

# JOINT PUBLIC NOTICE

February 9, 2015

United States Army  
Corps of Engineers  
New Orleans District  
Regulatory Branch  
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Permit Application Number  
MVN-2014-01965-MR

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Attn: Water Quality Certifications

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WQC Application Number  
WQC # 150204-04

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).

## **ENGLISH BAYOU MITIGATION BANK IN CALCASIEU PARISH**

**NAME OF APPLICANT:** B.H. Mitigation Company, LLC: c/o TerRestore, LLC, Attn: Leonard McCauley, 6070 Fitzgerald Drive, Denham Springs, LA 70706.

**LOCATION OF WORK:** The 253.6 acre site is located approximately four miles west of Iowa, Louisiana, in Calcasieu Parish, on Boys Village Road, as shown on enclosed drawings (Latitude: 30.2280 N, Longitude: -93.0896 W). The Project is located within the Lower Calcasieu Basin, Hydrologic Unit 08080206.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Martin S. Mayer  
Chief, Regulatory Branch

Enclosure

Final Prospectus  
Proposed English Bayou Mitigation Bank

Calcasieu Parish, Louisiana

January 13, 2015

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## Table of Contents

1.0	INTRODUCTION .....	1
1.1	Site Location .....	1
2.0	PROJECT GOALS AND OBJECTIVES .....	1
3.0	ECOLOGICAL SUITABILITY OF THE SITE .....	4
3.1	Historical Ecological Characteristics of the Site .....	4
3.2	Current Ecological Characteristics of the Site .....	4
3.3	General Need for the Project in this Area .....	5
3.4	Technical Feasibility .....	5
4.0	ESTABLISHMENT OF THE MITIGATION BANK .....	6
4.1	Site Restoration Plan .....	6
4.2	Current Site Risks .....	10
4.3	Long-Term Sustainability of the Site .....	10
5.0	PROPOSED SERVICE AREA .....	10
6.0	OPERATION OF THE MITIGATION BANK .....	11
6.1	Project Representatives .....	11
6.2	Qualifications of the Sponsor .....	11
6.3	Proposed Long-Term Ownership and Management Representatives .....	11
6.4	Site Protection .....	11
6.5	Long-Term Strategy .....	12
7.0	REFERENCES .....	12

## List of Tables

Table 1	Current Habitat Types and Landuse
Table 2	Proposed Mitigation Bank Habitat Types
Table 3	Proposed BLH Species Assemblage to be Planted
Table 4	Proposed Potential Coastal Prairie Species to be Planted

## List of Figures

Figure 1	Location Map
Figure 2	Site Boundary
Figure 3	Existing Conditions
Figure 4	Landuse / Land Cover within One-Mile Buffer
Figure 5	Proposed Mitigation Types
Figure 6	Existing Drainage
Figure 7	Proposed Drainage
Figure 7a-b	Typical Cross-Sections
Figure 8	Soils Map
Figure 9	Drainage Area
Figure 10	BLH Service Area
Figure 11	Coastal Prairie Service Area

## **1.0 INTRODUCTION**

B.H. Mitigation Company, LLC (Sponsor) submits this prospectus to the U.S. Army Corps of Engineers - New Orleans District (CEMVN) and the Interagency Review Team (IRT) to initiate evaluation of the proposed English Bayou Mitigation Bank (EBMB) in accordance with 33 CFR 332.8(d)(2). The details pertaining to the use of this site as a mitigation bank will be specified in the subsequent mitigation banking instrument (MBI). EBMB consists of 253.58 acres currently used for agricultural purposes and located in Section 33, Township 9S, Range 7W of Calcasieu Parish, Louisiana (Figure 1).

### **1.1 Site Location**

The Property is located at latitude 30.2280 N and longitude – 93.0896 W (approximate center point) in Calcasieu Parish, Louisiana. This location includes all or portions of Sections 32 and 33 Township 9S, Range 7W. The Property is located approximately 4.0 miles west of Iowa, Louisiana. To reach the Property, drive west on Interstate 10 toward Lake Charles; take Exit 43 (Iowa) to Louisiana Highway 383 South; proceed south for approximately 1.4 miles; turn right (west) on Louisiana Highway 90; proceed for approximately 4.0 miles; turn left onto Boys Village Road; proceed for 0.3 miles, and the property will be on the right (see Figure 2).

Current landuse of the property consists primarily of agricultural crop fields, cattle pasture, and open water (see Table 1 and Figure 3). Adjacent landuse consists primarily of agricultural (59%) and forest/woodlands (5%) (see Figure 4).

## **2.0 PROJECT GOALS AND OBJECTIVES**

The goal of EBMB is the re-establishment, rehabilitation, and preservation of 223.39 acres of coastal prairie and bottomland hardwood habitats, with an additional 20.42 acres of hydric and non-hydric inclusions. The remaining 9.77 acres of non-mitigation features will consist of ROW and open water.

The Sponsor proposes to restore the hydrology of the site by removing spoil banks, rice dikes, and elevated roads which currently impede the natural movement flood waters and sheet flow across the site. The Sponsor will also remove the site from agricultural use and reforest the site with an assemblage of species indicative of wetland forests in this area. The surrounding area consists primarily of agricultural landuse, making the proposed bank a valuable asset to water quality and wildlife.

Table 1: Current Habitat Types and Landuse (Figure 3)

<b>Habitat Type</b>	<b>Landuse</b>	<b>Acreage</b>
Agricultural Prior Converted Wetlands	Agricultural	<b>223.39</b>
Forested Areas	Recreational	<b>20.42</b>
Non-Wetlands	Roads/Right-of-Way (ROW)	<b>6.21</b>
Other U.S. Waters	Natural Drains / Drainage Canals	<b>3.56</b>
Total	---	<b>253.58</b>

Table 2: Proposed Mitigation Bank Habitat Types (Figure 5)

<b>Habitat Type</b>	<b>Acreage</b>	<b>Mitigation Type</b>
Bottomland Hardwood Forest	<b>44.41</b>	Re-establishment I
Bottomland Hardwood Forest	<b>15.00</b>	Rehabilitation I
Coastal Prairie	<b>139.86</b>	Re-establishment I
Coastal Prairie	<b>24.12</b>	Rehabilitation I
Wetland Forest	<b>8.63</b>	Hydric inclusion
Upland Forest	<b>11.79</b>	Non-hydric inclusion
ROW, Roads, and Water	Water: 3.56 ROW/Roads: 6.21 <b>Total: 9.77</b>	Non-mitigation
Total	<b>253.58</b>	---
Total Mitigation and Inclusions	<b>243.81</b>	---

## **2.1 Aquatic Functions to be Restored**

The EBMB site is located in the Upper Calcasieu watershed, specifically within the English Bayou drainage area. The site is currently in agricultural use for rice production and cattle pasture. The site drains into the West Fork of English Bayou via several agricultural drains. Rice dikes and spoil banks impound water on the site and prevent overbank flooding, hydrologically isolating the site (Figure 6).

The degrading of spoil banks, roads, and rice dikes will restore sheetflow across the property. Water that is currently flowing through the property via agricultural drains will be allowed to spread overbank and temporarily inundate the property (Figure 7).

Vegetative plantings will be used to restore natural vegetation throughout the property. Long-term maintenance will be provided to prevent colonization by noxious plants, erosion along interfaces of drainageways, and trespass vandalism. Vegetative plantings, as well as the restoration of the hydroperiod across the property, will create wildlife habitat, as well as benefiting water quality as described below in Section 2.2.

## **2.2 Water Quality**

The EBMB project area is located in the drainage area to Subsegment LA030702 (English Bayou – from Headwaters to Calcasieu Lock) as designated by Louisiana Department of Environmental Quality (LDEQ).

The project generally flows to the north via the West Fork of English Bayou, which bisects the western portion of the property (see Figure 6). The West Fork of English Bayou flows to the north and drains to English Bayou (approximately 1.0 mile downstream of the project), which then discharges into the Calcasieu River (approximately 8.8 miles downstream of the project).

The LDEQ-designated use of Fish and Wildlife Propagation (FWP) for Subsegment LA030702 was identified as impaired in the 2012 final LDEQ 303(d). The identified impairment was total dissolved solids (due to flow alterations from water diversions). Total Maximum Daily Loads (TMDLs) for ammonia nitrogen/dissolved oxygen and total suspended solids/turbidity were completed for Subsegment LA030702 (English Bayou) in 1997 and 2002 (respectively), due to prior impairments for these water quality parameters (cause by urban runoff, natural sources, and hydro-modification).

The cessation of agricultural activities along with degrading spoil banks, roads, rice dikes, 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).

### **3.0 ECOLOGICAL SUITABILITY OF THE SITE**

#### **3.1 Historical Ecological Characteristics of the Site**

EBMB lands were historically coastal prairie and hardwood forests, which were cleared for silvicultural and agricultural use prior to 1970. This is confirmed by aerial photography maintained by CEMVN. Since property acquisition in 1995, the property has been used only for agricultural activities.

#### **3.2 Current Ecological Characteristics of the Site**

The site is currently used for agricultural activities (i.e., rice fields and cattle pasture).

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 on Figures 6 and 7.

