



**US Army Corps
of Engineers**

Vicksburg District
4155 Clay Street
Vicksburg, MS 39183-3435
www.mvk.usace.army.mil



Public Notice

APPLICATION NO.:	<u>MVK-2020-00417</u>
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DATE:	<u>November 1, 2021</u>
EXPIRATION DATE:	<u>December 1, 2021</u>

Interested parties are hereby notified that the U.S. Army Corps of Engineers, Vicksburg District (Corps), is considering a proposal to establish the Pushepatapa Creek Mitigation Bank. A prospectus has been received describing the proposed bank from Ryan Conservation Group, LLC, the bank Sponsor. Comments are due by the expiration date cited above. Please send all comments via email to Mr. Anthony Lobred at address: Anthony.R.Lobred@usace.army.mil or via hard copy to U.S. Army Corps of Engineers, Vicksburg District, ATTN: CEMVK-RD, 4155 Clay Street, Vicksburg, Mississippi 39183-3485.

Location: The proposed site is located in Section 25, Township 1 North, Range 12 East, and Section 30, Township 1 North, Range 13 East, Walthall County, Mississippi (enclosure 1).

Description: The Pushepatapa Creek Mitigation Bank (PCMB) is being proposed by the bank Sponsor as a means to meet the requirements for compensatory mitigation for future and yet unknown wetland and stream losses, which may be permitted by the Corps under the authority of Section 404 of the Clean Water Act.

The bank Sponsor proposes to develop a mitigation bank by restoring/enhancing wetlands and restoring streams within the Pearl River basin. The proposed work would increase the wetland function, provide species diversity, and provide a wildlife corridor within both the middle and lower portions of the Pearl River Watershed (HUC: 03180003 and 03180004).

Baseline Conditions / Current Land Use / Proposed Actions: The property consists of approximately 53.59 acres in one contiguous tract of land that is positioned along both banks of the East Fork Pushepatapa Creek and is located within the Pearl River floodplain within portions of Walthall County, Mississippi.

The proposed PCMB would be located 13.5 miles southeast of Tylertown, MS and 1.4 miles north of the MS-LA state boundary. The Walthall County landscape is comprised primarily of farming areas with cattle and silvicultural crop production. Portions of the PCMB lands are currently, and have been historically, used for recreational hunting and silviculture purposes consistent with the county's referenced land uses.

The design of the PCMB would promote the rehabilitation and preservation of bottomland hardwood forest and riparian buffers along the East Fork Pushepatapa Creek within Walthall County, Mississippi and within the middle and lower reaches of the Pearl River basin. Major components of the plan would include the removal and restoration of drainage improvements and impediments within the Bank Property. The project would reduce fragmentation of forestland within this region and protect it in perpetuity. The PCMB project would remove the ongoing silviculture activities within the Bank Property and restore the Bank Property to a higher quality historic bottomland hardwood wetland ecosystem within the Pearl River watershed. The Bank Property would also ensure that the floodplain of the East Fork Pushepatapa Creek is maintained and protected from a future change in use.

The goal of the PCMB is to provide the opportunity to rehabilitate and preserve 53.59 acres of bottomland hardwood wetlands, stream complexes, and other forested wetland habitat. The PCMB would also provide the opportunity to restore natural hydrological processes across the site through the removal of impediments created by land improvements overtime. The planned hydrologic restoration activities would be conducted concurrent with the wetland rehabilitation work plan.

Proposed Mitigation Bank Establishment

Current Habitat Type	Proposed Mitigation Bank Habitat Type	Acres	Percentage
Degraded BLH Wetlands	BLH Restoration	6.4	11.94%
Degraded BLH Wetlands	BLH Enhancement	3.5	6.53%
Degraded BLH Non-wetlands	BLH Restoration	1.5	2.8%
Riparian Wetland Buffer	BLH Restoration	19.46	36.31%
BLH Forested Riparian Wetlands	Riparian Buffer Enhancement	13.73	25.66%
BLH Forested Riparian Non-Wetlands	Riparian Buffer Enhancement	4	7.46%
In-Stream Work	Stream Restoration	5	9.3%
Total		53.59	100%

The soils on the subject property primarily consist of Wehadkee silt loam. Additional soils include Mantachie soils, Savannah silt loam, and Smithdale fine sandy loam.

Service Area: This Mitigation Bank would be established to provide mitigation to compensate for impacts to waters of the United States, including wetlands, within the Corps of Engineers Vicksburg District located within the State of Mississippi. The service areas are demarcated by the United States Geologic Survey as hydrologic unit code 03180003 and 03180004 (primary service areas). Decisions authorizing the use of credits from the Mitigation Bank will be made by the appropriate authority on a case-by-case basis in accordance with all applicable requirements.

Comments should be received no later than the expiration date of this public notice. The prospectus, which outlines the conceptual plan for the bank, is available at the following website: <http://www.mvk.usace.army.mil/Missions/Regulatory/PublicNotices.aspx> and is also available for review at the Vicksburg District, Corps of Engineers, Regulatory Division.



Jennifer G. Brown
Team Lead, Permit & Evaluation Branch
Regulatory Division

Enclosures

Proposed Pushepatapa Creek Mitigation Bank Prospectus

Walthall County, Mississippi

August 12, 2021

Sponsor:
Ryan Conservation Group, LLC
7344 Sevenoaks Avenue
Baton Rouge, LA 70806

Agent:
Cypress Environment and Infrastructure
906 DeSoto Street
Ocean Springs, MS 39564



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1 INTRODUCTION

Cypress Environment and Infrastructure (Cypress) has prepared this prospectus in accordance with 33 CFR §332.8(d)(2) to summarize the mitigation potential on the proposed Pushapatapa Creek Mitigation Bank (Bank). The Bank includes 53.59 acres (ac.) in Section 30, Township 1 North, Range 13 East and Section 25, Township 1 North, Range 12 East in Walthall County, Mississippi. This prospectus summarizes the existing conditions of the Bank and assess the potential for establishing a mitigation bank to provide compensatory mitigation for unavoidable impacts to Waters of the United States associated with Department of the Army (DA) permits authorized under Section 404 of the Clean Water Act and Sections 9 and 10 of the Rivers and Harbors Act issued by the U.S. Army Corps of Engineers (USACE), Vicksburg District.

1.1 Proposed Ownership

The Sponsor, Ryan Conservation Group, LLC (Sponsor), is the legal owner of the proposed Bank tract. The Sponsor will hold fee title until the Bank has reached functional maturity and all credits are sold. There are no liens, encumbrances, easements, servitudes, or restrictions that have been identified on any portion of the property proposed for mitigation. No portion of the proposed Bank would occur on publicly-owned property.

1.2 Site Location

The Bank is in Sections 25 and 30 of Township 1 North and Ranges 12 and 13 East in Walthall County, Mississippi (MS). The site is approximately 13.5 miles southeast of Tylertown, MS and approximately 1.4 miles north of the Mississippi-Louisiana state line. The site entrance is on the west side of Vincetown Road north of Twin Bridge Road, and south of Old Settlement Road. The center of the site is located at latitude 31.021647° and longitude -89.942676°. Figure 1 provided in Appendix A shows the location and vicinity of the site.

2 GOALS AND OBJECTIVES

The proposed Bank will encompass 53.59 ac. of land in which restoration and enhancement activities are proposed. The goal of the Sponsor will be to conduct bottomland hardwood enhancement or restoration in wetland and nonwetland areas outside of the riparian buffers. In areas adjacent to the streams, the project will enhance or restore wetland and nonwetland riparian buffer. The project will also restore streams on the Bank.

The Sponsor intends for the Bank to serve as a bottomland hardwood and stream mitigation bank providing wetland and stream credits for sale as compensation for unavoidable impacts to wetlands associated with DA Section 404 permits. A conservation easement will be executed for the 53.59 ac. Bank. Through a contractual agreement with individual permit recipients, the Sponsor will commit to implementing the mitigation specified in DA permits and incur the responsibility of the long-term maintenance, management, protection, and overall success of the Bank.

3 JURISDICTIONAL WETLANDS

A wetland delineation was conducted on the Bank by Cypress in April 2020. A request for a preliminary jurisdictional determination (JD) was submitted to USACE MVK on June 3, 2020. A preliminary JD was issued by USACE MVK on October 26, 2020 (MVK-2020-417) for the Bank and is included in Appendix B.

4 CURRENT SITE CONDITIONS

This section describes the current conditions of the Bank and general conditions of adjacent land and the watershed.

4.1 Topography

Elevation on this site varies from approximately 200 feet (ft) North American Vertical Datum 1988 (NAVD88) to 246 ft. About 85% of the site is a broad flat with elevation increasing on the west side. The East Fork Pushapatapa Creek floodplain is the dominant topographic feature across the site. Site contours and features are shown on the United States Geologic Survey (USGS) topographic map in Figure 2 provided in Appendix A.

4.2 Existing Land Use

The current land use of the proposed Bank site is single-family residential and recreational hunting. The majority of the Bank is forested. The East Fork Pushapatapa Creek flows through the site and the associated bottomlands cover the majority of the site. The east side of the site contains a maintained residential area with a single-family home and a driveway.

The land use in the surrounding area is a mix of undeveloped forest, pine silviculture, agriculture, and single-family residential development. Land use of the site is shown in Figure 3 in Appendix A.

4.3 Soils

According to the most current United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Soils map, five soil types were identified within the Bank. Soil types are summarized in Table 1 and mapped in Figure 4 (Appendix A). The site is dominated by the poorly drained Wehadkee silt loam.

Table 1: USDA Mapped Soils

Soil Series	Unit Symbol	Hydric Rating	Percent of Site
Mantachie soils	Ma	Partially hydric	4.2%
Savannah silt loam 2-5% slopes	ShB2	Partially hydric	3.0%
Smithdale fine sandy loam, 12-17% slopes	RuE2	Partially hydric	0.2%
Smithdale fine sandy loam 17-40% slopes	RuF	Partially hydric	1.2%
Wehadkee silt loam (kinston)	Wk	Hydric	91.4%

4.4 Existing Plant Community

Currently, the Bank consists of two distinct vegetative communities: bottomland hardwood forest and maintained lawn. Since the bank includes stream buffers and areas outside of the stream buffers, those habitats are represented in both the stream buffers and areas outside of the stream buffers. The existing communities are described below.

