

JOINT PUBLIC NOTICE

December 7, 2015

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

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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WQC Application Number
WQC # 141117-02

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**

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 MITIGATION BANK
AVOUELLES PARISH, LOUISIANA
MVN-2015-00373 MG**

Prepared for

U.S. Army Corps of Engineers
New Orleans District
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Submitted by

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Prospectus
Wetland Mitigation Strategies, LLC
Atchafalaya Mitigation Bank
Avoyelles Parish, Louisiana

1.0 INTRODUCTION

Wetland Mitigation Strategies, 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 Mitigation Bank (AMB) in accordance with 33 CFR 332.8(d)(2). The AMB 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

Wetland Mitigation Strategies, LLC is the Sponsor of the AMB. The land is owned in fee simple by Dupuy Land Co. who will assume long term ownership and management of the AMB. Wetland Mitigation Strategies, LLC will remain as the bank Sponsor assisting with establishment and long term management of the bank.

1.2 Site Location

The AMB is approximately 1,156.31 acres but is being presented in a phased approach depending on market demands. The initial phase (Phase 1) of the AMB will include approximately 650.68 acres providing approximately 279.70 acres of bottomland hardwood Re-Establishment, approximately 10.69 acres of bottomland hardwood Rehabilitation, approximately 150.18 acres of bottomland hardwood Preservation, 57.60 acres of bottomland hardwood Upland Buffer Re-Establishment and 58.89 acres of bottomland hardwood Upland Buffer Preservation. The AMB Phase I is located on a tract owned by Dupuy Land Co. in southeast Avoyelles Parish adjacent to the City of Simmesport, 35 miles north of Opelousas and 53 miles northwest of Baton Rouge, Louisiana (Figure 1). The AMB Phase I is located at latitude 30.997817 and longitude -91.791590 within Sections 5, 6, 7 and 8, Township 1 South, Range 7 East, Avoyelles Parish, Louisiana (Figure 2).

The AMB 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. As described, the City of Simmesport is located in close proximity to the south divided by Bayou des Glaises along the southwest corner of the Bank property. B Cutoff road extends through the western portion of the Bank property in a north to south orientation 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).

AMB is located in the Atchafalaya – Vermillion basin HUC 080801 and the Atchafalaya watershed HUC 08080101. The AMB is located within the West Atchafalaya Floodway with a general drainage area of +\21,000 acres extending west to Bayou Des Glaises, north to Bayou

Natchitoches and east to Bayou Des Sot. Bayou Des Sot converges with Bayou Courville just north of the AMB before converging with the Atchafalaya River within the AMB property. The AMB 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 AMB property.

2.0 PROJECT GOALS AND OBJECTIVES

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

The goal of the AMB Phase I is the Re-Establishment of approximately 279.70 acres, Rehabilitation of approximately 10.69 acres and the Preservation of approximately 150.18 acres of bottomland hardwood habitat. The AMB Phase I will also provide Upland Buffer Re-

Establishment of approximately 57.60 acres and Upland Buffer Preservation of approximately 58.89 acres of bottomland hardwood habitat.

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

Habitat Type	Land Use	Acreage
PC Farmland	Agriculture	351.55
Section 404 Waters	Waters	14.27
Section 404 Wetlands	Wetlands	163.83
Forested Uplands	Forestland	59.58
Outparcel	Non-Mitigation	0
CRP Areas	BLH	56.74
Spoil Areas	Non-Mitigation	3.17
Access Roads	Non-Mitigation	1.54
Total	-	650.68

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

Present Habitat Type	Proposed Habitat Type	Acreage	Mitigation Type
PC Farmland	BLH	279.70	Re-establishment
PC Farmland	BLH	57.60	Upland Re-establishment
Section 404 Wetlands	BLH	10.69	Rehabilitation
Section 404 Wetlands	BLH	150.18	Preservation
Upland	BLH	58.89	Upland Preservation
Section 404 Waters	N/A	14.15	Section 404 Waters (Non-Mitigation)
CRP Areas	CRP Areas	55.84	Non-Mitigation
	Wildlife Openings	4.50	Non-Mitigation
	Access Roads	15.96	Non-Mitigation
	Spoil Areas	3.17	Non-Mitigation
Total		650.68	

3.0 ECOLOGICAL SUITABILITY OF THE SITE

3.1 Historic Site Conditions

AMB lands are located in Simmesport, Avoyelles Parish, Louisiana. Historically, bottomland hardwood forests existed throughout the Parish, but large portions of the land were cleared for silviculture, livestock grazing and agricultural uses. As described, historic photography indicate that the AMB property was forestland around 1952. The AMB 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 AMB property is utilized for agricultural row crop production purposes. The exception would include the existing riparian buffers along the east boundary of AMB 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 AMB 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 AMB property south of the Phase I boundary. The second dredge disposal site is located along the east boundary of the AMB property along the immediate bank of the Atchafalaya River. Each dredge disposal site has been removed from the AMB Phase I proposal and may be considered as a part of future phases to the Bank following cancellation USACE servitudes.

With the exception of the agricultural production activities prevalent within the AMB, 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 farmland 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 Wetland Mitigation Strategies, LLC revealed the presence of an area enrolled in the Conservation Reserve Program (CRP). With respect to AMB Phase I, the CRP area is located in the northwest portion of the subject property bordering the existing forestland habitat and B Cutoff Road. The CRP land is currently depicted within the limits of the Conservation Servitude boundary, but as non-mitigation.

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 AMB Phase I 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. Given the current land use, agricultural ditches can be found within the confines of the agricultural fields. Agricultural drainages were constructed to convey surface water across the property during rain events. The excavated drainages were designed and constructed to connect 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. The current hydrologic conditions within the AMB are depicted on [Figure 6](#) and the agricultural drainages are also depicted on [Figure 11](#).

3.2.4 Historic Hydrology

As described above, the historic hydrology within the Bank property has been altered through common agricultural practices. The construction of agricultural related drains to aid in the removal of surface water for agricultural row crop production has decreased overland flow and altered the historic hydrology within the Bank property. The historic hydrology and drainage patterns were determined through the use of available topographic maps and LIDAR remote sensing technology to determine approximate elevations within the Bank property and the adjacent properties located in the drainage area of the Bank property. It was determined that drainage through the north portion of the Bank property was conveyed to the north-northeast via agricultural drainages and into Bayou Courville, converging with the Atchafalaya River. Drainage in the southern portion of the Bank Site was generally to the south via agricultural drainages and overland flows into Bayou Des Glaises and into the Atchafalaya River located along the south boundary of the Bank property. Drainage within the adjacent properties to the north and west is believed to have been similar to the Bank property via improved agricultural drainages into Bayou Courville and Bayou Des Glaises. The historic hydrology of the Bank property and the adjacent properties are depicted in [Figure 7](#).

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 AMB 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

within the Dupuy Land Co. 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 and the process of doing so is well underway. Shortly, pertinent documentation verifying that the servitudes have been removed and the property is again free of encumbrances will be provided to the IRT upon receipt.

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

3.2.7 Zoning and Adjacent Property Development

AMB and adjacent property is within unincorporated land and is absent of zoning regulations. AMB 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 Bank property, the current land use type consists of 34% bottomland hardwood forest, 33% cultivated cropland, 15% developed, 4% fallow and generally 14% in water features (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 AMB 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 AMB 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 AMB 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 bottomland hardwood forests, the AMB seems properly sited to add to habitat and corridors of and for the Louisiana Black Bear as set forth by the U.S. Fish & Wildlife Services designation of the entirety of the AMB property as Designated Critical Habitat. 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 AMB is uniquely located within Critical Habitat, adjacent to the Atchafalaya River and on the southern edge of a major bottomland hardwood complex which includes several state wildlife management areas and federal national wildlife refuges. Bottomland hardwoods extend north from the AMB 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, Red River and Spring Bayou Wildlife Management Area complex), 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.

5.0 Bank Establishment

5.1 Management Summary

5.1.1. Hydrologic Restoration

The plugging and degradation of agricultural drains will restore natural sheet flow across the property and flow through natural sloughs. Water that is currently routed through agricultural drainages will again be allowed to sheet flow across the property and to flow through natural low-lying areas or slough habitats, thereby retaining surface water and upper soil saturation as it did historically. The natural ridge and swale ecosystem found along the Atchafalaya River will further reduce storm water runoff and allow the regeneration of unique and important bottomland hardwood forestlands within this watershed.

The removal of the agricultural practices will also eliminate the smaller cross drains or furrows within the Bank property. The furrows currently serve as seasonal conveyances within the agricultural fields. Furrows would be removed by disking, subsoiling and site preparation for vegetative plantings, described later within this prospectus.

Agricultural furrows convey storm water into larger agricultural drains located within the open fields (Figure 6). The agricultural drains transecting the open fields would be plugged and degraded as spoil material is available. Drain plugs would be placed within the primary agricultural drains to reduce storm water flows, but not alter historic flows adversely affecting non-bank property. The storm water flows within Phase I are expected to flow from the existing bottomland hardwood habitat along the south boundary of Phase I north across the site towards the undeveloped forestlands to the north.

One exception would include a drainage feature extending from west of B Cutoff Road along the north boundary of AMB Phase I and flowing into Bayou Couville would not be degraded as a part of the Phase I proposal. This presence of this unnamed drainage feature accepts storm water flows from the adjacent agricultural lands to the west and therefore would need to be maintained. Although this drainage feature will not be altered as a part of the Bank proposal, it is not believed that it will adversely affect the planned hydrologic restoration work plan or the success of the project.

During the design of the planned project, it was decided to divide Phase I and II within the central portion of the AMB property generally following an at-grade access road extending across the site in a west to east orientation. The access road and Phase boundary consequently follows the natural dividing boundary for storm water flows associated with Bayou Couville and Bayou Des Glaises, or north

and south respectfully. Current hydrologic flows extend across the Phase I from south to north flowing into unnamed tributaries of Bayou Couville. It is proposed to maintain the at-grade access road to provide interior access for management, compliance and overall recreation use. Maintenance of the access road is not expected to adversely affect the hydrologic regime within the subject property. Each access road would be maintained by bush hogging or clipping to grant interior access within the AMB property. The primary access roads will be maintained within a 50' right of way with interior woods roads maintained within a 12' right of way. The presence of the access roads have been excluded from the restoration work plan acreage.

B Cutoff Road extends across the AMB in a north to south orientation within the western portion of the property. B Cutoff also transects the western portion of AMB Phase I. The historic ridge and swale complex west of B Cutoff road convey storm water flows northeast towards Fish Bayou and south in Bayou Des Glaises. A portion of storm water would also be expected to flow east across B Cutoff and into unnamed tributaries of Bayou Couville. Historically, the ridge and swale complex extended across the entire site in a southwest to northeast orientation, generally perpendicular from the River. This is evident when visiting the forestland complex to the north. Incorporating the additional property west of B Cutoff road would continue the opportunity to re-establish bottomland hardwoods within the basin. The overall restoration plan to re-establish the historic and unique ridge and swale ecosystems along the River will continue across the AMB Phase 1. The presence of B Cutoff road is not anticipated to adversely affect the restoration efforts of this community.

The stream reaches observed within the site are relegated to natural unnamed tributaries of Bayou Courville and Bayou Des Glaises. Each of these waters discharges into the Atchafalaya River. The proposed bottomland hardwood re-establishment efforts are intended to further enhance the functions and services of the stream reaches present within the site. It is not, however, proposed to conduct in-stream rehabilitation as a part of the bank project. As mentioned, the project will reestablish and preserve riparian buffer zones along the stream reaches and, more importantly, within the Bayou Courville and Bayou Des Glaises floodplain and contiguous wetlands identified throughout the Bank property. The Hydrologic Work Plan developed for AMB Phase I is depicted as [Figure 11](#).

Upon review of the historic imagery available for the AMB 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 AMB 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 AMB or Phase II. The dynamics of the Atchafalaya River system have caused erosion to occur along the east boundary of the AMB while accretions have occurred along the south boundary of

the AMB. Following the 1973 flood, the U.S. Army Corps of Engineers completed a bank stabilization project along the east boundary of the AMB. 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 AMB boundary, future erosion along the AMB boundary would not be expected to the extent that would adversely affect the planned project. [Figure 12](#) depicts the estimated bankline digitized for 1952, 1981, 2005 and 2013. The proposed conservation servitude boundary for the AMB will follow the estimated 2013 bankline.

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

Following soil preparation, an appropriate combination of hard and soft mast producing bare-root stock will be planted within the AMB. Bare root stock will be utilized for plantings and assemblages planted will be similar to species assemblages historically located within surrounding wetland forests and bayous of the area. Historic species assemblages are identified within the Louisiana Natural Heritage Program's *The Natural Communities of Louisiana* (2009). Table 3, located below, provides a list of proposed species assemblages to be planted.

Table 3: Bottomland Hardwood Proposed Species Assemblages

Scientific Name	Common Name (USDA)	Wetland Indicator Status Region 2 (USDA)	Percent Composition
<i>Quercus lyrata</i>	Overcup oak	OBL	20%
<i>Quercus texana</i> Buckley	Nuttall oak	FACW	20%
<i>Quercus phellos</i> L.	Willow oak	FACW-	10%
<i>Carya aquatica</i> (Michx) Nutt.	Water hickory	OBL	10%
<i>Quercus nigra</i>	Water oak	FAC	5%
<i>Celtis laevigata</i> . Willd	Sugarberry	FACW	5%
<i>Ulmus Americana</i> L.	American elm	FACW	5%
<i>Taxodium distichum</i> (L.) Rich.	Bald Cypress	OBL	5%
<i>Fraxinus pennsylvanica</i>	Green Ash	FACW	5%
<i>Acer rubrum</i> L. var. <i>drummondii</i> (Hook. & Arn. Ex Nutt.) Sarg.	Drummond's red maple	OBL	5%
<i>Carya illinoensis</i>	Sweet pecan	FACU	5%
<i>Nyssa aquatica</i> L.	Water Tupelo	OBL	2.5%
<i>Diospyros virginiana</i>	Common persimmon	FAC	2.5%

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

Afforestation activities will include the planting of native BLH species during the first planting season following site preparation. BLH species will be planted on approximate 9-foot centers for a rate of 538 stems per acre (spa). 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 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.

Hard mast species should account for at least 50 to 70% of all BLH plantings with the remaining percentages accounted for by soft mast tree species. 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.

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.

5.1.5 Monitoring

Monitoring shall commence immediately following plantings such that a baseline is established for the AMB. Monitoring will then occur within the spring of years 1, 3 and 5. Following year 5, 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 AMB 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 is 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 AMB is the Atchafalaya-Vermillion Watershed Cataloguing Unit 080801. 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 AMB property. The District line traverses the AMB 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 AMB Phase I as well as the AMB 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

AMB 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

Wetland Mitigation Strategies, LLC
One American Place, Suite 820
Baton Rouge, LA 70825
POC: Mr. Andrew J. Harrison, Jr.

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

AMB 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

Wetland Mitigation Strategies, LLC (WMS), 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 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. Wetland Mitigation Strategies, LLC currently operates some or all aspects of five (5) mitigation banks, four (4) in VKD and one (1) in NOD.

Mr. Harrison and WMS 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 AMB Phase I has the potential to re-establish approximately 279.70 acres of bottomland hardwood habitat, rehabilitate approximately 10.69 acres of bottomland hardwood habitat and preserve approximately 150.18 acres of bottomland hardwood 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>

United States Department of Agriculture – Soil Survey of Avoyelles Parish, Louisiana, issued September 1986.

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)).

