

JOINT PUBLIC NOTICE

February 20, 2017

United States Army
Corps of Engineers
New Orleans District
Regulatory Branch
7400 Leake Avenue
New Orleans, LA. 70118

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

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Permit Application Number
MVN-2015-00373-MG

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Project Manager
Elizabeth Hill
WQC Application Number
WQC # 151216-01

Interested parties are hereby notified that a prospectus and permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [X] 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).

ATCHAFALAYA MITIGATION BANK IN AVOYELLES PARISH

NAME OF APPLICANT: Headwaters, Inc., Attn: Clay Cromwell, Post Office Box 2836, Ridgeland, Mississippi, 39158.

LOCATION OF WORK: The site is located to the north and west of the Atchafalaya River and north of Simmesport, Louisiana in Avoyelles Parish, as shown on enclosed drawings (Latitude: 30.997817 N, Longitude: -91.791590 W). The Project is located within the Atchafalaya Watershed, Hydrologic Unit 08080801.

CHARACTER OF WORK: Wetland Mitigation Strategies L.L.C. proposes to fill or plug multiple agricultural drains and furrows as well as restore the natural elevations of the site. These activities are to be conducted for the purpose of enhancing and restoring traditional surface hydrology in 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**

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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

**PROSPECTUS
ATCHAFALAYA RIVER MITIGATION BANK
AVOYELLES PARISH, LOUISIANA
MVN-2015-00373 MG**

Prepared for

U.S. Army Corps of Engineers
New Orleans District
7400 Leake Ave.
New Orleans, Louisiana 70118

Submitted by

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Prospectus
Atchafalaya River Holdings, LLC
Atchafalaya River Mitigation Bank
Avoyelles Parish, Louisiana

1.0 Introduction

Atchafalaya River Holdings, LLC (hereinafter the Sponsor) submits this prospectus to the U.S. Army Corps of Engineers, New Orleans District (New Orleans District), and the Interagency Review Team (IRT) to initiate evaluation of the proposed Atchafalaya River Mitigation Bank (ARMB) in accordance with 33 CFR 332.8(d)(2). The ARMB is being proposed as a first phase of an umbrella bank as the Sponsor expects to have additions that would be located abutting, adjacent or nearby to the proposed bank site. The details pertaining to the use and operation of this site as a mitigation bank will be specified within the subsequent Mitigation Banking Instrument (MBI).

1.1 Bank Sponsor and Owner

Atchafalaya River Holdings, LLC is the Sponsor of the ARMB. The land is owned in fee simple by Dupuy Land Co. who will assume long term ownership and management of the ARMB. Atchafalaya River Holdings, LLC will remain as the bank Sponsor assisting with establishment and long term management of the bank.

1.2 Site Location

ARMB is being presented as a possible phased project with Phase I of the ARMB to include approximately 393.1 total acres providing approximately 237.0 acres of bottomland hardwood (BLH) Re-Establishment, approximately 51.7 acres of BLH Preservation, 42.4 acres of BLH Upland Buffer Re-Establishment and 29.1 acres of BLH Upland Buffer Preservation. The ARMB Phase I is located on a tract owned by Dupuy Land Co. in southeast Avoyelles Parish near the City of Simmesport, 35 miles north of Opelousas and 53 miles northwest of Baton Rouge, Louisiana (Figure 1). The ARMB Phase I is located at latitude 30.997817 and longitude -91.791590 within Sections 5 and 6, Township 1 South, Range 7 East, Avoyelles Parish, Louisiana (Figure 2).

The ARMB Phase I is bordered to the east by the Atchafalaya River with agricultural fields bordered to the south and west and undeveloped forestland to the north and west. The City of Simmesport is located in close proximity to the south divided by Bayou des Glaives along the southwest corner of the Bank property. B Cutoff road is located along the west boundary of the Bank Property and is the primary point of access from the City of Simmesport. Lower Old River and the Mississippi River are located in close proximity to the east (Figure 3).

ARMB is located in the Atchafalaya – Vermillion basin HUC 080801 and the Atchafalaya watershed HUC 08080101. The ARMB is located within the West Atchafalaya Floodway with a general drainage area of +\-21,000 acres extending west to Bayou Des Glaives, north to Bayou Natchitoches and east to Bayou Des Sot. Bayou Des Sot converges with Bayou Courville just north of the ARMB before converging with the Atchafalaya River within the ARMB property. The

ARMB is located within the Atchafalaya-Vermillion basin recognized by the 6 digit Hydrologic Unit Code (HUC) 080801 (Figure 4).

Much of the upper portions of Avoyelles Parish and the Atchafalaya River drainage basin consisted historically of bottomland hardwoods, bald cypress sloughs and scrub/shrub swamp hardwoods. However, as with many floodplains much of this area was deforested and converted to agricultural uses. This region also represents an important flyway for migratory bird species, such as, waterfowl and neotropical migrants, as well as threatened and endangered species, such as, the Louisiana Black Bear.

1.3 Driving Directions

- Proceed on I-10 West from Baton Rouge.
- Merge onto LA-1 N via Exit 153 towards Port Allen.
- Travel approximately 4.5 miles and merge onto US-190 W/LA 1.
- Travel approximately 15.1 miles and then turn right on Wye Rd/LA-1.
- Travel approximately 12.6 miles and then turn left onto Hospital Rd/LA-1.
- Travel approximately 1.8 miles and then turn left onto Morganza Hwy LA-1/LA-10.
- Travel approximately 30.5 miles and then turn right onto Laurel St.
- Travel approximately 0.4 miles and then turn right onto Main St.
- Travel approximately 0.5 miles and then turn left onto B Cutoff.
- Travel less than 0.5 miles before entering the ARMB property.

2.0 Project Goals and Objectives

As described, ARMB has been designed in a phase approach with Phase I located within the northern portion of the Dupuy Land Co. property. The ARMB Phase I is located abutting the Atchafalaya River along the east boundary of Phase I allowing the Sponsor to begin the BLH restoration project abutting the river bank extending the riparian buffer zone to the west. Phase I is also abutting the existing BLH forest to the north and west allowing the Sponsor to remove agricultural fields/practices and restore the forestland to the south and along the banks of the Atchafalaya River and Bayou Courville. The existing BLH forest stretches almost 26 miles to the far side of the Richard K. Yancey Wildlife Management Area. The Phase I project will extend the forestland to the existing BLH habitats present within the central portion of the ARMB property providing connectivity to these habitats and reducing the overall forest fragmentation along the River. Phase II of the planned project would potentially further extend the riparian buffer zone south and connect the fragmented forestland (agriculture) to the Atchafalaya River. The ARMB project would remove the ongoing agricultural row crop activities within the Bank property and restore the Bank property to its historic BLH ecosystem within the Atchafalaya River watershed (Figure 5). Historical imagery depict the Bank property has forestland in 1952.

The goal of the ARMB Phase I is the Re-Establishment of approximately 237.0 acres and Preservation of approximately 51.7 acres of BLH habitat. The ARMB Phase I will also provide Upland Buffer Re-Establishment of approximately 42.4 acres and Upland Buffer Preservation of approximately 29.1 acres of BLH habitat.

Table 1: Current Habitat Types and Land Uses for ARMB Phase I

Habitat Type	Land Use	Acreage
PC Farmland	Agriculture	289.3
Section 404 Waters	Waters	12.5
Section 404 Wetlands	Wetlands	52.9
Forested Uplands	Forestland	29.1
CRP	Agricultural	9.3
Total	-	393.1

Table 2: Proposed Mitigation Bank Habitat Types for ARMB Phase I

Present Habitat Type	Proposed Habitat Type	Acreage	Mitigation Type
PC Farmland	BLH	237.0	Re-establishment
PC Farmland	BLH	42.4	Upland Re-establishment
Section 404 Wetlands	BLH	51.7	Preservation
Upland	BLH	29.1	Upland Preservation
Section 404 Waters	N/A	12.5	Section 404 Waters (Non-Mitigation)
	Wildlife Openings	7.0	Non-Mitigation
	Access Roads	13.4	Non-Mitigation
Total		393.1	

3.0 Ecological Suitability of the Site

3.1 Historic Site Conditions

ARMB lands are located in Simmesport, Avoyelles Parish, Louisiana. Historically, BLH forests existed throughout the Parish, but large portions of the land were cleared for silviculture, livestock grazing and agricultural uses. As described, historic photography indicates that the ARMB property was forestland around 1952. The ARMB lands are currently, and have been historically, used for agricultural activities.

3.2 Summary of Current Site Conditions

3.2.1 Current Land Uses

The vast majority of the ARMB property is utilized for agricultural row crop production purposes. The exception would include the existing riparian buffers along the east boundary of ARMB Phase I and abutting the Atchafalaya River. Alterations to the historic landscape would also include interior roadways and drainage improvements in support of the agricultural activities. Two (2) dredge disposal sites are also present within the ARMB property, which were utilized by the U.S. Army Corps of Engineers (USACE) in the early 1900's when improving

portions of the Atchafalaya River system. One (1) dredge disposal site is located within southeast portion of the ARMB property south of the Phase I boundary. The second dredge disposal site is located along the east boundary of the ARMB Phase I property along the immediate bank of the Atchafalaya River. Each dredge disposal site has been removed from the ARMB Phase I proposal and may be considered as a part of future phases to the Bank following cancellation of USACE servitudes.

With the exception of the agricultural production activities prevalent within the ARMB, smaller portions of the property remain in undeveloped forestlands. The forestland has been managed for timber production and utilized for recreational use over time.

3.2.2 Current Vegetation

Prior Converted Farmlands- As discussed, the subject property is predominately occupied by an open field habitat type that has historically been utilized for agricultural row crop production purposes. Due to the topography, natural drainage patterns of the site and the overall property location, the preponderance of the open field complex has hydric (soils and hydrology) characteristics throughout. Given this, it was determined that the significance of the open field habitat present within the subject property would be considered as a prior converted cropland habitat. Consultation with the Natural Resource Conservation Service (NRCS) confirmed that the open fields within the subject property are considered as prior converted and in some cases farmed wetlands.

The soils matrix color within the open field habitats ranges from 4/1–5/1 (dark gray/gray), 4/2-5/2 (dark grayish-brown/grayish-brown) to 5/3 (brown) on the 10YR Munsell Soil Color chart. A matrix color of 5/1 (gray), 4/3-4/4 (reddish-brown), 4/6 (yellowish red) also appears on the 5YR Munsell soil color chart. There is a soil mottling present (~10% - 40%) with a soil mottle color of 3/4-4/6 (dark yellowish-brown) to 5/6 (yellowish-brown) on the 10YR chart. Also, there is a soil mottle color of 4/6-5/8 (strong brown) on the 7.5YR Munsell soil color chart and a 3/4 (dark reddish-brown), 4/4 (reddish-brown) on the 5YR Munsell soil color chart. Depending on soil type, hydrologic indicators were limited to redox formations and mottling within the upper soil horizon. The drainage improvements and overall property management has increased storm water flows away from the open fields. As a result, hydrologic indicators are currently limited due to property improvements.

Forested Wetlands – The identified forested wetland habitats are directly associated with the presence of the Atchafalaya River and its associated tributaries that transect portions of the property. This complex located along the east, south and north boundaries of the property provides a riparian buffer to the Atchafalaya River containing the “first levee” along the river bank and the “first flat” or floodplain as you progress away from the river. Forested habitats observed within the northern portion of the site and interspaced throughout low-lying areas were also

considered as forested wetlands and natural depressions. These habitats are believed to perform functions vital to the prominent streams, including water control, groundwater recharge, soil enrichment and erosion control as they are typically located along the banks of the prominent stream and drainages throughout the site. The forested wetlands are primarily occupied by sweetgum, overcup oak, willow oak, hackberry, American sycamore, bald cypress and American elm. Primary midstory components consist of red maple, box elder, willow oak, water oak and green ash. The primary understory components include swamp privet, switch cane, palmetto, deciduous holly, cinnamon fern, buttonbush, *polygonum spp.* and *juncus spp.*

The soils matrix color within the forested wetland area ranges from 10YR 5/1-6/1 (gray) to 5/2 (grayish brown) on the Munsell Soil Color Chart. Soil mottle color of 4/4 (dark yellowish brown) to a 5/6 (yellowish-brown) on the 10YR chart is also represented. Hydrologic indicators within this area include inundation, soil saturation in the upper 12 inches, sulfuric odor, fluted trunks, drift deposits, water stained leaves, water marks and oxidized root channels. As described, the forested habitats are generally located along the perimeter of the open fields and subject property. The drainage improvements observed within the open fields were in most cases directed to convey storm water flows into the adjacent forestlands.

Conservation Reserve Program (CRP) – Consultation with the landowner and with the Sponsor revealed the presence of an area enrolled in the Conservation Reserve Program (CRP). With respect to ARMB Phase I, the CRP area is located in the northeast portion of the Dupuy property along the perimeter of the open agricultural fields. The CRP is considered grassland CRP and is a riparian buffer along the agricultural fields. The CRP included in Phase I is managed like the PC land and will be included as part of the Re-establishment mitigation work plan. All CRP contracts would be closed or terminated prior to approval.

The soils matrix color within the CRP area ranges from 10YR 5/1-6/1 (gray) to 5/2 (grayish brown) on the Munsell Soil Color Chart. Soil mottle color of 4/4 (dark yellowish brown) to a 5/6 (yellowish-brown) on the 10YR chart is also represented. Hydrologic indicators within this area include inundation, soil saturation in the upper 12 inches and oxidized root channels.

3.2.3 Current Hydrology

The Bank Property is generally split with a portion of the storm water flows conveyed through unnamed tributaries of Bayou Courville and Bayou Des Glaises located to the east and west, respectfully. Bayou Courville and Bayou Des Glaises flow generally southeast into the Atchafalaya River, located along the south and east boundaries of the Bank property. Bayou Des Glaises flows into the River along the south west boundary of the Bank property while Bayou Courville converges with the River in the northeast corner of the Bank property. Fish Bayou, being a tributary of Bayou Courville, also extends through the north portion of the

Bank Property. Given the current land use, agricultural drains can be found within the confines of the agricultural fields. Agricultural drains were constructed to convey surface water across the property during rain events. The excavated drains were designed and constructed connecting to larger conveyances within and along the perimeter of the Bank Property. In most cases, the spoil that was excavated was placed along the top banks of each channel or land planed back within the agricultural fields.

As described, current hydrology has been altered from the historical hydrologic regime through property improvements that have been completed over time in association with the agricultural land use. Each property improvement was generally completed to increase surface water runoff away from agricultural fields and associated row crops. No impoundments are present within the limits of the Bank Property. It was determined that 15,197.1 linear feet of agricultural drains are present within the limits of the Phase I ARMB. The agricultural drains can be described as shallow furrows located within the open agricultural fields. These drains convey storm water away from the agricultural row crops and towards intermittent drains located along field edges or wood lines. The larger agricultural drains located along field edges and wood lines are also regularly maintained to convey storm water away from the fields towards Bayou Courville and Fish Bayou (Section 404 Waters). Spoil material, consisting of earthen material, excavated from the construction of the agricultural drains can be found along the top bank of two (2) primary drains located within the central portion of the Bank Property. However, in each instance, the presence of the spoil material does not adversely affect the storm water runoff across the site. Storm water flows were found to flow to the east and northeast away from the spoil material. Further, evidence of ponding or reduced runoff was not noted adjacent to the spoil areas and agricultural drains. Earthen material excavated as a part of other drain improvements is believed to have been land planed within the agricultural fields. The current hydrology patterns, locations of agricultural drains and Section 404 Waters are depicted on [Figure 6](#).

As described, historically, the natural storm water runoff was conveyed via overland flows to the east and northeast across the Bank Property. Storm water runoff was conveyed through the unnamed tributaries and natural drainage patterns in wetland systems historically present. Property improvements have altered the historic drainage patterns to concentrate and convey storm water runoff through the unnamed tributaries throughout the Bank Property. The current topography continues to convey storm water runoff east and northeast through the Bank Property towards Fish Bayou, Bayou Courville and the River. During periods of high rainfall and backwater events, flooding events would also extend flood waters from the Atchafalaya River across large portions of the Bank Property. The presence of the agricultural drains throughout the Bank Property have altered these flows to minimize or maximize storm water sheet flows across the Bank Property. To support the re-establishment of BLH forestlands within the Bank Property, approximately 1,194.1 linear feet of agricultural drains will be filled/graded and approximately 8,855.5 linear feet of agricultural drains will be

plugged returning the sheet flow of storm water across the Bank Property. All spoil materials would be graded and tilled to minimize spoil concentrations and promote the restoration of the historic hydrology regime within the Bank Property. In many cases, spoil material previously excavated would be utilized to fill/grade and plug the drains. This would also reduce the additional fill materials present along the top banks of the drainages further restoring the connectivity of the drains and their riparian buffer zones.

3.2.4 Historic Hydrology

The Bank Property is divided into two (2) drainage basins with a portion of the storm water flows conveyed through unnamed tributaries of Bayou Courville and Bayou Des Glaises located to the north and west, respectfully. Bayou Courville and Bayou Des Glaises flow south and southeast into the Atchafalaya River, located along the east boundary of the Bank Property. Bayou Des Glaises converges with the Atchafalaya River along the south west boundary of the Bank Property while Bayou Courville converges with the River in the northeast corner of the Bank Property. Fish Bayou is also present within the north portion of the Bank Property, which flows into Bayou Courville before converging with the Atchafalaya River. The drainage area for each drainage system is collectively approximately 21,000 acres that, as described, flow through the Bank Property prior to the convergence with the Atchafalaya River, abutting the east and south boundary of the Bank Property. The historic hydrology of the Bank Property and the adjacent properties are depicted in [Figure 7](#).

The historic hydrology within the Bank Property has been altered through the original conversion from BLH to open agricultural land and common agricultural practices during the 1950-60's. Excavation and realignment of drainage features within the interior limits of the Bank Property has altered historic overland sheet flow and confined it to the primary drainages located along the perimeter of the Bank Property, previously described. Improvements to agricultural fields included intermittent drains throughout the Bank Property increasing storm water runoff away from the Bank Property into adjacent conveyances. The historic hydrology and drainage patterns were determined through the use of available topographic maps and LIDAR remote sensing technology to determine elevations within the Bank Property and the adjacent properties located in the drainage area of the Bank Property.

