVN, in consultation with the IRT, to remediate identified impacts within one year of the event and shall implement any subsequent adaptive management measures deemed necessary by CEMVN, in consultation with the IRT, from time to time before the next growing season. Failure to comply with these provisions may result in the suspension of credit sales or revocation of credits as set forth in Section VII.C. Suspension of credit sales or revocation of credits does not relieve the Sponsor of its obligation to continue to operation, manage, and maintain the habitat/acreage represented by credits previously sold and to continue to monitor and report with respect to those areas.

E. Financial Responsibilities

In all instances, the Sponsor shall bear the full cost and financial responsibility associated with the construction, operation, and management of the Bank and any and all corrective actions and remedial measures deemed necessary under the provision of this MBI. Although in appropriate instances, financial assurances may provide a source of funds to remedy deficiencies and/or to provide for long-term management needs, the absence of sufficient financial assurances to correct deficiencies and/or to fund long-

term management will not relieve Sponsor (or Long-term Steward) of its responsibilities pursuant to this MBI.

VIII. INSPECTION BY IRT AND HOLDER

The Sponsor and the Owner shall grant access to the Property to members of the IRT or their agents or designees, and the Holder for the purpose of inspection, compliance monitoring, adaptive management, corrective measures and remediation consistent with the terms and conditions of this MBI. Inspecting parties will give a three day minimum notice to the Sponsor and/or the Owner prior to any site visit.

IX. FUNDING

A. Construction and Establishment (C&E) Funds

1. PURPOSE

The Sponsor agrees to provide Financial Assurances sufficient to ensure satisfactory completion of the work described in the Mitigation Work Plans (Attachments C1 and C2) and the Adaptive Management Plans (Section XII of each Mitigation Work Plan). The Sponsor further agrees to establish a Construction and Establishment (C & E) financial assurance to ensure the availability of sufficient funds to perform work required to attain long-term success criteria.

2. ESTIMATE OF FUNDS REQUIRED

Section XIV of each Mitigation Work Plan outlines the method of assessing initial construction costs and ongoing management funds required for a third party to construct or manage and monitor the lands through the first 15 years for forested systems and the first five years for marsh systems. Summaries of the construction costs, establishment costs, and itemization sheets will be provided as an attachment of each Mitigation Work Plan.

3. C & E FUNDING MECHANISM

The Sponsor is establishing the Construction and Establishment (C&E) financial assurance to assure sufficient funds are available to perform work required to construct and maintain the Bank through successful attainment of long term success criteria. An assessment of the initial and capital costs and ongoing management funds required to manage and monitor the Bank is included in the Mitigation Work Plans and provides an estimate of work and cost requirements for construction and establishment of the Bank through achievement of long-term success criteria. The funding information for this account is provided in Section XIV (Funding) of the Mitigation Work Plans.

4. C&E FINANCIAL ASSURANCES

- a. The Sponsor shall provide copies of annual status of the financial assurances to CEMVN upon request and/or in their monitoring reports.
- b. The financial assurances shall guarantee payment to a third party, as determined appropriate by the CEMVN in consultation with the IRT, in the event that the Sponsor does not fulfill its obligations to perform, as specified in this MBI.
- c. Payment to Sponsor, or if necessary, to a third party as identified by CEMVN, of a specified amount of the financial assurances shall be made upon written notification by CEMVN to the financial institution.

5. C&E RELEASE SCHEDULE

The Financial assurances shall be reduced as success criteria are achieved and the probability decreases that those funds would be needed according to the schedule as shown in Section XIV.C of each Mitigation Work Plan.

B. Long Term Maintenance/Management Funds

To ensure long-term sustainability of the resource, the Sponsor will describe the Maintenance/Management Funds needed in Section XIV of each Mitigation Work Plan (Attachments C1 and C2) of this Mitigation Banking Instrument.

1. ANNUAL COST ESTIMATES FOR LONG-TERM NEEDS ¹

The cost of long-term management for years 16 to 50 and adjusted for inflation every five years is discussed in the Section XIV of each Mitigation Work Plan.

2. LONG-TERM MAINTENANCE AND PROTECTION FUNDING MECHANISM

The Sponsor shall establish a Long-Term Maintenance and Protection Fund as discussed in Section XIV of each Mitigation Work Plan.

X. LONG-TERM PROTECTION AND MAINTENANCE

A. Conservation Servitude

The Owner shall burden the Property with perpetual Conservation Servitude in accordance with Louisiana Conservation Servitude Act, La. R.S. 9:1271. et seq. The Conservation Servitude shall be signed, notarized and filed in the Calcasieu Parish conveyance record with an executed copy of the MBI attached. After filing, a copy of

¹ The deposit value per credit acre must reflect, at a minimum, the total fund value divided by no more than 90% of anticipated credits.

the recorded Conservation Servitude, clearly showing the book, page and date of filing, will be provided to CEMVN prior to the release of credits.

Prior to execution of the Conservation Servitude, the Owner shall provide evidence that the entity proposed to hold the Conservation Servitude is a CEMVN approved Holder by virtue of being either a governmental body empowered to hold an interest in immovable property under the laws of the State of Louisiana or the United States of America; or is a non-profit corporation organized pursuant to Louisiana's Non-Profit Corporation Law, Title 12, Sections 201-269 of the Louisiana Revised Statutes, the purposes or powers of which include retaining or protecting the natural, scenic, or open-space values of immovable property; assuring the availability of immovable property for agricultural, forest, recreational or open-space use; protecting natural resources; maintaining or enhancing air or water quality; or preserving the historical, archaeological or cultural aspects of unimproved immovable property. Upon execution of the Conservation Servitude, the Holder shall hold and enforce the Conservation Servitude placed on the Property, and the Property shall be protected in perpetuity.

Modification of the Conservation Servitude is not permissible without prior written authorization from CEMVN, in consultation with the IRT. Any request to modify the Conservation Servitude, or to the rights and obligations created under it, shall be made in writing and forwarded to CEMVN for review and approval. All requests must describe existing language and the requested modification.

The Owner acknowledges and agrees that the Conservation Servitude applies to all of the Property, not just those portions of the Property identified as wetlands.

1. PROHIBITED USES

No activities that result in the material degradation of habitat within the Bank (Prohibited Uses) shall be permitted without prior written authorization from CEMVN, following consultation with the IRT. Prohibited uses include but are not limited to:

- a. Construct any structure or structures on the Property;
- b. Cutting, burning, removing or destroying vegetation (including trees) on the Property except in accordance with CEMVN, in consultation with the IRT approved plan for controlling invasive species;
- c. Building or allowing others to be build or developed roads, trails or paths on said Property except as authorized by CEMVN;
- d. Partitioning the Property with fencing or constructing perimeter or boundary fencing designed to impede the movement of terrestrial wildlife to and from the Property from adjacent forested to other undeveloped property or designed to contain terrestrial wildlife within the property;

- e. Changing the elevation of or contours (excavate or deposit dredged material) of the Property except in accordance with the Mitigation Work Plans or under approved adaptive management plans;
- f. Pumping, draining, or allowing the Property to be drained in any way;
- g. Placing, filling, storing, or dumping refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste, or other such items on the Property;
- h. Land clearing or deposition of soil, shell, rock, or other fill on the Property;
- i. Grazing of animals including cattle or other domestic livestock on the Property;
- j. Commercial, industrial, agricultural, mineral exploration, and extraction or residential uses of the Property;
- k. Operating of any vehicle on the Property in a manner such that its use destroys/removes vegetation or alters the natural contours of the surface elevation, except in accordance with the Mitigation Work Plans or under an approved adaptive management plan;
- l. Grazing of domestic or non-domestic livestock or conduct any form of animal husbandry for any purpose on the Property;
- m. Any other activity which is inconsistent with the establishment, maintenance, and protection of the Property as identified in the Mitigation Work Plans.

2. ALLOWED USES

The Owner/Sponsor shall not use or authorize the use of areas within the Bank for any purpose that interferes with its conservation purposes other than those exclusively specified below:

- a. Monitoring of vegetation, soils and water;
- b. Maintenance of wetlands, pre-existing trails, bridges, berms, dams, outlet and spillway structures, and other appurtenant facilities as identified in the Mitigation Work Plans;
- c. Licensed hunting, fishing, trapping and non-consumptive recreational uses (i.e., hiking, bird watching, etc.);
- d. Ecological education that does not involve alteration, destruction, or injury to any vegetation, habitat, trees, ground areas, etc;
- e. Compliance with federal regulations or appropriate court orders;

f. Activities identified in Section VI (Description of Work to Be Performed) and Section VII (Maintenance Plan) of each Mitigation Work Plan necessary to implement and maintain the development of the Bank in accordance with this MBI; and

g. Any activity that has received authorization from CEMVN, in consultation with the IRT, through a DA permit.

The Owner and Sponsor understand that the construction, operation, and abandonment of any authorized activity must be done in such a manner that minimizes direct, secondary and cumulative adverse impacts to the bank. At the termination of the authorized activity, the site will be restored to pre-project elevations and planted with a mixture of appropriate wetland species. The Owner and Sponsor acknowledge that such activities have the potential to reduce the total amount of credits available in the bank.

B. The Long-Term Maintenance Plan

The Long-Term Maintenance Plan is outlined in the Mitigation Work Plans (Attachments C1 and C2 to this MBI).

XI. BANK USE

Credits derived from the ecological benefits associated with implementation and maintenance of the Bank may be used as compensatory mitigation for unavoidable impacts to waters of the United States, including wetlands, that result from activities authorized under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, provided such activities have met all applicable requirements. Additionally, these credits derived may be used as compensation for wetland impacts outside the New Orleans District or for other programs provided approval from CEMVN is obtained first. In instances where credits are used for purposes other than compensation for DA permits, the determination of amount of acres necessary to satisfy those compensatory requirements will be made by the agency in charge of that respective program. Regardless of the program for which an ecological credit is used, that acreage is deducted from total acreage of the Bank and may not be used again.

A. Bank Service Area

The Bank is established to provide compensation for impacts to Coastal Prairie and Bottomland Hardwood habitats, in the Calcasieu, Mermentau, and Vermilion-Teche drainage basins. The primary service area for Bottomland Hardwood would be the 8-digit hydrologic units: 08080203, 08080204, 08080205, and 08080206. The primary service area for Coastal Prairie would be the 8-digit hydrologic units: 08080102, 08080103, 08080201, 08080202, 08080203, 08080204, 08080205, and 08080206. The secondary Service area for both Bottomland Hardwood and Coastal Prairie will be on a case-by-case basis as shown in Figures 3 and 4 in Attachment A.

B. Projects Eligible to Use the Bank

Only after CEMVN has determined that the Bank is appropriate can the Bank be used to satisfy a permittee's mitigation responsibilities. Generally, the Bank will not be appropriate for adverse impacts occurring outside the primary Bank service area and/or impacts that are to other wetland types. However, CEMVN may consider use of the Bank on a case-by-case basis if, after consulting with the other regulatory and resource agencies, they determine that the Bank offers ecologically preferable compensation to that available within the impacted watershed. To compensate for out-of-kind impacts and/or impacts in other watersheds may increase the amount of required mitigation.

C. Determination of Bank Credits

To determine the amount of acres required to offset a particular impact to wetlands, CEMVN will use either best professional judgment or a CEMVN approved assessment method to determine the number of credits per acre available at the bank and the number of credits lost as a result of an impact. The same assessment method will be used to calculate both credits available and credits lost.

Credit Determination is tied to the ecological restoration and/or enhancement outlined in Section XI of each Mitigation Work Plan (Attachments C1 and C2).

D. Schedule of Credit Availability

Credit release is tied to achieving all the milestones within the success criteria at specific monitoring times as outlined in Section VII of each Mitigation Work Plan.

E. Credit Transactions

1. STIPULATIONS REGARDING THE SALE OF CREDITS

a. By entering the transaction into the Regulatory In-lieu Fee & Bank Information Tracking System (RIBITS), the Sponsor acknowledges and agrees to assume legal responsibility for the permittee's compensatory mitigation requirements identified in a permittee's DA permit. Immediately following this entry, the Sponsor will provide signed documentation (Attachment D) that confirms that he has accepted the legal responsibility for providing the required compensatory mitigation. In so doing, the Sponsor acknowledges that he has agreed to accept the legal responsibility for the establishment, long-term management, maintenance, monitoring, and protection of the restored wetlands represented by the transferred credits. If the Sponsor fails to provide the required compensatory mitigation, CEMVN may pursue enforcement measures against the Sponsor to ensure compliance with the mitigation requirements of the Department of the Army Permit (DA Permit).

b. For each credit transaction, the Sponsor shall complete and sign the written declaration (Attachment D) that the Sponsor accepts the responsibility to provide the compensatory mitigation required by the permittee's DA Permit. The declaration is to include the DA Permit number and is to specify the number and resources type(s) of credits that the Sponsor has transferred. The Sponsor will forward the declaration to CEMVN the same date it enters the transaction information into RIBITS.

c. Prior to the sale of credits, the Sponsor shall contact the CEMVN project manager for DA Permit transactions to obtain approval to sell credits and to verify acreage requirements and necessary ledger information. Where a credit transaction is not related to a CEMVN DA Permit, the Sponsor must contact the CEMVN bank project manager for approval to sell those credits. Sale will generally be approved unless there is a DA Permit pending that proposes to use all or part of the requested credits. A credit transaction for a CEMVN DA Permit will take precedence over all other credit transactions. CEMVN will provide written confirmation of its decision.

d. The Sponsor shall not commit to providing mitigation that is not available or is committed for other projects. Should the number of credits sold exceed the number available, the Sponsor, at its own cost and expense, shall secure credits from another CEMVN approved mitigation bank within the watershed in an amount to necessary to fully offset the credit shortage.

e. Credits will be sold in no less than tenth acre increments.

2. PROCEDURE FOR SELLING BANK CREDITS

a. CEMVN, with input from interested resource agencies, will determine the number and types of mitigation credits that must be secured to fully compensate for a proposed project's wetland impacts when those impacts are associated with a DA Permit. The CEMVN project manager will provide the applicant with a list of CEMVN approved mitigation banks that are appropriate for offsetting the unavoidable adverse impacts associated with his proposed project. The amount of mitigation required is determined by the CEMVN project manager and will be rounded to the nearest one-tenth (0.1) acre.

b. If the permit applicant selects the Bank, the applicant will contact the Sponsor and arrange for the purchase of the necessary acres as determined by CEMVN. Prior to the sale of credits the Sponsor must obtain approval from CEMVN in accordance with the provisions of paragraph 1.a above.

3. CREDIT SALE NOTIFICATION

a. Upon contracting for the credit sales, the Sponsor shall enter the necessary information into the RIBITS. The information will include the Corps jurisdiction, date of transaction, permittee name, credits debited, permit number, wetland type impacted, acres impacted, impact project's USGS 8-digit HUC, and impact latitude and longitude.

b. The acreage required by the DA Permit will be deducted from the Bank's credit balance at the time it is entered into RIBITS. Sale terms including price and payment are matters of contract between Sponsor and permittees. For any credit transaction once the credits are debited, the Sponsor is legally responsible for provision of the compensatory mitigation required by the DA Permit. Any failure by the permittee to comply with the terms of the sale will not affect either the credit debiting or Sponsor's responsibility to provide the mitigation required by the DA Permit.

F. Requirements for Initial Credit Release

No Credits will be released until the Sponsor has provide a signed statement stating that all of the following requirements have been met and has provided copies of the following executed documents, as appropriate:

- 1. Permits:** Obtain all necessary permits (including DA Permits), approvals, and authorizations required to construct, operate, and maintain the Bank. This MBI does not fulfill or substitute for such authorization.
- 2. Holder Qualifications:** Evidence that the entity proposed to hold the Conservation Servitude is a CEMVN approved Holder.
- 3. Conservation Servitude:** An executed perpetual Conservation Servitude with a copy of this MBI with proof of recordation in the Mortgage and Conveyances Records Office of the parish in which the Property is located.
- 4. Financial Assurance:** Documentation establishing the C&E financial assurances stipulated in Section IX and the Long-Term Maintenance and Protection financial assurances described in Section X of this MBI and in Section XIV of the Mitigation Work Plans.
- 5. Property Ownership:** A title search that identifies all known encumbrances including mortgages, liens, rights-of-way, servitudes, easements, etc. and documentation that the Conservation Servitude is not subordinate to any other easement or major lien. Sponsor shall provide a copy of the recorded document evidencing that any mortgages encumbering the property have been subordinated to the Conservation Servitude.
- 6. Execution of MBI:** MBI signed by the Owner, Sponsor, and CEMVN District Commander or his representative and approval by all participant IRT agencies; and
- 7. Work Schedule:** Submission of the timetable for implementing work identified in the permit, Mitigation Work Plans, or elsewhere in this MBI.

G. Subsequent Credit Releases

Prior to each credit release, the Sponsor shall provide to CEMVN an electronic copy of the monitoring report with information necessary to document successful

attainment of required milestones. Following review of such documentation and a finding that required milestones were achieved. CEMVN will notify the Sponsor and the IRT in writing of its findings with respect to the Bank's attainment of its success criteria and determination for the number of credits approved for release.

XII. MODIFICATION OF THIS MBI

A. Minor Modification to MBI

1. This MBI is subject to written modification as mutually agreed to by the IRT and the Sponsor. The streamlined review process set forth in 33 CFR 332.8(g)(2) may be used for modifications that involve changes reflecting adaptive management for the Bank, credit release, changes in credit releases and credit release schedules, and changes that the district engineer determines not to be significant in accordance to procedures in 33 CFR 332.8(g)(2) *Streamlined Review Process*.

2. Should changes in this MBI be required by CEMVN that are not acceptable to the Sponsor, the Sponsor may elect to end his participation and close the Bank. At that time, the procedures outlined in Section XII.C below will be followed.

B. Major Modifications to the MBI

1. Expansion of Addendum to the Bank

Modification of the MBI to include the expansion of the Bank to include additional acreage will be processed in accordance with 33 CFR 332.8(d) and 332.8(g)(1). Requests to expand the Bank will be considered only in instances where (1) the additional acreage is located on the same parcel of land or on a parcel of land contiguous to the Bank and (2) CEMVN determines that the natural composition, structure, functions, and processes performed by the restored/enhanced wetland community are the same as those outlined in this MBI. For the modification of this MBI the amendment will contain the following:

- a.** Detailed description of existing conditions of the Property identifying existing and prior land uses, vegetation, hydrology alterations, and soils;
- b.** A Mitigation Work Plan that details the proposed hydrologic and vegetative restoration/enhancement work that is necessary to produce the mitigation credits;
- c.** Drawings depicting the site showing its location to other mitigation sites authorized by this MBI; different mitigation types, soils, and hydrology; drawings depicting the work required; vicinity map; plan view depicting the proposed work; and typical cross-sections of that work;
- d.** A Department of the Army issued wetland determination;
- e.** A title opinion and survey clearly identifying any existing encumbrances on the

Property;

f. A draft Conservation Servitude;

g. A draft of the mechanism to be used to secure the necessary Construction and Establishment financial assurance; and

h. A draft of the mechanism to be used to establish the necessary Long-Term Maintenance and Protection account.

CEMVN will determine if the work identified in the Mitigation Work Plan requires a DA permit. A DA permit application is not required with the prospectus, but the Sponsor may choose to submit an application at this time as obtaining any and all permits is a prerequisite to selling credits.

A public interest review will be required for each addendum. The prospectus, Mitigation Work Plan, and drawings will be advertised by public notice for a minimum of thirty days to obtain public comments.

CEMVN, in consultation with the IRT, will evaluate each proposed property. The evaluation will typically require an inspection of the property and review of the prospectus and restoration plan. If warranted, the IRT will recommend modifications to the proposed restoration plan. By signing this MBI, the agencies are under no obligation to accept future addenda. Each addendum will be evaluated on its own merit.

A separate credit assessment will be conducted to determine habitat values of each addendum.

The mutually agreed upon Mitigation Work Plan will be signed by designated authorities for each IRT member and included as an amendment to this MBI and subject to all its requirements, conditions and terms.

2. Exclusions of Approved Mitigation Site

The Sponsor may elect to exclude a portion of the Property on which no credits have been sold from the Bank. However, notification and approval by CEMVN must be obtained by the Sponsor prior to removal from the Bank.

Reduction in Bank size may adversely affect future releases of mitigation credits and financial assurances. Additionally, CEMVN, in consultation with the IRT, will re-evaluate the credit value per acre for the portion of the site remaining in the Bank. Should the re-evaluation of credits determine that debits exceed the available credits produced by the acres remaining in the Bank, CEMVN may require that a portion of the area to be excluded remain in the Bank to make up the credit difference caused by the reduction in Bank size.

After CEMVN, in consultation with the IRT, has approved the exclusion, the Owner may, with approval from the Sponsor, Holder and CEMVN, modify the Conservation Servitude to remove the servitude from that portion of the Property excluded, allowing however, as sufficient buffer to protect the integrity of the remaining bank.

C. Termination of This MBI

1. Should CEMVN, in consultation with the IRT, determine that the Sponsor is in material default of any provision of the MBI for this Bank, CEMVN may require such corrective actions as, as it deems necessary. If CEMVN determines that the Sponsor (or its agents or employees) has engaged in any misrepresentation, misapplication, misappropriation, improper management, or non-disclosure of pertinent information, CEMVN may require termination of this MBI or such other corrective action as it deems appropriate. Owner and Sponsor acknowledge and agree that all obligations hereunder that pertain to the credits sold or transferred prior to termination of the MBI shall have no effect on the perpetual Conservation Servitude granted by Owner over the Property in accordance with Louisiana law La. R.S. 9:1271, et seq. and 33 CFR § 332.8(t) except as set forth in paragraph C.3 below.

2. In the event that the MBI is terminated, CEMVN will:

a. Revise the Bank's credit allotment based on the work completed at closure;

b. Review the credits already sold by the Bank and the corresponding mitigation requirements for DA Permits assumed by the Sponsor; and

c. Determine whether the success criteria achieved by the previously sold credits/acreage are sufficient to meet current and outstanding mitigation requirements or whether additional credits are required to satisfy the DA Permit mitigation obligations assumed by the Sponsor. Should additional credits be needed to satisfy the Sponsor's DA Permit mitigation obligations, those obligations (as determined by CEMVN) may be satisfied by either:

i) Completion of implementation of the Mitigation Work Plans and achievement of the performance standards set forth in the Mitigation Work Plans on additional acreage within the Bank; or

ii). The purchase of appropriate mitigation credits from another CEMVN approved Bank.

3. Upon termination of this MBI, the Conservation Servitude shall remain in full force and effect on those lands for which credits have been sold. In addition, a buffer sufficient to protect the integrity of the Bank, as determined by CEMVN in consultation with the IRT, shall be established and protected by the Conservation Servitude. Depending on the success level of the acreage sold as credits, additional acreage also may be required to satisfy the mitigation obligations assumed by the Sponsor. The

Owner shall record any CEMVN approved and duly executed, revised Conservation Servitude in the Mortgage and Conveyance Office of the parish where the land is located and shall provide a copy of the recorded document to CEMVN. The Conservation Servitude shall remain in full force and effect on:

- a. that portion of the Property representing credits sold;
- b. that portion of the Property representing any deficit between the mitigation obligations assumed by the Sponsor (through credits sold) and the mitigation obligation satisfied by the Bank as described in 2.c above; and
- c. that portion of the Property determined necessary by CEMVN, in consultation with the IRT, to provide a buffer sufficient to protect the integrity of the Bank.

4. In the event of the negligent or wrongful act or failure to act of the Owner, Sponsor, or their respective managers, partners, employees, contractors, or agents, including but not limited to misrepresentation, misapplication, misappropriation, improper management, non-disclosure of pertinent information, or non-compliance with the terms of this MBI, CEMVN and other IRT members may void their recognition of the Bank and/or terminate their future participation in this MBI. All funds in the Long-term escrow account, if any, will be forfeited to the Holder or to a long-term Steward or a CEMVN designee. Additionally, CEMVN and the IRT reserve the right to prosecute any negligent or wrongful act or failure to act including any intentional misrepresentation, misappropriation, non-disclosure of pertinent information, or non-compliance with the terms of this MBI to the fullest extent of the law.

D. Termination of Participation

IRT members may terminate their participation upon written notification to all signatory parties without invalidating this MBI. Participation of the IRT member seeking termination will end 30 days after written notification. Termination by one member of the IRT of its involvement in this MBI shall not terminate the MBI or affect the roles of the remaining members of the IRT, or the Sponsor or Owner. Remaining credits authorized solely under the authority of the withdrawing agency for use in that agency's programs will no longer be available for use to satisfy the requirements of that agency's program. Nothing in this Section is intended or shall be construed to limit the legal or equitable remedies (including specific performance and injunctive relief) available to the IRT members in the event of a threatened or actual breach of this MBI by the Sponsor.

XIII. TRANSFER OF PROPERTY OR SPONSORSHIP

All transfers of any interest in the Property or sponsorship are subject to the applicable provisions of the Conservation Servitude.

A. Transfers of Bank Property

1. The Owner may sell, assign, convey, or otherwise transfer its interest in the Property at any time provided that any such transfer on or after the execution date of this MBI must be made in accordance with and subject to this MBI and the Conservation Servitude and the following conditions:

a. The transferee is able to assume and agrees to assume the obligations of the Owner as set forth in this MBI; and

b. The transferee understands and agrees to the allowed/prohibited uses of the Property as set forth in the Conservation Servitude.

2. Notice of Property Transfer

a. The Owner must provide notice to CEMVN and to the Sponsor (if different from the Owner) that he intends to transfer the Property at least 60 days prior to the transfer. This notice must include the proposed transferee's name and the name of its authorized representative, if different, its address and phone number, the anticipated date of the transfer, and a statement signed by the proposed transferee that the Owner has:

i. Provided to it copies of this MBI and the Conservation Servitude;

ii. Explained the allowed/prohibited uses of the Property; and

iii. Advised that any transfer of the Property is subject to the terms and conditions contained in the MBI.

b. The Sponsor also must provide notice to CEMVN of any transfer of the bank Property by the Owner at least 60 days prior to the transfer or within 5 business days of learning of such transfer, whichever is earlier. This obligation continues until the Sponsor has provided the required notice to CEMVN even after the Property has been transferred. The Owner and the Sponsor may submit a joint notice, in which case the notice shall be clearly identified as such. The Sponsor's notice must include the proposed transferee's name and the name of its authorized representative, if different, its address and phone number, the anticipated date of the transfer, and a statement signed by the proposed transferee that the Sponsor has:

i. Provided to it copies of this MBI and the Conservation Servitude;

ii. Explained the allowed/prohibited uses of the Property; and

iii. Advised that any transfer of the Property is subject to the terms and conditions contained in the MBI.

c. After receipt of the notice of transfer, CEMVN, in consultation with the IRT, may

seek additional information about the proposed transferee and its fitness to assume the obligations of Owner from the current Owner, the proposed transferee, or from the Sponsor. Additionally, the Sponsor may submit any information it deems relevant to the transfer to CEMVN.

d. Any transfer of the ownership made without the required notice by Sponsor may, at the discretion of CEMVN, in consultation with the IRT, result in a suspension of credit sales until the Sponsor provides the information required in the notice.

3. At the time of the transfer of the Property, the transferee must sign this MBI as Owner and attest as follows, which statements shall be typed above the transferee's signature on the MBI:

a. That it has read and understands and agrees to the terms and conditions of the MBI and the Conservation Servitude; and

b. That it agrees to assume all obligations and responsibilities of the Owner contained in this MBI.

4. Upon execution of the MBI by the transferee/new owner, all obligations of the Owner pursuant to this MBI become those of the transferee/new owner.

5. From and after the date of any transfer by the Owner of its interest in the Property, the transferor shall have no further obligations hereunder and all references to the Owner in this MBI shall thereafter refer to the transferee, except that the transferor's liability for acts, omissions, breaches, or other compliance issues occurring prior to the transfer shall survive the transfer.

B. Transfer of Sponsorship

1. The Sponsor may sell, assign, convey, or otherwise transfer its interest in the Bank at any time provided that the Sponsor is in full compliance with all requirements of this MBI (including all financial assurance requirements) and the transferee provides a written statement agreeing to assume the obligations of the Sponsor as set forth in this MBI.

2. Notice of Change of Sponsor

a. The Sponsor must provide notice of its intent to transfer the sponsorship to the IRT, through CEMVN, and to the Owner at least 60 days prior to the transfer. This notice must include:

i) The proposed transferee's name and the name of its authorized representative, if different, its address and phone number, and the anticipated date of the transfer;

ii) A statement signed by the proposed transferee that:

6. From and after the date of any transfer by Sponsor of its interest in the sponsorship, the transferor shall have no further obligations hereunder and all references to Sponsor in this MBI shall thereafter refer to the transferee, except that the transferor's liability for acts, omissions, breaches, or other compliance issues occurring prior to the transfer shall survive the transfer.

XIV. ESTABLISHMENT OF STEWARD

Should the Sponsor choose to designate a Long-Term Steward, the Sponsor will provide CEMVN with written notice of his intent to designate one at least 60 days prior to the effective date of the Steward's assumption of the responsibilities. This notice must include the proposed Steward's name and the name of its authorized representative, if different, its address and phone number, and the anticipated date of the transfer. Once the IRT has determined the qualifications of and accepted the Long-Term Steward chosen by the Sponsor, to assume the responsibilities for the stewardship over the Property, CEMVN must be provided with a statement signed by the proposed Steward that the Sponsor has:

- A. Provided to it copies of this MBI and the conservation servitude;
- B. Explained the allowed/prohibited uses of the Property; and
- C. Transferred any remaining C&E financial assurance and Long-Term Maintenance and Protection endowment funds to accounts established by the Long-Term Steward and approved by CEMVN.

XV. BANK LIFE

Bank life ends when all success criteria have been attained and all credits have been sold. At this point all construction and establishment of financial assurance have been returned to the Sponsor and long term management is initiated. Unless such responsibility is transferred, with prior approval of CEMVN, to a Long-Term Steward, the Sponsor will remain responsible for: 1) the compensatory mitigation requirements for any DA permit for which it sold Bank credits; and 2) the long-term management, maintenance, monitoring, and protection of the mitigation represented by those credits.

XVI. OTHER PROVISIONS

A. Disclaimer and Notice

This MBI does not in any manner affect statutory authorities and responsibilities of the signatory parties.

USACE approval of this Instrument constitutes the regulatory approval required for the Black Bayou Mitigation Bank to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F.R. 332.8(a)(1). This Instrument is

not a contract between the Sponsor or Property Owner and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by the Sponsor or Property Owner for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

B. Warranties and Representations of Owner/Sponsor/Holder

Owner/Sponsor hereby represents and warrants as follows:

1. It is a limited liability company (or other legal entity) in good standing in the state of its organization and that it is qualified to do business in Louisiana and in every jurisdiction in which it is required to be qualified;
2. It has the full power and authority to enter into this MBI and that its signatories are authorized to transact business and enter contracts on its behalf; and
3. The execution and performance of its obligations under the MBI will not constitute a breach of any other agreement or a violation of any ordinance statute, law, or regulation to which it is a party or by which it is bound.

C. Compliance with Laws

Owner and Sponsor and Holder and/or Third Party each represent, warrant, and covenant that it is and will remain in compliance and abide with any and all statutes, laws, ordinances, rules, and regulations promulgated by any government entity which are applicable to it.