4.4.1 Bottomland Hardwood Wetland

Bottomland hardwood wetlands are present throughout the Bank site. Across the bottomland hardwood wetland, swamp tupelo (*Nyssa biflora*) and invasive Chinese tallow (*Triadica sebifera*) trees dominate the overstory with red maple (*Acer rubrum*) and swamp titi (*Cyrilla racemiflora*) trees intermixed. Invasive Chinese privet (*Ligustrum sinense*) and Florida anise (*Illicium floridanum*) shrubs dominate the midstory with

Chinese tallow and American hornbeam (*Carpinus caroliniana*) shrubs intermixed. The understory of the bottomland hardwood forest is comprised mainly of scattered sedges and rushes.

The existing bottomland hardwood wetland is impacted by widespread invasive species cover. Invasive Chinese privet and Chinese tallow are present across multiple stratum within the bottomland hardwood wetland. Based on initial fieldwork, the performance standard of no more than 5% cover would not be met by current conditions and the performance standard for percent stem density of noxious species is also exceeded.

4.4.2 Bottomland Hardwood Nonwetland

Bottomland hardwood nonwetlands are present along the west boundary of the site and at areas of higher elevation within the East Fork Pushepatapa Creek floodplain. Across the bottomland hardwood nonwetland, southern magnolia (*Magnolia grandiflora*) and American hornbeam dominate the overstory. Invasive Chinese privet and southern magnolia dominate the midstory. The understory is dominated by little brown jug (*Hexastylis arifolia*).

The existing bottomland hardwood nonwetland is impacted by widespread invasive species cover. Invasive Chinese privet and Chinese tallow are present across multiple stratum within the bottomland hardwood wetland. Based on initial fieldwork, the performance standard of no more than 5% cover would not be met by current conditions and the performance standard for percent stem density of noxious species is also exceeded.

4.4.3 Riparian Wetland Buffer

The riparian wetland buffer contains bottomland hardwood wetlands and areas of maintained lawn. Maintained lawn is present in the area around the residential structure. This area is primarily dominated by herbaceous species including turf grass and sedges (*Carex spp.*) with a few trees and shrubs present.

4.4.4 Riparian Nonwetland Buffer

The riparian nonwetland buffer contains bottomland hardwood nonwetlands and areas of maintained lawn. Maintained lawn is present in the area around the residential structure. This area is primarily dominated by herbaceous species including turf grass and sedges (*Carex spp.*) with a few trees and shrubs present.

4.5 Existing Hydrology

4.5.1 Watershed Context

The Bank is located in the southern portion of the East Fork Pushepatapa Creek subwatershed, United States Geologic Survey (USGS) Hydrologic Unit Code (HUC) 031800040502.

Restoration of optimally functioning stream and wetlands within the Bank will provide significant ecological uplift for the East Fork Pushepatapa Creek subwatershed (12-digit hydrologic unit), as well as downstream benefits for the Lower Pearl River watershed (8-digit hydrologic unit), the Pearl River Basin (6-digit hydrologic unit), and Mississippi Sound. Figure 5 provided in Appendix A shows the Bank's location within the Pearl River Basin.

4.5.2 Existing Stream Conditions

The Bank is located in a low, poorly-drained area with onsite streams including the East Fork Pushepatapa Creek (S1), an unnamed tributary of the East Fork Pushepatapa Creek (S2), and a ditch (S3).

The East Fork Pushepatapa Creek (S1) enters the site along the north boundary and meanders across the Bank flowing offsite across the south Bank boundary. The East Fork Pushepatapa Creek drains a 23,368 ac. basin north of the Bank where it enters the site. Approximately four miles south of the Bank, the East Fork Pushepatapa Creek drains into Pushepatapa Creek which drains into the Pearl River.

4.5.2.1 East Fork Pushepatapa Creek – Reach S1-1

This reach has generally stable banks, the bed material is typical, and sediment deposition does not indicate significant active erosion.

4.5.2.2 East Fork Pushepatapa Creek – Reach S1-2

Debris and structures have fallen into the stream have created areas of aggradation and flow disruption. The banks are actively eroding and the stream channel is becoming over-widened in the middle of this reach.

4.5.2.3 East Fork Pushepatapa Creek – Reach S1-3

This reach has generally stable banks, the bed material is typical, and sediment deposition does not indicate significant active erosion.

4.5.2.4 Unnamed Tributary – Reach S2-1

Due to impacts and rerouting of the flow, the features of the previously present stream have been obscured. At this time, only a gentle swale is present. Flow appears to be limited to flood events.

4.5.2.5 Unnamed Tributary – Reach S2-2

This reach includes pattern, profile, and dimension that is largely intact. Flow has been rerouted through the cutoff ditch and flood flows have deposited sediment in areas of the channel. Debris is present near the confluence with the East Fork of the Pushepatapa Creek.

4.5.2.6 Cutoff Ditch – Reach S3

This feature is an artificial straight ditch with straight sides that creates a flow bypass for the Unnamed Tributary. Topographic maps indicate that there was historically no stream feature in this location. The age of the ditch is unknown, but the bed has downcut to the point it was arrested by clay bed material. The trees on the banks of the feature are moderately sized. However, the ditch has not naturalized into typical pattern, dimension, or profile of a natural stream.

Stream cross sections showing existing conditions are shown in Appendix D. Table 2 provides a description of the existing streams onsite.

Table 2: Existing Stream Conditions

Feature ID	Description	Flow Regime	Length (LF)	Drainage Basin Area (acre)
S1-1	Stream	Perennial	726.45	23,368.35
S1-2	Stream	Perennial	1,533.56	26,918.88
S1-3	Stream	Perennial	775.53	26,959.93

S2-1	Impacted stream	None	600	41.05
S2-2	Stream	Intermittent	684.95	41.05
S3*	Ditch	Perennial	705.80*	3,550.53
TOTAL			5,026.29	

*The ditch is not included in the stream length total since it is not a natural feature.

5 PROPOSED SERVICE AREA

The Bank is located in the Lower Pearl River drainage basin within the Pearl River Basin (HUC 031800). The proposed primary mitigation service area for the Bank is the Lower Pearl River watershed (HUC 03180004) and the secondary service area is Middle Pearl-Silver River (HUC 03180003). The proposed service areas are mapped in Figure 5 provided in Appendix A. Decisions authorizing use of credits from the Bank will be made by the appropriate authority on a case-by-case basis in accordance with all applicable requirements.

6 GENERAL NEED FOR THE BANK

Restoration of bottomland hardwood wetlands and streams within the Bank will benefit the ecological health of the Pearl River Basin. The ecological benefits include improvements to wildlife habitat, regulation of flooding, stream recharge, and water quality.

Unless established as a mitigation bank, this site will be replanted in pine for eventual timber harvesting as well as being maintained as a residence. These uses will result in altered forest community composition, proliferation of invasive species, reduction in biodiversity, removal of riparian vegetation and destabilization of the streambank, and disturbance of hydrology. Without implementation of the proposed Bank, the site will remain in a degraded condition with future deterioration due to additional residential development.

In addition, the proposed Bank will provide compensation for unavoidable impacts associated with local commercial and residential developments in the primary or secondary service area. To date, there are no approved stream credit-generating banks in the primary service area (Lower Pearl River) or the secondary service area (Middle Pearl-Silver River). The proposed Bank would be the first and only bank to provide stream credits for mitigation of unavoidable impacts in both service areas.

7 BANK ESTABLISHMENT

This section describes the ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the Bank site and how this site will support the planned types of aquatic resources and function, as stated in 33 CFR 332.8 (d)(2)(vii)(A).

7.1 Site Work Plan

This section provides a description of the proposed stream restoration, riparian buffer enhancement and restoration, and bottomland hardwood wetland enhancement and restoration within the proposed Bank.

7.1.1 Stream Work Plan

Stream work is proposed instream. The stream workplan is shown in Figure 6 in Appendix A.

7.1.1.1 East Fork Pushepatapa Creek – Reach S1-1

This reach is proposed for buffer work only. Forest diversity within the buffer would be improved with native, typical species to increase species diversity and provide benefit to wildlife and overall forest resiliency.

7.1.1.2 East Fork Pushepatapa Creek – Reach S1-2

This reach is proposed for buffer work and instream work. Removal of debris and restoration of the streambed where debris is currently obstructing flow would include installation of log vanes to manage grade control and promote bed stability as flow is restored. Woody vegetation would be reestablished to the banks and additional bank structures such as root wads or toe wood lunkers would be used to provide bank stability while vegetation reestablishes as well as provide wildlife habitat.

7.1.1.3 East Fork Pushepatapa Creek – Reach S1-3

This reach is proposed for buffer work only. Forest diversity within the buffer would be improved with native, typical species to increase species diversity and provide benefit to wildlife and overall forest resiliency.

7.1.1.4 Unnamed Tributary – Reach S2-1

This reach is proposed for a Rosgen Priority I restoration which will include construction of a new channel with appropriate dimension, pattern, and profile for this watershed. Woody vegetation would be reestablished with typical native species for streams of this size and geography. The pattern shown on Figure 6 is approximate and the actual pattern would be designed during the mitigation bank instrument development. This approximate pattern would add 172 linear feet to this segment for a total length of 772 feet.

7.1.1.5 Unnamed Tributary – Reach S2-2

This reach is proposed for buffer work along with placement of instream structures. Woody vegetation would be reestablished with typical native species for streams of this size and geography. Instream structures would be placed as debris is removed to ensure grade control is managed to maintain a stable, free-flowing stream. Other instream structures would be added for habitat enhancement and bank stability.

7.1.1.6 Cutoff Ditch – Reach S3

This artificial cut off ditch is proposed to be plugged and filled with material removed from the Priority I restoration area of the Unnamed Tributary.

7.1.2 Wetland Work Plan

7.1.2.1 Stream Buffer

Stream buffer work includes enhancement and restoration activities. The proposed stream buffer work plan is shown in Figure 7 in Appendix A.

7.1.2.1.1 Riparian Wetland Buffer Restoration & Enhancement

Wetland buffer restoration will consist of the construction of a new stream channel and associated floodplain and other instream restoration actions. Wetland buffer restoration areas will be planted with native vegetation and invasive species will be removed. Planting will occur along stream banks in accordance with local reference systems for similar-sized streams. Planted buffer areas will be monitored to ensure that natural vegetation establishes.

Wetland buffer enhancement will consist of improving native species diversity through plantings and conducting invasive species control. Planting will occur along stream banks in accordance with local reference systems for similar-sized streams. Planted buffer areas will be monitored to ensure that natural vegetation establishes.

7.1.2.1.2 Riparian Nonwetland Buffer Enhancement

Nonwetland buffer enhancement and reestablishment will consist of planting native vegetation and invasive species control. Planting will occur in accordance with local reference systems for similar-sized streams. Planted buffer areas will be monitored to ensure that natural vegetation establishes.

