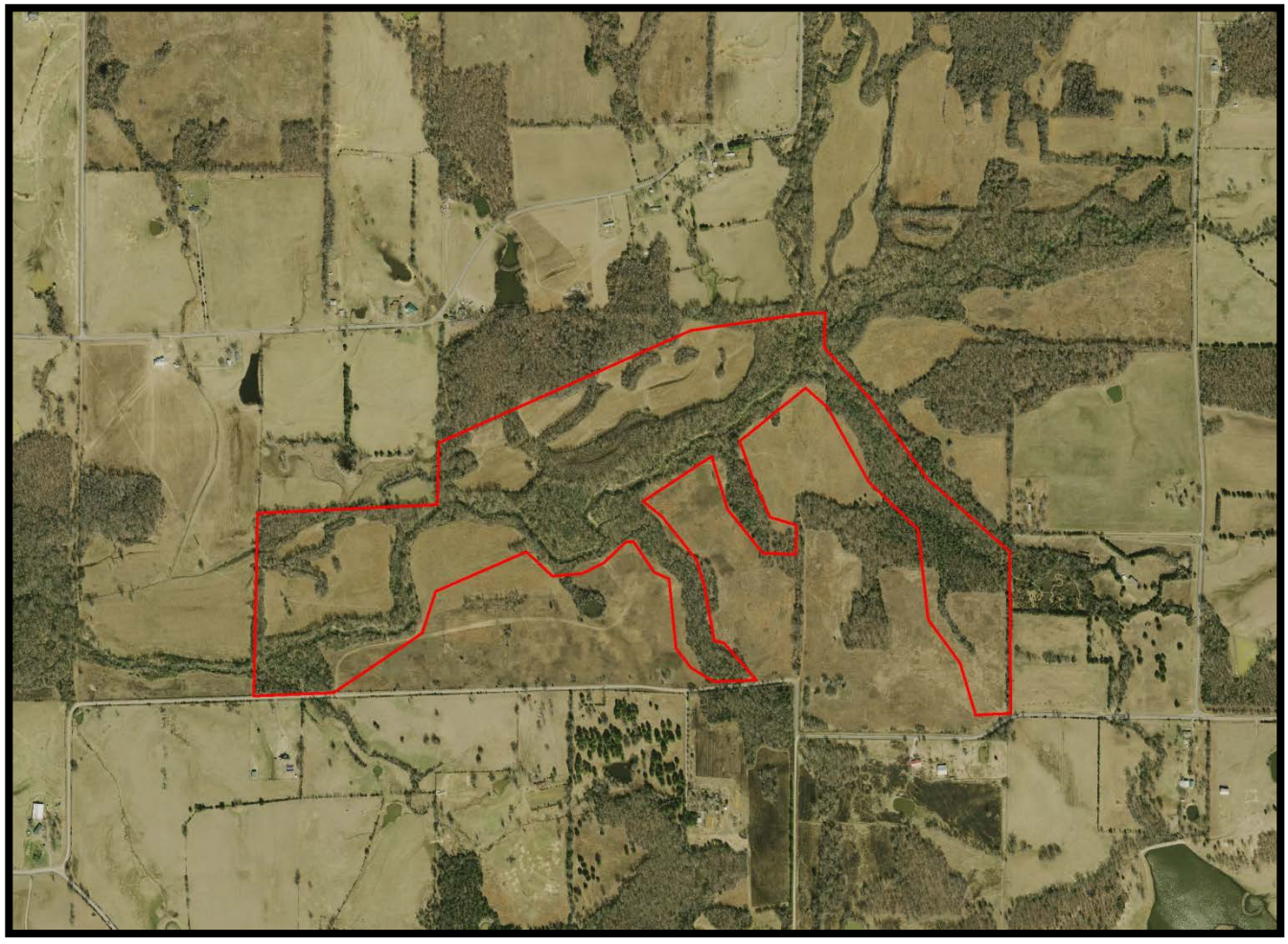
Proposed
Muddy Bayou Mitigation Bank
Prospectus

White and Faulkner Counties, Arkansas



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Prospectus
Proposed Muddy Bayou Mitigation Bank
White and Faulkner Counties, Arkansas