D. Non-reporting NWP

The Sponsor agrees not to utilize a non-reporting Nationwide Permit or Regional Permit under Section 404 of the Clean Water Act to impact any Waters of the United States on the Property. Notification shall be required for the use of any Nationwide Permit and/or Regional Permit in connection with this Bank.

E. Dispute Resolution

Resolution of disputes about amendments to this MBI shall be in accordance with 33 CFR § 332.8(e). If a dispute arises about the application of this MBI any party may raise the issue to CEMVN. CEMVN will convene a meeting of the IRT, or initiate another appropriate forum for communication, typically within twenty days of receipt of notice of the dispute. CEMVN will fully consider comments provided by the IRT and the Sponsor, if provided, in reaching its decision. Ultimately CEMVN is responsible for making final decisions regarding the use and performance of the Bank and the sale of its credits. Disputes related to satisfaction of success criteria may be subject to

independent review from government agencies or academia that is not part of the IRT. The IRT will evaluate this input and determine whether the success criteria are met.

Any dispute arising under this Instrument will not give rise to any claim by Sponsor or Property Owner for monetary damages.

F. Overall Performance

If the IRT determines that the Bank is not performing according to the standards and criteria set forth in this MBI, credit sales will be suspended until the Sponsor in consultation with CEMVN has developed an approved remedial action plan and performed the work defined in the remedial action plan necessary to produce additional credits. The Sponsor will provide to the IRT the remedial action plan within 60 days of notification of any deficiency. Following IRT approval of the remedial action plan, the Sponsor will conduct the remedial action measures prior to the end of the nearest growing season. Subsequent adaptive management measures may be required by the IRT. Sale of credits will not resume until remedial actions have been taken. The Sponsor will continue to provide monitoring reports as specified in this document, unless determined to be unnecessary by the IRT.

G. Specific Language of MBI Shall Be Controlling

The Parties intend the provisions of this MBI and each of the documents incorporated by reference in it to be consistent with each other, and for each document to be binding in accordance with its terms. To the fullest extent possible, these documents shall be interpreted in a manner that avoids or limits any conflict between or among them. However, if and to the extent that specific language in this MBI conflicts with specific language in any document, other than the conservation servitude, that is incorporated into this MBI by reference, the specific language within the MBI shall be controlling.

H. Notice

Any notice required or permitted hereunder shall be deemed to have been given either (i) when delivered by hand, or (ii) three (3) days following the date deposited in the United States mail, postage prepaid, by registered or certified mail, return receipt requested, or (iii) sent by Federal Express or similar next day nationwide delivery system, addressed as follows (or addressed in such other manner as the party being notified shall have requested by written notice to the other party):

Sponsor: B.H. Mitigation Company, LLC
5667 Bankers Avenue
Baton Rouge, Louisiana 70808-2610
(225) 922-4540
Tspies@powellgrp.com
POC: Tom Spies

Agent: Pangaea Conservation & Compliance, LLC
P.O. Box 2171
Denham Springs, Louisiana 70726
POC: Leonard McCauley

Landowner: Excalibur Land Company, LLC
5667 Bankers Avenue
Baton Rouge, Louisiana 70808-2610
(225) 922-4540
Tspies@powellgrp.com
POC: Tom Spies

Interagency Review Team:

Department of the Army
New Orleans District, Corps of Engineers
7400 Leake Avenue
New Orleans, Louisiana 70118-3651
POC: Jacqueline Farabee

EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202
POC: Raul Gutierrez

U.S. Fish and Wildlife Service
646 Cajundome Boulevard, Suite 400
Lafayette, Louisiana 70506
POC: Josh Marceaux

Louisiana Department of Wildlife and Fisheries
2000 Quail Drive
Baton Rouge, Louisiana 70808
POC: Joe Maryman

This MBI constitutes the entire agreement between the parties concerning the subject matter hereof and supersedes all prior agreements or undertakings.

J. Invalid Provisions

In the event any one or more of the provisions contained in this MBI are held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability will not affect any other provisions hereof, and this MBI shall be construed as if such invalid, illegal, or unenforceable provision had not been contained herein.

K. Headings and Captions

Any paragraph heading or captions contained in this MBI shall be for convenience of reference only and shall not affect the construction or interpretation of any provisions of this MBI.

L. Counterparts

This MBI may be executed by the parties in any combination, in one or more counterparts, all of which together shall constitute but one and the same instrument.

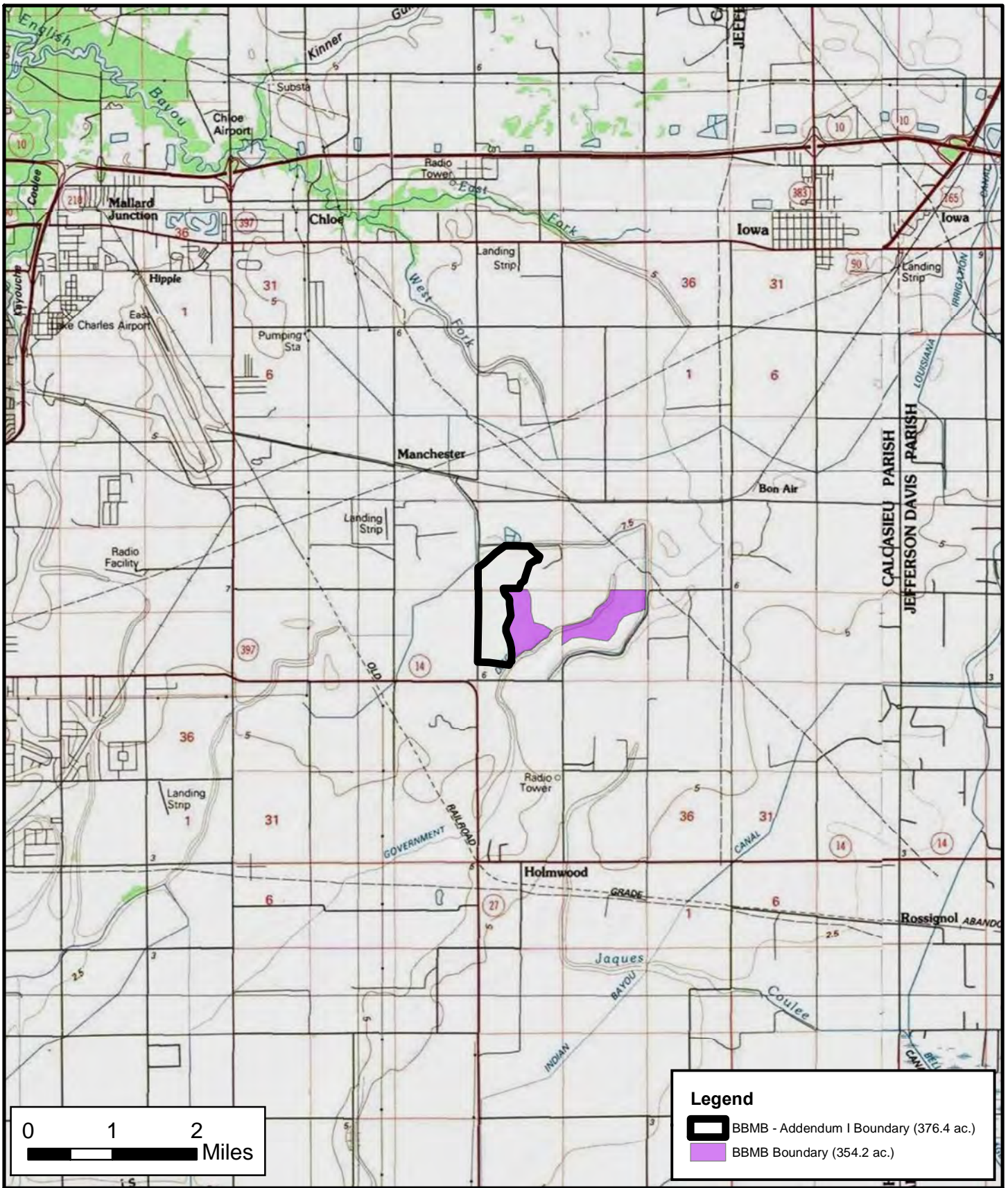
M. Binding

This MBI shall be immediately, automatically, and irrevocably binding upon the Sponsor and its heirs, successors, assigns, and legal representatives upon execution by the Sponsor and the CEMVN, even though it may not, at that time or in the future, be executed by the other potential parties to this MBI. The execution of this MBI by EPA, LDWF, or the U.S. Fish and Wildlife Service, or other agency, city, or county shall cause the executing agency to become a party to this MBI upon execution, even though all or any of the other potential parties have not signed the MBI. Execution does not signify the agencies' agreement with the use of credits in the Bank in connection with any specific permit or project.

N. Liability of Regulatory Agencies

The responsibility for financial success or loss and any risk to the investment undertaken by the Sponsor rests solely with the Sponsor. The regulatory agencies that are parties to this MBI administer their regulatory programs to best protect and serve the public's interest in its waterways, and not to guarantee the financial success of Banks, specific individuals, or entities. Accordingly, there is no guarantee of profitability for any individual Bank. Sponsors should not construe this MBI as a guarantee in any way that the agencies will ensure sale of credits from this Bank or that the agencies will forgo other mitigation options that may also serve the public interest. Since the agencies do not control the number of mitigation banks proposed or the resulting market impacts upon success or failure of individual banks, in depth market studies of the potential and future demand for credits are the sole responsibility of the bank proponent. Sponsor shall have no right to money damages and shall have no right to claim or to recover a loss of anticipated revenues based on any decision by CEMVN and/or based on CEMVN's administration of its mitigation banking program and/or this mitigation bank.

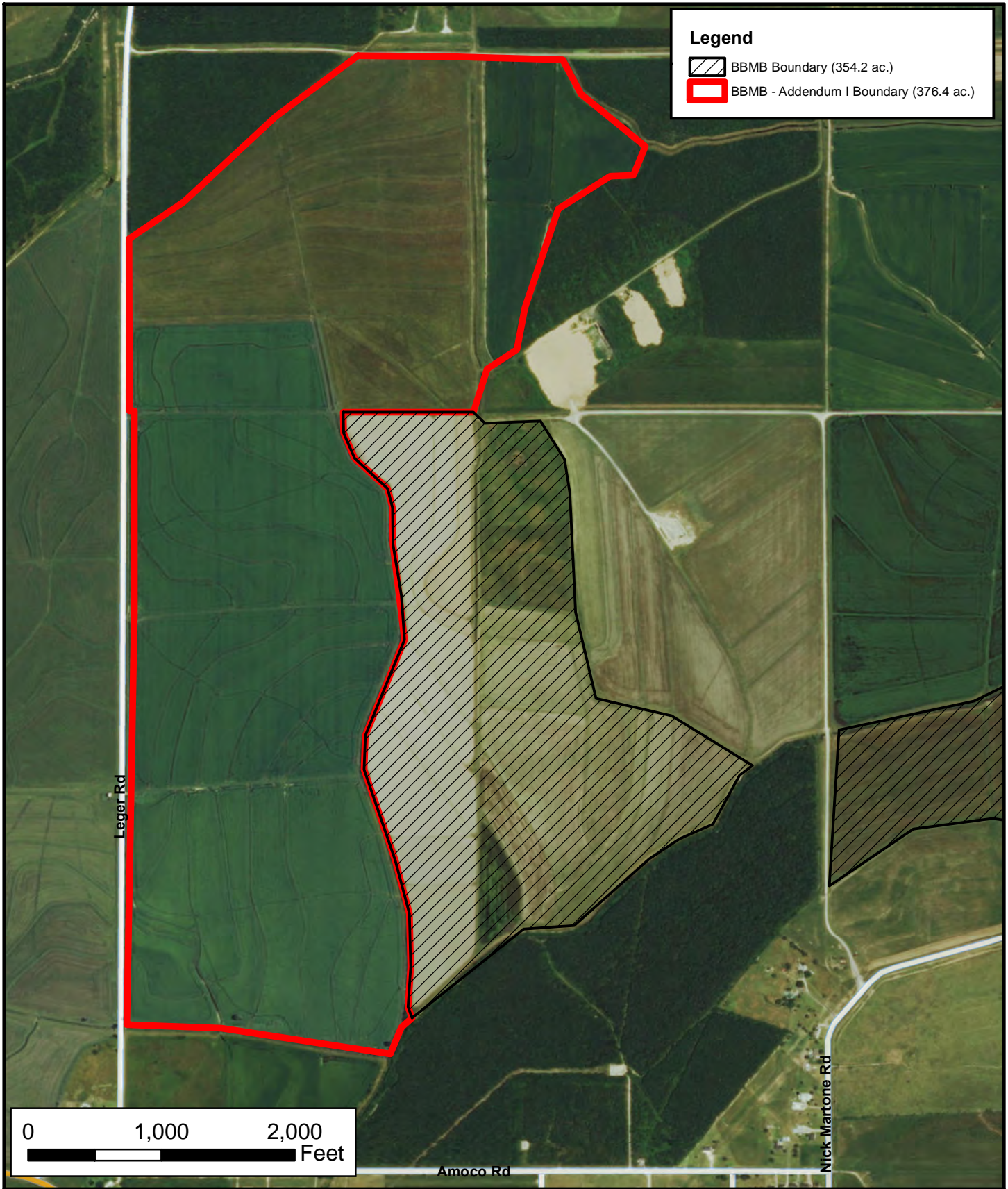
Attachment A -Maps





SITE VICINITY MAP
 Black Bayou Mitigation Bank - Addendum I
 Calcasieu Parish

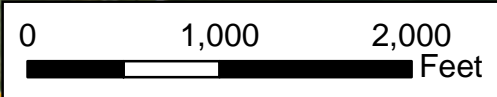


Figure: 1
 Date: April 2016
 Scale: 1:100,000



Legend

-  BBMB Boundary (354.2 ac.)
-  BBMB - Addendum I Boundary (376.4 ac.)

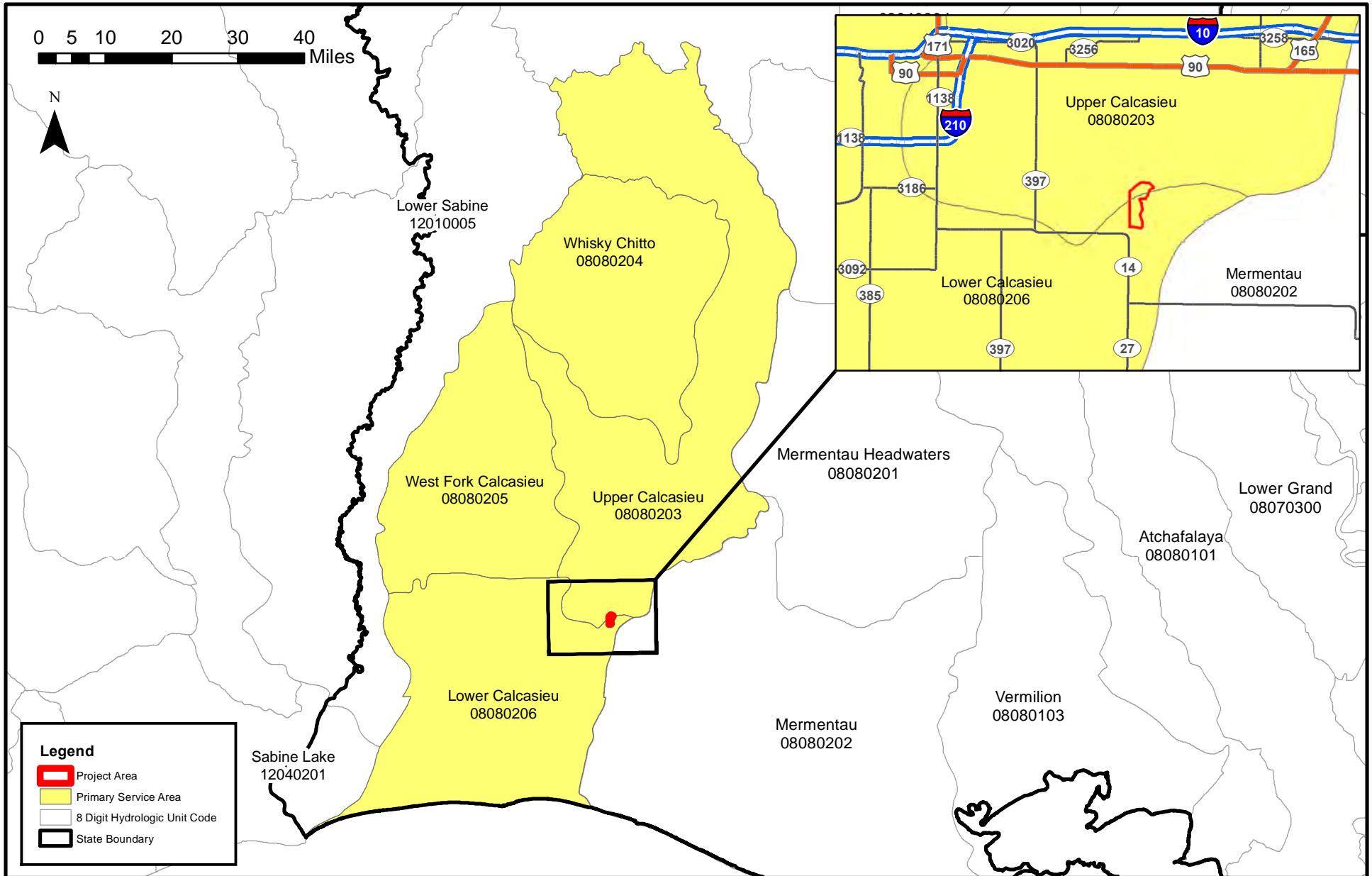


SITE BOUNDARY

Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish



Figure: 1
Date: April 2016
Scale: 1:12,000



BOTTOMLAND HARDWOOD SERVICE AREA MAP

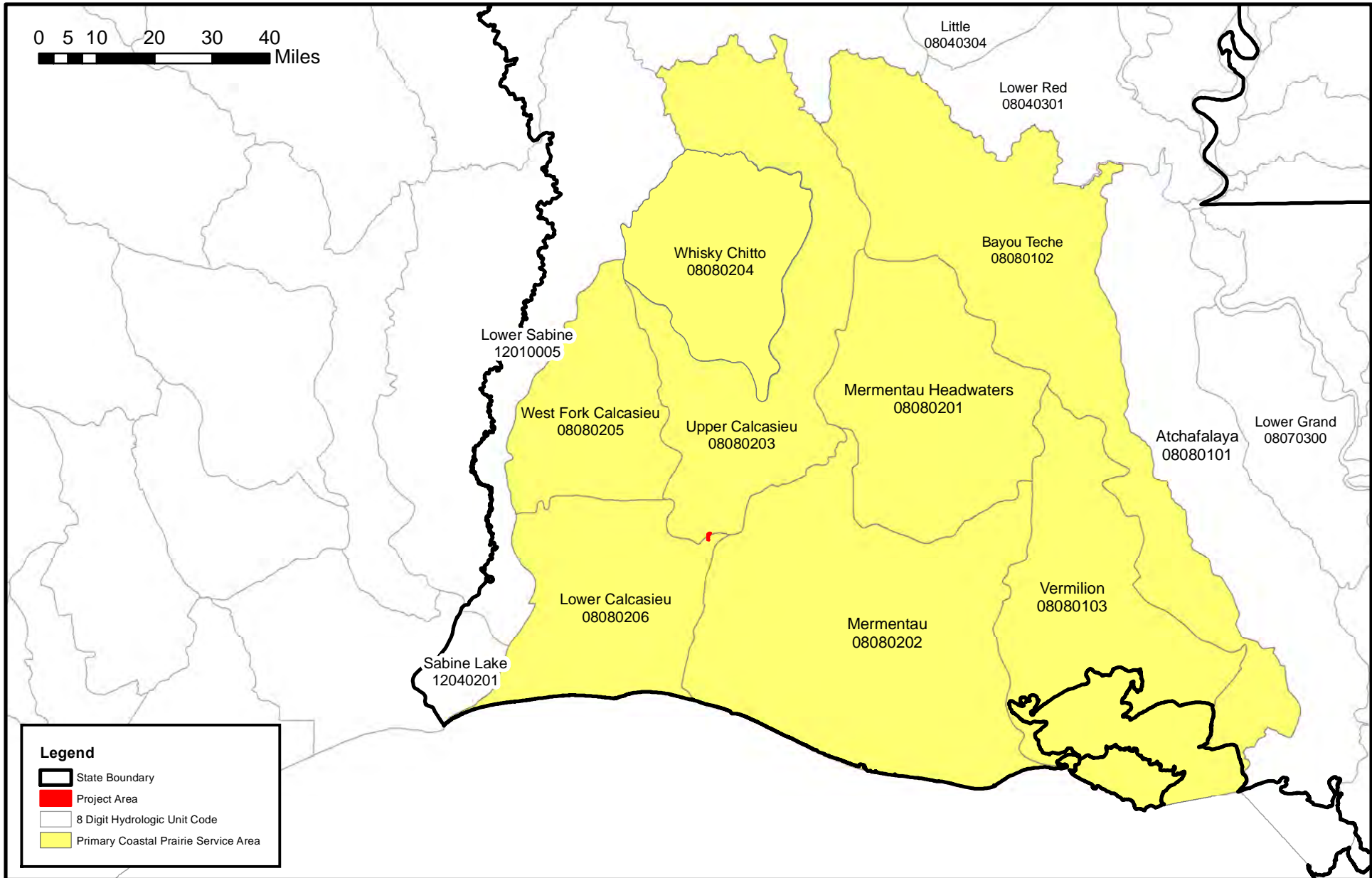
Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish



Figure: 3

Date: April 2016

Scale: 1:1,300,000



COASTAL PRAIRIE SERVICE AREA MAP

Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish



Figure: 4

Date: June 2016

Scale: 1:1,500,000



Attachment B - Title Report/Opinion (Not included with this submittal)

Attachment C1 - Mitigation Work Plan – Bottomland Hardwood Habitat

ATTACHMENT C1: MITIGATION WORK PLAN
 FOR BOTTOMLAND HARDWOOD HABITAT
 BLACK BAYOU MITIGATION BANK – ADDENDUM I

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FOR BOTTOMLAND HARDWOOD HABITAT
BLACK BAYOU MITIGATION BANK – ADDENDUM I

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Figure C1-2 – Mitigation Types

Figure C1-3 – Landuse

Figure C1-4 – Existing Drainage

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Attachment MWP-BLH-B – Combined Cost Analysis Report

Attachment MWP-BLH-C - Assessment Method(s)

ATTACHMENT C1: MITIGATION WORK PLAN
 FOR BOTTOMLAND HARDWOOD HABITAT
 BLACK BAYOU MITIGATION BANK – ADDENDUM I

I. Bank Property Location

The center point of the property is located at latitude 30.1711 N and longitude –93.0775 W in Calcasieu Parish, Louisiana (See Attachment A of the MBI). The property is located in the 08080203 Hydrologic Unit Code (the Upper Calcasieu Watershed) and the 08080206 Hydrologic Unit Code (the Lower Calcasieu Watershed).

Driving directions to the site are as follows:

Drive west on Interstate 10 toward Lake Charles; take Exit 36 onto Louisiana Highway 397 South; proceed south for approximately 6.4 miles; turn left (east) on Louisiana Highway 14; proceed for approximately 2.5 miles; turn left onto Leger Road; proceed for 0.3 miles; and the property will be on the right.

II. Objective

A. Aquatic Resource Type and Functions to be Restored/Enhanced/Preserved

This Bank will re-establish 370.1 acres of bottomland hardwood forest (BLH) and coastal prairie habitat. The Bank will also contain an additional 6.9 acres of non-mitigation features consisting of open water.

Table C1-1: Current Habitat Types and Landuse (see Figure C1-1)

Habitat Type	Landuse	Acreage
Agricultural Prior Converted Wetlands	Agricultural	370.1
Other U.S. Waters	Natural Drains / Drainage Canals	6.3
Total	---	376.4

ATTACHMENT C1: MITIGATION WORK PLAN
 FOR BOTTOMLAND HARDWOOD HABITAT
 BLACK BAYOU MITIGATION BANK – ADDENDUM I

Table C1-2: Proposed Mitigation Bank Habitat Types (see Figure C1-2)

Habitat Type	Acreage	Mitigation Type
Coastal Prairie	295.6	Re-establishment
Bottomland Hardwood Forest	74.5	Re-establishment
Other U.S. Waters	6.3	Non-mitigation
Total	376.4	---
Total Mitigation	370.1	---

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), BLH forests are forested, alluvial wetlands occupying broad floodplain areas that flank large river systems. BLH forests may be called fluctuating water level ecosystems characterized and maintained by a natural hydrologic regime of alternating wet and dry periods. These forests support distinct assemblages of plants and animals associated with particular landforms, soils, and hydrologic regimes. They are important natural communities for maintenance of water quality, providing a very productive habitat for a variety of fish and wildlife, and are important in regulation of flooding and stream recharge.

This project will re-establish coastal prairie and bottomland hardwood habitat wetland communities so that they become species rich/diverse, sustainable wetland ecosystems. This shall be accomplished through removal of the site from agricultural use; degrading of spoil banks and rice dikes, thereby restoring sheetflow across the property; allowing overflowing of agricultural drains, thereby temporarily inundating the property; and through vegetative plantings in order to restore a natural assemblage of species, which will create additional wildlife habitat throughout.

ATTACHMENT C1: MITIGATION WORK PLAN
FOR BOTTOMLAND HARDWOOD HABITAT
BLACK BAYOU MITIGATION BANK – ADDENDUM I

B. Watershed Contributions

1. Watershed Need

BBMB – Addendum I is proposed to provide compensatory mitigation for CEMVN approved projects within the Upper and Lower Calcasieu watersheds. In recent years, these watersheds have seen the highest demand for wetland mitigation in the New Orleans District.

Due to development and agriculture, very little native prairie and forest habitat remains in the vicinity of the site (see Figure C1-3), providing limited habitat for migratory birds and terrestrial wildlife. The restoration of this site will provide 370.1 acres of much needed natural habitat. The site will be converted to a more natural ecosystem, while also improving the water quality in the receiving waters downstream of this site.

2. Watershed Benefits

The BBMB – Addendum I project area is located in the drainage area to Subsegment LA031101 (Intracoastal Waterway – from Calcasieu Lock to East Calcasieu River Basin Boundary, see Figure C1-7) as designated by Louisiana Department of Environmental Quality (LDEQ). The project area flows to Government Ditch via unnamed canals/ drainageways. Government Ditch borders the southeastern corner of the site (Figure C1-4). Government Ditch then flows to the south and drains to South Fork Black Bayou (approximately 13 miles downstream of the project), which then discharges into the Intracoastal Waterway (approximately 18 miles downstream of the project).

The LDEQ-designated uses of Fish and Wildlife Propagation (FWP) and Primary Contact Recreation (PCR) for Sub-segment LA031101 were identified as impaired in the 2014 final LDEQ 303(d). Identified impairments include chlorides (due to tidal influence), sulfates (due to hydrostructure flow regulation), total dissolved solids (due to tidal influence and hydrostructure flow regulation), and water temperature (due to natural causes and drought-related impacts). A Total Maximum Daily Load (TMDL) for fecal coliform was completed for Subsegment 030103 (Calcasieu River) in October 2010, due to prior impairments from local septic systems.

The cessation of agricultural activities along with degrading spoil banks and rice dikes, and restoration of native habitats for this project will aid in meeting the current and future TMDLs through the resulting water quality improvements due to increased filtration and plant uptake (i.e., nonpoint source pollution prevention).

In addition to improvement in water quality due to reduction in non-point source pollution, BBMB – Addendum I will improve plant and wildlife habitat and provide increased wetland function over that which is currently performed by the bank given its current condition.

ATTACHMENT C1: MITIGATION WORK PLAN
FOR BOTTOMLAND HARDWOOD HABITAT
BLACK BAYOU MITIGATION BANK – ADDENDUM I

III. Site Selection

The primary factors considered during site selection included the following:

1. Site location in relationship to possible future permitted activities involving wetland impacts;
2. Site directly abuts the approved Black Bayou Mitigation Bank;
3. Site is currently used for crop production, but due to poor landscape position and lack of sufficient water supply it can only support a crop once every five years; and
4. Ecological and technical suitability indicating the high likelihood of a successful restoration/mitigation project.

Restoration efforts will re-establish approximately 370.1 acres of coastal prairie and bottomland hardwood habitat while expanding/improving wildlife habitat and providing water quality benefits to the area.

IV. Site Protection Instrument

(See Section X. Long-Term Protection and Maintenance, Subsection A. “Conservation Servitude” of this MBI.)

V. Baseline Information

This section contains both the historical and current ecological and physical information about the Bank Site.

A. Land Use

1. Historical Land Use

BBMB – Addendum I lands were historically coastal prairie with pockets of hardwood forests, which were cleared for silvicultural and agricultural use prior to 1970. Since property acquisition by the Sponsor in 1995, the property has been used solely for agricultural activities, including cultivation and production of rice (*Oryza sativa*).

2. Current Land Use

The BBMB – Addendum I is currently used for cultivation and production of rice (*Oryza sativa*) but due to poor landscape position and lack of sufficient water supply it can only support a crop once every five years.

ATTACHMENT C1: MITIGATION WORK PLAN
FOR BOTTOMLAND HARDWOOD HABITAT
BLACK BAYOU MITIGATION BANK – ADDENDUM I

B. Soils

The 1988 and 2014 Calcasieu Parish Soil Surveys map the soils located on site as Morey loam (Mr), Crowley-Vidrine complex (Cr), Judice silty clay loam (Ju), Midland silty clay loam (Mn), and Mowata-Vidrine silt loams (Mt). A soil map for the BBMB – Addendum I is provided as Figure C1-5.

- Morey loam soils are located along broad flat terraces of the Gulf Coast Prairies and have slopes of zero (0) to one (1) percent. Soils are poorly drained, slowly permeable, and rarely flooded.
- Crowley-Vidrine complex are somewhat poorly drained, level soils, located along broad ridges within Gulf Coast Prairies. Crowley and Vidrine soils are so intermingled that they are nearly impossible to map separately, as Vidrine soil is located in small mounded areas surrounded by Crowley soil. Slopes are generally one (1) to three (3) percent.
- Judice silty clay loam consist of poorly drained, very slowly permeable soils located within depression throughout Gulf Coast Prairies. These soils are rarely flooded and unlikely to pond. Slopes are found to be zero (0) to one (1) percent.
- Midland silty clay loam consists of poorly drained, very slowly permeable soils located within shallow depressions throughout the Gulf Coast Prairies. Slopes are generally less than one (1) percent.
- Mowata-Vidrine silt loams are a mixture of Mowata and Vidrine soils, so intermingled that they are difficult to map individually. Small mounds of Vidrine soils are usually found surrounded by Mowata soils, with Mowata being the predominant soil on site. These soils are poorly drained to somewhat poorly drained, nearly level soils, located along broad flats within coastal prairies. Slopes are found to be zero (0) to one (1) percent.

A wetland delineation conducted in September 2015 (prepared by TerRestore, LLC for Excalibur Land Company) confirmed that these soils are present on site as depicted within the Calcasieu Parish Soil Surveys, do present hydric indicators, and are hydric soils as identified by the Natural Resources Conservation Service.