The Bank Property was delineated in April of 2015 by Headwaters, Inc. Through consultation with the New Orleans District, a preliminary jurisdictional determination was issued on November 18, 2015 referenced as MVN-2015-01027-SB. The determination concluded that Section 404 wetlands are present within the riparian buffer zones adjacent the open agricultural fields. The agricultural fields were determined to be Prior Converted (PC); therefore, these areas are not jurisdictional. A copy of the preliminary jurisdictional determination has been included within the Appendices of this report.

3.2.5 Mapped Soil Types

Soils – As evidenced by the *Soil Survey for Avoyelles Parish Louisiana*, published in September 1986 by the USDA - Soil Conservation Service [now Natural Resources Conservation Service (NRCS)], the soils on the subject property primarily consist of Tensas-Sharkey clay with other soils present such as Moreland silt loam, Moreland clay, Roxana very fine sandy loam and Convent very fine sandy loam.

The Tensas-Sharkey complex, overwash, undulating, occasionally flooded series consists of undulating, poorly drained to somewhat poorly drained soil on natural levees on the Atchafalaya River. The soil is subject to occasional flooding for brief to very long periods. Slopes range from 0 to 5 percent.

The NRCS, Avoyelles Parish, Louisiana, has categorized the significance of the open agricultural fields as “Prior Converted Farmland” (PC). PC is defined by the Soil Conservation Service (Section 512.15 of the National Food Security Act Manual, August 1988) as wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values.

The normal circumstances for PC Farmlands generally do not support a prevalence of hydrophytic vegetative components and, as such, are not subject to regulation under Section 404 of the Clean Water Act. In most cases, because of the magnitude of hydrological alterations that have most often occurred on PC Farmlands, such farmland minimally, if at all, meet the hydrology requirements as described within the 1987 Corps of Engineers’ *Wetlands Delineation Manual*. Given this, “waters of the United States” do not include PC farmland. Notwithstanding the determination of an area’s status as PC farmland by any other Federal Agency, for the purpose of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the Environmental Protection Agency (EPA).

If PC farmland is abandoned (512.17 National Food Security Act Manual as amended, June 1990) and wetland conditions return, then the area will be subject to regulation under Section 404 of the Clean Water Act. An area will be considered abandoned if for five (5) consecutive years there has been no cropping, management or maintenance activities related to agricultural production. In this case, positive indicators of all mandatory wetlands criteria, including hydrophytic vegetation, hydrology and hydric soils must be observed. The soil survey for the Bank property is included as [Figure 8](#).

3.2.6 Property Encumbrances

Two (2) servitudes are presently found on the Dupuy Land Co. property. One (1) servitude calculated as +/- 334 acres and is located within the south-central portion

of the bank property. The second servitude is calculated as +/- 25 acres and is located within the east central portion of the bank property. The servitudes are depicted on the survey plat map included within Appendix A of this prospectus document. The servitudes were placed on the property as a part of the dredging activities within the Atchafalaya River and the placement of dredged spoil material within the Dupuy Land Co. property. The servitudes encompass the spoil placement areas dating back to the early 1900's. At this time, both the Operations and Engineering divisions of the USACE New Orleans District and Vicksburg District have agreed to cancel the servitudes.

The presence of the two (2) servitudes have been excluded from the current ARMB Phase I proposal. Once the servitudes are canceled and market conditions dictate, those properties may be proposed under future phases of the ARMB.

3.2.7 Zoning and Adjacent Property Development

ARMB and adjacent property is within unincorporated land and is absent of zoning regulations. ARMB is connected to and primarily surrounded by natural tributaries and forested wetland areas, including large forestlands located north and northwest of the site that are known to be occupied by Louisiana Black Bears and considerable other wildlife. As described, Bayou Des Glaises, Fish Bayou and Bayou Courville being direct tributaries of the Atchafalaya River are the primary conveyances of storm water runoff from within the Bank property. When considering a one (1) mile radius around the Phase I Bank property, the current land use type consists of 36% BLH forest, 34% cultivated cropland, 13% developed, 12% water, 3% scrub-shrub/Cutover and 2% Pasture/Open Field (Figure 9). The agricultural lands are generally concentrated along the banks of the primary drainages where fertile soils are located. The forestlands are concentrated to the north and northwest with the Atchafalaya River located along the east and south boundary.

The ARMB is positioned within the center of the agricultural fields and its re-establishment will reduce the current forestland fragmentation restoring and preserving a wildlife corridor. The project will also reduce non-point source pollution through the elimination of agricultural production and the removal of improved drainage features directly abutting the River. Further, the position of the mitigation site along the convergence of three primary tributaries of the Atchafalaya River, as well as the Atchafalaya River itself, will provide non-point source pollution filtration increasing water quality downstream from the project site. Figure 10 depicts the Louisiana Black Bear Designated Critical Habitat and its relation to the Bank property. The entirety of the property falls within Designated Critical Habitat.

3.2.8 Preliminary Jurisdictional Determination

The ARMB property was delineated in April of 2015 by Headwaters, Inc. A copy of the wetland delineation report was submitted to the USACE, New Orleans District and has been assigned project number MVN-2015-01027-SB. A copy of

the preliminary jurisdictional determination is included within the Appendices of this report.

3.3 Water Rights and Hydrological Influences

3.3.1 Water Rights

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.

3.3.2 General Watershed Characteristics

3.3.2.1 Water Sources and Losses

The sources of water to the project area are currently direct precipitation and surface flow from adjacent land from the west and north. Additionally, overland flooding from the Atchafalaya River provides a source of surface water during normal seasonal flooding events. Storm water flows across the site generally via overland flows into agricultural drainages interconnected to unnamed tributaries of Bayou Courville and Bayou Des Glaises, located in the northeast and southwest portions of the property, respectively. Additionally, a portion of the flows is also believed to flow generally south directly into the Atchafalaya River.

Avoyelles Parish is located in the east-central part of Louisiana. Marksville, the parish seat, is near the center of the parish and is about 30 miles southeast of Alexandria. The Red River forms part of the northern and eastern boundaries of the parish. It flows into the Atchafalaya River, which serves as the southeastern boundary of the parish. Other important streams are Bayou Choctaw, Bayou de Lac, Bayou Boeuf, Bayou des Glaises, Petite Riviere, La Vieille Riviere, Bayou Natchitoches and West Atchafalaya Diversion Canal. The Atchafalaya complex, Lac aux Perles, and Saline Lake are the largest lakes in the parish. Parish wide, about 52 percent of the land is cultivated cropland and pasture and 34 percent is woodland.

The total annual average precipitation is 61.25+ inches. Of this, 30 inches, or 50 percent, usually falls in April through September which includes the growing season for most crops.

3.3.2.2 Hydroperiod

Hydric soils indicate that the site is either currently inundated or saturated in the upper soil profile for at least 14 consecutive days per year or was subject to these conditions prior to conversion of the site to agriculture. This site is comprised primarily of Tensas-Sharkey complex soils which, in

this area, typically have a seasonal high water table between the surface and 36 inches below the surface during the months of December and April.

3.4 Water Quality

The Atchafalaya River Basin is located in the south-central part of Louisiana. The Atchafalaya River is a distributary of the Red, Black and Mississippi Rivers, presently carrying about 30% of the Mississippi's flow. The basin is well-defined by a system of levees which surround it on the north, east, and west. The entire basin serves as a major floodway for Mississippi River floodwaters. It encompasses approximately 1,806 square miles and is predominantly wooded lowland and cypress-tupelo swamp with some fresh water marshes in the lower distributary area. It constitutes the largest contiguous fresh water swamp in the United States.

The ARMB project area is located in the drainage area sub segment LA010101_00, being the upper reaches of the Atchafalaya River Basin. The designated uses for subsegment LA010101_00 are Secondary Contact Recreation (SCR), Fish and Wildlife Propagation (FWP) and Primary Contact Recreation (PCR).

The removal of irrigated and non-irrigated crop production, filling of drainage features and planting of trees for this project will result in overall water quality improvements due to increased filtration and plant uptake, reduction of agricultural pesticides and herbicides, reduction of use of nitrogenous or phosphorous fertilizers, and minimization of sedimentation/siltation as well as TSS and turbidity (i.e., nonpoint source pollution prevention).

4.0 Wildlife Values

Bottomland hardwood forests provide important ecosystem functions, including maintenance of water quality, habitat for fish and wildlife species, regulation of flooding and stream recharge. In addition to the many species present in BLH forests, the ARMB seems properly sited to add to habitat and corridors of and for the Louisiana Black Bear. The area was previously designated Critical Habitat by the U.S. Fish & Wildlife Service for the Louisiana Black Bear. The Louisiana Department of Wildlife and Fisheries (LDWF) also identified Avoyelles Parish as falling within the current range of Louisiana Black Bears in its Rare Animals of Louisiana publication. The ARMB is uniquely located within previously designated Critical Habitat, adjacent to the Atchafalaya River and on the southern edge of a major BLH complex which includes several state wildlife management areas and federal national wildlife refuges. Bottomland hardwoods extend north from the ARMB all of the way to Acme on the north, Deer Park on the northeast and Marksville on the west. Within these connecting forestlands are Richard K. Yancey Wildlife Management Area (comprised of the former Three Rivers and Red River Wildlife Management Areas), Bayou Cocodrie National Wildlife Refuge, Lake Ophelia National Wildlife Refuge, Grassy Lake Wildlife Management Area and Pomme de Terre Wildlife Management Area. Reforestation of this property will undoubtedly serve the purpose of increasing habitat and reducing fragmentation and as an interconnecting corridor habitat for the Louisiana Black Bear. The rehabilitation of the forest will also provide wintering habitat for neotropical migrants ([Figure 10](#)).

5.0 Bank Establishment

5.1 Management Summary

5.1.1. Hydrologic Restoration

The Sponsor proposes to re-establish 237.0 acres of BLH forested wetlands from open agricultural fields by ceasing intensive agricultural practices for row crop production and restoring the relic hydrologic regime and planting desirable species of native BLH vegetation. In addition, the Sponsor proposes to preserve 51.7 acres of BLH forested wetlands existing within the Bank Property. Further, the Sponsor proposes to re-establish 42.4 acres of BLH forested upland buffer and preserve 29.1 acres of BLH forested uplands located along the top bank regions of the Atchafalaya River. The mitigation work plan will provide the opportunity to restore and protect 360.2 acres of BLH habitat within the Atchafalaya River watershed (Figure 11).

1. The initial hydrology restoration work plan will include the filling and grading, to as close as practicable, agricultural drains located within the Bank Property. One (1) agricultural drain approximately 1,194.1 linear feet in length and located along the west boundary will be filled and graded with spoil material located along the top bank of the drain. The drain will be graded to an elevation comparable to the forestlands to the west and the existing open agricultural fields to the east, restoring the natural sheet flow of storm water runoff across the Bank Property. The agricultural drain was constructed along the wood line and field boundary to further convey storm water runoff from the open agricultural fields. Storm water currently conveys storm water to the north towards a tributary of Fish Bayou and to the south towards a tributary of Bayou Courville. Figure 11 depicts the location of the agricultural drain to be filled and graded as a part of the mitigation work plan. A cross sectional view, representing the agricultural drain, has been prepared and is included within the appendices of this report.
2. As a part of the hydrology restoration work plan, it is also planned to place thirteen (13) earthen plugs within agricultural drains located throughout portions of the Bank Property. The earthen plugs will degrade approximately 8,855.5 linear feet of agricultural drains within the Bank Property. Earthen plugs will be used to reduce the sheet flow and conveyance across the agricultural fields restoring sheet flow across the Bank Property. Each earthen plug will be placed within the agricultural drains and filled to, as close as practicable, the surface elevation of the adjacent properties or riparian buffers depending on the location of the agricultural drain. The concept is to reduce sheet flow through each agricultural drain and restore the connectivity of sheet flow to the adjacent Bank Property. As described, each agricultural drain extends across portions of the open agricultural fields and were constructed to direct storm water away from agricultural crops.

As described, the Bank Property is positioned adjacent to the Atchafalaya River with a substantial drainage basin associated with tributaries of Bayou Courville, Fish Bayou and Bayou Des Glaise. Adjacent properties to the west and south

of the current Bank Property (Phase I) will remain in agricultural production. Portions of the adjacent agricultural fields drain storm water through the Bank Property via unnamed tributaries of Fish Bayou and Bayou Courville. To maintain this drainage and not impede flows within the adjacent agricultural fields, it is planned to maintain two (2) agricultural drains totaling 5,147.5 linear feet. One (1) drain flows west to east along the north and central portions of the Bank Property. Again, this drain contributes to the current storm water runoff from open agricultural fields to the west of the Bank Property. One (1) drain is also located in the central portion of the Bank Property flowing south to north through the Bank Property. This drain connects the ARMB Phase I and II. This drain is also located parallel to the primary interior at-grade access road. As a part of the hydrologic work plan, the re-establishment of BLH habitat within the Bank Property, it is specifically proposed to construct four (4) earthen plugs within natural low lying swales along the west side of the south to north drain to remain. The earthen plugs will be placed along the west bank of the south to north drain to remain within the natural swales to reduce storm water runoff from the Bank Property to the west of the drain. The implementation of the earthen plugs is expected to restore the hydrologic regime within this region of the Bank Property and thus not allow the interior drain to remain to adversely affect the success of the mitigation work plan. The natural gradient east of the interior drain flows storm water runoff to the east towards Bayou Courville. Given this, no additional earthen plugs are proposed along the east side of the drain.

Earthen material will be obtained from existing spoil material located adjacent to the previously excavated drains or from an approved location within the Bank Property. [Figure 11](#) depicts the location of each earthen plug and its juxtaposition to the agricultural drains as a part of the mitigation work plan. A cross sectional view, representing the existing agricultural drain and planned earthen plug, has been prepared and is included within the appendices of this report.

3. As a part of the Bank Property design, the Landowner will maintain 18,060.6 linear feet (13.4 acres) of at-grade access roads located throughout the Bank Property. The at-grade access roads have been maintained as a part of the current land use for agricultural purposes. Each at-grade access road depicted on [Figure 11](#) and [Figure 13](#) will be maintained as a part of the mitigation work plan and utilized for access, completion of the mitigation work plan, monitoring and maintenance of the Bank Property. The at-grade access roads will be maintained by bush hogging, clipping, etc. The presence of the at-grade access roads will not impede sheet flow across the Bank Property as they are located along natural ridges or wood lines. A cross sectional view, representing the at-grade access road located along the south boundary of the Bank Property has been prepared and is included within the appendices of this report.
4. The Sponsor will also maintain two (2) culvert crossings and three (3) low water crossings located along the existing at-grade access road. The culvert crossings are located along the primary internal at-grade access road and within agricultural drains that will remain as a part of the hydrologic work plan. The

Sponsor will maintain the two (2) existing culverts and prevent the accumulation of drift/debris within the agricultural drains. The culverts are necessary to provide access to the interior portions of the Bank Property. The three (3) low water crossings will be maintained along larger stream channels, similarly providing access throughout portions of the Bank Property. [Figure 11](#) depicts the location of the culvert and low water crossings as a part of the mitigation work plan.

5. Reaches of Bayou Courville, Fish Bayou and associated tributaries, all considered as Section 404 Waters, totaling 16,601.9 linear feet (12.5 acres) will be preserved and maintained as a part of the hydrology work plan. No channel improvements are proposed as a part of the hydrology work plan. In fact, each stream reach is located within the confines of the BLH preservation located within the northeast portion of the Bank Property.

The Hydrologic Work Plan developed for ARMB Phase I is depicted as [Figure 11](#).

6. Upon review of the historic imagery available for the ARMB and the general area along the Atchafalaya River system, it was revealed that the downstream movement of water or river's current has changed course over the years. Review of the 1952 aerial photograph indicated that the west bank of the River was, on average, 250 feet to the east of the current bankline boundary within the northern portion of the ARMB or Phase I. Consequently, review of the 1952 aerial photograph indicated that the west bank of the River was also within, what is currently forestland, within the southern portion of the ARMB or potential Phase II. The dynamics of the Atchafalaya River system have caused erosion to occur along the east boundary of the ARMB while accretions have occurred along the south boundary of the ARMB. Following the 1973 flood, the U.S. Army Corps of Engineers completed a bank stabilization project along the east boundary of the ARMB. The U.S. Army Corps of Engineers placed concrete mats along the Atchafalaya River bank to stabilize the embankment and slow further erosion. Aerial photography since the completion of the bank stabilization project further indicate that only minimal erosion has occurred since the completion of the project in 1975. Given the current stability of the ARMB boundary, future erosion along the ARMB boundary would not be expected to the extent that would adversely affect the planned project. [Figure 12](#) depicts the estimated bank line digitized for 1952, 1981, 2005 and 2013. The proposed conservation servitude boundary for the ARMB will follow the estimated 2013 bank line.

5.1.2 Soil Preparation

Following the degradation of agricultural furrows present within the Bank property, agricultural drainages will be plugged in specific locations through the Bank property. Following the initial hydrologic restoration work plan, the Sponsor will mechanically prepare soils in the fields for vegetative plantings. Deep-ripping may

be used to alleviate soil compaction and encourage air and water pore space for root growth. Herbicides may be used where necessary.