Current sources of water include direct precipitation, runoff from adjacent properties, and backwater flooding from the Calcasieu River. The average annual precipitation in the vicinity of the project area is approximately 52.4 inches. August is the wettest month of the year with an average precipitation of 5.8 inches, and March is the driest month of the year with an average precipitation of 2.7 inches. Average annual runoff ranges from 12 to 20 inches in this region.

Current vegetation within cleared cow pasture consists of predominantly: Southern carpet grass (*Axonopus affinis*), Dallisgrass (*Paspalum dilatatum*), and Early butter-cup (*Ranunculus fascicularis*).

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

The Calcasieu Parish Soil Survey maps the sites soils as Mowata-Vidrine silt loams (Mt), Leton silt loam (Lt), Edgarly loam (Mr), and Crowley-Vidrine complex (Cr). A wetland delineation conducted in January 2014 confirmed that these soils present hydric indicators and are wetland soils. Figure 8 presents the current soils within the project area.

Hydric soils indicate that the site is inundated for at least 14 consecutive days per year. This site is comprised primarily of Mowata-Vidrine silt loam and Edgarly loam soils, which, in this area, typically have a seasonal high water table between the surface and 1.5 feet below the surface during the months of December and April.

The jurisdictional determination from CEMVN, MVN-2014-00564-SR, dated April 16, 2014, is included in Appendix B.

The drainage area has been estimated based on topographic maps and HUC areas. The drainage area is bound on the north by Louisiana Highway 90, on the west by Manchester Road, on the east by David Road, and on the south by McCown Road (Figure 9).

### **3.3      *General Need for the Project in this Area***

EBMB is proposed to provide compensatory mitigation for CEMVN approved projects within the Calcasieu-Mermentau watershed, which encompasses approximately 1,270 square miles. In recent years, this watershed has 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, providing limited habitat for migratory birds and terrestrial wildlife. The restoration of this site will provide 253.58 acres of much needed natural habitat, while also improving the water quality in the receiving waters downstream of this site.

### **3.4      *Technical Feasibility***

The EBMB has the potential to re-establish and rehabilitate 223.39 acres of coastal prairie and forested wetlands. These lands will be protected and maintained by conservation servitude.

The site is underlain by hydric soils, according to the NRCS soil survey and verified via field investigations. Despite hydrologic modification of Bank lands, the hydric soil indicators have persisted.

The site is bisected by the West Fork of English Bayou, which flows north to the Calcasieu River. Following hydrologic restoration (i.e., removal of spoil banks and rice dikes), water in English Bayou will flood Bank lands during high water events.

A reference site was used to determine the species assemblage which historically existed at the project site.

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

### **4.1 Site Restoration Plan**

#### **4.1.1 Hydrologic Restoration**

##### Spoil Banks / Elevated Access Roads / Rice Dikes:

Currently, overbank flooding is impeded by spoil banks, elevated roads, and rice dikes. 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.

#### **4.1.2 Vegetative Restoration**

##### **4.1.2.1 BLH Reestablishment/Rehabilitation Measures**

For those 59.41 acres proposed for designation as BLH re-establishment and rehabilitation, 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* (Louisiana Natural Heritage Program, August 2009, available at: <http://www.wlf.louisiana.gov>). A proposed species list is presented in Table 3.

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) for bare-root stock. Initial / interim planting success rates for reestablishment areas will be a minimum of 250 trees per acre for bare-root stock. Long-term success for all replanted areas will be 80% canopy coverage. Escrow or bond sum release rates and monitoring requirements will be consistent with other recently implemented CEMVN approved mitigation banks.

##### **4.1.2.2 Coastal Prairie Reestablishment/Rehabilitation Measures**

For those 163.98 acres proposed for designation as Coastal Prairie re-establishment and rehabilitation, 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 in Table 4.

Proposed coastal prairie areas designated as re-establishment and rehabilitation 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 local habitats. Coastal prairie habitat will be maintained by prescribed burning on a 1-3 year cycle. Escrow or bond sum release rates and monitoring requirements will be consistent with other recently implemented CEMVN approved mitigation banks.

**4.1.2.3 Hydric and Non-hydric Inclusions**

For those 20.42 acres proposed for designation as hydric and non-hydric inclusions, restoration will include removal of invasive plant species.

**4.1.2.4 Invasive Species Control**

Invasive plant species such as Chinese tallowtree (*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.

Table 3. Proposed BLH Species Assemblage to be Planted

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

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

Table 4. Proposed Potential Coastal Prairie Species to be Planted

Scientific Name	Common Name (USDA)	Wetland Indicator Status Region 2 (USDA)
<b>Coastal Prairie</b>		
<i>Agalinis fasciculata</i>	Beach Purple False	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
<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</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 elliottii</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
<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 dumosum</i>	Rice Button Aster	FAC
<i>Symphyotrichum</i>	Calico Aster	FAC
<i>Tradescantia ohiensis</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

#### 4.1.2.5 Monitoring

At a minimum, monitoring reports shall be completed in the spring (when new growth makes identification practicable) of Years 1, 3, 5, 10, 15, and prior to and following the first thinning operation. Reports will be submitted by December 31 of each monitoring year.

#### **4.2 Current Site Risks**

While there is no immediate threat of conversion to a more intensive landuse for this site (or any known proposed development on any adjacent properties), continued use of this site for agricultural purposes would further degrade the water quality of the receiving water bodies and would provide limited benefit to wildlife habitat.

EBMB is free of encumbrances, with the exception of a lien which will be released prior to Bank approval. EBMB and adjacent properties are within unincorporated land and are absent of zoning regulations.

There are no existing hydrologic disturbances on or adjacent to the site, over which the Sponsor has no control. Louisiana Civil Code, Article 490, treats water resources under the theory of absolute ownership and rule of capture, provided capture does not result in harm to neighbors.

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

EBMB will be self-sustaining, requiring minimal maintenance after the final success criteria are met. No structures are proposed or would be necessary to assure hydrologic or vegetative restoration.

### **5.0 PROPOSED SERVICE AREAS**

EBMB is located in the Hydrologic Unit Code (HUC) 08080203.

EBMB will provide BLH mitigation credits primarily to the HUC 08080203 area and secondarily to the Calcasieu drainage basin (HUCs 08080204, 08080205, and 08080206) (Figure 10).

EBMB will provide Coastal Prairie mitigation credits primarily to the HUC 08080203 area and secondarily to HUCs 08080201, 08080202, 08080205, 08080206, 08080102, and 08080103 (Figure 11).

These proposed service areas are consistent with other CEMVN approved mitigation banks within this region.

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

### **6.1 *Project Representatives***

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

Agent: TerRestore, LLC  
8070 Fitzgerald Drive  
Denham Springs, Louisiana 70706

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

### **6.2 *Qualifications of the Sponsor***

B.H. Mitigation, LLC has more than 50 years of experience in land management, forestry, and agriculture. B.H. Mitigation, LLC currently manages over 18,000 acres of land and silviculture, including Cow Bayou Mitigation Bank (an approved mitigation bank within the New Orleans District).

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

The long-term owner of the bank is proposed to be Excalibur Land Company, LLC, and the long-term management of the bank is proposed to be conducted by B.H. Mitigation Company, LLC.

### **6.4 *Site Protection***

EBMB will be protected in perpetuity by a conservation servitude pursuant to Louisiana Revised Statute 9:1271 *et seq.* The servitude will be held by Louisiana Land Conservancy (Holder), a conservation-oriented 501(c)(3) organization. The servitude will inure and run with the property title.

The servitude will prohibit activities, such as clear cutting, fill discharges, cattle grazing, or other commercial surface development that would diminish the quality or quantity of restored wetlands.

### **6.5 Long-Term Strategy**

A long-term maintenance and protection escrow account will provide funding for long-term boundary maintenance and site protection, into perpetuity. These long-term maintenance and site protection activities will be conducted by the Sponsor. The conservation servitude will protect the site from any activities that would diminish the quality of restored wetlands on the site. No structures are proposed or would be necessary to assure hydrologic or vegetative restoration.

## **7.0 REFERENCES**

Code of Federal Regulations, Title 33, Parts 325 and 332 and Title 40, Part 230, as published on pages 19594-19704 in the Federal Register dated 10 April 2008.

