# JOINT PUBLIC NOTICE

April 27, 2015

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

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

(225) 219-3225/FAX (225) 325-8250 Elizabeth.Hill@la.gov Project Manager Elizabeth Hill WQC Application Number WQC # 150414-03

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).

## ASH SLOUGH ADDENDUM ONE MITIGATION BANK IN EAST BATON ROUGE PARISH

NAME OF APPLICANT: A.S.H Mitigation Bank, LLC c/o Pangaea Conservation and Compliance LLC, Attn: Leonard McCauley, P.O. Box 2171, Denham Springs, LA 70727

**LOCATION OF WORK**: The 123.9 acre site is located approximately two miles south of Baker, Louisiana, in East Baton Rouge Parish, on Rafe Meyer Road, as shown on enclosed drawings (Latitude: 30.574058 N, Longitude:–91.193675W). The Project is located within the Bayou Sara-Thompson Creek Hydrologic Unit 08070201.

**CHARACTER OF WORK**: Degrade spoil banks and redistribute material for the purpose of enhancing and restoring traditional surface hydrology to the site for the construction of a mitigation bank. The proposed restoration will re-establish 24.4 acres, rehabilitate 4.2 acres and enhance 13.4 acres of bottomland hardwoods. In addition to the restoration acreage 21.3 acres of hydric inclusions and 34.8 acres of non-hydric inclusions will be included in the conservation servitude for the proposed bank.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close <u>30 days</u> 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, <u>ATTENTION: REGULATORY BRANCH</u>. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.

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

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

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

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

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

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

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

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

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

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

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

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

Martin S. Mayer Chief, Regulatory Branch

**Enclosure** 

# **Contents**

I. Bank Property Location	3
II. Objective	
A. Aquatic Resource Type and Functions to be Restored/Enhanced/Preserved	4
B. Watershed Contributions	5
III. Site Selection	6
IV. Site Protection Instrument	7
V. Baseline Information	7
A. Land Use	
B. Soils	7
C. Hydrology	8
D. Vegetation	
VI. Description of Work	
A. Soils Hydrologic Work Plan	
B. Vegetation	
VII. Maintenance Plan	
VIII. Performance Standards	
A. Initial Success Criteria	13
B. Interim Success Criteria	13
C. Long-Term Success Criteria	
IX. Monitoring Requirements	
A. Permanent circular monitoring stations	
B. Transects	
C. Soil Profile	16
D. Floristic Survey	16
E. Photographs	
F. Qualitative Analysis	
G. Hydrologic Conditions	
H. Ledgers	
X. Monitoring Reports	
A. As-Built Report	
B. Initial Success Criteria Report	
C. Interim Success Criteria Report	
D. Long Term Success Criteria Report	
XI. Bank Credits	
A. Credit Determination	22
B. Schedule of Credit Availability	
XII. Adaptive management plan	
XIII. Long Term Protection and Maintenance	
XIV. Funding	
A. Construction and Establishment (C&E) Funds	
B. Long Term Maintenance/Management Funds	
XV. Other Information	

Attachment MWP-A-Figures Attachment MWP-B-Cost Analysis Report

#### MITIGATION WORK PLAN FOR BOTTOMLAND HARDWOOD HABITAT

#### I. Bank Property Location

The center point of the property is located at Latitude 30.574058 N and Longitude -91.193675 W, approximately 2.0 miles south of Baker, Louisiana in East Baton Rouge Parish. The property is located in the Hydrologic Unit Code (HUC) 08070201 (Bayou Sara – Thompson Watershed).

Driving directions to the site are as follows: From the intersection of Interstate 10 and Interstate 110, drive north on Interstate 110 toward Baker for approximately 7.5 miles; take Exit 8A toward Baker (north) onto Louisiana Highway 19 North (Scotland Avenue); proceed north for approximately 2.1 miles; turn left (west) on to Rafe Meyer Road; proceed for approximately 0.5 miles; and the property will be on the right (see MBI Attachment A, Figures 1-2).

#### II. Objective

A.S.H. Mitigation Bank, LLC (Owner), as the owner in fee title, will record a conservation servitude for 123.95 acres. A.S.H. Mitigation Bank, LLC (Sponsor) will implement mitigation improvements, including re-establishment (24.4 acres), rehabilitation (4.2 acres), and enhancement (13.4 acres), for a total of 42.0 acres of bottomland hardwoods at the Bank (Figures C1-C2 and Tables 1-2). The goal of the Ash Slough Headwaters Mitigation Bank Addendum I (ASHMB I) is to restore a 110.8-acre bottomland hardwood (BLH) wetland community as a species diverse, sustainable ecosystem by restoring natural hydrology, surface topography, and vegetative communities at the Bank site, and to implement performance standards, monitoring protocols, and remedial actions as described in this Mitigation Work Plan to ensure the Bank success. In addition to the 42.0 acres of restored wetlands, the Bank also includes 21.3 acres of hydric inclusions and 34.8 acres of non-hydric inclusions.

Table 1. Current Habitat Types and Land Use

Habitat Type	Land Use	Acreage
Agricultural Wetlands	Agricultural	48.3
Forested Wetlands	Recreational	50.1
ROW	-	12.4
Total		110.8

**Table 2. Mitigation Bank Habitat Types** 

Habitat Type	Acreage	Mitigation Type
Bottomland Hardwood	24.4	Re-establishment I
Bottomland Hardwood	4.2	Rehabilitation I
Bottomland Hardwood	13.4	Enhancement I
Bottomland Hardwood	21.3	Hydric inclusion
Uplands	34.8	Non-hydric inclusion
Non-wetland	12.7	Non-mitigation
Total	110.8	
Total Mitigation and Inclusions	98.1	

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

The Sponsor will restore and maintain 42.0 acres of BLH habitat in compliance with the provisions of this MBI. Restoration will consist of re-establishment, rehabilitation, and enhancement (Figure 4). The restoration of BLH habitat at the Bank will require that the Sponsor plant those areas which were previously cleared for agricultural and silvicultural purposes and which are currently in agricultural use. The Bank also includes 56.1 acres of hydric and non-hydric inclusions. The remaining 12.7 acres of non-mitigation features will consist of ROW. Table 2 identifies resource types (Louisiana Natural Heritage Program descriptions) and acreages to be restored, along with method of compensation (i.e., re-establishment, rehabilitation, and enhancement, etc.).

The following is a description of the natural resource types:

- Forested, alluvial wetlands occupying broad floodplain areas flanking large river systems,
- Maintained by a natural hydrologic regime of alternating wet and dry periods that follow seasonal flooding events,
- Provide important ecosystem functions including maintenance of water quality, providing productive habitat for a variety of fish and wildlife species, and regulation of flooding and stream recharge,
- Soils are alluvial deposits, heavy clays to silty clays, high in organic matter and nutrients,
- Dominant forest species can be aggregated into specific associations based on environmental factors such as physiography, topography, hydric soils, and hydrologic regimes, and
- Vegetation associations are typically mixtures of broadleaf deciduous, needle leaf deciduous and evergreen trees and shrubs.

Due to hydrologic modification of the natural drainage patterns, Bank lands are currently hydrologically impaired due to drainage swales. Water which would have naturally sheetflowed across Bank lands is currently conveyed to Ash Slough via drainage swales (Figure C3).

Restoration efforts will include re-establishing a more natural hydrologic regime for the Bank lands. The filling of drainage swales will restore sheetflow across the property (Figures C4 and C4a-b). Water that is currently flowing through drainage swales will be allowed to sheetflow across the site and into Ash Slough, as it did historically.

Reforestation efforts associated with re-establishment, rehabilitation, and enhancement will utilize one-year old seedlings (acquired from nurseries utilizing stock grown from local seed sources) which are representative of a species assemblage historically common to bottomlands hardwoods of the area. This species assemblage is identified in *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. Trees of these species which are commercially available will be utilized. Table 3 identifies the species assemblage to be planted.

#### **B.** Watershed Contributions

#### 1. Watershed Need

The ASHMB I site is located in the Bayou Sara-Thompson Creek watershed, specifically within the drainage area of the headwaters of Ash Slough.