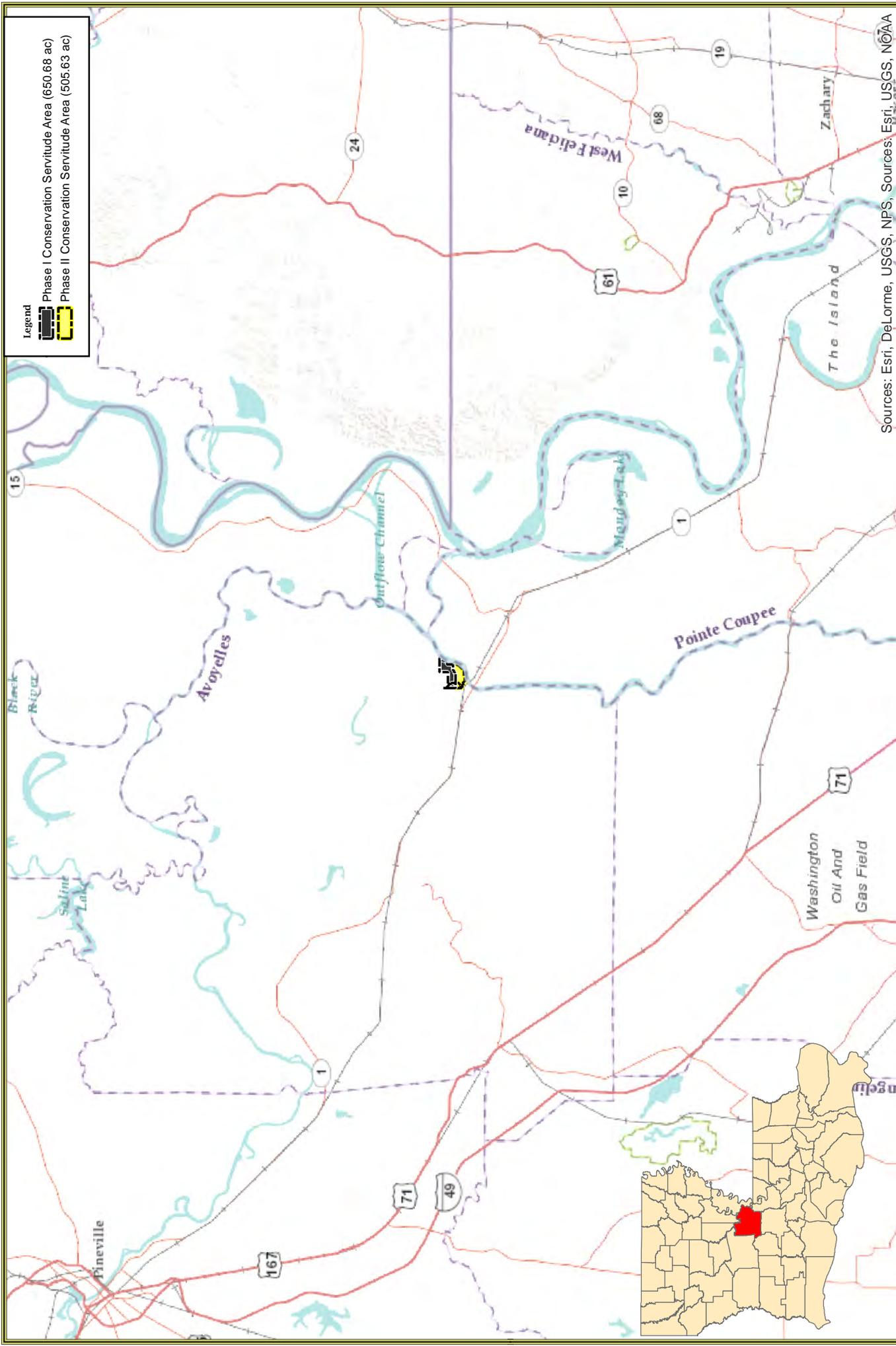
<http://www.deq.louisiana.gov/portal/DIVISIONS/WaterPermits/WaterQualityStandardsAssessment/WaterQualityInventorySection305b/2012IntegratedReport.aspx>

<http://www.deq.louisiana.gov/portal/Portals/0/planning/305b/2012/12%20IR1%20Appendix%20A%20Text%20and%20Maps%20FINAL%201-25-13.pdf>

National Wetland Plant List, Version 3.2. U.S. Army Corps of Engineers, 2014.
http://wetland_plants.usace.army.mil/

The Natural Communities of Louisiana. Louisiana Department of Wildlife and Fisheries
Louisiana Natural Heritage Program 2009.
http://www.wlf.louisiana.gov/sites/default/files/pdf/page_wildlife/6776are%20Natural%20Communities/LA_NAT_COM.pdf

Figures



Legend

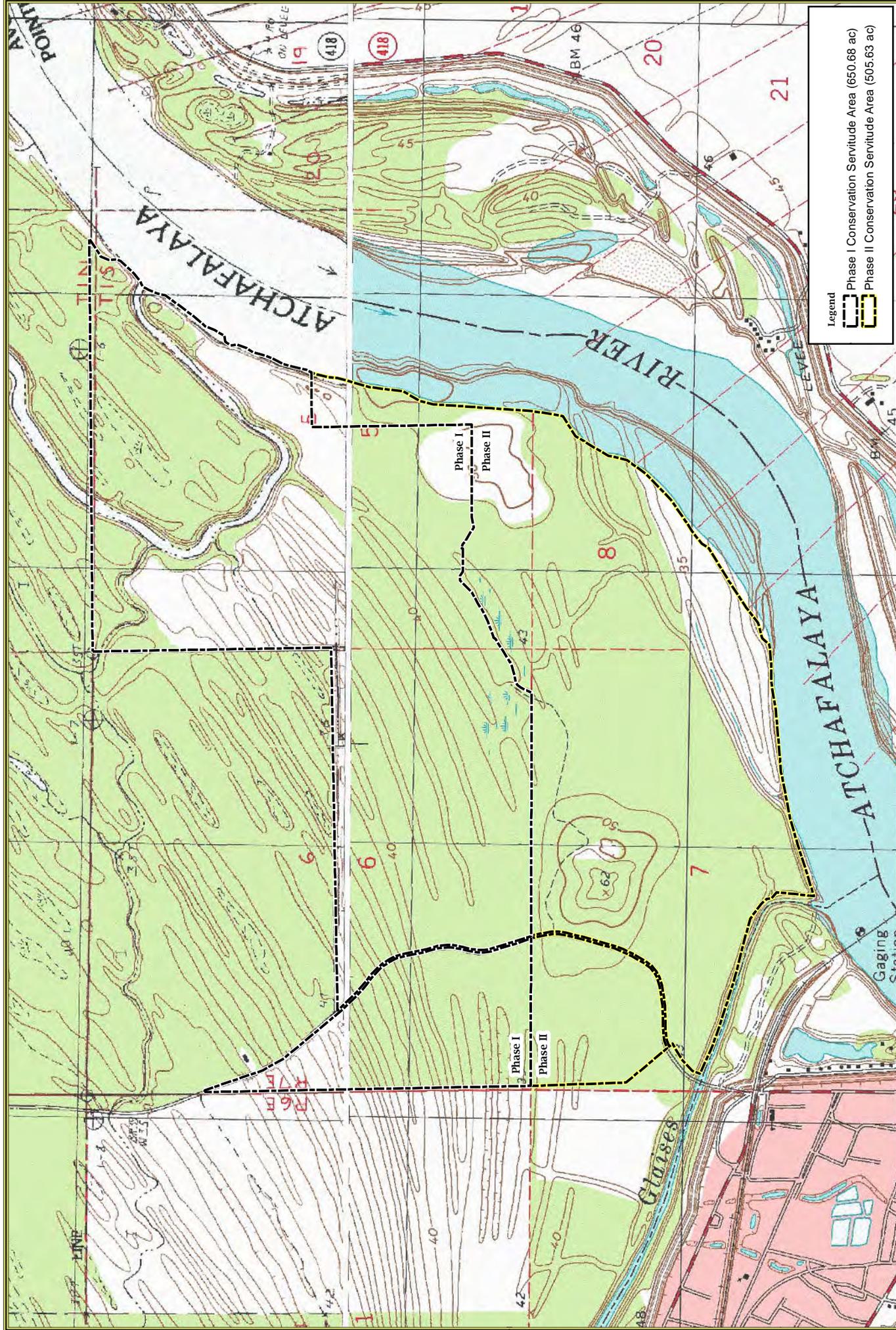
- Phase I Conservation Servitude Area (650.68 ac)
- Phase II Conservation Servitude Area (505.63 ac)

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

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



ESRI World Topography Basemap



Legend

- Phase I Conservation Servitude Area (650.88 ac)
- Phase II Conservation Servitude Area (505.63 ac)

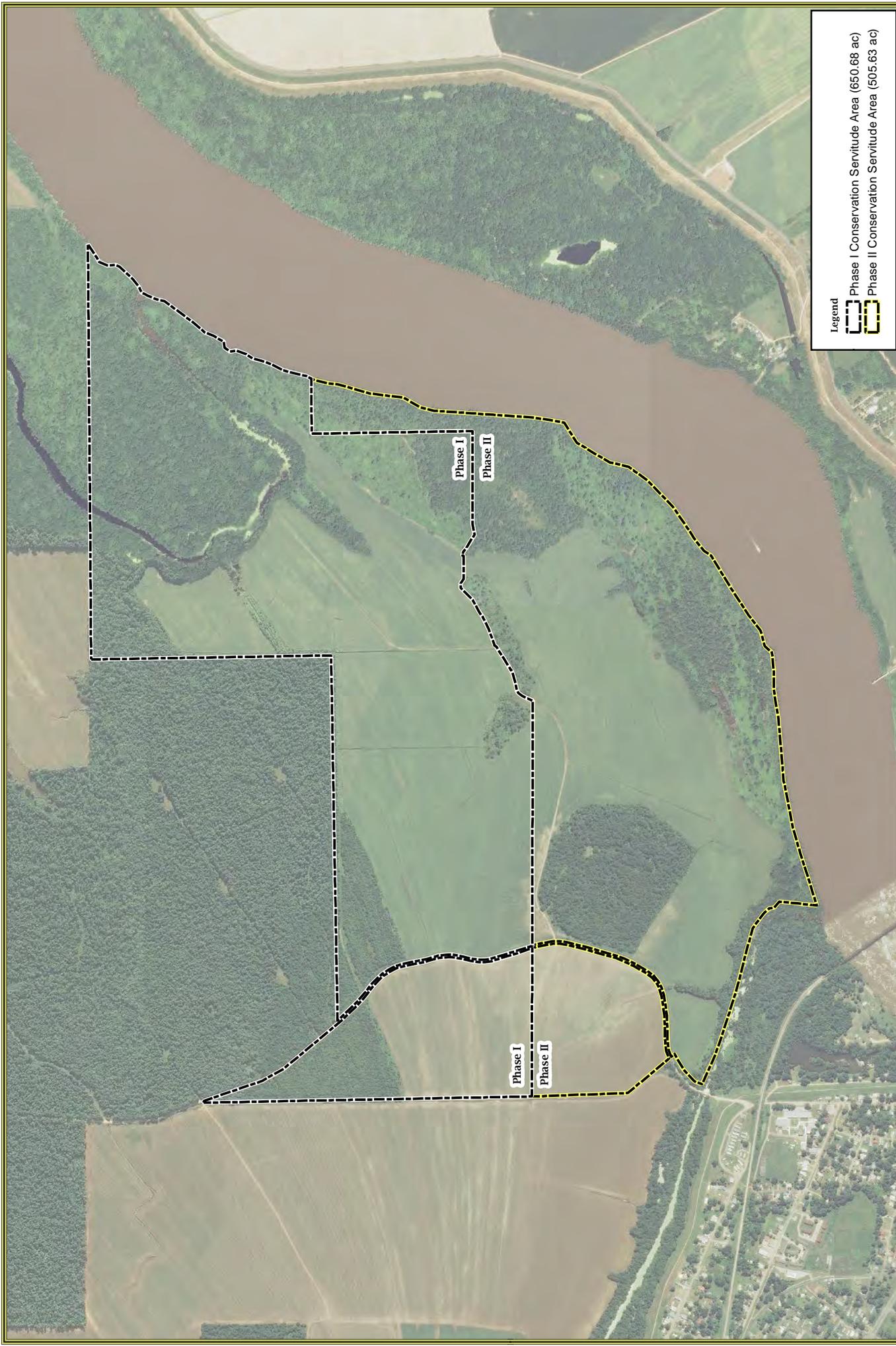
Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T1S-R7E
 Avoyelles Parish, Louisiana
[Figure 2 - Site Location Map](#)

HEADWATERS INC.
 NATURAL RESOURCES CONSULTING
 WWW.HEADWATERS-INC.COM

NORTH
 1:18,000

0 1,400 2,800
 Feet

USGS Big Bend/Simmsport (LA) Quad



Legend



Phase I Conservation Servitude Area (650.68 ac)

Phase II Conservation Servitude Area (505.63 ac)

Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 3 - Site Location Map

HEADWATERS
 INC.
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USDA NAIP 2013



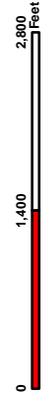
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Phase I Conservation Servitude Area (650.68 ac)
 Phase II Conservation Servitude Area (505.63 ac)

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

Figure 5 - Historical Imagery Map

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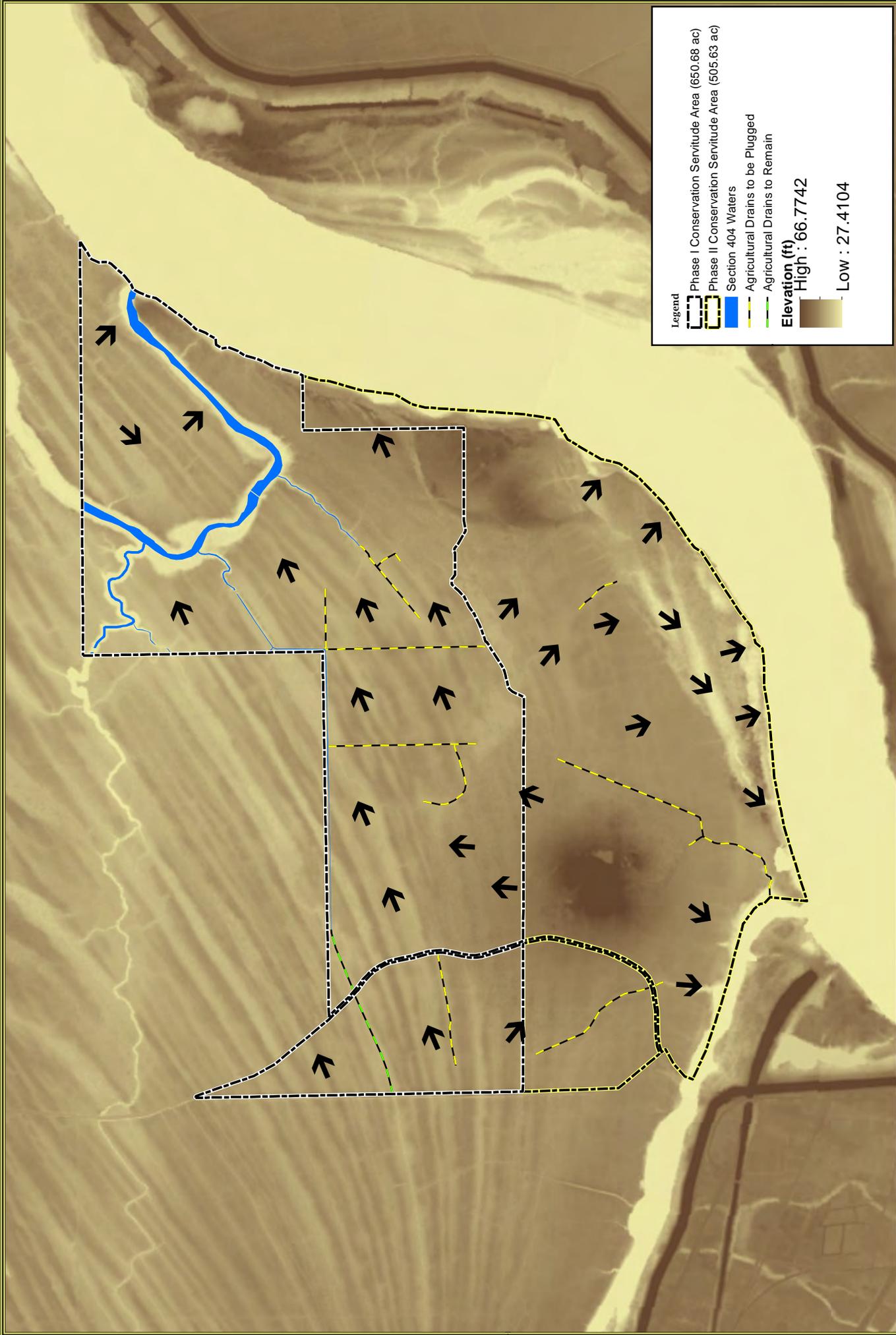