I. Introduction

The objective of this prospectus is the creation of the Muddy Bayou Mitigation Bank (MBMB) on 141.7-acres located near Mt. Vernon, Arkansas, adjacent to the existing Little Creek Mitigation Bank (LCMB). The proposed mitigation bank is owned by Keathley Farms. The sponsor of the proposed mitigation bank is also Keathley Farms. Wetland Consultants Unlimited is serving as the consultants in the establishment of the mitigation bank. The proposed service areas include all portions of AR HUC 11110205 & 11110203 and adjacent watersheds. This prospectus will detail the location of the mitigation bank site, provide ecological information for the proposed site and describe the plan to fully develop the site into a functioning and sustainable hardwood ecosystem. This document discusses the ecological suitability of the site to achieve the objective of the proposed mitigation bank, including the physical, chemical and biological characteristics of the site and how the site will support the planned types of aquatic resources and functions. A preliminary jurisdictional determination was performed on the proposed bank site by Wetland Consultants Unlimited on October 28, 2013.

II. Project Site

The proposed mitigation bank site encompasses a total of 141.7-acres and is located southeast of the town of Mt. Vernon in Faulkner and White Counties, Arkansas. The proposed mitigation bank is located within the Cadron Watershed (HUC 11110205) (Figure 8). Historically the site contained wooded buffers along the existing streams. Due to land clearing for agricultural practices these wooded buffers were removed or

reduced. The remaining riparian buffers along the tributaries to Muddy Bayou were destroyed by a tornado on April 25, 2011. The storm either snapped off or blew down any of the remaining mature hardwood timber along the tributaries to Muddy Bayou. This left the property non-traversable, therefore the landowner has cleaned up the storm damage with mechanized equipment.

III. Mitigation Bank Goals and Objectives

The proposed Muddy Bayou Mitigation Bank will encompass a 141.7-acre tract that is currently managed in hay fields. The goal of the MBMB is to re-establish and restore stream and wetland functions with values associated with this type of habitat. The proposed site will serve as a stream and wetland mitigation bank offering for sale stream and wetland mitigation credits as compensation for unavoidable impacts to streams and wetlands associated with Department of the Army Section 404 permits and / or USACE Civil Works Projects. There will be a Conservation Easement placed on the 141.7-acres for the mitigation implemented. Through a contractual agreement with individual permit recipients, Keathley Farms will, for a fee to be paid by permittees, commit to implementing the mitigation specified in USACE permits and incur the responsibility for long-term maintenance, management, protection, and overall success of the site.

Table 1 –MBMB Stream Lengths

Stream	Re-establish 100ft Riparian Buffers on both sides	Re-establish 100ft Riparian Buffer on one side	Re-establish 50ft Riparian Buffers on both sides	Re-establish 50ft Riparian Buffer on one side	Preserve Riparian Buffers
Stream 1	300 feet	340 feet	451 feet	1,435 feet	3,732 feet
Stream 2	2,587 feet				
Stream 3	1,537 feet				
Stream 4	1,049 feet				
Stream 5	2,029 feet				
Stream 6			681 feet		
Stream 7			594 feet		
Stream 8			613 feet		
Totals	**7,502 feet**	**340 feet**	**2,339 feet**	**1,435 feet**	**3,732 feet**

IV. Establishment and Operation

The Sponsor proposes to re-establish and/or restore approximately 40.8-acres of riparian buffers and preserve approximately 19-acres of riparian buffers along the existing streams. The Sponsor also proposes to restore approximately 9-acres of forested wetlands (Figure 5). Restoration will be accomplished by restoring the appropriate specie mixture of bottomland hardwoods during the standard planting season (December – March). Seedlings will be planted on 12x12 spacing, for a standard density of at least 302 seedlings per acre. The hydrology has been manipulated due to agricultural practices. Hydrological factors will be restored based on historic aerial photography and historic drainage patterns in the wetland area. The species of seedlings planted will consist of: Nuttall oak ((*Quercus texana*), water oak (*Quercus nigra*), green ash (*Fraxinus pennsylvanica*), nutmeg hickory (*Carya myristiciformis*), willow oak (*Quercus phellos*), overcup oak (*Quercus lyrata*), and persimmon (*Diospyrus virginiana*).

Stream credits generated by the MBMB will be calculated based on linear feet of stream, riparian buffer establishment, and stream channel restoration. All stream and riparian credits shall be determined by the Little Rock District Stream Method (USACE 2011). Wetland credits generated by MBMB will be calculated using the Charleston Method for Calculating Required Mitigation Credits. The wetland and stream credits generated will be approved by the Little Rock District Corps of Engineers. The Sponsor will obtain all appropriate environmental documentation, permits, and/or other authorizations needed to establish and maintain the MBMB.