7.1.2.2 Wetlands and Nonwetlands

These areas are outside of the stream buffer areas and include both jurisdictional and nonjurisdictional areas. The proposed wetland work plan is shown in Figure 8 in Appendix A.

7.1.2.2.1 Bottomland Hardwood Wetland Restoration & Enhancement

Bottomland hardwood wetland restoration will consist of the re-establishment of wetlands and wetland hydrology through the construction of a new stream channel and associated floodplain and other instream restoration actions. Re-established bottomland hardwood wetlands will undergo invasive species removal.

Bottomland hardwood wetlands outside of the riparian buffer will be enhanced according to the performance standards required by the USACE MVK Interagency Review Team (IRT). Invasive species control will be conducted to enhance the overall wildlife benefit and resiliency of the wetland.

7.1.2.2.2 Bottomland Hardwood Nonwetland Enhancement

Bottomland hardwood forests outside of the riparian buffer will be enhanced according to the performance standards required by the USACE MVK Interagency Review Team (IRT). Invasive species control will be conducted to meet bottomland hardwood forest performance standards for invasive species coverage and stem density per acre.

7.2 Water Rights

Hydrology on the site will continue to be precipitation-driven with no pumping or artificial hydrology required. The property owner has intact water rights and the proposed Bank will not result in a loss of downstream water quantity.

8 METHODS FOR DETERMINING CREDITS, RELEASE OF CREDITS, AND ACCOUNTING PROCEDURES

The Sponsor proposes that approximately 53.59 acres of the Pushepatapa Creek Mitigation Bank can be used as compensatory mitigation through the restoration of streams, riparian buffer corridors, and bottomland hardwood wetlands. Within this 53.59 acres, the sponsor proposes that approximately 2,796 LF of stream channel and 4,996 LF of riparian buffer can be either enhanced or restored and used as compensatory mitigation.

The Vicksburg District uses the Charleston Method (revision 2010) to estimate impacts and mitigation credits to both wetlands and linear systems (streams). During preparation of the Mitigation Bank instrument credits will be calculated for each type of restoration and specific accounting into categories for restoration and enhancement for each habitat type (stream, riparian buffer, bottomland hardwood wetland).

9 TECHNICAL FEASIBILITY

The proposed construction work required to develop the Bank is based on currently accepted restoration methods and is technically feasible. The construction work will consist of site preparation, restoring approximately 2,796 LF of stream (dependent on final stream design), plugging 705.80 LF of ditch, native plantings, and invasive species control. The relatively low landscape position within the floodplain and the presence of hydric soils indicate that minimal soil work will be required for the successful restoration of wetland hydrology and forested wetlands. The existence of forested wetlands within and adjacent to the Bank also suggests a high potential for successful restoration.

10 BANK OPERATION

This section describes how the proposed Bank will be established and operated, as stated in 33 CFR 332.8(d)(2)(ii). The USACE MVK will establish an IRT to review documentation for the establishment and management of the proposed mitigation Bank. The USACE MVK serves as Chair of the IRT and is responsible for the final decisions regarding the terms and conditions of the mitigation banking instrument (MBI). The Sponsor is responsible for preparing all documentation associated with the establishment of the proposed Bank, including the prospectus, MBI, and other appropriate documents.

10.1 Project Representatives

Ryan Conservation Group, LLC will serve as the Sponsor and long-term owner. The long-term management of the proposed Bank will be the ultimate responsibility of the Sponsor. The Sponsor has contracted Cypress to provide guidance and oversight as its agent. Cypress specializes in wetland and stream mitigation banking and other natural resource services and regulatory compliance. Contact information for both parties is provided below.

Proposed Sponsor/Landowner: Ryan Conservation Group, LLC
7344 Sevenoaks Ave.
Baton Rouge, LA 70806
norm@ryanservices.com
225-955-6676

Proposed Agent: Cypress Environment and Infrastructure
906 DeSoto Street
Ocean Springs, Mississippi 39564
chenderson@cypressei.com
228-596-2708

10.2 Qualifications of the Sponsor

As stated in 33 CFR §332.8(d)(2)(vi.), this section described the Sponsor's, Landowner's, and Agent's qualifications to successfully complete all proposed work associated with the establishment and operation

of the Bank. Ryan Conservation Group, LLC intends to contract with Cypress, an experienced consultant, to complete the work in accordance with USACE MVK requirements.

Cypress has over 15 years of expertise in wetland and stream mitigation banking. With a former USACE Mobile District (SAM) Interagency Review Team member on staff as well as experience in all stages of mitigation banking, Cypress brings unique skills and perspective to plan, permit, construct, and monitor mitigation banks. Cypress was able to bring the first three commercial mitigation banks in USACE SAM to 100% credit release through their integrated construction and monitoring. Cypress has been involved in 11 mitigation banks, totaling over 10,700 acres and has successfully established multiple wetland and stream mitigation banks.

Cypress personnel includes a professional wetland scientist, personnel certified in Rosgen's Natural Channel Design Methodology for stream and river restoration, as well as an American Institute of Certified Planners (AICP) certified planner with an advanced specialty certification in environmental planning.

10.3 Site Protection

The mitigation Bank Sponsor will ensure the long-term management and protection of the restored mitigation Bank through long-term management and a conservation easement. The Sponsor is responsible for the long-term management for the property. If the Sponsor decides not to retain the property, the land will be transferred, along with long-term management funds, to a state or federal resource agency or a non-profit conservation organization subject to approval by the USACE MVK and mitigation bank IRT.

A conservation easement will be established for the site and held by a third party. The easement will be held by a nonprofit organization, or a state or federal resource agency approved by USACE MVK. The conservation easement will outline the permissible uses of the property and prohibit uses that would have negative ecological effects on the restored property. Permissible activities with no negative ecological impacts, such as hunting and fishing, will be allowed so long as they maintain or improve the ecology of the site. Adverse impacts caused by permissible activities would require permitting and mitigation.

10.4 Long-Term Management

The Sponsor, its heirs, assigns or successors, shall be responsible for maintaining and protecting lands contained within the Bank, unless the Bank lands are transferred to a state or federal resource agency or non-profit conservation organization or this responsibility is contractually conveyed to another person, subject to approval by the IRT.

The Sponsor will ensure the long-term success and sustainability of the proposed Bank through practices such as invasive species control, site monitoring, establishment of financial assurances, and perpetual protection through a conservation easement. In accordance with 33 CFR 332.7(d), a long-term management plan will be included in the MBI that will address long-term management activities, annual cost estimates long-term management activities, and the funding mechanism that will be used to support long-term management.

11 REFERENCES

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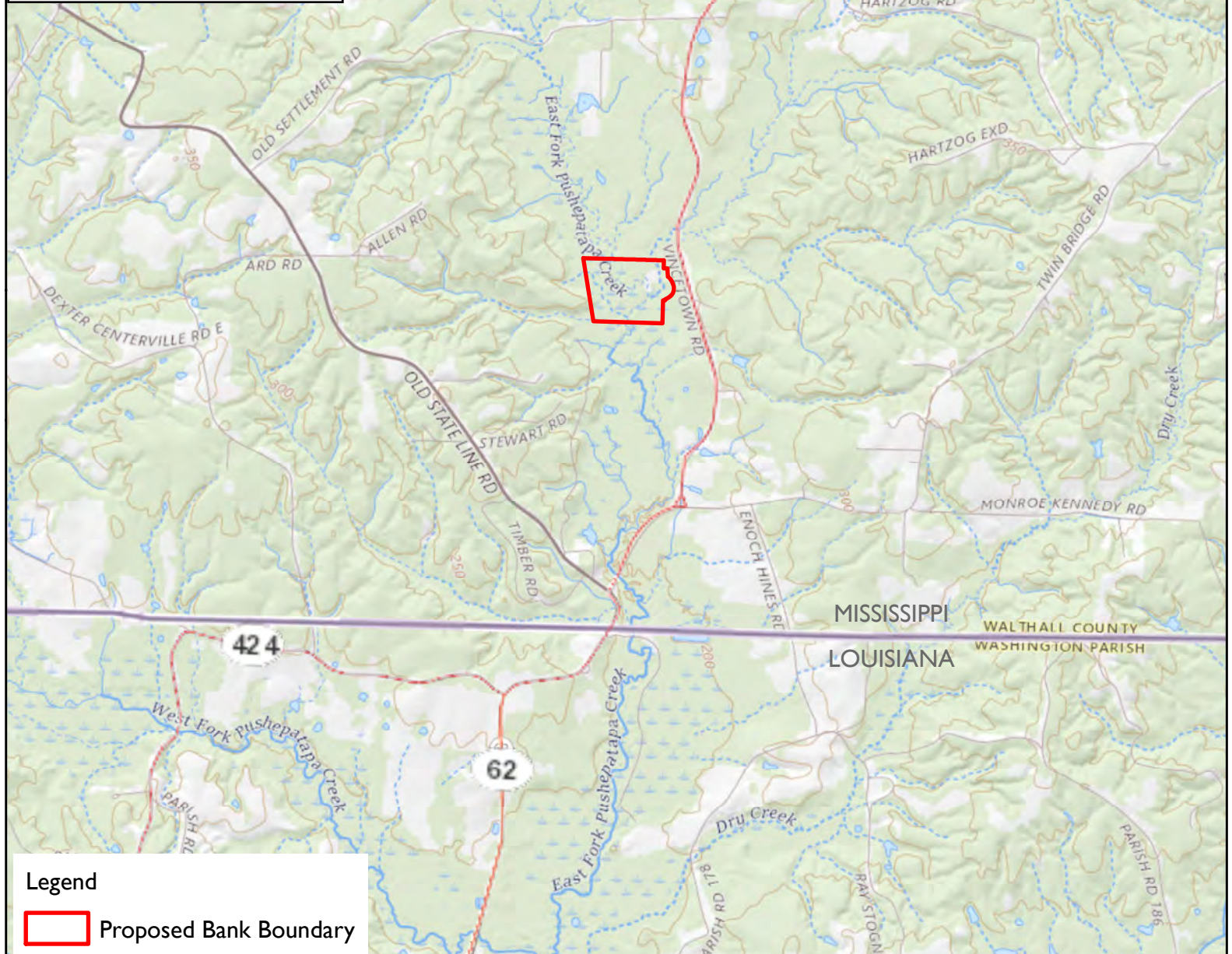
Natural Resources Conservation Service. Web Soil Survey. U.S. Department of Agriculture, Natural Resources Conservation Service. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed 12 July 2020.