Figure 6 - Current Hydrology Map

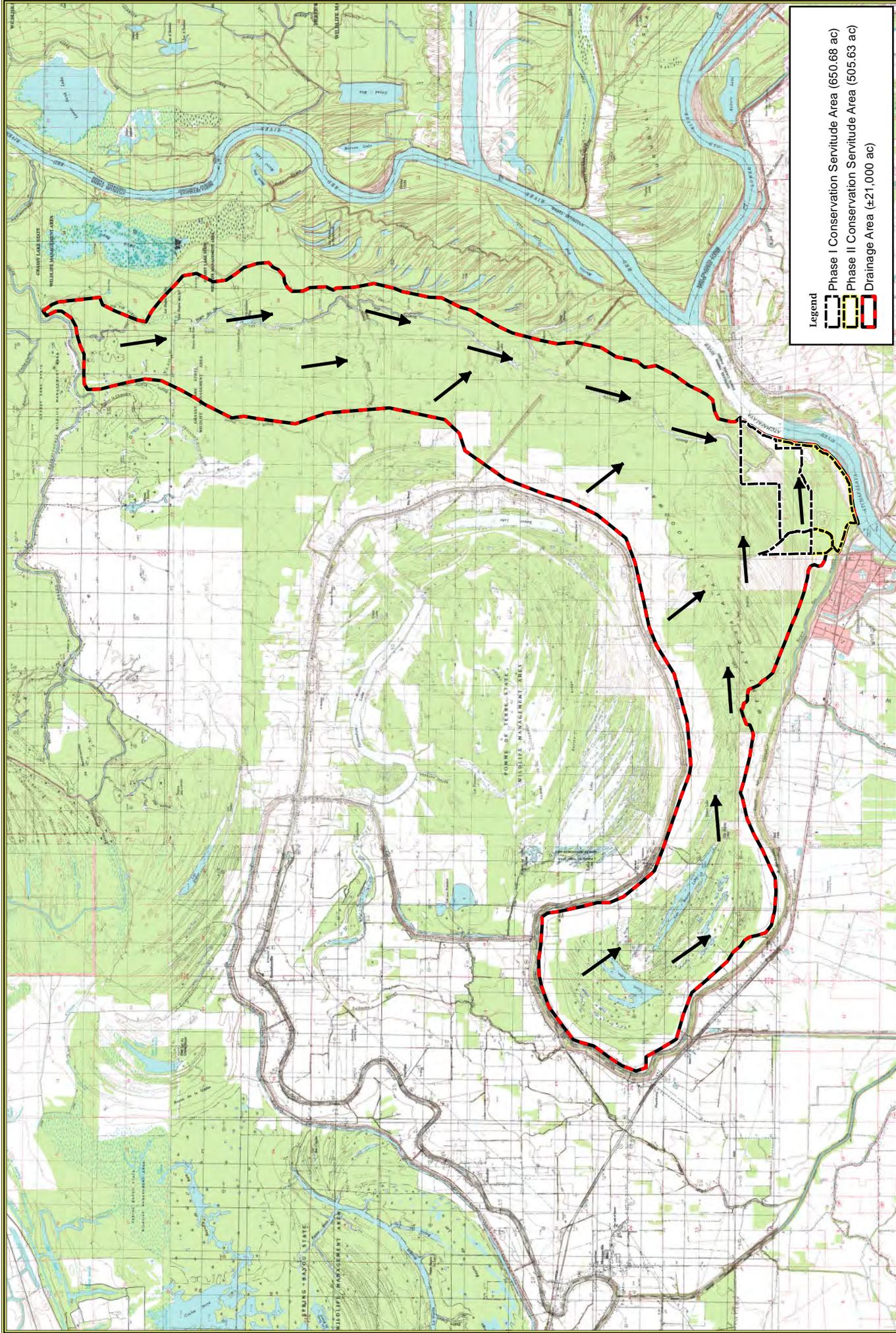
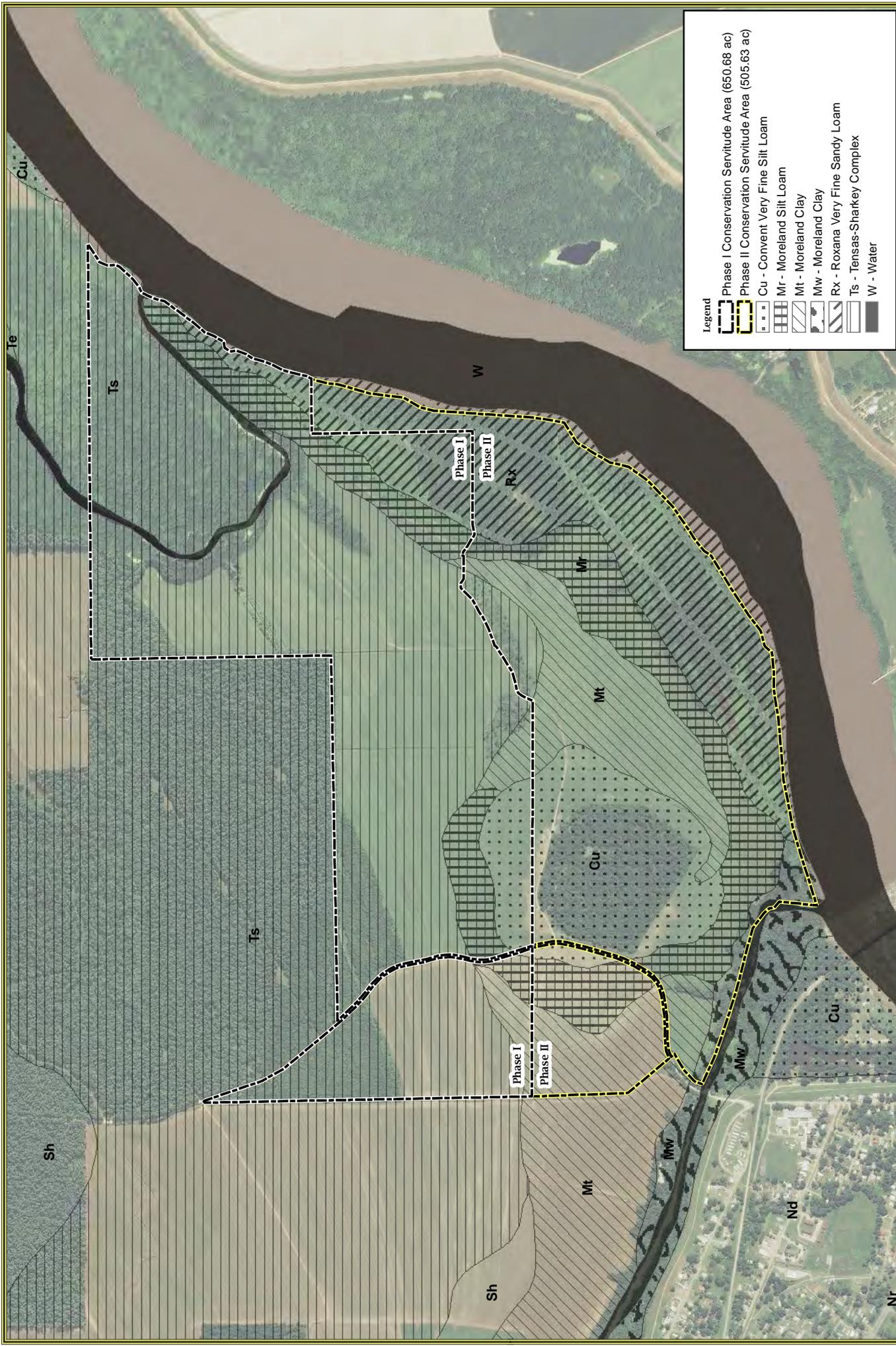


Figure 7 - Historic Hydrology Map



Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T1S-R7E
 Avoyelles Parish, Louisiana

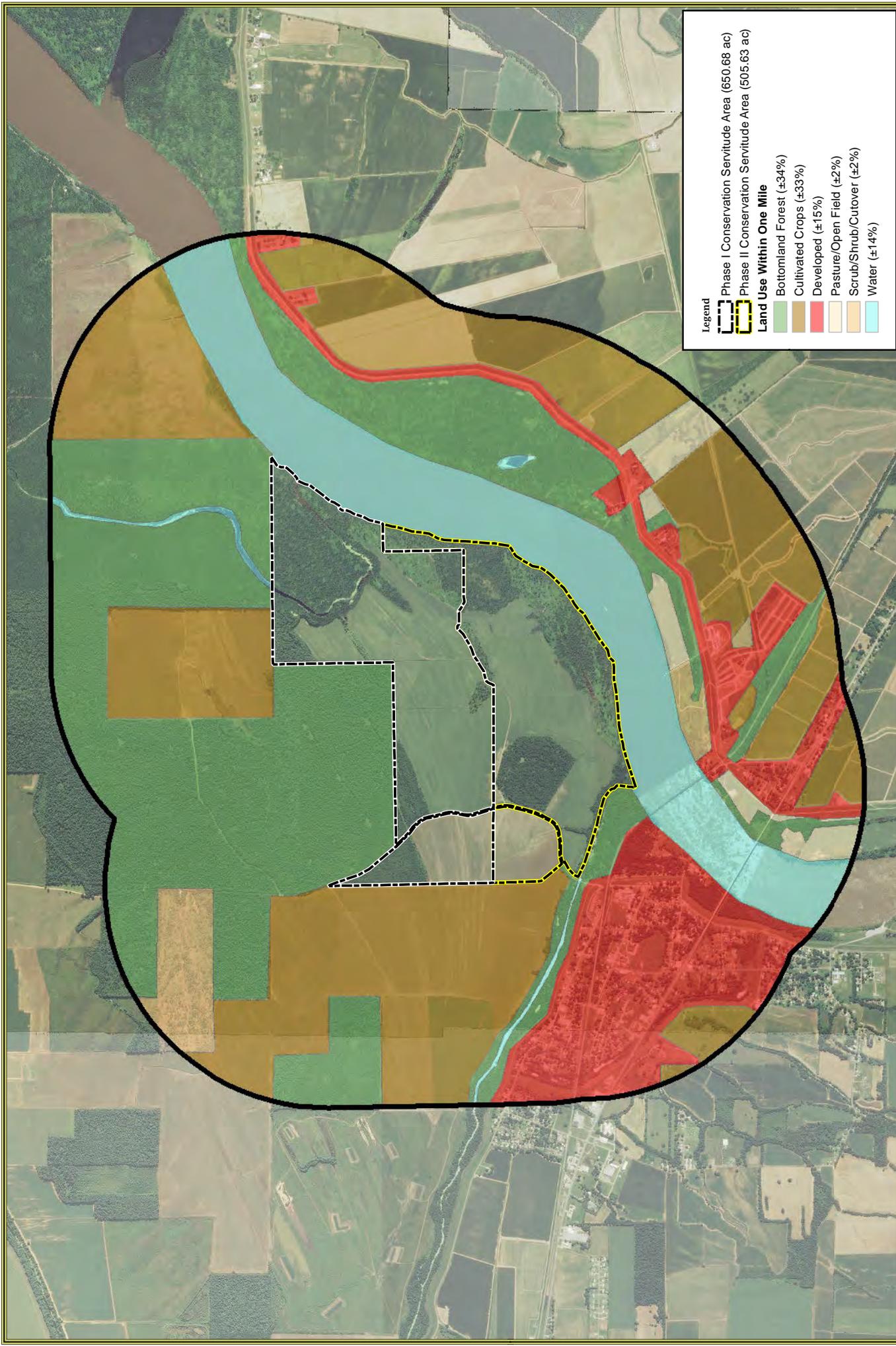
Figure 8 - NRCS Published Soils Map

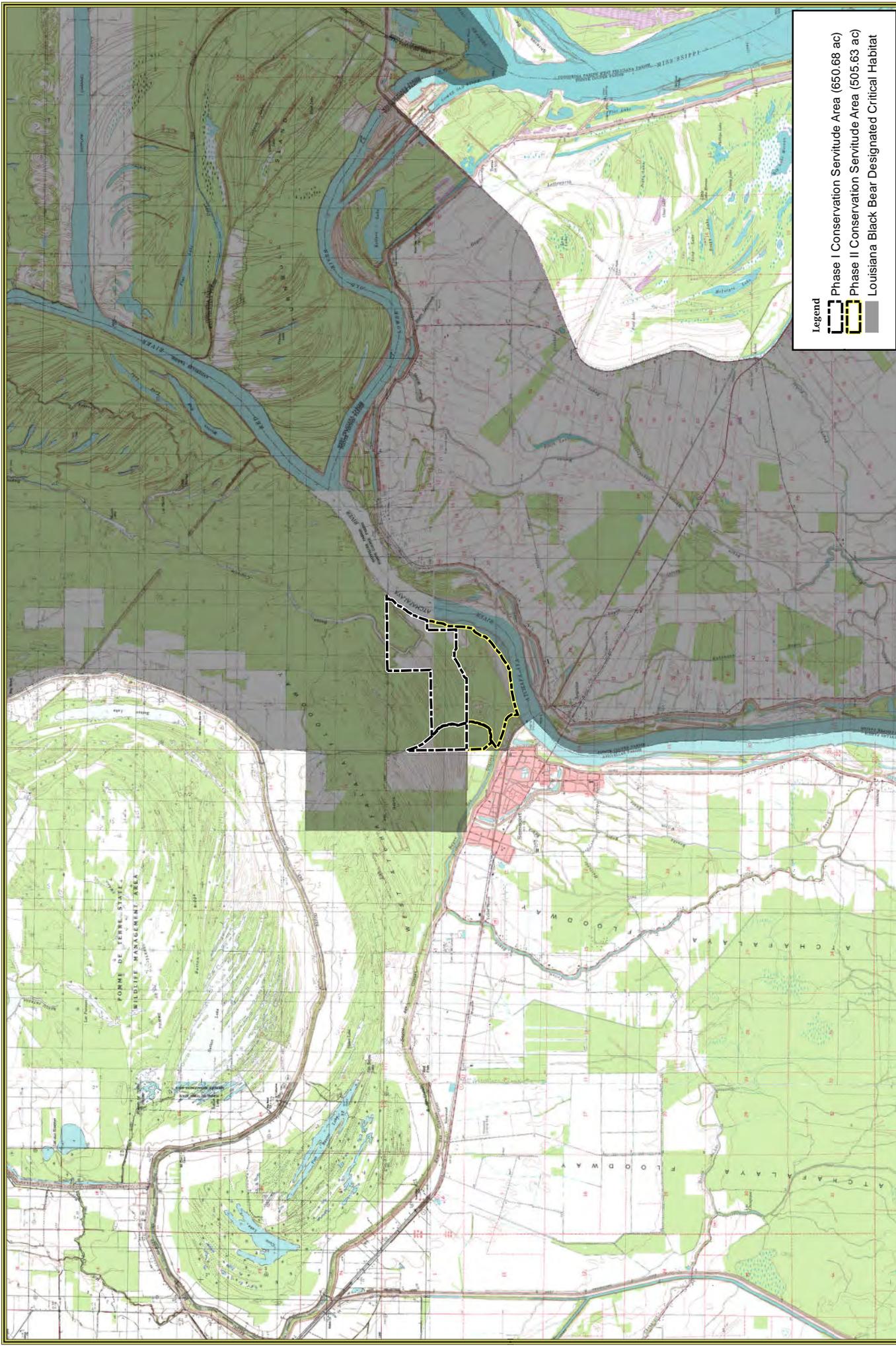
USDA NAIP 2013

NORTH
 1:18,000

0 1,400 2,800 Feet

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Legend

-  Phase I Conservation Servitude Area (650.68 ac)
-  Phase II Conservation Servitude Area (505.63 ac)
-  Louisiana Black Bear Designated Critical Habitat