5.1.3 Vegetative Plantings

Re-establishment Work Plan

1. It is planned to re-establish 237.0 acres of BLH forested wetlands and 42.4 acres of BLH forested uplands (buffer) within the Bank Property. The re-establishment work plan for each habitat will be accomplished by preparing the site as needed (ripping, disking, tilling, mowing, etc.) during the fall prior to planting and by planting an appropriate species mixture indicative of BLH ecosystems during the non-growing season of 2017 (Table 3). As list of plant species to be planted appears in Table 3.
2. The restoration areas will be planted using a mixture of hard mast and soft mast species during the non-growing season (i.e., December – March). Prior to planting, site preparation will be conducted using mechanical and chemical means, such as, mowing, disking, ripping, shredding and herbicidal application. Invasive and undesirable species control will be conducted throughout the entire project area over the life of the Bank.
3. The Sponsor does not anticipate degrees of soil settlement requiring planting deferment. The site will be prepared in such a manner that soil disturbance will be avoided or minimized to the maximum extent practicable, and site preparation has been planned such that favorable conditions for planting will be established and maintained throughout the preparation activities. Site preparation activities will be documented with digital photographs and provided to the IRT during times in which these activities take place.
4. Planting procedures will adhere to the following specifications:
 - a. One (1) to two (2) year old bare-root seedlings obtained from a registered licensed regional nursery grower and of a regional eco-type species properly stored and handled to ensure viability will be planted at the Bank during the period December 15 through March 15 (planting season). Events, such as, spring flooding may warrant storage of trees with planting in late spring or early summer. If seedlings listed are not available, then substitutions may be made if they are approved by the IRT. The anticipated schedule for planting is the non-growing season of 2017. The Sponsor will plant appropriate species in such a manner to ensure adequate species diversity and to ensure that monotypic tree rows will not be established;
 - b. Seedlings will be planted following a 10' x 10' spacing to achieve an initial stand density of, at minimum, 432 seedlings per acre;
 - c. Species selected for planting will be planted in a random mixture as dictated by terrain and edaphic conditions. The species selected will be site appropriate in terms of habitat design, soil-moisture regime and species diversity. Ten or more species may be represented in the planting

assemblage to insure adequate species diversity. The exact species and quantities for planting will be determined by the availability of such species from commercial nurseries providing localized ecotype seedlings. Seedlings would certainly be mixed upon plantings so that areas are not comprised of a single species. The distribution of stems will create a mosaic of hard and soft mast species that will provide seasonally available forages for a wide range of indigenous wildlife including the Louisiana black bear. The availability of soft mast species is important during the summer and hard mast is critical in the fall and early winter for the buildup of fat reserves in black bears preparing for denning. Single species plantings will generally be avoided;

- d. The Bank 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 or other plant competition; and
- e. Sponsor will use all prudent efforts (physical, chemical, and/or mechanical) to remove and control Chinese tallow tree and any other existing noxious/exotic vegetation from the Bank Property to the nearest seed sources for colonization by these species. The Bank will be monitored to prevent infestation by noxious/exotic vegetation. Noxious/exotic vegetation stem density will be controlled to five (5) percent or less of the total stem density on an acre-by-acre basis. Sponsor may use disking and/or herbicide application during the first three (3) years of growth to reduce competition for seedlings (i.e., disking or mowing between planted rows of trees or chemical applications to encourage survival and growth of desirable plant species).

Table 3: Plant Species Proposed for the Bank Property:

Bottomland Hardwood Plantings		
Common Name	Scientific Name	Percent Composition
Nuttall oak*	<i>Quercus nuttalli</i>	20%
willow oak	<i>Quercus phellos</i>	15%
water oak	<i>Quercus nigra</i>	10%
Baldcypress*	<i>Taxodium distichum</i>	10%
Sweet pecan	<i>Carya illionensis</i>	5%
overcup oak*	<i>Quercus lyrata</i>	5%
green ash	<i>Fraxinus pennsylvanica</i>	5%
Drummond red maple	<i>Acer rubrum var. drummondii</i>	5%
sweetgum	<i>Liquidambar styraciflua</i>	5%
common persimmon	<i>Diospyros virginiana</i>	5%
sugarberry	<i>Celtis laevigata</i>	5%
American elm	<i>Ulmus Americana</i>	5%
mayhaw	<i>Crataegus opaca</i>	2.0%
Buttonbush*	<i>Cephalanthus occidentalis</i>	1.0%
Water hickory*	<i>Carya aquatica</i>	1.0%
Box elder	<i>Acer negundo</i>	1.0%

*Species to be concentrated within natural low-lying swales and contours.

The Mitigation Work Plan developed for ARMB Phase I is depicted as [Figure 13](#).

For a given planting, a minimum of 250 seedlings/saplings per acre will be present (with a 60 to 40 hard mast to soft mast ratio) at the end of the fourth year (i.e. Year 5) following successful attainment of the one-year survivorship criteria. Trees established through natural recruitment may be included in this tally, however, no less than 125 hard mast-producing seedlings per acre must be present.

5.1.4 Invasive/Noxious Species Control

Invasive and noxious plant species, such as, Chinese tallow tree (*Triadica sebifera*) will be removed using various techniques which may include pre-and post-emergent herbicide applications, direct application by spray and/or injection, mowing and any other successful technique during initial planting. The percent cover of invasive plants will be monitored during short-term and long-term success monitoring and appropriate action taken, if needed. (Please reference 5.1.3. Vegetative Plantings 4.e.)

5.1.5 Monitoring

Monitoring shall commence immediately following plantings such that a baseline is established for the ARMB. Monitoring will then occur within the spring of years 1, 3 and 5. Following year 5 or achieving short term success criteria, monitoring shall then occur every 3 years until a minimum average canopy coverage of 80% is established.

If it is determined at any time that the ARMB is not progressing at the rate at which it should, monitoring will then begin to occur yearly until, at a minimum, the established interim success criteria are met. Once the long-term success criteria have been met, required thinning may occur following surveying. Surveying shall also be performed following thinning events.

5.2 Proposed Service Area

5.2.1 Primary Service Area

The primary service area for the ARMB is the Atchafalaya Watershed Cataloguing Unit 08080101. Use beyond this area will be determined on a case-by-case basis as deemed appropriate by the New Orleans District ([Figure 14](#)).

The current District boundary between the USACE New Orleans and Vicksburg District traverses the upper portion of the approximate 1,156.31 acre ARMB property. The District line traverses the ARMB property in a northeast to southwest orientation with the Vicksburg District to the north and the New Orleans District to the south. It is our understanding that the District line is arbitrarily depicted following the approximate drainage basins. It is our experience that the entire ARMB Phase I, as well as the ARMB property in its entirety, drains into the Atchafalaya River and its immediate tributaries and thus the New Orleans District.

5.3 General Bank and Need and Technical Feasibility

ARMB is proposed to provide compensatory mitigation for New Orleans District approved projects within the Hydrologic Unit Code (HUC) 08080101 (Atchafalaya). Projects located outside the HUC 08080101 would be evaluated on a case by case basis by the District.

In addition to providing mitigation for activities associated with continued population growth, the proposed service area has a history of oil and gas exploration and production, including the development of the Tuscaloosa Marine Shale formation, federal water control projects and considerable linear activities, including transportation, power transmission and pipelines.

5.4 Future Ownership and Long-Term Management Strategy

5.4.1 Sponsor/Operations Manager/Long-Term Management

Atchafalaya River Holdings, LLC
One American Place, Suite 820
Baton Rouge, LA 70825
POC: Mr. Andrew J. Harrison, Jr., Managing Member

5.4.2 Landowner/Long-Term Ownership

Dupuy Land Company
P.O. Box 9
Marksville, LA 71351
POC: Mr. Dirk Dupuy, Manager

5.4.3 Agent

Headwaters, Inc.
P.O. Box 2836
Ridgeland, MS 39158
www.headwaters-inc.com
POC: Mr. Clay Cromwell

5.4.4 Perpetual Site Protection Mechanism

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

The Conservation 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.

5.4.5 Sponsor Qualifications

Atchafalaya River Holdings, LLC, managed by Mr. Andrew J. Harrison, Jr., will be the primary operator for bank land management and office operations. Mr. Harrison holds B.S. and M.S. degrees in wildlife management from Louisiana Tech University (1981) and Louisiana State University (1984). He previously managed wetland properties for Williams, Inc. focusing on multiple use opportunities and winter waterfowl habitat management. Mr. Harrison later attained a J.D. (1990) and an LL.M. (environmental law) (1991) from Loyola University School of Law and the George Washington University National Law Center, respectively. Following law school, he was assistant regional counsel at the U.S. Environmental Protection Agency, Region IV, for four years and spent an additional year on detail to the Environmental Enforcement Section of the Lands and Natural Resources Division of the U.S. Department of Justice. In 1996, Mr. Harrison commenced working on mitigation banks, including counseling, establishing, operating and, for some, managing the business of banks. Since then, Mr. Harrison has worked on a number of mitigation banks and permittee responsible mitigation projects (PRMs) in the New Orleans (NOD) and Vicksburg (VKD) Districts. Through a company named Wetlands Mitigation Strategies, LLC, Mr. Harrison currently operates some or all aspects of five (5) mitigation banks, four (4) in VKD and one (1) in NOD.

Mr. Harrison and Atchafalaya River Holdings will be supported by Mr. Clay Cromwell and others of Headwaters who have considerable experience in mitigation banking in VKD and the Mobile District.

6.0 Conclusion

In summary, the ARMB Phase I has the potential to re-establish approximately 237.0 acres of BLH habitat and preserve approximately 51.7 acres of BLH habitat. The bank will also re-establish 42.4 acres of BLH upland buffer and preserve 29.1 acres of BLH upland buffer habitat. These lands will be protected and maintained by Conservation Servitude in perpetuity. More detailed information regarding financial assurances, monitoring provisions, and credit release schedules will be provided in the subsequent draft MBI and will reflect current standards within the New Orleans District.

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, Avoyelles Parish, Louisiana.

<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

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http://soils.usda.gov/survey/online_surveys/louisiana/avoyellesLA1986/Avoyelles.pdf

Louisiana Department of Environmental Quality, Louisiana Water Quality Inventory: Integrated Report (305(b)/303(d)).

<http://www.deq.louisiana.gov/portal/DIVISIONS/WaterPermits/WaterQualityStandardsAssessment/WaterQualityInventorySection305b/2012IntegratedReport.aspx>

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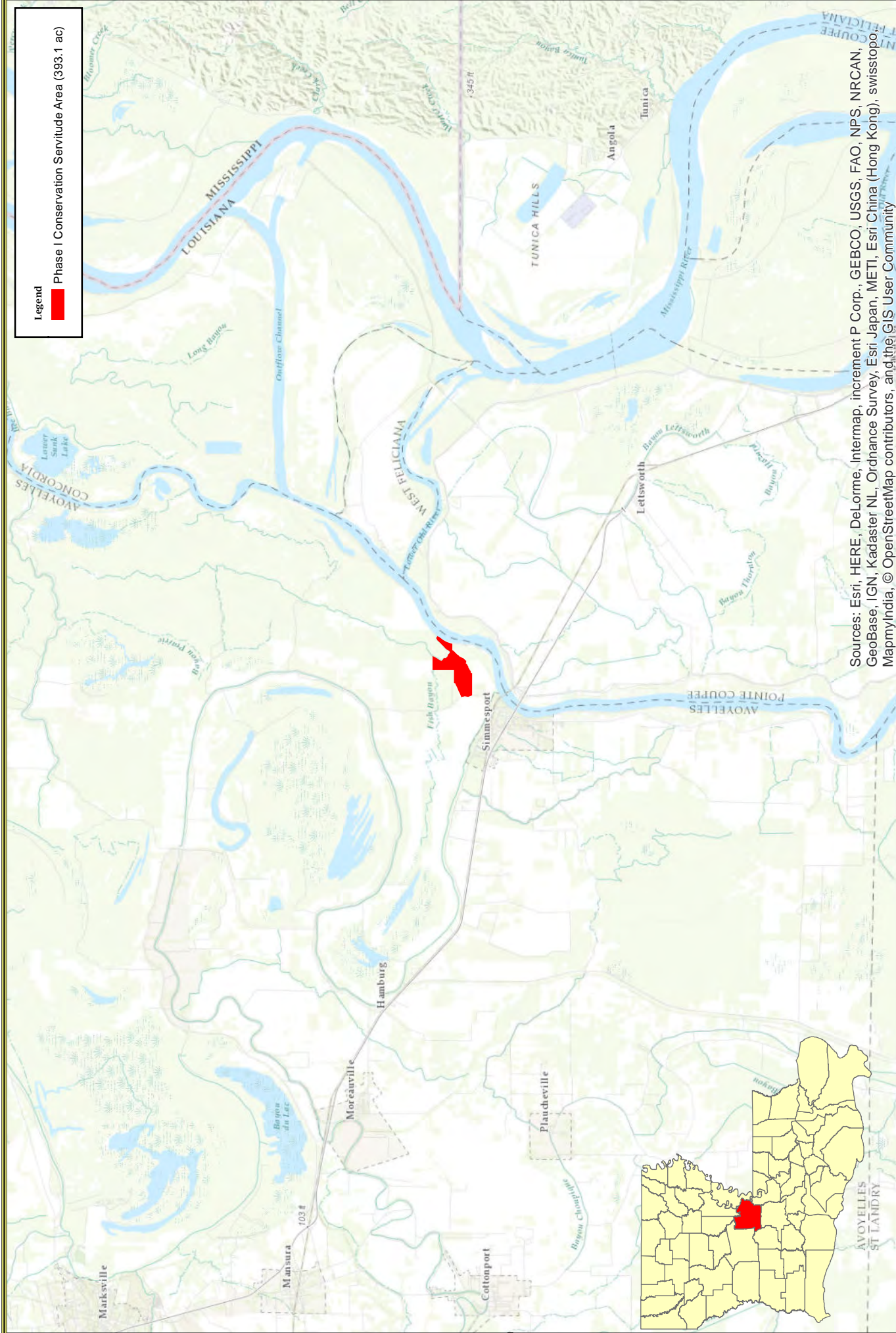
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http://www.wlf.louisiana.gov/sites/default/files/pdf/page_wildlife/6776are%20Natural%20Communities/LA_NAT_COM.pdf

Figures



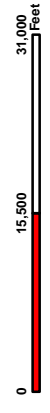
Legend
■ Phase I Conservation Servitude Area (393.1 ac)

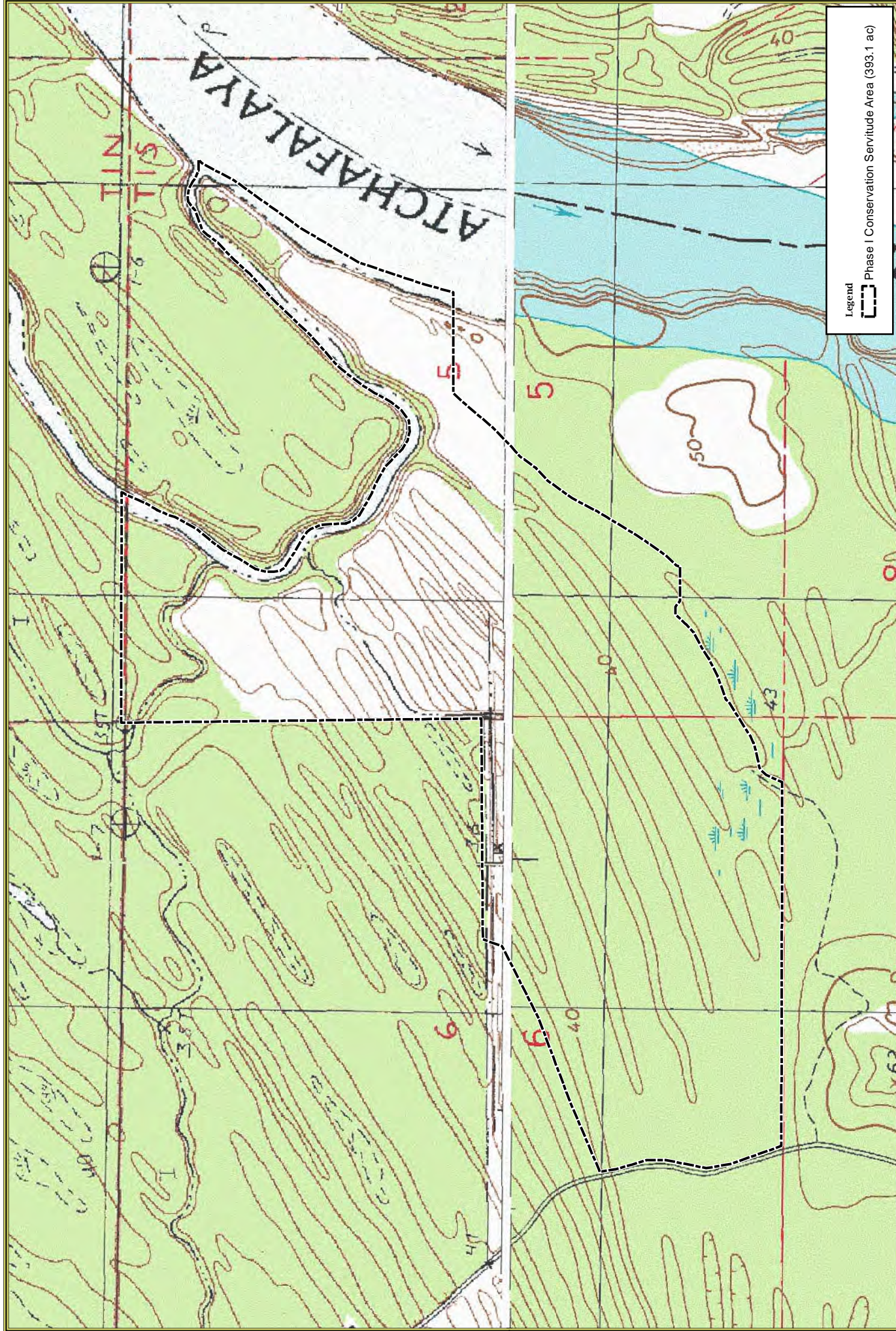
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Atchafalaya River Mitigation Bank

Sec. 5, 6, 7 & 8 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana

Figure 1 - Vicinity Map





Legend

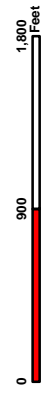
Phase I Conservation Servitude Area (393.1 ac)

Atchafalaya River Mitigation Bank

Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana

Figure 2 - Site Location Map

NORTH
 1:12,000



USGS Big Bend/Simmsport (LA) Quad





Legend



Phase I Conservation Servitude Area (393.1 ac)