Through these improvements, the Bank will be capable of sustaining wetland functions, values, and services in accordance with an IRT-approved plan and this MBI. The functional benefit to the Bayou Sara-Thompson Creek watershed will include an increase in the quantity and quality of BLH habitat for resident and migratory wildlife and the conversion of the Bank to a more natural ecosystem. In the future, and as more commercial, industrial and residential development occurs in the vicinity, the Bank will provide an increased functional value with respect to the reduction of flooding and the reduction of point source pollution within the watershed.

#### 2. Watershed Benefits

The Bank will also benefit the Bayou Sara-Thompson Creek watershed through the retention of surface water runoff, stream flow maintenance, nutrient cycling, aquatic productivity, improved plant and wildlife habitat, and the reduction of non-point source pollution (nutrients and suspended solids) originating from agricultural activities.

The restoration work will increase the wetland functions over that currently performed by the Bank in its current condition. The Sponsor would offer the credits produced from this lift as compensation for wetland losses resulting from work authorized by Department of the Army (DA) permits.

#### III. Site Selection

This site was selected based on its proximity and direct connectivity to existing water resources. Additionally, this site was historically bottomland hardwood, but was hydrologically disconnected from natural hydrological patterns due to the construction of drainage features.

The goal of this Bank is to remove the site from agricultural use and to restore 42 acres (re-establish 24.4 acres, rehabilitate 4.2 acres, and enhance 13.4 acres) of pasture to a high-quality, self-sustaining bottomland hardwood forested wetland ecosystem that exhibits natural species composition and supports a wildlife habitat typical of healthy bottomland hardwoods. The restoration and protection of BLH ecosystems will be accomplished through the restoration of agricultural land underlain by hydric soils and hydrological restoration.

Establishment of this Bank will include an increase in the quantity and quality of BLH habitat for resident wildlife and the conversion of the site to a more natural ecosystem. The majority of adjacent lands are currently used for agriculture, residential, and commercial purposes; therefore, this Bank will establish a refuge for wildlife.

The quality of downstream receiving waters (Subsegment LA040103 – Comite River-entrance of White Bayou to Amite River) has previously been identified by the Louisiana Department of Environmental Quality (LDEQ) as being impaired for Primary Contact Recreation (PCR) use due to fecal coliform, with suspected sources of impairment listed as onsite treatment (septic) systems and sanitary sewer overflows (collection system failures). A Total Maximum Daily Load (TMDL) was completed for Subsegment LA040103 for fecal coliforms on March 28, 2012. The cessation of agricultural activities along with removal of drainage swales, degrading access roads, and planting of trees 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).

#### 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

ASHMB I lands were historically bottomland hardwoods, which were cleared for silvicultural and agricultural use prior to 1970. This is confirmed by aerial photography maintained by CEMVN. According to the landowner, the site has been used for agricultural activities (currently cattle grazing and hay production) only for over 60 years.

#### 2. Current Land Use

Bank lands are currently in agricultural use as pasture. Adjacent land use is predominately agricultural and residential (Figure C5).

#### B. Soils

The soil types present at the Bank, as identified in the East Baton Rouge Parish Soil Survey, include:

- Frost silt loams, occasionally flooded (FrA and FoA)

   zero to one percent slopes (approximately 20 percent of Bank area);
- Oprairie silts (OpA) zero to three percent slopes (approximately 10 percent of Bank area);
- Deerford-Verdun complex (DaA) zero to two percent slopes (approximately 30 percent of Bank area); and
- Jeanerette silt loam (JeA) zero to one percent slopes (approximately 40 percent of Bank area).

Frost silt loam soils are poorly drained and slowly permeable soils found on broad flats and depressions. Oprairie silt loams are somewhat poorly drained and slowly permeable soils found throughout the parish. Deerford-Verdun complexes are somewhat poorly drained and very slowly permeable soils covering two-thirds of the parish.

Field investigations and a wetland delineation conducted in 2014 confirmed these soil types, along with hydric indicators. Figure C6 presents the current soil types within the project area.

Hydric soils indicate that the site is inundated or saturated for at least 14 consecutive days per year. During the months of December to April: Frost silt loam soils typically have a water table between the surface and 1.5 feet below the surface and Oprairie silts typically have a water table between 1.0 and 2.0 feet below the surface.

Agricultural use of this property in the past has likely modified soils through the loss of organic material due to traditional cultivation, loss of biomass and leaf litter, and increased runoff.

## C. Hydrology

1. Historical Hydrology and Drainage Patterns

Prior to the construction of drainage swales, surface water on the site was able to pond in depressions or sheetflow across the site into Ash Slough.

2. Existing Hydrology and Drainage Patterns

The ASHMB I site is located in the Bayou Sara – Thompson Creek watershed. The site is currently in agricultural use as livestock pasture and utilized for hay production. The headwaters of Ash Slough are located at the northeastern corner of the site, with Ash Slough generally flowing through the property toward the southeast (to Cypress Bayou and thence to the Comite River). An unnamed drainageway passes through the center of the property and connects to Ash Slough near the northeast corner of the site.

Water which would have naturally sheetflowed across Bank lands is currently conveyed to Ash Slough by drainage swales. Current and proposed drainage patterns are depicted on Figures C3 and C4.

CEMVN issued jurisdictional determination # MVN-2014-00915-SK for the Bank on July 7, 2014, which concluded that the Bank is comprised of approximately:

Section 404 Wetlands: 28.24 acres,Non-Wetlands: 81.94 acres, and

• Open water: 0.61 acres.

#### D. Vegetation

#### 1. Historical Plant Community

Plant species which were likely present on the site historically (based on existing forested areas which have persisted since the 1940's) include:

- Cherrybark Oak (Quercus pagoda Raf.)
- Laurel oak (Quercus laurifolia Michx.)
- Willow Oak (Quercus phellos L.)
- Nuttall Oak (Quercus texana Buckley)
- Water Oak (Quercus nigra L.)
- Drummond Red Maple (*Acer rubrum* L. var. *drummondii* (Hook. & Arn. ex Nutt.) Sarg.)
- American Elm (*Ulmus americana* L.)
- Sweetgum (Liquidambar styraciflua L.)
- Baldcypress (*Taxodium distichum* (L.) Rich.)
- Green Ash (Fraxinus pennsylvanica Marsh.)

#### 2. Existing Plant Community

Dominate vegetation within forested areas are laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*), slippery elm (*Ulmus rubra*), honey locust (*Gleditsia triacanthos*), water hickory (*Carya Aquatica*), sugarberry (*Celtis laevigata*), and Chinese tallow (*Triadica sebifera*).

Dominate vegetation within cleared agricultural areas consists of bahiagrass (*Paspalum notatum*), leathery rush (*Juncus coriaceus*), and common rush (*Juncus effusus*).

#### **VI. Description of Work**

This Bank will provide 42.0 acres of bottomland hardwood forest to compensate for unavoidable wetland impacts for the Bayou Sara – Thompson Creek watershed area. In order to accomplish this task, the Sponsor shall complete the following soils/hydrologic and habitat work.

#### A. Soils/Hydrologic Work Plan

Hydrologic restoration will consist of the restoration of natural surface flow and stream flow on the Bank in a manner that mimics natural hydrology observable at undisturbed bottomland hardwood forests.

#### **Drainage Swales:**

Currently, precipitation runoff is conveyed to Ash Slough via drainage swales. Removal of these features will contribute to the ability of runoff on-site to sheetflow across the site re-establishing a more natural regime.

Spoil bank material excavated during the construction of the drainage swales will be used to fill all drainage swales to natural grade. Figure C4 presents the location of drainage swales to be removed.

The Sponsor will implement temporary seeding for stabilization of bare soils as needed during Bank establishment/construction.

## B. Vegetation

The site will be reforested with an assemblage of species tailored to mimic native bottomland hardwood forests in this area. Table 3 identifies the species assemblage to be planted. Species will be planted in a random mixture as dictated by terrain and by edaphic conditions. Single species row plantings will be avoided.