United States Fish and Wildlife Service. National Wetland Inventory Historic Wetland Habitat. <https://www.fws.gov/wetlands/Data/Historic-Wetlands-Data.html>. Accessed 7 July 2020.

APPENDIX A



Site Location



Legend
 Proposed Bank Boundary



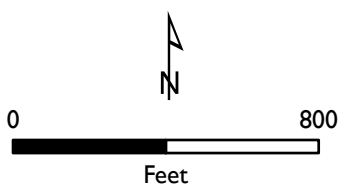
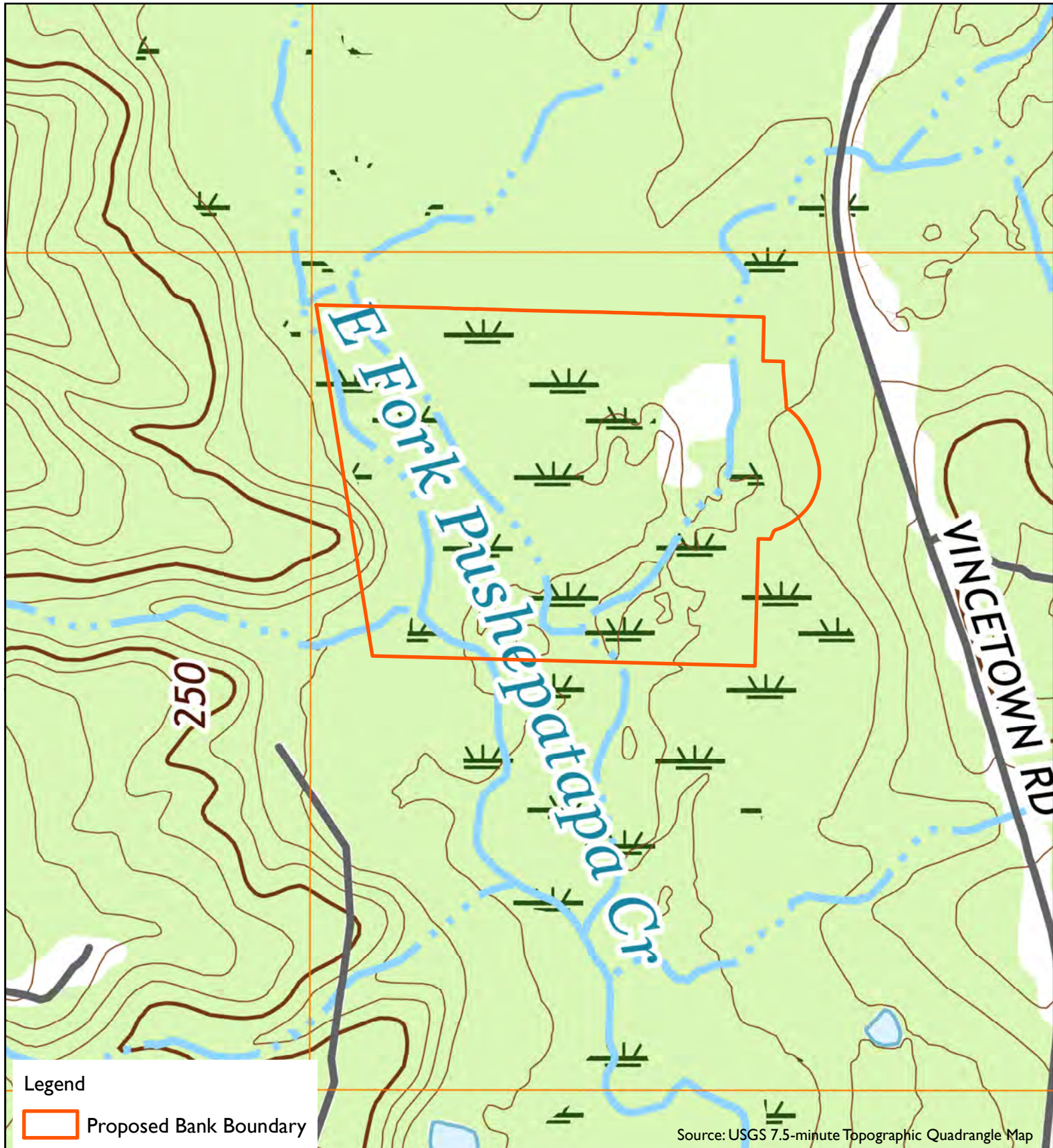
Coordinate System:
 NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
 PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
 Walthall County, MS



FIGURE I

BANK LOCATION AND VICINITY MAP



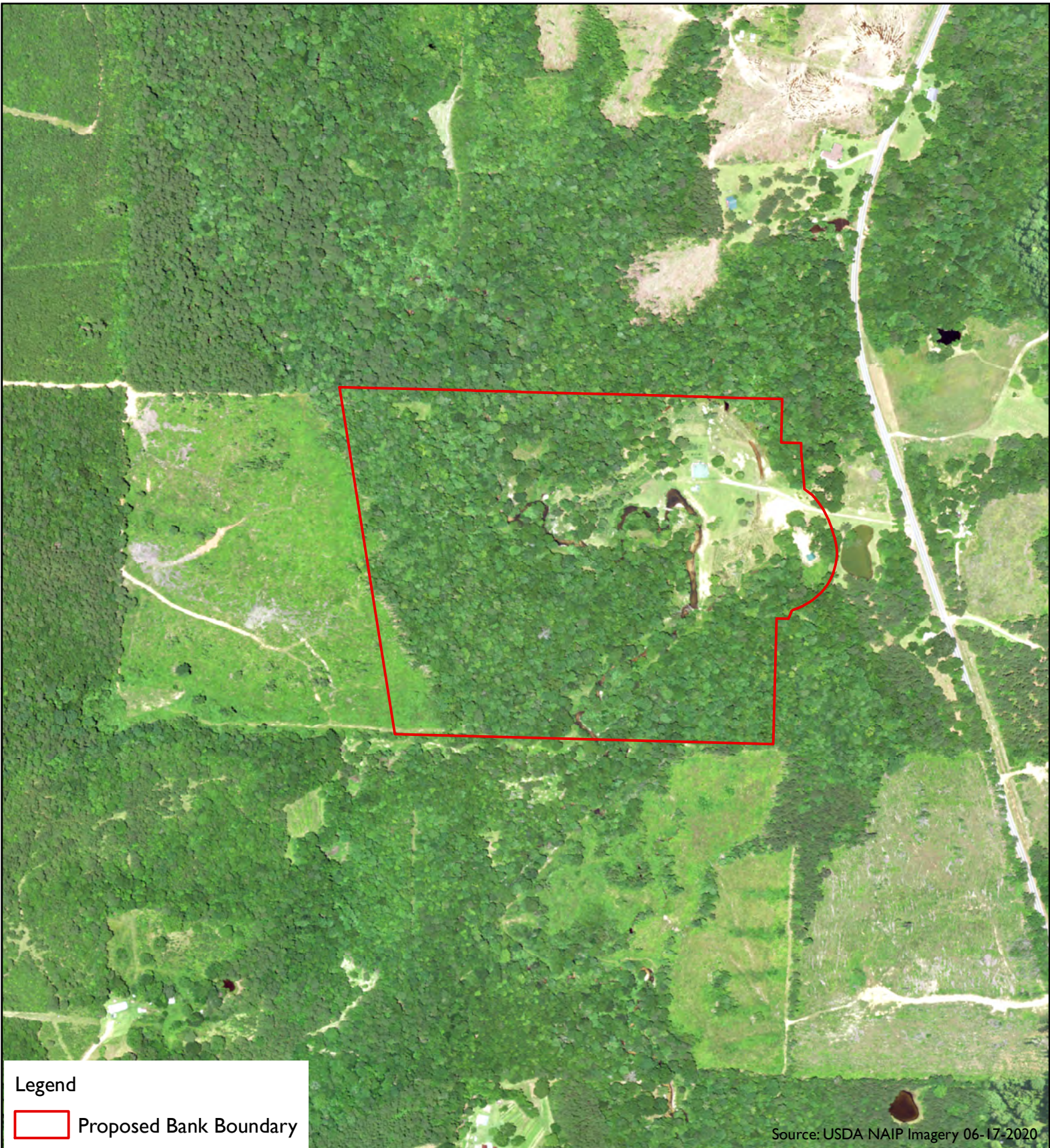
Coordinate System:
NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
 PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
 Walthall County, MS