Agricultural use of this property in the past and present has modified the topography and hydrology of the project site.

C. Hydrology

1. Historical Hydrology and Drainage Patterns

BBMB – Addendum I is located within the Upper and Lower Calcasieu watersheds and is currently utilized for agricultural activities including cultivation and production of rice (*Oryza sativa*). Prior to silvicultural and agricultural activities, surface water was able to pond within depressional areas throughout the site or sheetflow across the site.

ATTACHMENT C1: MITIGATION WORK PLAN FOR BOTTOMLAND HARDWOOD HABITAT BLACK BAYOU MITIGATION BANK – ADDENDUM I

Historical drainage patterns are believed to have been similar to those shown on Figure C1-6 as proposed (post-restoration) drainage patterns. Government Ditch is believed to be a historical/natural water feature which was supplanted by the existing canal.

Historical water sources to the Bank included direct precipitation and overbank flooding from nearby drainageways. Drainage of this property has been impacted by construction/modification of adjacent drainageways (and associated spoil banks and culverts), and construction of ditches (and associated spoil banks and culverts) within the property (see Figure C1-4). Construction of rice dikes (see Figure C1-6) also impacted site drainage.

Jurisdictional determination MVN-2015-02288-SQ was issued by CEMVN for this property on April 15, 2016.

2. Existing Hydrology and Drainage Patterns

Natural hydrology has been altered by agricultural drainage improvements and soil surface compaction. Currently, wetlands and unnamed drainageways on-site are hydrologically isolated due to spoil banks along drainageways and rice dikes. Wetland hydrology on-site is currently driven by direct precipitation – rice dikes have been minimally gapped to allow some of the excessive precipitation to flow from the site as runoff, while spoil banks are too high for routine flood waters to overtop. Current and proposed drainage patterns are depicted within Figures C1-4 and C1-6. The drainage area associated with the property is depicted in Figure C1-7, and elevations (2-foot contours) are depicted on Figure C1-8.

D. Vegetation

1. Historical Plant Community

Species assemblages historically common to bottomland hardwood forests are identified within *The Natural Communities of Louisiana*. Plant species which were likely present on site prior to silvicultural and agricultural activities include those species listed below.

Bottomland Hardwood Species:

- Water Oak (*Quercus nigra* L.)
- Cherrybark Oak (*Quercus pagoda* Raf.)
- Nuttall Oak (*Quercus texana* Buckley)
- Willow Oak (*Quercus phellos* L.)
- Laurel Oak (*Quercus laurifolia* Michx.)
- Green Ash (*Fraxinus pennsylvanica*)

ATTACHMENT C1: MITIGATION WORK PLAN
FOR BOTTOMLAND HARDWOOD HABITAT
BLACK BAYOU MITIGATION BANK – ADDENDUM I

- Sweetgum (*Liquidambar styraciflua* L.)
- Sugar Berry (*Celtis laevigata*)
- American Elm (*Ulmus americana* L.)
- Drummond's Maple (*Acer rubrum* L. var. *drummondii* (Hook. & Arn. Ex Nutt.) Sarg.)

2. Existing Plant Community

Current vegetation within cleared crop fields consists of predominantly cultivated rice (*Oryza sativa*).

VI. Description of Work

This Bank will provide 370.1 acres of coastal prairie and bottomland hardwood habitat to compensate for unavoidable wetland impacts for the Calcasieu Basin (See Figure C1-2). In order to accomplish this task, the Sponsor shall complete the following soils/hydrologic and habitat work.

A. Soils/Hydrologic Work Plan

The proposed mitigation plan involves the cessation of agricultural production, the restoration of surface hydrology; planting of an assemblage of native species indicative of coastal prairies; and the implementation of effective short-term, intermediate, and long-term management strategies.

Currently, overbank flooding is impeded by spoil banks and rice dikes (see Figures C1-6 – C1-6b). During flood stages sufficient to overtop these impediments, flood waters become impounded behind them. Removal of these impediments will contribute to the ability of flood waters on-site to rise and recede in a more natural regime.

Spoil bank material excavated during restoration will be spread over adjacent fields so as not to significantly alter topography or will be removed from site.

Figures C1-6 – C1-6b provide a plan view and typical cross-sections to be utilized during construction activities.

B. Vegetation

For the 74.5 acres proposed for designation as BLH re-establishment, an appropriate combination of hard and soft mast producing bare-root stock will be planted. Species assemblages will be selected and planted based on landscape position. Proposed species assemblages to be planted will be representative of a species assemblage historically common to surrounding wetland forest and bayous of the area. These species assemblages are identified in *The Natural Communities of Louisiana*

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(Louisiana Natural Heritage Program, August 2009, available at: <http://www.wlf.louisiana.gov>). A proposed species list is presented below.

Table C1-3: Proposed Bottomland Hardwood Species Assemblages to be Planted

Scientific Name	Common Name (USDA)	Observed In Reference Site ⁽¹⁾	Recorded In Calcasieu Parish (USDA)	Wetland Indicator Status Region 2 (USDA)	Percent Composition (%)
Reference Site – Bottomland Hardwood					
<i>Quercus nigra</i> L.	Water oak	Yes	Yes	FAC	12%
<i>Quercus pagoda</i> Raf.	Cherrybark oak	Yes	Yes	FACW	12%
<i>Quercus texana</i> Buckley	Nuttall oak	Yes	Yes	FACW	12%
<i>Quercus phellos</i> L.	Willow oak	Yes	Yes	FACW	12%
<i>Quercus laurifolia</i> Michx.	Laurel oak	Yes	Yes	FACW	12%
<i>Fraxinus pennsylvanica</i>	Green ash	Yes	Yes	FACW	8%
<i>Liquidambar styraciflua</i>	Sweetgum	Yes	Yes	FAC	8%
<i>Celtis laevigata</i>	Sugar berry	Yes	Yes	FACW	8%
<i>Ulmus americana</i> L.	American elm	Yes	Yes	FAC	8%
<i>Acer rubrum</i> L. var. <i>drummondii</i> (Hook. & Arn. Ex Nutt.) Sarg.	Drummond's maple	Yes	Yes	OBL	8%

(1) A nearby reference site of a natural (healthy) bottomland hardwood community was selected on which vegetative surveys were conducted.

Proposed planting spacing in areas designated as BLH re-establishment will be 9'x 9' (for an initial density of 538 trees per acre) of bare-root stock. Seedling species will be mixed so as not to create single species rows. Hard mast species will be planted so that they comprise not less than 60 percent, but not more than 70 percent, of the planted seedlings. If overstocking of soft mast occurs due to adjacent forested areas, the Sponsor will conduct adaptive management/thinning of soft mast as needed to correct the hard mast to soft mast ratio. Initial / interim monitoring survival rates for re-establishment and rehabilitation areas will be a minimum of 250 trees per acre. Long-term success for all replanted areas will be >80% canopy coverage. Weedy vegetation within planted areas will be maintained by mowing and/or herbicidal application through Year 5 (prescribed burning will not be used) with spot treatments through Year 15 or achievement of long-term success criteria.

Invasive plant species such as Chinese tallow (*Triadica sebiferum*) will be removed by cutting or herbicidal treatment during initial planting. The percent cover of invasive plants will be monitored during long-term and short-term success monitoring, and appropriate action will be taken if needed.

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VII. Maintenance Plan

Maintenance activities will be conducted by the Sponsor during establishment of the Bank (i.e., until all credits are sold), and the Long-term Steward will conduct maintenance activities after all credits are sold (see Section III of the MBI – Responsibilities of Parties).

- A. The Bank will be monitored through year 50 or later, if canopy cover of 80 percent has not been achieved to prevent re-infestation by noxious/exotic vegetation. Noxious/exotic vegetation stem density shall be controlled so that it comprises, on an acre-by-acre basis, not more than one percent of the total stem density. Section VI.B.7 of the Mitigation Work Plan details the elimination/control of invasive plants.
- B. The property boundary will be monitored and maintained as needed. Boundary maintenance of the Bank will include the posting of signs to demarcate the Bank boundary. Fencing will be maintained between the Bank and any adjacent lands which are grazed.
- C. The Owner will make periodic inspections of the property of not less than once per year to verify that use of the property is consistent with this MBI and the conservation servitude and to inspect for any damage caused by flood, fire, storm, wind, accident, vandalism, negligence, or other act or event that causes damage to the Bank.

VIII. Performance Standards

In order for the Bank to be considered acceptable for mitigating wetland impacts associated with DA permits, the Property will be restored in accordance with the Mitigation Work Plan such that it meets wetland criteria as described in the 1987 Corps of Engineers Wetland Delineation Manual (the 1987 Manual) as well as the November 2010 Regional Supplement for the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0. Performance standards (success criteria) used to measure the success of the Bank are provided below.

A. Initial Success Criteria

1. Hydrology: Ground surface elevations must be conducive to establishment and support of hydrophytic vegetation, and re-establishment and maintenance of hydric soil characteristics. To that end, all alterations of the natural topography (ditching, spoil banks, land leveling, bedding, fire breaks, etc) that have affected the duration and extent of surface water have been removed or otherwise rendered ineffective in accordance with this Mitigation Work Plan.

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2. Vegetation: A minimum of 250 planted seedlings per acre must survive through the end of the second spring following the planting (i.e., Year 1). Those surviving seedlings must be representative both in species composition and percentage identified in this Mitigation Work Plan. This criterion will apply to initial plantings, as well as any subsequent replanting, that may be needed to meet this requirement.

B. Interim Success Criteria

1. Hydrology: By Year 3 (two years following attainment of the one-year survivorship criteria) site hydrology will be restored such that the Property meets the wetland criterion as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0. Data demonstrating that wetland hydrology has been re-established is to be collected by the Sponsor and submitted to CEMVN in the monitoring report for the interim success criteria.

2. Vegetation and Vegetative Plantings:

a. For a given planting, a minimum of 250 seedlings/saplings per acre must be present (with a 60 to 40 hard mast to soft mast ratio) at the end of the fourth year (i.e. Year 5) following successful attainment of the one-year survivorship criteria. Trees established through natural recruitment may be included in this tally; however, no less than 125 hard mast-producing seedlings per acre must be present. Surviving hard mast seedlings must be representative of the species composition and percentage identified in this Mitigation Work Plan. Exotic/invasive species may not be included in this tally.

b. By Year 5 (four years following successful attainment of the one-year survivorship criteria) the Bank and the perimeter will be virtually free (approximately 5% or less on an acre-by-acre basis) of exotic/invasive vegetative species.

c. Developing plant community must exhibit characteristics and diversity indicative of a viable native forested wetland community commensurate with stand age and site conditions by Year 5. Achievement of wetland vegetation dominance is defined as a vegetation community where more than 50% of all dominant species are facultative (FAC) or wetter, excluding FAC- plants, using “routine delineation methods” as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0.

C. Long-Term Success Criteria

1. Forest canopy coverage exceeds eighty percent of forested land mass as measured by an approved method. Forest canopy species abundance and composition is consistent with the restoration goals identified in the restoration plan and credit

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assessment methodologies. The long term species composition should fall within the range of 50:50 to 40:60 soft mast to hard mast ratio.

2. When forest canopy coverage exceeds eighty percent, the Bank will be essentially void of exotic/invasive vegetation (all seed-producing trees removed from Bank and perimeter and less than 3% of the understory on an acre per acre basis). An active treatment program will continue as part of the long-term maintenance program.

3. If thinning to maintain or enhance the ecological value of the Bank is determined necessary by the IRT at this time, the Sponsor/Steward will develop a thinning plan in coordination with the IRT. Thinning operations shall be performed by the Sponsor/Steward per the requirements of the thinning plan.

4. The Sponsor will provide documentation that the “Long-Term Maintenance and Protection” escrow account is fully funded.

IX. Monitoring Requirements

The Sponsor agrees to perform all work necessary to monitor the Bank to demonstrate compliance with the success criteria established in this Mitigation Work Plan. The Sponsor will monitor the Bank in the spring of each monitoring year using the guidelines in Section VIII of this Mitigation Work Plan. Surveys of permanent monitoring stations will occur in the following time frame:

1. Immediately following planting of the Bank to establish baseline information.
2. In Year 1, 3, 5 and after achieving interim success criteria, monitoring will occur every 3 years until an average canopy coverage of 80% is established.
3. If thinning is required after successfully achieving the long-term success criteria, the site will be surveyed prior to and following the first thinning operation following plantings.

If monitoring for any given year determines that the Bank is not progressing as expected, monitoring will continue on an annual basis until the Bank successfully meets or exceeds established milestones. After achieving the interim success criteria, monitoring will occur every 3 years until average canopy coverage of 80% is obtained. If thinning is required after successfully achieving the long-term success criteria, the site will be surveyed prior to and following the first thinning operation following plantings.

The survey of the permanent monitoring stations will collect data to evaluate the survival rate of planted vegetation; number, species and growth rates (average heights and diameter). In addition to planted seedlings, surveys will include the number by species of volunteering trees, shrubs and woody vines. Surveys will also collect information regarding colonizing plant species, the wetland plant status (scaled from

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obligate (OBL) to upland (UPL) of each and the number by species of exotic/noxious specimens.

A. Permanent circular monitoring stations

Immediately following initial planting of the Bank, the Sponsor will randomly establish a permanent circular monitoring station for every 20 acres on the Bank. Each station will have a minimum area of 1/20th acre (radius=26 feet). Stations will be identified with a permanent marker (e.g., an 8-foot PVC pipe anchored with a metal T post at plot center) and GPS coordinates will be recorded for each station. A map will be provided to CEMVN (See Reporting Protocols below) that depicts the location of the monitoring stations as well as a coordinating list containing the coordinates for each station. All individual planted seedlings/saplings falling within each monitoring station will be marked with a numbered tag that uniquely identifies each seedling. A document providing seedling information shall be presented (to CEMVN) for each monitoring station and this document shall not only list the specific tag number for each seedling within the monitoring station, but also the species (by scientific and common name), height, diameter, wetland rating, hard mast or soft mast categorization, and general condition of each stem.

To establish baseline information this data will be obtained immediately following the initial planting of the Bank site or phase of the Bank.

B. Transects

The Sponsor shall establish transects along planted rows to be used to determine overall survivorship of planted seedlings. Transects shall make up approximately 3% of the total number of rows and arranged so that a representative sample of the entire track is obtained. The beginning and ending points of each transect shall be marked with a permanent marker (e.g., an 8-foot PVC pipe anchored with a metal T post) and GPS coordinates shall be recorded for these points.

To establish baseline information transects will be surveyed to determine the number by species of planted seedlings within 60 days of planting. Transects will be surveyed until successful attainment of the interim success criteria. Initial and interim transect surveys shall record the species present, the number of living seedlings for each species, the wetland indicator status of each species, the mast type of each species and describe the general condition of the seedlings. Any failed areas of plantings should be noted along with an explanation for the failure.

C. Soil Profile

The Sponsor will collect data on the hydrologic conditions of the Bank as necessary. Sufficient data shall be provided to accurately demonstrate variations in soil conditions. Information to demonstrate hydric properties within the soil shall be provided

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as a description of the upper 12 inches of the soil profile. Such data will be presented as points with GPS coordinates for each point, a hydric indication for each point, and an explanation to support the information for each point. This information shall also be provided on a referenced map included as an attachment.

The Sponsor will be required to submit a Corps issued JD (at year 3) to show that the Property meets the wetland criterion as described in the 1987 Manual as well as the Regional Supplement of the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0.

D. Floristic Survey

To document the attainment of the long-term success criteria, the Sponsor will complete a comprehensive floristic survey for the Bank as part of the monitoring requirements.

A floristic survey should be comprehensive over the entire site, and should be conducted using systematic field techniques. This survey should provide a list of plants and communities existing on the site. If adverse conditions such as disease, drought, predation, or herbivory, etc. exist and have impacted the plantings, then this information and these conditions need to be discussed in the report.

E. Photographs

Digital images shall be taken from ground level at each monitoring station and from elevated positions throughout the Bank to document overall conditions. These ground level images should provide a North, South, East, and West image for each station.

F. Qualitative Analysis

The Sponsor shall evaluate the entire extent of the Bank (or phase of the Bank that this report represents) and provided observations concerning overall seeding survivorship, colonization of the Bank by volunteer plant species, wildlife utilization, and any other information that is pertinent to achievement of initial success criteria.

G. Hydrologic Conditions

A description of the condition of any applicable hydrology altering features (culverts, ditches, plugs, etc.) and a general discussion of hydrologic conditions at monitoring stations shall be provided.

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H. Ledgers

The Sponsor will utilize the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) as a ledger to show all transactions. The Sponsor will input the following information: transaction date, permittee name, credits/acres sold and DA permit number. No other reporting measures are required.

X. Monitoring Reports

Independent of the As-built report, the Sponsor will submit monitoring reports documenting monitoring efforts at the Bank to the CEMVN by July 31st of the year monitoring occurs. Besides monitoring results for that monitoring year, reports will include a financial assurance report documenting withdrawals and deposits. The monitoring reports will follow the guidelines listed below:

The monitoring report will include data sufficient for comparison to the performance standards found in Section VIII of this Mitigation Work Plan. The Sponsor shall also include, in these reports, a discussion of all activities which took place at the Bank.

A. As-Built Report

An As-built report will be submitted to CEMVN within 60 days following completion of all work required to restore or enhance special aquatic sites. The As-built report will describe in detail the work performed and provide a list of species planted, the number of each species, the hard or soft mast categorization, and the wetland rating. No deviation from the Mitigation Work Plan may occur without prior approval from the IRT. The As-built report will include a discussion of the coordination with IRT members, a description of and reasons for any approved deviation. The As-built report shall provide:

- a. A survey showing finished grades and plantings with written documentation, plan view, and cross sectional drawings of all construction and establishment work implemented on the bank.
- b. Survey data collected from the permanent monitoring stations and the transects. This survey data should include the number and species of the seedlings planted, timing of all work events, and maps showing the location (including latitude/longitude) of all monitoring stations as described in this Work Plan.
- c. Detailed descriptions of site preparation, planting procedures, etc.

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B. Initial Success Criteria Report

The Sponsor shall monitor the Bank in the spring (March 15-May 31) of its second growing season following initial planting of the Bank. The Sponsor will provide an Initial Success Criteria Report by July 31st of that year.

The Sponsor shall provide details in accordance with this Mitigation Work Plan, on any maintenance/management work conducted on the Bank after submission of the As-Built Report. The Sponsor shall provide a brief description of any anticipated maintenance/management work to be conducted prior to attainment of interim success criteria.

1. Vegetation

a. Permanent Circular Plot Data

The Sponsor shall provide plot data in tabular form on all planted seedlings falling within each permanent circular monitoring plot as described and as established in accordance with Section IX of this Mitigation Work Plan. A description of the general condition of the seedlings, including the number and species of surviving seedlings in each monitoring station, the tag number, and a discussion of likely causes of mortality for the non-survivors shall be provided. A number (by species) of exotic/invasive species, including a description of the generalized degree of distribution and whether they are seed bearing trees or seedlings will also be provided.

b. Transect Data

The Sponsor shall provide data in tabular form for the total number of planted seedlings as described in Section IX.B of this Mitigation Work Plan. A description of the general condition of the seedlings and the discussion of likely causes of mortality, if appropriate, shall also be provided. Exotic/invasive species should be noted along with information on the generalized amount of each and whether they are seed bearing trees or seedlings.

2. Hydrologic Data

The Sponsor shall provide a description of the condition of any applicable hydrology altering features (culverts, ditches, plugs, etc.) and a general discussion of hydrologic conditions at monitoring stations.

3. Photographs

The Sponsor must submit digital photographs in accordance with Section IX.E of this Mitigation Work Plan.

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4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in Section IX.F of this Mitigation Work Plan.

5. Funding

The Sponsor shall provide CEMVN with copies of the most recent financial account statements for both the financial assurance accounts and the Long-Term Maintenance and Protection Fund. If any escrowed funds were used, the Sponsor will include a narrative describing that use, the justification for that use, and supporting documentation (e.g. receipts). The Sponsor shall also provide any justification for any requested release from financial assurance accounts.

C. Interim Success Criteria Report

The Sponsor shall monitor the Bank in the spring (March 15-May 31) of its third growing season following attainment of the one-year survivorship criteria for the Bank. The Sponsor will provide an Interim Success Criteria Report by July 31st of that year.

1. Vegetation

Note: For a given planting, a minimum of 250 seedlings/saplings per acre must be present at the end of the fourth year (i.e. Year 5) following successful attainment of the one-year survivorship criteria. Trees established through natural recruitment may be included in this tally; however, no less than 125 hard mast-producing seedlings per acre must be present. Surviving hard mast seedlings must be representative of the species composition and percentage identified in this Mitigation Work Plan. Exotic/invasive species may not be included in this tally.

a. Permanent Circular Plot Data

The Sponsor shall provide plot data in tabular form on all planted seedlings falling within each permanent circular monitoring plot as described and as established in accordance with Section IX of this Mitigation Work Plan. A description of the general condition of the seedlings, including the number and species of surviving seedlings in each monitoring station, the tag number, and a discussion of likely causes of mortality for the non-survivors shall be provided. A number (by species) of exotic/invasive species, including, a description of the generalized degree of distribution and whether they are seed bearing trees or seedlings will also be provided.

b. Transect Data

The Sponsor shall provide data in tabular form for the total number of planted seedlings as described in Section IX.B of this Mitigation Work Plan. A description of the

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general condition of the seedlings and the discussion of likely causes of mortality, if appropriate, shall also be provided. Exotic/invasive species should be noted along with information on the generalized amount of each and whether they are seed bearing trees or seedlings.

2. Hydrologic Data

By Year 3, two years following attainment of the one-year survivorship criteria, the Sponsor **must provide a Corps issued wetland determination** to prove that site hydrology has been restored such that the Property meets the wetland criterion as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2. The Sponsor shall submit a wetland delineation report and a request for a jurisdictional determination to CEMVN.

3. Photographs

The Sponsor must submit digital photographs in accordance with Section IX.E of this Mitigation Work Plan.

4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in Section IX.F of this Mitigation Work Plan. The Sponsor shall provide details on any maintenance/management work conduction on the Bank after submission of the Initial Success Criteria Report. The Sponsor shall provide a brief description of any anticipated maintenance/management work to be conducted prior to attainment of long-term success criteria. Note: By year 5, four years following successful attainment of the one-year survivorship criteria, the developing community must exhibit characteristics and diversity indicative of a viable native forested wetland community commensurate with stand age and site conditions; the Bank and the perimeter will be virtually free (approximately 5% or less on an acre-by-acre basis) of exotic/invasive vegetation.

5. Funding

The Sponsor shall provide CEMVN with copies of the most recent financial account statements for both the financial assurance accounts and the Long-Term Maintenance and Protection Fund. If any escrowed funds were used, the Sponsor will include a narrative describing that use, the justification for that use and supporting documentation (e.g. receipts). The Sponsor shall also provide any justification for any requested release from financial assurance accounts.

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D. Long-Term Success Criteria Report

1. Vegetation

Note: For a given planting, a minimum of 250 seedlings/saplings per acre must be present at the end of the fourth year (i.e. Year 5) following successful attainment of the one-year survivorship criteria. Trees established through natural recruitment may be included in this tally; however, no less than 125 hard mast-producing seedlings per acre must be present. Surviving hard mast seedlings must be representative of the species composition and percentage identified in this Mitigation Work Plan. Exotic/invasive species may not be included in this tally.

a. Permanent Circular Plot Data

The Sponsor shall provide plot data in tabular form on all planted seedlings falling within each permanent circular monitoring plot as described and as established in accordance with Section IX of this Mitigation Work Plan. A description of the general condition of the seedlings, including the number and species of surviving seedlings in each monitoring station, the tag number, and a discussion of likely causes of mortality for the non-survivors shall be provided. A number (by species) of exotic/invasive species, including, a description of the generalized degree of distribution and whether they are seed bearing trees or seedlings will also be provided.

b. Transect Data

The Sponsor shall provide data in tabular form for the total number of planted seedlings as described in Section IX.B of this Mitigation Work Plan. A description of the general condition of the seedlings and the discussion of likely causes of mortality, if appropriate shall also be provided. Exotic/invasive species should be noted along with information on the generalized amount of each and whether they are seed bearing trees or seedlings.

2. Hydrologic Data

Note: By Year 3, two years following attainment of the one-year survivorship criteria, the Sponsor must provide a Corps issued wetland determination to prove that site hydrology has been restored such that the Property meets the wetland criterion as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2. The Sponsor shall submit a wetland delineation report and a request for a jurisdictional determination to CEMVN.

Provide supporting documentation that the hydrology achieved at year three still exists on the site.

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3. Photographs

The Sponsor must submit digital photographs in accordance with Section IX.E of this Mitigation Work Plan.

4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in Section IX.F of this Mitigation Work Plan. The Sponsor shall provide details on any maintenance/management work conduction on the Bank after submission of the Initial Success Criteria Report. The Sponsor shall provide a brief description of any anticipated maintenance/management work to be conducted prior to attainment of long-term success criteria. Note: By year 5, four years following successful attainment of the one-year survivorship criteria, the developing community must exhibit characteristics and diversity indicative of a viable native forested wetland community commensurate with stand age and site conditions; the Bank and the perimeter will be virtually free (approximately 3% or less on an acre-by-acre basis) of exotic/invasive vegetation.

5. Funding

The Sponsor shall provide CEMVN with copies of the most recent financial account statements for both the financial assurance accounts and the Long-Term Maintenance and Protection Fund. If any escrowed funds were used, the Sponsor will include a narrative describing that use, the justification for that use and supporting documentation (e.g. receipts). The Sponsor shall also provide any justification for any requested release from financial assurance accounts.

XI. Bank Credits

A. Credit Determination

Refer to Attachment MWP-BLH-C.

B. Schedule of Credit Availability

Upon submittal of all appropriate documentation by the Sponsor, and subsequent approval by CEMVN in consultation with the IRT, CEMVN will release credits for use by the Sponsor according to the following schedule:

1. Thirty percent (30%) of total anticipated project credits will be available for debiting upon confirmation that all items in Section XI.F (1-7) of the MBI have been completed.
2. An additional twenty percent (20%) of total anticipated credits will be available for debiting upon providing documentation that the vegetative plantings have been

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conducted and completion of the work necessary to restore site topography and wetland hydrology of the Bank as outlined in Section VI of this Mitigation Work Plan.

3. An additional twenty percent (20%) of the total anticipated credits would be released upon successfully completing the initial success criteria (Section VIII.A of this Mitigation Work Plan).
4. An additional twenty percent (20%) of the total anticipated credits would be released upon successfully completing the interim success criteria (Section VIII.B of this Mitigation Work Plan).
5. The remaining ten percent (10%) of the total anticipated credits would be released once the long-term success criteria (Section VIII.C of this Mitigation Work Plan) are met.

XII. Adaptive management plan

If seedling survival falls below the target survival criteria, or if target species ratios are not met, the Sponsor shall address the causes of mortality before replacing all lost seedlings of the appropriate species during the following planting season. Replanting, monitoring, and reporting, as previously described, shall occur as needed to achieve and document the required survival rate. No additional credits will be released until it is determined by CEMVN that seedling replanting has achieved the required survivorship success criteria.

If the survival criteria are not met after three attempts, CEMVN will convene a meeting of the IRT and the Sponsor to decide if replanting should continue. Should the IRT determine that achieving the required survival rate would not be likely, the IRT will reassess the Bank to determine whether its use should be discontinued or if a new management potential should be calculated incorporating the new conditions. If the IRT determines that the number of successful mitigation credits remaining in the Bank is exceeded by the number of mitigation credits sold to permittees, the Sponsor shall provide replacement mitigation within one year of this decision in an amount equivalent to the value represented by the credits sold within the unsuccessful areas.

XIII. Long Term Protection and Maintenance

To ensure long-term sustainability of the resource, the Sponsor shall burden the property with a perpetual conservation servitude as described in Section X of the MBI.

XIV. Funding

Section IX.A of the MBI provides specific details about the funding for the Construction and Establishment (C&E) Activities for the Bank.

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A. Construction and Establishment (C&E) Funds

1. Estimate of C&E Funds Required

Initial construction and establishment costs and ongoing management funds required to manage and monitor the lands through the first 15 years are outlined in Attachment MWP-BLH-C (Table C4 - Cost Structure for Black Bayou Mitigation Bank) of this Mitigation Work Plan. These costs have been estimated by identifying costs (based upon third-party rates and mitigation banking experience) associated with individual tasks necessary to construct, establish, maintain, manage, and monitor mitigation banks. These costs are then broken down by year in separate tables in MWP Attachment MWP-BLH-C for each of construction, establishment, and long-term maintenance/ protection. Funding amounts have been adjusted for inflation every five years based on the Consumer Price Index. To fund this account, the Sponsor proposes to establish an escrow account for construction and a separate escrow account for establishment.

Financial assurances shall be reduced as success criteria are achieved. The value of the financial assurance to remain will be based on the work a third party may be required to perform to assure successful attainment of remaining milestones (i.e., funding for exotic control, replanting due to failure of plantings, etc.) should the Sponsor be in default.

The principal amount (\$126,637.15) of the Construction Fund will be phased out in a single transaction. Upon verification by the IRT that the construction work has been completed, the CEMVN, acting on behalf of the IRT, shall advise the provider of the financial assurance to release 100 percent (\$126,637.15) of the principal amount of the Construction Fund.

Copies of the annual status of the financial assurances will be provided to CEMVN upon request and/or in monitoring reports.

The financial assurances shall guarantee payment to a third party, as determined appropriate by the CEMVN in consultation with the IRT, in the event that the Sponsor does not fulfill its obligations to perform, as specified in the MBI.

Payment to Sponsor, or a third party as identified by CEMVN, of a specified amount of the financial assurances shall be made upon written notification by CEMVN to the financial institution.

2. C&E Funding Mechanism

To fund this account the Sponsor proposes to establish a “Construction and Establishment Fund” escrow account. This account will be administered by a federally

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insured depository that is “well capitalized” or “adequately capitalized” as defined in Section 38 of the Federal Deposit Insurance Act.

3. C&E Release Schedule

The Financial assurances shall be reduced as success criteria are achieved and the probability decreases that those funds would be needed according to the following schedule:

1. Upon verification that all hydrologic modifications, construction, and planting as describe in this Mitigation Work Plan have been completed to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall advise the Sponsor and the financial institution that the C&E financial assurance may be reduced to \$87,547.47.
2. Upon verification by CEMVN, in consultation with the IRT, that the initial success criteria have been attained for all tracts to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall advise the Sponsor and the financial institution that the C&E financial that assurance may be reduced to \$81,632.
3. Upon verification by CEMVN, in consultation with the IRT, that the interim success criteria have been attained for all tracts to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall advise the Sponsor and the financial institution that the C&E financial assurance may be reduced to \$47,354.
4. Upon verification by CEMVN, in consultation with the IRT, that the long-term success criteria have been attained for all tracts to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall notify the Sponsor and the financial institution that the remaining C&E financial assurance may be released to the Sponsor.