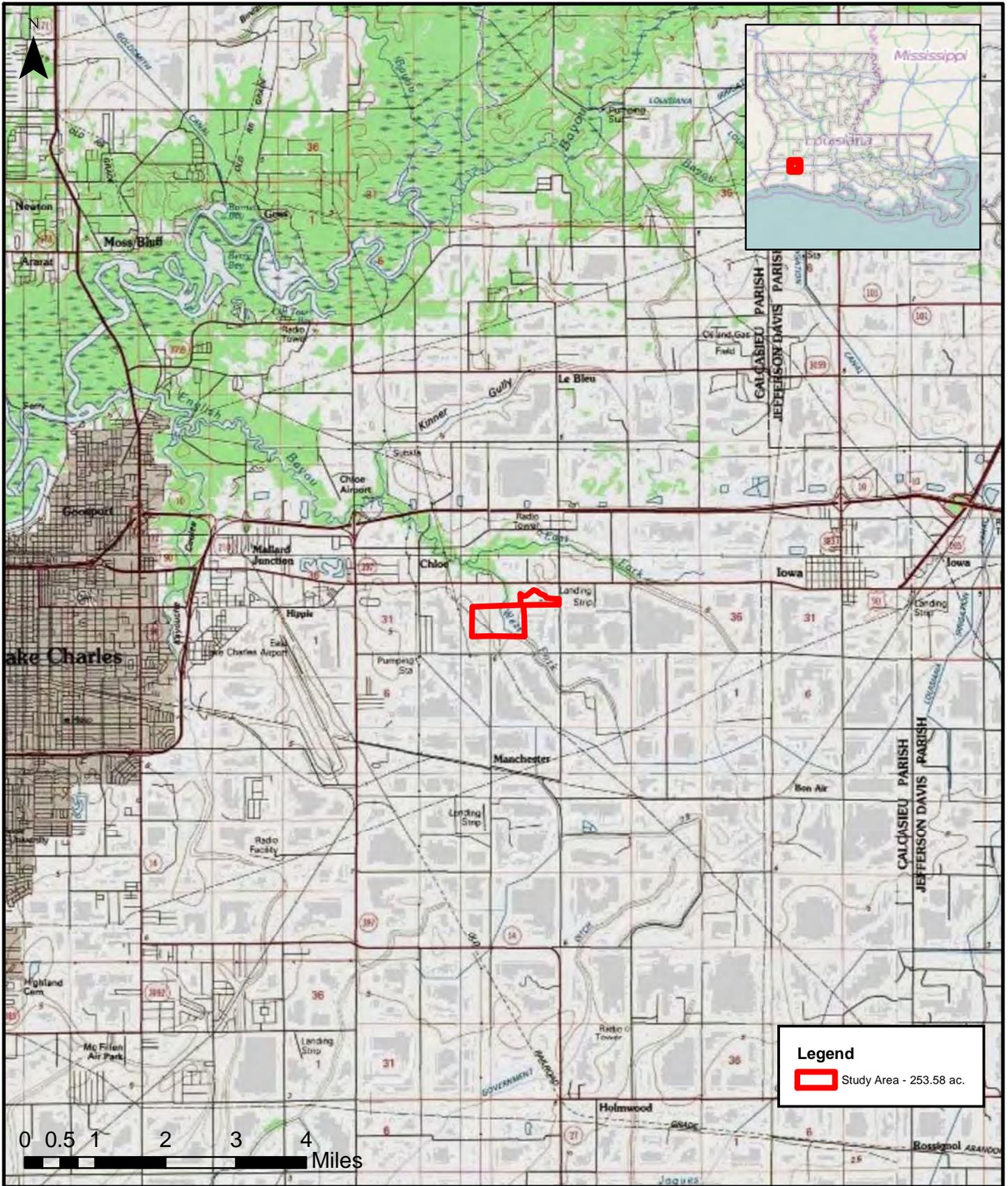
United States Department of Agriculture – Natural Resources Conservation Service, Web Soil Survey, Calcasieu Parish, Louisiana, Retrieved December 2010.  
[http://soils.usda.gov/survey/online\\_surveys/louisiana/index.html](http://soils.usda.gov/survey/online_surveys/louisiana/index.html)

United States Department of Agriculture – Natural Resources Conservation Service, PLANTS Database – USDA PLANTS, Retrieved June 2009.  
<http://plants.usda.gov/>

Louisiana Department of Environmental Quality 303(d) Impaired Waterbodies List, 2008.

# **Appendix A**

## **Figures**



## LOCATION MAP

English Bayou  
Calcasieu Parish

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA  
Copyright: © 2013 National Geographic Society, i-cubed

Figure: 1

Date: October 2014

Scale: 1:120,000

ESRI

Map Author:



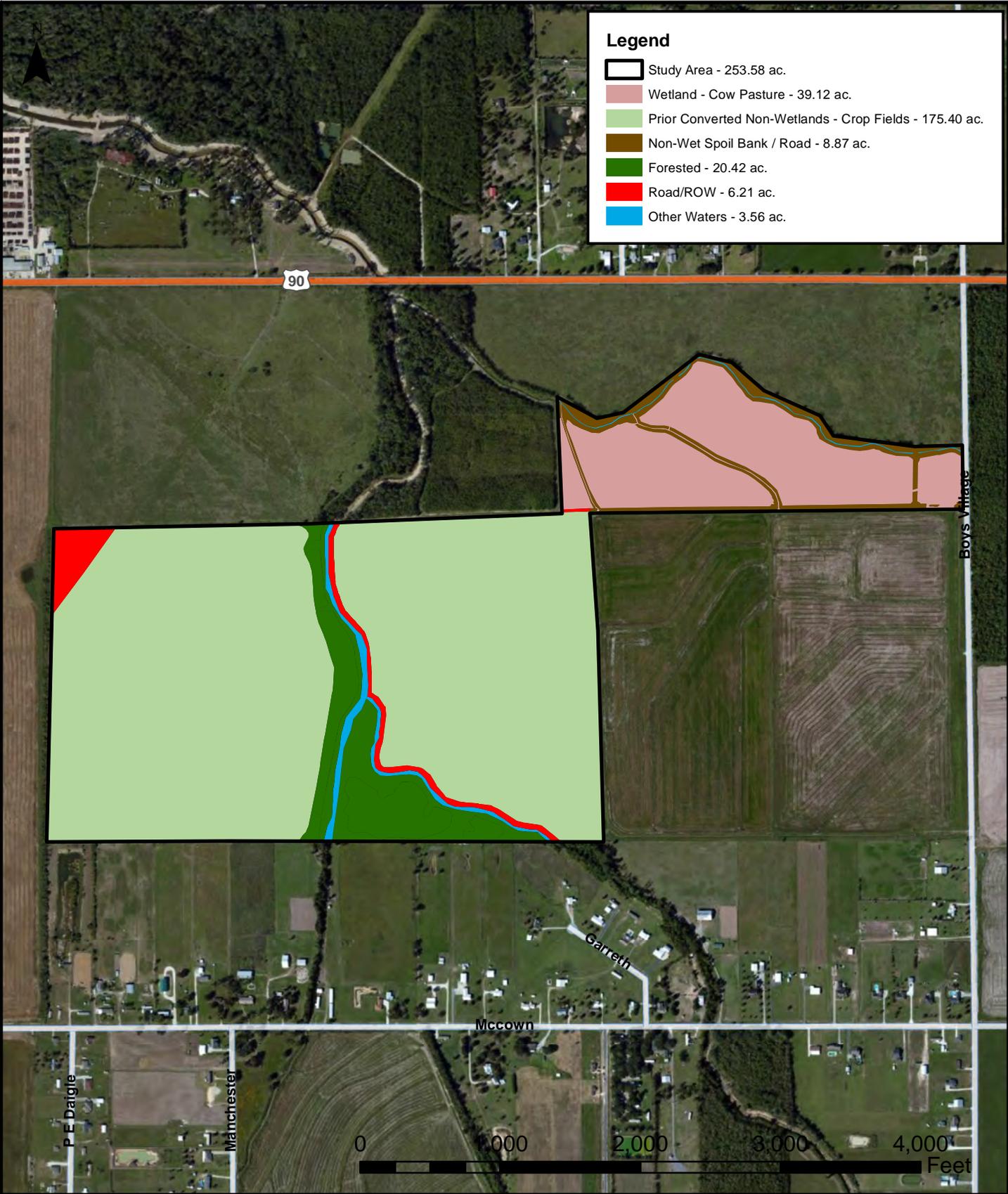
**SITE BOUNDARY**  
 English Bayou  
 Calcasieu Parish

**Legend**  
 Study Area - 253.58 ac.



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure: 2
Date: October 2014
Scale: 1:11,500
Source: ESRI
Map ID: 277027103-3052