Species assemblages to be planted are representative of species assemblages historically common to surrounding bottomland hardwood forests of the area. For verification, the identified assemblages were cross-referenced with those identified in East Baton Rouge Parish in the USDA/NRCS PLANTS online database. Reference sites were found to be consistent with bottomland hardwood forests described in *The Natural Communities of Louisiana* (Louisiana Natural Heritage Program, August 2009, available at: http://www.wlf.louisiana.gov).

Table 3. Species Assemblages to be Planted

Scientific Name	Common Name (USDA)	Observed on site	Recorded In East Baton Rouge Parish (USDA)	Wetland Indicator Status Region 2 (USDA)	Percent Composition
Bottomland Hardwood					
Quercus nigra L.	Water oak	Yes	Yes	FAC	15%
Quercus pagoda Raf.	Cherrybark oak	Yes	Yes	FAC+	10%
Quercus texana Buckley	Nuttall oak	No	Yes	FACW	10%
Quercus phellos L.	Willow oak	Yes	Yes	FACW-	10%
Quercus laurifolia Michx.	Laurel oak	Yes	Yes	FACW	10%
Quercus michauxii Nutt.	Swamp chestnut oak	Yes	Yes	FACW	10%
Liquidambar styraciflua L.	Sweetgum	Yes	Yes	FAC+	5%

Celtis laevigata.Willd.	Sugarberry	Yes	Yes	FACW	5%
Ulmus americana L.	American elm	Yes	Yes	FACW	5%
Acer rubrum L. var. drummondii (Hook. & Arn. Ex Nutt.) Sarg.	Drummond's maple	Yes	Yes	OBL	5%
Carya aquatica (Michx.) Nutt.	Water hickory	Yes	Yes	OBL	5%
Taxodium distichum (L.) Rich.	Bald Cypress	No	Yes	OBL	5%
Fraxinus pennsylvanica Marsh.	Green ash	No	Yes	FACW	5%

## Re-establishment and Rehabilitation Areas:

For those 28.6 acres of non-wetland and wetland agricultural pastures and cleared wetland pasture which are proposed for as re-establishment and rehabilitation, an appropriate combination of hard and soft mast producing bare-root stock will be planted.

Vegetative plantings will be used to restore natural vegetation throughout the property. One year old bare-root seedlings obtained from a registered, licensed regional nursery, and of regional eco-type species properly stored and handled to ensure viability, will be planted during the period November through March (planting season). Events such as spring flooding may warrant temporary storage of the seedlings and delay of planting until late spring or early summer. If listed seedling species are not available, substitutions may be made if the substitutions are approved by the IRT. The anticipated schedule for planting is the non-growing season of 2015-2016.

Proposed planting spacing in areas designated as re-establishment and rehabilitation will be 9'x 9' (for an initial density of 538 trees per acre) of bare-root stock. Hard mast species will be planted so that they comprise not less than 50 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 planting success 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.

#### **Enhancement Areas:**

Those 13.4 acres of the Bank which are designated as enhancement are currently forested with a mix of native and invasive species and grazed by cattle. The Sponsor will remove the site from agricultural use, remove/control invasive species, enhance wetland hydrology, and provide supplemental planting of bare-root stock. Invasive species within enhancement areas will be removed and stumps will be treated with herbicide. The existing canopy will be assessed with respect to hard to soft mast ratios,

and trees will be removed as needed. Bare-root stock will be planted to replace those trees removed and in order to achieve a hard mast percentage of at least 50% but not more than 70%.

#### **Invasive Species Control:**

Planted areas will be maintained, on an as-needed basis, by the use of mechanical or chemical control or some combination thereof in order to control noxious/exotic species colonization and competition from other plants.

The Sponsor will eradicate Chinese tallow tree and any other existing noxious/exotic vegetation on the site by all necessary physical, chemical, or mechanical means on the Bank. 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.

#### 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. <u>Hydrology:</u> 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.
- 2. <u>Vegetation</u>: 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. <u>Hydrology</u>: 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 that 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 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 Years 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 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 1/20<sup>th</sup> 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 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.

#### 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 31<sup>st</sup> 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 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.

#### 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 31<sup>st</sup> 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 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.

#### 4. Qualitative Analysis

The Sponsor must provide a qualitative analysis of the site as described in 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 31<sup>st</sup> 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 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

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 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.

#### 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 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.

#### 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 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

Credits in the Bank were determined using an approved method put forth by CEMVN prior to Bank approval. Results will be included as Attachment MWP-B. In addition, CEMVN may also use best professional judgment in the determination of such credits.

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

## XIV. Funding

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

## 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 C of this Mitigation Work Plan. These costs have been estimated by identifying costs (based upon mitigation banking experience) associated with individual tasks necessary to construct, establish, maintain, manage, and monitor (see MWP Attachment C of this Mitigation Work Plan— Cost Structure for Ash Slough Headwaters Mitigation Bank Addendum I). These costs are then broken down by year in separate tables in MWP Attachment 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 (\$23,437.40) 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 (\$23,437.40) 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 this 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 fund a "Construction and Establishment Fund" 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.

#### 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 (Attachment C of the MBI) 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 \$25,823.69.
- 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 \$23,372.21.
- 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 \$12,172.10.
- 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 \$55,000.00 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.

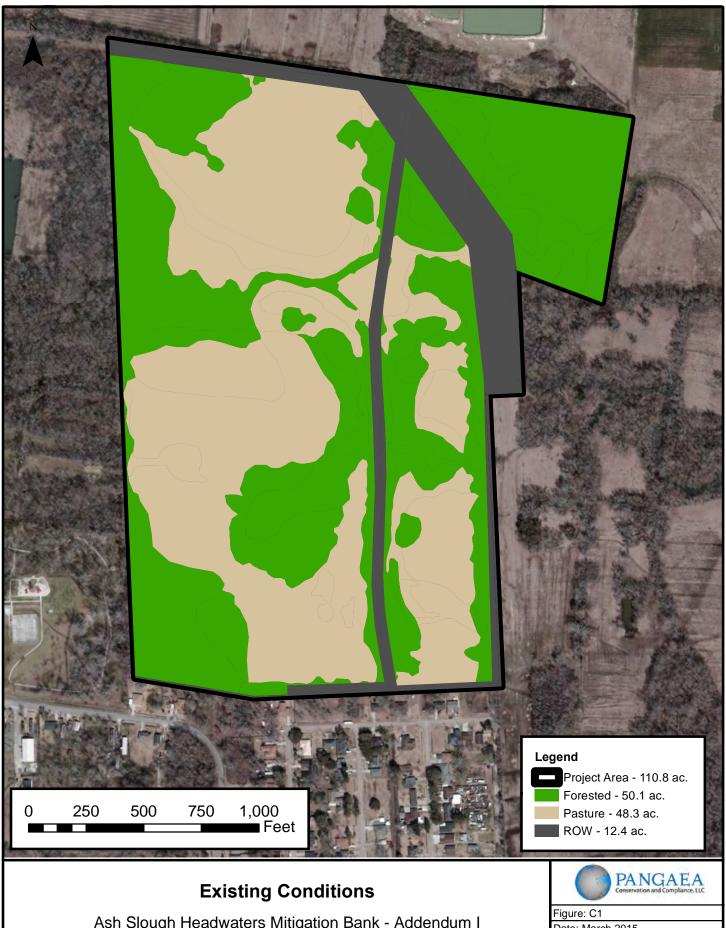
## 2. Annual Cost Estimates for Long-Term Needs

The cost of long-term management is \$25,838.53 from year 16 to year 50. This amounts to \$72,354.29 when adjusted for inflation every five years. Attachment 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