B. Long Term Maintenance/Management Funds

1. Long-term Management Needs

To ensure that sufficient funds are available to provide for the perpetual maintenance and protection of the Bank, the Sponsor is establishing the “Long-Term Maintenance and Protection” escrow account. This account will be administered by a federally-insured depository that is "well-capitalized" or "adequately-capitalized" as defined in Section 38 of the Federal Deposit Insurance Act. The account will be incrementally funded through credit sales and shall contain a minimum balance of \$210,000.00 by the time 70% of the total number of credits are sold or upon successful achievement of the Interim Success Criteria, whichever occurs first. Any accrued interest shall be used in the operation, maintenance, or other purpose directly benefitting the Bank. Only the interest accumulated may be withdrawn for this purpose. The principal shall not be used and shall remain as part of the Bank’s assets to ensure that sufficient funds are available should perpetual maintenance responsibilities be assumed by a third

ATTACHMENT C1: MITIGATION WORK PLAN
FOR BOTTOMLAND HARDWOOD HABITAT
BLACK BAYOU MITIGATION BANK – ADDENDUM I

party. The Sponsor or Long-Term Steward may withdraw the accumulated interest only with written approval from CEMVN and may only be used to maintain the Bank. The Sponsor shall provide copies of depository account statements to CEMVN upon request and within monitoring reports.

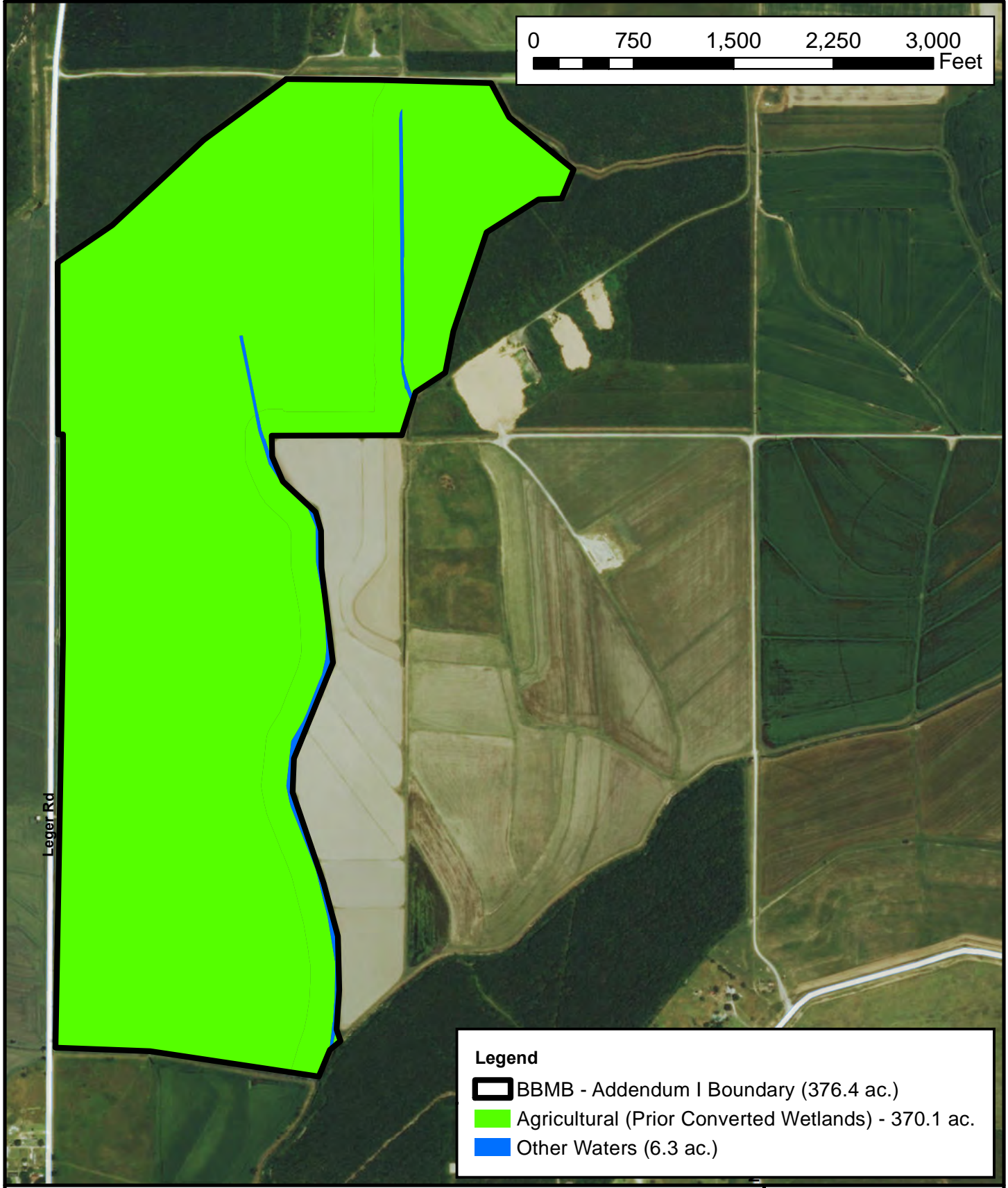
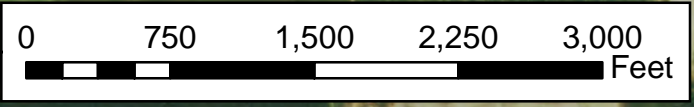
2. Annual Cost Estimates for Long-Term Needs

The cost of long-term management is \$99,057 from year 16 to year 50. This amounts to \$277,384 when adjusted for inflation every five years. Attachment MWP-BLH-B contains a description of the necessary work and an itemization of costs to perform the work for long term management and protection of the Bank.




3. Long-Term Maintenance and Protection Funding Mechanism

To ensure that sufficient funds are available to provide for the perpetual maintenance and protection of the Bank, the Sponsor is establishing the “Long-Term Maintenance and Protection” escrow account. This account will be administered by a federally-insured depository that is “well capitalized” or “adequately capitalized” as defined in Section 38 of the Federal Deposit Insurance Act. The account will be incrementally funded by deposit a minimum of \$810.00 into the account per credit /acre sold at the time of credit sale. The deposit value per credit/acre must reflect, at a minimum, the total fund value divided by no more than 90% of anticipated credits. Once the account is fully funded (\$210,000), no incremental fund per credit sale is required. The account shall be fully funded by the time 70% of the total number of credits are sold or upon successful achievement of the Long-Term Success Criteria, whichever occurs first. If the Long-Term Success Criteria are met prior to fully funding the escrow account, then the Sponsor must deposit into the escrow account the difference between the amount determined to be full funding and the account balance difference between the amount determined to be full funding and the account balance. Documentation that the account is fully funded is a pre-requisite for release of the remaining credits following attainment of the Long-Term Success Criteria as identified in this Mitigation Work Plan. Accrued interest in excess of the value of the fully funded account may only be used for the administration, operation, maintenance and/or other purposed that directly benefit the Bank. The principal shall not be used and shall remain as part of the Bank’s assets to ensure that sufficient funds are available should perpetual maintenance responsibilities be assumed by a third party. The Sponsor or Long-Term Steward may withdraw the accumulated interest only with written approval from CEMVN and only to be used to maintain the Bank. The Sponsor shall provide copies of depository account statements to CEMVN upon request and in their monitoring reports.

Attachment MWP-BLH-A : Figures



Legend

-  BBMB - Addendum I Boundary (376.4 ac.)
-  Agricultural (Prior Converted Wetlands) - 370.1 ac.
-  Other Waters (6.3 ac.)

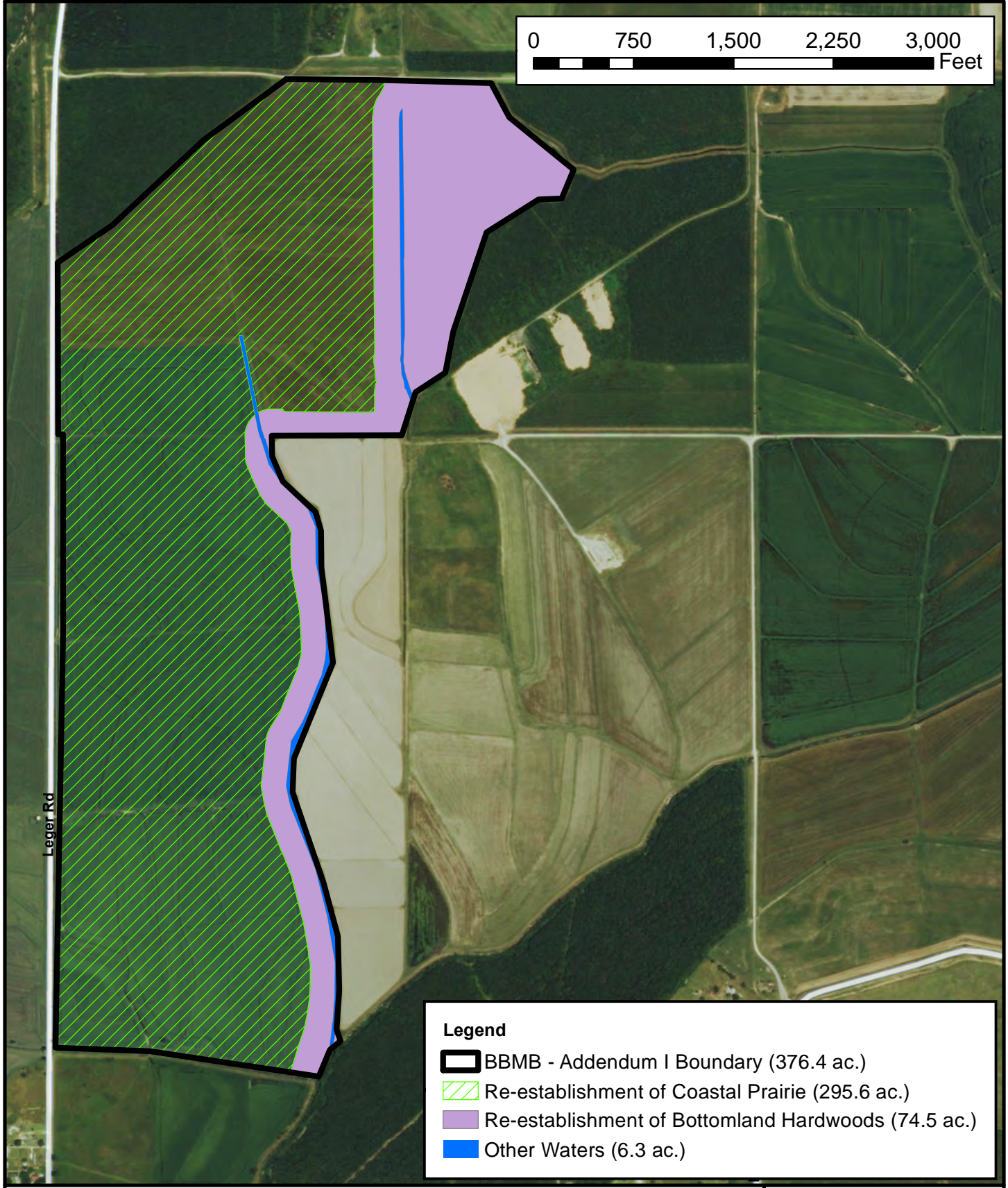
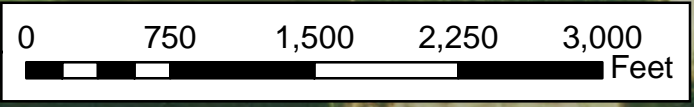


EXISTING CONDITIONS

Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish



Figure: C1
 Date: April 2016
 Scale: 1:12,000



Legend

- BBMB - Addendum I Boundary (376.4 ac.)
- Re-establishment of Coastal Prairie (295.6 ac.)
- Re-establishment of Bottomland Hardwoods (74.5 ac.)
- Other Waters (6.3 ac.)

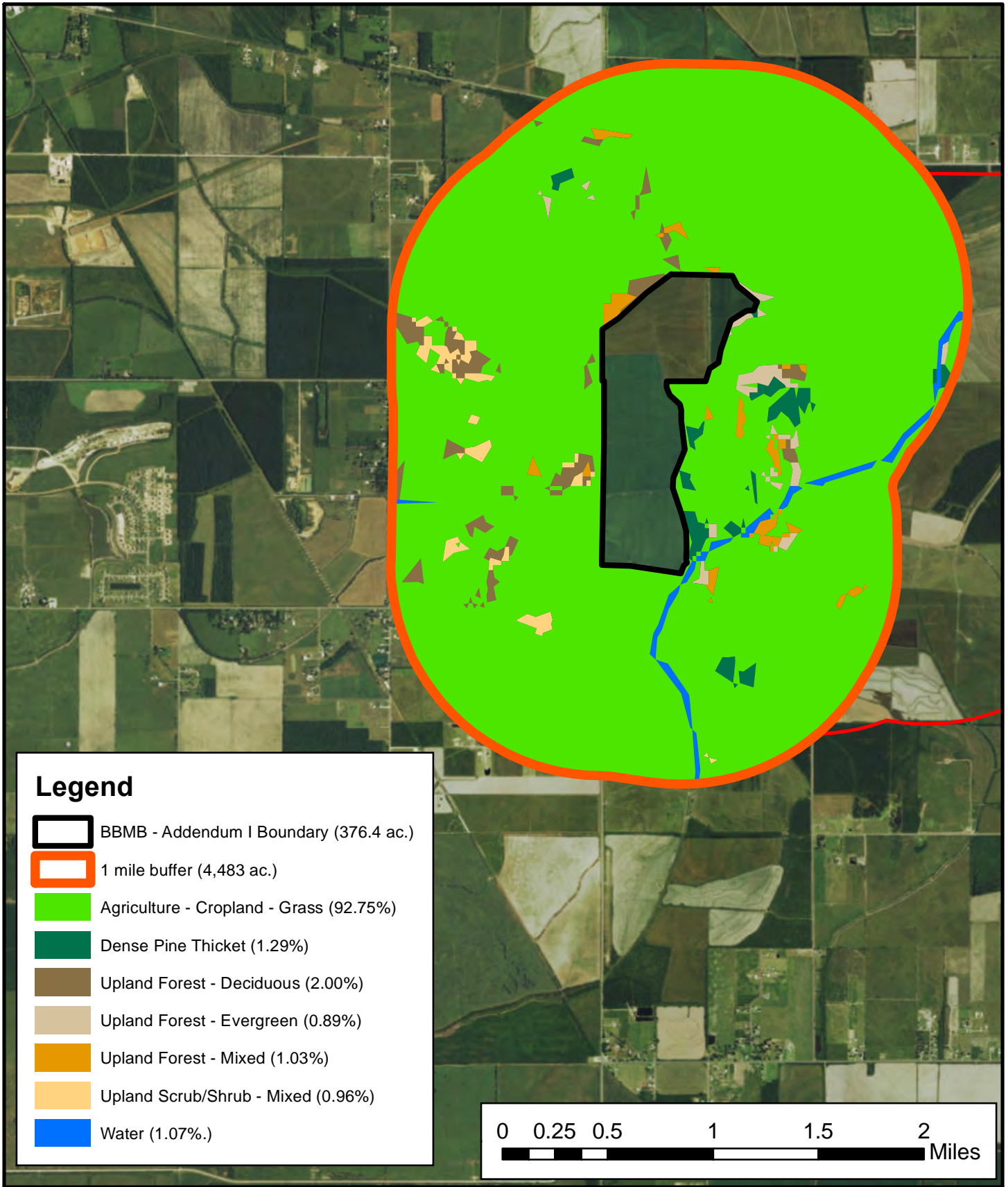


PROPOSED MITIGATION TYPES










Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish

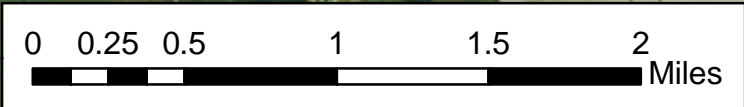


Figure: C2
Date: April 2016
Scale: 1:12,000



Legend

-  BBMB - Addendum I Boundary (376.4 ac.)
-  1 mile buffer (4,483 ac.)
-  Agriculture - Cropland - Grass (92.75%)
-  Dense Pine Thicket (1.29%)
-  Upland Forest - Deciduous (2.00%)
-  Upland Forest - Evergreen (0.89%)
-  Upland Forest - Mixed (1.03%)
-  Upland Scrub/Shrub - Mixed (0.96%)
-  Water (1.07%.)

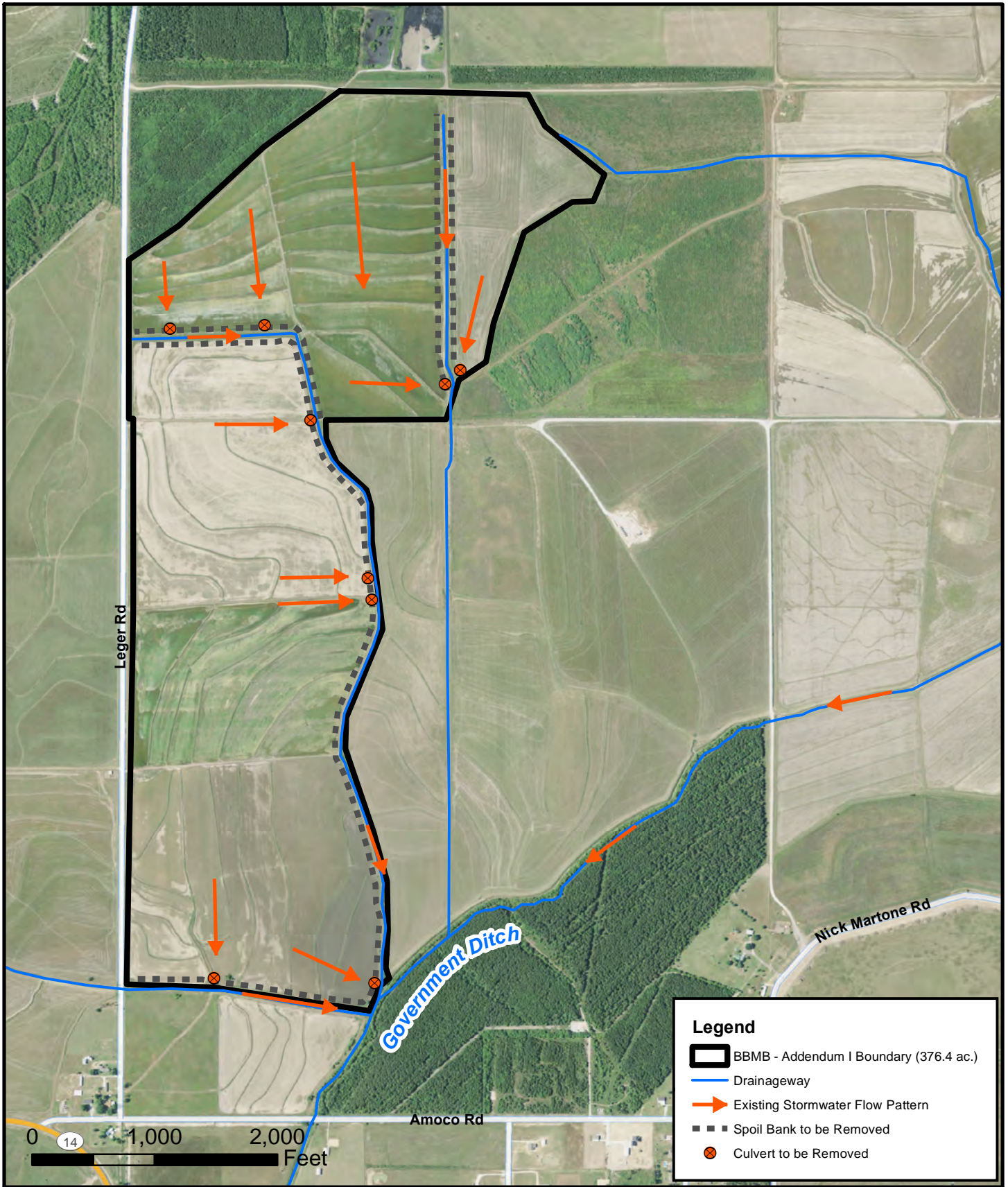


LAND USE/LAND COVER WITHIN 1 MILE BUFFER

Black Bayou
Calcasieu Parish



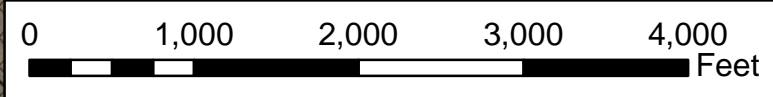
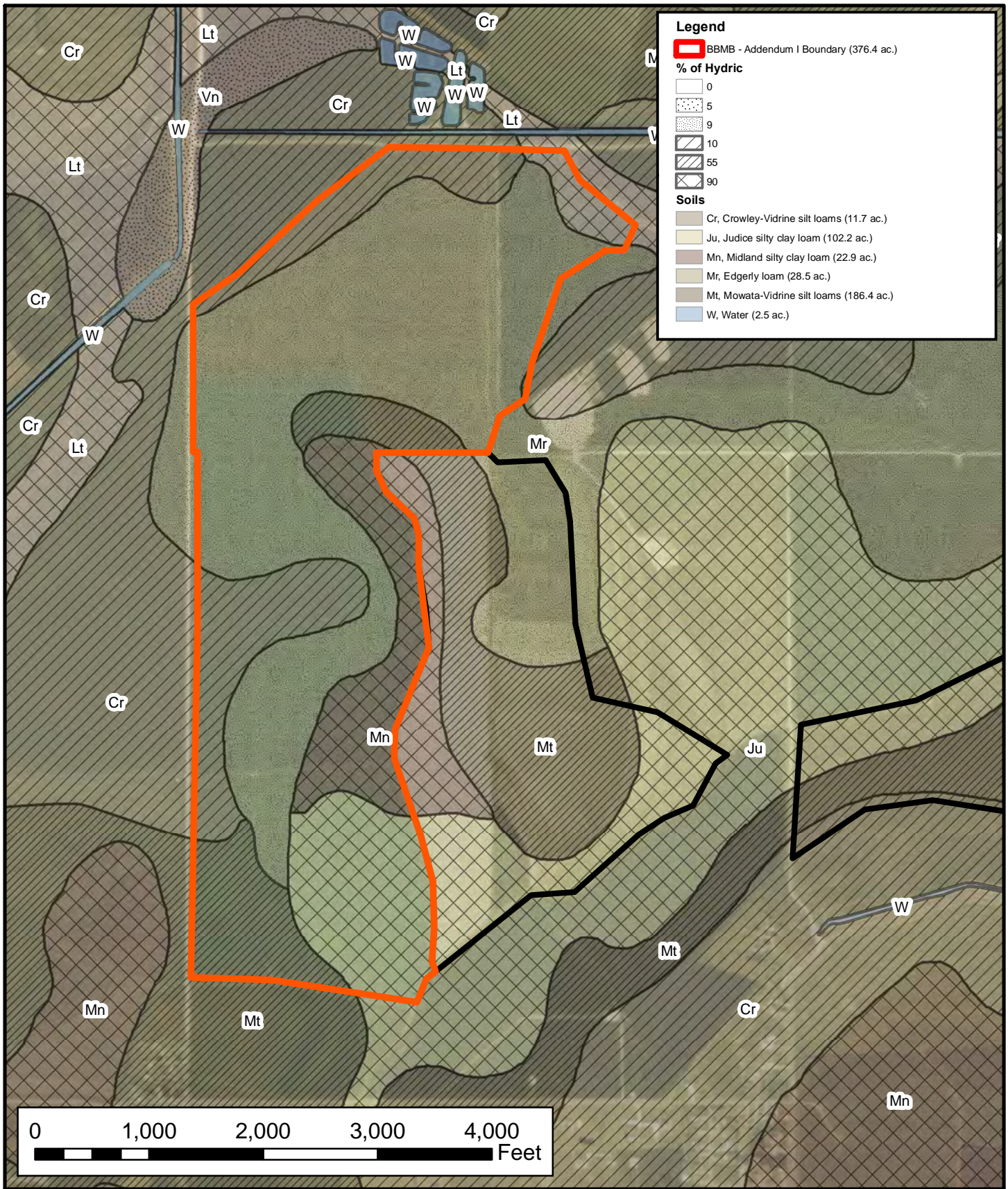
Figure: C3
Date: April 2016
Scale: 1:40,000



EXISTING DRAINAGE
 Black Bayou Mitigation Bank - Addendum I
 Calcasieu Parish



Figure: C4
 Date: May 2016
 Scale: 1:13,000

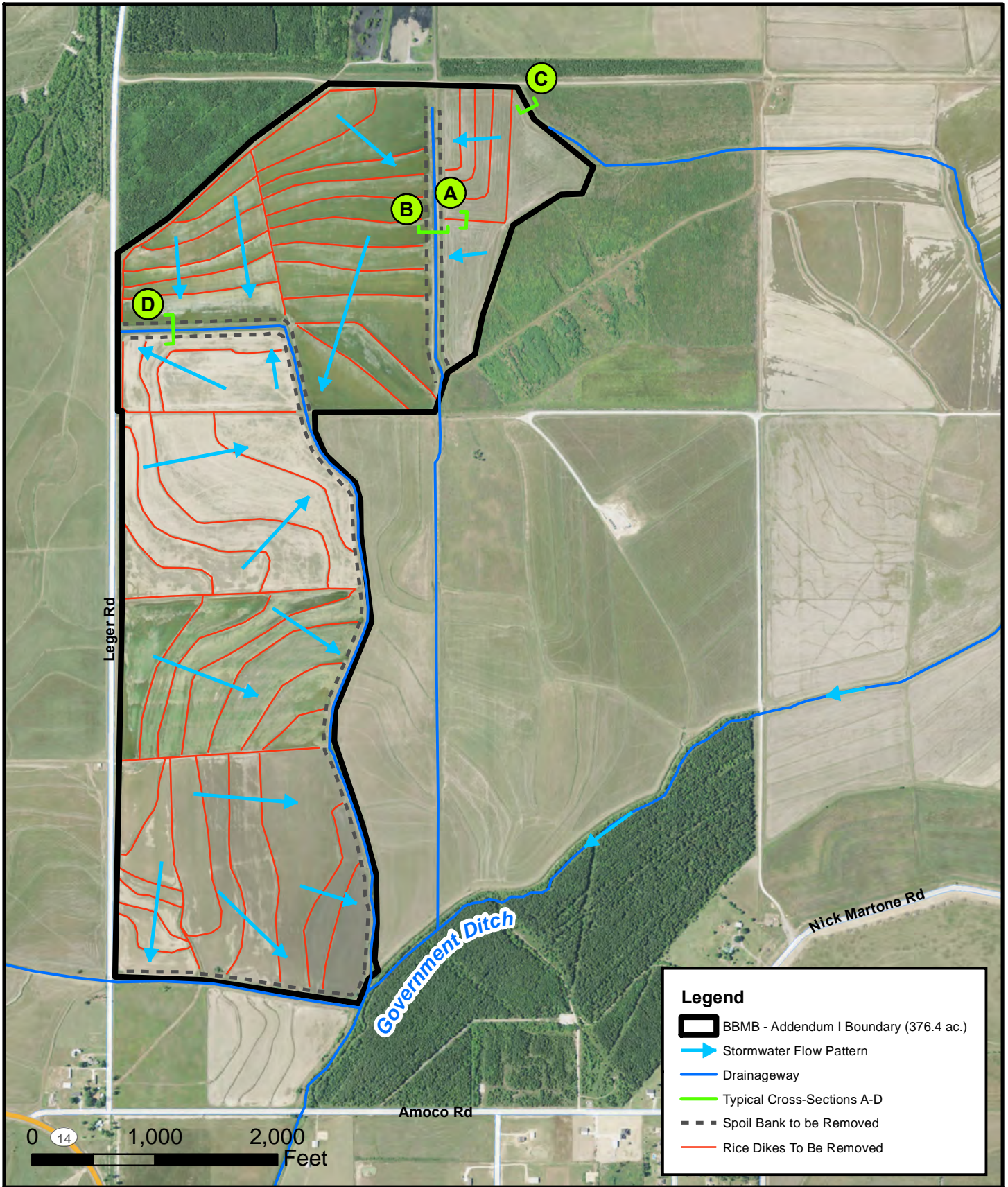


SOILS MAP

Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish



Figure: C5
Date: April 2016
Scale: 1:14,000



Legend

- BBMB - Addendum I Boundary (376.4 ac.)
- Stormwater Flow Pattern
- Drainageway
- Typical Cross-Sections A-D
- Spoil Bank to be Removed
- Rice Dikes To Be Removed

0 1,000 2,000 Feet



PROPOSED DRAINAGE
 Black Bayou - Addendum I
 Calcasieu Parish



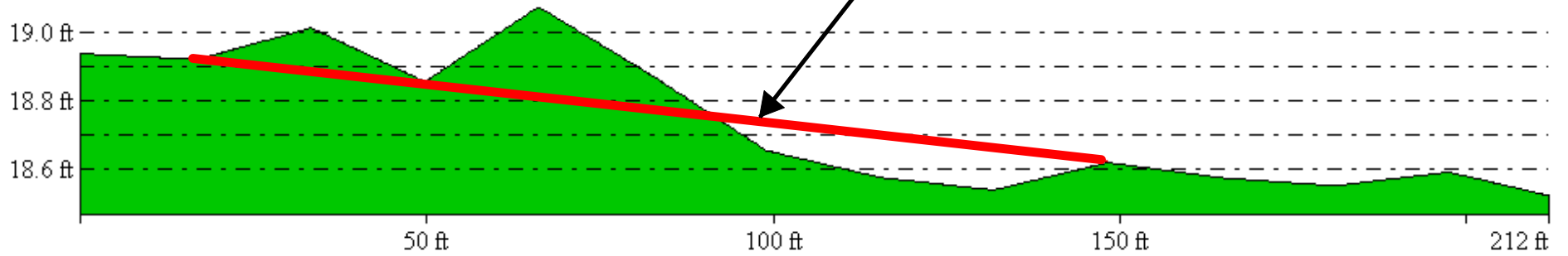
Figure: C6
 Date: May 2016
 Scale: 1:13,000

CROSS-SECTION A-A'

FINISHED GRADE

From Pos: 492871.182, 3338460.139

To Pos: 492871.182, 3338395.591

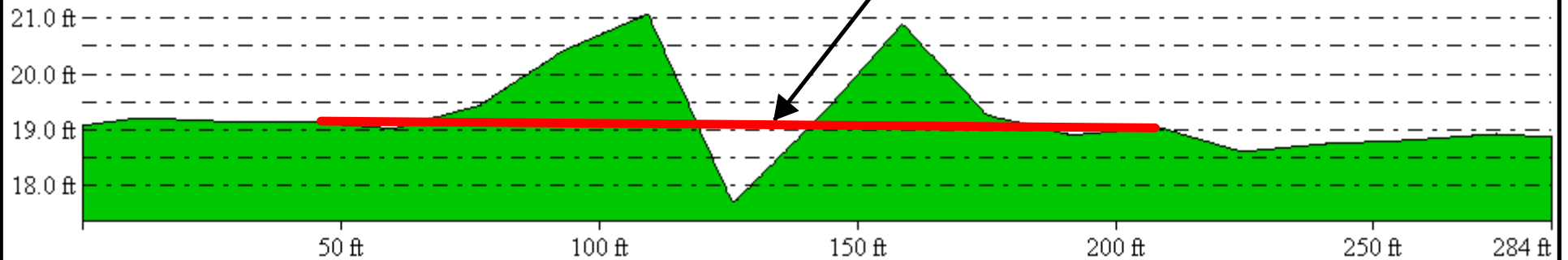


CROSS-SECTION B-B'