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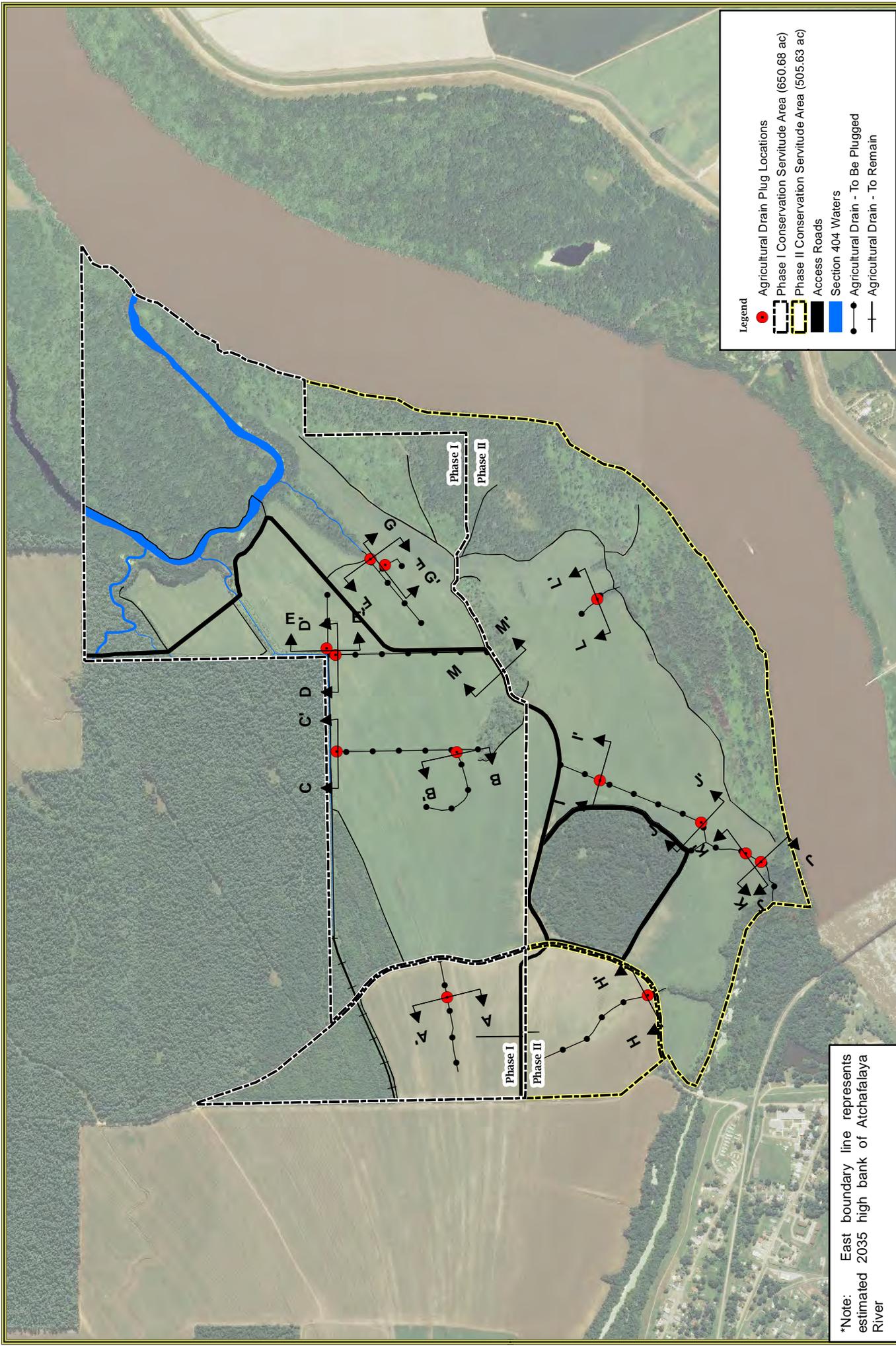
USGS Big Bend/Simmsport (LA) Quad

Atchafalaya Mitigation Bank

Sec. 5, 6, 7 & 8 - T1S - R7E
Avoyelles Parish, Louisiana

Figure 10 - Louisiana Black Bear Designated Critical Habitat Map





- Legend**
- Agricultural Drain Plug Locations
 - Phase I Conservation Servitude Area (650.68 ac)
 - Phase II Conservation Servitude Area (505.63 ac)
 - Access Roads
 - Section 404 Waters
 - Agricultural Drain - To Be Plugged
 - Agricultural Drain - To Remain

*Note: East boundary line represents estimated 2035 high bank of Atchafalaya River



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

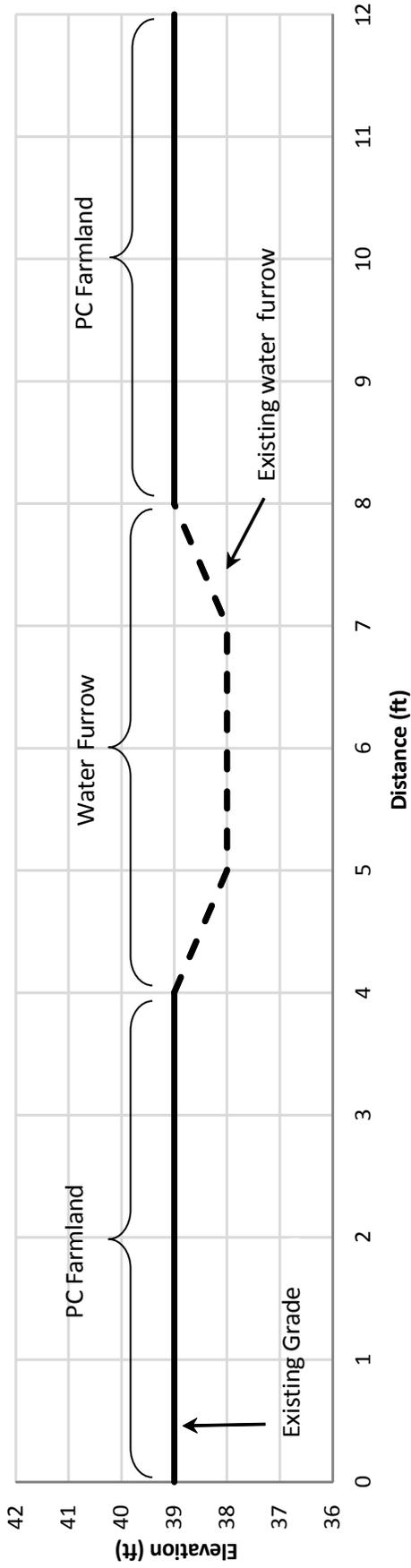
Figure 11 - Hydrological Work Plan Map



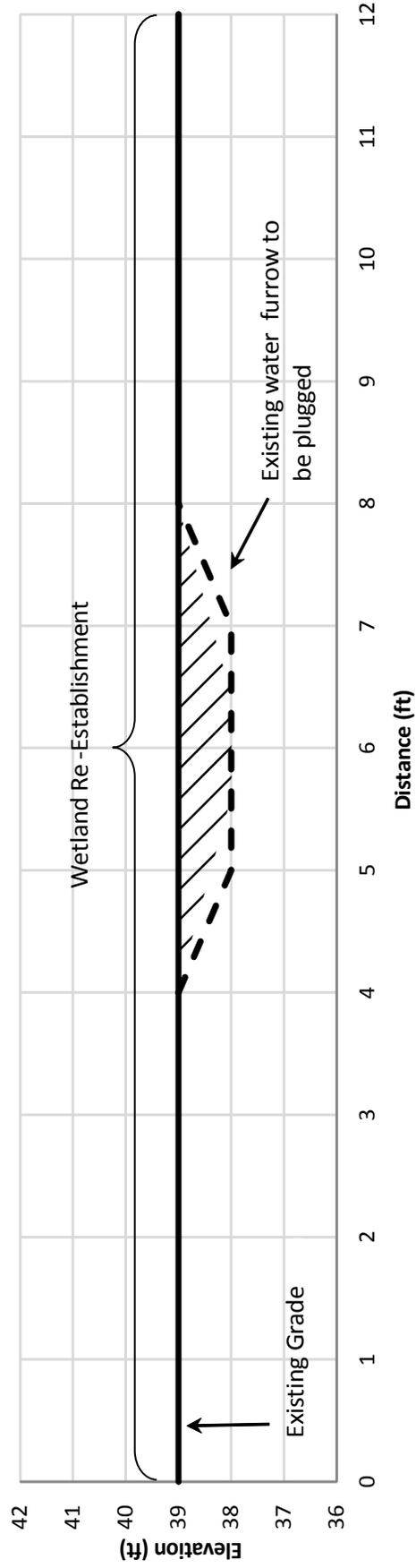
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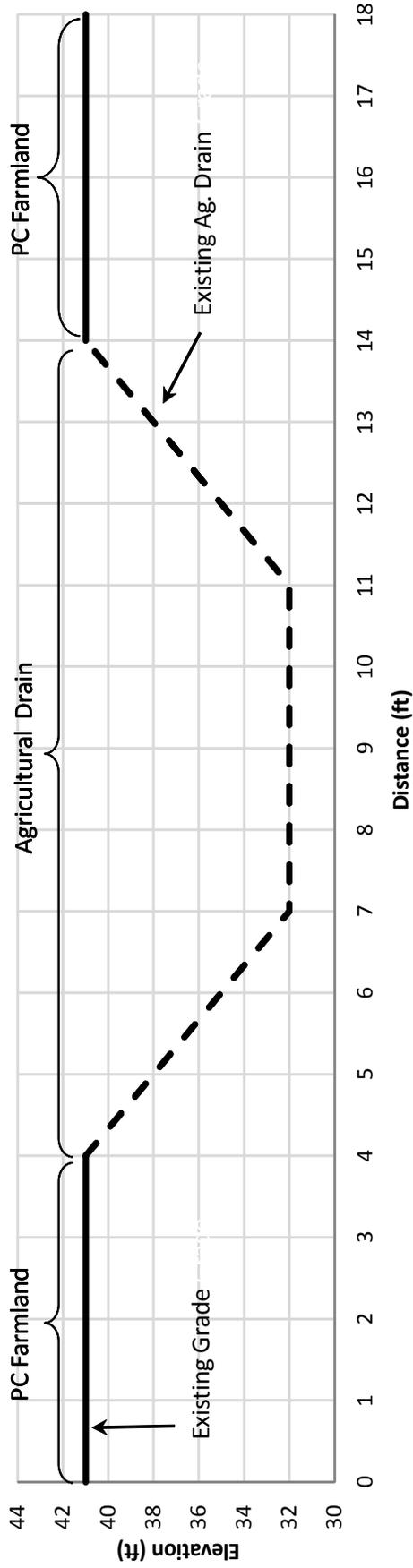
Typical Cross Section A - A' Existing Conditions



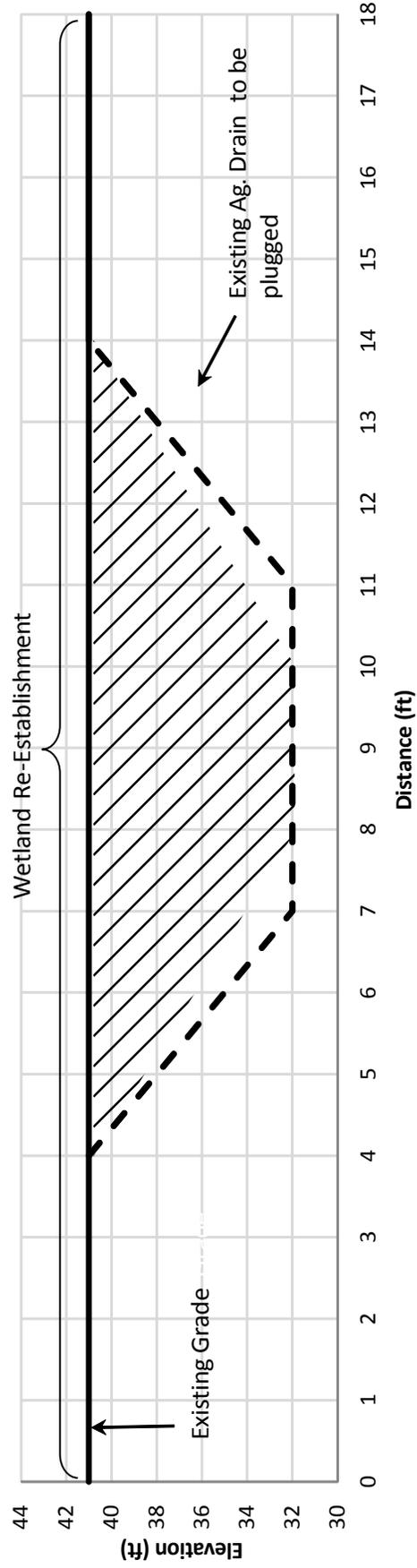
Typical Cross Section A - A' Proposed Conditions



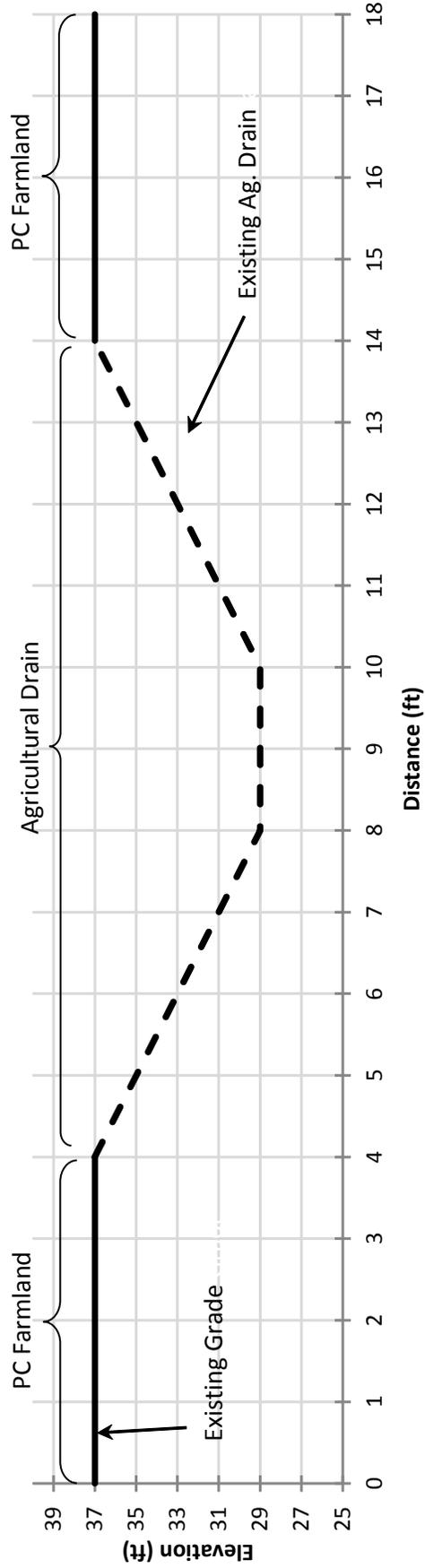
Typical Cross Section B - B' Existing Conditions