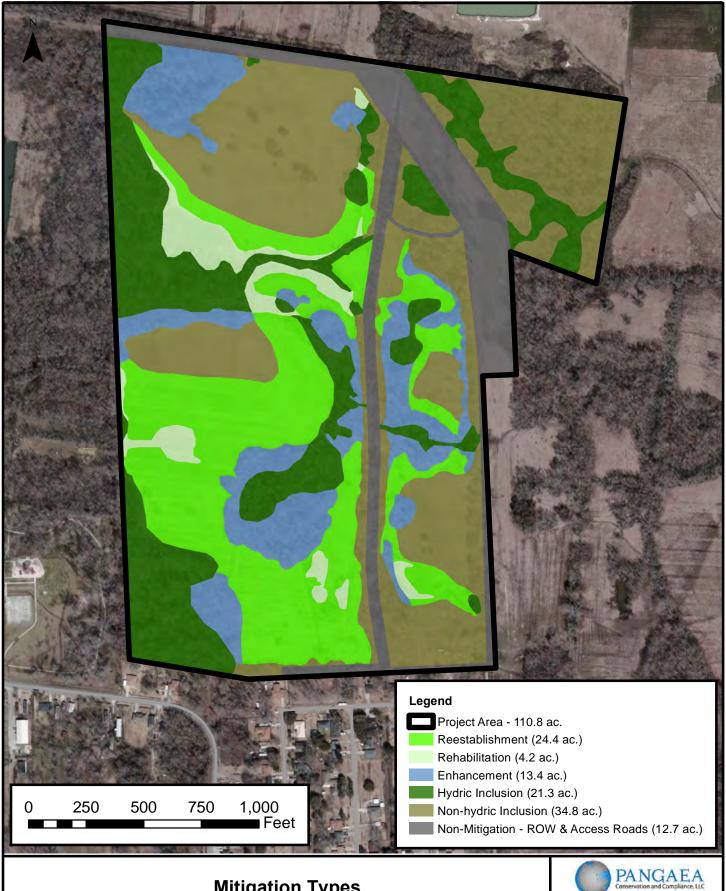
To ensure that sufficient funds are available to provide for the perpetual maintenance and protection of the Bank, the Sponsor is establishing the "Long-Term Maintenance and Protection" escrow account. This account will be administered by a federally-insured depository that is "well capitalized" or "adequately capitalized" as defined in Section 38 of the Federal Deposit Insurance Act. The account will be incrementally funded by deposit a minimum of \$1,309.52 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 (\$55,000.00), 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 prerequisite for release of the remaining credits following attainment of the Lon-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.



Ash Slough Headwaters Mitigation Bank - Addendum I East Baton Rouge Date: March 2015 Scale:1:5,000

Source:



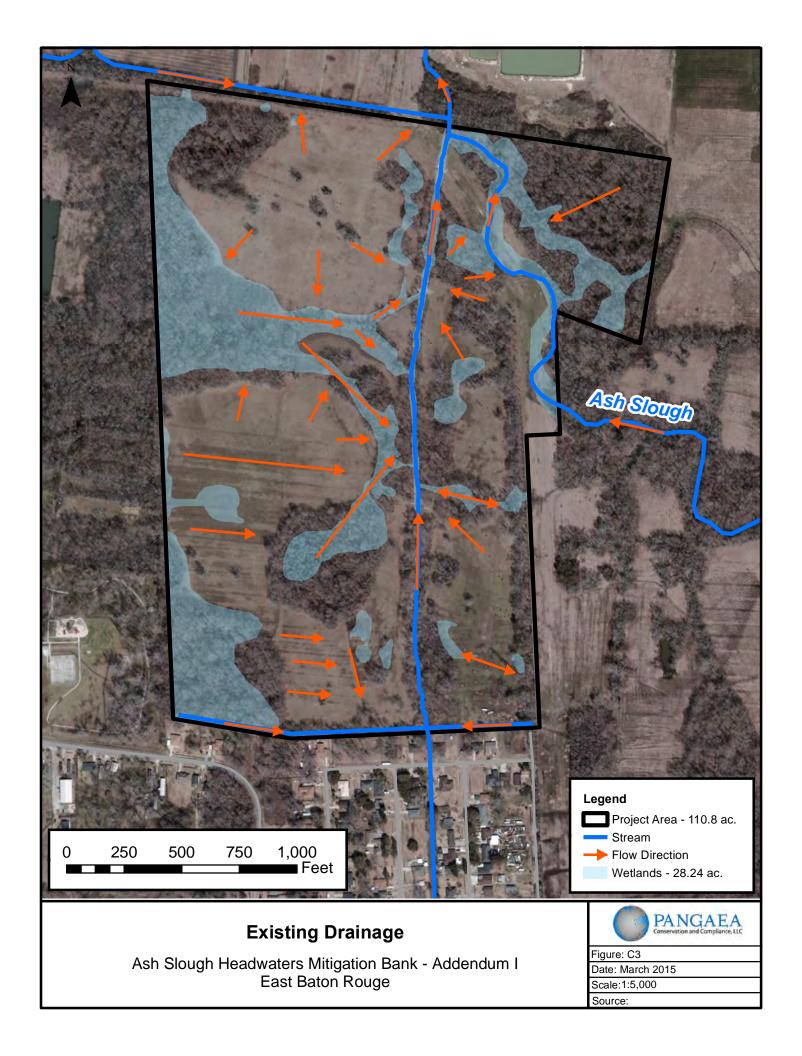
# **Mitigation Types**

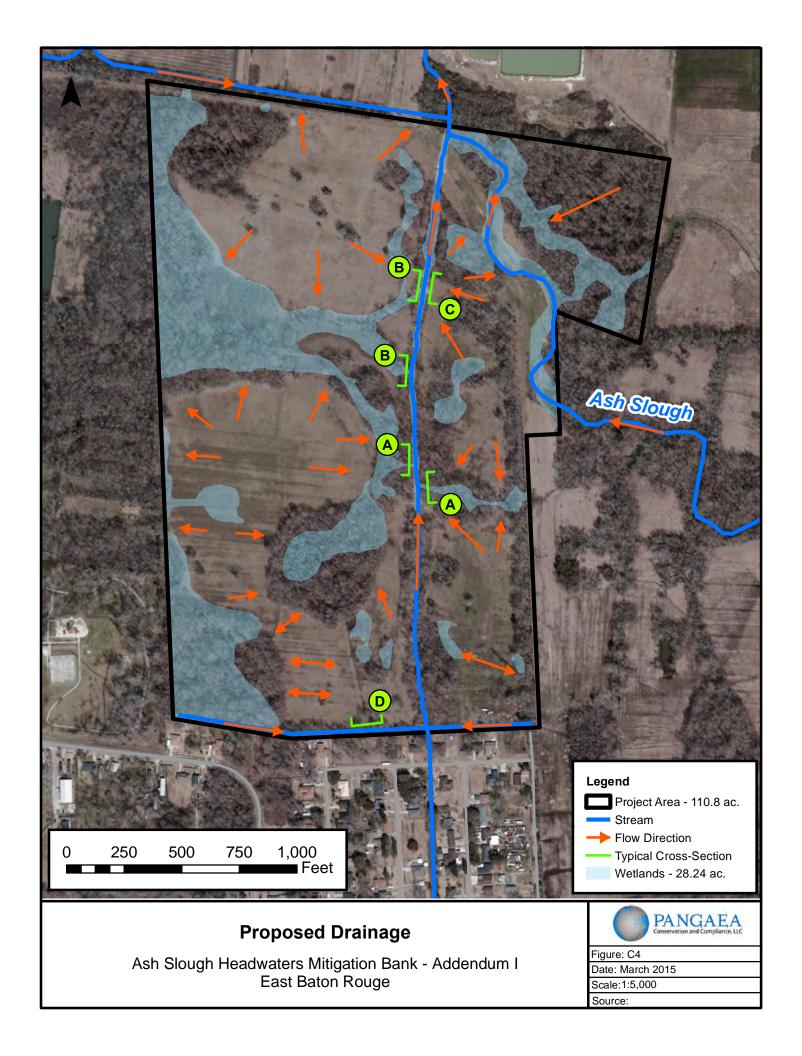
Ash Slough Headwaters Mitigation Bank - Addendum I East Baton Rouge