The Sponsor agrees to perform all necessary work to monitor the MBMB to demonstrate compliance with the criteria established for the bank. The Sponsor will establish both short and long-term monitoring plots when the initial seedling planting occurs. The monitoring reports will be provided to the Little Rock District no later than December 15th following the 1st, 2nd, 3rd, 5th, 8th, and 10th growing seasons. In the event that monitoring reveals that initial planting failed to meet the success criteria of 50% survival rate or 150 trees per acre, the Sponsor will take measures to achieve the criteria the following year.

V. Proposed Service Area

The proposed MBMB is located within United States Geological Survey (USGS) Hydrologic Cataloging 11110205 (Cadron), which includes portions of Cleburne, White, Faulkner, Van Buren and Conway counties (Figure 6). Hydrologic Cataloging Units (HUC) 11110205 & 11110203 will serve as the MBMB's primary service area. The Cadron and Lake Conway Point Remove Watersheds include (but not limited to) Muddy Bayou-East Fork Cadron Creek, Turkey Creek-East Fork Cadron Creek, Headwaters East Fork Cadron Creek, Clear Creek-East Fork Cadron Creek, Needs Creek-East Fork Cadron Creek, Outlet East Fork Cadron Creek, Point Remove Creek, East Fork Point Remove Creek, West Fork Point Remove Creek, Cypress Creek, Cadron Creek, Hackers Creek, Isabell Creek, Lee Creek, and Galla Creek . The bank also satisfies HUC 11110207 (Lower Arkansas-Maumelle Watershed) for a secondary service area. The Cadron and Lake Conway Point Remove Service Areas will be used as primary service areas for wetland and stream mitigation. The Lower Arkansas–Maumelle Service Area

will be used as a primary service area for wetland mitigation and a secondary service area for stream mitigation. The MBMB will be used to compensate for unavoidable stream and wetland impacts occurring within the primary and secondary HUCs. However, the Little Rock District in conjunction with the IRT (Inter-Agency Review Team) may, on a case-by-case basis, allow the mitigation bank to be used to compensate for impacts occurring outside the recognized area.

VI. Need and Feasibility of the Bank Site

The need for this project is precipitated by the increased industrial development associated with natural gas exploration in the area and the limited mitigation options available, as well as urban growth. Potential clients of the proposed mitigation bank include: Natural Gas Companies utilizing the surrounding areas for gas exploration, cities within the service area, industrial development, private developers and Arkansas State Agencies that do not have mitigation opportunities within the service areas.

VII. Ownership and Long-Term Management

Keathley Farms is the owner of the property and will record a conservation easement on the property. The restriction will require that any activity on the property complies with the terms of a mitigation plan or banking instrument. The long-term ownership arrangements for this property will include retention of the property by Keathley Farms and utilization of the property by Keathley Farms as an outdoor recreational property, not to be further developed. To ensure long-term protection of all lands included in the mitigation bank, the Sponsor (Keathley Farms), its heirs or successors, will be responsible for maintaining and protecting lands contained within the restored portions of the MBMB in perpetuity.

VIII. Qualifications of the Sponsor

Wetland Consultants Unlimited (WCU) is the consultant representing the Sponsor (Keathley Farms) for the Muddy Bayou Mitigation Bank. WCU has conducted preliminary investigations and developed this prospectus in conjunction with the U.S. Army Corps of Engineers (COE). WCU is an environmental consulting firm that has

been in business since 2007 and has continuously provided professional service to industry, government agencies, private companies and individuals. WCU has developed on site mitigation plans for private individuals, Waste Management Inc., and multiple consulting firms. WCU has established two private mitigation banks, one in the Little Rock Corps District and the other in the Vicksburg District Corps District. The Sponsor has one Corps of Engineer approved wetland and stream mitigation bank to date. The Little Creek Mitigation Bank was approved for credit sales in September 2013.

IX. Ecological Suitability

The proposed mitigation site is located in the Arkansas River drainage basin. Utilizing the ecoregions map *Level III Ecoregions of the Conterminous United States* as defined by the United States Environmental Protection Agency, 2004, this site is located in the Arkansas Valley Hills ecoregion (Level IV). The Arkansas Valley Hills ecoregion is more hilly than the Arkansas Valley Plains ecoregion, but less rugged than other adjacent ecoregions (Boston Mountains, and the Scattered High Ridges and Mountains of the Arkansas Valley). Historically, oak-hickory or oak-hickory-pine forests were prevalent. Today, pastureland is extensive but rugged, wooded areas do exist.