FINISHED GRADE

From Pos: 493031.630, 3338465.672

To Pos: 493118.309, 3338465.672



CROSS-SECTIONS A-A' & B-B'

Black Bayou - Addendum I
Calcasieu Parish



Figure: C1-6a

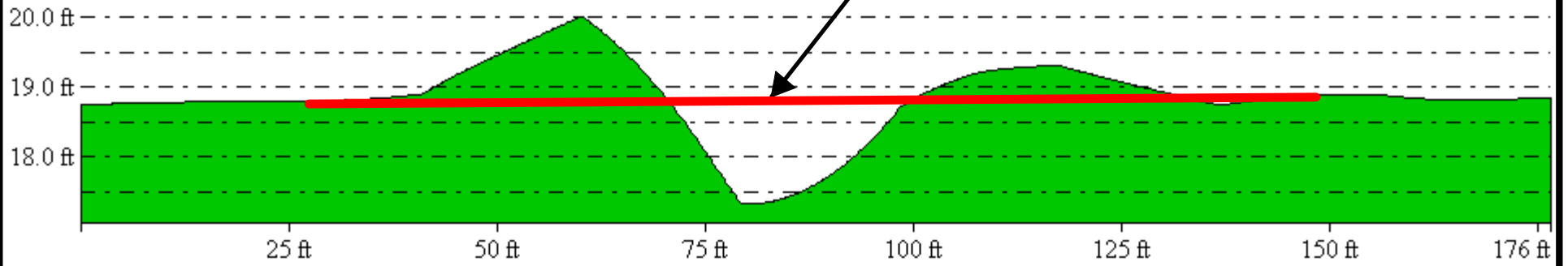
Date: June 2016

Scale: N/A

CROSS-SECTION C-C'

From Pos: 493284.291, 3338698.046

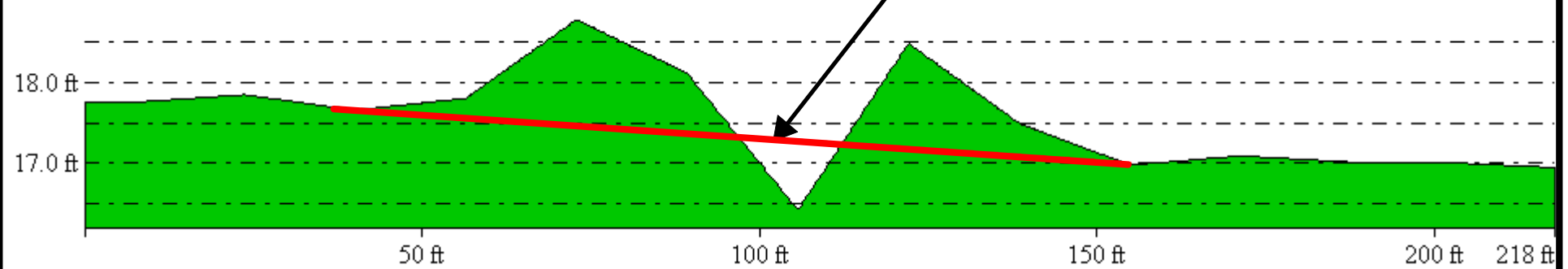
To Pos: 493330.396, 3338725.709



CROSS-SECTION D-D'

From Pos: 492391.681, 3338187.193

To Pos: 492391.681, 3338120.800



CROSS-SECTIONS C-C' & D-D'

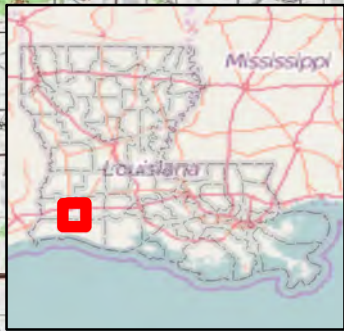
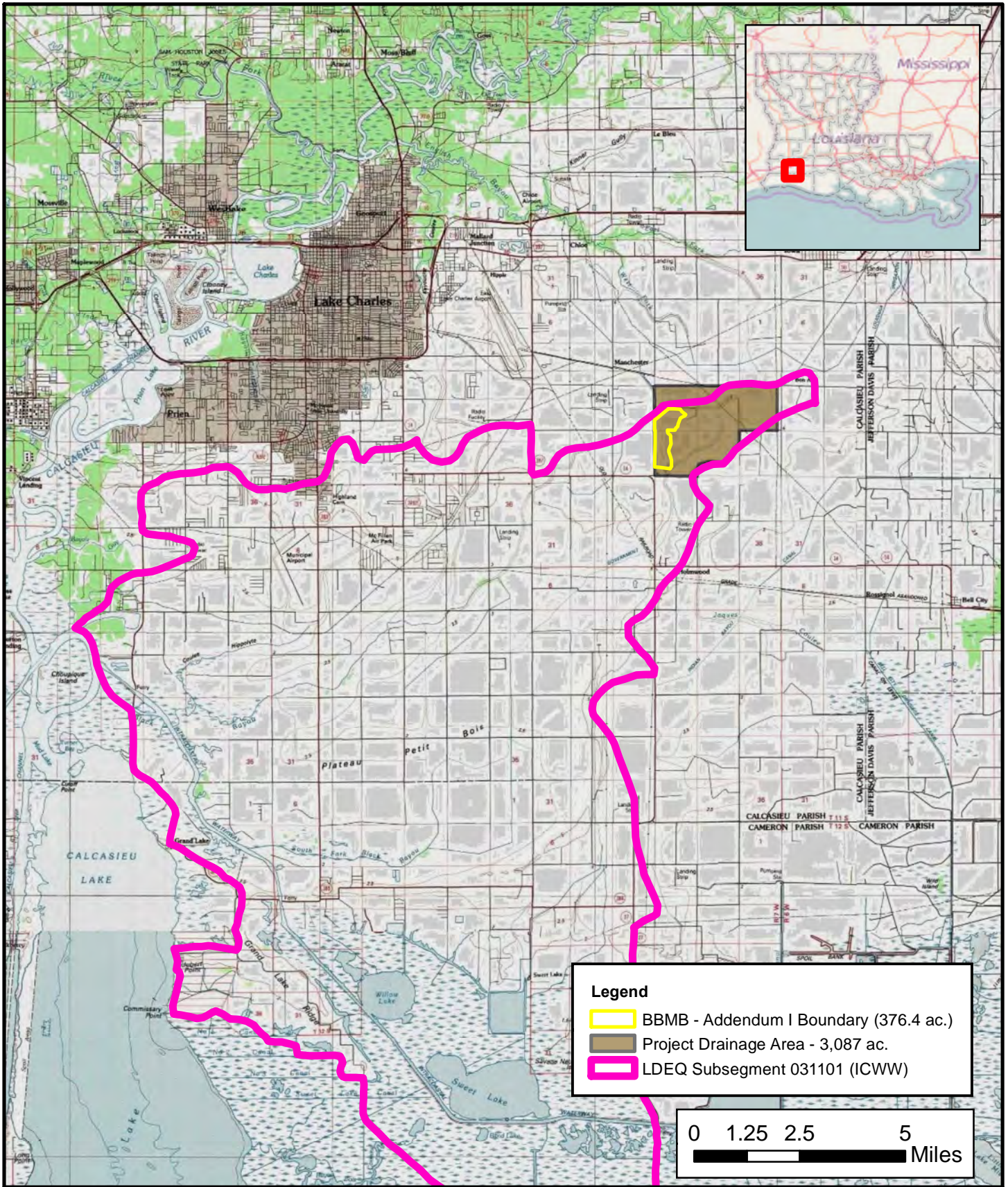
Black Bayou - Addendum I
Calcasieu Parish



Figure: C1-6b

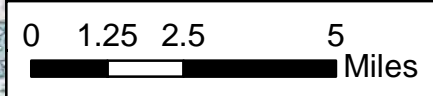
Date: June 2016

Scale: N/A



Legend

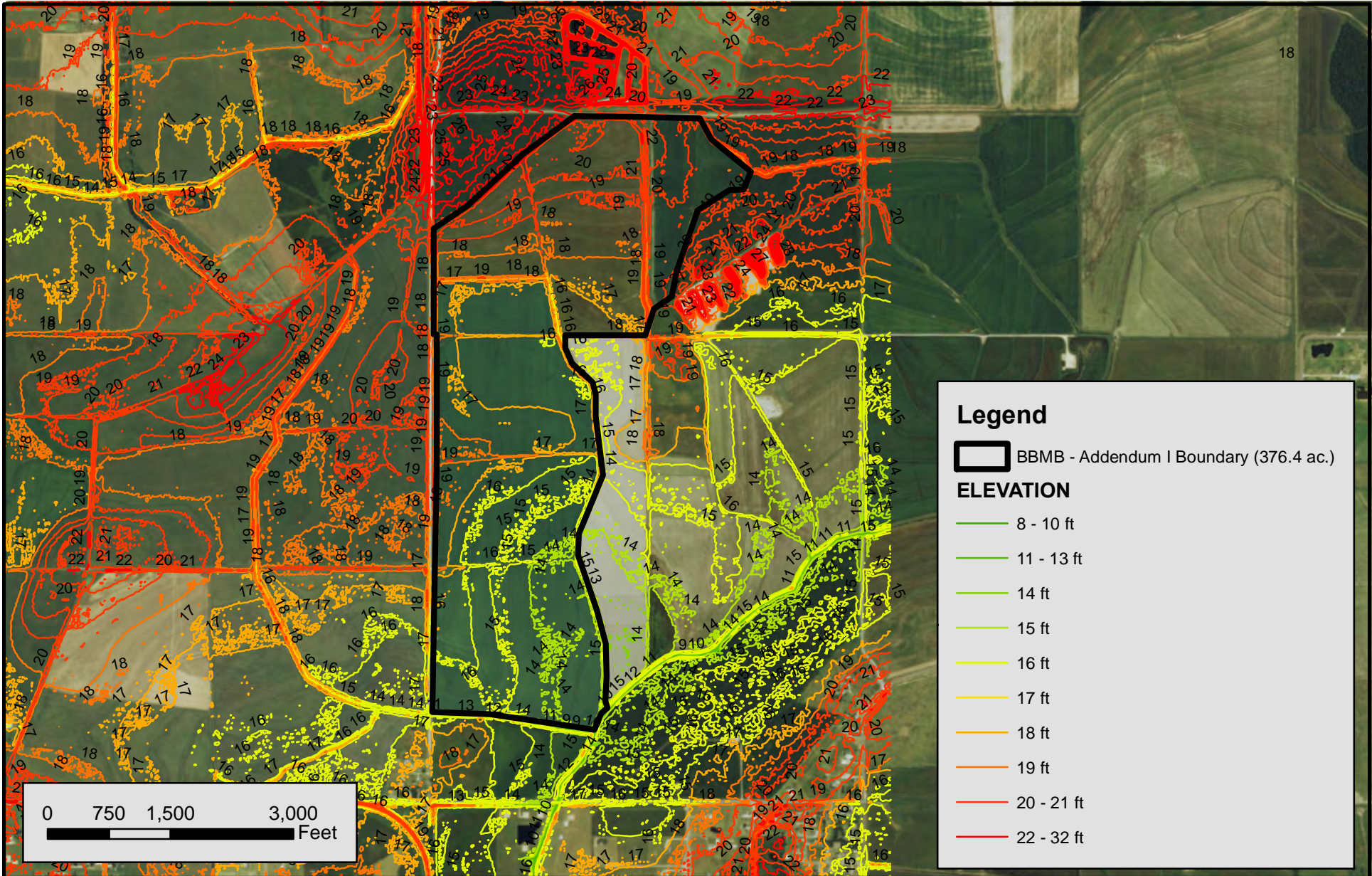
- BBMB - Addendum I Boundary (376.4 ac.)
- Project Drainage Area - 3,087 ac.
- LDEQ Subsegment 031101 (ICWW)



DRAINAGE AREA
 Black Bayou - Addendum I
 Calcasieu Parish



Figure: C7
 Date: May 2016
 Scale: 1:200,000



1-FT CONTOUR MAP

Black Bayou - Addendum I
Calcasieu Parish



Figure: C8

Date: June 2016

Scale: 1:20,000

Attachment MWP-BLH-B : Cost Analysis Report

Financial Assurance for Black Bayou Mitigation Bank Addendum I	
Site Acreage (Conservation Servitude)	376.4
Planted Acreage BLH	74.5
Planted Acreage Coastal Prairie	295.6
Seedlings (Total)	40081
Perimeter Boundary Miles	4.00
Hydrology Work (Days)	10.00

Construction Item Cost	Unit	Unit Cost	Total Cost
Soil Preparation	Acre	\$25.00	\$ 9,252.50
Seedlings and Labor	Tree	\$0.65	\$ 26,052.65
Coastal Prairie Seed/Plug and Labor	Acre	\$225.00	\$ 66,510.00
Prescribed Burn Year 1	Acre	\$20.00	\$ 5,912.00
Broadcast Spraying	Acre	\$25.00	\$ 9,410.00
Hydrology Restoration	Day	\$950.00	\$ 9,500.00
Total			\$ 126,637.15

Establishment Item Cost	Unit	Unit Cost	Total Cost*
Taxes (Annually 15 years)	Yearly for 16 years	\$1,976.10	\$ 31,617.60
Invasive Species Control (Spot Treatment)	Acre	\$25.00	\$ 9,410.00
Prescribed Burn	3-5 Year Rotation	\$5,912.00	\$ 17,736.00
Mobilization	Yearly for 15 years	\$100.00	\$ 1,500.00
Monitoring (Initial Success/Vegetation)	Acre	\$25.00	\$ 1,862.50
Monitoring (Interim Success/Vegetation)	Acre	\$25.00	\$ 1,862.50
Monitoring (Interim Success/Hydrology)	Plot	\$1,000.00	\$ 10,000.00
Long-term Monitoring (10 years)	Yearly for 10 years (years 5-15)	\$100.00	\$ 1,000.00
Boundary Maintenance (15 years)	Mile	\$225.00	\$ 900.00
Total			\$ 75,888.60

Long-Term Fund Annual Costs Years 16-50		Unit Cost	Total Cost
Taxes (Annually)	Acre	\$5.25	\$ 1,976.10
Invasive Species Control (Spot Treatment) at 1%	Acre	\$25.00	\$ 94.10
Mobilization	Yearly	\$75.00	\$ 75.00
Account Maintenance and Misc	Yearly	\$325.00	\$ 325.00
10-Year Boundary Maintenance (Annualized)	Mile	\$900.00	\$ 360.00
Total			\$ 2,830.20

* Cost does not reflect inflationary adjustment

Financial Assurance (Construction Fund) Year 0			
Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Percent of Cost
		3.2%	
YEAR 0			
Soil Preperation	\$ 9,252.50	\$ 9,252.50	7%
BLH Planting (Material and Labor)	\$ 26,052.65	\$ 26,052.65	21%
CP Planting (Material and Labor)	\$ 66,510.00	\$ 66,510.00	53%
Prescribed Burn Year 1	\$ 5,912.00	\$ 5,912.00	5%
Broadcast Spraying	\$ 9,410.00	\$ 9,410.00	7%
Hydrology Restoration	\$ 9,500.00	\$ 9,500.00	8%
Total	\$ 126,637.15	\$ 126,637.15	100%
Total Per Acre	\$ 1,699.83	\$ 1,699.83	

Financial Assurance (Establishment Fund) Year 0 to Year 15			
Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Percent of Cost
		3.2%	
YEAR 0			
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 1			
Monitoring (Initial Success/Vegetation)	\$ 1,862.50	\$ 1,862.50	2.1%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
TOTAL - INITIAL SUCCESS CRITERIA BLH and CP¹	\$ 5,914.70	\$ 5,914.70	6.6%
YEAR 2			
Broadcast Spraying (50%)	\$ 4,705.00	\$ 4,705.00	5.4%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 3			
Monitoring (Interim Success/Hydrology)	\$ 10,000.00	\$ 10,000.00	11.4%
Prescribed Burn	\$ 5,912.00	\$ 5,912.00	6.8%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 4			
Broadcast Spraying (30%)	\$ 2,823.00	\$ 2,823.00	3.2%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 5			
Monitoring (Interim Success/Vegetation)	\$ 1,862.50	\$ 2,180.19	2.5%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
TOTAL - INTERIM SUCCESS CRITERIA BLH²	\$ 33,606.90	\$ 34,278.72	31.9%
LONG-TERM SUCCESS CRITERIA CP			
YEAR 6			
Invasive Species Control (5%)	\$ 470.50	\$ 550.75	0.6%
Prescribed Burn	\$ 5,912.00	\$ 6,920.43	7.9%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 7			
Invasive Species Control (5%)	\$ 470.50	\$ 550.75	0.6%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 8			
Invasive Species Control (2%)	\$ 188.20	\$ 220.30	0.3%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 9			
Invasive Species Control (2%)	\$ 188.20	\$ 220.30	0.3%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 10			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Long-term Monitoring	\$ 500.00	\$ 685.12	0.8%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
Boundary Maintenance	\$ 900.00	\$ 1,233.22	1.4%

Financial Assurance (Establishment Fund) Year 0 to Year 15			
Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Percent of Cost
		3.2%	
YEAR 11			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Prescribed Burn	\$ 5,912.00	\$ 8,100.87	9.3%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 12			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 13			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 14			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 15			
Invasive Species Control (1%)	\$ 94.10	\$ 150.93	0.2%
Mobilization	\$ 100.00	\$ 160.40	0.2%
Long-term Monitoring	\$ 500.00	\$ 801.98	0.9%
Taxes	\$ 1,976.10	\$ 3,169.60	3.6%
TOTAL - YEAR 15 (CANOPY COVER≥80%)³	\$ 36,367.00	\$ 47,354.05	53.8%
Total	\$ 75,888.60	\$ 87,547.47	94.5%
Total Per Acre	\$ 211.70	\$ 244.22	

¹The total shown for "Initial Success Criteria" includes costs estimated to occur during Year 0 - Year 1.

²The total shown for "Interim Success Criteria" includes costs estimated to occur during Year 2 - Year 5.

³The total shown for "Year 15 (Canopy Cover≥80%)" includes costs estimated to occur during Year 6 - Year 15.

Long-Term Maintenance and Protection Fund anticipated to Year 16 to Year 50 for Mitigation Bank

Time (Year)	Item	Total Cost at Year 0	Inflation Rate		Total		Per Acre*		Return
			3.20%	5-Year Inflationary Adjustment	\$	210,000.00	\$	810.59	4.20%
					Escrow Account Activity	Investment Acc't Balance	Investment Earning		
15		\$ -	\$ -	\$ -	\$ 210,000.00	\$ 210,000.00	\$ -		
16	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ (4,684.81)	\$ 214,135.19	\$ 8,820.00		
17	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ (4,684.81)	\$ 218,444.05	\$ 8,993.68		
18	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ (4,684.81)	\$ 222,933.89	\$ 9,174.65		
19	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ (4,684.81)	\$ 227,612.30	\$ 9,363.22		
20	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ (5,313.87)	\$ 231,858.14	\$ 9,559.72		
21	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ (5,313.87)	\$ 236,282.31	\$ 9,738.04		
22	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ (5,313.87)	\$ 240,892.30	\$ 9,923.86		
23	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ (5,313.87)	\$ 245,695.90	\$ 10,117.48		
24	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ (5,313.87)	\$ 250,701.26	\$ 10,319.23		
25	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ (6,220.27)	\$ 255,010.44	\$ 10,529.45		
26	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ (6,220.27)	\$ 259,500.60	\$ 10,710.44		
27	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ (6,220.27)	\$ 264,179.35	\$ 10,899.03		
28	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ (6,220.27)	\$ 269,054.61	\$ 11,095.53		
29	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ (6,220.27)	\$ 274,134.63	\$ 11,300.29		
30	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ (7,281.29)	\$ 278,367.00	\$ 11,513.65		
31	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ (7,281.29)	\$ 282,777.13	\$ 11,691.41		
32	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ (7,281.29)	\$ 287,372.48	\$ 11,876.64		
33	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ (7,281.29)	\$ 292,160.84	\$ 12,069.64		
34	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ (7,281.29)	\$ 297,150.31	\$ 12,270.76		
35	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ (8,523.28)	\$ 301,107.35	\$ 12,480.31		
36	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ (8,523.28)	\$ 305,230.58	\$ 12,646.51		
37	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ (8,523.28)	\$ 309,526.99	\$ 12,819.68		
38	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ (8,523.28)	\$ 314,003.85	\$ 13,000.13		
39	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ (8,523.28)	\$ 318,668.73	\$ 13,188.16		
40	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ (9,977.12)	\$ 322,075.70	\$ 13,384.09		
41	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ (9,977.12)	\$ 325,625.77	\$ 13,527.18		
42	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ (9,977.12)	\$ 329,324.93	\$ 13,676.28		
43	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ (9,977.12)	\$ 333,179.47	\$ 13,831.65		
44	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ (9,977.12)	\$ 337,195.89	\$ 13,993.54		
45	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ (11,678.94)	\$ 339,679.17	\$ 14,162.23		
46	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ (11,678.94)	\$ 342,266.76	\$ 14,266.53		
47	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ (11,678.94)	\$ 344,963.02	\$ 14,375.20		
48	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ (11,678.94)	\$ 347,772.52	\$ 14,488.45		
49	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ (11,678.94)	\$ 350,700.03	\$ 14,606.45		
50	Annual Cost 16-50	\$ 2,830.20	\$ 13,671.05	\$ (13,671.05)	\$ (13,671.05)	\$ 351,758.37	\$ 14,729.40		
		\$ 99,057.00	\$ 277,384.13						

* Per the provisions outlined in Section X.C of the Mitigation Work Plan.

Attachment MWP-BLH-C : Assessment Method(s)

Attachment C2 - Mitigation Work Plan – Coastal Prairie Habitat

ATTACHMENT C2: MITIGATION WORK PLAN
 FOR COASTAL PRAIRIE HABITAT
 BLACK BAYOU MITIGATION BANK - ADDENDUM I

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Attachment MWP-CP-A-Figures

Figure C2-1 – Existing Conditions

Figure C2-2 – Mitigation Types

Figure C2-3 – Landuse

Figure C2-4 – Existing Drainage

Figure C2-5 – Soils

Figure C2-6 – Proposed Drainage

Figures C2-6a – C2-6b – Cross-Sections

Figure C2-7 – Drainage Area

Figure C2-8 – Contours

Attachment MWP-CP-B- Combined Cost Analysis Report

Attachment MWP-CP-C- Assessment Method(s)

Attachment MWP-CP-D- Burn Plan

Figure BP-1 – Control Burn Plan Diagram (Not Included with this submittal)

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 FOR COASTAL PRAIRIE HABITAT
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I. Bank Property Location

The center point of the property is located at latitude 30.1711 N and longitude – 93.0775 W in Calcasieu Parish, Louisiana (See Attachment A of the MBI). The property is located in the 08080203 Hydrologic Unit Code (the Upper Calcasieu Watershed) and the 08080206 Hydrologic Unit Code (the Lower Calcasieu Watershed).

Driving directions to the site are as follows:

Drive west on Interstate 10 toward Lake Charles; take Exit 36 onto Louisiana Highway 397 South; proceed south for approximately 6.4 miles; turn left (east) on Louisiana Highway 14; proceed for approximately 2.5 miles; turn left onto Leger Road; proceed for 0.3 miles; and the property will be on the right.

II. Objective

A. Aquatic Resource Type and Functions to be Restored/Enhanced /Preserved

This Bank will re-establish 370.1 acres of bottomland hardwood forest (BLH) and coastal prairie habitat. The Bank will also contain an additional 6.3 acres of non-mitigation features consisting of open water.

Table C2-1: Current Habitat Types and Landuse (see Figure C2-1)

Habitat Type	Landuse	Acreage
Agricultural Prior Converted Wetlands	Agricultural	370.1
Other U.S. Waters	Natural Drains / Drainage Canals	6.3
Total	---	376.4

ATTACHMENT C2: MITIGATION WORK PLAN
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Table C2-2: Proposed Mitigation Bank Habitat Types (see Figure C2-2)

Habitat Type	Acreage	Mitigation Type
Coastal Prairie	295.6	Re-establishment
Bottomland Hardwood Forest	74.5	Re-establishment
Other U.S. Waters	6.3	Non-mitigation
Total	376.4	---
Total Mitigation and Inclusions	370.1	---

Coastal prairies, as defined within *The Natural Communities of Louisiana* (updated August 2009 by the Louisiana Department of Wildlife and Fisheries [LDWF] and the Louisiana Natural Heritage [LNHP] program), are prairies located within southwestern Louisiana, once very extensive but today are limited to small, remnant parcels. Coastal prairies located along the southern portion of the state may occur on “islands” or ridges surrounded by marsh. Soils are typically saturated in winter and dry in late spring and fall. The region is underlain by a clay pan 6 to 18 inches below the surface that prevents downward percolation of water and inhibits upward movement of capillary water. The diverse vegetation is most often dominated by grasses (with an abundance of forbs); however, trees can be found within coastal prairies within higher elevation (and better drained) areas near stream sides or along ridges, forming “gallery forests”. These trees act to divide the Coastal Prairie into many subunits or “coves”. The natural demarcation line between the forest and grassland is very sharp. Many plants in Coastal Prairie are the same as ones found in the pine savannahs and flatwoods that occur immediately north of the coastal prairie region. Fire plays a critical role in this natural community. Certain woody species may invade without periodic fire. The transition zone from coastal prairie to pine savannah is extremely diverse as it contains species from both communities.

This project will re-establish coastal prairie and bottomland hardwood habitat wetland communities so that they become species rich/diverse, sustainable wetland ecosystems. This shall be accomplished through removal of the site from agricultural use; degrading of spoil banks, roads, and rice dikes, thereby restoring sheetflow across the property; allowing overflowing of agricultural drains, thereby temporarily inundating the property; and through

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vegetative plantings in order to restore a natural assemblage of species, which will create additional wildlife habitat throughout.

B. Watershed Contributions

1. Watershed Need

It is estimated that as much as 2.5 million acres of coastal prairie existed in Louisiana at the time of early European settlement; however, most of this habitat has been converted to pasture or agriculture. With this conversion and the abatement of fire, less than 100 acres of this habitat remains and is listed as critically imperiled within the state of Louisiana. Very little native prairie and forest remains in the vicinity of the BBMB – Addendum I (see Figure C2-3), providing limited habitat for migratory birds and terrestrial wildlife. The restoration of this site will provide 370.1 acres of much needed natural habitats, while also improving the water quality in the receiving waters downstream of this site.

BBMB – Addendum I is proposed to provide compensatory mitigation for CEMVN approved projects within the Upper and Lower Calcasieu watersheds. In recent years, this watershed has seen the highest demand for wetland mitigation in the New Orleans District.

2. Watershed Benefits

The BBMB – Addendum I project area is located in the drainage area to Subsegment LA031101 (Intracoastal Waterway – from Calcasieu Lock to East Calcasieu River Basin Boundary, see Figure C2-7) as designated by Louisiana Department of Environmental Quality (LDEQ). The project area flows to Government Ditch via unnamed canals/ drainageways. Government Ditch borders the southeastern corner of the site (Figure C2-4). Government Ditch then flows to the south and drains to South Fork Black Bayou (approximately 13 miles downstream of the project), which then discharges into the Intracoastal Waterway (approximately 18 miles downstream of the project).

The LDEQ-designated uses of Fish and Wildlife Propagation (FWP) and Primary Contact Recreation (PCR) for Sub-segment LA031101 were identified as impaired in the 2014 final LDEQ 303(d). Identified impairments include chlorides (due to tidal influence), sulfates (due to hydrostructure flow regulation), total dissolved solids (due to tidal influence and hydrostructure flow regulation), and water temperature (due to natural causes and drought-related impacts). A Total Maximum Daily Load (TMDL) for fecal coliform was completed for Subsegment 030103 (Calcasieu River) in October 2010, due to prior impairments from local septic systems.

The cessation of agricultural activities along with degrading spoil banks and rice dikes, and restoration of native habitats for this project will aid in meeting the current and future TMDLs through the resulting water quality improvements due to increased filtration and plant uptake (i.e., nonpoint source pollution prevention).

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In addition to improvement in water quality due to reduction in non-point source pollution, BBMB – Addendum I will improve plant and wildlife habitat and provide increased wetland function over that which is currently performed by the bank given its current condition.

III. Site Selection

The primary factors considered during site selection included the following:

1. Site location in relationship to possible future permitted activities involving wetland impacts;
2. Site directly abuts the approved Black Bayou Mitigation Bank;
3. Site is currently used for crop production, but due to poor landscape position and lack of sufficient water supply it can only support a crop once every five years; and
4. Ecological and technical suitability indicating the high likelihood of a successful restoration/mitigation project.

Restoration efforts will re-establish approximately 329.2 acres of coastal prairie and bottomland hardwood habitat while expanding/improving wildlife habitat and providing water quality benefits to the area.

IV. Site Protection instrument

(See Section X. Long-Term Protection and Maintenance, Subsection A. “Conservation Servitude” of this MBI.)

V. Baseline information

This section contains both the historical and current ecological and physical information about the Bank Site.

A. Land Use

1. Historical Land Use

BBMB – Addendum I lands were historically coastal prairie with pockets of hardwood forests, which were cleared for silvicultural and agricultural use prior to 1970. Since property acquisition by the Sponsor in 1995, the property has been used solely for agricultural activities, including cultivation and production of rice (*Oryza sativa*).

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2. Current Land Use

The BBMB – Addendum I is currently used for cultivation and production of rice (*Oryza sativa*) but due to poor landscape position and lack of sufficient water supply it can only support a crop once every five years.

B. Soils

The 1988 and 2014 Calcasieu Parish Soil Surveys map the soils located on site as Morey loam (Mr), Crowley-Vidrine complex (Cr), Judice silty clay loam (Ju), Midland silty clay loam (Mn), and Mowata-Vidrine silt loams (Mt). A soil map for the BBMB – Addendum I is provided as Figure C2-5.

- Morey loam soils are located along broad flat terraces of the Gulf Coast Prairies and have slopes of zero (0) to one (1) percent. Soils are poorly drained, slowly permeable, and rarely flooded.
- Crowley-Vidrine complex are somewhat poorly drained, level soils, located along broad ridges within Gulf Coast Prairies. Crowley and Vidrine soils are so intermingled that they are nearly impossible to map separately, as Vidrine soil is located in small mounded areas surrounded by Crowley soil. Slopes are generally one (1) to three (3) percent.
- Judice silty clay loam consist of poorly drained, very slowly permeable soils located within depression throughout Gulf Coast Prairies. These soils are rarely flooded and unlikely to pond. Slopes are found to be zero (0) to one (1) percent.
- Midland silty clay loam consists of poorly drained, very slowly permeable soils located within shallow depressions throughout the Gulf Coast Prairies. Slopes are generally less than one (1) percent.
- Mowata-Vidrine silt loams are a mixture of Mowata and Vidrine soils, so intermingled that they are difficult to map individually. Small mounds of Vidrine soils are usually found surrounded by Mowata soils, with Mowata being the predominant soil on site. These soils are poorly drained to somewhat poorly drained, nearly level soils, located along broad flats within coastal prairies. Slopes are found to be zero (0) to one (1) percent.

