



MITIGATION BANK PROSPECTUS--REVISED

BIG CREEK MITIGATION BANK

WHITEHEAD FORESTRY SERVICES, INC.

COLUMBIA COUNTY, ARKANSAS



H&T Environmental, INC.

ENVIRONMENTAL PERMITTING, MITIGATION, LAND RECLAMATION
AND WILDLIFE

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- 1 Preliminary Jurisdictional Determination- MVK-2012-632

1. INTRODUCTION

The following report summarizes the mitigation potential on approximately 273 +/- acres in NW/4 and the SW/ NE/4 in Section 3, Township 17 South, Range 21 West and that part of the SE/4 SW/4 lying south of US Highway 82 in Section 34, Township 16 south, Range 21 West; then the SE/4 NE/4 Section 3, Township 17 south, Range 21 West, Columbia Co., AR less and except a 2 acres in the Southeast corner, beginning at the SEC of the SE/4 NE/4 thence north 330 ft., thence west 264 ft., thence south 330 ft., thence east 264 ft. to the POB., 38 acres more or less all in Columbia County, Arkansas. The purpose of the report is to summarize the existing conditions for the proposed Big Creek Mitigation Bank(BCMB) and assess the potential for establishing a mitigation bank to provide compensatory wetland mitigation and stream credits for unavoidable impacts to wetlands and streams associated with Department of the Army (DA) permits authorized under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act issued by the US Army Corps of Engineers (USACE), Vicksburg District.

2. GOALS AND OBJECTIVES

The proposed BCMB will encompass approximately 273 acres out of a contiguous 320 acres. The goal of Whitehead Forestry Services, INC is to create and establish a sustainable bottomland hardwood and stream restoration ecosystem on the 273+/- acres defined in this report.

Whitehead Forestry Services, INC (WFS), the bank Sponsor, proposes to create 273+/- acres as a sustainable bottomland ecosystem by restoring and enhancing the channelized Barlow stream and enhancing portions of Big Creek and other perennial streams on the property. Currently there are approximately 18,323 feet of streams on the property. By adding the additional 12,052 linear feet this will bring the total linear footage to approximately 30,375 linear feet of stream length captured from restoration of historic channels and through use of the existing floodplain to re-establish the meander patterns.

The preliminary fluvial morphology characterization are based upon visual observations made along the existing reaches of both streams during a preliminary field investigation, desktop analysis of the stream plan forms and drainage areas, and hydraulic geometry relationships developed for streams in the region, often referred to as Regional Curves. The intent of this preliminary assessment was not to implement a full fluvial geomorphological assessment of the streams for the purposes of establishing the baseline conditions required for restoration design. Rather, the intent was to confirm visual observations of numerous indicators that the streams are impaired in their dimension, pattern, and profile at the site and that they as such, will qualify for re- establishment and/or enhancement/rehabilitation.

Prior to development of the DMBI, all stream reaches on the site will be surveyed by qualified stream restoration engineers and scientists to document their existing baseline conditions. These assessments will include full fluvial geomorphological stream characterization and classification assessments in accordance with the protocols set forth by Rosgen (1996 and 2006). The full fluvial geomorphological assessment will yield the exact levels of impairment and the appropriate form of restoration to be implemented on each separate and discernable stream reach on the site.

WFS intends for the BCMB to serve as a stream restoration and bottomland hardwood mitigation bank offering for sale, wetland mitigation and stream credits for unavoidable impacts to wetlands and streams associated with DA Section 404 permits. A conservation servitude will be executed for both types of the mitigation implemented. Through a contractual agreement with individual permit recipients, WFS will, for a fee to be paid by permittees, 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 BCMB.

3. PROPERTY OWNERSHIP

3A Ownership

The Sponsor for the project is Whitehead Forestry Services (WFS). The legal owners of the land in the Big Creek Mitigation Bank- BCMB (the site) and Whitehead Forestry Services – WFS, are Steve and Julia Whitehead.

3B Servitudes/Easements

Currently there is one power line easement owned by Entergy and it has a 30 ft. easement running north and South on the east side of the property and there is an existing oil pipeline ROW running parallel with Hwy 82.