Typical Cross Section B - B' Proposed Conditions



Typical Cross Section C - C' Existing Conditions



Typical Cross Section C - C' Proposed Conditions

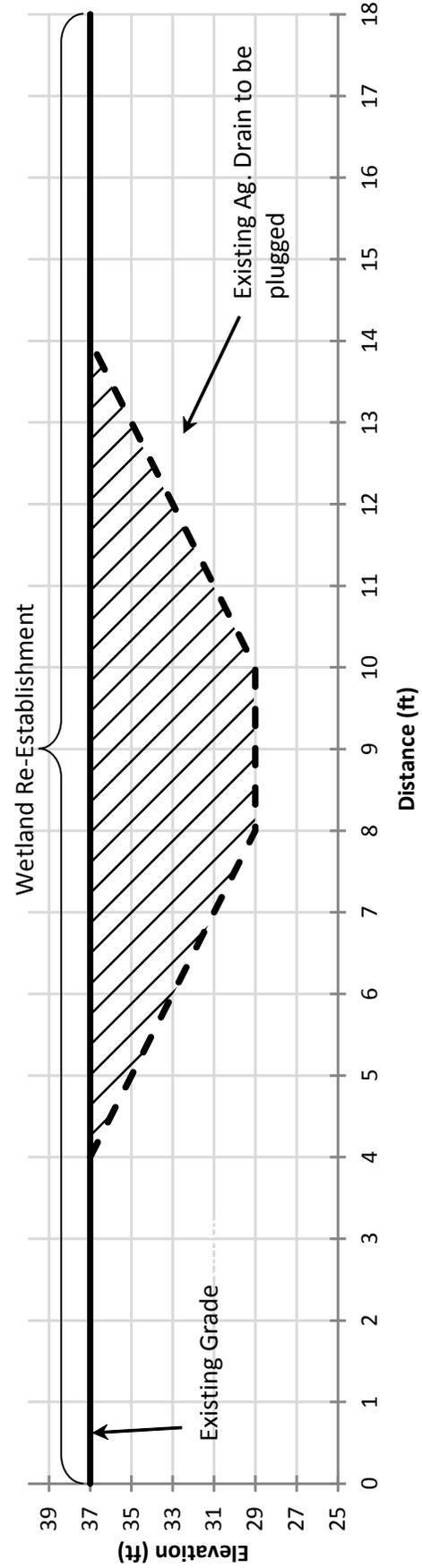
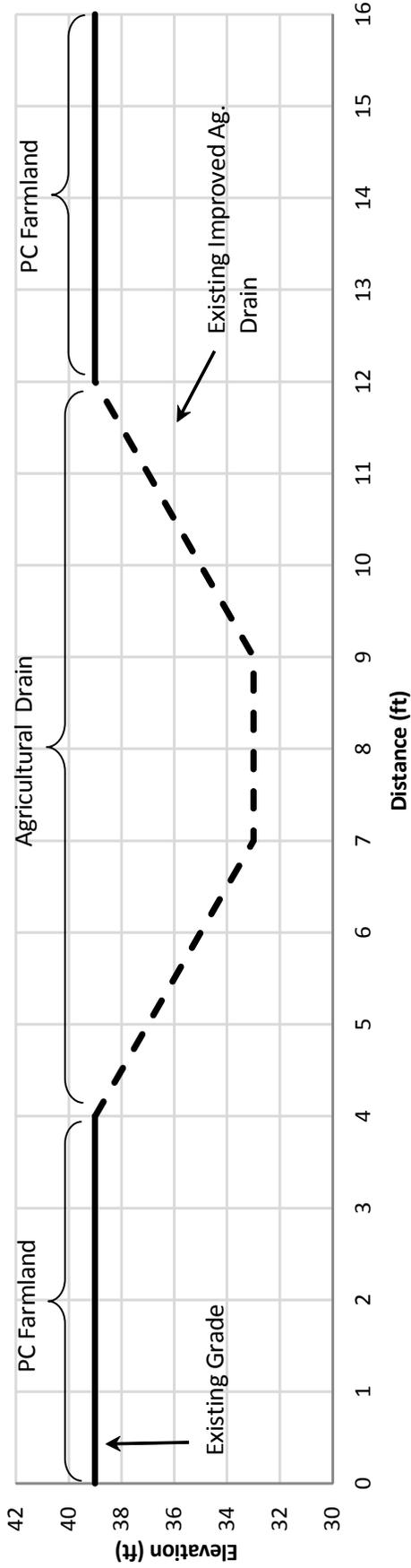
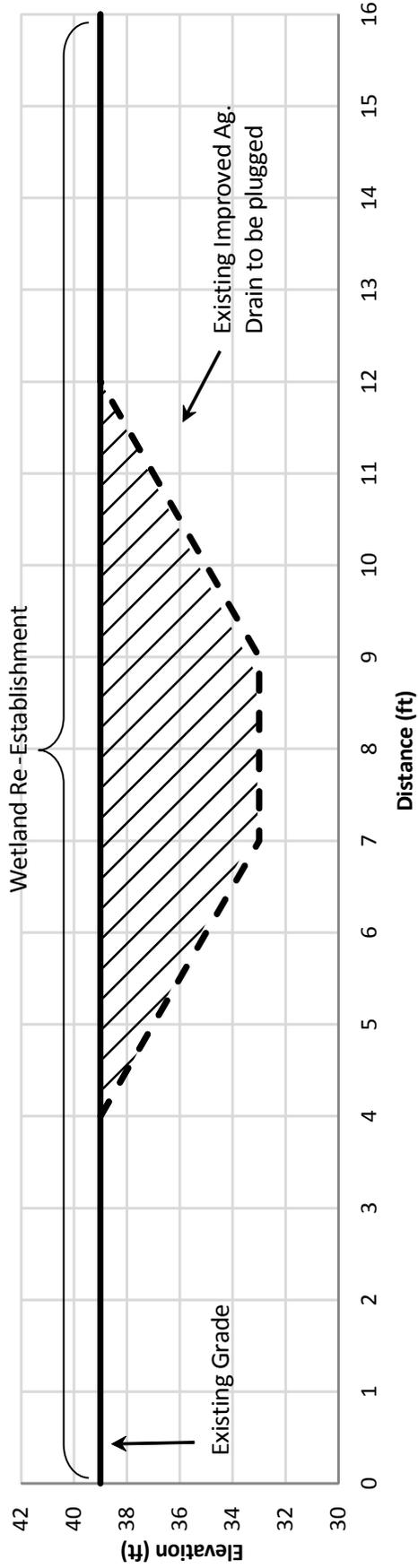


Figure 11C: Typical Cross Section C-C'

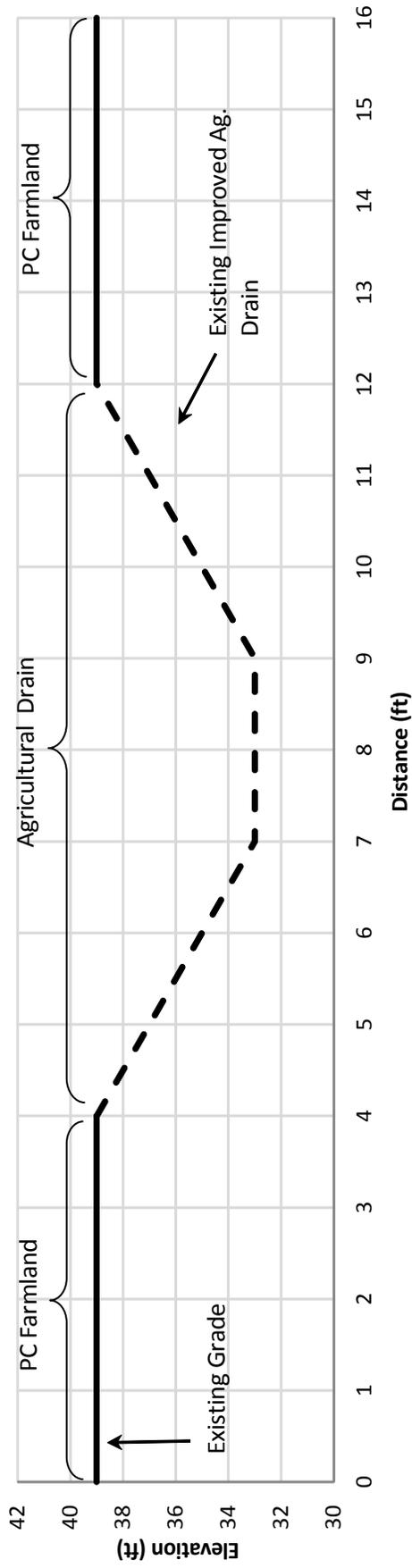
Typical Cross Section D - D' Existing Conditions



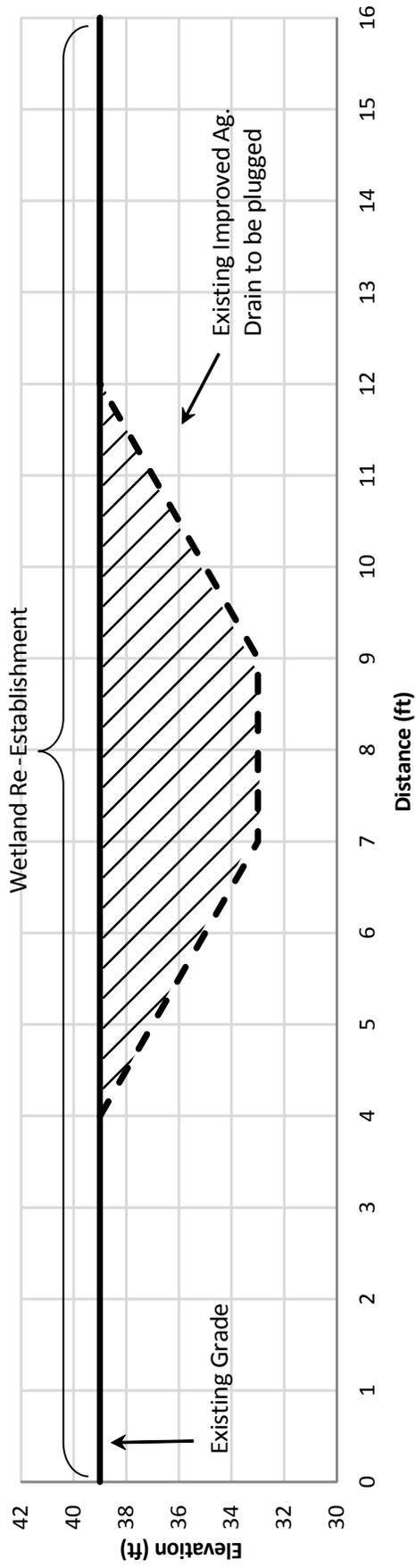
Typical Cross Section D - D' Proposed Conditions



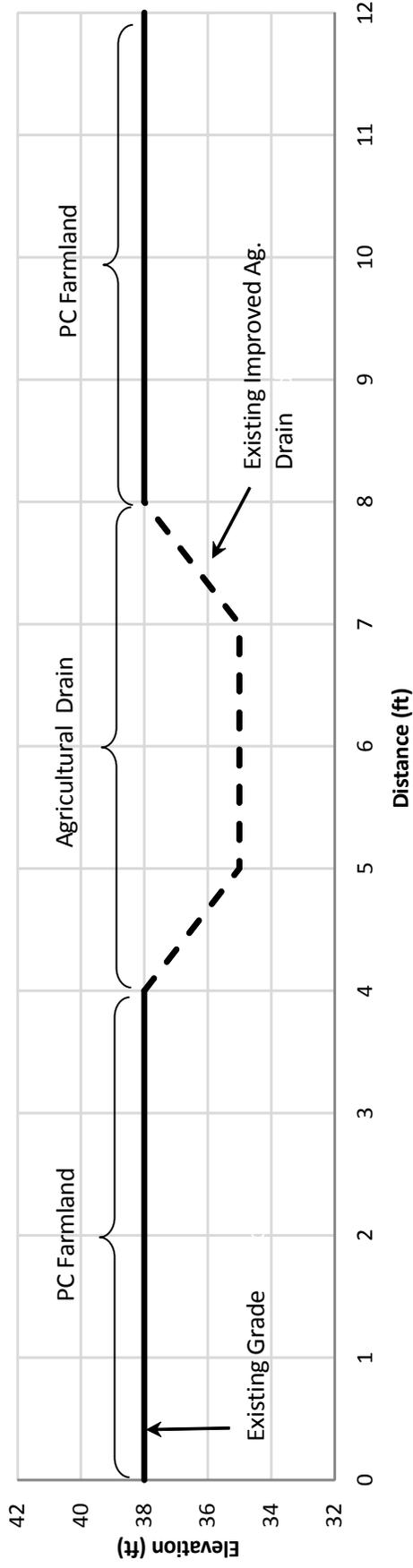
Typical Cross Section E - E' Existing Conditions



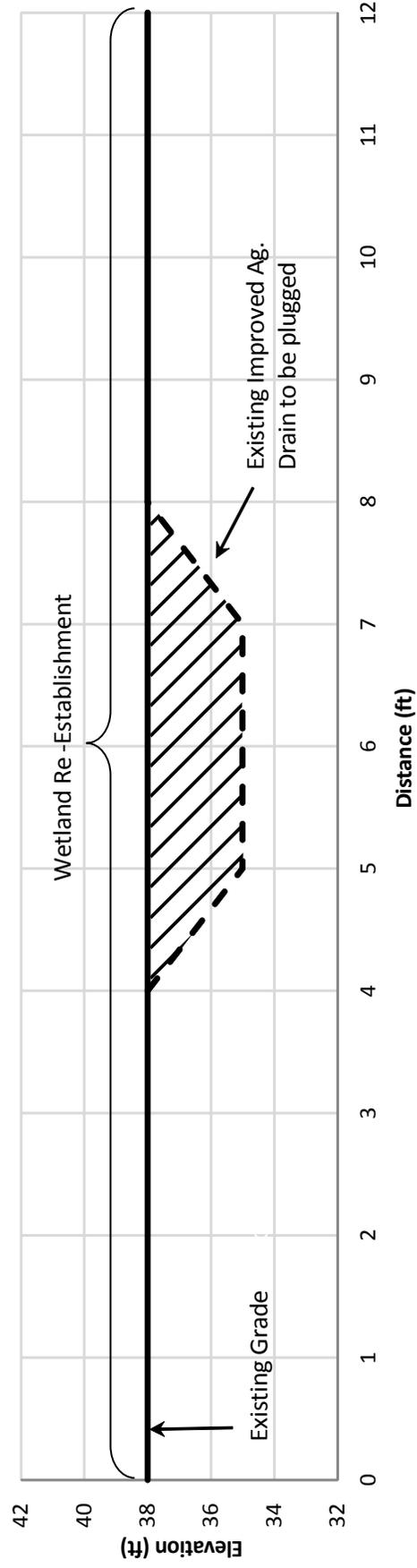
Typical Cross Section E - E' Proposed Conditions



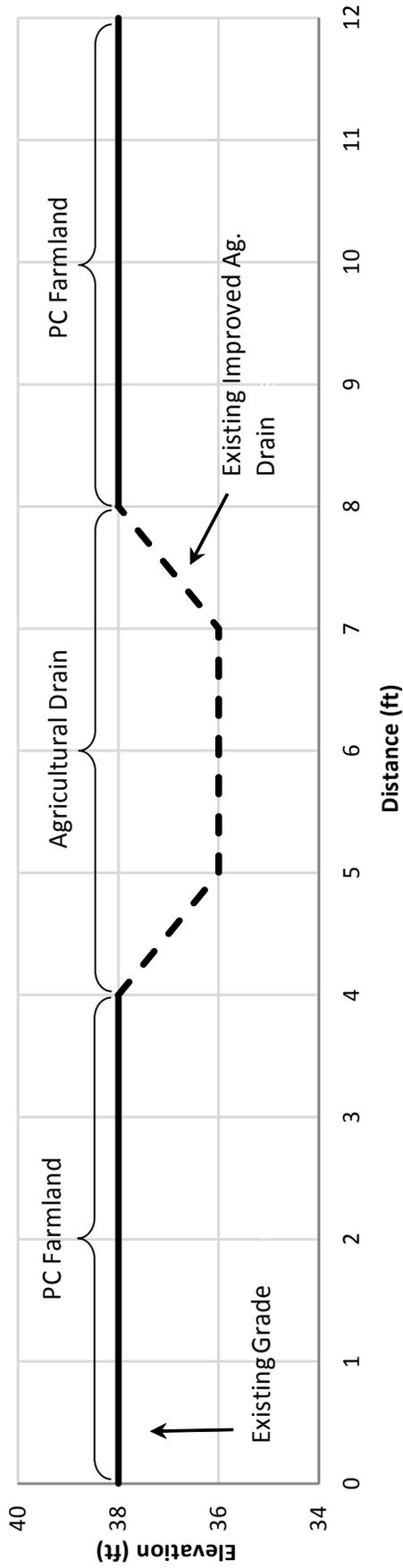
Typical Cross Section F - F' Existing Conditions