The proposed property is primarily fallow fields that were previously used for agricultural purposes. Historically, wooded buffers existed along the eastern portion of stream 1, and along streams 2, 3, 4 and 5. These buffers were destroyed due to tornado damage on April 25th, 2011. Streams 6, 7 and 8 have minimal wooded buffers that remain after years of agricultural practices.

The Natural Resource Conservation Service (NRCS) has mapped the soils located on the property. There were three mapped soil types identified on the proposed property. The predominate soil type identified on the property is Taft Silt Loam, 0 to 2% slopes. The second soil type identified is Leadvale Silt Loam, 1-3% slopes. The third soil type identified is Barling Silt Loam. Taft Silt Loam soils are somewhat poorly drained with a fragipan in the subsoil. These soils are formed in a silty mantle of loess or alluvium and the underlying residue of limestone or shale. These nearly level soils are on upland flats, stream terraces, and in depressions. Leadvale soils consist of deep, moderately well drained soils with a fragipan. These soils formed in silty materials in uplands or local

silty alluvium form nearby uplands underlain largely by shale and siltstone or in places by sandstone, phyllite, and slate. Leadvale soils are on slightly concave toe slopes, benches, and terraces. Barling Silt Loam soils are very deep, moderately will drained, moderately permeable soils formed in silty alluvium derived from siltstone, sandstone and shale. These soils are on level to nearly level flood plains in Boston Mountains and Arkansas River Valley.

The proposed mitigation bank is adjacent to the Little Creek Mitigation Bank. The proposed bank is bisected by Muddy Bayou and its unnamed tributaries. The wetlands identified on the site are located within the floodplain of Muddy Bayou. Due to the loss of trees and vegetation from agricultural practices and the 2011 tornado, the streams have become increasingly unstable and sediment loads have increased due to the lack of forested buffers and stabilized stream banks.

X. Water Rights

Hydrology on the site will continue to be precipitation-driven and no water rights are necessary.