3C Liens/Encumbrances/Restrictions

Currently there are no known liens, encumbrances, or restrictions on the property proposed for the mitigation bank.

4. WETLAND DELINEATION

A wetland delineation for 273+/- acres, which incorporates the proposed BCMB tract, was conducted by H&T Environmental INC on April 25th & April 26 and then on May 3rd & May 17th, 2012. There are approximately 167.92 acres that classify as wetlands on the property. These wetlands are of an emergent quality and will be restored to bottomland hardwoods during construction of the mitigation bank. On February 7, 2013 a preliminary jurisdiction determination (MVK-2012-00632) for the BCMB was issued by the Vicksburg District.

On or about June 2, 2014 the applicant purchased an additional 30 acres that includes a portion of Barlow Creek that was not included in the initial Jurisdictional Determination. This revised JD now includes data on all of Barlow Creek as well as Big Creek and the surrounding tributaries that feed into both creek systems. There is an additional 8 acres that the applicant is attempting to purchase from private land owners. These 8 acres were included in the revised Jurisdictional Determination for the 38 acre parcel. Please refer to the attached figures for more information. (Corp's Pre-JD Map)

5. CURRENT SITE CONDITIONS

The tract is approximately 2.5 miles northwest of Magnolia, Arkansas (**Figure 1**). Access to the tract is gained via Hwy 82 which is directly north of the tract. BCMB is centered at Latitude 33.29407N; Longitude -93.26957W in the NW/4 and the SW/ NE/4 in Section 3, Township 17 South, Range 21 West; SE/4 NE/4 Section 3, Township 17 south, Range 21 West, Columbia Co., AR less and except a 2 acres in the Southeast corner, beginning at the SEC of the SE/4 NE/4 thence north 330 ft., thence west 264 ft., thence south 330 ft., thence east 264 ft. to the POB., 38 acres more or less and that part of the SE/4 SW/4 lying south of US Highway 82 in Section 34, Township 16 south, Range 21 West, all in Columbia County, Arkansas. The tract is bordered by Hwy 82 to the North, bottomland hardwood and pine timber in all other directions (**Figure 2**).

Columbia County has a humid, subtropical climate characterized by relatively high rainfall in average years. The relative humidity is 60 percent or more 72 percent of the time. Temperatures of 32 degrees or lower occur on an average of 43 days a year, and temperatures of 90 degrees or higher occur on an average of 103 days a year. The average frost free period is 222 days a year, (United States Department of Agriculture (USDA) Soil Conservation Service 1962).

6. EXISTING LAND USE

Portions of the proposed area are currently being used for pine tree cultivation, while mixed portions of the tract supports a large fescue crop. There is an adjacent 80 acre piece of property, the furthest portion of the property to the west, that was clear cut in the summer of 2009. Big Creek runs through this 80 acre piece and a stream side management zone was left intact when the tract was cut. Currently the site has not been replanted and a large crop of Chinese Tallow (*Triadica Sebifera*) now exists.

1. Big Creek enters from the northwest side along Hwy 82 and flows in a southwesterly direction. There is approximately 8,429 feet of stream channel associated with Big Creek. The channel averages 8-10 feet in width and 6-8 feet in depth. Some depths vary due to beaver activity and debris. Big Creek exits the property along the Southern portion of the West 80 acres associated with the proposed bank. The channel lies in Guyton soil and field surveys determined that Guyton was present. Much of the area outside of the creek channel lies in Guyton as well. Wetlands are sporadically spaced along the channel and within the 80 acre piece of property.

Big Creek Stream Enhancement (Rosgen C/F): Big Creek has lost the proper dimension and profile to adequately carry its sediment load and discharge. As a result, the channel has become entrenched. Lateral migration is evident in areas where Cypress trees propagate in the center of the now active channel. This dimension and profile is proposed to be altered, using natural channel design, to match that of the reference stream channel for this stream type, in the same size watershed and the same physiographic regime. Stream Buffers are proposed to be restored during this project. During the enhancement phase, BCMB proposes to enhance Big Creek's stream length to approximately 11, 250 linear feet.