Atchafalaya River Mitigation Bank

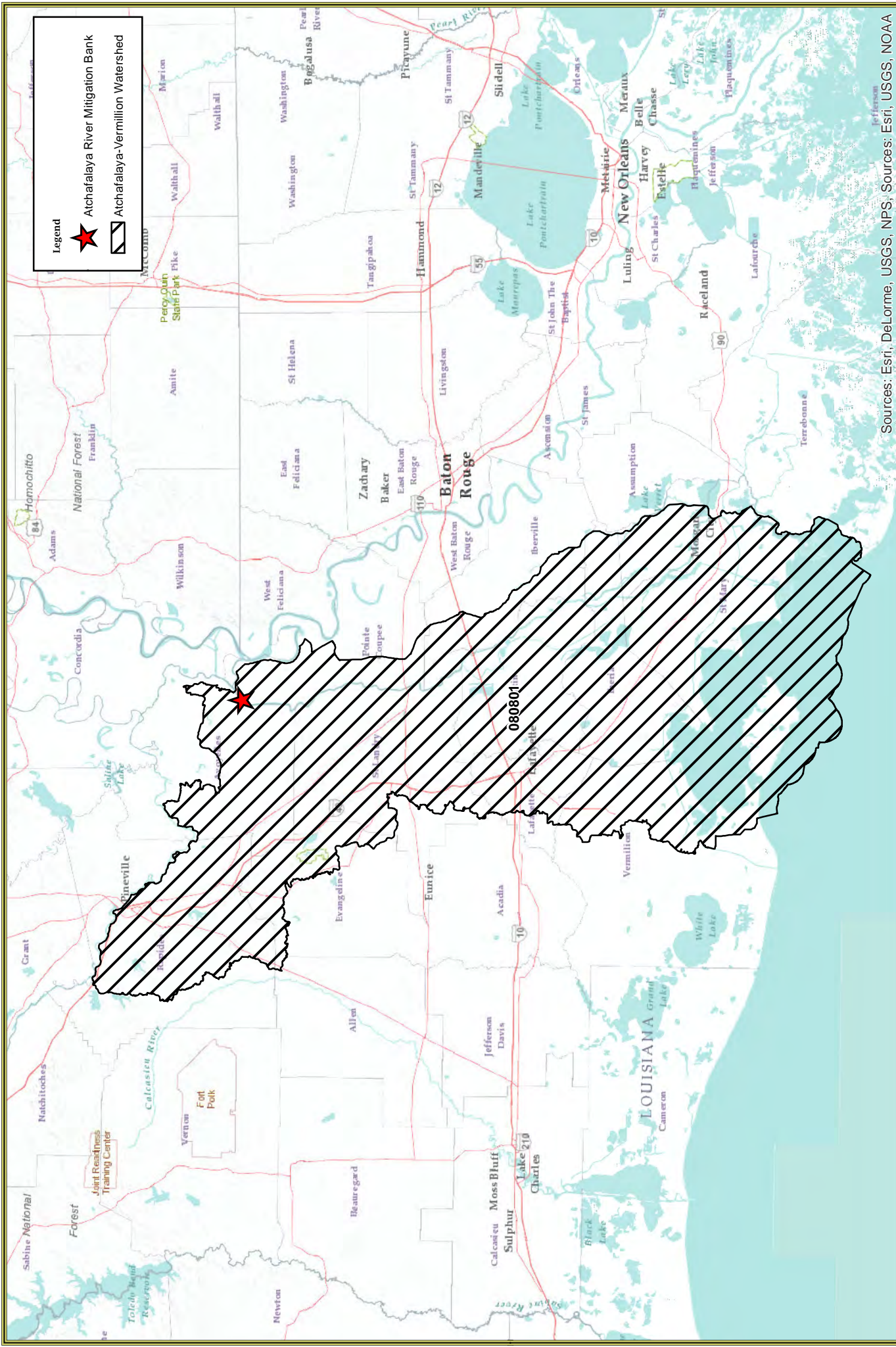
Sec. 5 & 6 - T 1 S - R 7 E

Avoyelles Parish, Louisiana

Figure 3 - Site Location Map



USDA NAIP 2013



Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 4 - Watershed Location Map

Sources: Esri, DeLorme, USGS, NPS, Sources: Esri, USGS, NOAA



Legend



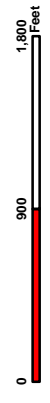
Phase I Conservation Servitude Area (393.1 ac)



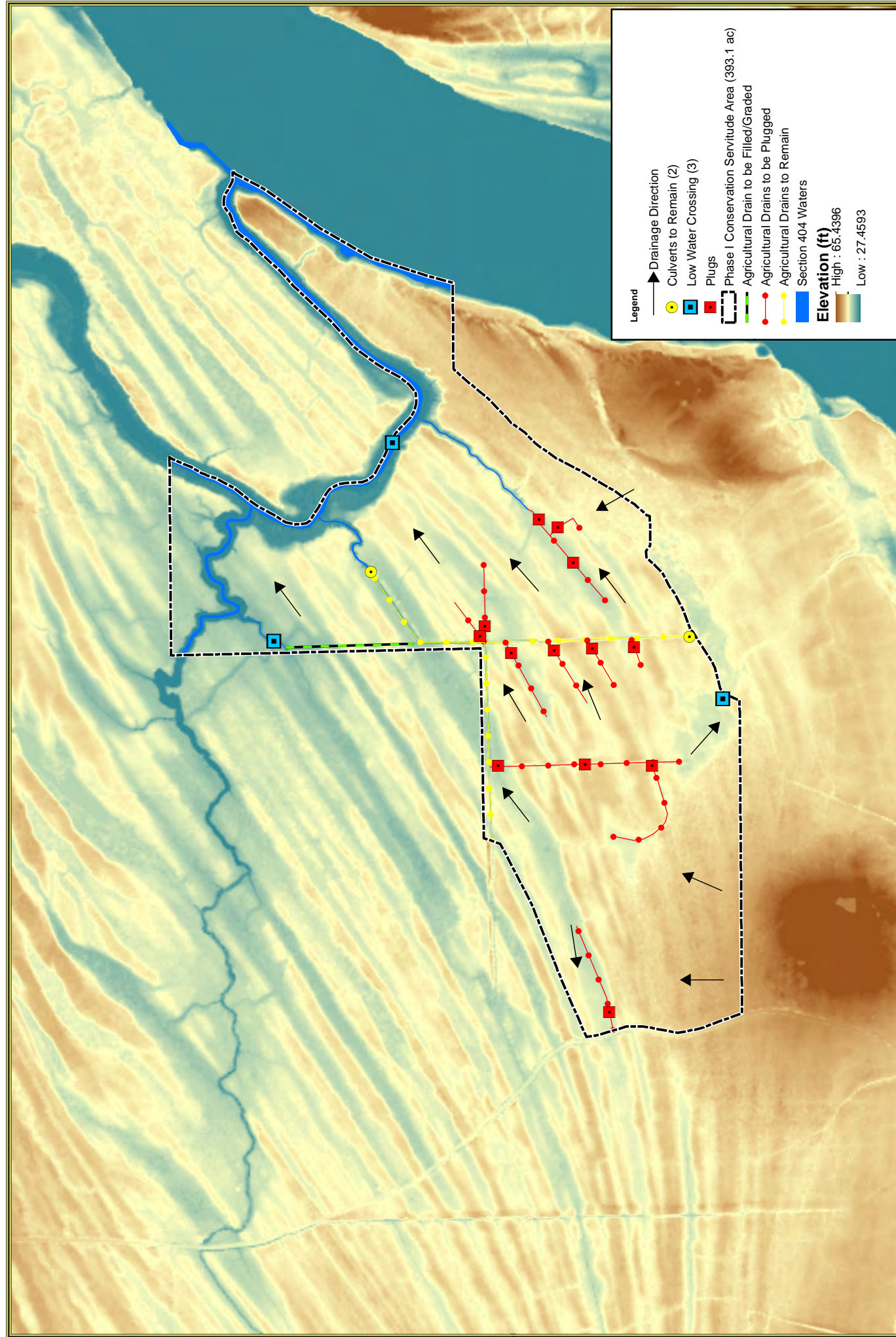
Atchafalaya River Mitigation Bank

Sec. 5 & 6 - T 1 S - R 7 E
Avozelles Parish, Louisiana

Figure 5 - Historical Imagery Map



1952 USGS Aerial Photography



Legend

- Drainage Direction
- Culverts to Remain (2)
- Low Water Crossing (3)
- Plugs
- Phase I Conservation Servitude Area (393.1 ac)
- Agricultural Drain to be Filled/Graded
- Agricultural Drains to be Plugged
- Agricultural Drains to Remain
- Section 404 Waters

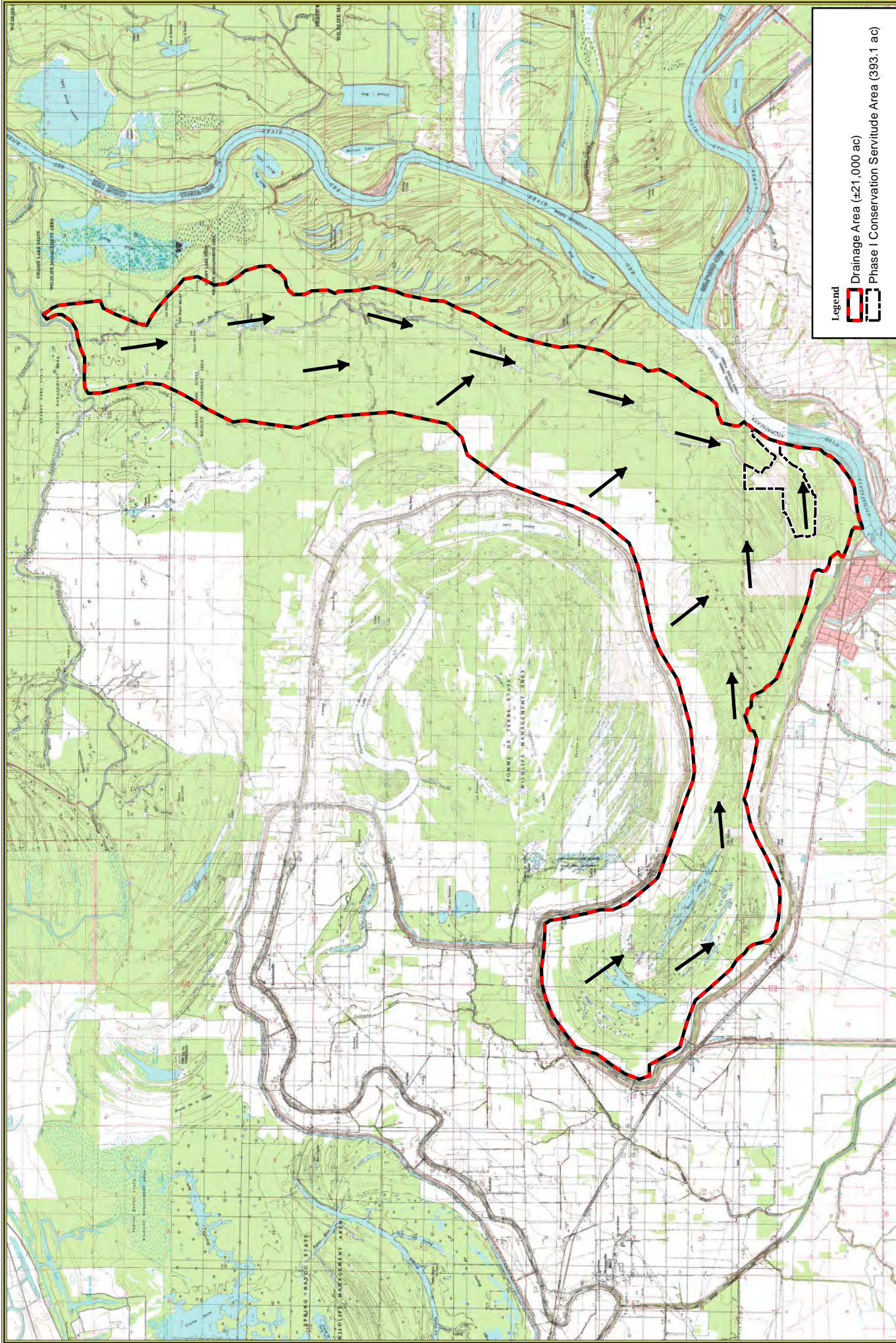
Elevation (ft)
 High : 65,439.6
 Low : 27,459.3

Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 6 - Current Hydrology Map

NORTH
 1:14,000

0 1,100 2,200
 Feet

LIDAR (LSU Atlas)



Legend

Drainage Area ($\pm 21,000$ ac)

Phase I Conservation Servitude Area (393.1 ac)

Atchafalaya River Mitigation Bank

Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana

Figure 7 - Historic Hydrology Map



USGS Big Bend/Simmsport (LA) Quad





Legend

- Phase I Conservation Servitude Area (393.1 ac)
- Cu - Convent Very Fine Silt Loam
- Mr - Moreland Silt Loam
- Mt - Moreland Clay
- Rx - Roxana Very Fine Sandy Loam
- Ts - Tensas-Sharkey Complex
- W - Water

Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana

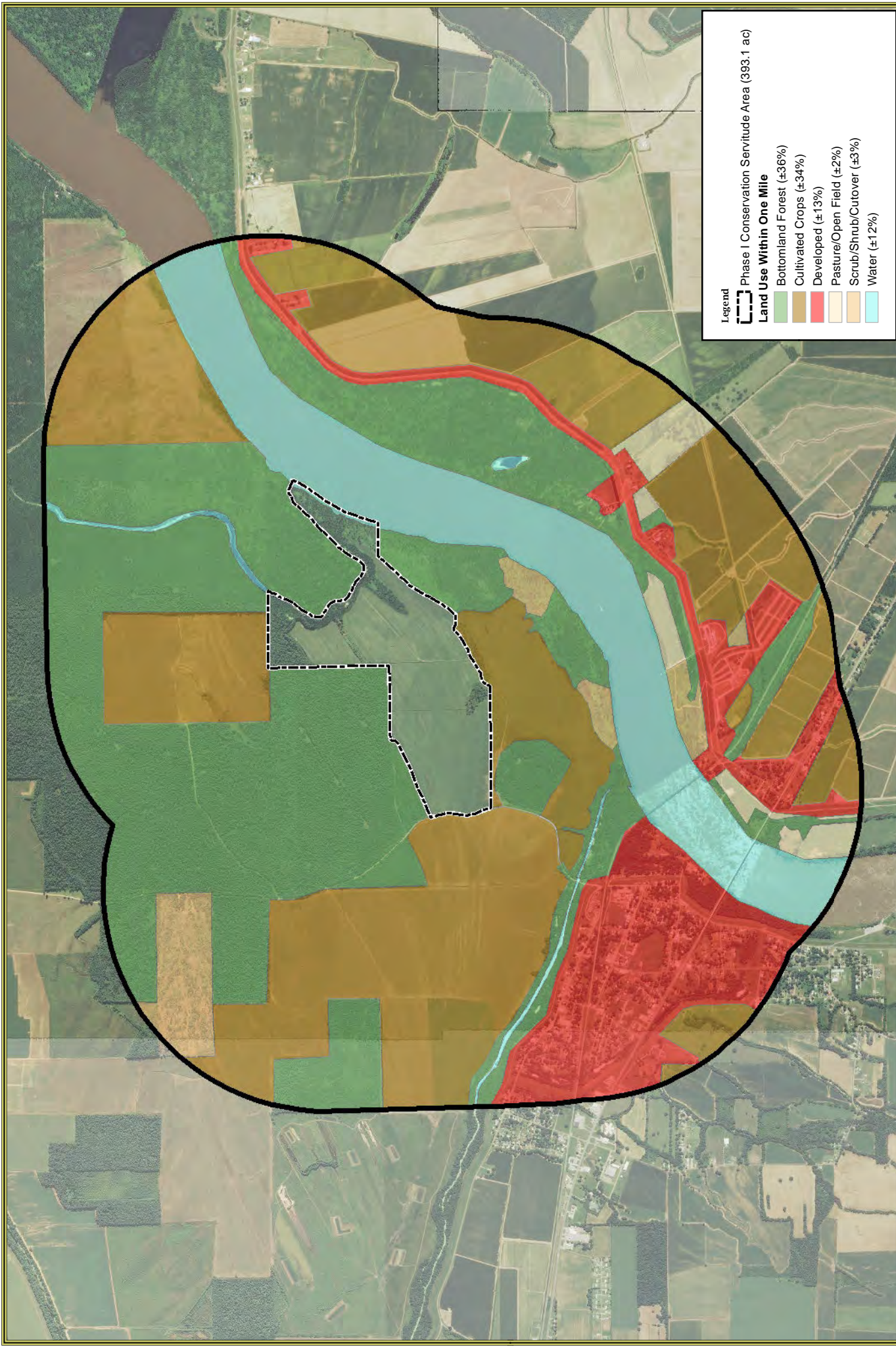
Figure 8 - NRCS Soil Survey Map

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USDA NAIP 2013

NORTH
 1:12,000


0 900 1,800 Feet

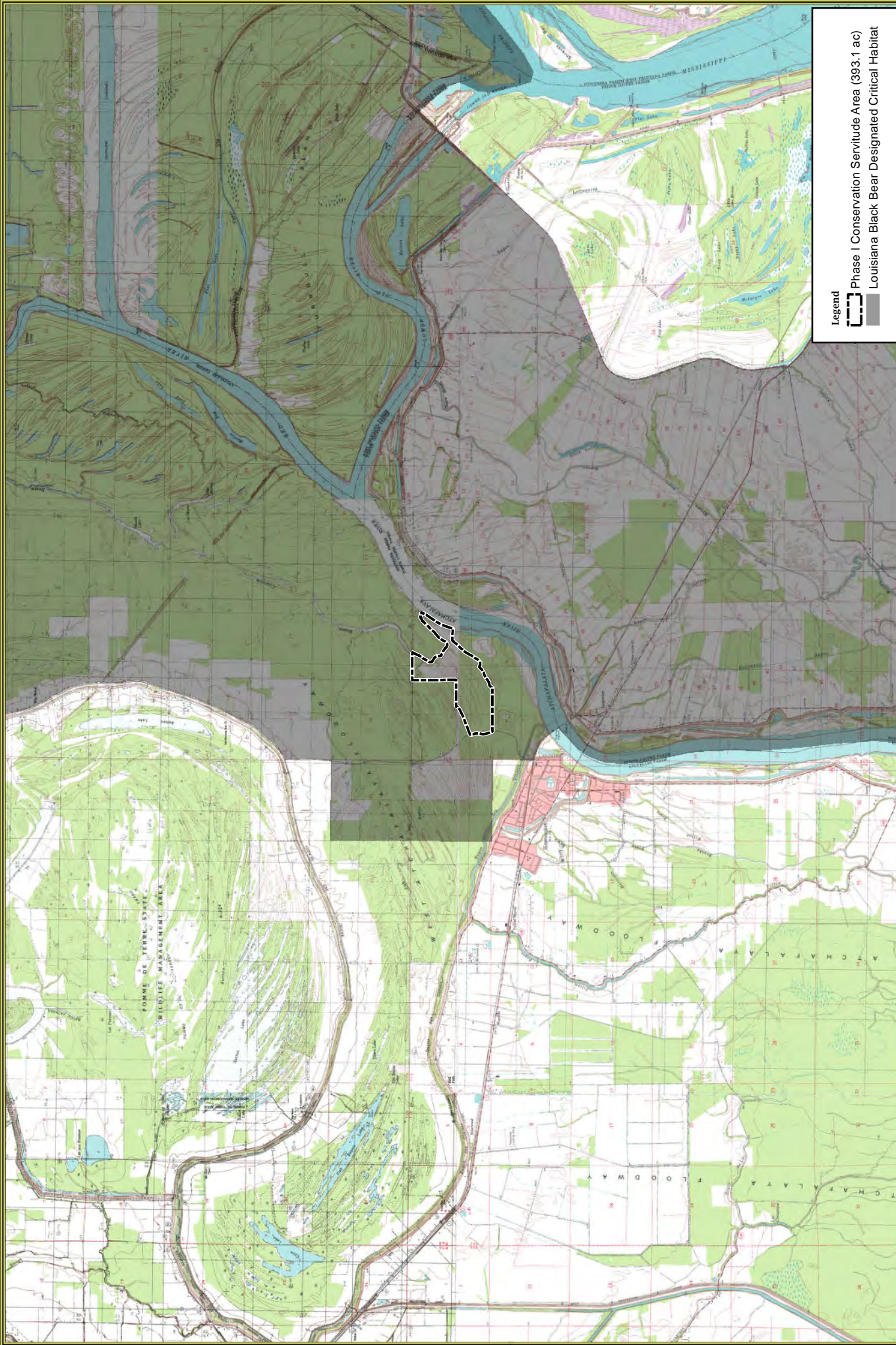


Legend
 [Dashed Line] Phase I Conservation Servitude Area (393.1 ac)
 [Solid Line] Land Use Within One Mile

- Bottomland Forest (±36%)
- Cultivated Crops (±34%)
- Developed (±13%)
- Pasture/Open Field (±2%)
- Scrub/Shrub/Cutover (±3%)
- Water (±12%)

Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 9 - Current Land Use Map


 NORTH
 1:36,000
 0 2,800 5,600 Feet
 USDA NAIP 2013



Legend



Phase I Conservation Servitude Area (393.1 ac)



Louisiana Black Bear Designated Critical Habitat

Atchafalaya River Mitigation Bank

Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana

Figure 10 - Louisiana Black Bear Critical Habitat



1:100,000

7,500

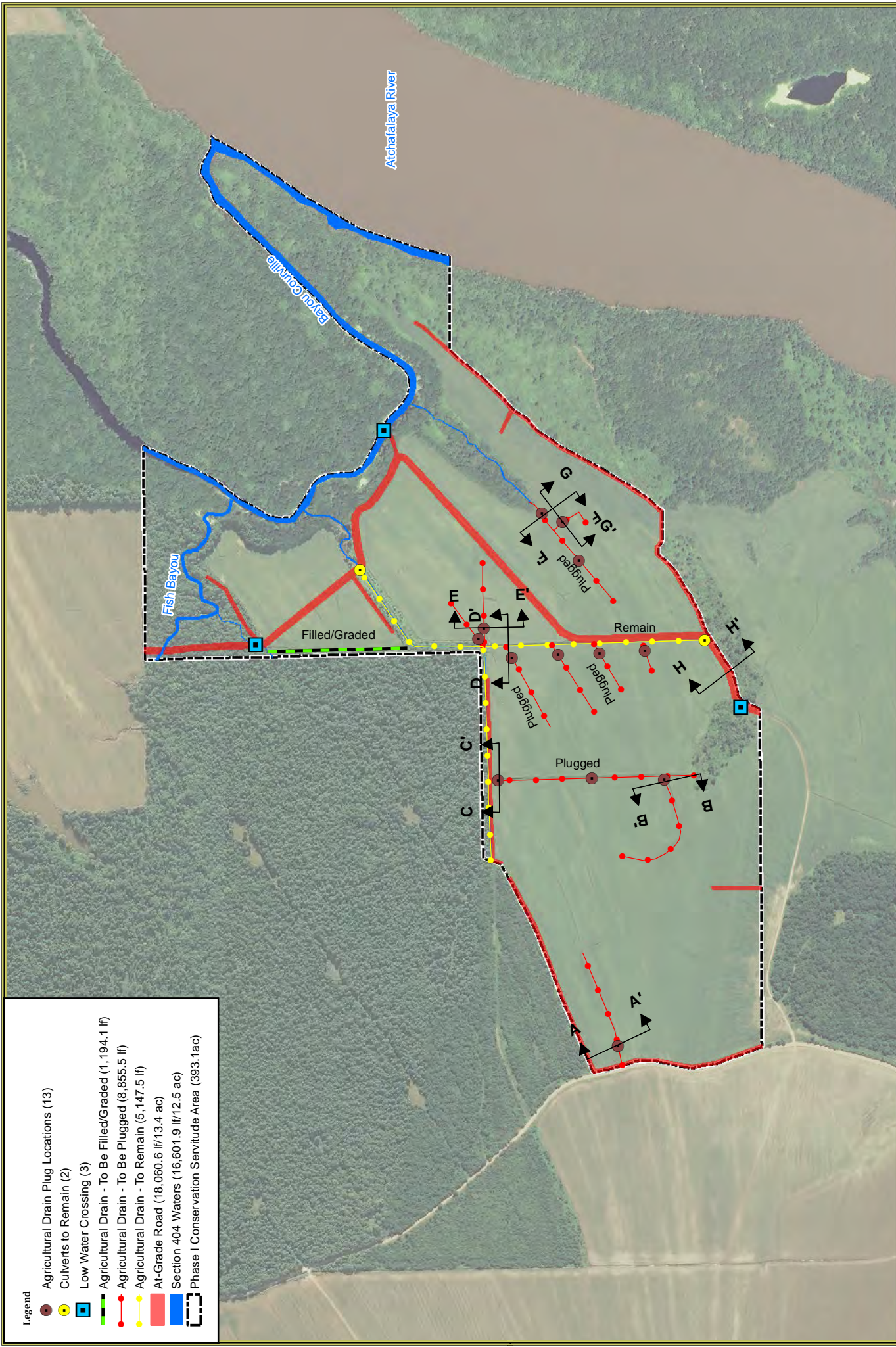
0

15,000


Feet

USGS Big Bend/Simmsport (LA) Quad





- Legend**
- Agricultural Drain Plug Locations (13)
 - Culverts to Remain (2)
 - Low Water Crossing (3)
 - Agricultural Drain - To Be Filled/Graded (1,194.1 lf)
 - Agricultural Drain - To Be Plugged (8,855.5 lf)
 - Agricultural Drain - To Remain (5,147.5 lf)
 - At-Grade Road (18,060.6 lf/13.4 ac)
 - Section 404 Waters (16,601.9 lf/12.5 ac)
 - Phase I Conservation Servitude Area (393.1ac)



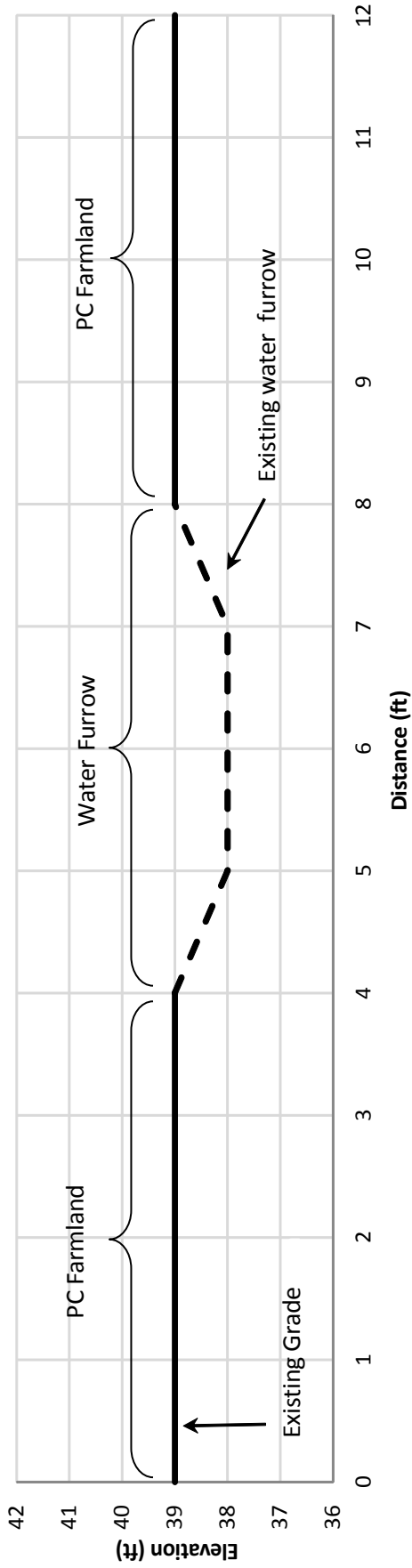
 NORTH
 1:13,000
 0 1,000 2,000 Feet
 USDA NAIP 2013

Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 11 - Hydrological Work Plan Map

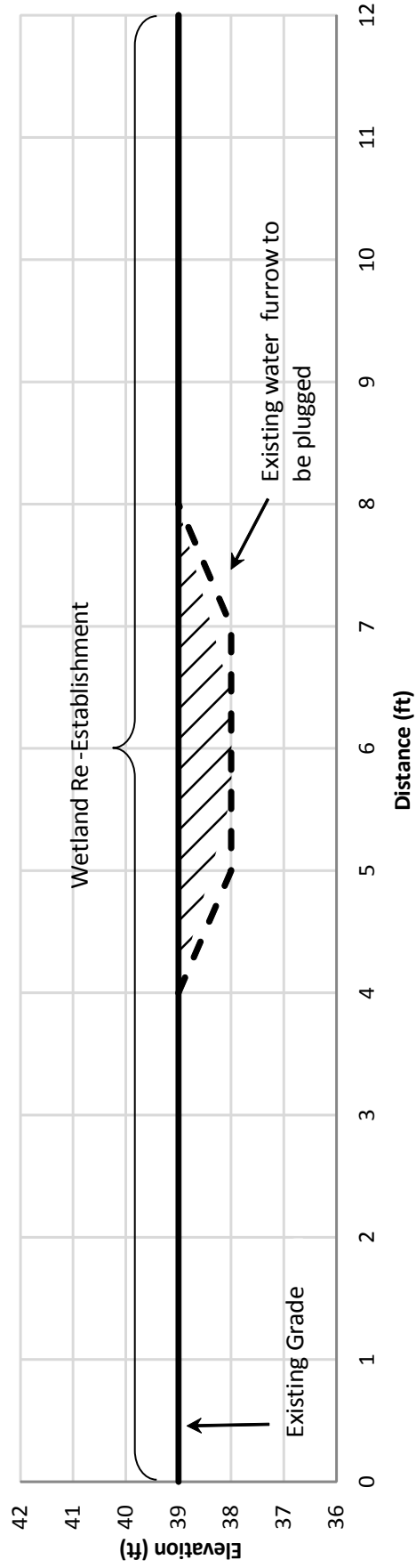


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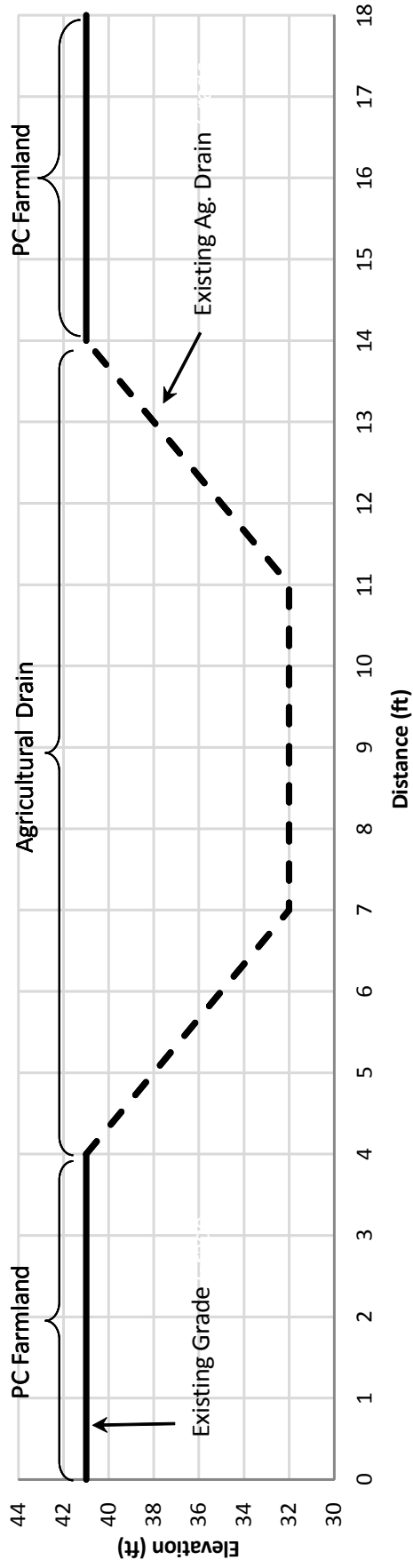
Typical Cross Section A - A' Existing Conditions



Typical Cross Section A - A' Proposed Conditions



Typical Cross Section B - B' Existing Conditions



Typical Cross Section B - B' Proposed Conditions

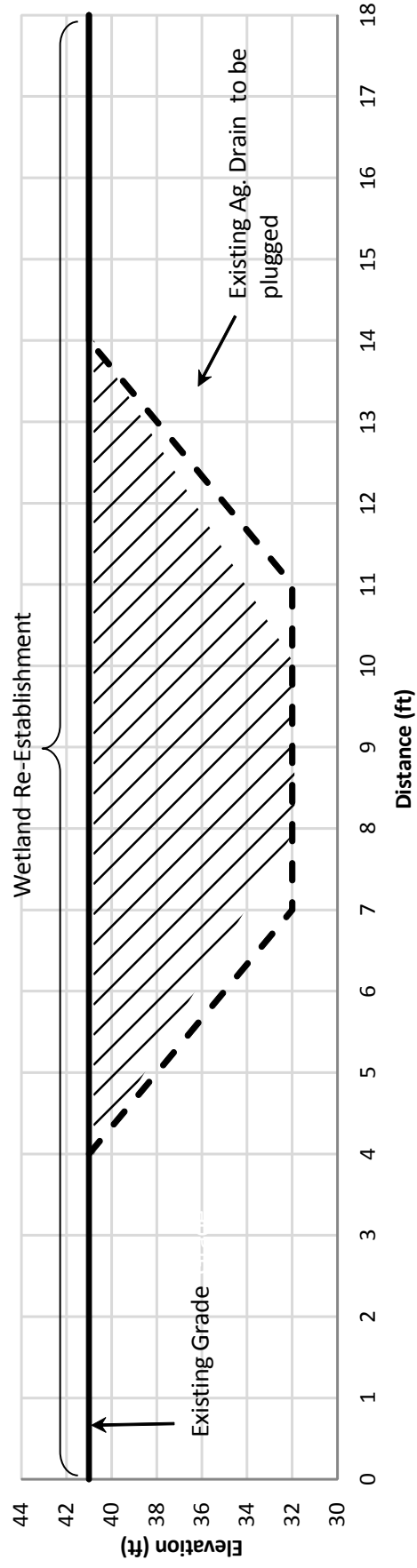
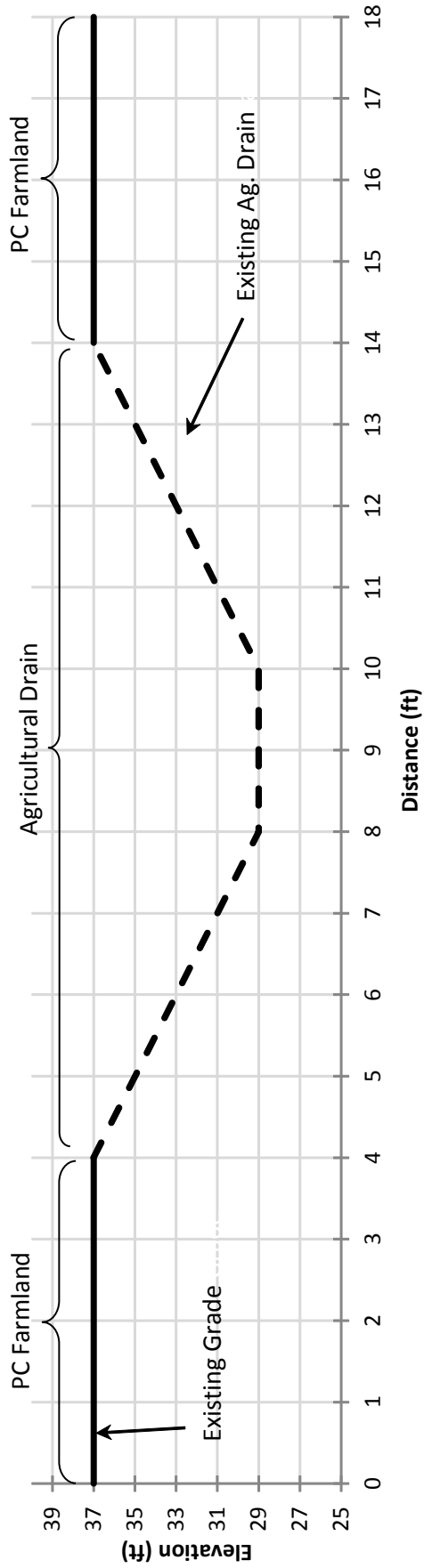