## EXISTING CONDITIONS

English Bayou  
Calcasieu Parish

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

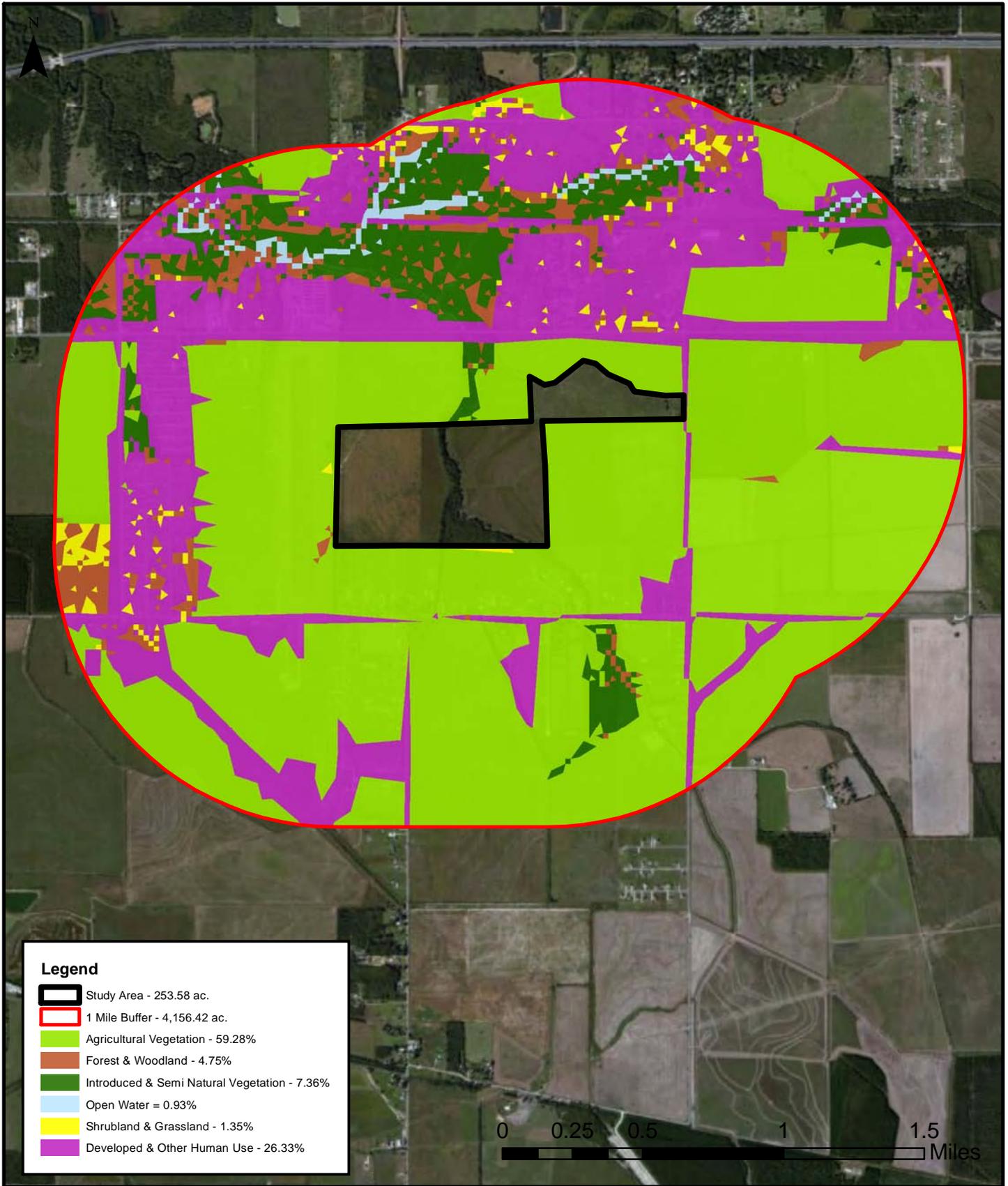
Figure: 3

Date: January 2015

Scale: 1:11,500

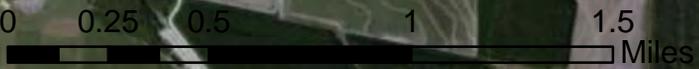
Source: ESRI

Map ID: 277027103-3052



**Legend**

- Study Area - 253.58 ac.
- 1 Mile Buffer - 4,156.42 ac.
- Agricultural Vegetation - 59.28%
- Forest & Woodland - 4.75%
- Introduced & Semi Natural Vegetation - 7.36%
- Open Water = 0.93%
- Shrubland & Grassland - 1.35%
- Developed & Other Human Use - 26.33%

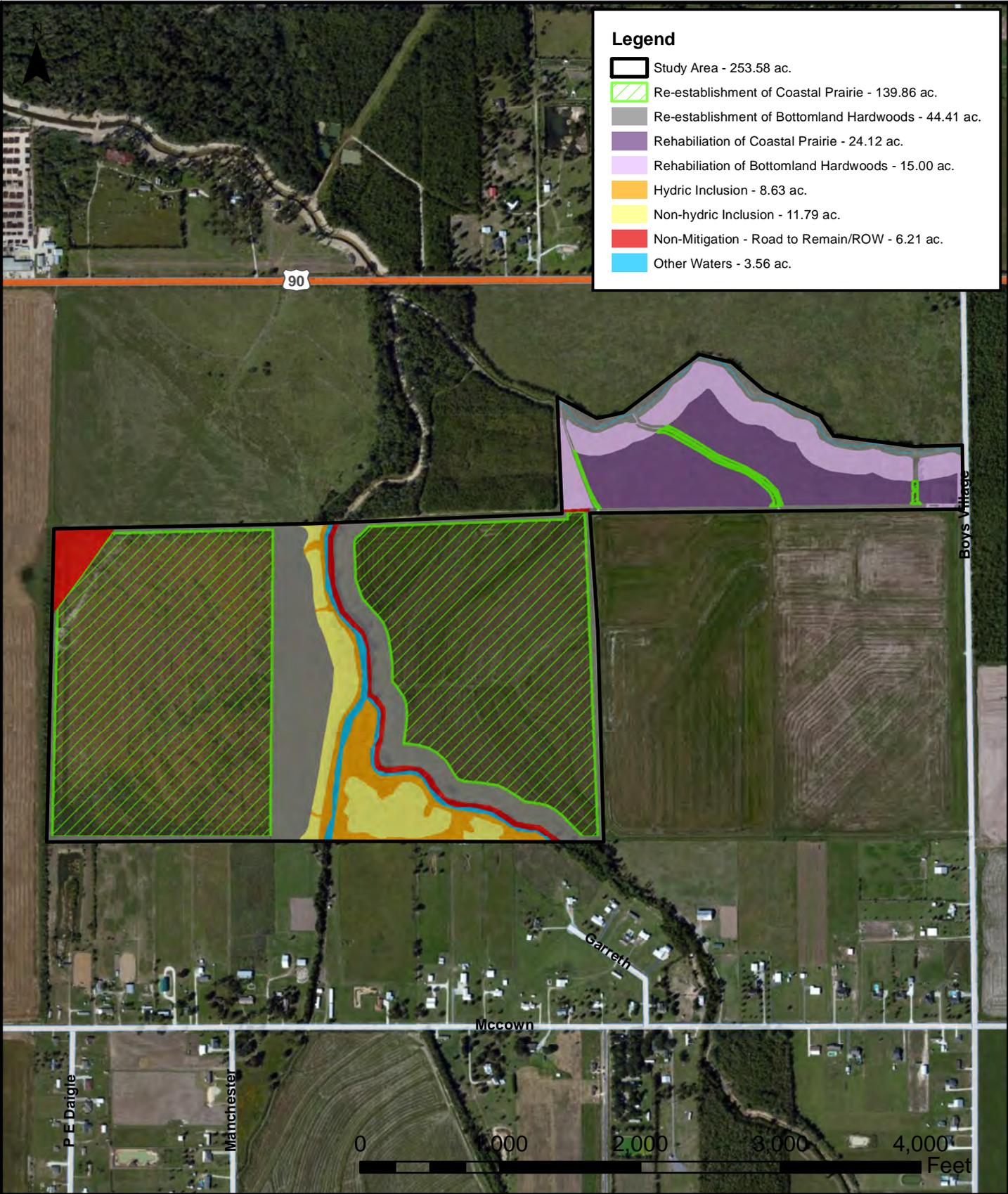


**LAND USE/LAND COVER WITHIN 1 MILE BUFFER**

English Bayou  
Calcasieu Parish

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA  
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure: 4
Date: October 2014
Scale: 1:30,000
ESRI/USGS
Map Author:



## PROPOSED MITIGATION TYPES

English Bayou  
Calcasieu Parish

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

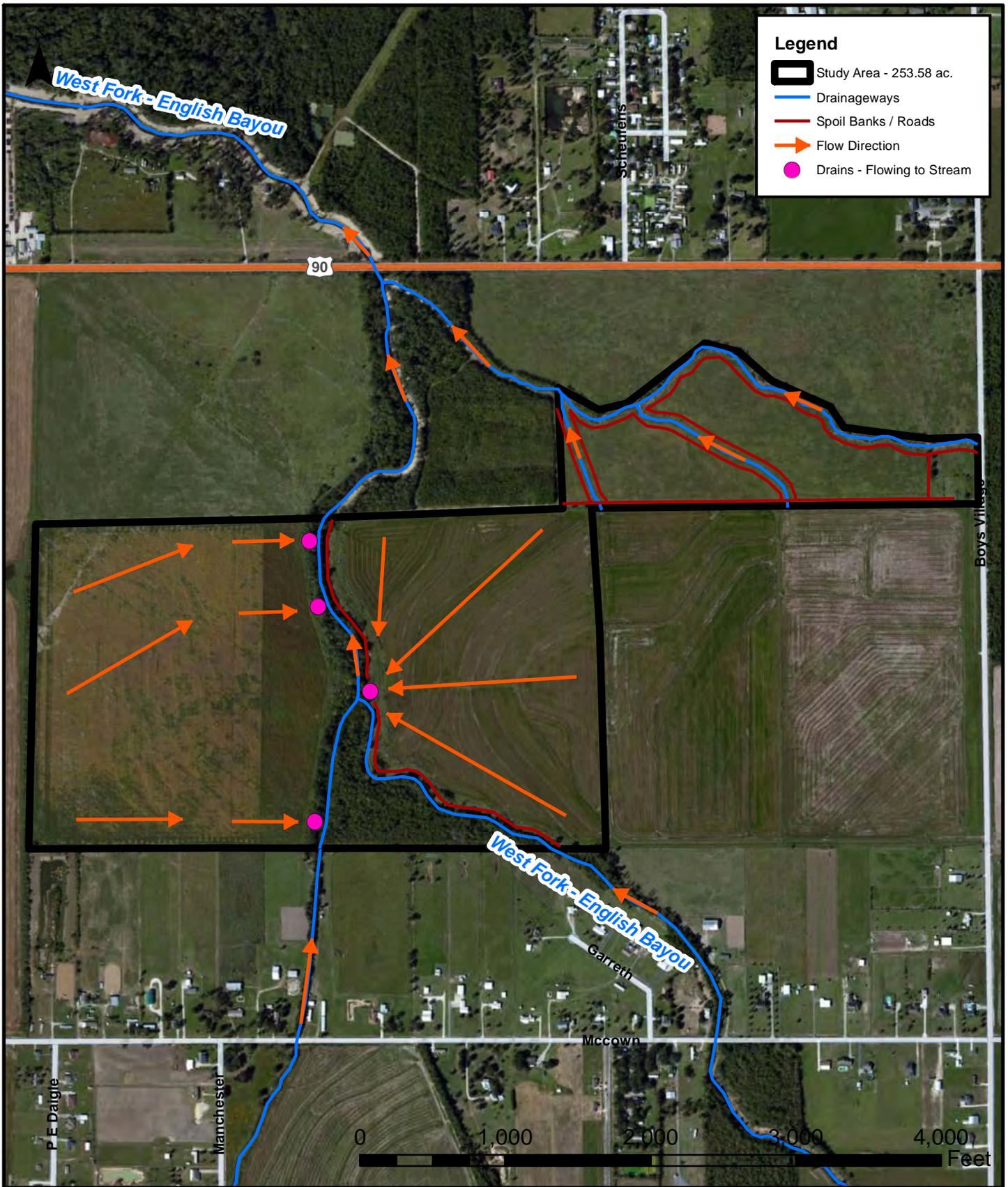
Figure: 5

Date: December 2014

Scale: 1:11,500

Source: ESRI

Map ID:



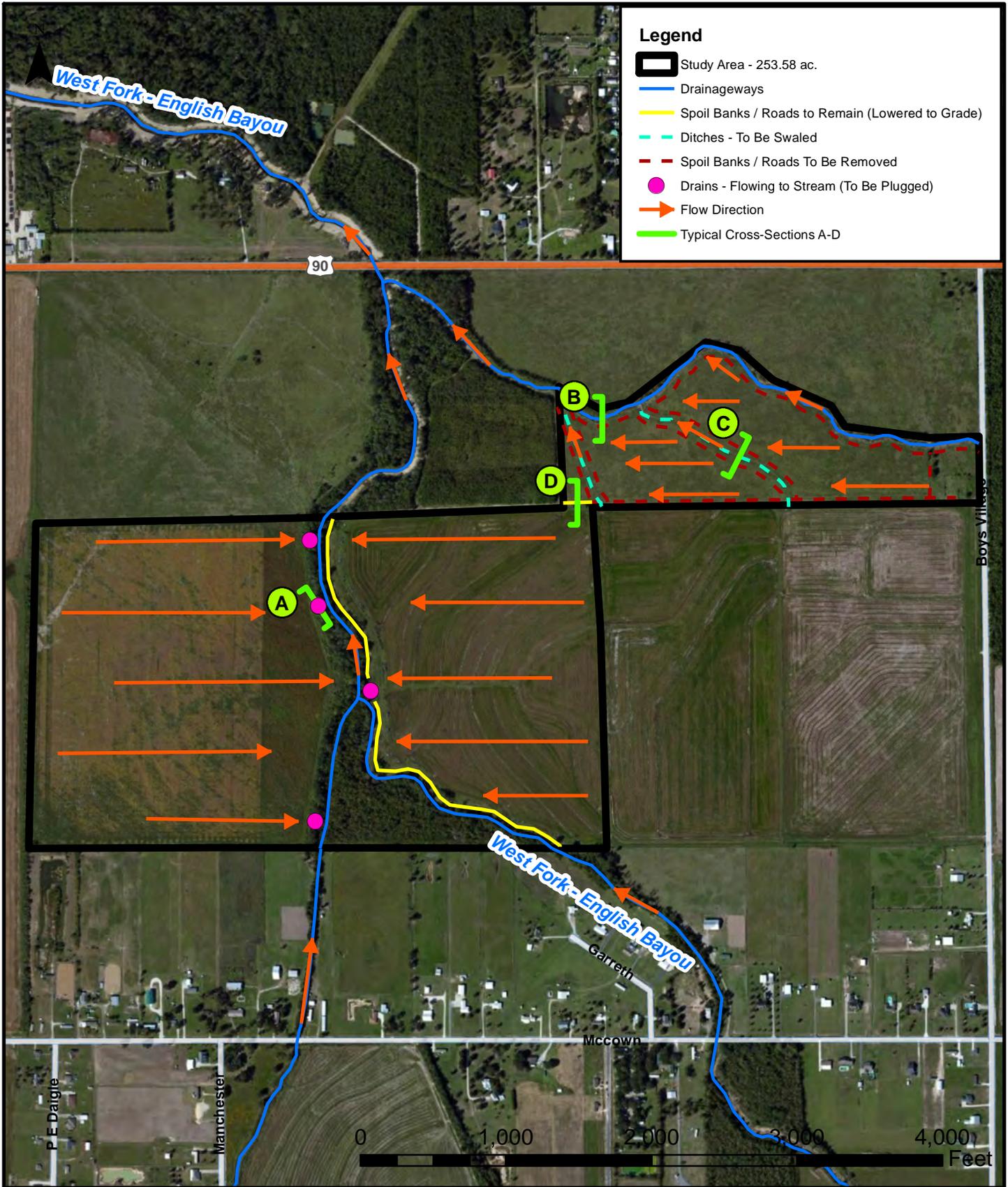
**Legend**

- Study Area - 253.58 ac.
- Drainageways
- Spoil Banks / Roads
- Flow Direction
- Drains - Flowing to Stream

**EXISTING DRAINAGE**  
 English Bayou  
 Calcasieu Parish

Figure: 6
Date: October 2014
Scale: 1:11,000
Source: ESRI
Map ID:

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**Legend**

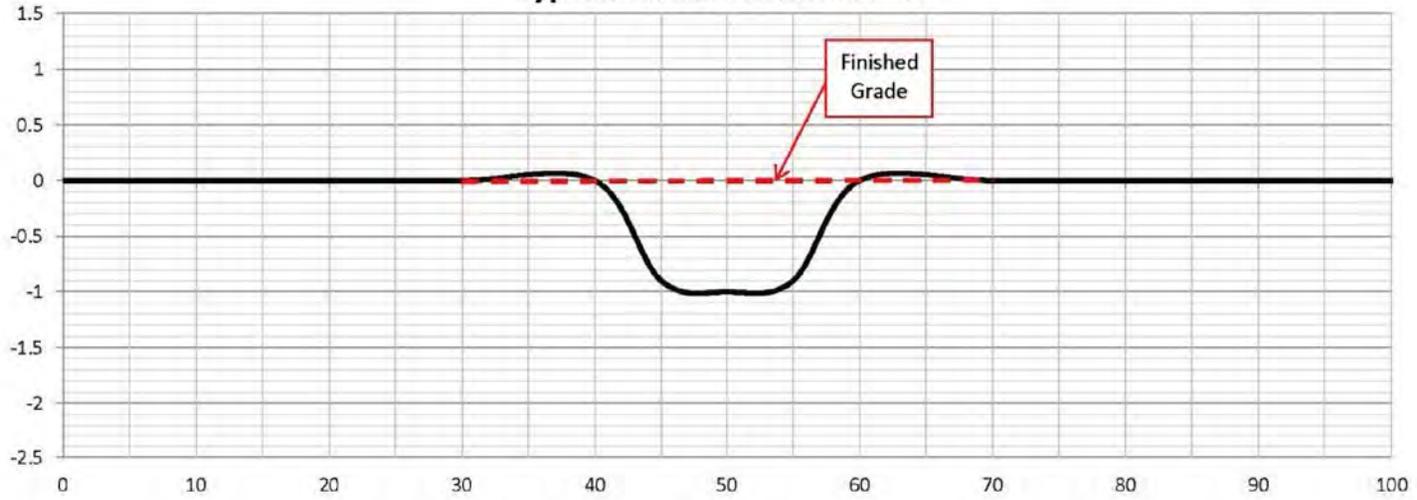
- Study Area - 253.58 ac.
- Drainageways
- Spoil Banks / Roads to Remain (Lowered to Grade)
- Ditches - To Be Swaled
- Spoil Banks / Roads To Be Removed
- Drains - Flowing to Stream (To Be Plugged)
- ➔ Flow Direction
- ] Typical Cross-Sections A-D