2. Located on the northeastern side of the property, lies Barlow Creek measuring approximately 5,904'. Barlow is a perennial creek channel that eventually flows into Big Creek at the southwestern most portion of the property. This diverse creek channel enters the property under Hwy 82 and flows southwesterly for approximately 1 mile and then exits the property along the South property line of the West 80 acre portion of the property. During this one mile flow, elevation drops at a gradual rate and the terrain flattens out. After traveling for approximately 1,842' the creek becomes channelized. This channelization was reported to have been done by a previous land owner who wanted to change the hydrology so that his cattle would not get bogged down as they tried to graze. Soil was removed from the natural channel adding depth and straightening its overall flow. This allowed the ground around the channel to

adequately drain which then assisted in the formation of uplands. Sometime later several ponds were constructed to aid in the elevation of Hwy 82. We believe this disrupted the natural flow of Barlow Creek and the surrounding property. The Applicant proposes to restore Barlow Creek to its natural channel flow with enhancements.

Barlow Creek Stream Restoration (Rosgen F to C): Barlow Creek was subject to channelization in the middle third of the stream length on the subject property. Due to this drastic change in dimension, pattern and profile, the stream lengths both upstream and downstream have been impacted from modified discharge amounts. This dimension, pattern, and profile is proposed to be restored, using natural channel design, for the channelized portion of the stream to match that of the reference stream channel for this stream type, in the same size watershed and the same physiographic regime. Likewise, the dimension and profile of the un-channelized portions of Barlow Creek is proposed to be restored or enhanced. **(Upper Barlow Creek Stream Enhancement- Rosgen C).** The stream buffers are proposed to be restored as part of this project. During the restoration phase, BCMB proposes to restore approximately 770 linear feet, enhancing Barlow Creek to approximately 6,675 linear feet.

3. **Unnamed Perennial Stream A Restoration (Rosgen G to C):** This unnamed perennial stream has been altered by clearing and draining activities. Also, it appears that the middle portion of this small dimension stream was eliminated during the construction of several small ponds. The dimension, pattern and profile of the stream are proposed to be restored, partially through the draining and elimination of the ponds, to match that of the reference stream with the same watershed size and the same stream type. (Note: The portion of this stream on the additional 38 acres exists as a perennial ditch or Rosgen G stream type.) Stream Buffers are proposed to be restored during this project. During the restoration phase, BCMB proposes to restore this stream to approximately 5,800 linear feet.
4. Flowing southwesterly from the lower east side of the property is an unnamed creek channel. The channel eventually ties into Barlow Creek along the South property line. The channel further serves to collect drain water from the Big Creek/ Barlow Creek drainage area and appears to have been channelized.

Unnamed Perennial Stream B Restoration/Enhancement (Rosgen G to C): This unnamed perennial stream lies on the southern portion of the proposed mitigation bank. The stream pattern has been historically altered which has resulted in a highly degraded stream channel. A portion of this stream was eliminated or altered from the

construction of ponds. The pattern is proposed to be restored, along with the profile and dimension, where required, to match a reference stream of the same stream type and having the same watershed area. Stream Buffers are proposed to be restored during this project. . (Note: The portion of this stream on the additional 38 acres exists as a perennial ditch or Rosgen G stream type.) During the restoration phase, BCMB proposes to restore and enhance this stream to approximately 4,500 linear feet.

5. **Intermittent Streams A and B Enhancement (Rosgen B):** These two small intermittent streams have been altered by loss of buffer and numerous crossings. The streams exist as small jurisdictional intermittent ditches on the property. The dimension and profile are proposed to be restored in alignment with the reference reach or regional curve data available for this area. The buffers will be restored as part of this project. During the enhancement phase, BCMB proposes to enhance these two streams to approximately 950 linear feet for Stream A, and 1,200 linear feet for Stream B.

The total proposed stream restoration or enhancement for BCMB is approximately 30,375 linear feet. For location of these streams, please refer to the attached Stream's Figure. Please see Figure 9 for explanation of the Rosgen Scale.