A wetland delineation conducted in September 2015 (prepared by TerRestore, LLC for Excalibur Land Company) confirmed that these soils are present on site as depicted within the Calcasieu Parish Soil Surveys, do present hydric indicators, and are hydric soils as identified by the Natural Resources Conservation Service.

Agricultural use of this property in the past and present has modified the topography and hydrology of the project site.

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C. Hydrology

1. Historical Hydrology and Drainage Patterns

The BBMB is located within the Upper and Lower Calcasieu watersheds and is currently utilized for agricultural activities including cultivation and production of rice (*Oryza sativa*). Prior to silvicultural and agricultural activities, surface water was able to pond within depressional areas throughout the site or sheetflow across the site.

Historical drainage patterns are believed to have been similar to those shown on Figure C2-6 as proposed (post-restoration) drainage patterns. Government Ditch is believed to be a historical/natural water feature which was supplanted by the existing canal.

Historical water sources to the Bank included direct precipitation and overbank flooding from nearby drainageways. Drainage of this property has been impacted by construction/modification of adjacent drainageways (and associated spoil banks and culverts), and construction of ditches (and associated spoil banks and culverts) within the property (see Figure C2-4). Construction of rice dikes (see Figure C2-6) also impacted site drainage.

Jurisdictional determination MVN-2015-02288-SQ was issued by CEMVN for this property on April 15, 2016.

2. Existing Hydrology and Drainage Patterns

Natural hydrology has been altered by agricultural drainage improvements and soil surface compaction. Currently, wetlands and unnamed drainageways on-site are hydrologically isolated due to spoil banks along drainageways, elevated roads, and rice dikes. Wetland hydrology on-site is currently driven by direct precipitation – rice dikes have been minimally gapped to allow some of the excessive precipitation to flow from the site as runoff, while spoil banks and elevated roads are too high for routine flood waters to overtop. Current and proposed drainage patterns are depicted within Figures C2-4 and C2-6. The drainage area associated with the property is depicted in Figure C2-7, and elevations (1-foot contours) are depicted on Figure C2-8.

D. Vegetation

1. Historical Plant Community

Plant species which were likely present on site prior to silvicultural and agricultural activities include those species listed below.

This species list was developed based on species assemblages (1) identified within *The Natural Communities of Louisiana* as being historically common to coastal prairies,

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(2) identified within the publication *Paradise Lost? The Coastal Prairie of Louisiana and Texas* (published in 2000 by the USGS National Wetlands Research Center, available online at http://www.nwrc.usgs.gov/prairie/paradise_lost.pdf) as being historically common to coastal prairies, and (3) recently approved in other Coastal Prairie wetland mitigation plans by CEMVN.

Coastal Prairie Species:

- Beach Purple False (*Agalinis fasciculata*)
- Purple False Foxglove (*Agalinis purpurea*)
- Winter Bent Grass (*Agrostis hyemalis*)
- Eastern Bluestar (*Amsonia tabernaemontana*)
- Big Bluestem (*Andropogon gerardii*)
- Bushy Bluestem (*Andropogon glomeratus*)
- Elliot's Bluestem (*Andropogon gyrans*)
- Broomsedge (*Andropogon virginicus*)
- Three Awn Grass (*Aristida purpurascens*)
- Egg-leaf Indian Plantain (*Arnoglossum ovatum*)
- Tall Blue Aster (*Aster praealtus*)
- Roughstem aster (*Aster puniceus*)
- Beaded Beggar's Ticks (*Bidens aristosa*)
- American Blue Hearts (*Buchnera Americana*)
- Caric sedges (*Carex spp.*)
- Wild Chervil (*Chaerophyllum tainturieri*)
- Star Tickseed (*Coreopsis pubescens*)
- Plains Tickseed (*Coreopsis tinctoria*)
- Tall Tickseed (*Coreopsis tripteris*)
- Toothache Grass (*Ctenium aromaticum*)
- Variable Panic Grass (*Dicanthelium spp.*)
- Cypress Panic Grass (*Dichanthelium dichotomum*)
- Panic Grass (*Dicanthelium spp.*)
- Velvet Panic Grass (*Dicanthelium scoparium*)
- Dwarf Spikerush (*Eleocharis parvula*)
- Elliot Lovegrass (*Eragrostis elliottii*)
- Coastal Lovegrass (*Eragrostis refracta*)
- Showy Daisy Fleabane (*Erigeron philadelphicus*)
- Fleabane (*Erigeron strigosus*)
- Button Snakeroot (*Eryngium yuccifolium*)
- Boneset (*Eupatorium perfoliatum*)
- Roundleaf Boneset (*Eupatorium rotundifolium*)
- Flat-topped Goldenrod (*Euthamia leptcephala*)
- Vernal Sneezeweed (*Helenium vernale*)
- Narrow Leaf Sunflower (*Helianthus angustifolius*)
- Crimoneyed Mallow (*Hibiscus moscheutos*)

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- Soft Rush (*Juncus effuses*)
- Blazing Star (*Liatris spicata*)
- Purple Dew Drop (*Lobelia puberula*)
- Coastal Muhly Grass (*Muhlenbergia capillaris*)
- Beaked Switchgrass (*Panicum anceps*)
- Switchgrass (*Panicum virgatum*)
- Florida Paspalum (*Paspalum floridanum*)
- Brownseed Paspalum (*Paspalum plicatulum*)
- Smooth Beardtongue (*Penstemon digitalis*)
- Beardtongue (*Penstemon laxiflorus*)
- Common Self-heal (*Prunella vulgaris*)
- Single Stem Snakeroot (*Psoralea simplex*)
- Whiteleaf Mountain Mint (*Pycnanthemum albescens*)
- Lowland Mountain Mint (*Pycnanthemum muticum*)
- Thin Leaf Mountain Mint (*Pycnanthemum tenuifolium*)
- Maryland Meadow Beauty (*Rhexia mariana*)
- Anglestem Beaksedge (*Rhynchospora caduca*)
- Helmet Flower (*Scutellaria integrifolia*)
- Narrowleafed Blue-eyed (*Sisyrinchium angustifolium*)
- Spreading Blue-eyed Grass (*Sisyrinchium rosulatum*)
- Roughleaf Goldenrod (*Solidago rugose*)
- Seaside Goldenrod (*Solidago sempervirens*)
- Rice Button Aster (*Symphotrichum dumosum*)
- Calico Aster (*Symphotrichum spp.*)
- Common Spiderwort (*Tradescantia ohiensis*)
- Pine Barren Tridens (*Tridens ambiguous*)
- Long-spike Tridens (*Tridens strictus*)
- Eastern Gamma Grass (*Tripsacum dactyloides*)
- Giant Ironweed (*Vernonia gigantea*)

2. Existing Plant Community

Current vegetation within cleared crop fields consists of predominantly cultivated rice (*Oryza sativa*).

VI. Description of Work

This Bank will provide 370.1 acres of coastal prairie and bottomland hardwood habitat to compensate for unavoidable wetland impacts for the Calcasieu Basin (See Figure C2-2). In order to accomplish this task, the Sponsor shall complete the following soils/hydrologic and habitat work.

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A. Soils/Hydrologic Work Plan

The proposed mitigation plan involves the cessation of agricultural production, the restoration of surface hydrology; planting of an assemblage of native species indicative of coastal prairies; and the implementation of effective short-term, intermediate, and long-term management strategies.

Currently, overbank flooding is impeded by spoil banks, elevated roads, and rice dikes (see Figures C2-6 – C2-6b). During flood stages sufficient to overtop these impediments, flood waters become impounded behind them. Removal of these impediments will contribute to the ability of flood waters on-site to rise and recede in a more natural regime.

Spoil bank material excavated during restoration will be spread over adjacent fields so as not to significantly alter topography or will be removed from site.

Those access roads to remain will be lowered (to grade) and low-water crossings will be installed (as necessary) to further facilitate drainage.

Figures C2-6 – C2-6b provide a plan view and typical cross-sections to be utilized during construction activities.

B. Vegetation

For those 295.6 acres proposed for designation as Coastal Prairie re-establishment, an appropriate assemblage of coastal prairie species will be planted. Species assemblages will be selected and planted based on landscape position. Proposed species assemblages to be planted will be representative of a species assemblage historically common to surrounding wetland prairies of the area. These species assemblages are identified in *The Natural Communities of Louisiana* (Louisiana Natural Heritage Program, August 2009, available at: <http://www.wlf.louisiana.gov>). A proposed list of possible species to be planted is presented within the table located below.

Table C2-3: Proposed Coastal Prairie Species Assemblages to be Planted

Scientific Name	Common Name (USDA)	Wetland Indicator Status Region 2 (USDA)
Coastal Prairie		
<i>Agalinis fasciculata</i>	Beach Purple False Foxglove	FAC
<i>Agalinis purpurea</i>	Purple False Foxglove	FACW
<i>Agrostis hyemalis</i>	Winter Bent Grass	FAC
<i>Amsonia tabernaemontana</i>	Eastern Bluestar	FACW
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Andropogon glomeratus</i>	Bushy Bluestem	FACW

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Scientific Name	Common Name (USDA)	Wetland Indicator Status Region 2 (USDA)
Coastal Prairie		
<i>Andropogon gyrans</i>	Elliot's Bluestem	FAC
<i>Andropogon virginicus</i>	Broomsedge	FAC
<i>Aristida purpurascens</i>	Three Awn Grass	FACW
<i>Arnoglossum ovatum</i>	Egg-leaf Indian Plantain	FACW
<i>Aster praealtus</i>	Tall Blue Aster	FACW
<i>Aster puniceus</i>	Roughstem Aster	OBL
<i>Bidens aristosa</i>	Beaded Beggar's Ticks	FACW
<i>Buchnera Americana</i>	American Blue Hearts	FAC
<i>Carex spp.</i>	Caric Sedges	FACW
<i>Chaerophyllum tainturieri</i>	Wild Chervil	FAC
<i>Coreopsis pubescens</i>	Star Tickseed	FAC
<i>Coreopsis tinctoria</i>	Plains Tickseed	FAC
<i>Coreopsis tripteris</i>	Tall Tickseed	FAC
<i>Ctenium aromaticum</i>	Toothache Grass	FACW
<i>Dichanthelium commutatum</i>	Variable Panic Grass	FAC
<i>Dichanthelium dichotomum</i>	Cypress Panic Grass	FAC
<i>Dichanthelium</i>	Panic Grass	OBL
<i>Dichanthelium scoparium</i>	Velvet Panic Grass	FACW
<i>Dichanthelium scoparium</i>	Velvet Panic Grass	FACW
<i>Eleocharis parvula</i>	Dwarf Spikerush	OBL
<i>Eragrostis elliotii</i>	Elliot Lovegrass	FACW
<i>Eragrostis refracta</i>	Coastal Love Grass	FACW
<i>Erigeron philadelphicus</i>	Showy Daisy Fleabane	FAC
<i>Erigeron strigosus</i>	Fleabane	FAC
<i>Eryngium yuccifolium</i>	Button Snakeroot	FAC
<i>Eupatorium perfoliatum</i>	Boneset	FACW
<i>Eupatorium rotundifolium</i>	Roundleaf Boneset	FAC
<i>Euthamia leptoccephala</i>	Flat-topped Goldenrod	FACW
<i>Helenium vernale</i>	Vernal Sneezeweed	FACW
<i>Helianthus angustifolius</i>	Narrow Leaf Sunflower	FACW
<i>Hibiscus moscheutos</i>	Crimson-eyed Mallow	OBL
<i>Juncus effusus</i>	Soft Rush	FACW
<i>Liatris spicata</i>	Blazing Star	FAC
<i>Lobelia puberula</i>	Purple Dew Drop	FACW
<i>Muhlenbergia capillaris</i>	Coastal Muhly Grass	FAC
<i>Panicum anceps</i>	Beaked Switchgrass	FAC
<i>Panicum virgatum</i>	Switchgrass	FAC
<i>Paspalum floridanum</i>	Florida Paspalum	FACW

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Scientific Name	Common Name (USDA)	Wetland Indicator Status Region 2 (USDA)
Coastal Prairie		
<i>Paspalum plicatulum</i>	Brownseed Paspalum	FAC
<i>Penstemon digitalis</i>	Smooth Beardtongue	FAC
<i>Penstemon laxiflorus</i>	Beardtongue	FAC
<i>Prunella vulgaris</i>	Common Self-heal	FAC
<i>Psoralea simplex</i>	Single Stem Snakeroot	FAC
<i>Pycnanthemum albescens</i>	Whiteleaf Mountain Mint	FAC
<i>Pycnanthemum muticum</i>	Lowland Mt. Mint	FAC
<i>Pycnanthemum tenuifolium</i>	Thin Leaf Mt. Mint	FACW
<i>Rhexia mariana</i>	Maryland Meadow Beauty	FACW
<i>Rhynchospora caduca</i>	Anglestem Beaksedge	OBL
<i>Scutellaria integrifolia</i>	Helmet Flower	FAC
<i>Sisyrinchium angustifolium</i>	Narrowleafed Blue-eyed	FACW
<i>Sisyrinchium rosulatum</i>	Spreading Blue-eyed Grass	FAC
<i>Solidago rugosa</i>	Roughleaf Goldenrod	FAC
<i>Solidago sempervirens</i>	Seaside Goldenrod	FACW
<i>Symphyotrichum dumusom</i>	Rice Button Aster	FAC
<i>Symphyotrichum lateriflorum</i>	Calico Aster	FAC
<i>Tradescantia ohioensis</i>	Common Spiderwort	FAC
<i>Tridens ambiguus</i>	Pine Barren Tridens	FACW
<i>Tridens strictus</i>	Long-spike Tridens	FACW
<i>Tripsacum dactyloides</i>	Eastern Gamma	FAC
<i>Vernonia gigantea</i>	Giant Ironweed	FAC

Proposed coastal prairie areas designated as re-establishment will be prepared by applying herbicides and tilling soil to remove invasive species prior to planting. Coastal prairie areas will be replanted with seed from regional suppliers or harvested from Louisiana Coastal Prairie habitats. Seeds will be pneumatically dispersed along transect to insure even coverage at a rate of 1 lb per acre. Seeding will take place during the months of November and December. The seed mix will consist of monocot and dicot seeds for those species listed in Table C2-3. Seeds potentially used for planting will be procured from seed producers and harvesters in the Gulf Coastal Plain of Louisiana.

Coastal prairie habitat will be maintained by prescribed burning on a 3 year cycle during the months of May and June, contingent upon abundance of fuel. Escrow or bond sum release rates and monitoring requirements will be consistent with other recently implemented CEMVN approved mitigation banks.

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VII. Maintenance Plan

The coastal prairie mitigation areas will be maintained by a controlled fire regime (by licensed burn contractor) which may range from a frequency of one to three years to maintain favorable native plant development. Attachment MWP-CP-D is a detailed burn plan for the property (Figure BP-1 depicts the Control Burn Plan Diagram).

The Sponsor will use all prudent efforts, physical, chemical, or mechanical, to eliminate existing undesirable/exotic vegetation present such as Chinese tallow (*Triadica sebifera*) on the site during site preparation activities. The Sponsor will continue to monitor the site through annual inspections to document the effectiveness of control efforts, the extent and degree of invasive species present, the extent and degree of any herbivory damage, and the condition and functionality of any hydrological structures.

Following such monitoring, invasive species and herbivore control will be implemented, as necessary and hydrological structures will be replaced if determined necessary.

VIII. Performance Standards

In order for the Bank to be considered acceptable for mitigating wetland impacts associated with DA permits, the Property will be restored in accordance with the Mitigation Work Plan such that it meets wetland criteria as described in the 1987 Corps of Engineers Wetland Delineation Manual (the 1987 Manual) as well as the November 2010 Regional Supplement for the Corps of Engineers Wetland Delineation manual: Atlantic and Gulf Coastal Plain Region Version 2.0. Performance standards (success criteria) used to measure the success of the Bank are provided below.

Ecological enhancement of coastal prairie and related habitats is measured by the progress from its current state (as described in the baseline conditions) towards an open, highly species diverse coastal prairie ecosystem with trees confined to the more elevated and better drained stream sides or ridges, forming "gallery forests", which act to divide the Coastal Prairie into many subunits or "coves". The progression of the vegetative community over time should reflect an increase of indigenous coastal prairie species as shown in Table C2-3. The control of woody shrubs and hardwood encroachment or lack of encroachment into coastal prairie areas can be used to measure the success of management in moving the site to a high quality ecosystem. The following criteria use these elements to measure success.

A. Initial Success Criteria

1. Hydrology. Ground surface elevations must be conducive to establishment and support of hydrophytic vegetation, and re-establishment and maintenance of hydric soil characteristics. To that end, all alterations of the natural topography (ditching, spoil

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banks, elevated roads, rice dikes, land leveling, bedding, etc.) that have affected the duration and extent of surface water have been removed or otherwise rendered ineffective in accordance with this Mitigation Work Plan. Low-water crossings which were proposed to further facilitate drainage have been installed.

2. Vegetation: By Year 1, vegetative monitoring data will establish the following criteria have been met:

- The area will have been seeded and/or planted with appropriate species and geographic types per Section VI.B.
- The initial controlled burn must have occurred.
- Tree and/or sapling/shrub species cover should be <15% of the area.
- Invasive tree and or sapling/shrub species cover should represent <10% of the area.

B. Interim Success Criteria

1. Hydrology: By Year 3 (two years following attainment of the one-year survivorship criteria) site hydrology will be restored such that the Property meets the wetland criterion as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0. Data demonstrating that wetland hydrology has been re-established is to be collected by the Sponsor and submitted to CEMVN in the monitoring report for the interim success criteria.

2. Vegetation and Vegetative Plantings: By Year 3 (two years following attainment of the one year survivorship criteria) vegetative monitoring data must indicate the following:

- Controlled burns have occurred at least twice within the coastal prairie area.
- Vegetative cover within the herbaceous strata cover of forbs/herb and graminoid species is >80% excluding undesirable/exotic species.
- On average, >14 forb/herb or graminoid species, excluding undesirable/exotic species, must be present within the herbaceous layer throughout the Bank site.
- Tree and/or sapling/shrub species cover should be <15% of the area.
- Invasive tree and/or sapling/shrub species cover should represent <10% of the area.

C. Long-Term Success Criteria (Year 5 and beyond)

1. Hydrology: By Year 5 and beyond, four years following successful attainment of the Year 1 establishment criteria, the Bank site will meet the wetland criterion for site vegetation, soils and hydrology as described in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the U.S. Army Corps of Engineers Regional Supplement for the Atlantic and Gulf Coastal Plain (USACE 2010).

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2. Vegetation and Vegetative Plantings: By Year 5 and beyond, four years following successful attainment of the Year 1 initial success criteria, vegetative monitoring data must indicate the following:

- Controlled burns must have occurred at a frequency of once every two to three years.
- The vegetative cover for the herbaceous strata will be >90% total with a composition of >50% graminoid species and <50% forb/herb species. Undesirable species (including noxious/exotic species) should represent <10% of the species composition.
- A total of 50 graminoid and forb/herb species, excluding undesirable/exotic species, should be present within the herbaceous strata throughout the Bank site.
- Tree and/or sapling/shrub species cover should be <15% of the area.
- Invasive tree and/or sapling/shrub species cover should represent <5% of the area.

The developing plant community must exhibit characteristics and diversity indicating a viable, native coastal prairie community commensurate with climate and site conditions. Achievement of wetland vegetation dominance is defined as a vegetation community where more than 50% of all dominant species are facultative ("FAC") or wetter as determined by the appropriate test per the Atlantic and Gulf Coastal Plain Regional Supplement (USACE 2010).

IX. Monitoring Requirements

The Sponsor agrees to perform all work necessary to monitor the Bank to demonstrate compliance with the success criteria established in this Mitigation Work Plan. The Sponsor will monitor the Bank in the fall of each monitoring year using the guidelines within this section of this Mitigation Work Plan.

Surveys of permanent monitoring stations will occur in the following time frame:

1. Prior to beginning of site restoration (within one year of authorizing credit sales) of the Bank to establish baseline information.
2. A planting and hydrologic restoration report upon completion of the work.
3. An initial success criteria report (1 Year after planting)
4. An interim success criteria report (2 years after successfully meeting the initial success criteria).
5. Long-term success criteria report (4 years after meeting the initial success criteria and every fifth year thereafter).

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If monitoring for any given year determines that the Bank is not progressing as expected, monitoring will continue on an annual basis until the Bank successfully meets or exceeds established milestones. After achieving the initial success criteria, monitoring will occur as stated above.

Surveys will include a summary of where, when and percent coverage of burns that have occurred since the previous monitoring report. Data collected for initial, interim and long-term monitoring will be the same as for baseline conditions using the same sample plots.

The survey of the permanent monitoring stations will collect data to evaluate the survival rate of planted vegetation; number, species, and growth rates (average heights and diameter (if appropriate)). Surveys will include the number by species of volunteering trees, shrubs and woody vines. Surveys will also collect information regarding colonizing plant species, the wetland plant status (scaled from obligate (OBL) to upland (UPL) of each and the number by species of undesirable specimens (including noxious/exotic species).

A. Transects

Prior to any restoration work on the site of the Bank, the Sponsor will establish management units by dividing the site to account for habitat types present and areas with management histories that are significantly different from each other. The Sponsor shall establish transects across each management unit that is representative of approximately 3% of the management unit. The beginning and ending points of each transect shall be marked with a permanent marker (e.g., an 8-foot PVC pipe anchored with a metal T post) and GPS coordinates shall be recorded for these points. These areas shall be depicted on maps and drawings submitted.

B. Permanent circular monitoring stations

Immediately following initial planting of the Bank, the Sponsor will randomly establish permanent circular monitoring stations. A minimum of 1 set of circular nested sample plots/stations (1/100th acre and 1/10th acre) per every 10 acres on the site, will be systematically distributed along transects in each management unit. At least two sets of the sampling plots will include areas initially determined to be non-jurisdictional and two will include habitat inclusions, if present. During evaluation of data CEMVN may request additional information from other areas of the site outside the established plots. Plot size and data to be collected from plots for vegetation monitoring are listed below. Additional plant species noted outside sample plots will also be reported to obtain a total species list for the site. This information will be provided in tabular form. Cover will be determined from sample plots as follows:

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Plot Size	Radius	Strata	Data Collected
1/100 th acre (435.6 sq. feet)	11.7 sq. ft.	Herbaceous	<ol style="list-style-type: none"> 1. Species present including undesirable species (including Introduced Species (IS)) 2. Cover by each species 3. Total cover including undesirable species including IS 4. Total cover minus undesirable species (including IS) 5. Relative percent cover grasses and graminoids excluding undesirable species (including IS) 6. Relative percent cover forbs excluding undesirable species (including IS) 7. Relative percent cover of undesirable species (including IS)
1/10 th acre (4356 Square ft.)	37.2	Sapling /shrub strata	<ol style="list-style-type: none"> 1. Species present including undesirable (which includes Introduced saplings/shrubs) sapling/shrubs 2. Cover by each sapling/shrub species 3. Total cover by all species 4. Total cover all species minus undesirable sapling/shrubs (which includes introduced saplings/shrubs) 5. Total cover undesirable sapling/shrubs (which includes introduced saplings/shrubs) 6. Relative percent cover of sapling/shrubs 7. Relative percent cover undesirable sapling/shrubs (which includes introduced saplings/shrubs)
1/10 th acre (4356 sq. ft.)	37.2 sq. feet	Groundcover (< 2 ft.)	Additional species no found in 435.6 sq. ft. plots.

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C. Soil Profile

The Sponsor will collect data on the hydrologic conditions of the Bank at a minimum of 50% of the permanent monitoring stations. Sufficient information to demonstrate hydric properties within the soil shall be provided as a description of the upper 12 inches of the soil profile. Such data will be presented as points with GPS coordinates for each point, a hydric indication for each point, and an explanation to support the information for each point.

The Sponsor will be required to submit a Corps issued JD (at year 3) to show that the Property meets the wetland criterion as described in the 1987 Manual as well as the Regional Supplement of the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0.

D. Floristic Survey

To document the attainment of the long-term success criteria the Sponsor will complete a comprehensive floristic survey for the Bank as part of the monitoring requirements.

E. Photographs

Digital images shall be taken from ground level at each monitoring station and from elevated positions throughout the Bank to document overall conditions. These ground level images should provide a North, South, East, and West image for each station.

F. Qualitative Analysis

The Sponsor shall evaluate the entire extent of the Bank (or phase of the Bank that this report represents) and provided observations concerning overall seeding survivorship, colonization of the Bank by volunteer plant species, wildlife utilization and any other information that is pertinent to achievement of initial success criteria.

G. Hydrologic Conditions

A description of the condition of any applicable hydrology altering features (culverts, ditches, plugs, etc.) and a general discussion of hydrologic conditions at monitoring stations.

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H. Ledgers

The Sponsor will utilize the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) as a ledger to show all transactions. The Sponsor will input the following information: transaction date, permittee name, credits/acres sold and DA permit number. No other reporting measures are required.

X. Monitoring Reports

Independent of the as-built report the Sponsor will submit monitoring reports documenting monitoring efforts at the Bank to the CEMVN by December 31st of the year monitoring occurs. Besides monitoring results for that monitoring year, reports will include a financial assurance report documenting withdrawals and deposits. The monitoring reports will follow the guidelines listed below:

The monitoring report will include data sufficient for comparison to the performance standards found in Section VIII of this Mitigation Work Plan. The Sponsor shall also include, in these reports, a discussion of all activities which took place at the Bank.

A. Base Line Data Report

In order to demonstrate site rehabilitation through management, the Sponsor will perform a Floristic Survey using the permanent monitoring plots (as described in Section IX.B of this Mitigation Work Plan) prior to performing any site management. This baseline data will be collected at each sample plot. For habitat inclusions, if present, the Sponsor will identify species composition of the various vegetative strata and provide a percentage of the total for each species. In addition, the Sponsor will provide a report detailing the hydrologic disturbances that need attention and provide a work plan identifying work necessary to accomplish hydrologic restoration.

B. As-Built Report

An As-built report will be submitted to CEMVN within 60 days following completion of all work required to restore or enhance special aquatic sites. The as-built report will describe in detail the work performed and provide a list of species planted, the number of each species, and the wetland rating. No deviation from the Mitigation Work Plan may occur without prior approval from the IRT. The As-built report will include a discussion of the coordination with IRT members, a description of and reasons for any approved deviation. The As-built report shall provide:

- a. A survey showing finished grades and plantings with written documentation, plan view and cross sectional drawings of all construction and establishment work implemented on the bank.

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b. Survey data collected from the permanent monitoring stations and the transects.

This survey data should include the number of species planted, timing of all work events, and maps showing the location (including latitude/longitude) of all monitoring stations as described in this Mitigation Work Plan.

c. Detailed descriptions of site preparation, planting procedures,

C. Fire Management Reporting

For each burn event, the following information will be reported: date of burn, percentage coverage of the site burned, percent coverage by species for various vegetative strata, species composition, and a map showing the location of the area burned (if the percentage of the site burned is less than 100%).

D. Initial Success Criteria Report

The Sponsor shall submit the following at the end of the first year after planting.

The Sponsor shall provide details in accordance with Section VIII.A of this Mitigation Work Plan, on any maintenance/management work conducted on the Bank after submission of the As-Built Report. The Sponsor shall provide a brief description of any anticipated maintenance/management work to be conducted prior to attainment of interim success criteria.

1. Vegetation

The sponsor shall provide plot data in tabular form for each permanent circular monitoring plot as described and as established in accordance with Section IX. of this MWP. A description of the general condition of the seedlings, including the number and species of surviving seedlings in each monitoring station, and a discussion of likely causes of mortality for the non-survivors, and a description of the generalized degree and distribution of exotic/invasive species will also be provided. This vegetative monitoring data will be compared to baseline data to demonstrate restoration of the coastal prairie habitat.

2. Hydrologic Data

The Sponsor shall provide a description of the condition of any applicable hydrology altering features (culverts, ditches, plugs, etc.), a general discussion of hydrologic conditions at monitoring stations and date(s) of activities documentation (fire and road side berm restoration which will be returned to natural grade) demonstrating unimpeded sheet flow.

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3. Photographs

The Sponsor must submit digital photographs in accordance with Section IX.E of this Mitigation Work Plan.

4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in Section IX.F of this Mitigation Work Plan.

5. Fire Management Report

A summary Fire Management Report will be provided with the Initial Success Criteria Report in accordance with specifications given in Section X.C.

6. Funding

The Sponsor shall provide CEMVN with copies of the most recent financial account statements for both the financial assurance accounts and the Long-term Maintenance and Protection Fund. If any escrowed funds were used, the Sponsor will include a narrative describing that use, the justification for that use and supporting documentation (e.g. receipts). The Sponsor shall also provide any justification for any requested release from financial assurance accounts.

Should this report indicate that the initial success criteria were not attained, the report will include an Adaptive Management Plan (see Section XII of this Mitigation Work Plan) that indicates the problems(s) and a plan of action on solving the problems.

E. Interim Success Criteria Report

The Sponsor shall monitor the Bank at Year 3 or two years following attainment of the initial success criteria for the Bank. This report will document the attainment of the interim success criteria as described in Section VIII.B of this Mitigation Work Plan.

1. Vegetation

Vegetation monitoring data (See Section IX.B. of this MWP) will be provided. In addition documentation will be provided on the success of the plantings and the percentages of seedling survival. This vegetative monitoring data will be compared to initial success criteria report to demonstrate restoration of the coastal prairie.

a. Permanent Monitoring Plot Data

The Sponsor shall provide vegetation monitoring plot data summarized in tabular form for general vegetation permanent monitoring plots as established in accordance

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with Section IX.B of this Mitigation Work Plan. In addition, a description of the generalized degree and distribution of undesirable species and whether they are seed bearing trees or seedlings will also be provided.

2. Hydrologic Data

By Year 3, two years following attainment of the one-year survivorship criteria, the Sponsor **must provide a Corps issued wetland determination** to prove that site hydrology has been restored such that the Property meets the wetland criterion as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2. The Sponsor shall submit a wetland delineation report and a request for a jurisdictional determination to CEMVN as described in the 1987 Manual as well as the November 2010 Regional Supplement to the Corps of Engineers wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2. Hydrologic restoration information will also include photographic documentation (fire break and road side berm restoration) demonstrating unimpeded sheet flow.

3. Photographs

The Sponsor must submit digital photographs in accordance with Section IX.E of this Mitigation Work Plan.

4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in Section IX.F of this Mitigation Work Plan. The Sponsor shall provide details on any maintenance/management work conduction on the Bank after submission of the Initial Success Criteria Report. The Sponsor shall provide a brief description of any anticipated maintenance/management work to be conducted prior to attainment of long-term success criteria. Note: By year 5, four years following successful attainment of the one-year survivorship criteria, the developing community must exhibit characteristics and diversity indicative of a viable coastal prairie wetland community; the Bank and the perimeter will be virtually free (approximately 5% or less on an acre-by-acre basis) of exotic/invasive vegetation.

5. Fire Management Reports

Fire Management Reports will be provided for each burn event (see Section X.C of this Mitigation Work Plan).

6. Funding

The Sponsor shall provide CEMVN with copies of the most recent financial account statements for both the financial assurance accounts and the Long-Term

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Maintenance and Protection Fund. If any escrowed funds were used, the Sponsor will include a narrative describing that use, the justification for that use and supporting documentation (e.g. receipts). The Sponsor shall also provide any justification for any requested release from financial assurance accounts.