Typical Cross Section F - F' Proposed Conditions



Typical Cross Section G-G' Existing Conditions



Typical Cross Section G-G' Proposed Conditions

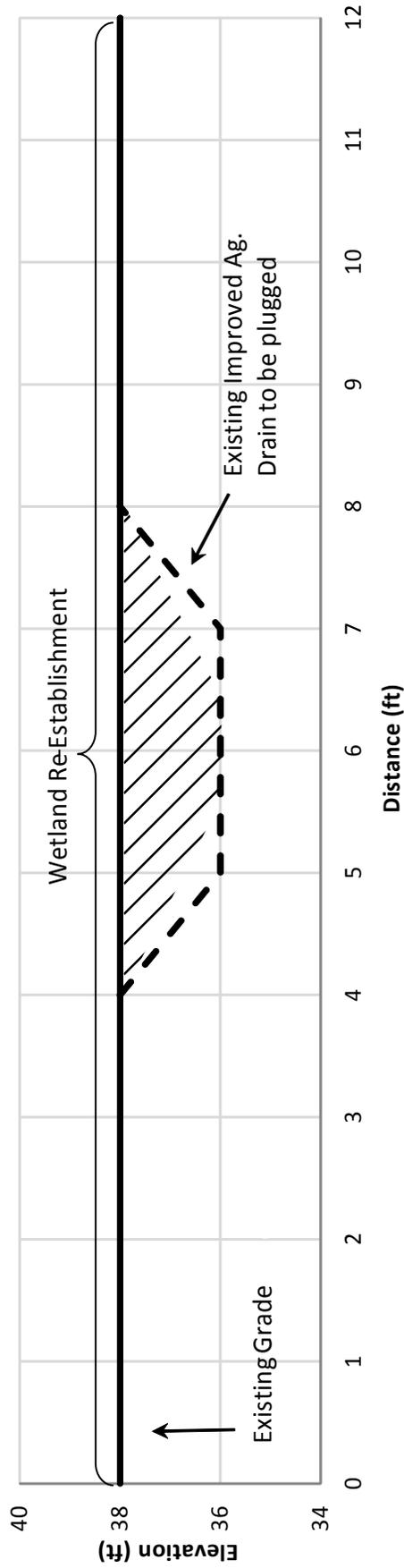
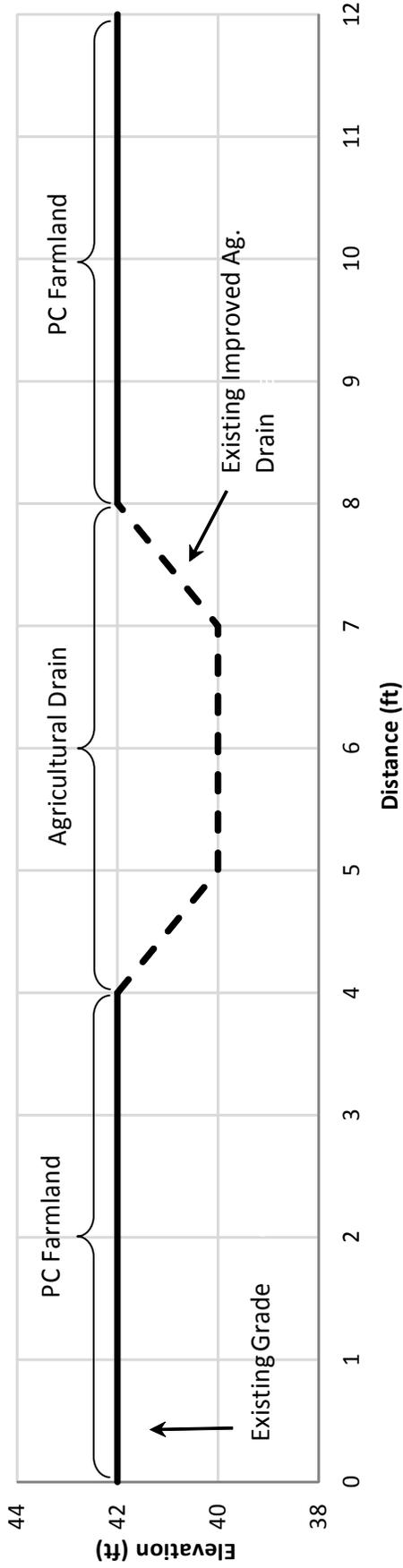
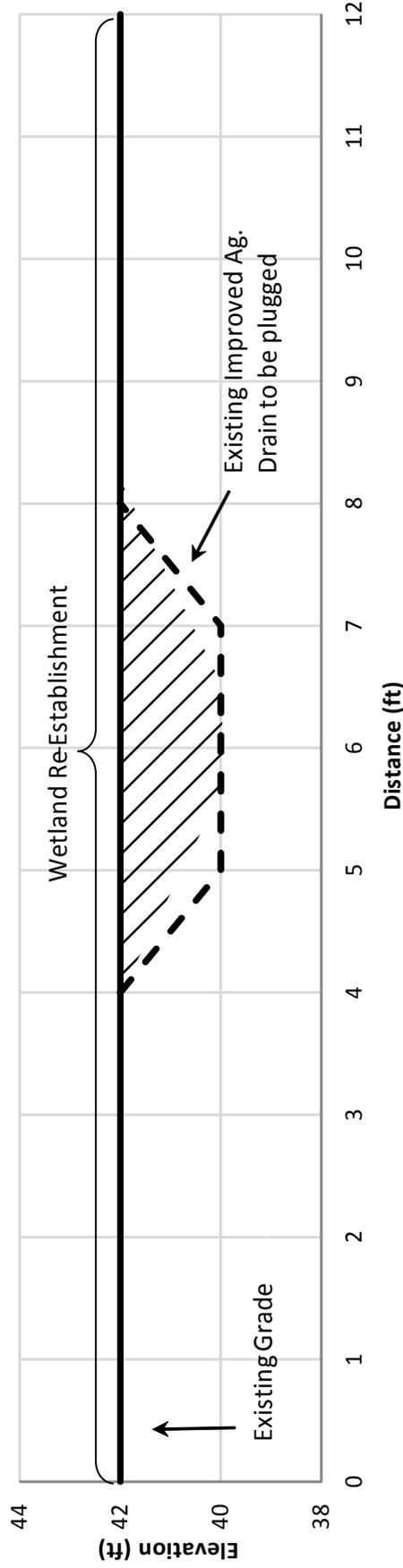


Figure 11G: Typical Cross Section G-G'

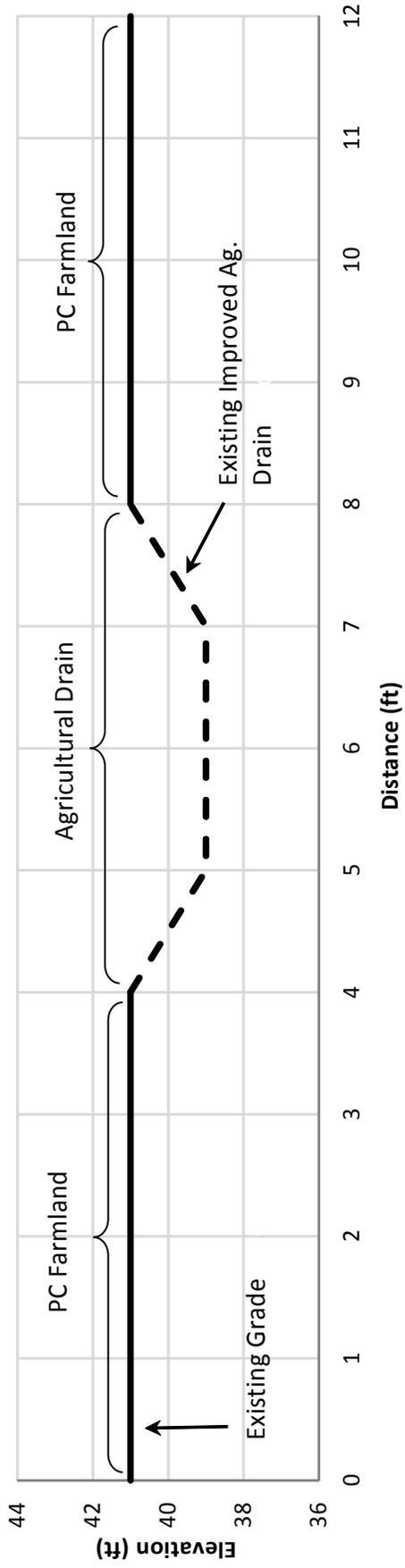
Typical Cross Section H- H' Existing Conditions



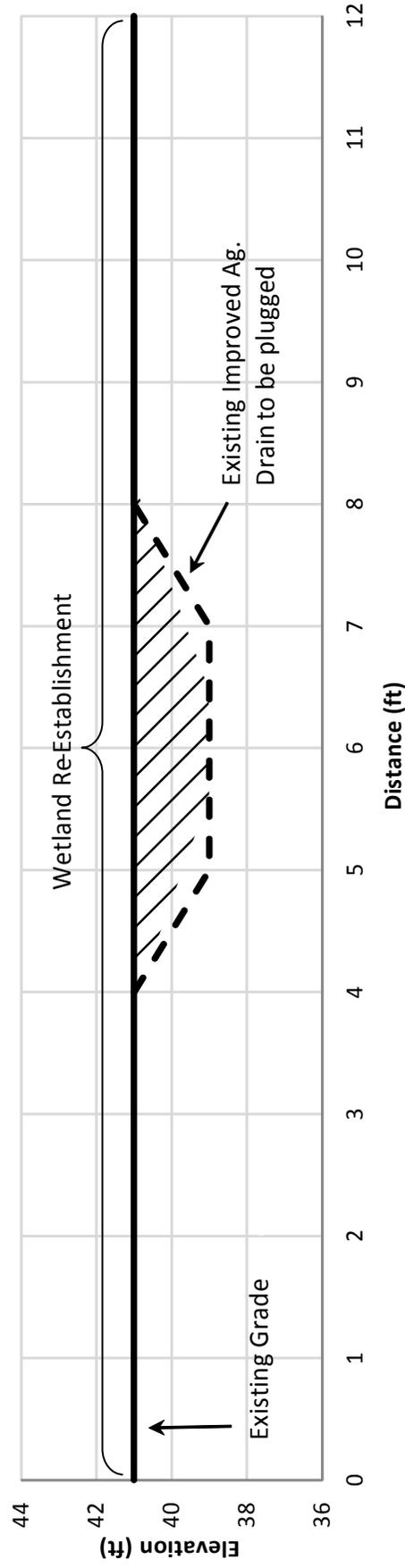
Typical Cross Section H- H' Proposed Conditions



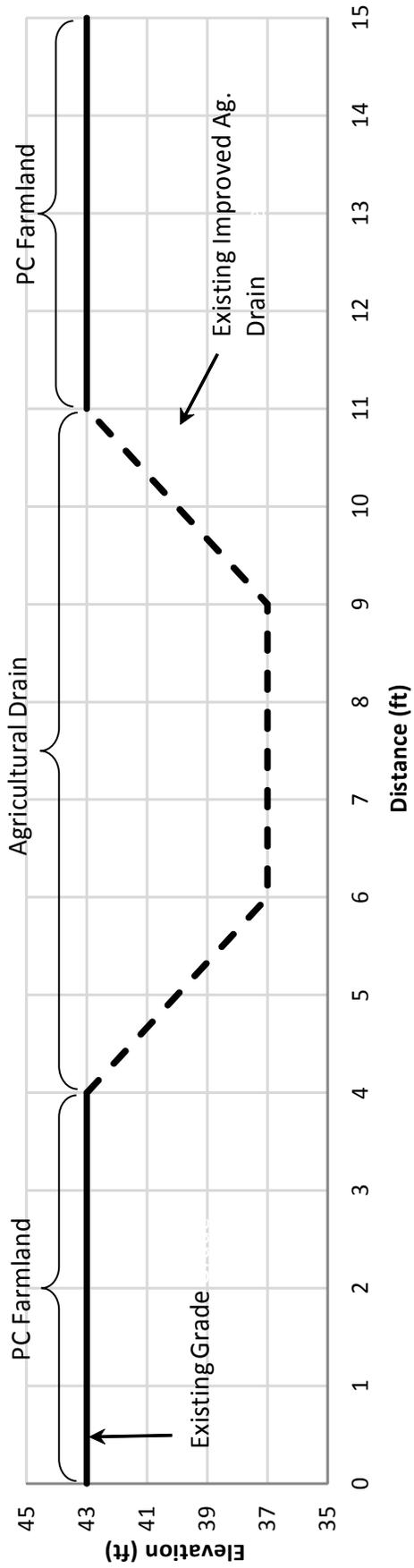
Typical Cross Section I-I' Existing Conditions



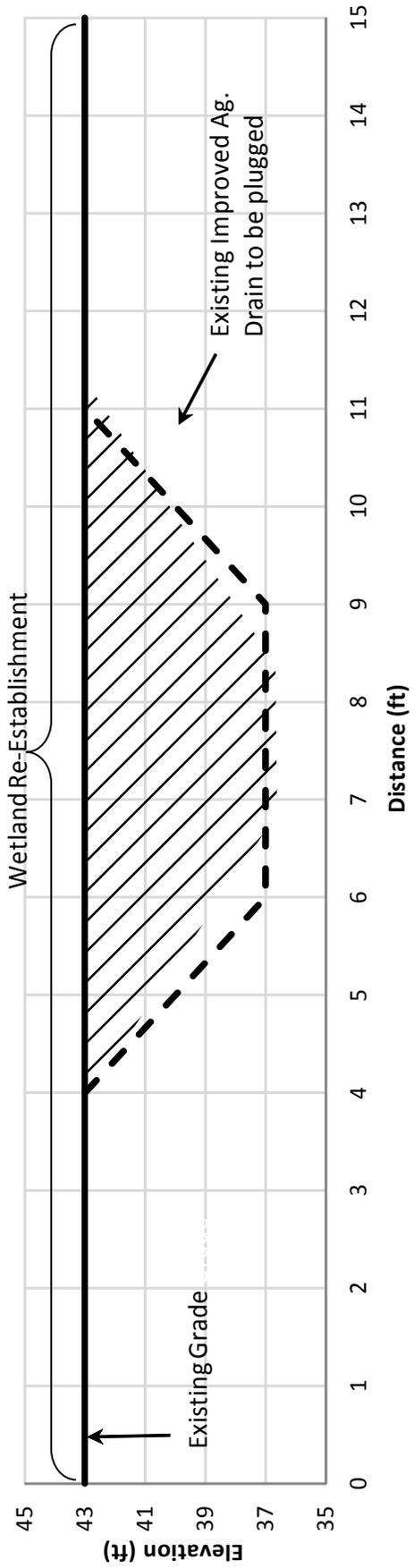
Typical Cross Section I-I' Proposed Conditions



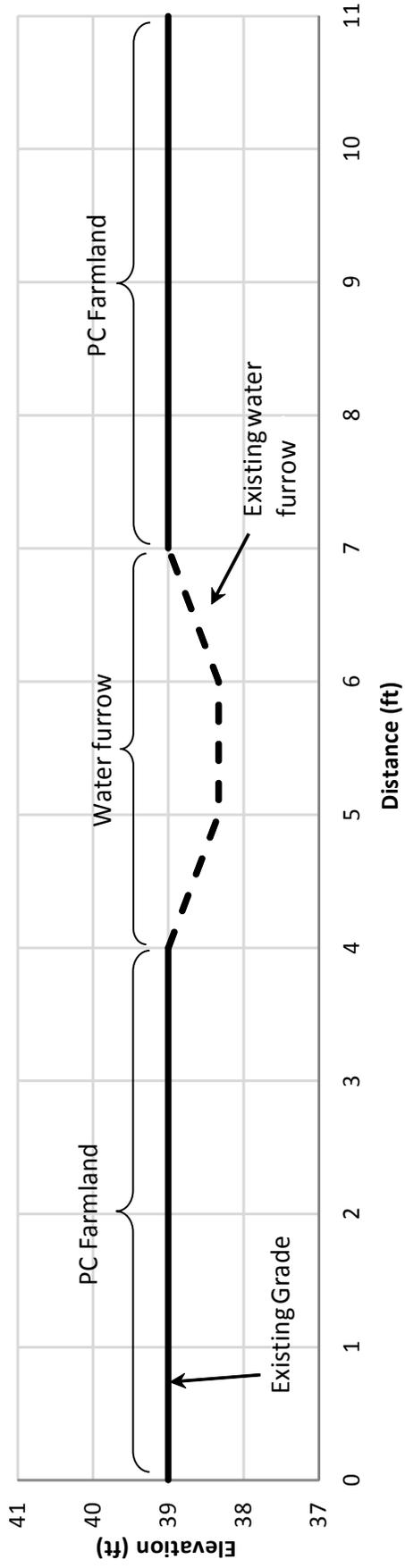
Typical Cross Section J-J' Existing Conditions