Table 1 contains pre-restoration habitat descriptions and acreages of the jurisdictional wetlands, other waters of the U.S, and buffer associated with the proposed site.

TABLE 1: PRE-RESTORATION HABITAT ACREAGE SUMMARY

CLASS	HABITAT	ACREAGE
Jurisdictional Wetlands		
	Invasive and emergent wetland species	167.92
Other Waters of the U.S.	Big Creek, Barlow Creek, 1 unnamed Intermittent streams, & 1 unnamed ephemeral stream	3.31 (16,242 L.F., 1,352 L.F., & 2,807 L.F.)
Upland Area	Mixed fescue and scrub shrub	101.77
	TOTAL	273.0

6A Existing Plant Communities

Dominant habitats associated with the jurisdictional wetlands on the tract consisted of bottomland hardwood with small amounts of cypress present along the stream channels.

Species identified within these habitats include green ash (*Flaxinus pennsylvanica*), sweet gum (*Liquidambar styraciflua*), swamp chestnut (*Quercus michauxii*), American beech (*Fagus grandifolia*), bald cypress (*Taxodium distichum*), black willow (*Salix nigra*), alligator weed (*Alternanthera philoxeroides*), Carolina foxtail (*Alopecurus carolinianus*), deer tongue (*Dichanthelium clandestinum*), short bristled horned beaksedge (*Rhynchospora corniculata*), loose flower water willow (*Justicia ovata*), lizard tail (*Saururus cernuus*), cherry bark oak (*Quercus pagoda*), water oak (*Quercus nigra*), Chinese tallow (*Triadica sebifera*), loblolly pine (*Pinus taeda*), green briar (*Smilax bona-nox*), dew berry (*Rubus trivialis*), clustered fescue (*Festuca paradoxa*), Johnson grass (*Sorghum halepense*), Bermuda grass (*Cynodon dactylon*), alligator weed (*Alternanthera philoxeroides*), common rush (*Juncus effusus*), bog smart weed (*Polygonum setaceum*), button bush (*Cephalanthus occidentalis*), and Virginia dayflower (*Commelina virginica*).

All species names and common names were acquired from either the U.S. Army Corps of Engineers National Wetland Plant List (NWPL) or the USDA's Plant Data Base; 2012

6B Soils

The NRCS Web Soil Survey shows that the tract may be underlain by Guyton silt loams, less than 1 percent slopes, Harleston very fine sandy loam, and Bibb fine sandy loam. Approximately 85 percent of the tract is underlain with Guyton silt loam, with Bibb being the next most prevalent soil, which is classified as a hydric soil. Guyton silt loam was most exhibited over a majority of the tract. Both Guyton and Bibb soils are listed as hydric soils on the local (NRCS Web Soil Survey 2012) and National Hydric Soils List by State) hydric soils lists.

6C Existing Hydrology

The tract is in the Barlow Branch/Big Creek Watershed (Loggy Bayou); within the United States Geological Survey (USGS) Hydrologic Cataloguing Unit 11140203 further defined in the 12 digit code as 111402030108. Sources of hydrology on the tract are primarily rainfall, sheet flow, and drainage from ground north of the tract. The tract drains primarily northeast to southwest via Barlow Creek and Big Creek. Topographic elevations on the tracts range from 170-210 feet above the National Geodetic Vertical Datum (NGVD) for mean sea level.

6D Geographic Service Area

The BCMB is located within United States Geological Survey (USGS) Hydrologic Cataloging Unit 11140203 which includes parts of Nevada, Lafayette, Columbia, and Ouachita Counties (**Figure 6**). Hydrologic Unit Cataloging (HUC) 11140203 will serve as the BCMB's primary service area; while HUC's 08040103-Little Missouri Watershed & 08040201-Lower Ouachita Watershed will provide secondary service areas for the BCMB.

7 Site Restoration Plan

The Sponsor proposes to restore approximately 189.69 acres of bottomland hardwood from pasture land grass, shrub-scrub habitat, and herbaceous habitat by planting desirable species of native vegetation. Additionally, the Sponsor proposes to enhance the Big Creek channel and restore natural flow to the Barlow Chanel (**Stream's Figure-5**), as well as restore two unnamed perennial streams. There are also 2 unnamed intermittent streams that will be enhanced. Table 2 contains post-restoration habitat and acreage descriptions, other waters of the U.S., and bottomland hardwood buffer.