USGS TOPOGRAPHIC MAP

CYPRESS
 Environment & Infrastructure

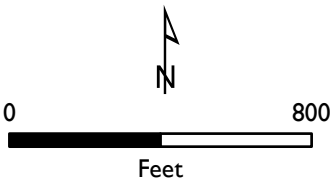
FIGURE 2



Legend

 Proposed Bank Boundary

Source: USDA NAIP Imagery 06-17-2020



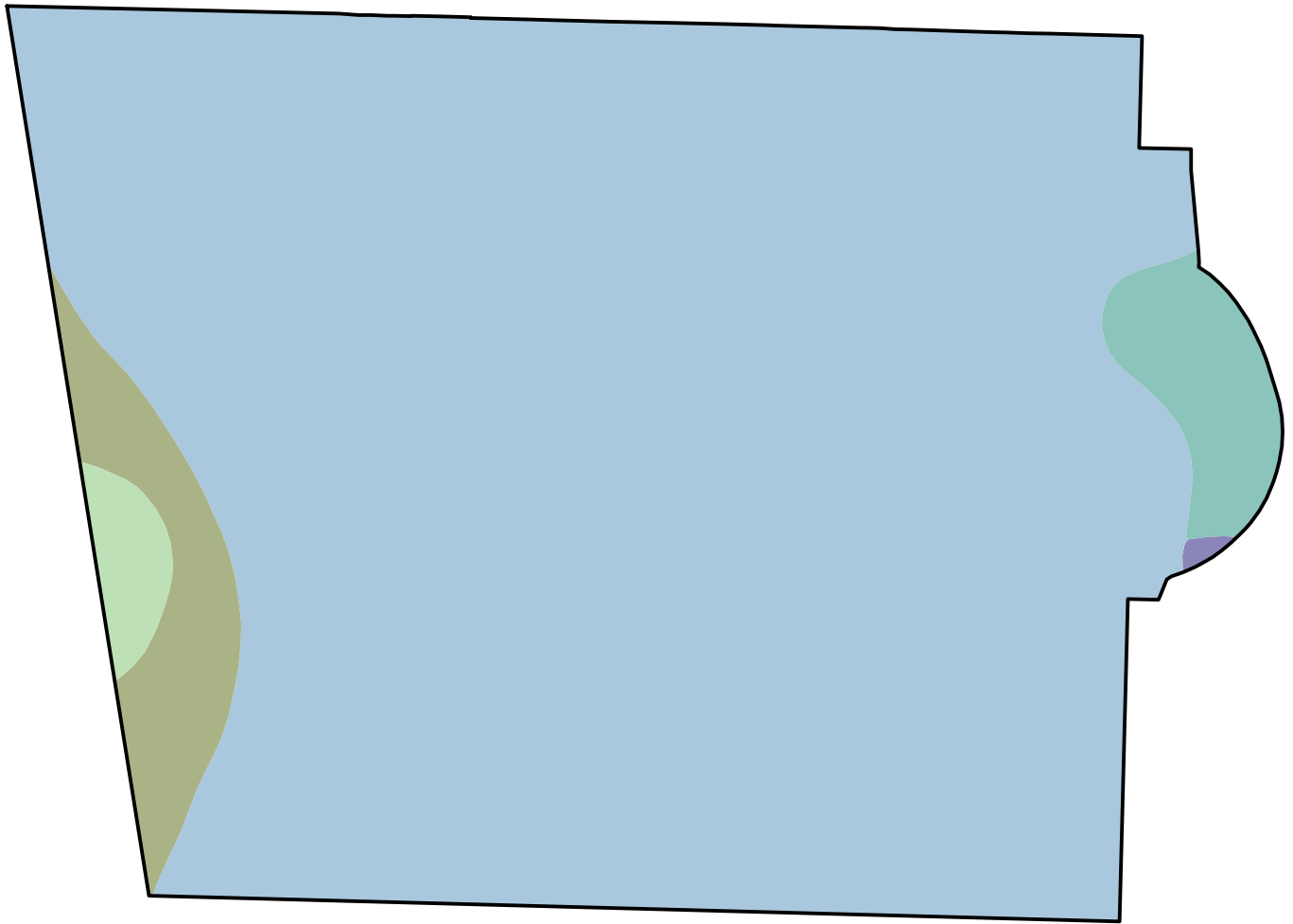
Coordinate System:
NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
Walthall County, MS




FIGURE 3






SITE AERIAL PHOTOGRAPH



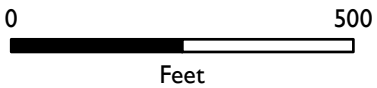
Legend

 Proposed Bank Boundary

Soil Series

-  Mantachie soils
-  Savannah silt loam, 2 to 5% slopes
-  Smithdale fine sandy loam, 12 to 17% slopes
-  Smithdale fine sandy loam, 17 to 40% slopes
-  Wehadkee silt loam (kinston)

Source: USDA Natural Resources Conservation Service (NRCS) soils data.



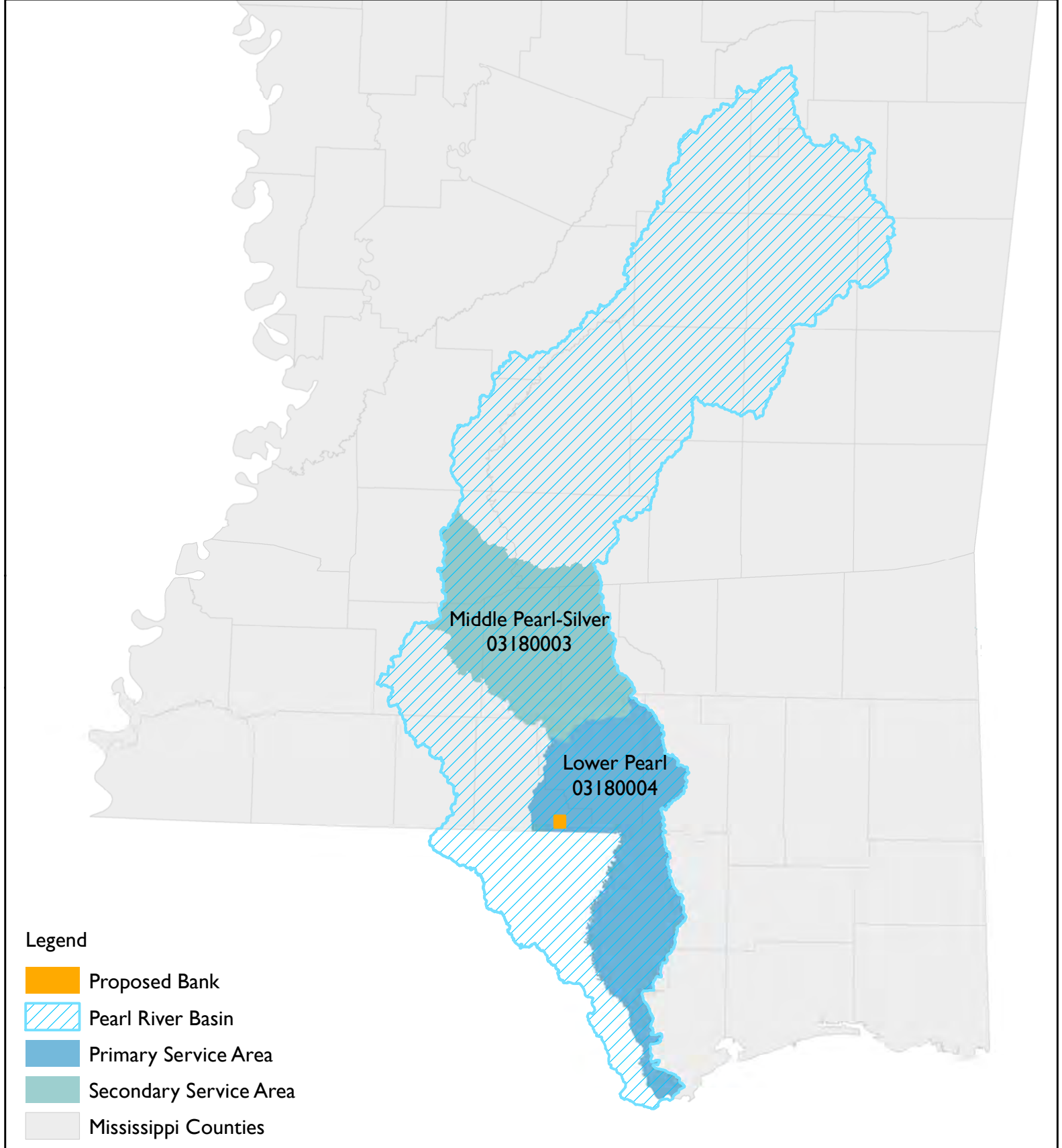
Coordinate System:
NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
Walthall County, MS


USDA NRCS SOILS




FIGURE 4



- Legend**
- Proposed Bank
 - Pearl River Basin
 - Primary Service Area
 - Secondary Service Area
 - Mississippi Counties


 N


 0 50
 Miles

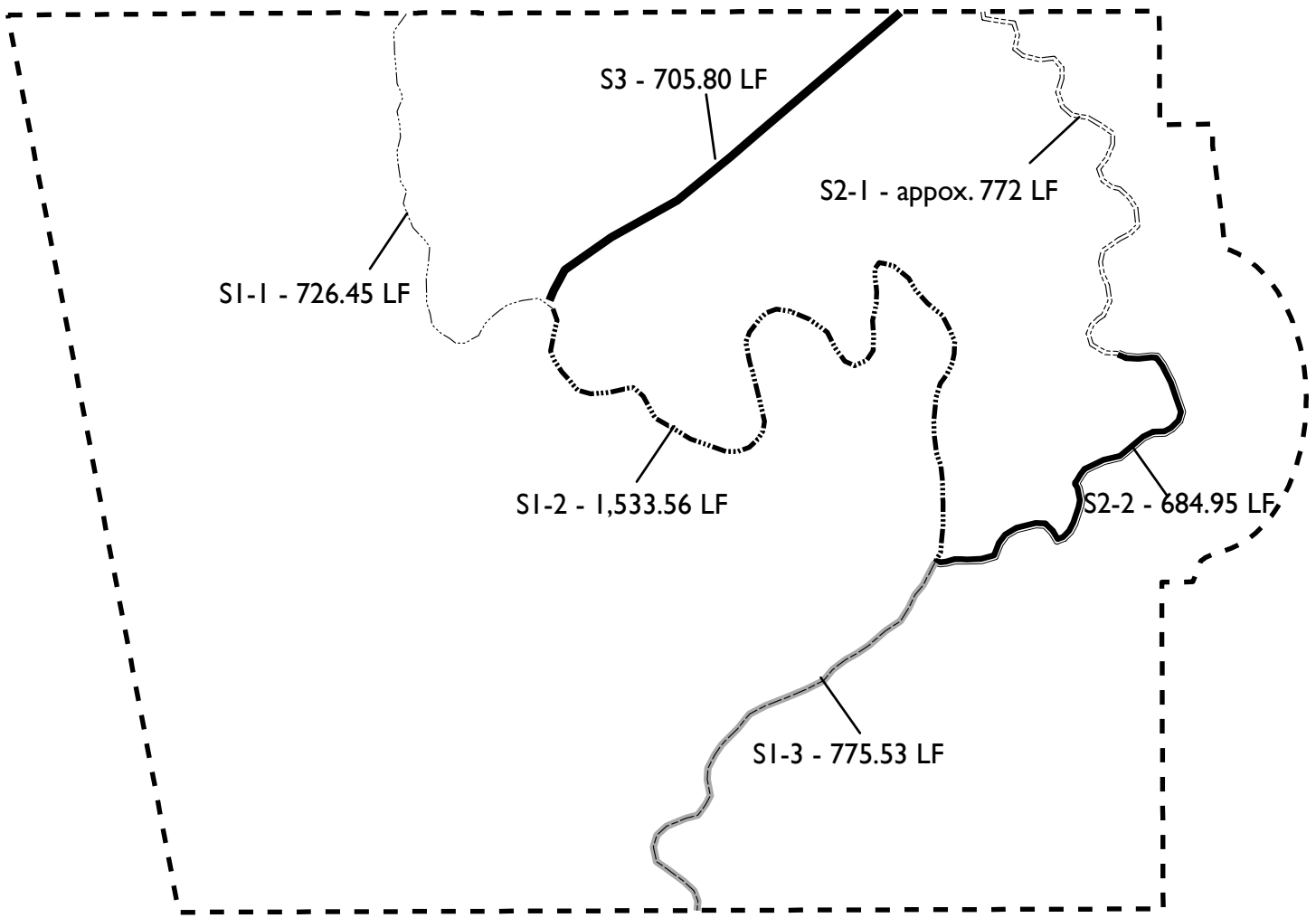
Coordinate System:
 NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
 PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
 Walthall County, MS



FIGURE 5

PROPOSED SERVICE AREA

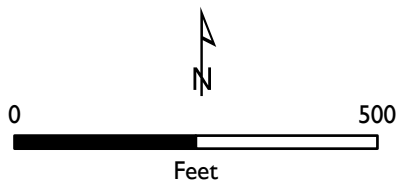


Legend

Proposed Bank Boundary (53.59 ac.)