FIGURES

Project Location Map

Data Point Map

Soils Map

Topographic Map

Site Map

8-Digit HUC Location Map

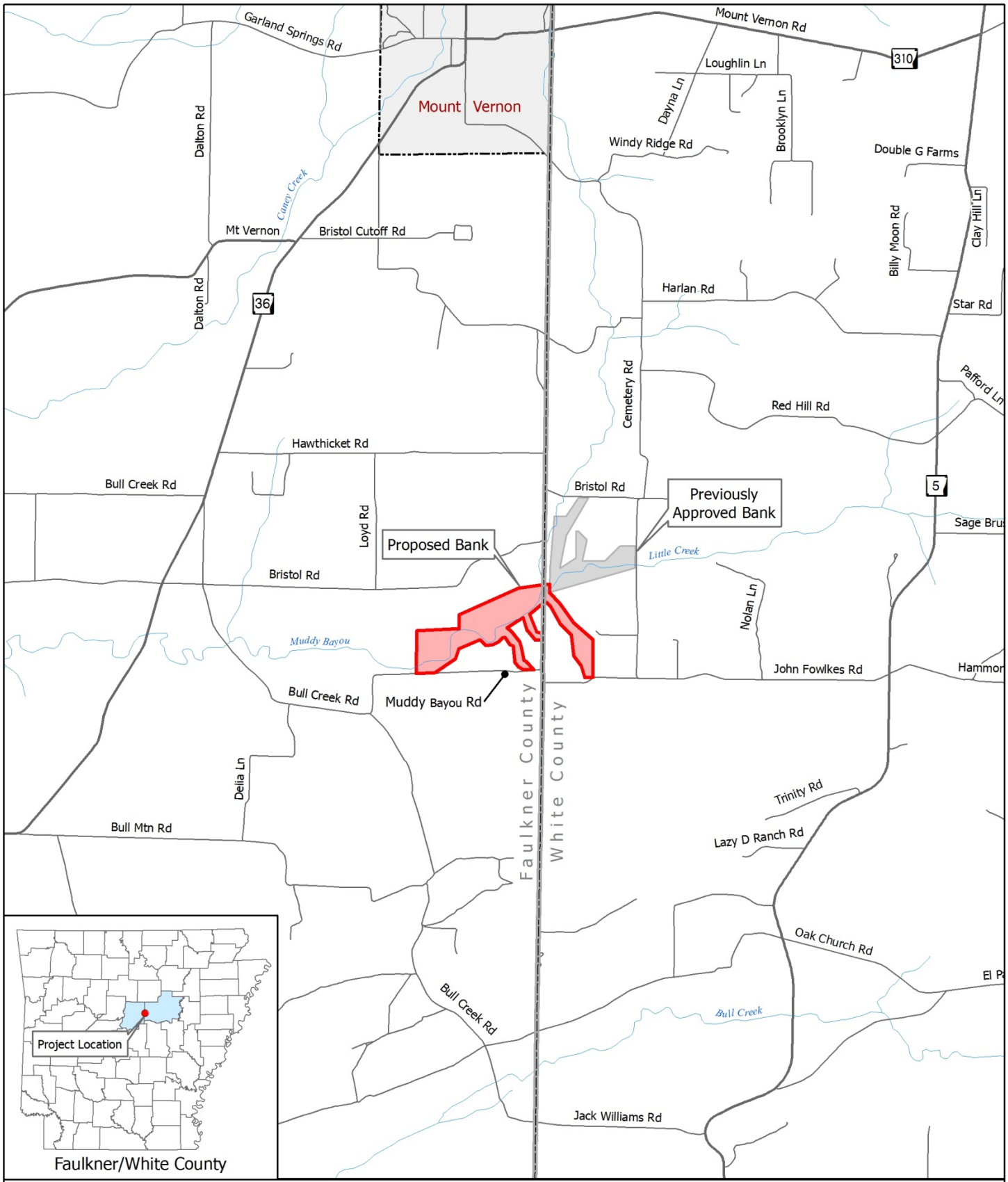

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FIGURE 1
PROJECT LOCATION MAP
MUDDY BAYOU MITIGATION BANK

January 13, 2014

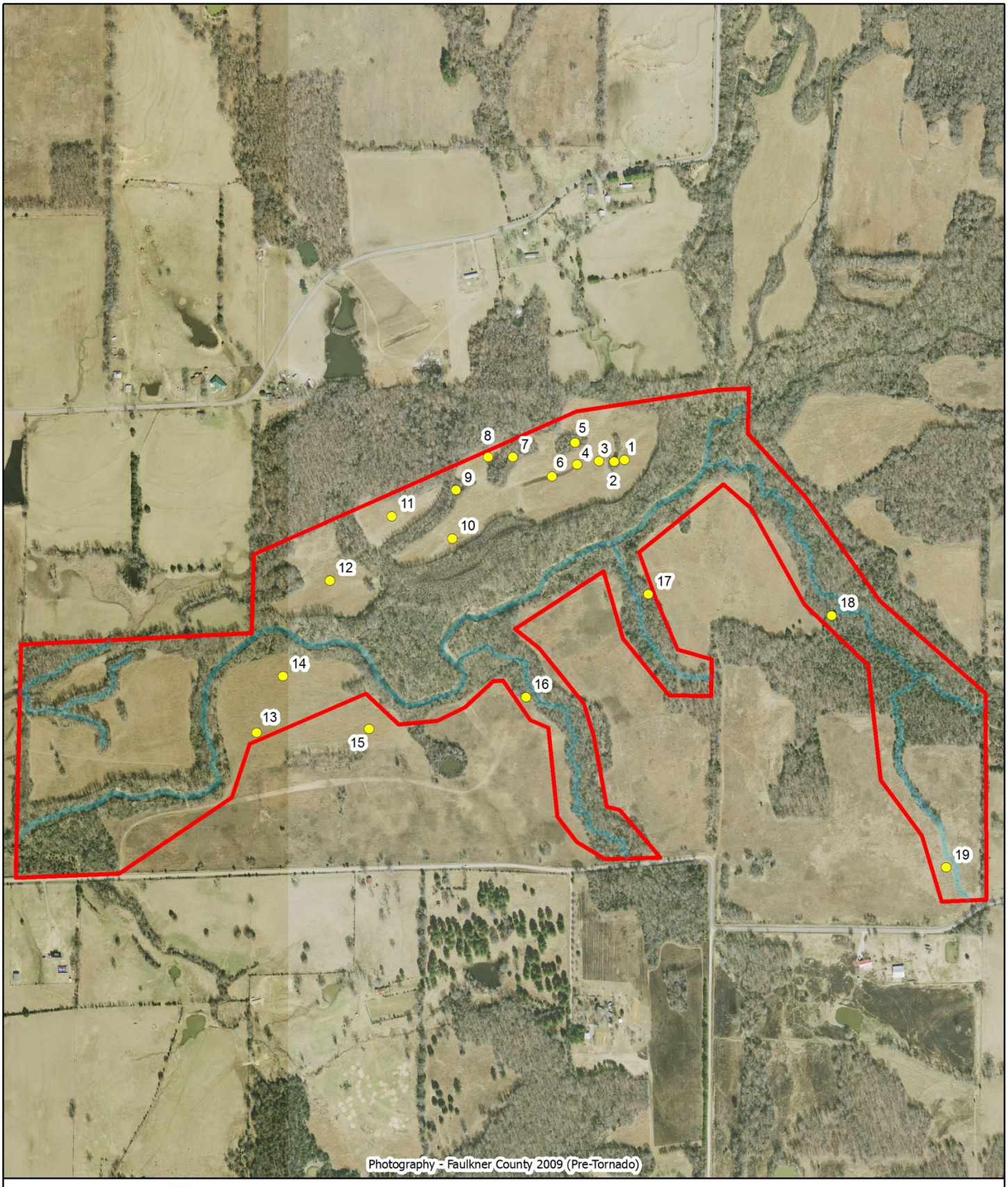