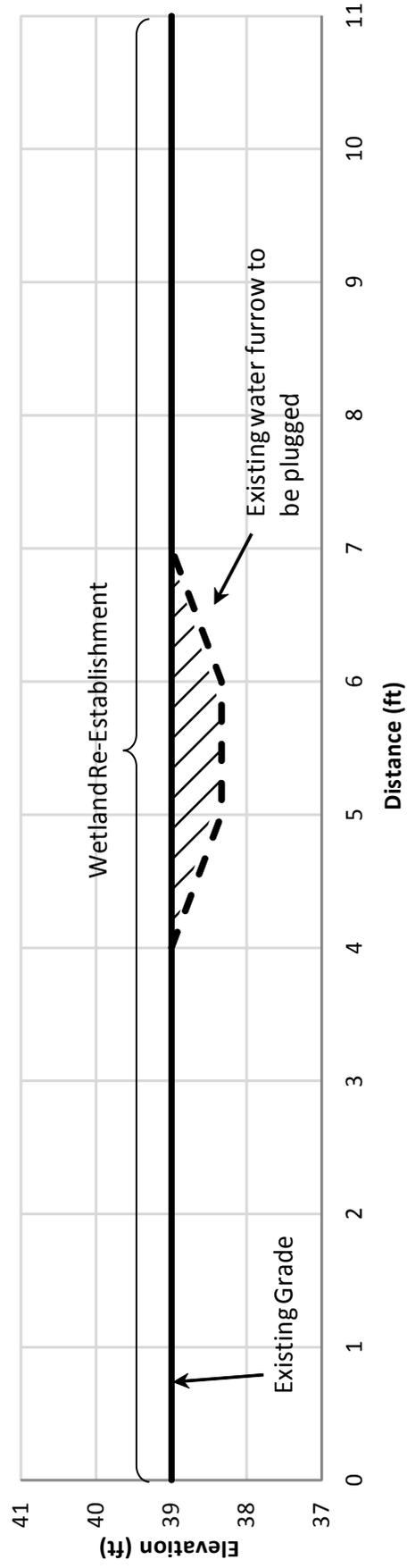
Typical Cross Section J-J' Proposed Conditions



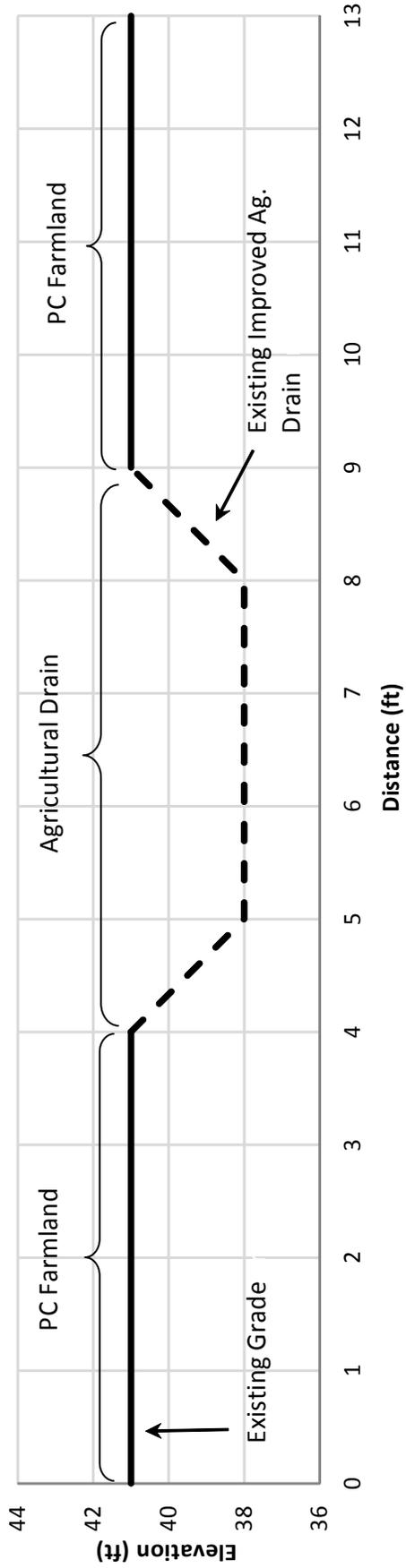
Typical Cross Section K-K' Existing Conditions



Typical Cross Section K-K' Proposed Conditions



Typical Cross Section L- L' Existing Conditions



Typical Cross Section L- L' Proposed Conditions

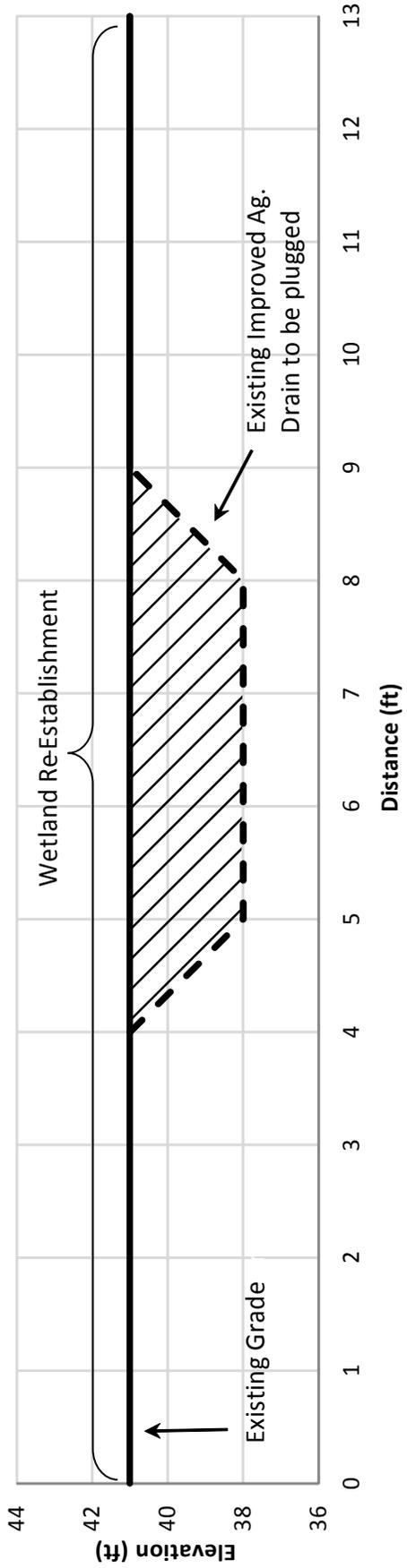
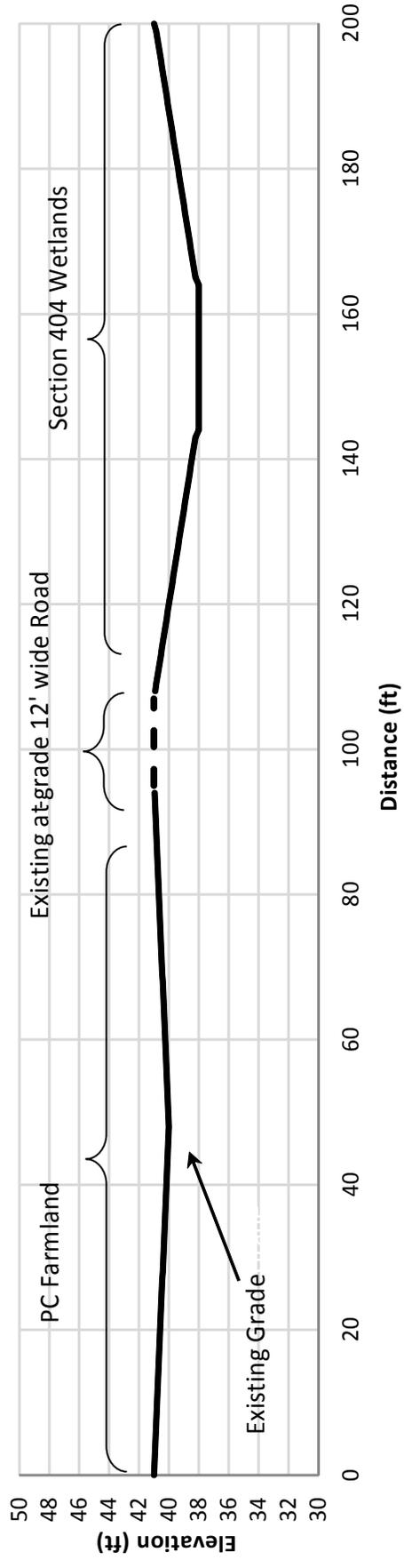
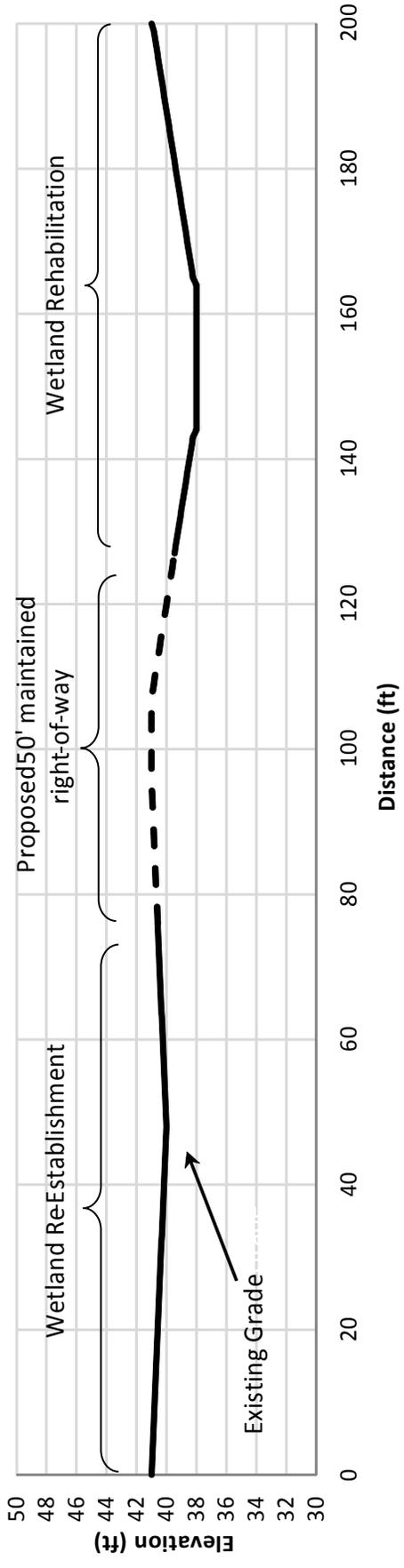


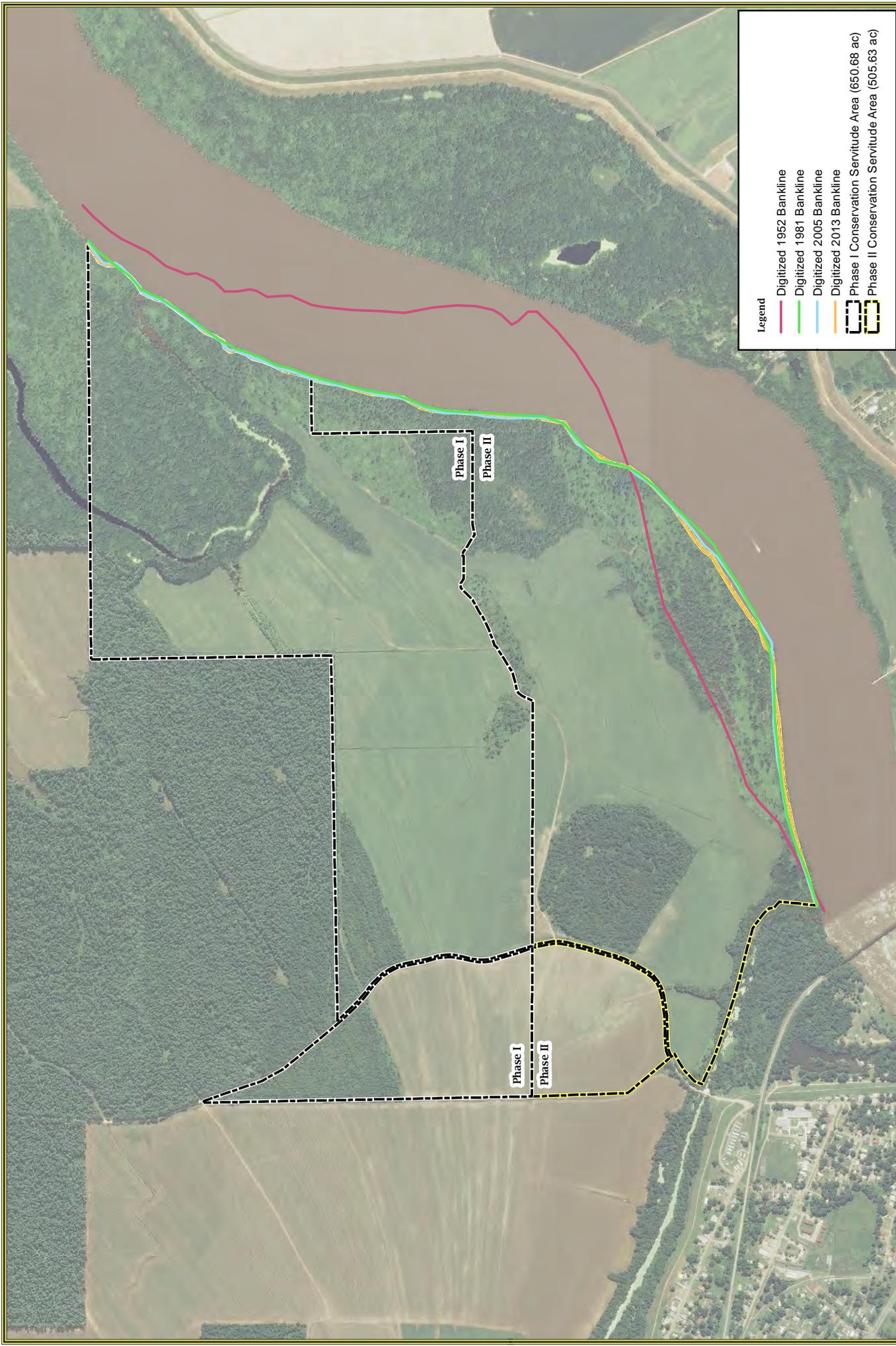
Figure 11L: Typical Cross Section L-L'

Typical Cross Section M- M' Existing Conditions



Typical Cross Section M- M' Proposed Conditions





Legend

- Digitized 1952 Bankline
- Digitized 1981 Bankline
- Digitized 2005 Bankline
- Digitized 2013 Bankline
- Phase I Conservation Servitude Area (650.68 ac)
- Phase II Conservation Servitude Area (505.63 ac)