Stream Mitigation Features

- S1-1
- S1-2 (Proposed In-Stream Work)
- S1-3
- S2-1 (Proposed In-Stream Work)
- S2-2 (Proposed In-Stream Work)
- S3 (Proposed Removal)



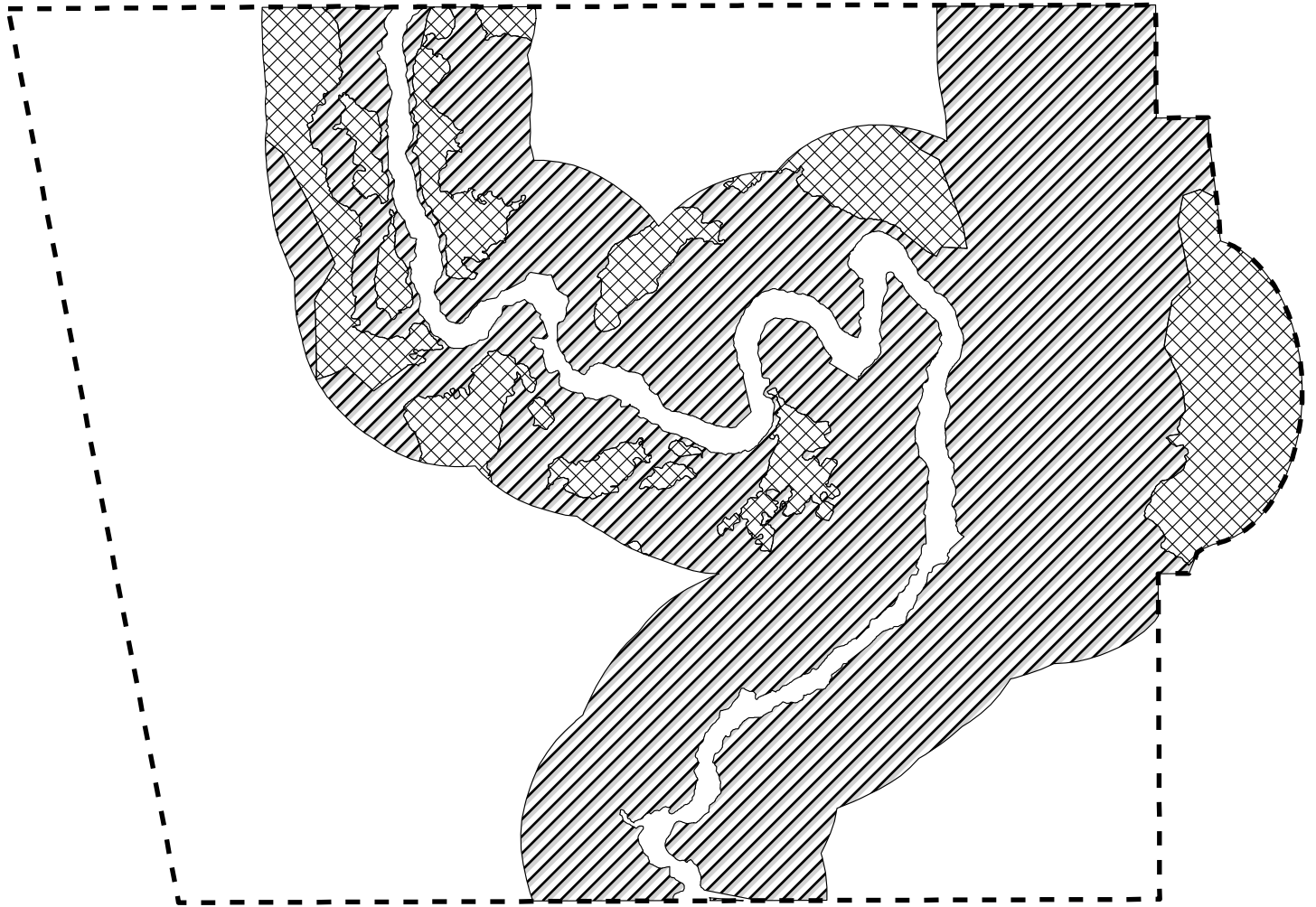
Coordinate System:
NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
Walthall County, MS


PROPOSED STREAM WORK PLAN




FIGURE 6



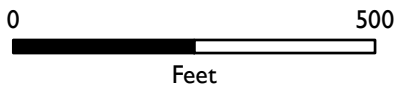
Legend

 Proposed Bank Boundary (53.59 ac.)

Stream Buffer Mitigation Features

 Riparian Wetland Buffer Restoration or Enhancement

 Riparian Nonwetland Buffer Restoration or Enhancement



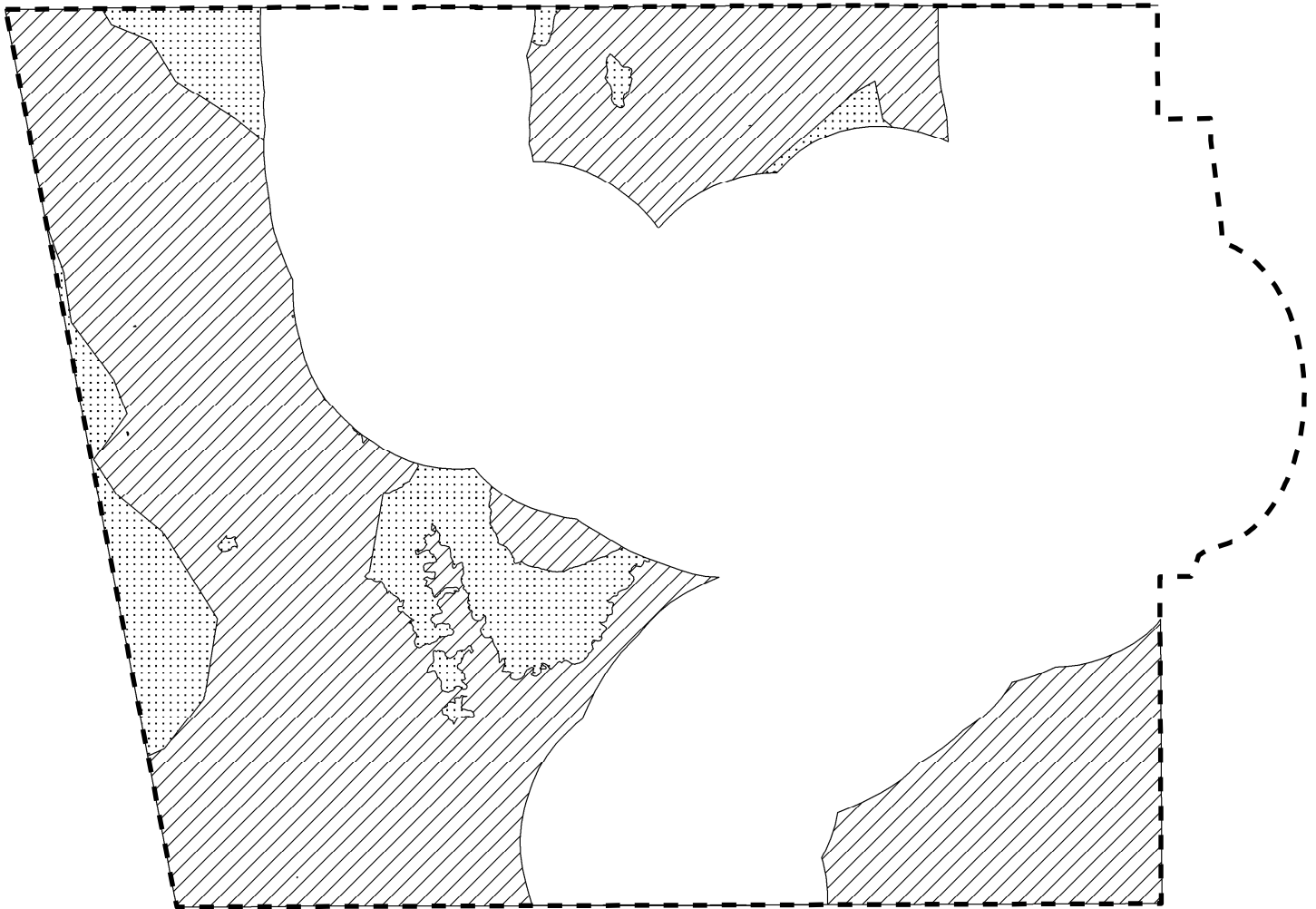
Coordinate System:
NAD 1983 UTM Zone 16N

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PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
Walthall County, MS


**PROPOSED STREAM BUFFER
WORK PLAN**



FIGURE 7



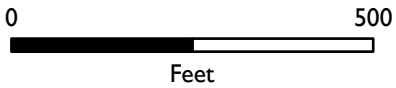
Legend

 Proposed Bank Boundary (53.59 ac.)

Mitigation

 Bottomland Hardwood Wetland Restoration or Enhancement

 Bottomland Hardwood Nonwetland Restoration or Enhancement



Coordinate System:
NAD 1983 UTM Zone 16N

RYAN CONSERVATION GROUP, LLC
PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
Walthall County, MS

PROPOSED WETLAND WORK PLAN



FIGURE 8

APPENDIX B



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, VICKSBURG DISTRICT
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

October 26, 2020

Regulatory Division

SUBJECT: Jurisdictional Determination – Mr. Norm V. Ryan, Sr., Proposed
Pushapatapa Creek Mitigation Bank, Sandy Hook, Walthall County, Mississippi; MVK-
2020-417

Mr. Marc Foster
Cypress Environment and Infrastructure
Post Office Box 1168
Biloxi, Mississippi 39533

Dear Mr. Foster:

This is in response to your request for a jurisdictional determination for the subject property located in section 25, T1N-R12E and section 30, T1N-R13E, Walthall County, Mississippi.