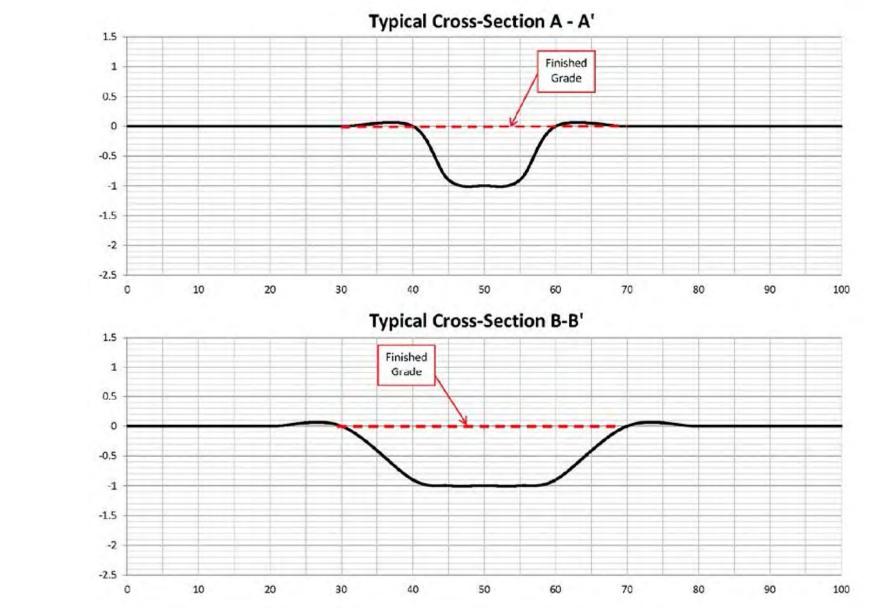


Figure: C2 Date: March 2015 Scale:1:5,000

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## **CROSS-SECTIONS A'A' & B-B'**

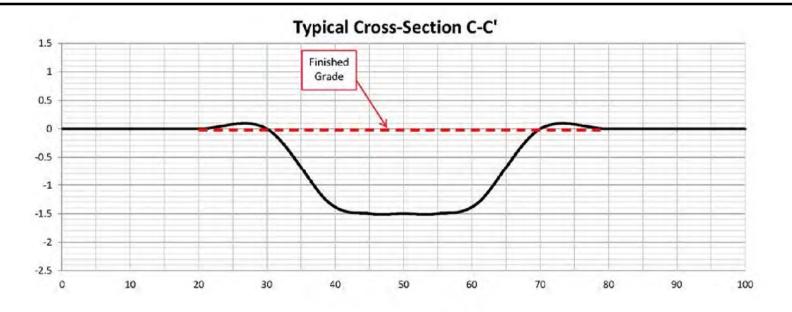
Ash Slough Headwaters Mitigation Bank - Addendum I East Baton Rouge



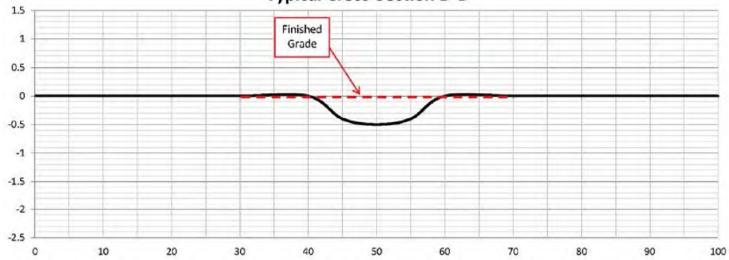
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Date: March 2015

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# Typical Cross-Section D-D'



## **CROSS-SECTIONS A'A' & B-B'**

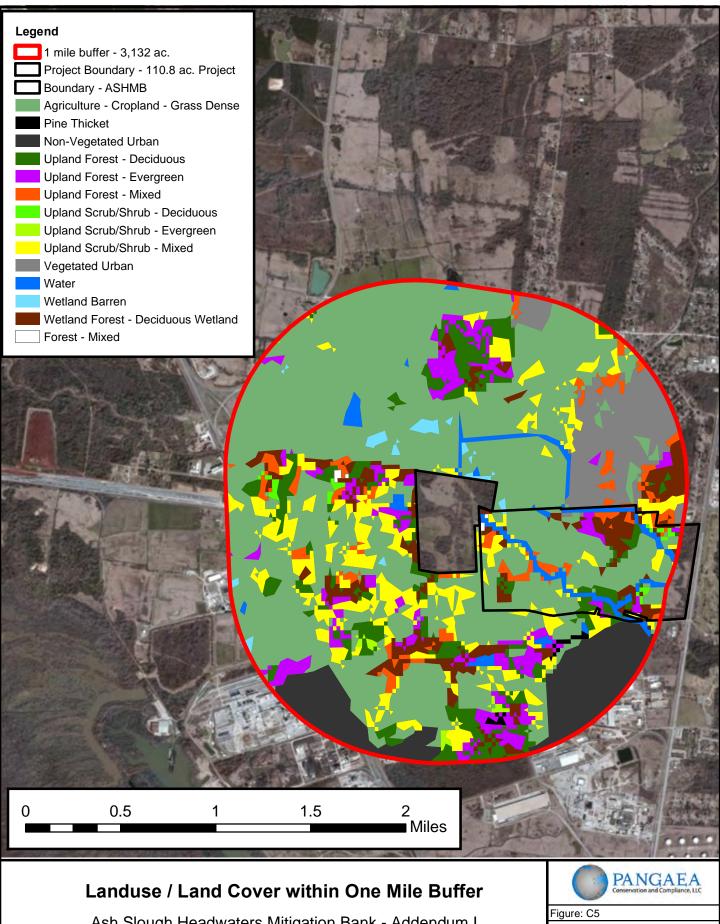
Ash Slough Headwaters Mitigation Bank - Addendum I East Baton Rouge