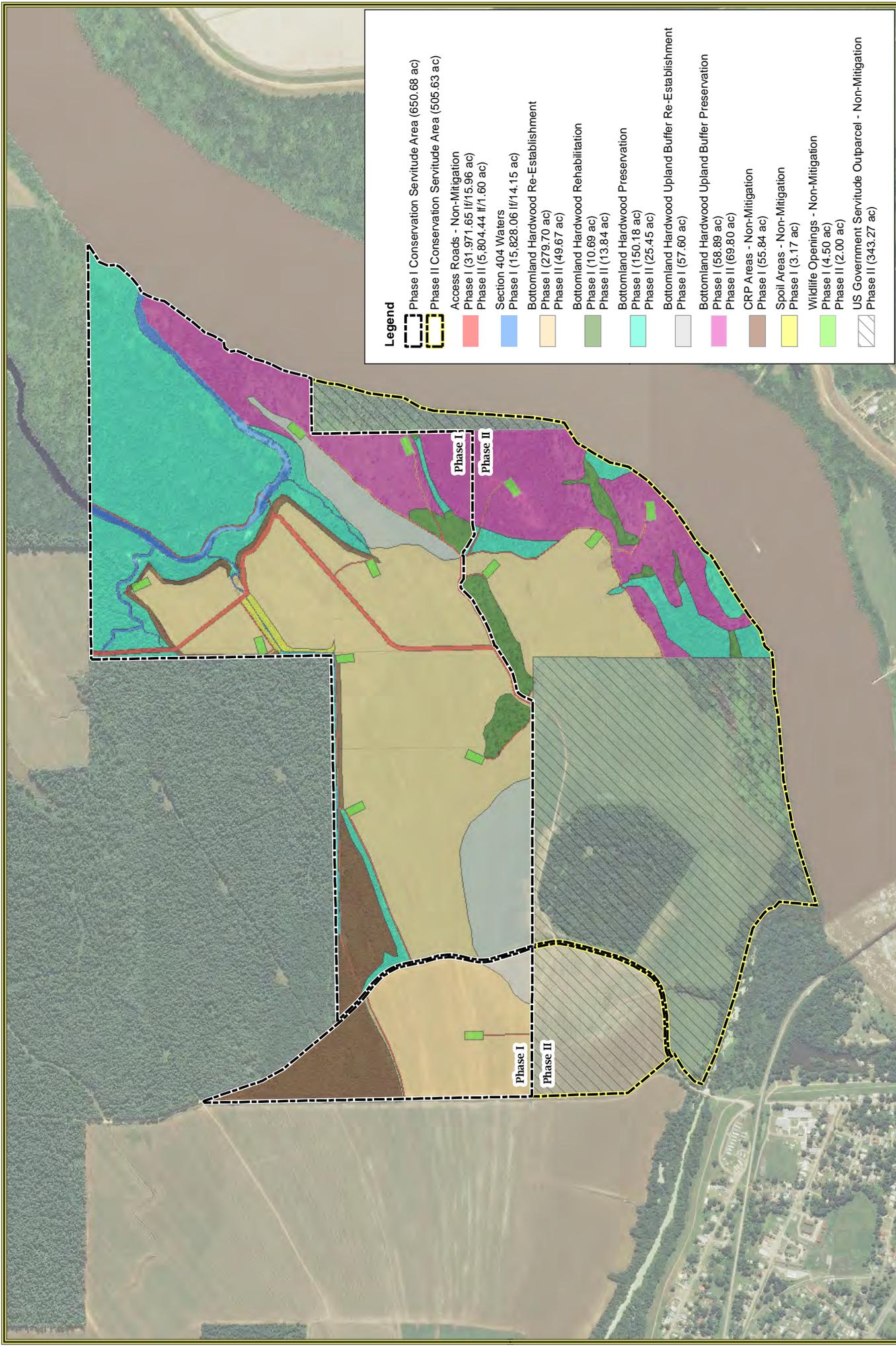
Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana

Figure 12 - Estimated Bankline Erosion Exhibit

USDA NAIP 2013

NORTH
 1:18,000

0 1,400 2,800
 Feet



Legend

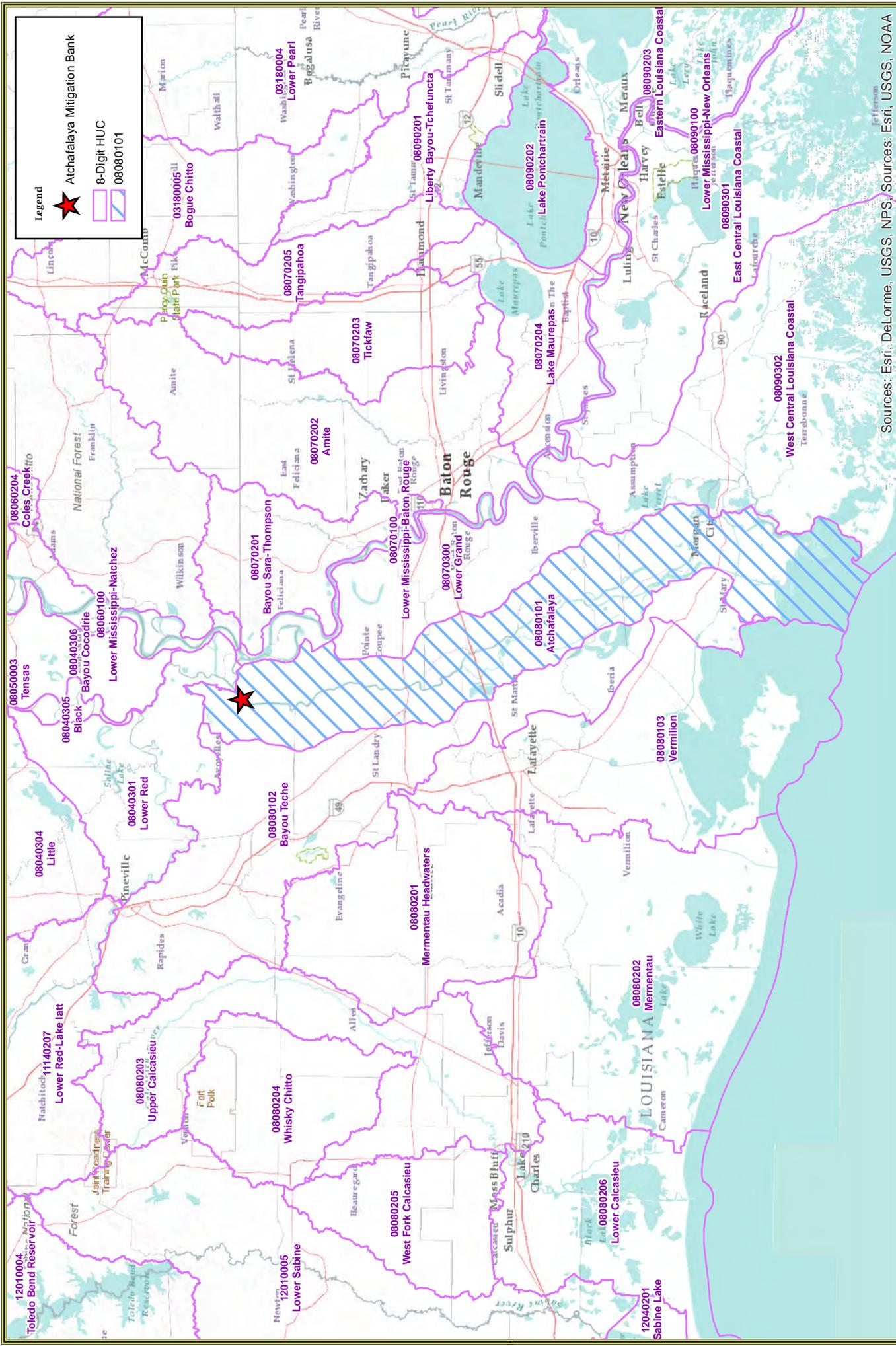
- Phase I Conservation Servitude Area (650.68 ac)
- Phase II Conservation Servitude Area (505.63 ac)
- Access Roads - Non-Mitigation
- Phase I (31,971.65 lf/15,96 ac)
- Phase II (5,804.44 lf/1,60 ac)
- Section 404 Waters
- Phase I (15,828.06 lf/14,15 ac)
- Bottomland Hardwood Re-Establishment
- Phase I (279.70 ac)
- Phase II (49.67 ac)
- Bottomland Hardwood Rehabilitation
- Phase I (10.69 ac)
- Phase II (13.84 ac)
- Bottomland Hardwood Preservation
- Phase I (150.18 ac)
- Phase II (25.45 ac)
- Bottomland Hardwood Upland Buffer Re-Establishment
- Phase I (57.60 ac)
- Bottomland Hardwood Upland Buffer Preservation
- Phase I (68.89 ac)
- Phase II (69.80 ac)
- CRP Areas - Non-Mitigation
- Phase I (55.84 ac)
- Spoil Areas - Non-Mitigation
- Phase I (3.17 ac)
- Wildlife Openings - Non-Mitigation
- Phase I (4.50 ac)
- Phase II (2.00 ac)
- US Government Servitude Outparcel - Non-Mitigation
- Phase II (343.27 ac)

Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 13 - Mitigation Plan Map

NORTH
1:18,000

0 1,400 2,800 Feet

USDA NAIP 2013



Atchafalaya Mitigation Bank
 Sec. 5, 6, 7 & 8 - T 1 S - R 7 E
 Avoyelles Parish, Louisiana
Figure 14 - Service Area Map

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



ESRI World Topography Basemap

Appendices

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

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

DATE: 5/28/15

**"RELEASE/DISPOSAL OF
SPOIL DISPOSAL EASEMENT,
ATCHAFALAYA RIVER
CHANNEL IMPROVEMENT**

MOREAU PROFESSIONAL LAND SURVEYING, LLC
mikemoreau@alumini.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	215.8	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	803.1	S18°58'42"E
L63	288.3	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

**GASPARD FARMING
COMPANY, LLC.**

**F. PIERRE
LIVAUDAIS, ET AL**

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

LEGEND:

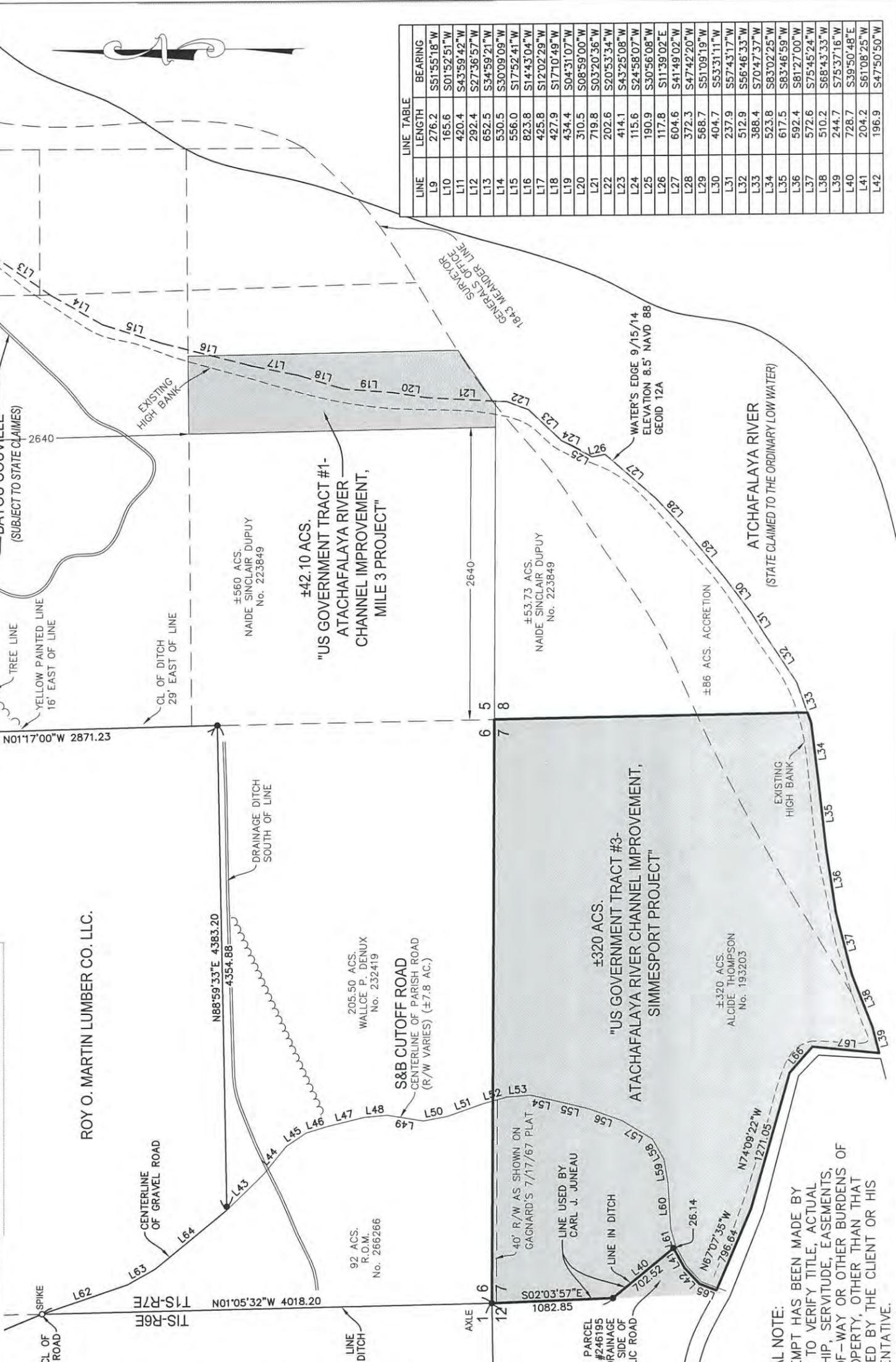
- FOUND 1/2" IRON ROD (UNLESS OTHERWISE NOTED)
- SET 1/2" IRON ROD
- ▭ SHADED AREA INDICATE THE TRACTS THAT WILL BE RELEASED/DISPOSED OF

REFERENCE MATERIAL

1. PLAT BY CLAUDE E. MCMATH DATED 11/14/55 FOR MARC DUPUY, ET AL.
2. PLAT BY CARL J. JUNEAU DATED 3/3/05 FOR MARTY GASPARD.
3. PLAT BY CLAUDE E. MCMATH DATED 10/30/56 FOR MARSHALL P. SANDEZ.
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.

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°56'06"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	S56°46'33"W
L33	388.4	S70°47'37"W
L34	523.8	S63°02'25"W
L35	617.5	S63°46'59"W
L36	592.4	S81°27'00"W
L37	572.6	S75°45'24"W
L38	510.2	S68°43'35"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



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

NOV 18 2015

REPLY TO
ATTENTION OF

Operations Division
Surveillance and Enforcement Section

Mr. Clay Cromwell
Headwaters, Inc.
P.O. Box 2836
Ridgeland, Mississippi 39157

Dear Mr. Cromwell:

Reference is made to your request, on behalf of Wetlands Mitigation Strategies, LLC, for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Sections 5, 6, 7, and 8, Township 1 South, Range 7 East, Avoyelles Parish, Louisiana (enclosed map). Specifically, this property is identified as the proposed Atchafalaya Mitigation Bank.

Based on the results of a field investigation, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the United States. Additionally, waters that may be subject to Corps' jurisdiction under Section 10 of the Rivers and Harbors Act (RHA) are indicated in blue on the map. A DA permit will be required prior to any work in waters subject to Corps' jurisdiction under Section 10 of the RHA.

This delineation/determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in your request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If the property owner or tenant is a USDA farm participant, or anticipates participation in USDA programs, a certified wetland determination should be requested from the local office of the Natural Resources Conservation Service prior to starting work.

You are advised that you must obtain a permit from a local assuring agency, usually a Levee Board or Parish Council, for any work within 1500 feet of a federal flood control structure such as a levee. You must apply by letter to the appropriate agency including full-size construction plans, cross sections, and details of the proposed work. Concurrently with your application to the assuring agency, you must also forward a copy of your letter and plans to Ms. Amy Powell, Operations Manager for Completed Works of the Corps, the Coastal Protection and Restoration Authority, and/or the Louisiana Department of Transportation and Development for their review and comments concerning the proposed work. The assuring agency will not issue a permit for the work to proceed until they have obtained letters of no objection from these reviewing agencies. For additional information, please contact Ms. Powell at (504) 862-2241.

You and your client are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Should there be any questions concerning these matters, please contact Mr. Brian Oberlies at (504) 862-2275 and reference our Account No. MVN-2015-01027-SY. If you have specific questions regarding the permit process or permit applications, please contact our Western Evaluation Section at (504) 862-2261.

Sincerely,



 Martin S. Mayer
Chief, Regulatory Branch

Enclosures

PRELIMINARY
JURISDICTIONAL DETERMINATION

Sec. 10

Sec. 10

Sec. 404

Sec. 10

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

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



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