TABLE 2: POST RESTORATION HABITAT ACREAGE SUMMARY

CLASS	HABITAT	ACREAGE
Jurisdictional Wetlands Restoration	Bottomland Hardwood Restoration	156.63
	Bottomland Hardwood Enhancement	110.64
	Upland Buffer Area	5.73
	TOTAL	273 +/- Acres
Bottomland Stream Restoration	Bottomland Stream Restoration In Linear Feet	30,375 L.F. Total Acreage =273

Stream Restoration Data

Bankfull Width (Wbkf)

Wbkf Bc Stream Type (ft.) = $16.57 * DA^{0.30}$

Wbkf C Stream Type (ft.) = $16.89 * DA^{0.29}$

Mean Bankfull Depth (dbkf)

dbkf Bc Stream Type (ft.) = $1.19 * DA^{0.33}$

dbkf C Stream Type (ft.) = $1.03 * DA^{0.32}$

The above formulas were derived from a compilation of regional curves from Arkansas, North Carolina and Texas. A true reference reach will need to be surveyed to confirm the accuracy of the formulas.

The following represents the drainage areas calculated for each stream on the Proposed Big Creek Mitigation Bank:

Big Creek 12 square mile watershed

Bankfull Width = 34.72'

Bankfull Depth = 2.28'

Barlow Creek 2.5 square mile watershed

Bankfull Width = 22.03'

Bankfull Depth = 1.38'

UNPStream A 0.52 square mile watershed

Bankfull Width = 13.97'

Bankfull Depth = 0.84'

UNPStream B 0.20 square mile watershed

Bankfull Width = 10.59'

Bankfull Depth = 0.62'

All remaining streams will be sized based on visual observations of the current widths as compared to reference reach surveys.

7A Surface Hydrology

Following the clear cutting of the noxious species and pine, the Sponsor will carefully survey the mitigation area to determine the existence of any unnatural hydrologic influence (i.e. remnant beds, etc.). Natural flow will be restored to Barlow Channel by redirecting flow and changing the elevation to support the natural flow that used to exist.

7B Proposed Bottomland Hardwood Restoration

Restoration will be accomplished by restoring natural hydrology to the tracts and planting an appropriate species mixture of bottomland hardwoods during the standard planting season (December-March).

Seedlings will be planted on approximately 273 acres, using 12 x 12 foot spacing, for an initial stand density of at least 302 seedlings per acre. A mixture of no more than 40-50% of the selected species will be planted as will no less than 5% of any one species be planted in the target areas. Target areas of restoration will consist of micro-sites where vegetation will be planted based on restored hydrology and hydric soil conditions. If seedling availability renders a discrepancy of more than five percent from the desired mixture of hard-mast to soft mast species, Vicksburg District approval to modify the plan will be obtained. A mixture of the following species will be planted in micro-sites to restore the tract:

Species Selection List

Overcup oak ~ <i>Quercus lyrata</i>	Beech ~ <i>Fagus grandifolia</i>
Laurel oak ~ <i>Quercus laurifolia</i>	Red maple ~ <i>Acer rubrum</i>
Willow oak ~ <i>Quercus phellos</i>	American elm ~ <i>Ulmus americana</i>
Green ash ~ <i>Fraxinus pennsylvanica</i>	Cedar elm ~ <i>Ulmus crassifolia</i>
Loblolly pine ~ <i>Pinus taeda</i>	Sweetbay magnolia ~ <i>Magnolia virginiana</i>

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

The Sponsor proposes that approximately 273 acres of the BCMB can be used as compensatory mitigation through the restoration of bottomland hardwoods. The Sponsor also proposes that approximately 18,323 +/- (linear footage subject to change as engineering progresses); feet of perennial & intermittent stream channel can be used as compensatory mitigation through the preservation of bottomland hardwood stream channel. There are several assessment models available to determine the potential for restoring functions of the BCMB wetlands. At present, Vicksburg District uses the Charleston Method to determine both the amount of credits necessary to replace forested wetland functions

impacted by authorized projects and the credits available in a mitigation project. The Charleston Method used to calculate mitigation credits will also be used to calculate credits required to replace wetland functions impacted as a result of authorized projects. It is anticipated that the credits will be released for mitigation, incrementally upon achievement of certain milestones such as, but not limited to, approval of the mitigation bank restoration plan, tree planting, exotic species control, hydrology restoration; ect.