Figure: C4b

Date: March 2015

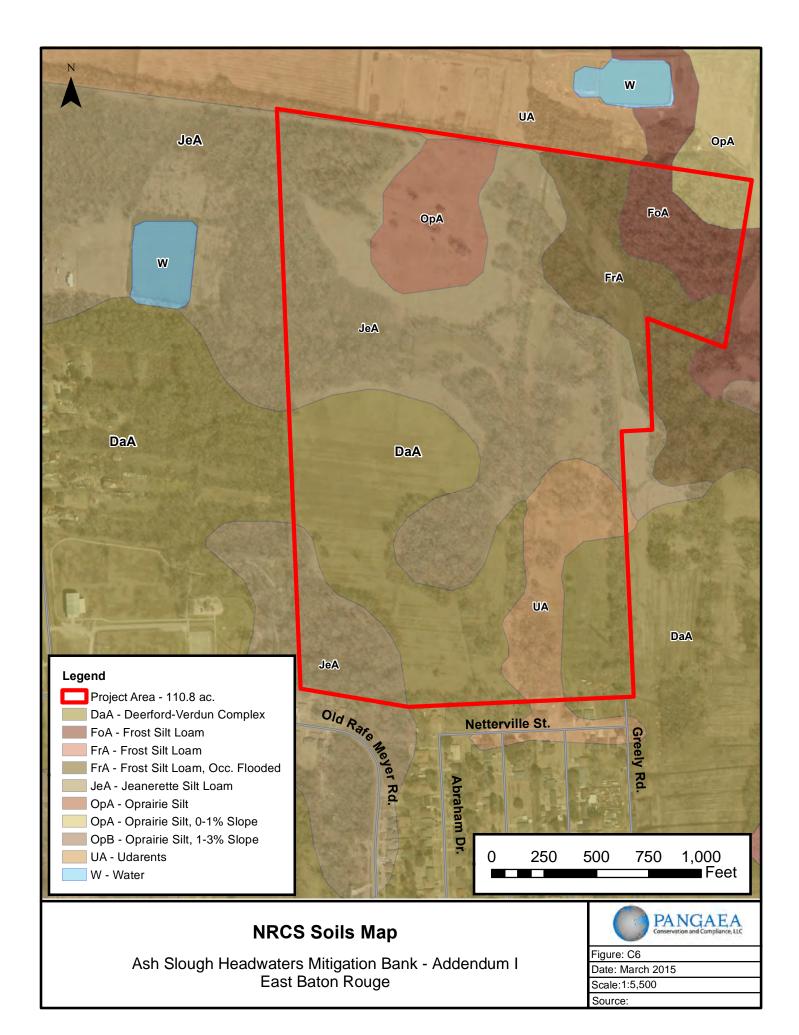
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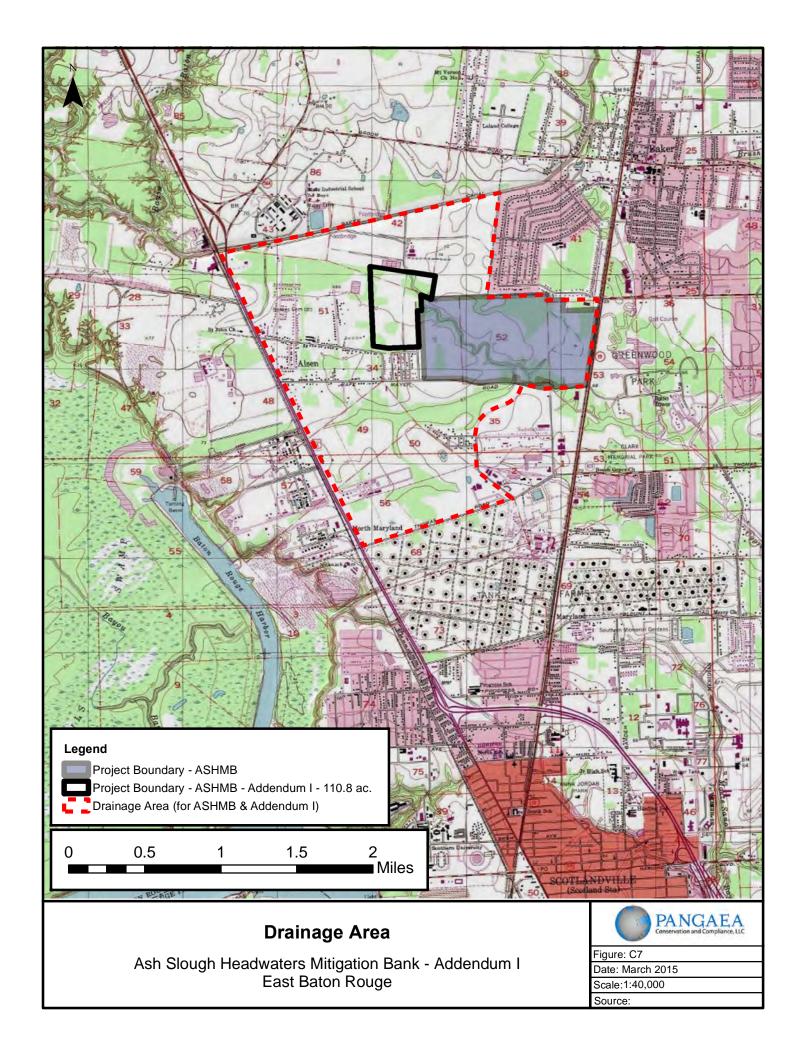


Ash Slough Headwaters Mitigation Bank - Addendum I East Baton Rouge

Figure: C5
Date: March 2015
Scale:1:32,000

Source:





Financial Assurance for Ash Slough Headwaters Mitigation Bank Addendum I				
Site Acreage (Conservation Servitude)	123.95			
Planted Acreage	42			
Seedlings (Total)	22596			
Perimeter Boundary Miles	1.85			
Hydrology Work (Days)	7.00			

Construction Item Cost	Unit	Unit Cost	Tota	l Cost
Soil Preparation	Acre	\$25.00	\$	1,050.00
Seedlings and Labor	Tree	\$0.65	\$	14,687.40
Broadcast Spraying	Acre	\$25.00	\$	1,050.00
Hydrology Restoration	Day	\$950.00	\$	6,650.00
Total			\$	23,437.40

Establishment Item Cost	Unit	Unit Cost	Total Cost*
Taxes (Annually 15 years)	Yearly for 16 years	\$650.74	\$ 10,411.80
Invasive Species Control (Spot Treatment)	Acre	\$25.00	\$ 1,050.00
Mobilization	Yearly for 15 years	\$100.00	\$ 1,500.00
Monitoring (Initial Success/Vegetation)	Acre	\$25.00	\$ 1,050.00
Monitoring (Interim Success/Vegetation)	Acre	\$25.00	\$ 1,050.00
Monitoring (Interim Success/Hydrology)	Plot	\$1,000.00	\$ 6,000.00
Long-term Monitoring (10 years)	Yearly for 10 years (years 5-15)	\$100.00	\$ 1,000.00
Boundary Maintenance (15 years)	Mile	\$225.00	\$ 416.25
Total			\$ 22,478.05

Long-Term Fund Annual Costs Years 16-50		Unit (	Cost	<b>Total Cost</b>	
Taxes (Annually)	Acre		\$5.25	\$	650.74
Invasive Species Control (Spot Treatment) at 1%	Acre		\$25.00	\$	10.50
Mobilization	Yearly				**
Account Maintenance and Misc					**
10-Year Boundary Maintenance (Annualized)	Mile		\$416.25	\$	77.01
Total				\$	738.24

<sup>\*</sup> Cost does not reflect inflationary adjustment

<sup>\*\*</sup> Cost of Mobilization and Account Maintenance cover by ASHMB

Financial Assurance (Construction Fund) Year 0						
Item	Total Cost at Yea	r 0	5-Year Inflationary Adjustment		Percent of Cost	
				3.2%		
YEAR 0						
Soil Preperation	\$	1,050.00	\$	1,050.00	4%	
Planting (Seedlings and Labor)	\$	14,687.40	\$	14,687.40	63%	
Broadcast Spraying	\$	1,050.00	\$	1,050.00	4%	
Hydrology Restoration	\$	6,650.00	\$	6,650.00	28%	
Total	\$	23,437.40	\$	23,437.40	100%	
Total Per Acre	\$	558.03	\$	558.03		