**PROPOSED DRAINAGE**  
English Bayou  
Calcasieu Parish

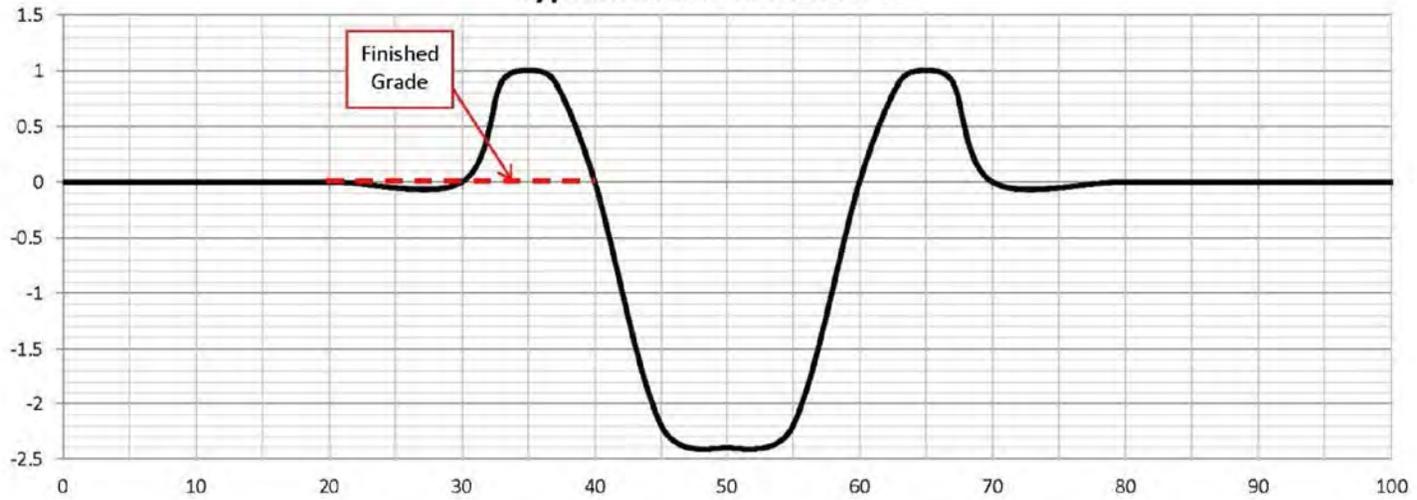
Figure: 7
Date: January 2015
Scale: 1:11,000
Source: ESRI
Map ID:

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Typical Cross-Section A - A'**



**Typical Cross-Section B-B'**



**ENGLISH BAYOU CROSS-SECTIONS A-A' & B-B'**

English Bayou  
Calcasieu Parish

Figure: 7a

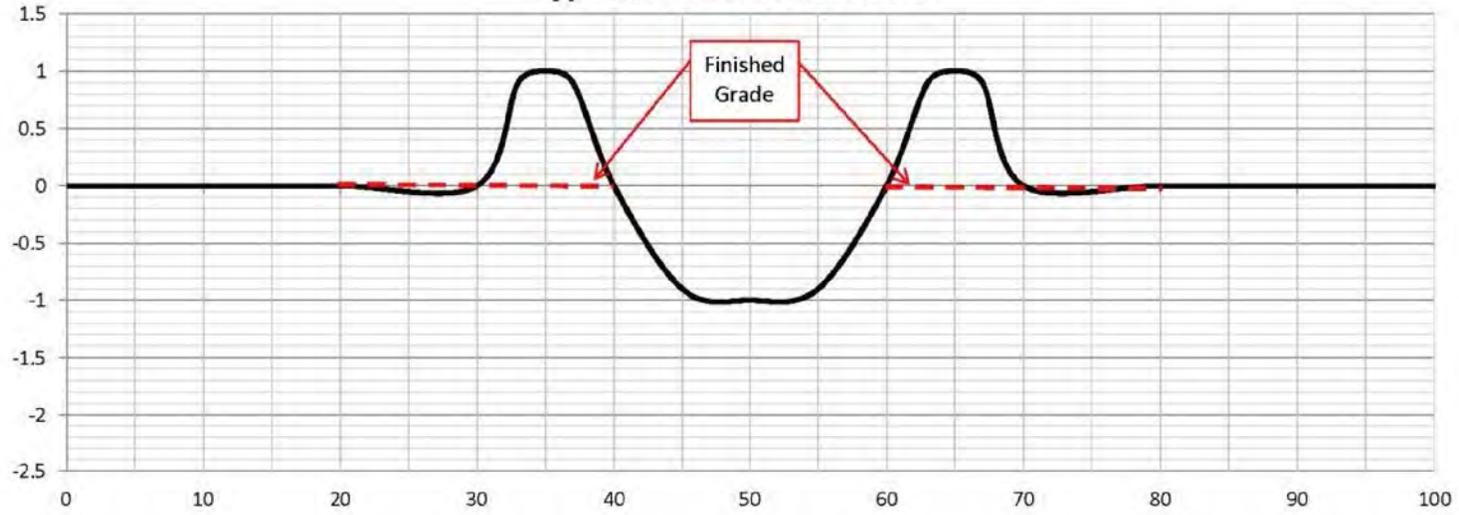
Date: January 2015

Scale: N/A

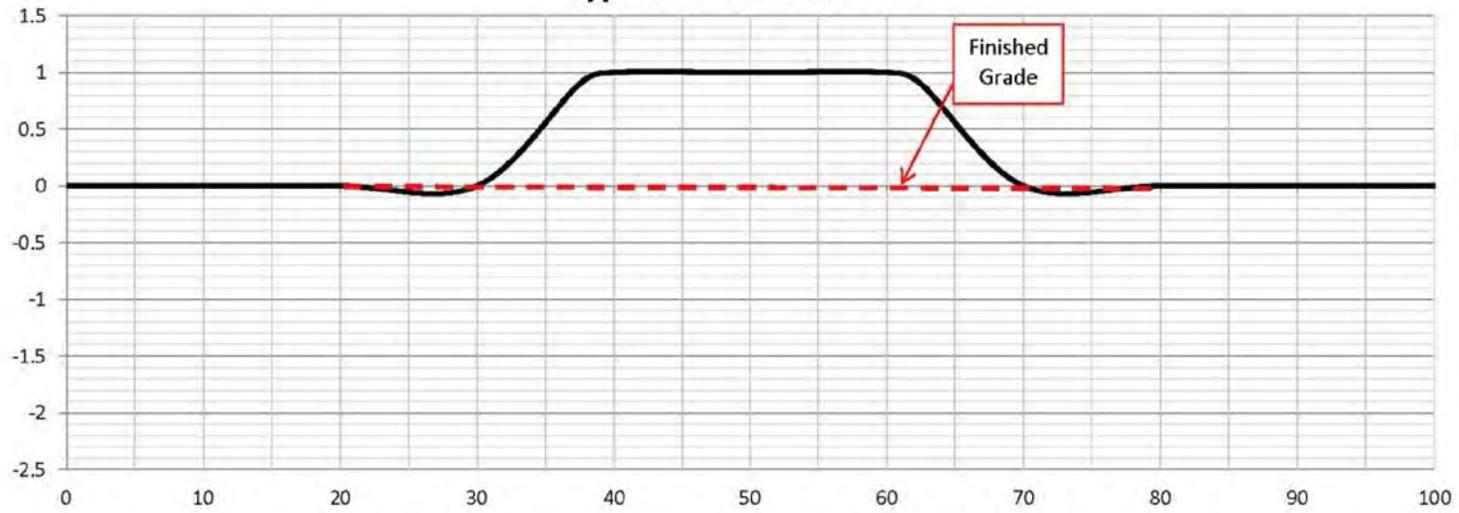
Source: USGS

Map ID:

### Typical Cross-Section C-C'



### Typical Cross-Section D-D'



## ENGLISH BAYOU CROSS-SECTIONS C-C' & D-D'

English Bayou  
Calcasieu Parish

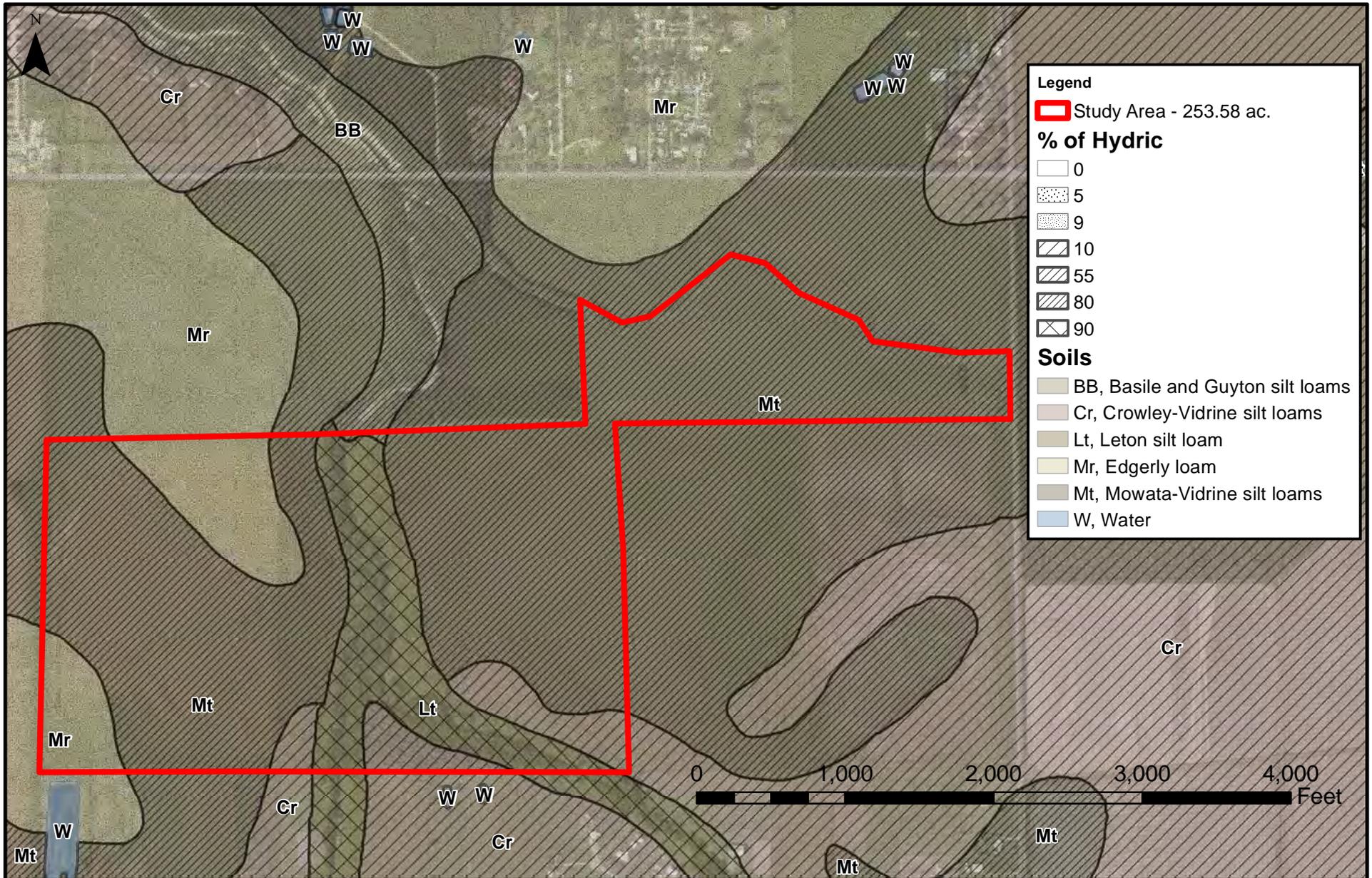
Figure: 7b

Date: January 2015

Scale: N/A

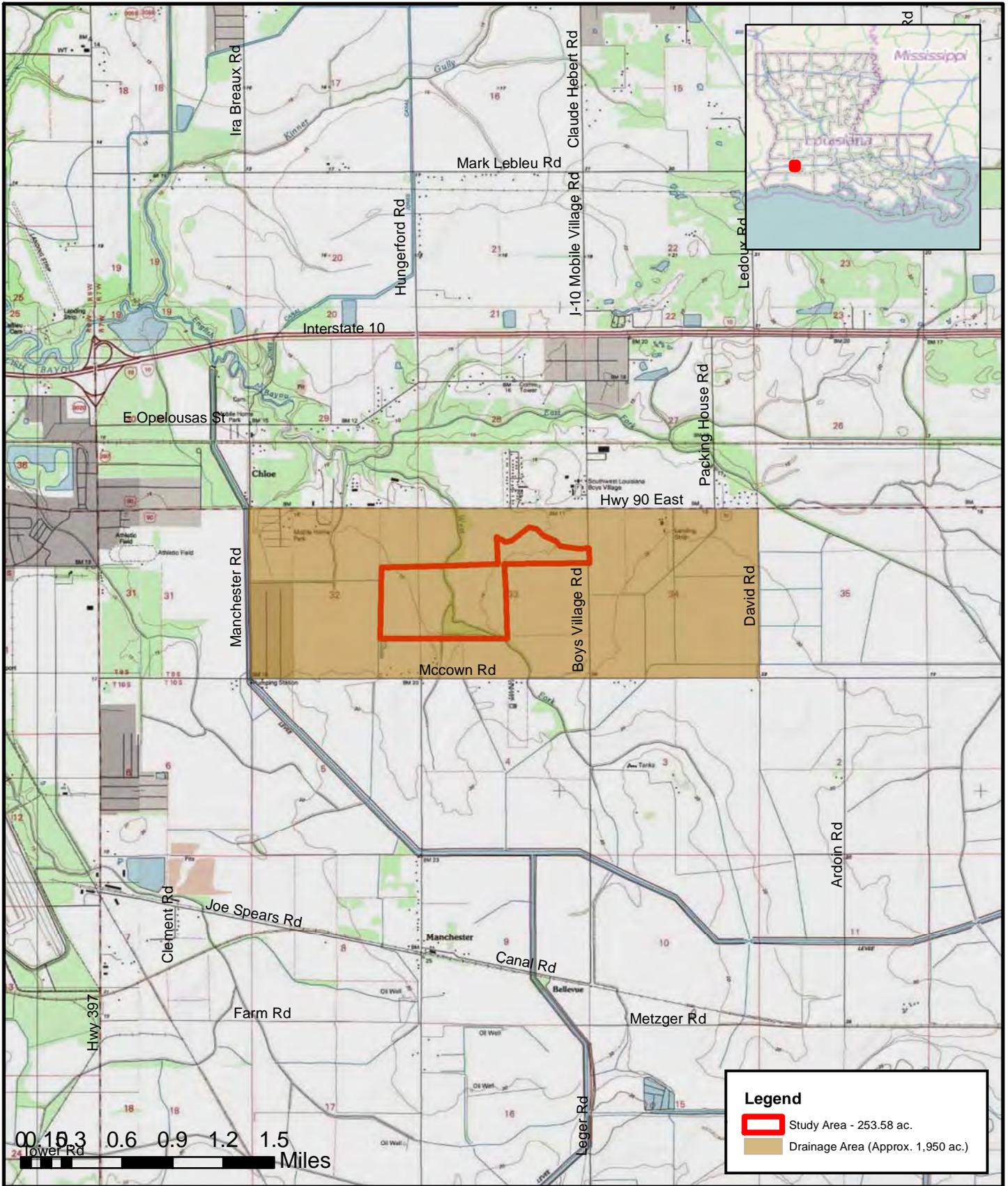
Source: USGS

Map ID:



**SOILS MAP**  
 English Bayou  
 Calcasieu Parish

Figure: 8  
 Date: October 2014  
 Scale: 1:11,000  
 Source: GEC/USGS  
 Map ID: 270131001000-3051



## DRAINAGE AREA

English Bayou  
Calcasieu Parish

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA  
Copyright: © 2013 National Geographic Society, i-cubed

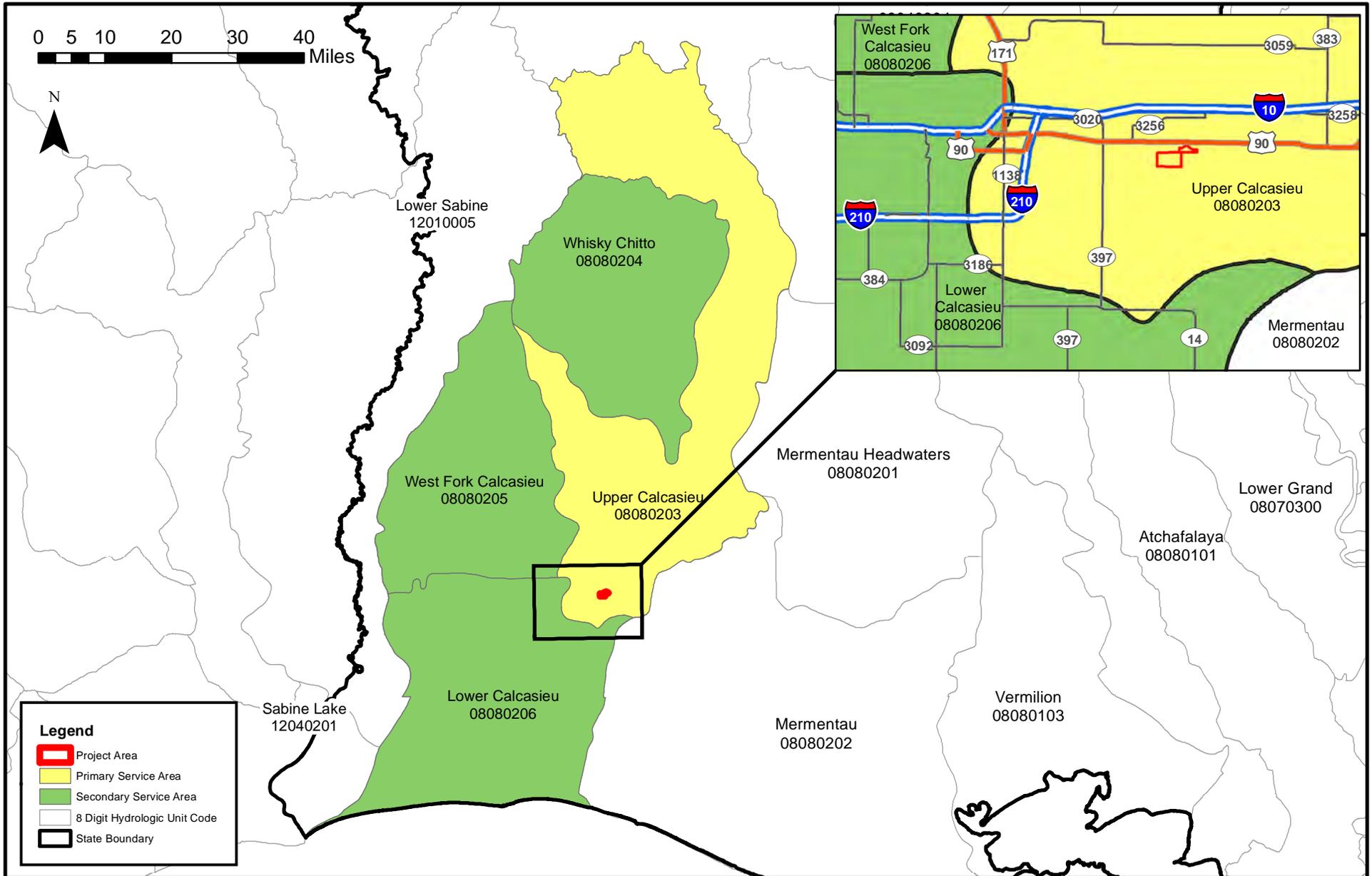
Figure: 9

Date: October 2014

Scale: 1:50,000

ESRI

Map Author:



## BOTTOMLAND HARDWOOD SERVICE AREA MAP

English Bayou  
Calcasieu Parish

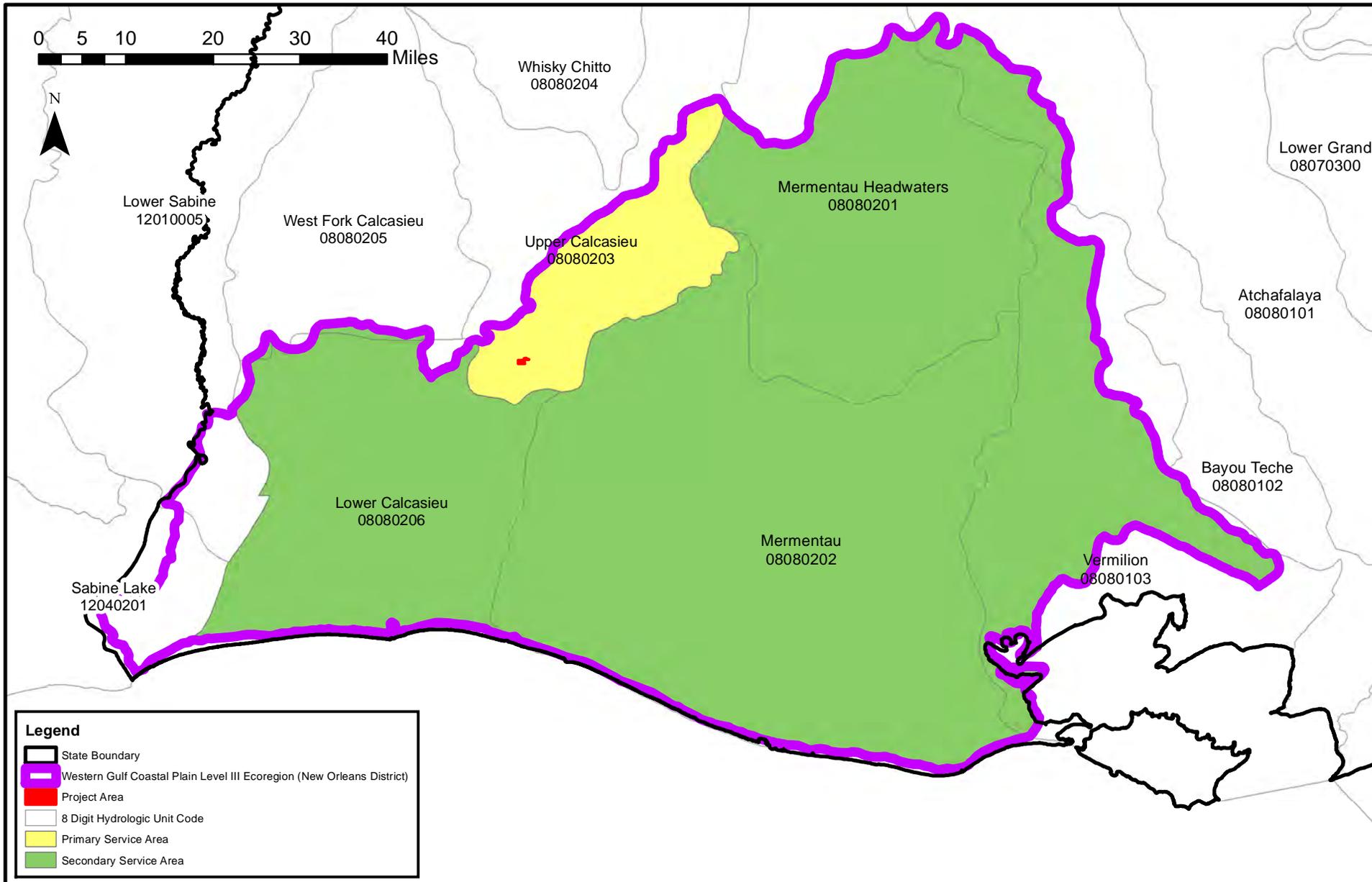
Figure: 10

Date: January 2015

Scale: 1:1,300,000

Source: USGS

Map ID:



**Legend**

- State Boundary
- Western Gulf Coastal Plain Level III Ecoregion (New Orleans District)
- Project Area
- 8 Digit Hydrologic Unit Code
- Primary Service Area
- Secondary Service Area

## COASTAL PRAIRIE SERVICE AREA MAP

English Bayou  
Calcasieu Parish

Figure: 11
Date: January 2015
Scale: 1:1,000,000
Source: USGS
Map ID:

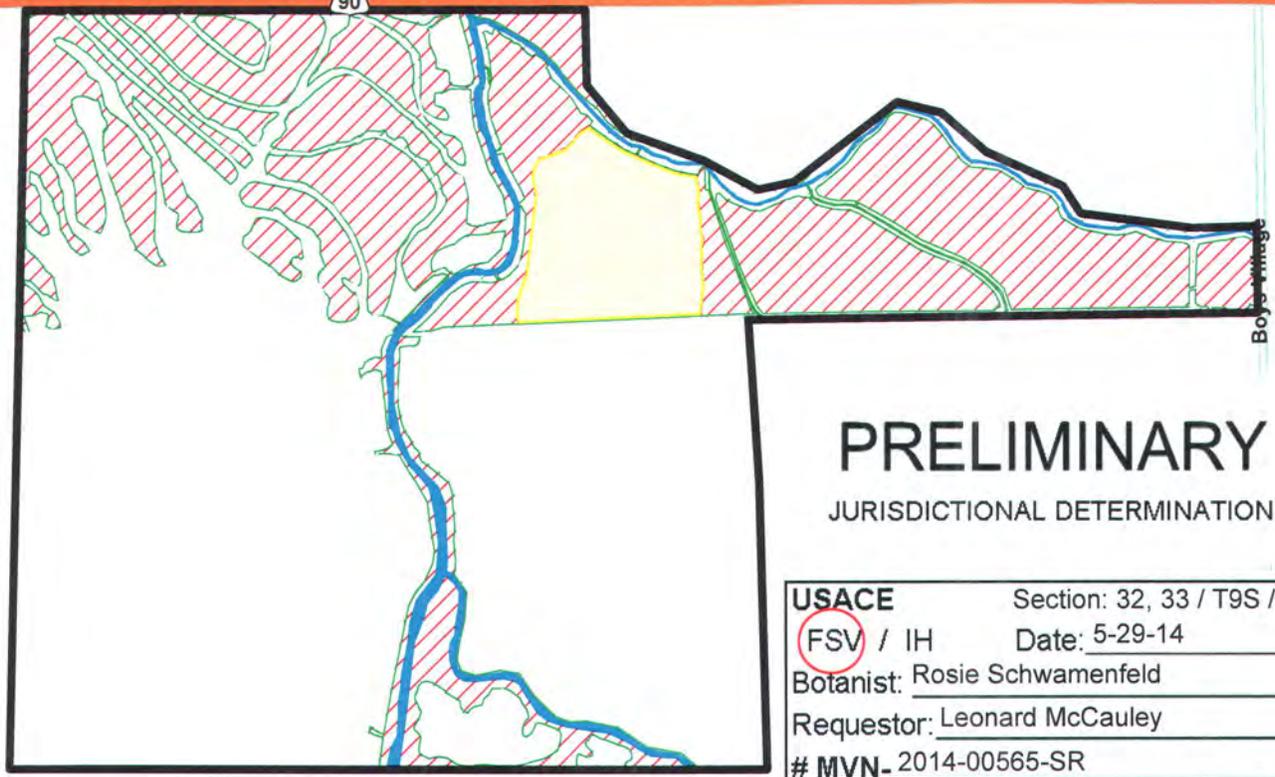
# **Appendix B**

## **Jurisdictional Determination**



Schreufens

90



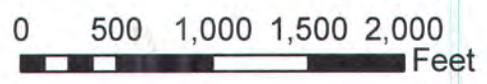
# PRELIMINARY

JURISDICTIONAL DETERMINATION

USACE Section: 32, 33 / T9S / R7W  
**FSV** / IH Date: 5-29-14  
Botanist: Rosie Schwamenfeld  
Requestor: Leonard McCauley  
# MVN-2014-00565-SR

**Legend**

- Sample Plots
- Study Area - 382.54 ac.
- Non-Wetlands - 246.61 ac.
- PRM - 18.10 ac. *Calceph W-82*
- Wetlands - 112.67 ac.
- Other Waters - 5.16 ac
- Stream Centerline - 11,422'



## WETLAND MAP - JD

English Bayou  
Calcasieu Parish

Figure: 4
Date: REVISED July 2014
Scale: 1:12,000
Source: GEC
Map ID: 277027103-3052