Based upon the information provided, including data collected during a recent site investigation, there appears to be jurisdictional wetlands and other waters of the United States located within the boundary of the property subject to regulation pursuant to Section 404 of the Clean Water Act. The approximate extent of jurisdictional waters of the United States is depicted on the enclosed map (enclosure 1). Any work involving the discharge of dredged or fill material (land clearing, ditching, filling, leveeing, culvert crossings, etc.) within the identified jurisdictional waters will require a Department of the Army Section 404 permit prior to beginning work. For your information, I have enclosed a copy of our appeals form for this preliminary determination (enclosure 2). In addition, the feature identified as an artificial pond on enclosure 1, is not considered waters of the United States. For your information, I have enclosed a copy of the basis of our determination (enclosure 3) and an appeals form for the pond (enclosure 4).

This approved jurisdictional determination for the pond site is valid for a period not to exceed five years from the date of this letter unless superseded by law or regulation. If the proposed work is not completed by this time, please contact this office for a reevaluation of permit requirements.

This determination of Department of the Army regulatory requirements does not convey any property rights, either in real estate or material or any exclusive privileges, and does not authorize any injury to property or invasion of rights or local laws or regulations, or obviate the requirement to obtain state or local assent required by law for the activity discussed herein.

The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for decision, and the final decision.

We are currently evaluating the proposed bank prospectus. If you have any questions, please refer to Identification No. MVK-2020-417, and contact Ms. Eli Polzer of this office, telephone 601-631-5721, or e-mail address: Eli.L.Polzer@usace.army.mil.

Sincerely,

Charles R. Allred, Jr.
Chief, Enforcement and Compliance Branch
Regulatory Division

Enclosures



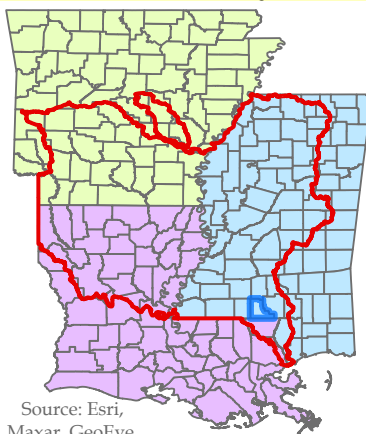
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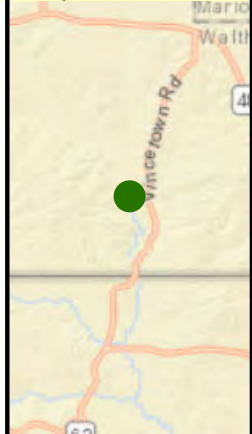
- Project Boundary
- Jurisdictional Features**
- Perennial Stream | 3037.01 lf
- Perennial Ditch | 705.80 lf
- Intermittent Stream | 685.28 lf
- Forested Wetlands | 34.32 ac
- Non-Jurisdictional Features**
- Artificial Pond | 0.60 ac

31.021647°, -89.942676°

Walthall County, MS



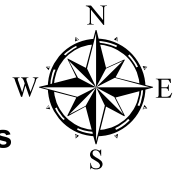
Project Location



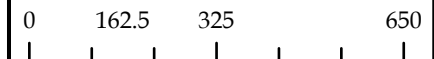
MVK-2020-417

Project:
Mr. Norm V. Ryan
Proposed Pushepatapa Creek
Mitigation Bank
Location:
Section 25, T1N-R12E
Dexter Quadrangle
Walthall County, MS

**Jurisdictional
Determination**



**US Army Corps
of Engineers®**
Regulatory Division
Enforcement & Compliance
Branch



Feet

Enclosure 1

APPENDIX C

Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
1

Date:
5/8/2020

Description:
Typical view of the
nonwetland, Magnolia-
dominated ridges within
the bottomland
hardwood complex.
Chinese privet (*Ligustrum
sinense*) dominated the
midstory.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
2

Date:
5/8/2020

Description:
Typical view of the
bottomland hardwood
forest. Chinese privet
(*Ligustrum sinense*)
dominated the midstory.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
3

Date:
5/8/2020

Description:
Typical view of the
maintained lawn.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
4

Date:
5/20/2020

Description:
Impacted stream feature
S2-1 north of driveway.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
5

Date:
2/4/2021

Description:
Impacted stream feature
S2-1 south of driveway.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
6

Date:
7/30/2019

Description:
Invasive Chinese privet
(*Ligustrum sinense*) and
Chinese tallow tree
(*Triadica sebifera*)
observed along S1.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
7

Date:
7/30/2019

Description:
Degraded concrete
bridge at confluence of
S3 and S1.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

Photo No:
8

Date:
10/7/2020

Description:
Woody debris within S1
near southern boundary
of site.



Site: Proposed Pushepatapa Mitigation Bank

Site Location:
Sandy Hook, Walthall
County, MS

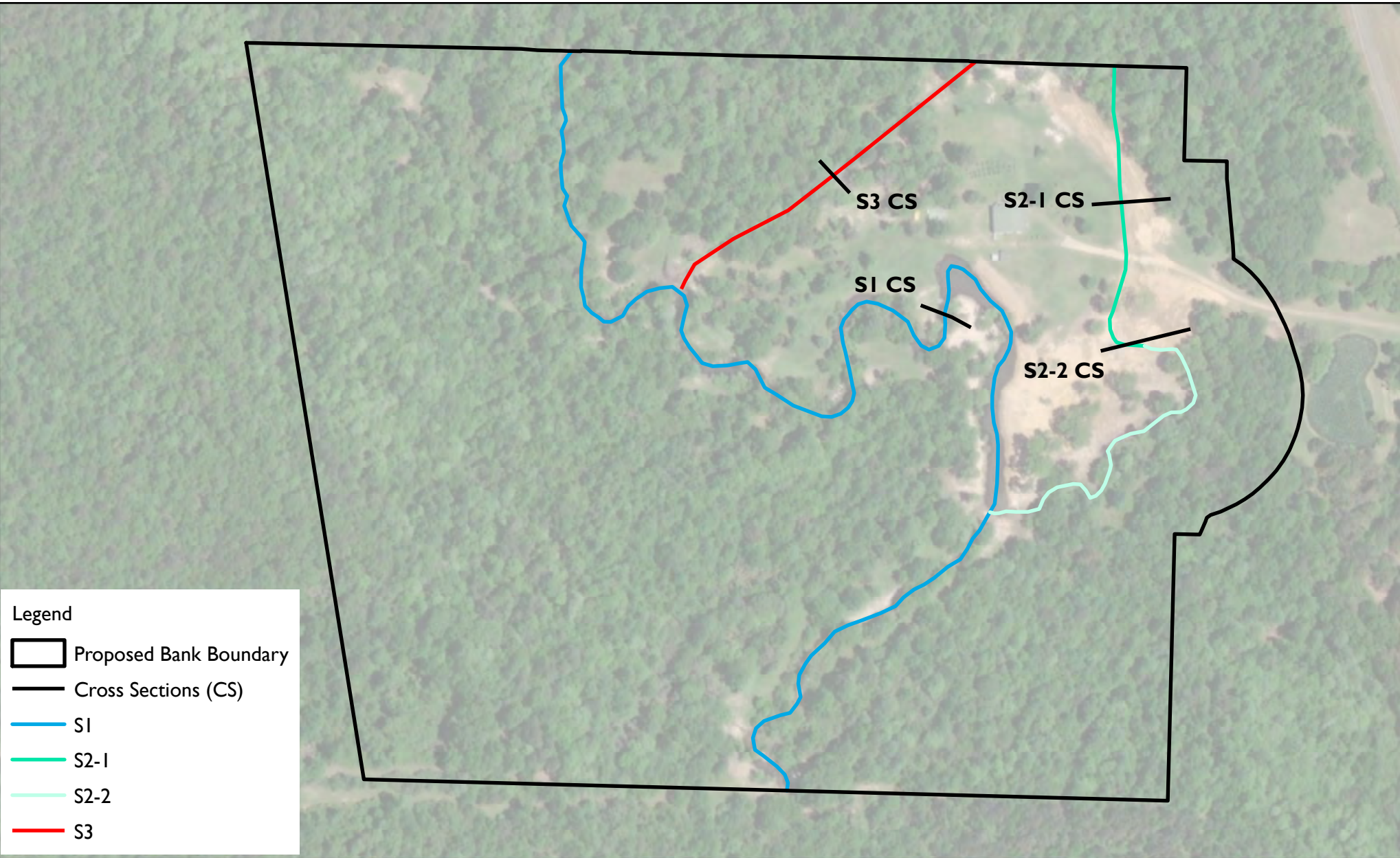
Photo No:
9

Date:
10/12/2020







Description:
Impacted stream feature
S2-2.