Figure 11B: Typical Cross Section B-B'

Typical Cross Section C - C' Existing Conditions



Typical Cross Section C - C' Proposed Conditions

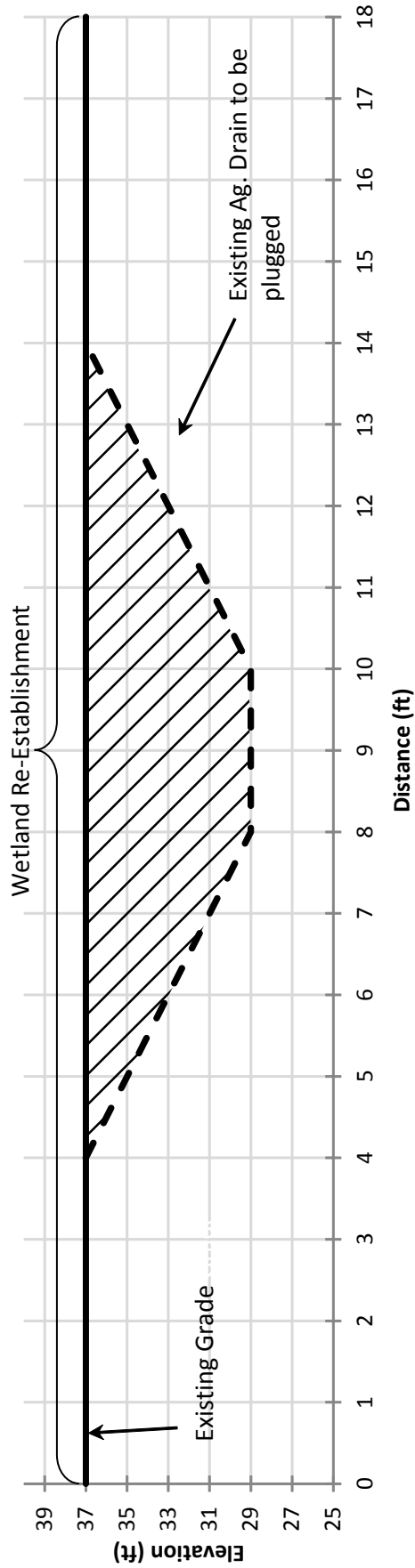
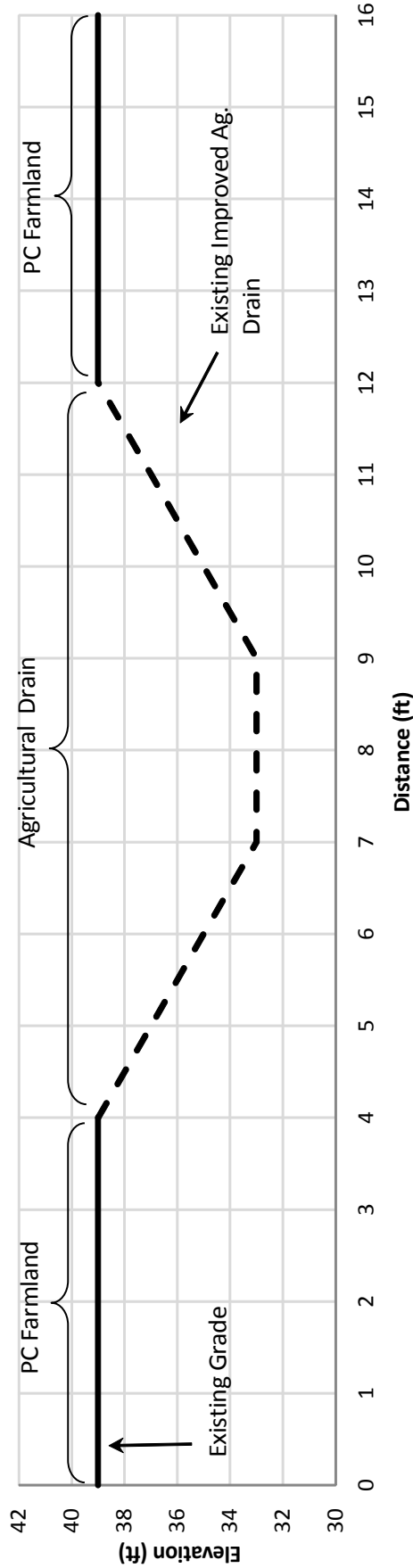
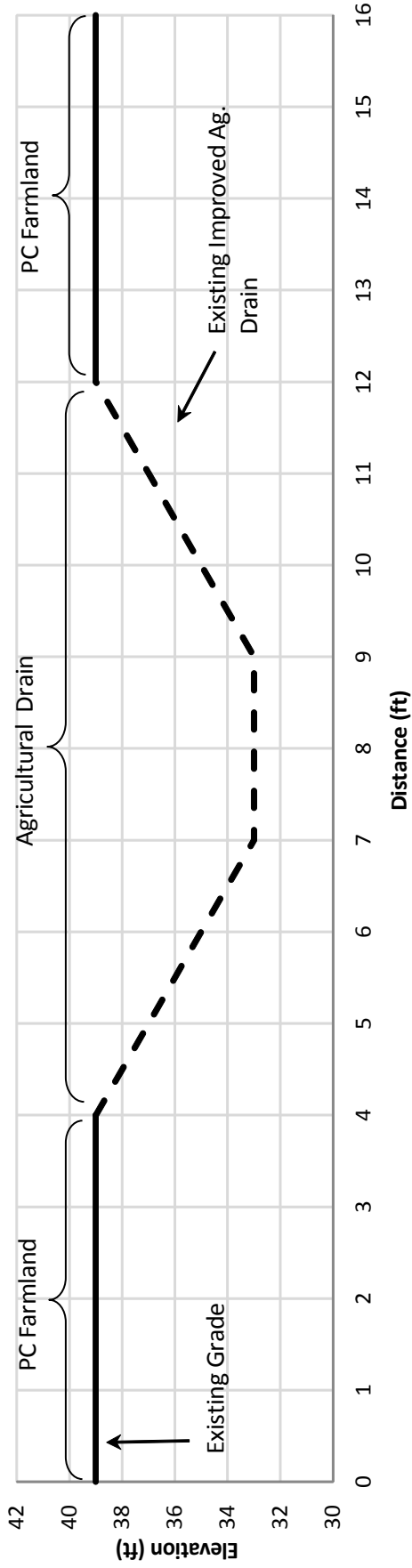


Figure 11C: Typical Cross Section C-C'

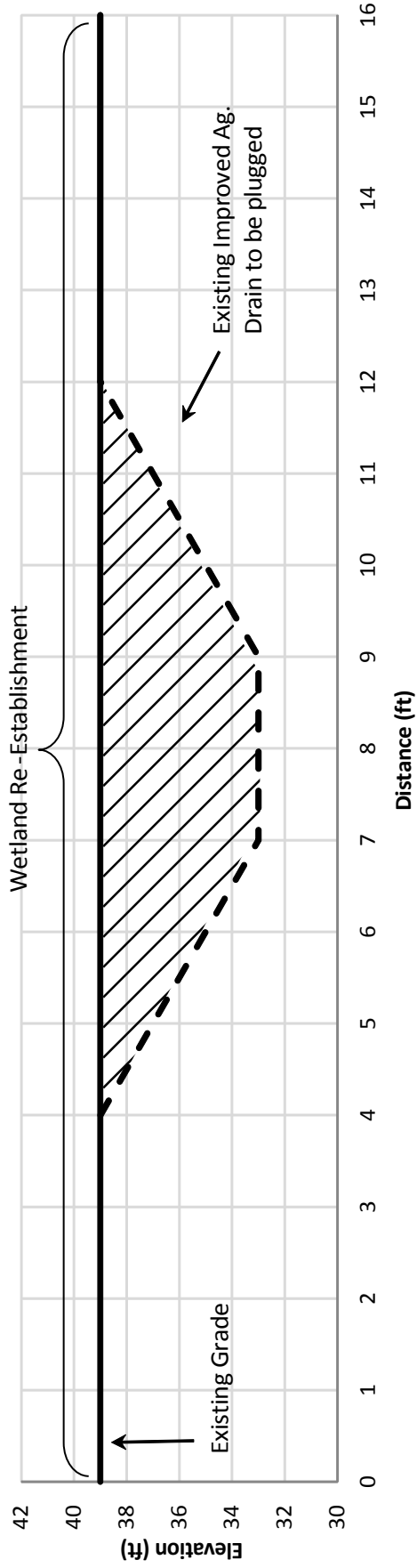
Typical Cross Section D - D' Existing Conditions



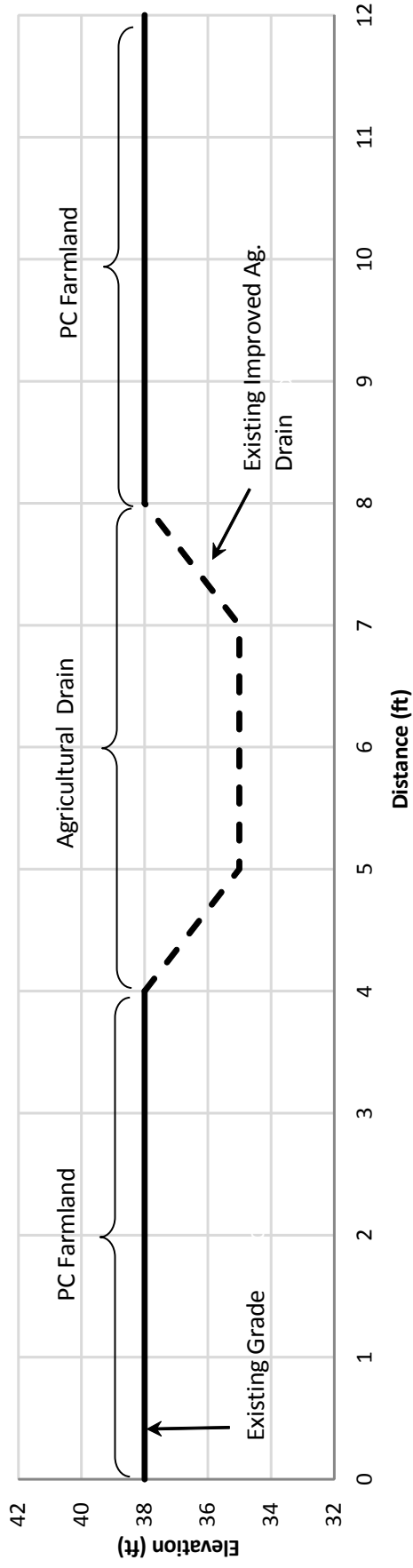
Typical Cross Section E - E' Existing Conditions



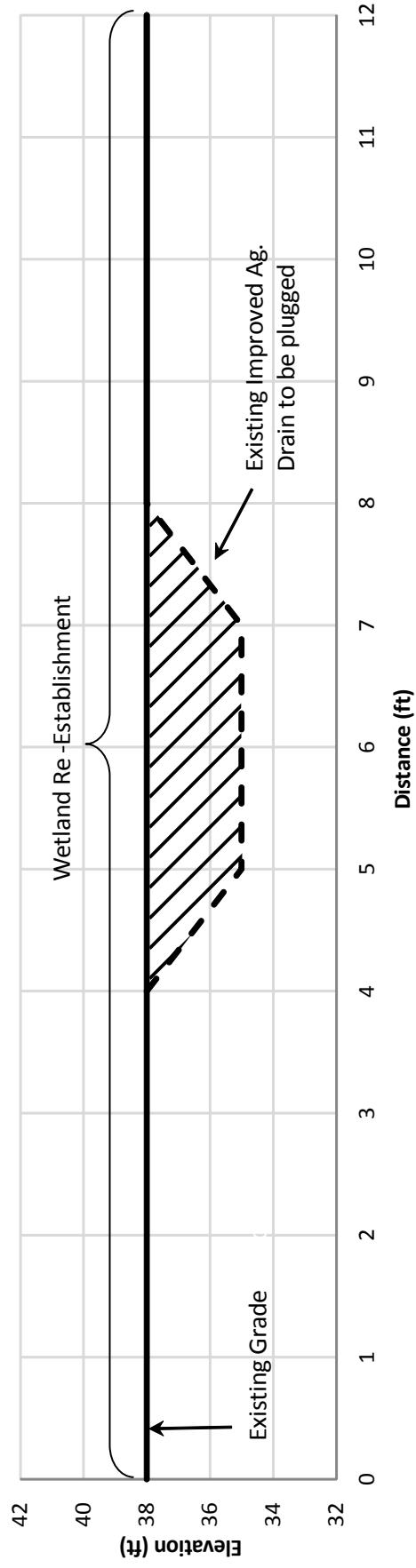
Typical Cross Section E - E' Proposed Conditions



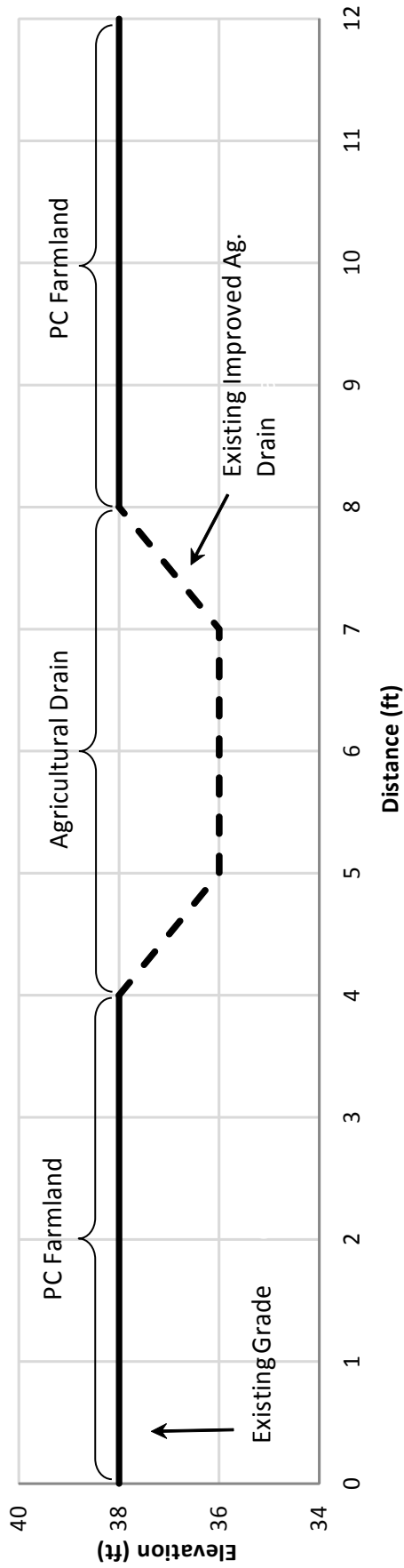
Typical Cross Section F - F' Existing Conditions



Typical Cross Section F - F' Proposed Conditions



Typical Cross Section G-G' Existing Conditions



Typical Cross Section G-G' Proposed Conditions

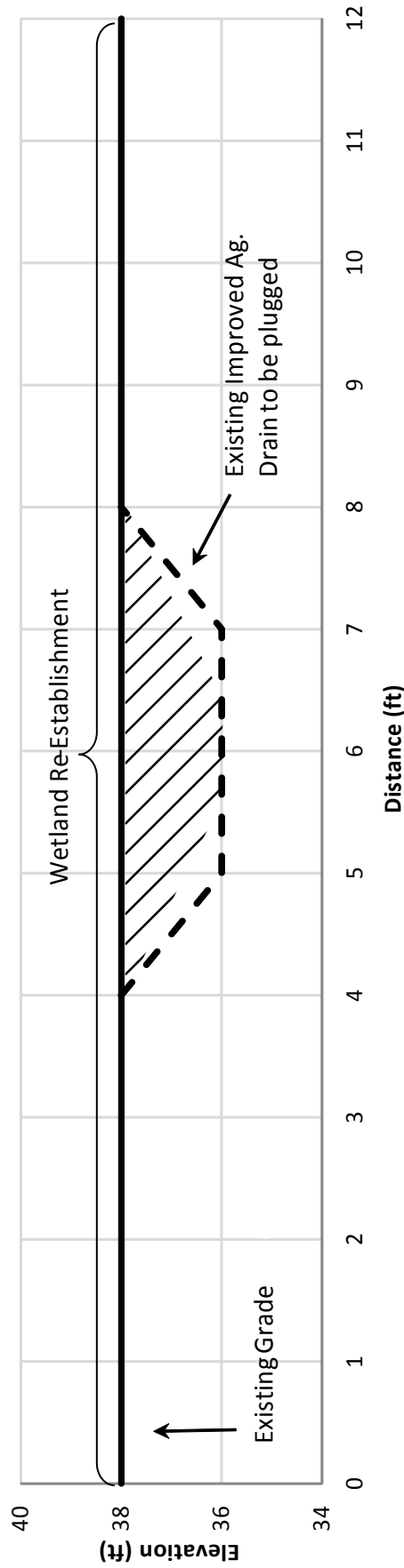
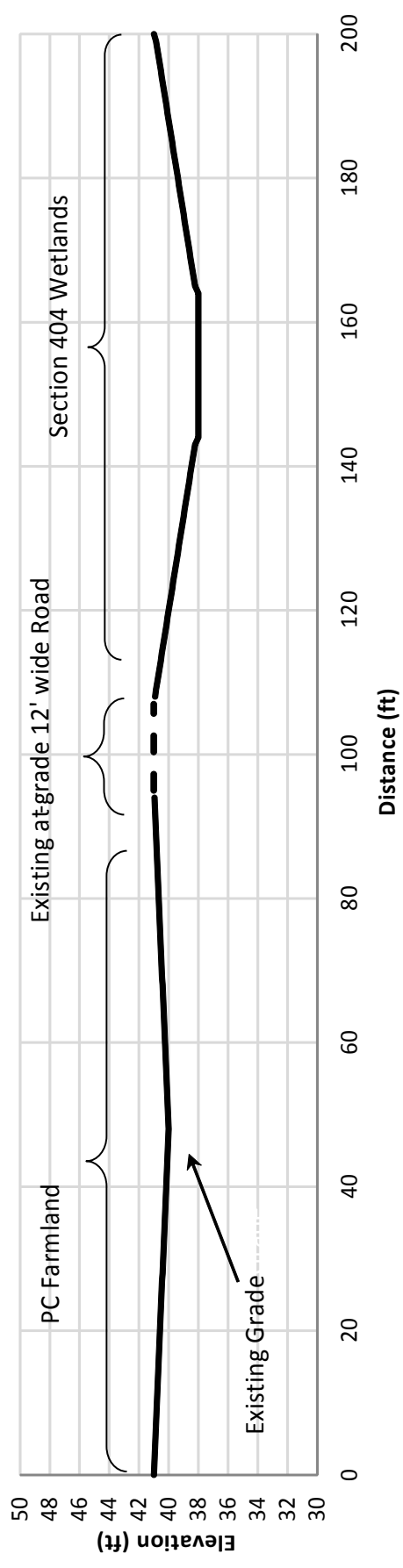