F. Long Term Success Criteria Report

The Sponsor shall monitor the Bank at Year 5, or four years after meeting the initial success criteria for the Bank. This long term success criteria report will document the attainment of the long term success criteria as described in Section VIII.C of this Mitigation Work Plan. Should information in this report indicate that the long-term success criteria are not attained, an Adaptive Management Plan (see Section XII of this Mitigation Work Plan) should be submitted to CEMVN. This plan should identify and describe the problem(s) and provide a plan of action on solving these problems.

1. Vegetation

The vegetative monitoring data will be compared to the interim success criteria report to demonstrate rehabilitation and/or maintenance of the coastal prairie habitat.

a. Permanent Monitoring Plot Data

The Sponsor shall provide vegetation monitoring plot data summarized in tabular form for general vegetation permanent monitoring plots as established in accordance with Section IX.B of this Mitigation Work Plan. In addition, a description of the generalized degree and distribution of undesirable species and whether they are seed bearing trees or seedlings will also be provided.

2. Hydrologic Data

The Sponsor must provide documentation to verify that the restored hydrology of the site as achieved in the Interim Success Criteria is still in place.

3. Photographs

The Sponsor must submit digital photographs in accordance with Section IX.E of this Mitigation Work Plan.

4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in Section IX.F of this Mitigation Work Plan. The Sponsor shall provide details on any maintenance/management work conducted on the Bank after submission of the Interim Success Criteria Report.

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5. Fire Management Reports

Fire Management Reports will be provided for each burn event (see Section X.C of this Mitigation Work Plan).

6. Funding

The Sponsor shall provide CEMVN with copies of the most recent financial account statements for both the financial assurance accounts and the Long-term Maintenance and Protection Fund. If any escrowed funds were used, the Sponsor will include a narrative describing that use, the justification for that use and supporting documentation (e.g. receipts). The Sponsor shall also provide any justification for any requested release from financial assurance accounts.

XI. Bank Credits

A. Credit Determination

Refer to Attachment MWP-CP-C.

B. Schedule of Credit Availability

Upon submittal of all appropriate documentation by the Sponsor, and subsequent approval by CEMVN in consultation with the IRT, CEMVN will release credits for use by the Sponsor according to the following schedule:

1. Thirty percent (30%) of total anticipated project credits will be available for debiting upon confirmation that all items in Section XI.F (1-7) of the MBI have been completed.
2. An additional twenty percent (20%) of the total anticipated credits will be available for debiting upon providing documentation that the vegetative plantings have been conducted and the completion of the work necessary to restore site topography and wetland hydrology of the Bank as outlined in Section VI of this Work Plan.
3. An additional twenty percent (20%) of total anticipated credits will be available for debiting upon successfully completing the Initial Success Criteria as described in Section VIII.A of this Mitigation Work Plan.
4. An additional twenty percent (20%) of the total anticipated credits would be released upon successfully completing the Interim Success Criteria in Section VIII.B of this Mitigation Work Plan.
5. An additional ten percent (10%) of the total anticipated credits would be released upon successfully completing the Long-Term Success Criteria in Section VIII.C of this Mitigation Work Plan are met.

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XII. Adaptive management plan

An adaptive management strategy, contingency, and remedial responsibilities shall be in place, and will be implemented in the event monitoring reveals that certain success criteria have not been met. In the event of a deficiency, the Sponsor shall provide a notice to the USACE. This notice shall include an explanation for the deficiency, and will outline specific practices and measures that will guide decisions for revising compensatory mitigation plans if needed.

If performance standards are not met as specified, the Sponsor shall take appropriate actions, as recommended by the USACE, to address the causes of mortality and shall replace vegetation during the following planting season. Replanting, monitoring, and reporting, as previously described, shall occur as needed to achieve and document the required vegetative ground coverage.

If the survival criterion is not met after three unsuccessful attempts, CEMVN in consultation with the IRT will decide if replanting should continue. Should CEMVN, in consultation with the IRT, determine that achieving the required survival rate would not be likely; the Sponsor shall be required to provide replacement mitigation for the increment of value which did not accrue within the successful tracts within one year of this decision. In addition, CEMVN will reassess the MBI to determine if a change in the management potential is warranted or if use of the BBMB should be discontinued. If warranted a new management potential may be calculated.

If wetland hydrology is not documented by Year 5, the Sponsor shall specify in the monitoring report those areas where attention is needed. The USACE may require the Sponsor to conduct adaptive management measures in order to obtain adequate hydrology. With approval of the USACE, the Sponsor would establish a means of increasing the amount of hydrology available on site.

XIII. Long Term Protection and Maintenance

To ensure long-term sustainability of the resource, the Sponsor shall burden the property with a perpetual conservation servitude as described in Section X of the MBI.

XIV. Funding

Section IX.A of the MBI provides specific details about the funding for the Construction and Establishment (C&E) Activities for the Bank.

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A. Construction and Establishment (C&E) Funds

1. Estimate of C&E Funds Required

Initial construction and establishment costs and ongoing management funds required to manage and monitor the lands through the first 15 years are outlined in MWP Attachment MWP-CP-C (Table C2-4 – Cost Structure for Black Bayou Mitigation Bank) of this Mitigation Work Plan. These costs have been estimated by identifying costs (based upon third-party rates and mitigation banking experience) associated with individual tasks necessary to construct, establish, maintain, manage, and monitor mitigation banks (including costs to implement proposed burn plan). These costs are then broken down by year in separate tables in MWP Attachment MWP-CP-C for each of construction, establishment, and long-term maintenance/ protection. Funding amounts have been adjusted for inflation every five years based on the Consumer Price Index. To fund this account, the Sponsor proposes to establish an escrow account for construction and a separate escrow account for establishment.

Financial assurances shall be reduced as success criteria are achieved. The value of the financial assurance to remain will be based on the work a third party may be required to perform to assure successful attainment of remaining milestones (i.e., funding for exotic control, replanting due to failure of plantings, etc.) should the Sponsor be in default.

The principal amount (\$126,637.15) of the Construction Fund will be phased out in a single transaction. Upon verification by the IRT that the construction work has been completed, the CEMVN, acting on behalf of the IRT, shall advise the provider of the financial assurance to release 100 percent (\$126,637.15) of the principal amount of the Construction Fund.

Copies of the annual status of the financial assurances will be provided to CEMVN upon request and/or in monitoring reports.

The financial assurances shall guarantee payment to a third party, as determined appropriate by the CEMVN in consultation with the IRT, in the event that the Sponsor does not fulfill its obligations to perform, as specified in the MBI.

Payment to Sponsor, or a third party as identified by CEMVN, of a specified amount of the financial assurances shall be made upon written notification by CEMVN to the financial institution.

2. C&E Funding Mechanism

To fund this account the Sponsor proposes to establish a “Construction and Establishment Fund” escrow account. This account will be administered by a federally

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insured depository that is “well capitalized” or “adequately capitalized” as defined in Section 38 of the Federal Deposit Insurance Act.

3. C&E Release Schedule

The Financial assurances shall be reduced as success criteria are achieved and the probability decreases that those funds would be needed according to the following schedule:

1. Upon verification that all hydrologic modifications, construction, and planting as describe in this Mitigation Work Plan have been completed to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall advise the Sponsor and the financial institution that the C&E financial assurance may be reduced to \$87,547.47.
2. Upon verification by CEMVN, in consultation with the IRT, that the initial success criteria have been attained for all tracts to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall advise the Sponsor and the financial institution that the C&E financial that assurance may be reduced to \$81,632.
3. Upon verification by CEMVN, in consultation with the IRT, that the interim success criteria have been attained for all tracts to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall advise the Sponsor and the financial institution that the C&E financial assurance may be reduced to \$47,354.
4. Upon verification by CEMVN, in consultation with the IRT, that the long-term success criteria (for both BLH and Coastal Prairie) have been attained for all tracts to the satisfaction of CEMVN, in consultation with the IRT, CEMVN shall notify the Sponsor and the financial institution that the remaining C&E financial assurance may be released to the Sponsor.

B. Long Term Maintenance/Management Funds

To ensure the long-term sustainability of the resource, the Sponsor will continue monitoring efforts and maintenance as described in Section VII of this MWP. These include, but are not limited to, invasive species control, boundary maintenance, insurance of payment of property taxes, fire management, and continued monitoring.

1. Long-term Management Needs

To ensure that sufficient funds are available to provide for the perpetual maintenance and protection of the Bank, the Sponsor is establishing the “Long-Term Maintenance and Protection” escrow account. This account will be administered by a federally-insured depository that is "well-capitalized" or "adequately-capitalized" as defined in Section 38 of the Federal Deposit Insurance Act. The account will be incrementally funded through credit sales and shall contain a minimum balance of

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BLACK BAYOU MITIGATION BANK - ADDENDUM I

\$210,000.00 by the time 70% of the total number of credits are sold or upon successful achievement of the Interim Success Criteria, whichever occurs first. Any accrued interest shall be used in the operation, maintenance or other purpose directly benefitting the Bank. Only the interest accumulated may be withdrawn for this purpose. The principal shall not be used and shall remain as part of the Bank's assets to ensure that sufficient funds are available should perpetual maintenance responsibilities be assumed by a third party. The Sponsor or Long-term Steward may withdraw the accumulated interest only with written approval from CEMVN and may only be used to maintain the Bank. The Sponsor shall provide copies of depository account statements to CEMVN upon request and within monitoring reports.

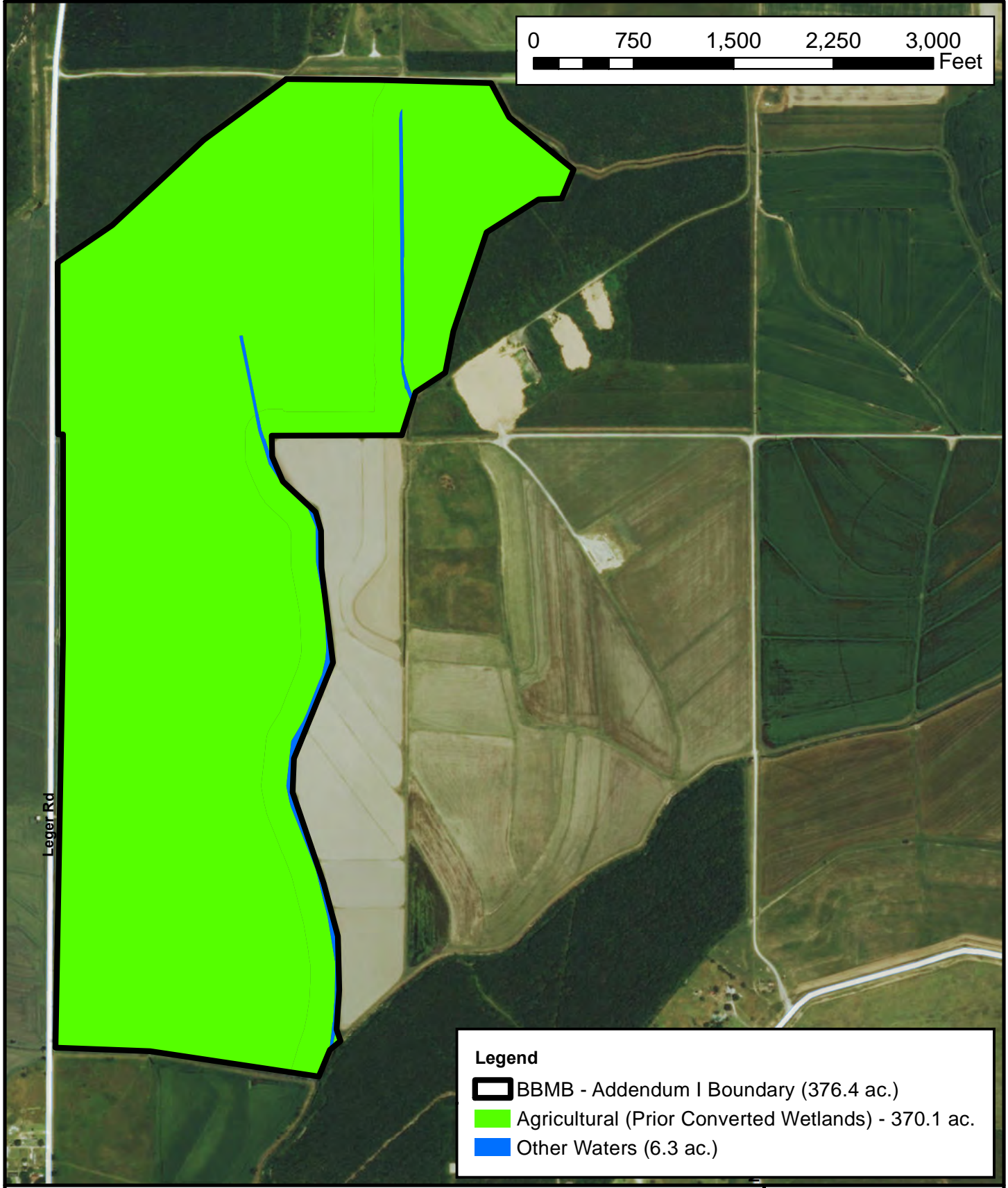
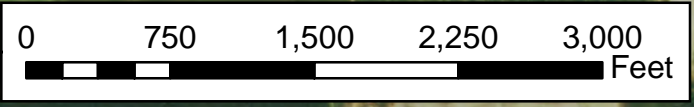
2. Annual Cost Estimates for Long-Term Needs

The cost of long-term management is \$99,057 from year 16 to year 50. This amounts to \$277,384 when adjusted for inflation every five years. Attachment MWP-CP-B contains a description of the necessary work and an itemization of costs to perform the work for long term management and protection of the Bank.




3. Long-Term Maintenance and Protection Funding Mechanism

To ensure that sufficient funds are available to provide for the perpetual maintenance and protection of the Bank, the Sponsor is establishing the "Long-Term Maintenance and Protection" escrow account. This account will be administered by a federally-insured depository that is "well capitalized" or "adequately capitalized" as defined in Section 38 of the Federal Deposit Insurance Act. The account will be incrementally funded by deposit a minimum of \$810.00 into the account per credit /acre sold at the time of credit sale. The deposit value per credit/acre must reflect, at a minimum, the total fund value divided by no more than 90% of anticipated credits. Once the account is fully funded (\$210,000), no incremental fund per credit sale is required. The account shall be fully funded by the time 70% of the total number of credits are sold or upon successful achievement of the Long-term Success Criteria, whichever occurs first. If the Long-Term Success Criteria are met prior to fully funding the escrow account then the Sponsor must deposit into the escrow account the difference between the amount determined to be full funding and the account balance difference between the amount determined to be full funding and the account balance. Documentation that the account is fully funded is a pre-requisite for release of the remaining credits following attainment of the Long-Term Success Criteria as identified in this Mitigation Work Plan. Accrued interest in excess of the value of the fully funded account may only be used for the administration, operation, maintenance and/or other purposed that directly benefit the Bank. The principal shall not be used and shall remain as part of the Bank's assets to ensure that sufficient funds are available should perpetual maintenance responsibilities be assumed by a third party. The Sponsor or Long-Term Steward may withdraw the accumulated interest only with written approval from CEMVN and only to be used to maintain the Bank. The Sponsor shall provide copies of depository account statements to CEMVN upon request and in their monitoring reports.

Attachment MWP-CP-A : Figures



Legend

-  BBMB - Addendum I Boundary (376.4 ac.)
-  Agricultural (Prior Converted Wetlands) - 370.1 ac.
-  Other Waters (6.3 ac.)

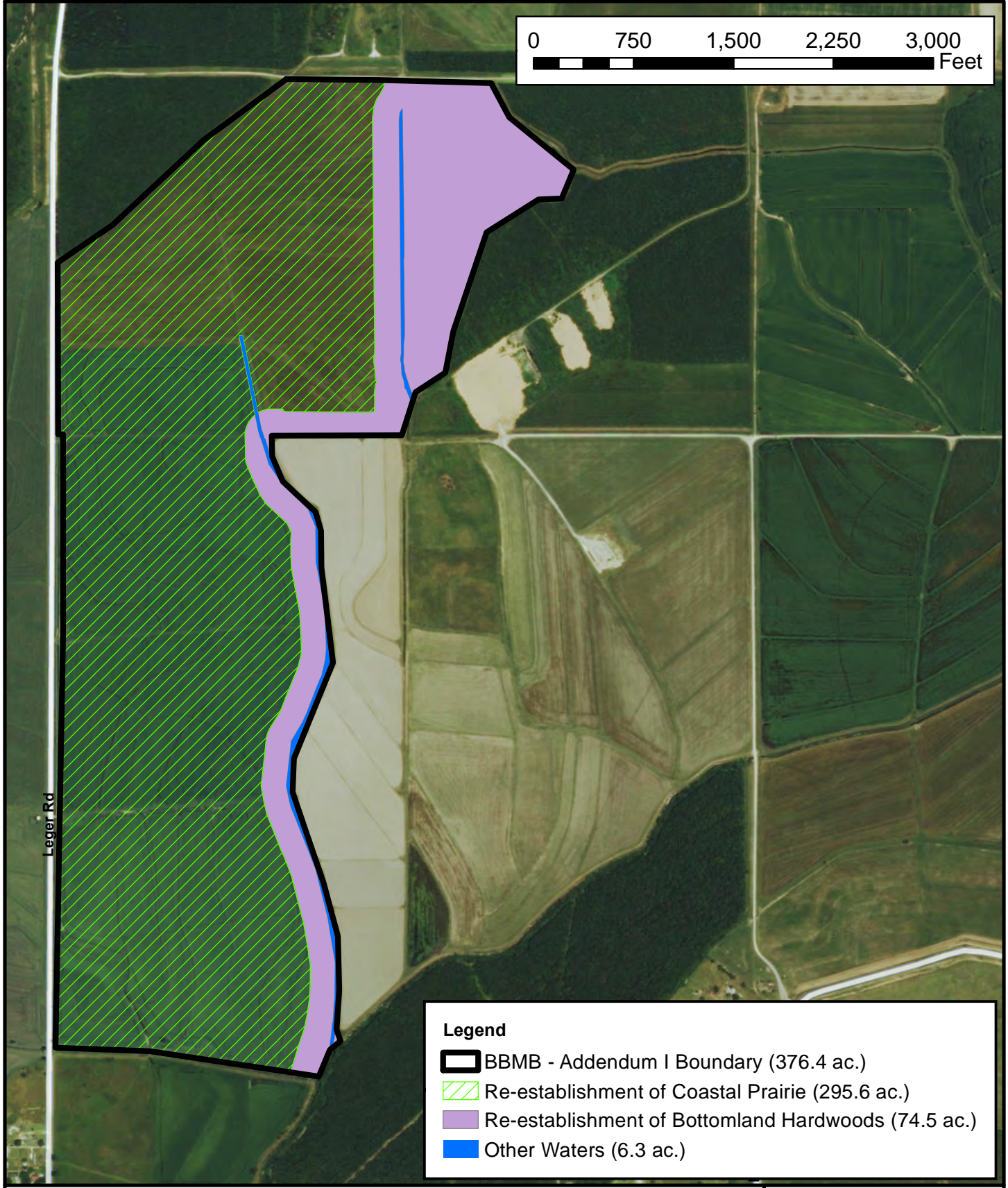
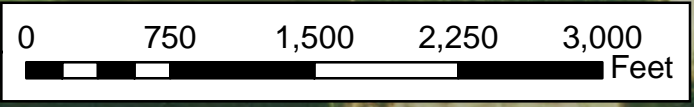


EXISTING CONDITIONS

Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish



Figure: C1
 Date: April 2016
 Scale: 1:12,000



Leger Rd

Legend

- BBMB - Addendum I Boundary (376.4 ac.)
- Re-establishment of Coastal Prairie (295.6 ac.)
- Re-establishment of Bottomland Hardwoods (74.5 ac.)
- Other Waters (6.3 ac.)

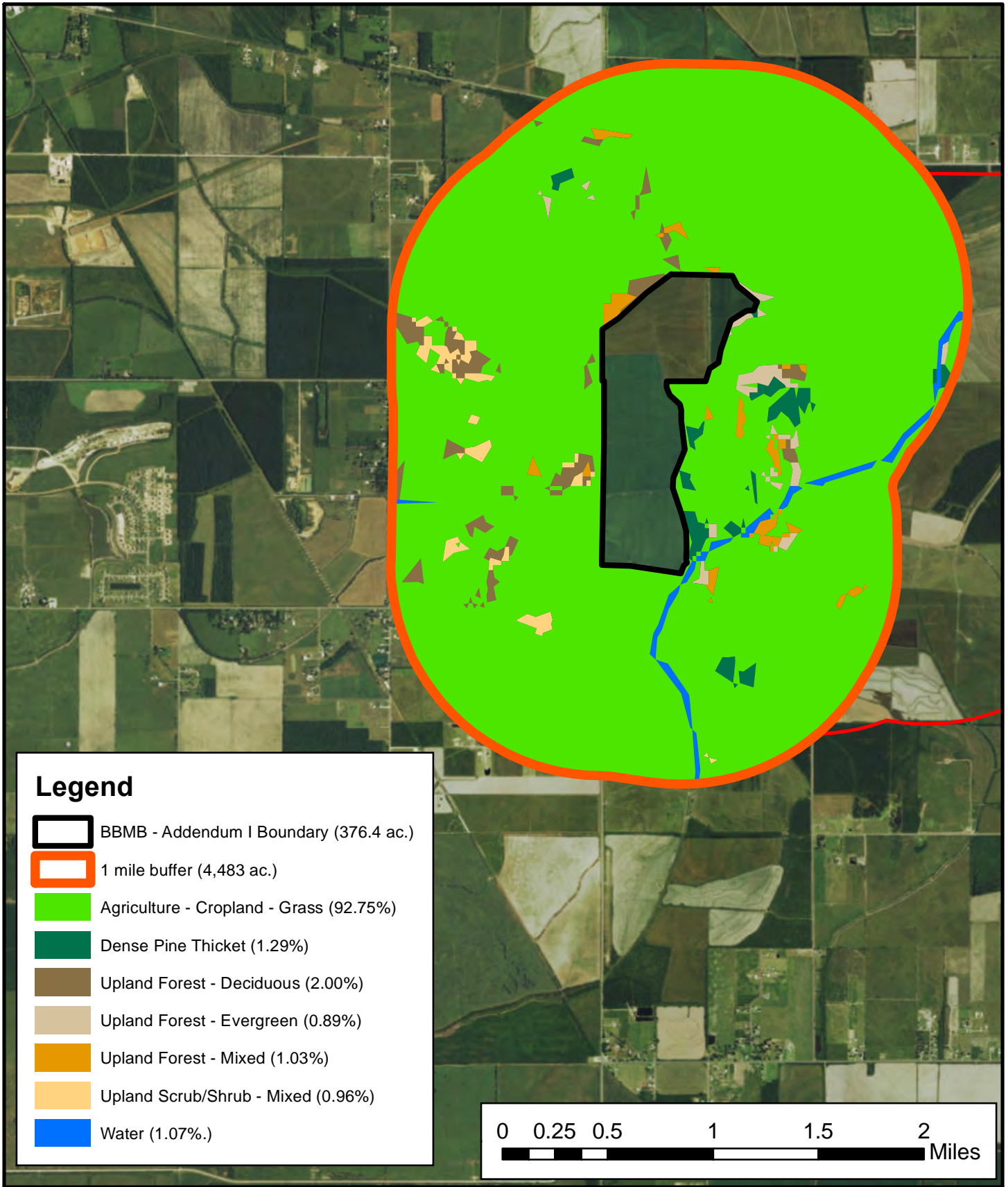


PROPOSED MITIGATION TYPES










Black Bayou Mitigation Bank - Addendum I
Calcasieu Parish

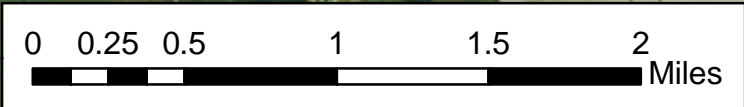


Figure: C2
Date: April 2016
Scale: 1:12,000



Legend

-  BBMB - Addendum I Boundary (376.4 ac.)
-  1 mile buffer (4,483 ac.)
-  Agriculture - Cropland - Grass (92.75%)
-  Dense Pine Thicket (1.29%)
-  Upland Forest - Deciduous (2.00%)
-  Upland Forest - Evergreen (0.89%)
-  Upland Forest - Mixed (1.03%)
-  Upland Scrub/Shrub - Mixed (0.96%)
-  Water (1.07%.)

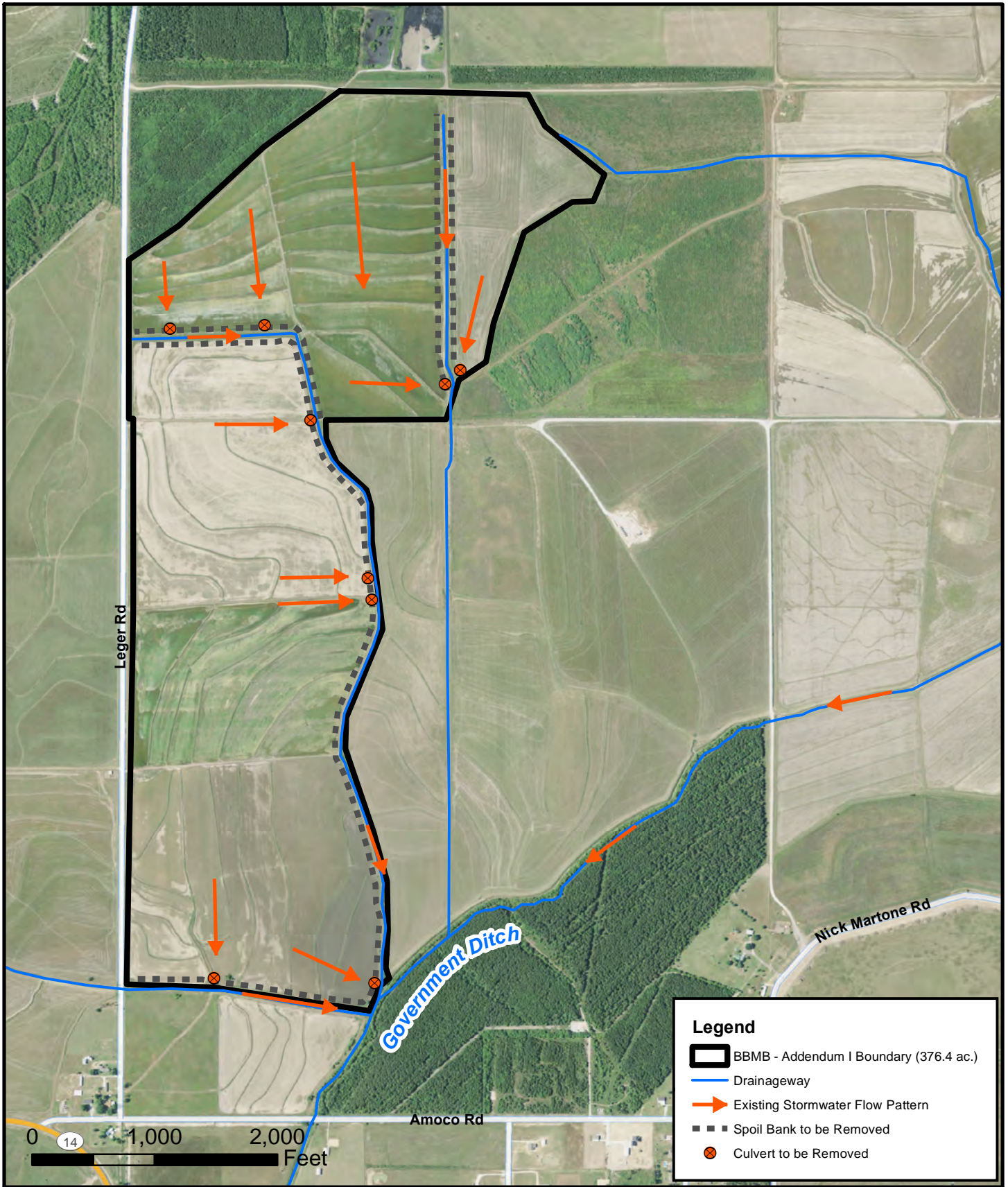


LAND USE/LAND COVER WITHIN 1 MILE BUFFER

Black Bayou
Calcasieu Parish



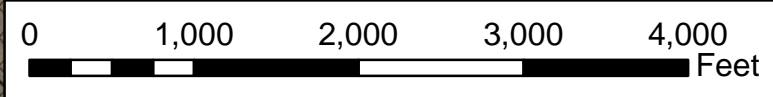
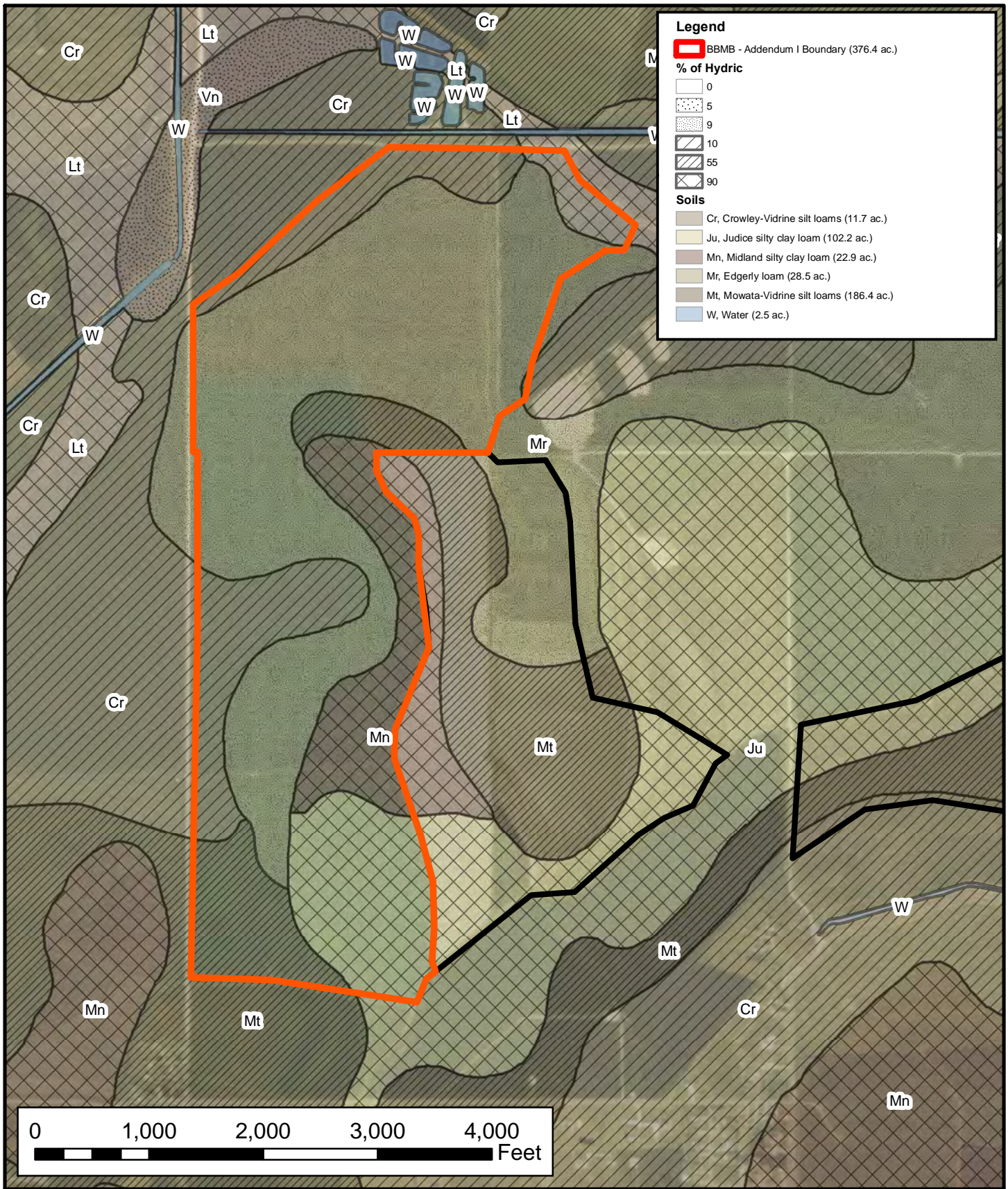
Figure: C3
Date: April 2016
Scale: 1:40,000