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FIGURE 2
DATA POINT MAP
MUDDY BAYOU MITIGATION BANK

0 350 700
Feet

Project Location

January 13, 2014

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FIGURE 3
SOILS MAP
MUDDY BAYOU MITIGATION BANK

0 350 700
Feet

Project Location

January 13, 2014

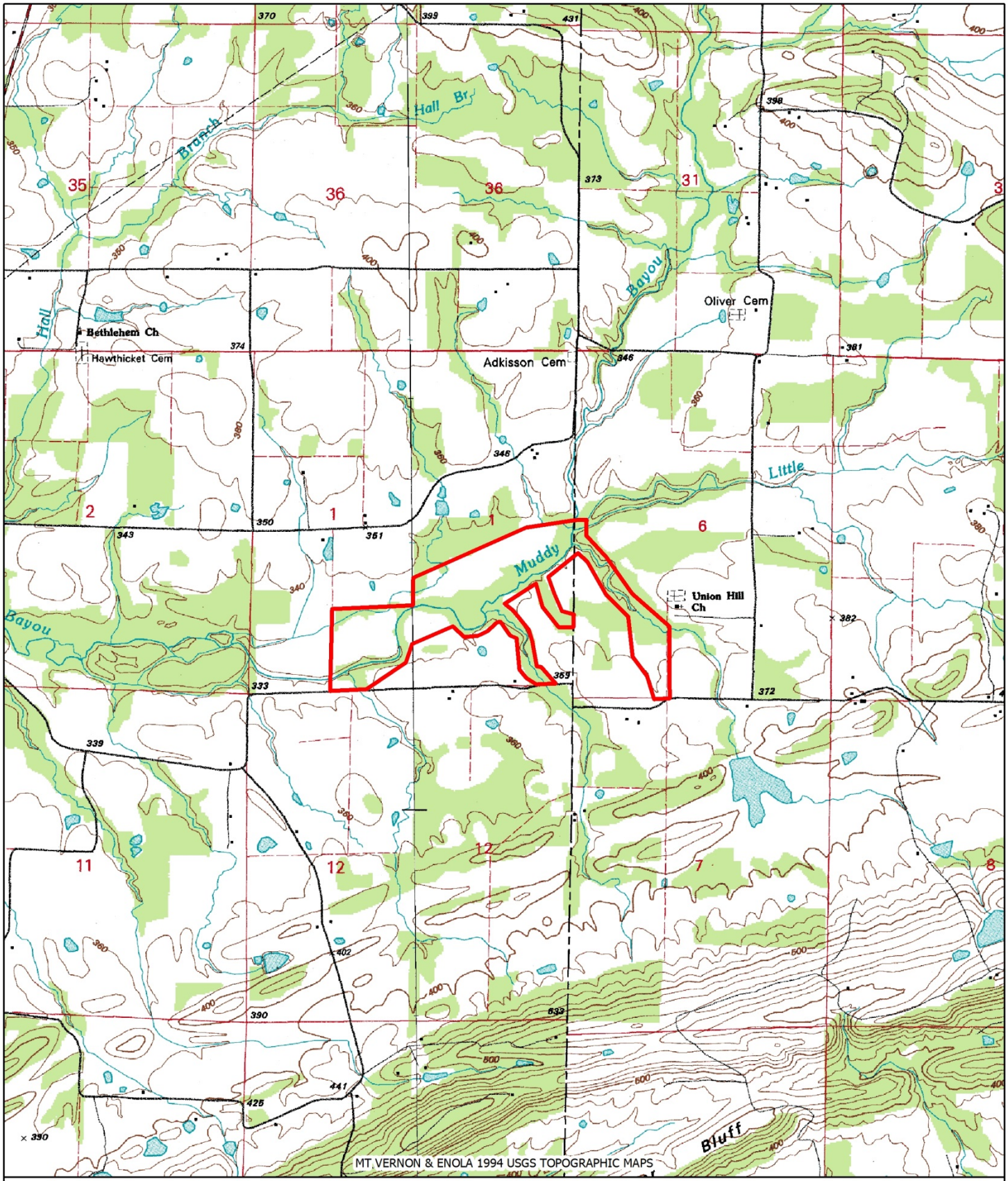

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FIGURE 4
TOPOGRAPHIC MAP
MUDDY BAYOU MITIGATION BANK

Scale - 1:24,000

Project Location

January 13, 2014

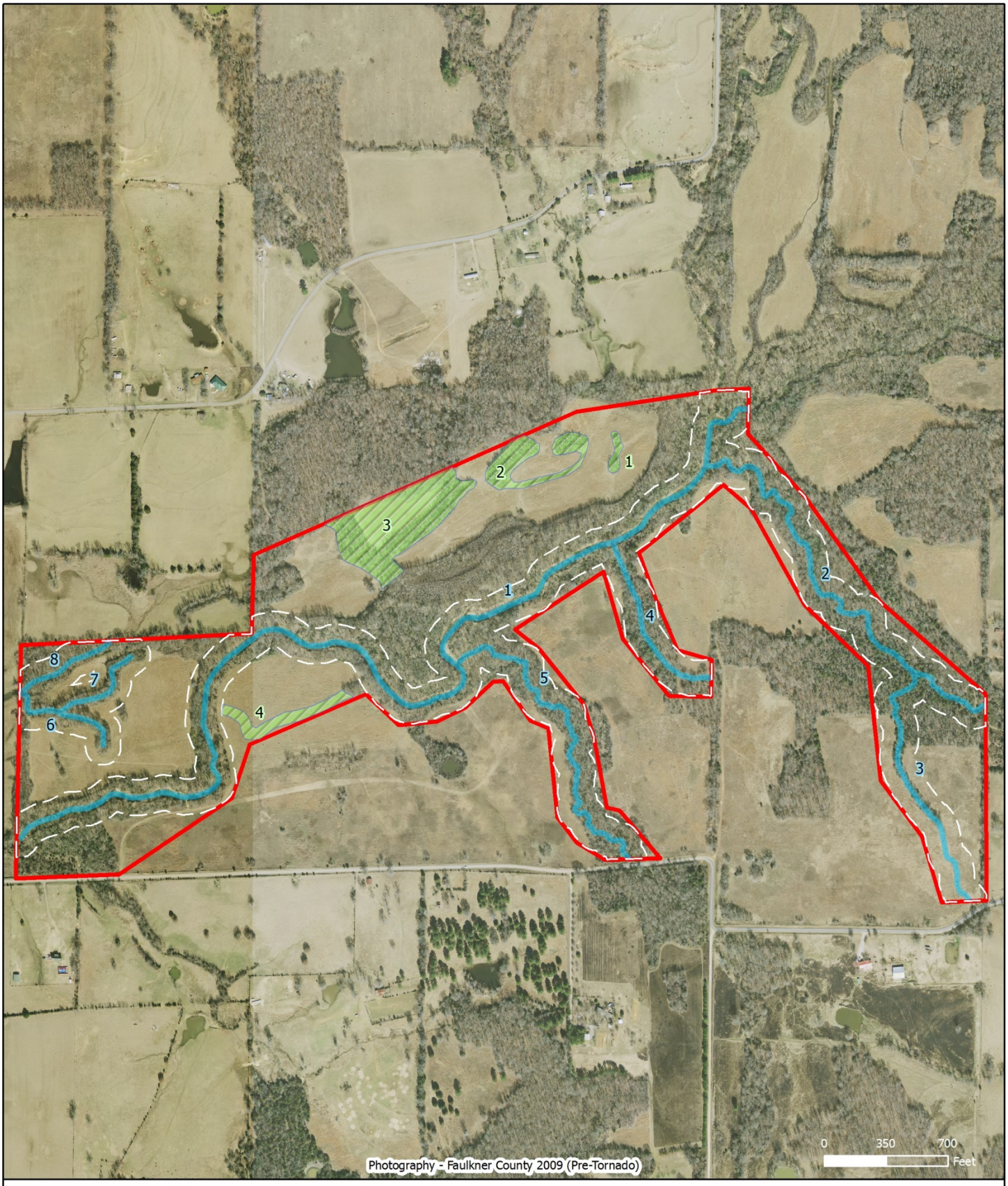

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FIGURE 5
SITE MAP