The Sponsor will be responsible for keeping an up-to-date ledger of all transactions within the BCMB. The Sponsor shall post debits of credits to the RIBBITS ledger maintained by the USACE, Vicksburg District, as Chair of the IRT. The Vicksburg District will then distribute the ledger to other IRT members. Additionally, the Sponsor shall submit a statement on any or all transactions to the USACE, Vicksburg District within 10 days of the transaction.

9 FINANCIAL ASSURANCES

Financial assurance will be in the form of an escrow account approved by an adequately capitalized, federally insured depository. Specified percentages of this assurance shall be released back to the Sponsor incrementally in accordance with the achievement of milestones specified in the initial contract.

10 LONG-TERM MAINTENANCE AND PROTECTION

To ensure long-term protection of all lands included in the compensatory mitigation contract, the Sponsor, its heirs, assigns or successors, will be responsible for maintaining and protecting the lands contained within the restored portions of the BCMB in perpetuity, unless the lands are transferred to a state or federal resource agency, non-profit conservation organization, or this responsibility is contractually conveyed to another person, all of which will be subject to approval by the Vicksburg District. A conservation servitude will be prepared to include a non-profit organization or state agency as the Grantor and Holder if required by the Interagency Review Team (IRT). This conservation servitude specifically prohibits activities that would reduce the quality of the restored wetlands. The conservation servitude also specifies permissible activities such as hunting, fishing, and recreational use given the activity causes no negative effect on the functions and values of the restored wetlands. Forest management within the conservation servitude could be allowed provided that this activity is performed to maintain or improve the overall ecological function of the tracts. Impacts that adversely affect the function and value of the tracts which are caused by permissible activities will require permitting and subsequent mitigation.

11 ADAPTIVE MANAGEMENT

Exotic/noxious plant species (e.g., Chinese tallow-tree, cottonwood, sycamore, and black willow) will be controlled as needed until crown closure has occurred. All timber harvests and thinning operations conducted in the BCMB will be authorized by the Vicksburg District and will be performed in a manner that maintains and enhances timber stand and wildlife habitat quality.

12 SUCCESS CRITERIA

A: Bottomland Hardwood Restoration/Enhancement

In order for the BCMB to be considered an acceptable mechanism for mitigating wetland impacts and stream impacts associated with DA permits, habitat created or restored in the area must satisfy wetland criteria described in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (US Army Corps of Engineers, Wetland Regulatory Assistance Program 2010).

In order to be considered fully successful, the efforts within the BCMB must result in the restoration of viable wetlands and streams capable of performing the important functions lost as a result of the projects it is intended to mitigate. The following criteria will be used to gauge the success of the mitigation effort:

Short-Term Success Criteria (Year 5): The following criteria will be used to assess the short-term project success:

1. Wetland hydrology (as defined in the Regional Supplement 2010) will be attained and maintained. Assessments will be made using primary and secondary indicators of wetland hydrology.
2. A 50% survival rate of planted and naturally recruited tree seedlings, of 151 trees per acre, will be attained through the end of the five-year monitoring requirement (Section 13). The initial hard-mast to soft-mast ratio will be maintained and the tracts will be managed to minimize populations of exotic/invasive species. This criterion will apply to initial plantings as well as any subsequent re-plantings that may be necessary.