YEAR 0	Financial Assurance (Establishment Fund) Year 0 to Year 15							
YEAR 0           Taxes         \$ 650.74         \$ 650.74           YEAR 1         ****         Monitoring (Initial Success/Vegetation)         \$ 1,050.00         \$ 1,050.00           Mobilization         \$ 100.00         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74         \$ 650.74           TOTAL - INITIAL SUCCESS CRITERIA1         \$ 2,451.48         \$ 2,451.48           YEAR 2         ***         ***         ***           Broadcast Spraying (50%)         \$ 525.00         \$ 525.00         ***           Mobilization         \$ 100.00         \$ 100.00         ***         ***           Taxes         \$ 650.74         \$ 650.74         ***         ***           Monitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00         ***         ***           Mobilization         \$ 100.00         \$ 650.74         ***         ***         ***           Proadcast Spraying (30%)         \$ 315.00         \$ 315.00         ***         ***         ***           Taxes         \$ 650.74         \$ 650.74         ***         ***         ***         ***         ***         ***         ***         ***         ***         ***         ***         **	ercent of Cost							
Taxes								
YEAR 1         Monitoring (Initial Success/Vegetation)         \$ 1,050.00         \$ 1,050.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           TOTAL - INITIAL SUCCESS CRITERIA <sup>1</sup> \$ 2,451.48         \$ 2,451.48           YEAR 2         Broadcast Spraying (50%)         \$ 525.00         \$ 525.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 3         Monitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00           Mobilization         \$ 100.00         \$ 6,000.00         \$ 650.74           YEAR 4         Broadcast Spraying (30%)         \$ 315.00         \$ 315.00           Mobilization         \$ 100.00         \$ 650.74         \$ 650.74								
Monitoring (Initial Success/Vegetation)         \$ 1,050.00         \$ 1,050.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           TOTAL - INITIAL SUCCESS CRITERIA <sup>1</sup> \$ 2,451.48         \$ 2,451.48           YEAR 2         Broadcast Spraying (50%)         \$ 525.00         \$ 525.00           Mobilization         \$ 100.00         \$ 100.00         \$ 650.74           YEAR 3         Wonitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00           Mobilization         \$ 100.00         \$ 6,000.00           Taxes         \$ 650.74         \$ 650.74           YEAR 4         Broadcast Spraying (30%)         \$ 315.00         \$ 315.00           Mobilization         \$ 100.00         \$ 650.74	2.5%							
Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           TOTAL - INITIAL SUCCESS CRITERIA <sup>1</sup> \$ 2,451.48         \$ 2,451.48           YEAR 2         ***         ***           Broadcast Spraying (50%)         \$ 525.00         \$ 525.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 3         ***         ***           Monitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00           Mobilization         \$ 100.00         \$ 650.74           YEAR 4         ***         ***           Broadcast Spraying (30%)         \$ 315.00         \$ 315.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74								
Taxes \$ 650.74 \$ 650.74  TOTAL - INITIAL SUCCESS CRITERIA¹ \$ 2,451.48 \$ 2,451.48  YEAR 2  Broadcast Spraying (50%) \$ 525.00 \$ 525.00  Mobilization \$ 100.00 \$ 100.00  Taxes \$ 650.74 \$ 650.74  YEAR 3  Monitoring (Interim Success/Hydrology) \$ 6,000.00 \$ 6,000.00  Mobilization \$ 100.00 \$ 100.00  Taxes \$ 650.74 \$ 650.74  YEAR 4  Broadcast Spraying (30%) \$ 315.00 \$ 315.00  Mobilization \$ 100.00 \$ 100.00  Taxes \$ 650.74 \$ 650.74	4.1%							
TOTAL - INITIAL SUCCESS CRITERIA¹         \$ 2,451.48         \$ 2,451.48           YEAR 2         Broadcast Spraying (50%)         \$ 525.00         \$ 525.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 3         Monitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 4         Broadcast Spraying (30%)         \$ 315.00         \$ 315.00           Mobilization         \$ 100.00         \$ 650.74           Taxes         \$ 650.74         \$ 650.74	0.4%							
YEAR 2         Broadcast Spraying (50%)       \$ 525.00 \$       \$ 525.00 \$         Mobilization       \$ 100.00 \$       \$ 100.00 \$         Taxes       \$ 650.74 \$       \$ 650.74 \$         YEAR 3         Monitoring (Interim Success/Hydrology)       \$ 6,000.00 \$       \$ 6,000.00 \$         Mobilization       \$ 100.00 \$       \$ 100.00 \$         Taxes       \$ 650.74 \$       \$ 650.74 \$         PEAR 4       Broadcast Spraying (30%)       \$ 315.00 \$       \$ 315.00 \$         Mobilization       \$ 100.00 \$       \$ 100.00 \$         Taxes       \$ 650.74 \$       \$ 650.74 \$	2.5%							
YEAR 2         Broadcast Spraying (50%)       \$ 525.00 \$       \$ 525.00 \$         Mobilization       \$ 100.00 \$       \$ 100.00 \$         Taxes       \$ 650.74 \$       \$ 650.74 \$         YEAR 3         Monitoring (Interim Success/Hydrology)       \$ 6,000.00 \$       \$ 6,000.00 \$         Mobilization       \$ 100.00 \$       \$ 100.00 \$         Taxes       \$ 650.74 \$       \$ 650.74 \$         PEAR 4       Broadcast Spraying (30%)       \$ 315.00 \$       \$ 315.00 \$         Mobilization       \$ 100.00 \$       \$ 100.00 \$         Taxes       \$ 650.74 \$       \$ 650.74 \$	9.1%							
Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 3           Monitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 4         Broadcast Spraying (30%)         \$ 315.00         \$ 315.00           Mobilization         \$ 100.00         \$ 650.74           Taxes         \$ 650.74         \$ 650.74								
Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 3           Monitoring (Interim Success/Hydrology)         \$ 6,000.00         \$ 6,000.00           Mobilization         \$ 100.00         \$ 100.00           Taxes         \$ 650.74         \$ 650.74           YEAR 4         Broadcast Spraying (30%)         \$ 315.00         \$ 315.00           Mobilization         \$ 100.00         \$ 650.74           Taxes         \$ 650.74         \$ 650.74	2.0%							
Taxes         \$         650.74         \$         650.74           YEAR 3           Monitoring (Interim Success/Hydrology)         \$         6,000.00         \$         6,000.00           Mobilization         \$         100.00         \$         100.00           Taxes         \$         650.74         \$         650.74           YEAR 4         Broadcast Spraying (30%)         \$         315.00         \$         315.00           Mobilization         \$         100.00         \$         100.00           Taxes         \$         650.74         \$         650.74	0.4%							
YEAR 3         Monitoring (Interim Success/Hydrology)       \$ 6,000.00       \$ 6,000.00         Mobilization       \$ 100.00       \$ 100.00         Taxes       \$ 650.74       \$ 650.74         YEAR 4       Broadcast Spraying (30%)       \$ 315.00       \$ 315.00         Mobilization       \$ 100.00       \$ 100.00         Taxes       \$ 650.74       \$ 650.74	2.5%							
Mobilization       \$ 100.00       \$ 100.00         Taxes       \$ 650.74       \$ 650.74         YEAR 4         Broadcast Spraying (30%)       \$ 315.00       \$ 315.00         Mobilization       \$ 100.00       \$ 100.00         Taxes       \$ 650.74       \$ 650.74								
Mobilization       \$ 100.00       \$ 100.00         Taxes       \$ 650.74       \$ 650.74         YEAR 4         Broadcast Spraying (30%)       \$ 315.00       \$ 315.00         Mobilization       \$ 100.00       \$ 100.00         Taxes       \$ 650.74       \$ 650.74	23.2%							
Taxes         \$ 650.74         \$         650.74           YEAR 4         Broadcast Spraying (30%)         \$ 315.00         \$         315.00           Mobilization         \$ 100.00         \$         100.00           Taxes         \$ 650.74         \$         650.74	0.4%							
YEAR 4         Broadcast Spraying (30%)       \$ 315.00 \$       \$ 315.00 \$         Mobilization       \$ 100.00 \$       100.00 \$         Taxes       \$ 650.74 \$       650.74 \$	2.5%							
Mobilization         \$ 100.00 \$         100.00           Taxes         \$ 650.74 \$         650.74								
Mobilization         \$ 100.00 \$         100.00           Taxes         \$ 650.74 \$         650.74	1.2%							
Taxes \$ 650.74 \$ 650.74	0.4%							
	2.5%							
YEAR 5								
Monitoring (Interim Success/Vegetation) \$ 1,050.00 \$ 1,229.10	4.8%							
Mobilization \$ 100.00 \$ 117.06	0.5%							
Taxes \$ 650.74 \$ 761.74	2.9%							
TOTAL - INTERIM SUCCESS CRITERIA <sup>2</sup> \$ 10,892.95 \$ 11,200.11	41.7%							
YEAR 6	121770							
Invasive Species Control (5%) \$ 52.50 \$ 61.46	0.2%							
Mobilization \$ 100.00 \$ 117.06	0.5%							
Taxes \$ 650.74 \$ 761.74	2.9%							
YEAR 7								
Invasive Species Control (5%) \$ 52.50 \$ 61.46	0.2%							
Mobilization \$ 100.00 \$ 117.06	0.5%							
Taxes \$ 650.74 \$ 761.74	2.9%							
YEAR 8								
Invasive Species Control (2%) \$ 21.00 \$ 24.58	0.1%							
Mobilization \$ 100.00 \$ 117.06	0.5%							
Taxes \$ 650.74 \$ 761.74	2.9%							
YEAR 9	2.370							
Invasive Species Control (2%) \$ 21.00 \$ 24.58	0.1%							
Mobilization \$ 100.00 \$ 117.06	0.5%							
Taxes \$ 650.74 \$ 761.74	2.9%							
YEAR 10								
Invasive Species Control (1%) \$ 10.50 \$ 14.39	0.1%							
Mobilization \$ 100.00 \$ 137.02	0.5%							
Long-term Monitoring \$ 500.00 \$ 685.12	2.7%							
Taxes \$ 650.74 \$ 891.67	3.5%							
Boundary Maintenance \$ 416.25 \$ 570.36	2.2%							