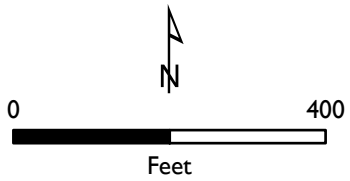


APPENDIX D



Legend

-  Proposed Bank Boundary
-  Cross Sections (CS)
-  S1
-  S2-1
-  S2-2
-  S3



Coordinate System:
NAD 1983 UTM Zone 16N

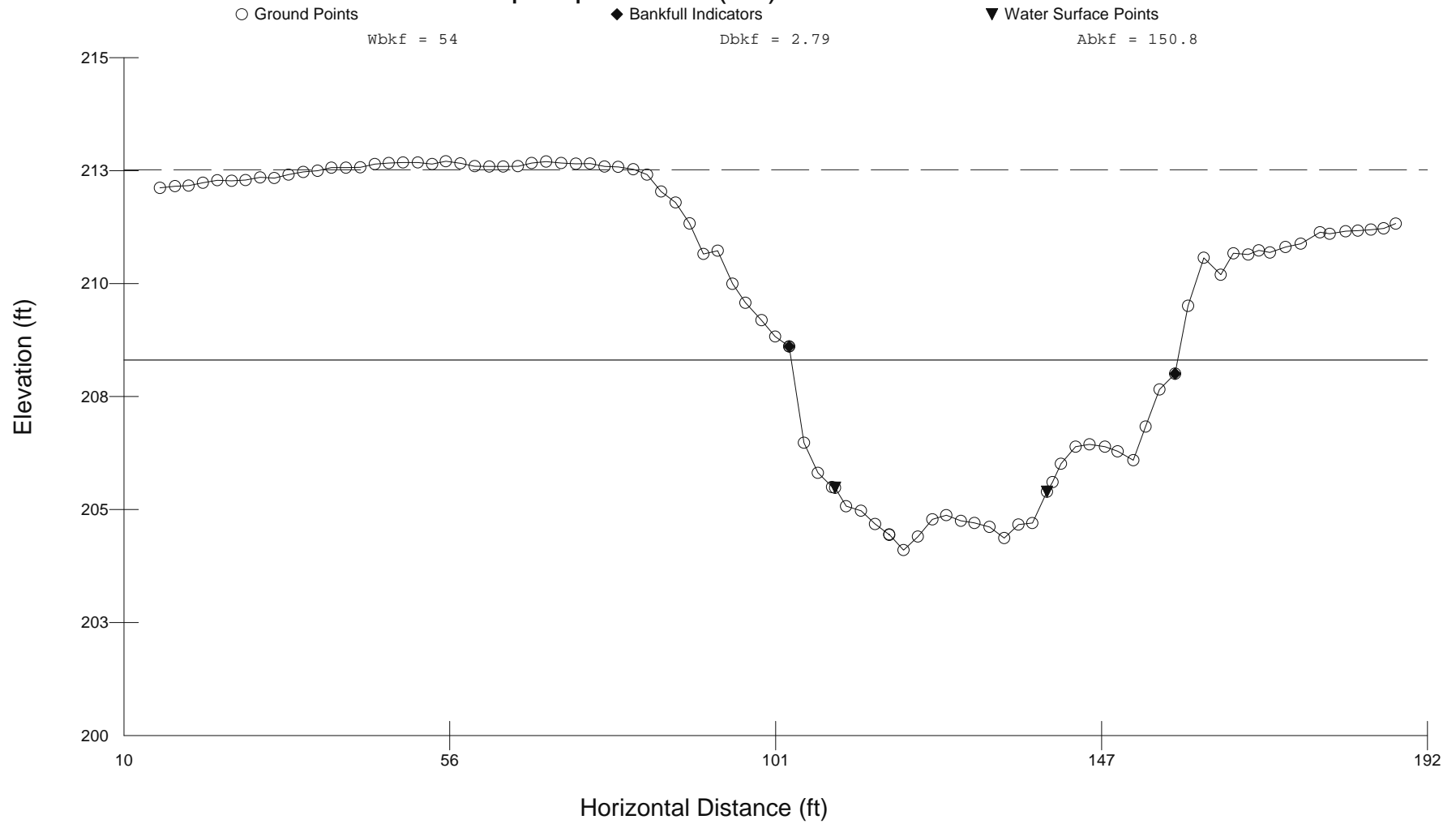
RYAN CONSERVATION GROUP, LLC
 PROPOSED PUSHEPATAPA CREEK MITIGATION BANK
 Walthall County, MS

STREAM CROSS SECTIONS



FIGURE D-1

Pushepatapa Creek (S1) Riffle Cross Section

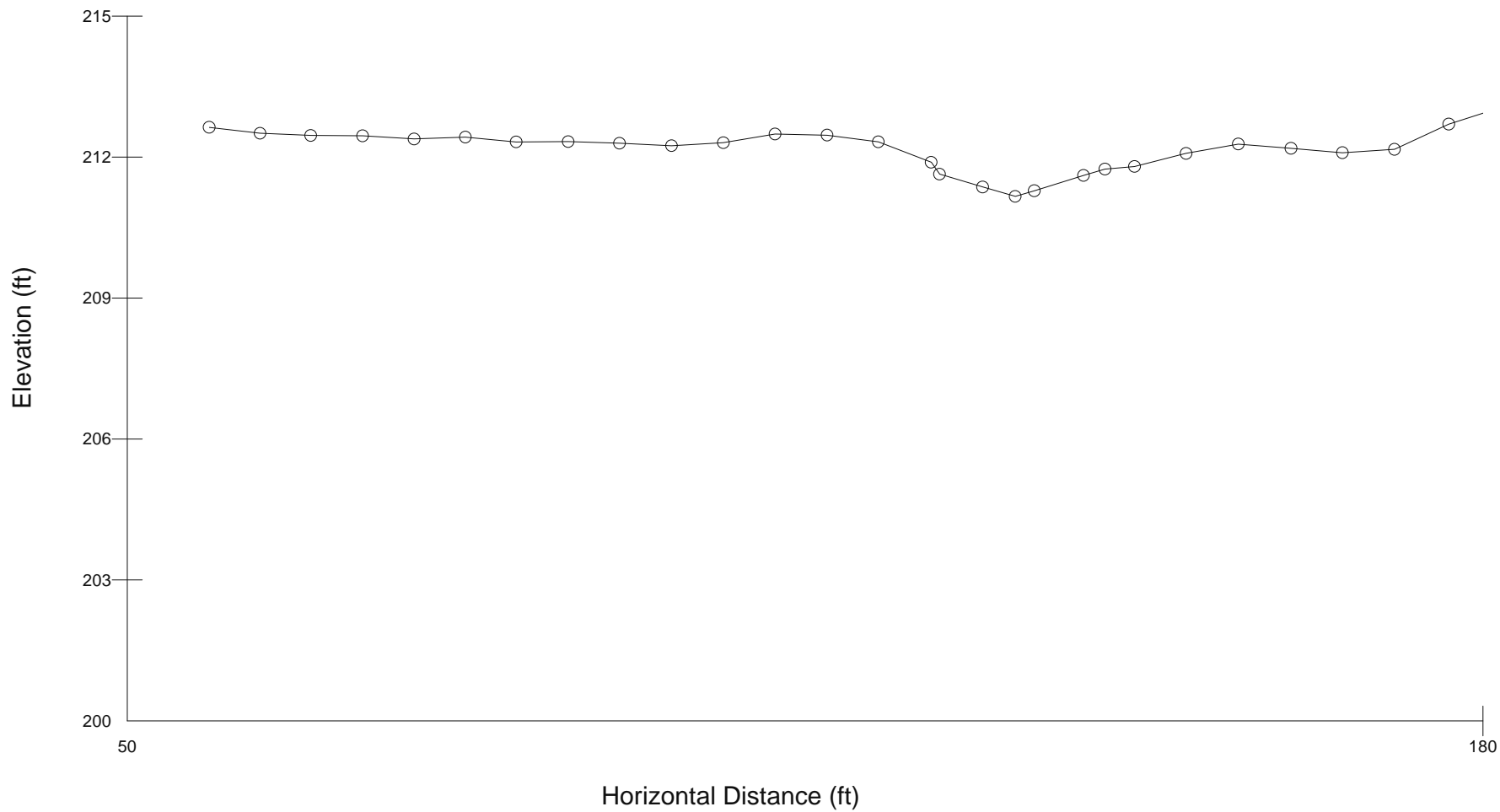


Impacted Stream (S2-1) Cross Section

○ Ground Points

◆ Bankfull Indicators

▼ Water Surface Points

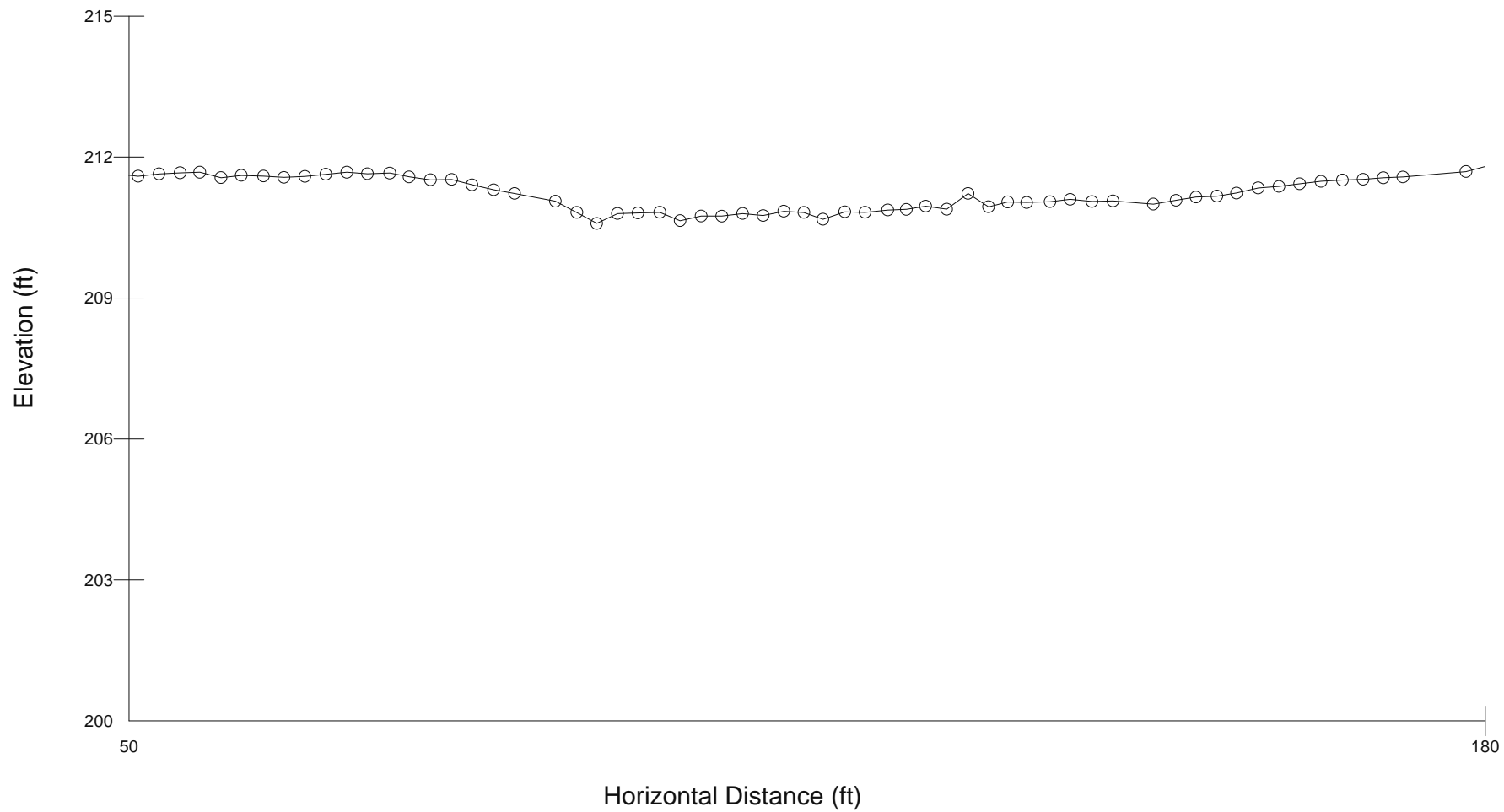


Impacted Stream (S2-2) Cross Section

○ Ground Points

◆ Bankfull Indicators

▼ Water Surface Points



Cutoff Ditch (S3) Cross Section

○ Ground Points

◆ Bankfull Indicators

▼ Water Surface Points