Long-Term Success Criteria (Year 10): The following criteria will be used to assess the success of the project over the long term:

1. The plant community must be comprised primarily of hydrophytic vegetation (as defined in the Regional Supplement 2010).
2. Planted tracts must exhibit characteristics and diversity of viable bottomland hardwood wetlands or communities commensurate with conditions on the tracts and the age of the stand. These will include:
 - A. Adequate mid-story and understory will become established on the tract by the end of Year 5.
 - B. The tract will qualify as jurisdictional wetlands by the end of Year 5 with the exception of Act of God events (i.e. draught).
 - C. The tract will be assessed at the end of Year 10 to ensure that bottomland hardwoods are established and that adequate control of exotic/invasive species has been achieved.
3. No human activities that might require a DA permit will occur within the restored portions of the BCMB without obtaining a Section 404 permit from the Vicksburg District and providing mitigation for any actual wetland loss. If a decision is made to authorize activities in previously planted portions of the BCMB, and such activities adversely affect the quantity and quality of functional wetlands, the permit recipient will be responsible for compensation for the direct loss of wetlands, past wetland impacts that are being mitigated by these wetlands, and all temporal losses associated with the re-establishment of new mitigation tracts.

B: Stream Restoration and Enhancement

MONITORING PLAN

Monitoring of the site's restoration efforts will be performed for seven years or until agreed upon performance standards have been met. Monitoring is proposed to identify trends in stream channel morphology, riparian vegetation, and water quality.

STREAM

An as-built survey of the restored streams immediately after construction will be completed to provide a baseline for post- restoration stream monitoring activities.

Annual monitoring will be implemented to document any changes in both:

1. Specific critical fluvial geomorphological parameters typically used in a Rosgen stream assessment protocol (Rosgen 2006), as well as,

2. The five, more general stream condition parameters included in the Level 2 Stream Condition Assessment.

A photographic record of pre-construction, post-construction, and annual monitoring conditions will also be compiled.

Critical Fluvial Geomorphological Parameter Assessment

Specific critical fluvial geomorphological parameters will be assessed annually through the development of channel cross-sections on riffles and pools, grain size analysis, and a water surface profile of the channel as described in Rosgen's Watershed Assessment of River Stability and Sediment Supply (Rosgen 2006). The data will be presented in graphic and tabular format. Data to be presented will include 1) cross-sectional area; 2) bankfull width; 3) average depth; 4) maximum depth; 5) width-to-depth ratio; 6) water surface slope; and 7) stream substrate composition.

Monitoring success criteria for specific critical fluvial geomorphological parameters are provided below. Structures

All installed structures will be stable and functioning. The specific criteria will be assessed by in-stream visual observation, in-stream measurements and photo documentation. Stable and functioning will be defined by the following:

- No stone or log material has migrated or moved from the point of installation,
- There is no loss of integrity of the structure by excessive undercutting of the channel bed,
- There is no erosive loss of the channel bank immediately upstream, immediately downstream, or adjacent to the structure at the near bank or far bank region, and
- Erosion control blankets or matting are in contact with the channel bank.

Pattern

The channel pattern will remain stable and within the design parameters for the specified Stream Type. Specific criteria will be defined by the following:

- Pool-pool spacing/bankfull width ratio for a given reach will not decrease or increase greater than 20% over the total monitoring period.

Profile

The channel profile will remain stable and not exhibit excessive aggradation or degradation of the channel bed. Specific criteria will be defined by the following dimensionless ratios:

- Average water surface slope of a given reach will not decrease or increase greater than 20% over the total monitoring period, and
- Riffle slope/average water slope ration of a given riffle in a given reach will not decrease or increase greater than 20% over the total monitoring period,

Dimension

The channel dimension will remain stable and not exhibit substantial widening of bankfull width or changes in riffle bankfull mean depth. Specific criteria will be defined by the following dimensionless ratios:

- Bankfull cross-sectional area of a given riffle or pool will not decrease or increase greater than 20% over the total monitoring period,
- Bankfull width of a given riffle or pool will not increase greater than 20% over the total monitoring period (it is anticipated that bankfull widths will decrease as vegetation is established and the constructed channel side slopes evolve to more vertical slopes, typical of natural E stream types),
- Width/depth ratio of a given riffle will not increase greater than 20% over the total monitoring period (again, it is anticipated that bankfull widths will decrease, thereby decreasing width/depth ratios, as vegetation is established and the constructed channel side slopes evolve to more vertical slopes, typical of natural E stream types),

- Bank height ratio of a given riffle will not increase greater than 20% over the total monitoring period, and
- Maximum depth of a given pool will not decrease greater than 30% or increase greater than 100% over the total monitoring period.