MUDDY BAYOU MITIGATION BANK

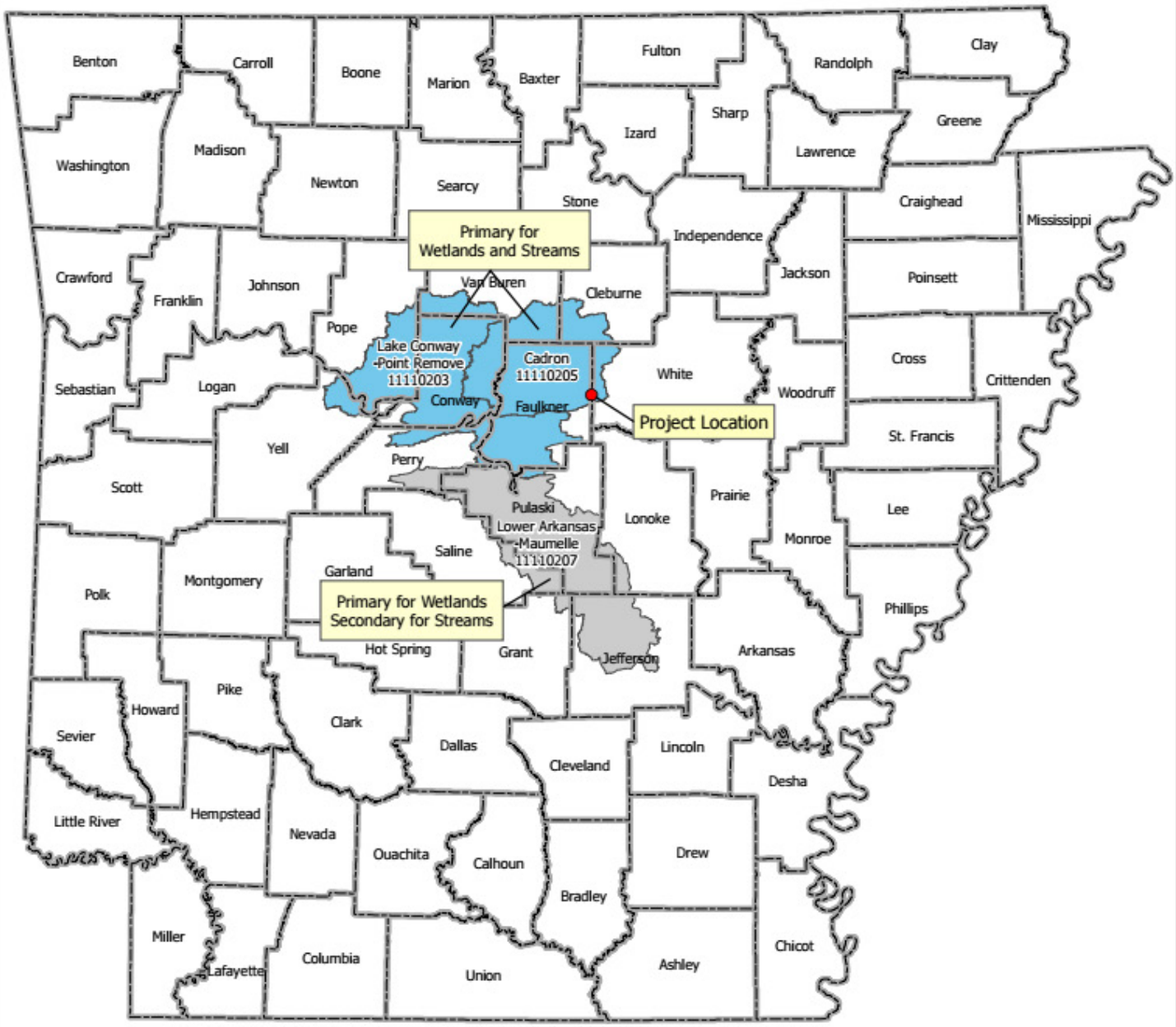

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FIGURE 6
8-DIGIT HUC LOCATION MAP
MUDDY BAYOU MITIGATION BANK

Primary Service Area
Secondary Service Area

February 5, 2014

APPENDICES

Appendix A – Preliminary Jurisdictional Determination