Figure 11G: Typical Cross Section G-G'

Typical Cross Section H-H' Existing Conditions



Typical Cross Section H-H' Proposed Conditions

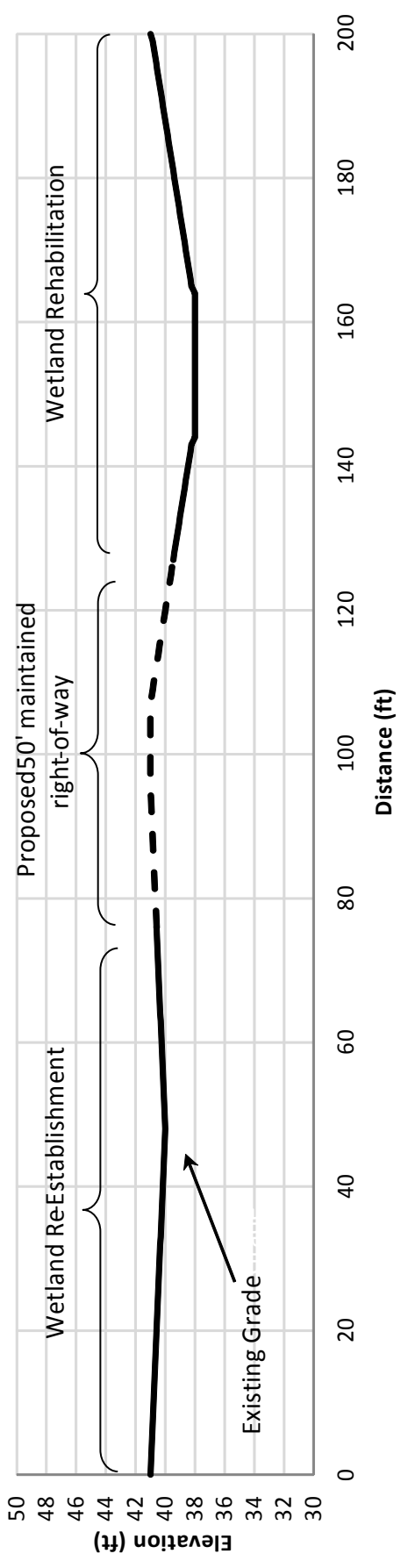
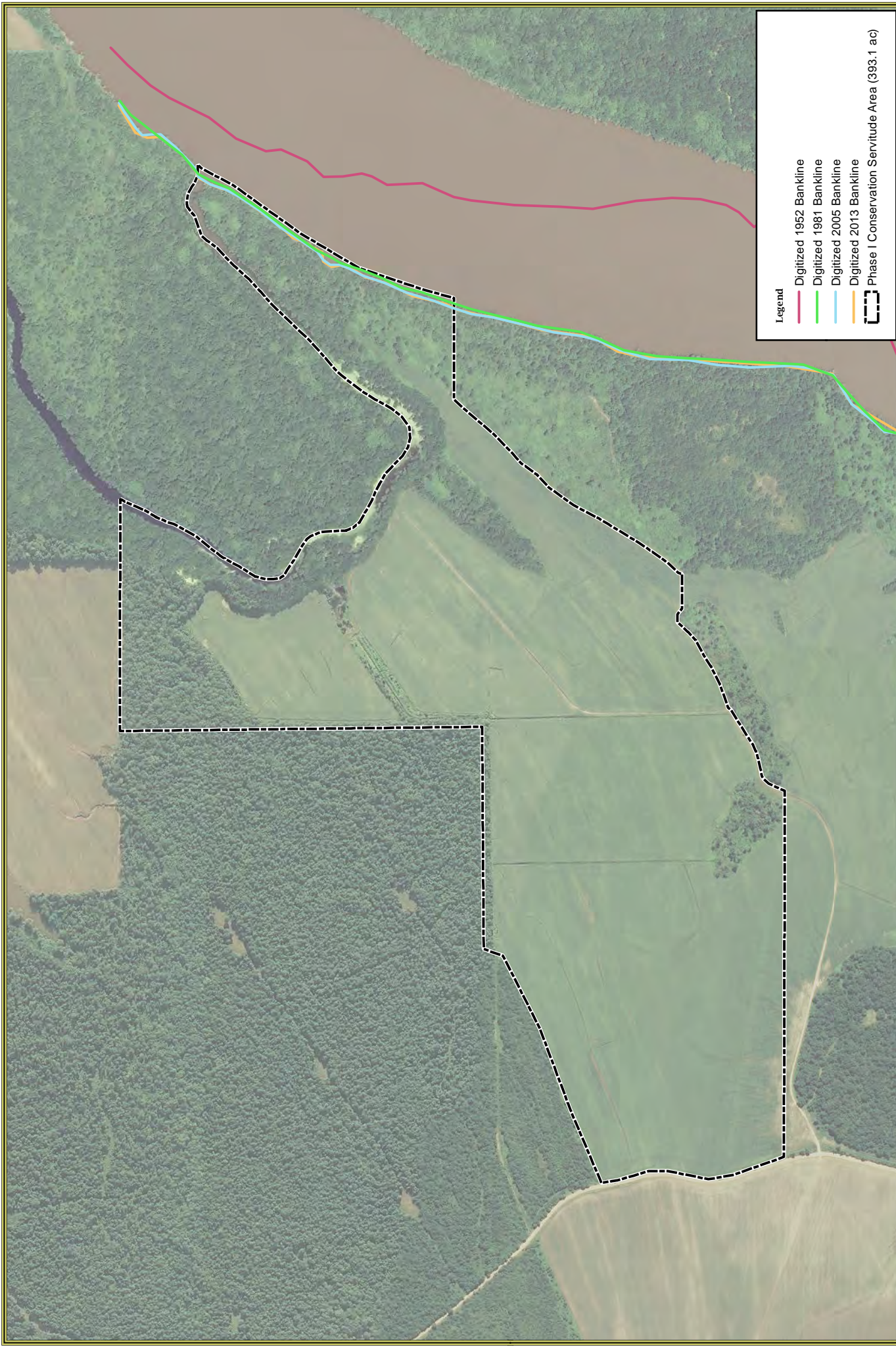



Figure 11H: Typical Cross Section H-H'



Legend

- Digitized 1982 Bankline
- Digitized 1981 Bankline
- Digitized 2005 Bankline
- Digitized 2013 Bankline
- Phase I Conservation Servitude Area (393.1 ac)



NORTH
 1:12,000

0 900 1,800
 Feet









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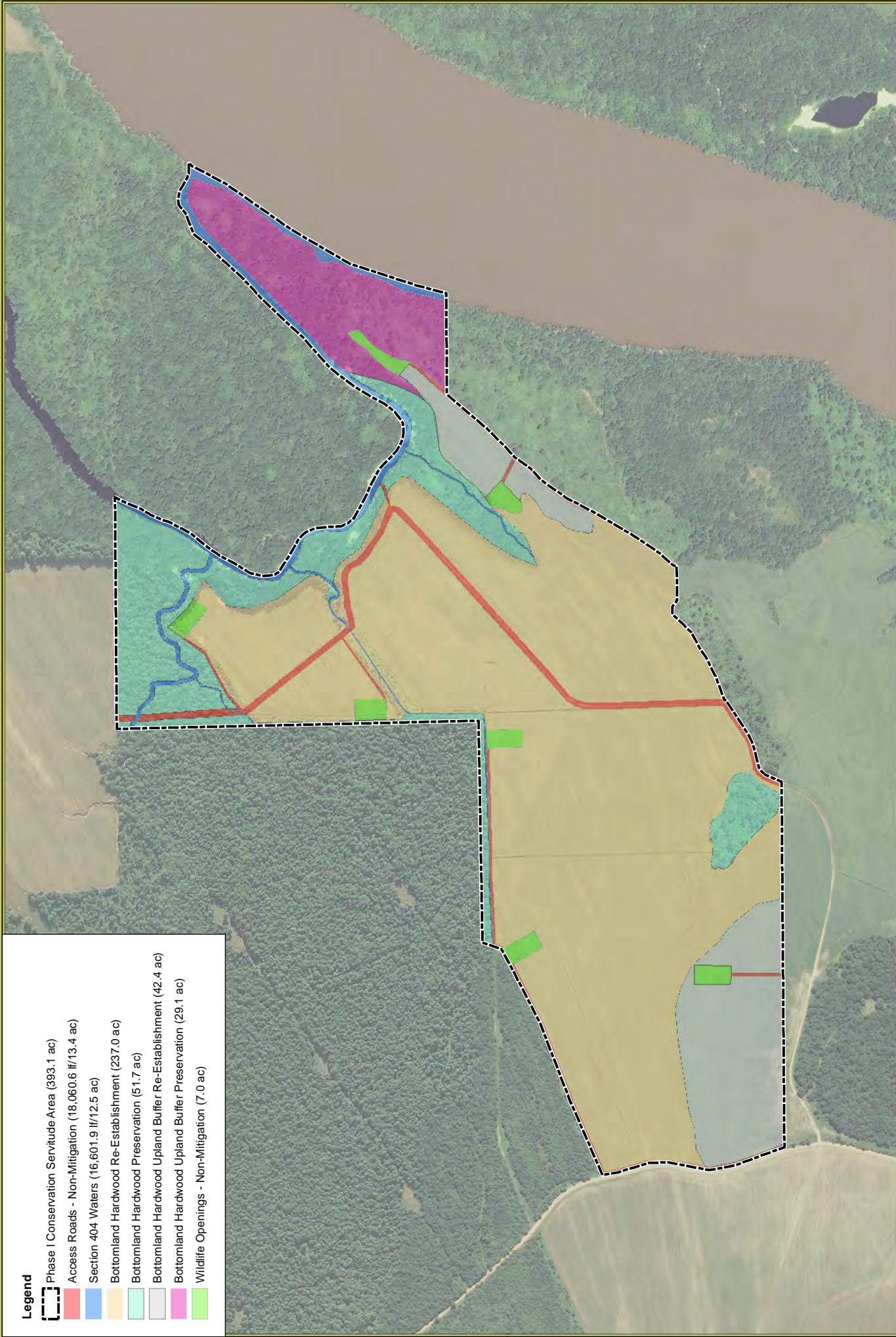
Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 12 - Estimated Bankline Map



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Legend

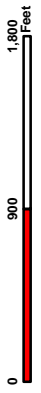
-  Phase I Conservation Servitude Area (393.1 ac)
-  Access Roads - Non-Mitigation (18,060.6 lf/13.4 ac)
-  Section 404 Waters (16,601.9 lf/12.5 ac)
-  Bottomland Hardwood Re-Establishment (237.0 ac)
-  Bottomland Hardwood Preservation (51.7 ac)
-  Bottomland Hardwood Upland Buffer Re-Establishment (42.4 ac)
-  Bottomland Hardwood Upland Buffer Preservation (29.1 ac)
-  Wildlife Openings - Non-Mitigation (7.0 ac)



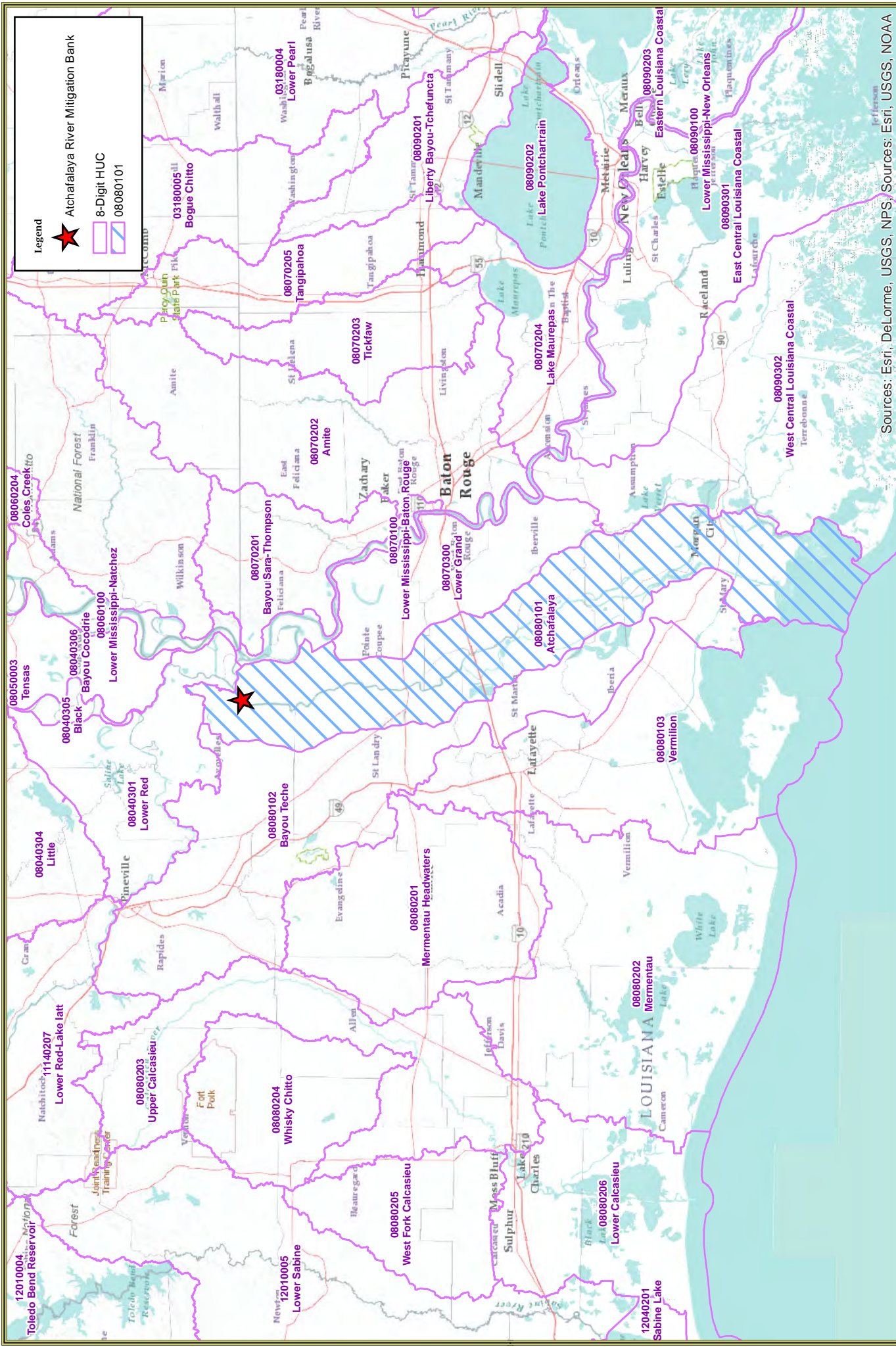
Atchafalaya River Mitigation Bank

Sec. 5 & 6 - T 1 S - R 7 E
Avoyelles Parish, Louisiana

Figure 13 - Mitigation Plan Map



USDA NAIP 2013



Atchafalaya River Mitigation Bank
 Sec. 5 & 6 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 14 - Service Area Map

Sources: Esri, DeLorme, USGS, NPS, Sources: Esri, USGS, NOAA

Appendices

±1193 ACRE TRACT

LOCATED IN SECTION 5, 6, 7 & 8, T1S-R7E,
SOUTHWESTERN LAND DISTRICT OF LOUISIANA,
AVOUELLES PARISH, LOUISIANA

SCALE: 1"=1000'
FOR: DUPUY LAND CO.

DATE: _____

AT REQUEST: DUPUY LAND CO.

DRAFT

MOREAU PROFESSIONAL LAND SURVEYING, LLC

mikemoreau@alumit.lsu.edu
218 CHESTNUT STREET - MARKSVILLE, LA 71351
OFFICE: (318)253-7323 CELL: (318)305-2101

MICHAEL HENRY MOREAU, JR. - P.L.S. REG. NO. 4948

LINE	LENGTH	BEARING
L43	453.6	S44°22'17"E
L44	327.0	S50°50'55"E
L45	213.7	S34°22'41"E
L46	204.6	S16°37'13"E
L47	326.8	S13°49'44"E
L48	211.2	S04°46'04"E
L49	325.1	S09°29'53"W
L50	215.2	S10°27'19"E
L51	332.4	S19°23'08"E
L52	227.4	S15°17'36"E
L53	215.7	S04°27'07"E
L54	215.8	S12°51'07"W
L55	317.7	S14°02'33"W
L56	318.6	S20°06'00"W
L57	317.1	S31°59'46"W
L58	213.1	S60°51'36"W
L59	214.3	S80°34'02"W
L60	416.8	S86°47'38"W
L61	162.5	S73°49'33"W
L62	80.3	S18°58'42"E
L63	286.3	S29°40'25"E
L64	835.6	S39°36'44"E
L65	161.5	S21°21'06"W
L66	313.6	N49°06'20"W
L67	601.7	N05°58'05"E

F. PIERRE
LIVAUDAIS, ET AL

GRID N: 180386.642
GRID E: 3496030.217
LATITUDE: 30°59'38.398"
LONGITUDE: -91°48'47.773"

GASPARD FARMING
COMPANY, LLC.