EXISTING DRAINAGE
 Black Bayou Mitigation Bank - Addendum I
 Calcasieu Parish



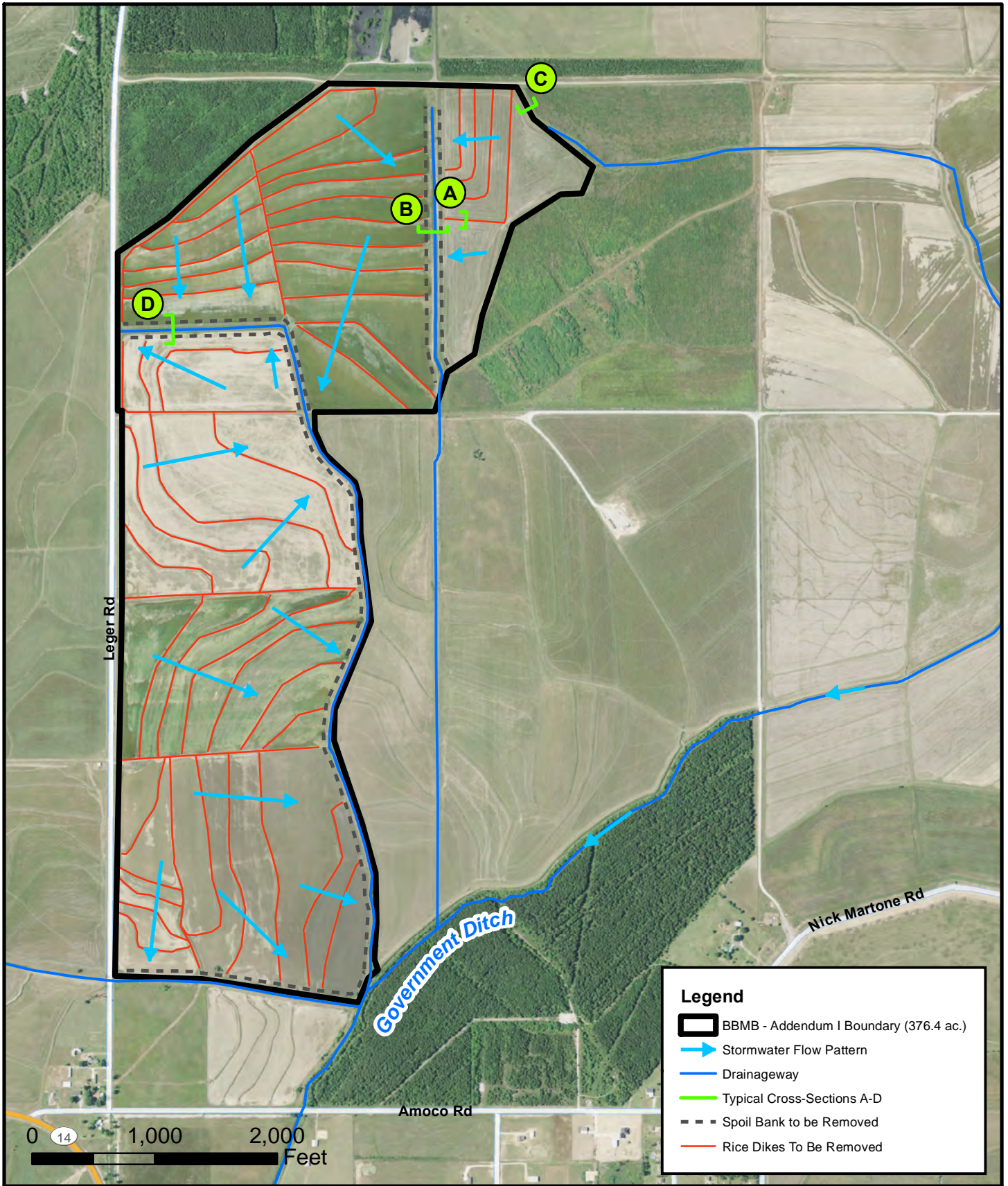
Figure: C4
 Date: May 2016
 Scale: 1:13,000



SOILS MAP
 Black Bayou Mitigation Bank - Addendum I
 Calcasieu Parish



Figure: C5
 Date: April 2016
 Scale: 1:14,000



Legend

- BBMB - Addendum I Boundary (376.4 ac.)
- Stormwater Flow Pattern
- Drainageway
- Typical Cross-Sections A-D
- Spoil Bank to be Removed
- Rice Dikes To Be Removed



PROPOSED DRAINAGE
 Black Bayou - Addendum I
 Calcasieu Parish

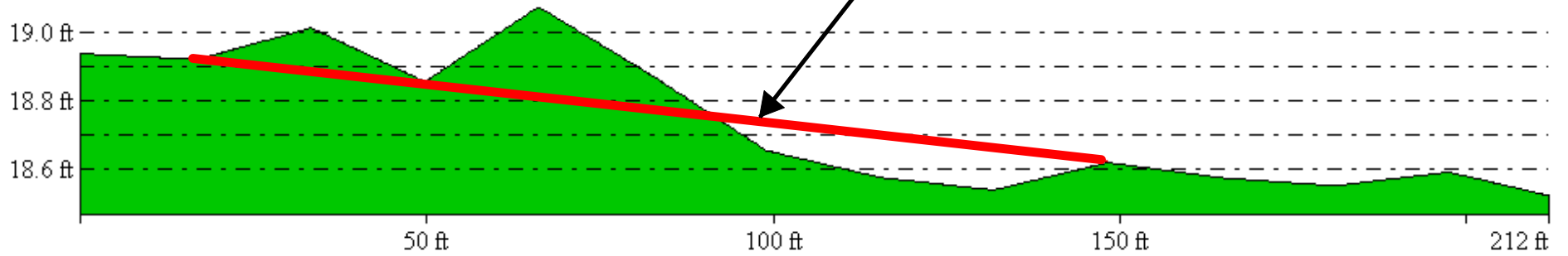
Figure: C6
 Date: May 2016
 Scale: 1:13,000

CROSS-SECTION A-A'

FINISHED GRADE

From Pos: 492871.182, 3338460.139

To Pos: 492871.182, 3338395.591

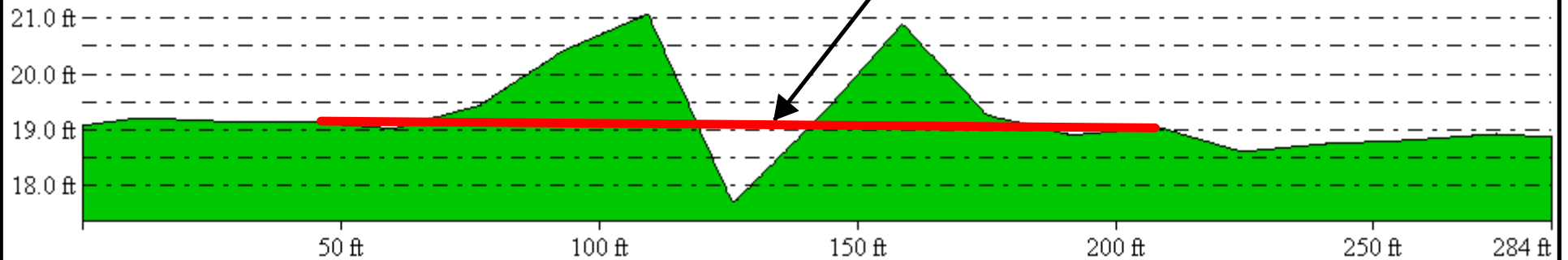


CROSS-SECTION B-B'

FINISHED GRADE

From Pos: 493031.630, 3338465.672

To Pos: 493118.309, 3338465.672



CROSS-SECTIONS A-A' & B-B'

Black Bayou - Addendum I
Calcasieu Parish



Figure: C1-6a

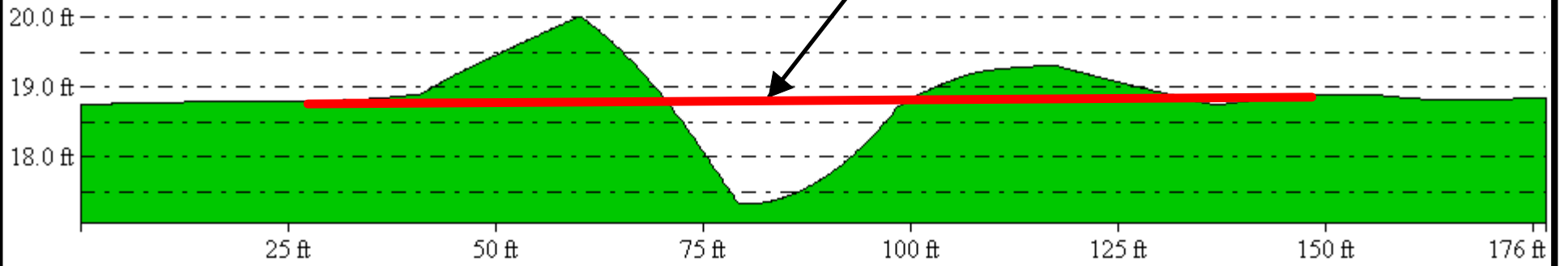
Date: June 2016

Scale: N/A

CROSS-SECTION C-C'

From Pos: 493284.291, 3338698.046

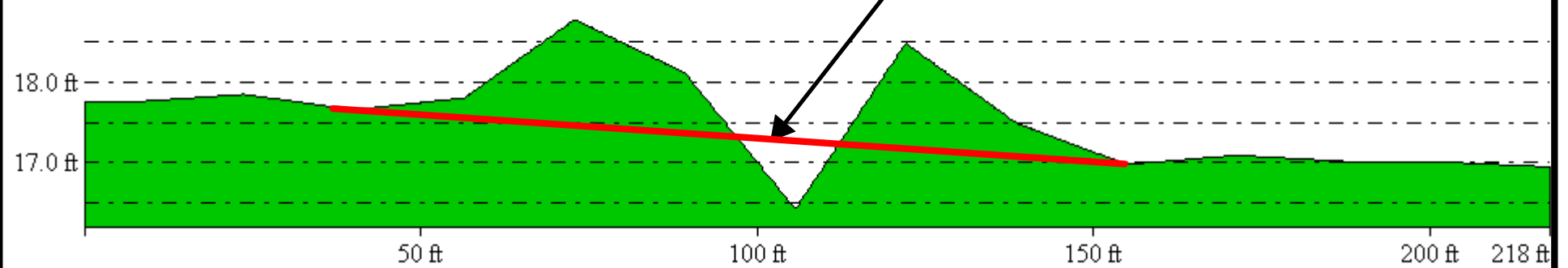
To Pos: 493330.396, 3338725.709



CROSS-SECTION D-D'

From Pos: 492391.681, 3338187.193

To Pos: 492391.681, 3338120.800



CROSS-SECTIONS C-C' & D-D'

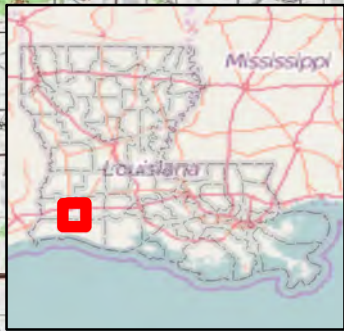
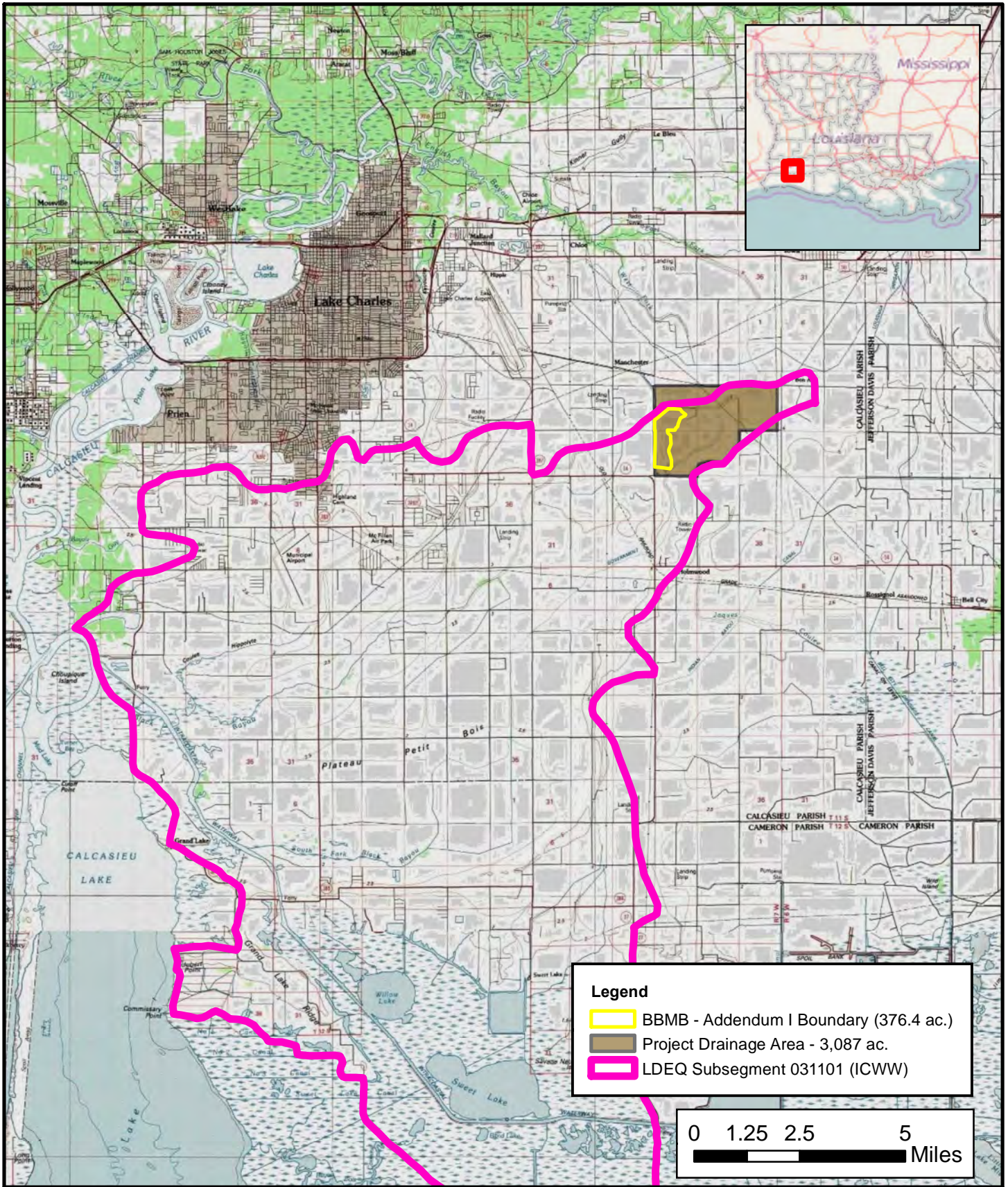
Black Bayou - Addendum I
Calcasieu Parish



Figure: C1-6b

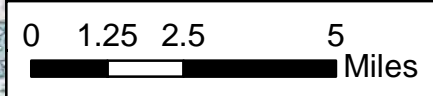
Date: June 2016

Scale: N/A



Legend

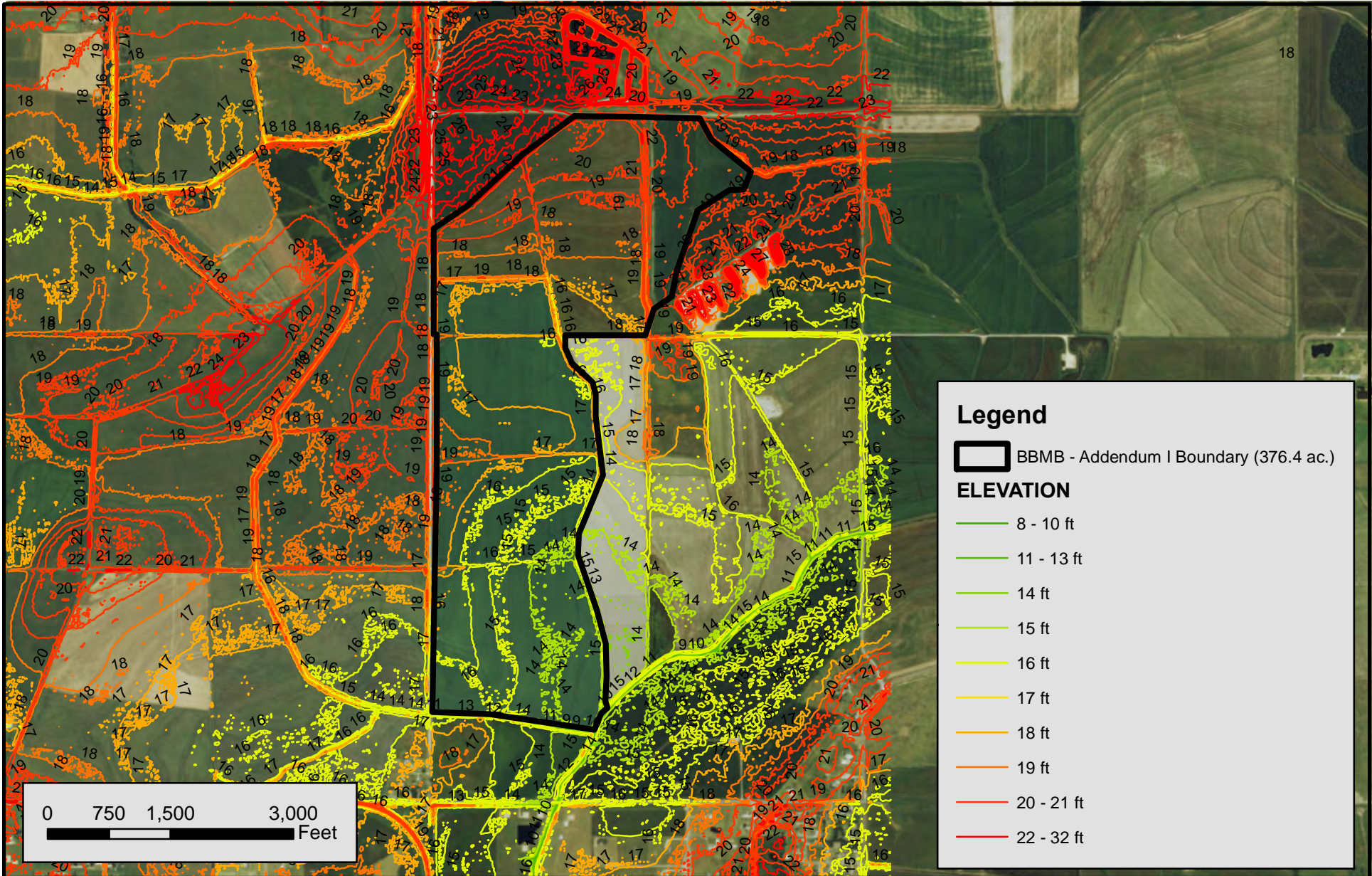
- BBMB - Addendum I Boundary (376.4 ac.)
- Project Drainage Area - 3,087 ac.
- LDEQ Subsegment 031101 (ICWW)



DRAINAGE AREA
 Black Bayou - Addendum I
 Calcasieu Parish



Figure: C7
 Date: May 2016
 Scale: 1:200,000



1-FT CONTOUR MAP

Black Bayou - Addendum I
Calcasieu Parish



Figure: C8

Date: June 2016

Scale: 1:20,000

Attachment MWP-CP-B : Cost Analysis Report

Financial Assurance for Black Bayou Mitigation Bank Addendum I	
Site Acreage (Conservation Servitude)	376.4
Planted Acreage BLH	74.5
Planted Acreage Coastal Prairie	295.6
Seedlings (Total)	40081
Perimeter Boundary Miles	4.00
Hydrology Work (Days)	10.00

Construction Item Cost	Unit	Unit Cost	Total Cost
Soil Preparation	Acre	\$25.00	\$ 9,252.50
Seedlings and Labor	Tree	\$0.65	\$ 26,052.65
Coastal Prairie Seed/Plug and Labor	Acre	\$225.00	\$ 66,510.00
Prescribed Burn Year 1	Acre	\$20.00	\$ 5,912.00
Broadcast Spraying	Acre	\$25.00	\$ 9,410.00
Hydrology Restoration	Day	\$950.00	\$ 9,500.00
Total			\$ 126,637.15

Establishment Item Cost	Unit	Unit Cost	Total Cost*
Taxes (Annually 15 years)	Yearly for 16 years	\$1,976.10	\$ 31,617.60
Invasive Species Control (Spot Treatment)	Acre	\$25.00	\$ 9,410.00
Prescribed Burn	3-5 Year Rotation	\$5,912.00	\$ 17,736.00
Mobilization	Yearly for 15 years	\$100.00	\$ 1,500.00
Monitoring (Initial Success/Vegetation)	Acre	\$25.00	\$ 1,862.50
Monitoring (Interim Success/Vegetation)	Acre	\$25.00	\$ 1,862.50
Monitoring (Interim Success/Hydrology)	Plot	\$1,000.00	\$ 10,000.00
Long-term Monitoring (10 years)	Yearly for 10 years (years 5-15)	\$100.00	\$ 1,000.00
Boundary Maintenance (15 years)	Mile	\$225.00	\$ 900.00
Total			\$ 75,888.60

Long-Term Fund Annual Costs Years 16-50		Unit Cost	Total Cost
Taxes (Annually)	Acre	\$5.25	\$ 1,976.10
Invasive Species Control (Spot Treatment) at 1%	Acre	\$25.00	\$ 94.10
Mobilization	Yearly	\$75.00	\$ 75.00
Account Maintenance and Misc	Yearly	\$325.00	\$ 325.00
10-Year Boundary Maintenance (Annualized)	Mile	\$900.00	\$ 360.00
Total			\$ 2,830.20

* Cost does not reflect inflationary adjustment

Financial Assurance (Construction Fund) Year 0			
Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Percent of Cost
		3.2%	
YEAR 0			
Soil Preparation	\$ 9,252.50	\$ 9,252.50	7%
BLH Planting (Material and Labor)	\$ 26,052.65	\$ 26,052.65	21%
CP Planting (Material and Labor)	\$ 66,510.00	\$ 66,510.00	53%
Prescribed Burn Year 1	\$ 5,912.00	\$ 5,912.00	5%
Broadcast Spraying	\$ 9,410.00	\$ 9,410.00	7%
Hydrology Restoration	\$ 9,500.00	\$ 9,500.00	8%
Total	\$ 126,637.15	\$ 126,637.15	100%
Total Per Acre	\$ 1,699.83	\$ 1,699.83	

Financial Assurance (Establishment Fund) Year 0 to Year 15			
Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Percent of Cost
		3.2%	
YEAR 0			
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 1			
Monitoring (Initial Success/Vegetation)	\$ 1,862.50	\$ 1,862.50	2.1%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
TOTAL - INITIAL SUCCESS CRITERIA BLH and CP¹	\$ 5,914.70	\$ 5,914.70	6.6%
YEAR 2			
Broadcast Spraying (50%)	\$ 4,705.00	\$ 4,705.00	5.4%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 3			
Monitoring (Interim Success/Hydrology)	\$ 10,000.00	\$ 10,000.00	11.4%
Prescribed Burn	\$ 5,912.00	\$ 5,912.00	6.8%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 4			
Broadcast Spraying (30%)	\$ 2,823.00	\$ 2,823.00	3.2%
Mobilization	\$ 100.00	\$ 100.00	0.1%
Taxes	\$ 1,976.10	\$ 1,976.10	2.3%
YEAR 5			
Monitoring (Interim Success/Vegetation)	\$ 1,862.50	\$ 2,180.19	2.5%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
TOTAL - INTERIM SUCCESS CRITERIA BLH²	\$ 33,606.90	\$ 34,278.72	31.9%
LONG-TERM SUCCESS CRITERIA CP			
YEAR 6			
Invasive Species Control (5%)	\$ 470.50	\$ 550.75	0.6%
Prescribed Burn	\$ 5,912.00	\$ 6,920.43	7.9%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 7			
Invasive Species Control (5%)	\$ 470.50	\$ 550.75	0.6%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 8			
Invasive Species Control (2%)	\$ 188.20	\$ 220.30	0.3%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 9			
Invasive Species Control (2%)	\$ 188.20	\$ 220.30	0.3%
Mobilization	\$ 100.00	\$ 117.06	0.1%
Taxes	\$ 1,976.10	\$ 2,313.17	2.6%
YEAR 10			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Long-term Monitoring	\$ 500.00	\$ 685.12	0.8%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
Boundary Maintenance	\$ 900.00	\$ 1,233.22	1.4%

Financial Assurance (Establishment Fund) Year 0 to Year 15			
Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Percent of Cost
		3.2%	
YEAR 11			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Prescribed Burn	\$ 5,912.00	\$ 8,100.87	9.3%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 12			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 13			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 14			
Invasive Species Control (1%)	\$ 94.10	\$ 128.94	0.1%
Mobilization	\$ 100.00	\$ 137.02	0.2%
Taxes	\$ 1,976.10	\$ 2,707.73	3.1%
YEAR 15			
Invasive Species Control (1%)	\$ 94.10	\$ 150.93	0.2%
Mobilization	\$ 100.00	\$ 160.40	0.2%
Long-term Monitoring	\$ 500.00	\$ 801.98	0.9%
Taxes	\$ 1,976.10	\$ 3,169.60	3.6%
TOTAL - YEAR 15 (CANOPY COVER≥80%)³	\$ 36,367.00	\$ 47,354.05	53.8%
Total	\$ 75,888.60	\$ 87,547.47	94.5%
Total Per Acre	\$ 211.70	\$ 244.22	

¹The total shown for "Initial Success Criteria" includes costs estimated to occur during Year 0 - Year 1.

²The total shown for "Interim Success Criteria" includes costs estimated to occur during Year 2 - Year 5.

³The total shown for "Year 15 (Canopy Cover≥80%)" includes costs estimated to occur during Year 6 - Year 15.

Long-Term Maintenance and Protection Fund anticipated to Year 16 to Year 50 for Mitigation Bank

Time (Year)	Item	Total Cost at Year 0	Inflation Rate		Total		Per Acre*		Return
			3.20%		\$ 210,000.00		\$ 810.59		4.20%
			5-Year Inflationary Adjustment		Escrow Account Activity		Investment Acc't Balance		Investment Earning
15		\$ -	\$ -	\$ -	\$ 210,000.00	\$ 210,000.00	\$ -		
16	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ 214,135.19	\$ 214,135.19	\$ 8,820.00		
17	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ 218,444.05	\$ 218,444.05	\$ 8,993.68		
18	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ 222,933.89	\$ 222,933.89	\$ 9,174.65		
19	Annual Cost 16-50	\$ 2,830.20	\$ 4,684.81	\$ (4,684.81)	\$ 227,612.30	\$ 227,612.30	\$ 9,363.22		
20	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ 231,858.14	\$ 231,858.14	\$ 9,559.72		
21	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ 236,282.31	\$ 236,282.31	\$ 9,738.04		
22	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ 240,892.30	\$ 240,892.30	\$ 9,923.86		
23	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ 245,695.90	\$ 245,695.90	\$ 10,117.48		
24	Annual Cost 16-50	\$ 2,830.20	\$ 5,313.87	\$ (5,313.87)	\$ 250,701.26	\$ 250,701.26	\$ 10,319.23		
25	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ 255,010.44	\$ 255,010.44	\$ 10,529.45		
26	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ 259,500.60	\$ 259,500.60	\$ 10,710.44		
27	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ 264,179.35	\$ 264,179.35	\$ 10,899.03		
28	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ 269,054.61	\$ 269,054.61	\$ 11,095.53		
29	Annual Cost 16-50	\$ 2,830.20	\$ 6,220.27	\$ (6,220.27)	\$ 274,134.63	\$ 274,134.63	\$ 11,300.29		
30	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ 278,367.00	\$ 278,367.00	\$ 11,513.65		
31	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ 282,777.13	\$ 282,777.13	\$ 11,691.41		
32	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ 287,372.48	\$ 287,372.48	\$ 11,876.64		
33	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ 292,160.84	\$ 292,160.84	\$ 12,069.64		
34	Annual Cost 16-50	\$ 2,830.20	\$ 7,281.29	\$ (7,281.29)	\$ 297,150.31	\$ 297,150.31	\$ 12,270.76		
35	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ 301,107.35	\$ 301,107.35	\$ 12,480.31		
36	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ 305,230.58	\$ 305,230.58	\$ 12,646.51		
37	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ 309,526.99	\$ 309,526.99	\$ 12,819.68		
38	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ 314,003.85	\$ 314,003.85	\$ 13,000.13		
39	Annual Cost 16-50	\$ 2,830.20	\$ 8,523.28	\$ (8,523.28)	\$ 318,668.73	\$ 318,668.73	\$ 13,188.16		
40	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ 322,075.70	\$ 322,075.70	\$ 13,384.09		
41	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ 325,625.77	\$ 325,625.77	\$ 13,527.18		
42	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ 329,324.93	\$ 329,324.93	\$ 13,676.28		
43	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ 333,179.47	\$ 333,179.47	\$ 13,831.65		
44	Annual Cost 16-50	\$ 2,830.20	\$ 9,977.12	\$ (9,977.12)	\$ 337,195.89	\$ 337,195.89	\$ 13,993.54		
45	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ 339,679.17	\$ 339,679.17	\$ 14,162.23		
46	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ 342,266.76	\$ 342,266.76	\$ 14,266.53		
47	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ 344,963.02	\$ 344,963.02	\$ 14,375.20		
48	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ 347,772.52	\$ 347,772.52	\$ 14,488.45		
49	Annual Cost 16-50	\$ 2,830.20	\$ 11,678.94	\$ (11,678.94)	\$ 350,700.03	\$ 350,700.03	\$ 14,606.45		
50	Annual Cost 16-50	\$ 2,830.20	\$ 13,671.05	\$ (13,671.05)	\$ 351,758.37	\$ 351,758.37	\$ 14,729.40		
		\$ 99,057.00	\$ 277,384.13						

* Per the provisions outlined in Section X.C of the Mitigation Work Plan.