Financial Assurance (Establishment Fund) Year 0 to Year 15							
Item	Total Cos	st at Year 0	5-Year Inflat	ionary Adjustment	Percent of Cost		
				3.2%			
YEAR 11							
Invasive Species Control (1%)	\$	10.50	\$	14.39	0.1%		
Mobilization	\$	100.00	\$	137.02	0.5%		
Taxes	\$	650.74	\$	891.67	3.5%		
YEAR 12							
Invasive Species Control (1%)	\$	10.50	\$	14.39	0.1%		
Mobilization	\$	100.00	\$	137.02	0.5%		
Taxes	\$	650.74	\$	891.67	3.5%		
YEAR 13							
Invasive Species Control (1%)	\$	10.50	\$	14.39	0.1%		
Mobilization	\$	100.00	\$	137.02	0.5%		
Taxes	\$	650.74	\$	891.67	3.5%		
YEAR 14							
Invasive Species Control (1%)	\$	10.50	\$	14.39	0.1%		
Mobilization	\$	100.00	\$	137.02	0.5%		
Taxes	\$	650.74	\$	891.67	3.5%		
YEAR 15							
Invasive Species Control (1%)	\$	10.50	\$	16.84	0.1%		
Mobilization	\$	100.00	\$	160.40	0.6%		
Long-term Monitoring	\$	500.00	\$	801.98	3.1%		
Taxes	\$	650.74	\$	1,043.76	4.0%		
TOTAL - YEAR 15 (CANOPY COVER≥80%) <sup>3</sup>	\$	9,133.63	\$	12,181.11	46.6%		
Total	\$	22,478.05	\$	25,832.69	99.5%		
Total Per Acre	\$	190.42	\$	218.83			

<sup>&</sup>lt;sup>1</sup>The total shown for "Initial Success Criteria" includes costs estimated to occur during Year 0 - Year 1.

<sup>&</sup>lt;sup>2</sup>The total shown for "Interim Success Criteria" includes costs estimated to occur during Year 2 - Year 5.

<sup>&</sup>lt;sup>3</sup>The total shown for "Year 15 (Canopy Cover≥80%)" includes costs estimated to occur during Year 6 - Year 15.

Long-Term Mair	ntenance and Protection Fund a	inticipated to Year 16 to Year 5	0 for Ash Slough Headwaters Mitigation E	Sank Addendum I		
			Inflation Rate	Total	Per Acre*	Return
			3.20%	\$ 55,000.00	\$ 1,309.52	4.20%
Time (Year)	Item	Total Cost at Year 0	5-Year Inflationary Adjustment	Escrow Account Activity	Investment Acc't Balance	Investment Earning
15		\$ -	\$ -	\$ 55,000.00	\$ 55,000.00	\$ -
16	Annual Cost 16-50	\$ 738.24	\$ 1,222.01	\$ (1,222.01)	\$ 56,087.99	\$ 2,310.00
17	Annual Cost 16-50	\$ 738.24	\$ 1,222.01	\$ (1,222.01)	\$ 57,221.67	\$ 2,355.70
18	Annual Cost 16-50	\$ 738.24	\$ 1,222.01	\$ (1,222.01)		\$ 2,403.31
19	Annual Cost 16-50	\$ 738.24	\$ 1,222.01	\$ (1,222.01)	\$ 59,633.89	\$ 2,452.92
20	Annual Cost 16-50	\$ 738.24	\$ 1,386.10	\$ (1,386.10)	\$ 60,752.41	\$ 2,504.62
21	Annual Cost 16-50	\$ 738.24	\$ 1,386.10	\$ (1,386.10)	\$ 61,917.92	\$ 2,551.60
22	Annual Cost 16-50	\$ 738.24	\$ 1,386.10	\$ (1,386.10)	\$ 63,132.37	\$ 2,600.55
	Annual Cost 16-50	\$ 738.24	\$ 1,386.10	\$ (1,386.10)	\$ 64,397.84	\$ 2,651.56
24	Annual Cost 16-50	\$ 738.24	\$ 1,386.10	\$ (1,386.10)		\$ 2,704.71
25	Annual Cost 16-50	\$ 738.24	\$ 1,622.53	\$ (1,622.53)		\$ 2,760.09
26	Annual Cost 16-50	\$ 738.24	\$ 1,622.53	\$ (1,622.53)	\$ 68,039.35	\$ 2,807.87
27	Annual Cost 16-50	\$ 738.24	\$ 1,622.53	\$ (1,622.53)	\$ 69,274.48	\$ 2,857.65
28	Annual Cost 16-50	\$ 738.24	\$ 1,622.53	\$ (1,622.53)	•	\$ 2,909.53
29	Annual Cost 16-50	\$ 738.24	\$ 1,622.53	\$ (1,622.53)	\$ 71,902.53	\$ 2,963.58
30	Annual Cost 16-50	\$ 738.24	\$ 1,899.29	\$ (1,899.29)		\$ 3,019.91
31	Annual Cost 16-50	\$ 738.24	\$ 1,899.29	\$ (1,899.29)	\$ 74,190.83	\$ 3,066.97
32	Annual Cost 16-50	\$ 738.24	\$ 1,899.29	\$ (1,899.29)	\$ 75,407.56	\$ 3,116.02
33	Annual Cost 16-50	\$ 738.24	\$ 1,899.29	\$ (1,899.29)	\$ 76,675.39	\$ 3,167.12
34	Annual Cost 16-50	\$ 738.24	\$ 1,899.29	\$ (1,899.29)	\$ 77,996.47	\$ 3,220.37
35	Annual Cost 16-50	\$ 738.24	\$ 2,223.25	\$ (2,223.25)	\$ 79,049.07	\$ 3,275.85
	Annual Cost 16-50	\$ 738.24	\$ 2,223.25	\$ (2,223.25)	\$ 80,145.87	\$ 3,320.06
37	Annual Cost 16-50	\$ 738.24	\$ 2,223.25	\$ (2,223.25)	\$ 81,288.75	\$ 3,366.13
38	Annual Cost 16-50	\$ 738.24	\$ 2,223.25	\$ (2,223.25)	\$ 82,479.62	\$ 3,414.13
39	Annual Cost 16-50	\$ 738.24	\$ 2,223.25	\$ (2,223.25)	\$ 83,720.51	\$ 3,464.14
40	Annual Cost 16-50	\$ 738.24	\$ 2,602.48	\$ (2,602.48)		\$ 3,516.26
41	Annual Cost 16-50	\$ 738.24				\$ 3,554.64
42	Annual Cost 16-50	\$ 738.24	\$ 2,602.48			\$ 3,594.63
43	Annual Cost 16-50	\$ 738.24	\$ 2,602.48	\$ (2,602.48)	\$ 87,612.42	\$ 3,636.30
44	Annual Cost 16-50	\$ 738.24	-			\$ 3,679.72
45	Annual Cost 16-50	\$ 738.24				
46	Annual Cost 16-50	\$ 738.24				\$ 3,753.47
47	Annual Cost 16-50	\$ 738.24	•			\$ 3,783.16
48	Annual Cost 16-50	\$ 738.24	\$ 3,046.39	\$ (3,046.39)	\$ 91,579.78	\$ 3,814.11
49	Annual Cost 16-50	\$ 738.24	\$ 3,046.39			\$ 3,846.35
50	Annual Cost 16-50	\$ 738.24	\$ 3,566.03	\$ (3,566.03)	\$ 92,693.66	\$ 3,879.95
		\$ 25,838.53	\$ 72,354.29			

 $<sup>\</sup>ensuremath{^{*}}$  Per the provisions outlined in Section X.C of the Mitigation Work Plan.