MARTY J. GASPARD

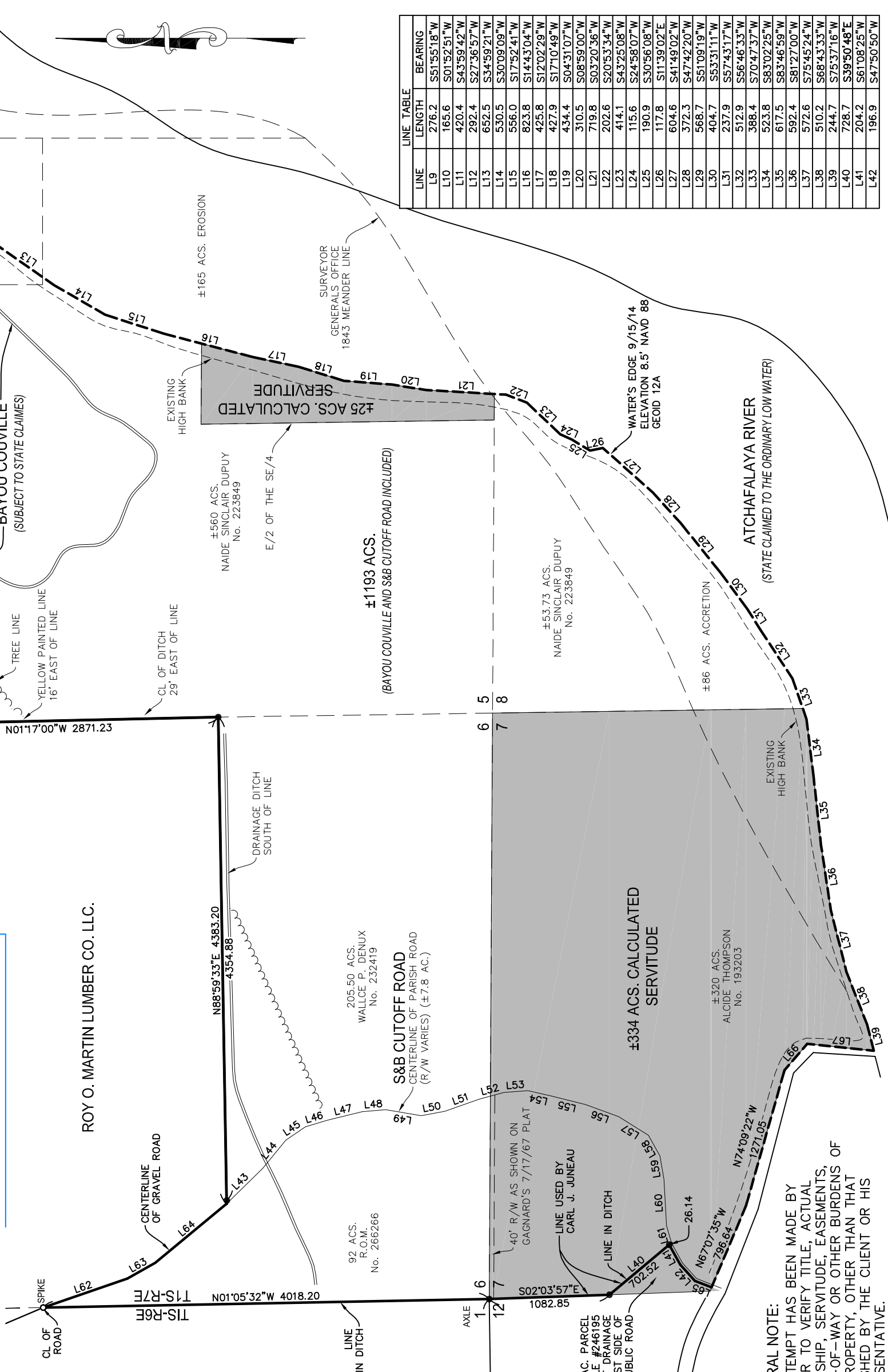
- ±3.4 AC. PARCEL FILE #246195
SERVITUDE OF DRAINAGE ALONG WEST SIDE OF PUBLIC ROAD
- LEGEND:
● FOUND 1/2" IRON ROD (STATE CLAIMED TO THE ORDINARY LOW WATER)
(UNLESS OTHERWISE NOTED)
○ SET 1/2" IRON ROD

REFERENCE MATERIAL

- PLAT BY CLAUDE E. MCMATH DATED 11/14/55 FOR MARC DUPUY, ET AL.
- PLAT BY CARL J. JUNEAU DATED 3/3/05 FOR MARTY GASPARD.
- PLAT BY CLAUDE E. MCMATH DATED 10/30/56 FOR MARSHALL P. SANDEZ.
- PLAT BY RALPH L. GAGNARD DATED 7/17/67 FOR TRIPLE "E" INC.
- MAP BY RALPH L. GAGNARD DATED 6/2/69 FOR DUPUY BROS.

GENERAL NOTE:

NO ATTEMPT HAS BEEN MADE BY AUTHOR TO VERIFY TITLE, ACTUAL OWNERSHIP, SERVITUDE, EASEMENTS, RIGHT-OF-WAY OR OTHER BURDENS OF THE PROPERTY, OTHER THAN THAT FURNISHED BY THE CLIENT OR HIS REPRESENTATIVE.



LINE	LENGTH	BEARING
L9	276.2	S51°55'18"W
L10	165.6	S01°52'51"W
L11	420.4	S43°59'42"W
L12	292.4	S27°36'57"W
L13	652.5	S34°59'21"W
L14	530.5	S30°09'09"W
L15	556.0	S17°52'41"W
L16	823.8	S14°43'04"W
L17	425.8	S12°02'29"W
L18	427.9	S17°10'49"W
L19	434.4	S04°31'07"W
L20	310.5	S08°59'00"W
L21	719.8	S03°20'36"W
L22	202.6	S20°53'34"W
L23	414.1	S43°25'08"W
L24	115.6	S24°58'07"W
L25	190.9	S30°56'08"W
L26	117.8	S11°39'02"E
L27	604.6	S41°49'02"W
L28	372.3	S47°42'20"W
L29	568.7	S51°09'19"W
L30	404.7	S53°31'11"W
L31	237.9	S57°43'17"W
L32	512.9	S66°46'33"W
L33	388.4	S70°47'37"W
L34	523.8	S83°02'25"W
L35	617.5	S83°46'59"W
L36	592.4	S81°27'00"W
L37	572.6	S75°45'24"W
L38	510.2	S68°43'33"W
L39	244.7	S75°37'16"W
L40	728.7	S39°50'48"E
L41	204.2	S61°08'25"W
L42	196.9	S47°50'50"W

ATCHAFALAYA RIVER
(STATE CLAIMED TO THE ORDINARY LOW WATER)

±86 ACS. ACCRETION

WATER'S EDGE 9/15/14
ELEVATION 8.5' NAVD 88
GEOID 12A

±53.73 ACS.
NAIDE SINCLAIR DUPUY
No. 223849

±1193 ACS.
(BAYOU COUVILLE AND S&B CUTOFF ROAD INCLUDED)

±25 ACS. CALCULATED
SERVITUDE

±560 ACS.
NAIDE SINCLAIR DUPUY
No. 223849

E/2 OF THE SE/4

CL OF DITCH
29' EAST OF LINE

YELLOW PAINTED LINE
16' EAST OF LINE

BAYOU COUVILLE
(SUBJECT TO STATE CLAIMS)

ROY O. MARTIN LUMBER CO. LLC.

GASPARD FARMING CO. LLC.

FISH BAYOU

TIN-R7E
T1S-R7E

689.25
N89°33'04"E 4980.30
630.67 1 P.

32 33
491.82
5 4

MARCHAND
No. 191298

±165 ACS. EROSION

SURVEYOR
GENERAL'S OFFICE
1843 MEANDER LINE

BAYOU DES GLAISES
(STATE CLAIMED TO THE ORDINARY LOW WATER)

±320 ACS.
ALCIDE THOMPSON
No. 193203

205.50 ACS.
WALLACE P. DENUX
No. 232419

S&B CUTOFF ROAD
CENTERLINE OF PARISH ROAD
(R/W VARIES) (±7.8 AC.)

92 ACS.
R.O.M.
No. 266266

40' R/W AS SHOWN ON
GAGNARD'S 7/17/67 PLAT

LINE USED BY
CARL J. JUNEAU

LINE IN DITCH

±334 ACS. CALCULATED
SERVITUDE

±26.14

N67°07'35"W
796.64

N74°09'22"W
1271.05

S02°03'57"E
1082.85

AXLE 12

AXLE 6

AXLE 1

AXLE 12

AXLE 6

AXLE 1

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

LINE IN DITCH

±1193 ACRE TRACT

LOCATED IN SECTION 5, 6, 7 & 8, T1S-R7E,
SOUTHWESTERN LAND DISTRICT OF LOUISIANA,
AVOYELLES PARISH, LOUISIANA

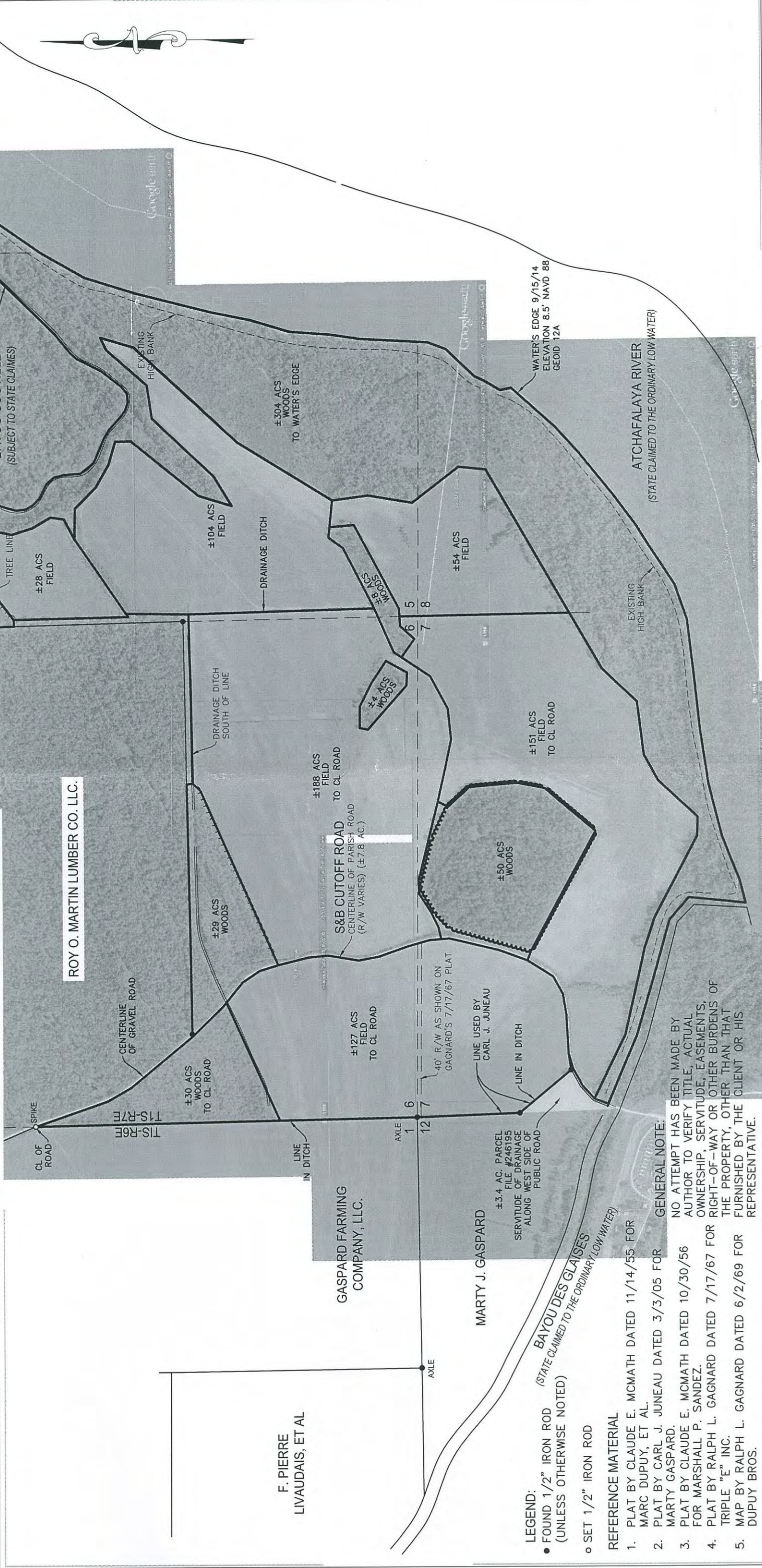
MOREAU PROFESSIONAL LAND SURVEYING, LLC
mikemoreau@alumni.lsu.edu
218 CHESTNUT STREET - MARKSVILLE, LA 71351
OFFICE: (318)253-7323 CELL: (318)305-2101

MICHAEL HENRY MOREAU, JR. - P.L.S. REG. NO. 4948

SCALE: 1"=1000' DATE: 8/29/14

FOR: DUPUY LAND CO.

AT REQUEST: DUPUY LAND CO.



F. PIERRE
LIVAUDAIS, ET AL

LEGEND:
● FOUND 1/2" IRON ROD
(UNLESS OTHERWISE NOTED)

○ SET 1/2" IRON ROD

REFERENCE MATERIAL

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4. PLAT BY RALPH L. GAGNARD DATED 7/17/67 FOR TRIPLE "E" INC.
5. MAP BY RALPH L. GAGNARD DATED 6/2/69 FOR DUPUY BROS.

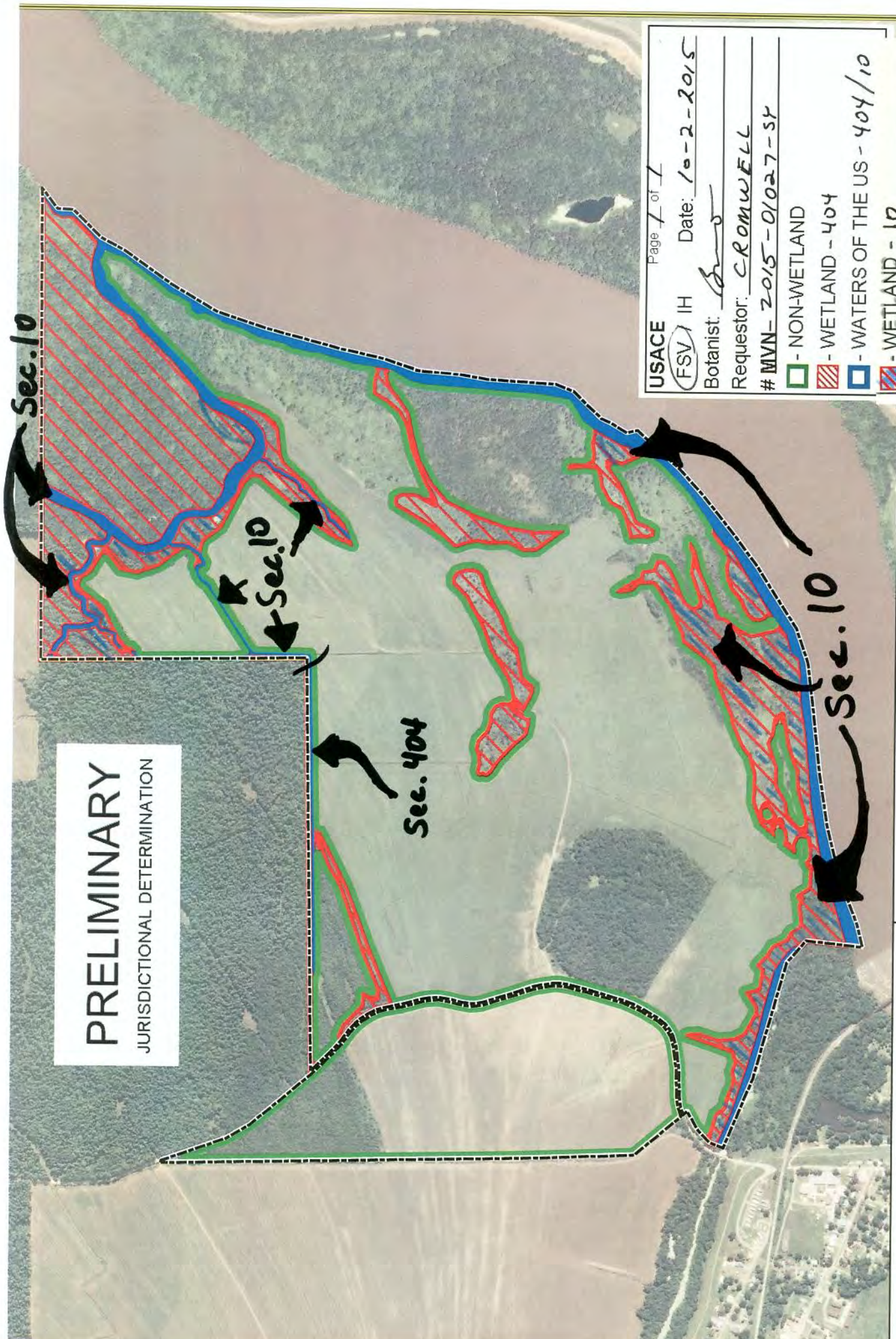
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USACE Page 1 of 7
 (FSV) IH Date: 10-2-2015
 Botanist: *[Signature]*
 Requestor: CROMWELL
 # MVN-2015-01027-SY

- NON-WETLAND
- WETLAND - 404
- WATERS OF THE US - 404/10
- WETLAND - 10

NORTH
 1:16,000
 0 1,250 2,500 Feet
 USDA NAIP 2013



PRELIMINARY
 JURISDICTIONAL DETERMINATION

Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
 Wetland Location Map

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