VEGETATION in the Stream Restoration & Enhancement Areas

After planting of the riparian corridor has been completed, an initial evaluation will be performed to verify planting methods were successful, and to determine the post-restoration, baseline species composition and density. Supplemental planting and additional modifications will be implemented, if necessary.

During quantitative vegetation sampling in early fall after the first full growing season, sample plots will be randomly placed within the site. In each sample plot, vegetation parameters to be monitored include species composition and species density. Visual observations of the percent cover of shrub and herbaceous species will also be recorded.

Vegetation Success Criteria

Characteristic species include woody shrub and herbaceous species planted in the riparian stream areas. An average density of 151 stems per acre of Characteristic Shrub & Herbaceous Species must be surviving in the first five monitoring years. Subsequently, 130 stems of Characteristic Shrub & Herbaceous Species per acre must be surviving in year 10.

13 MONITORING, REPORTING, AND CORRECTIVE ACTIONS

Monitoring Provisions: The Sponsor agrees to perform all necessary work to monitor the BCMB, and to demonstrate compliance with the success criteria established for the bank. The Sponsor will establish long-term monitoring plots as the time of seedling planting.

Monitoring Reports: Monitoring reports will be provided to the Vicksburg District no later than December 15th following the first, fifth, and tenth growing seasons. In the event that monitoring reveals that initial success criteria have not been met, the Sponsor will take measures to achieve the criteria the following year. Monitoring, reporting, and remedial actions will be conducted in accordance with the following:

1. The Sponsor will conduct surveys of living seedlings within the planted tract one year, five years, and ten years post-planting. In addition, a baseline sampling and long-term monitoring plot establishment will be conducted between April 15th and November 15th following the initial planting of the tract.
2. Seedling survival will be documented by performing a comprehensive tally or by counting seedlings in rows selected at random from within the tract. The number and orientation of rows used in the sample will vary depending on the size and configuration of the tract, but must be representative of the tract. In addition, the Sponsor will perform a cursory examination of the entire planted tract to determine if the overall survival rate is adequate.
3. The Sponsor will, within 60 days following the survey, provide a written report to the Vicksburg District. The report will include, at a minimum, the following:
 - A. A USGS topographical map with the BCMB indicated.
 - B. A detailed narrative that summarizes the condition of the BCMB and all regular maintenance activities.
 - C. Appropriate site maps that show the locations of sampling plots or rows, permanent photograph stations, sampling transects, ect.
 - D. Data regarding the hydrologic status of the BCMB (e.g., hydro-period, extent and depth of inundation, groundwater monitoring results, precipitation records, etc.).
 - E. Results of vegetation surveys, including the following: visual estimates of overall percent cover within each layer of vegetation; indices of species within each layer of vegetation; composition of plant community (wetland indicator status); calculations of survival for planted trees; estimates of natural re-vegetation; and estimates of plant vigor (as measured by evidence of reproduction).
 - F. Results of surveys of wildlife usages on the tract (e.g., observations of amphibians, reptiles, mammals, birds, and macro-invertebrates on or near the BCMB).
 - G. Descriptions of the condition of applicable drainage ditches, culverts, and water control structures.
 - H. A discussion of likely causes of observed tree mortality within the tract that did not exhibit a survival rate for planted seedlings of at least 50% (151 trees per acre).
4. If survival is less than 151 planted trees per acre (as determined by sampling or observing high mortality within any stratum or location within the planted tract),

the Sponsor will take appropriate actions to address the causes of mortality and replace all dead seedlings with new seedlings of the appropriate species during the following non-growing season. Replanting, if necessary, as described in Paragraphs 1 & 2 of this section, will occur yearly thereafter as needed to achieve and document the required survival rate for five consecutive years.

5. The Sponsor will not be responsible for replacement of seedlings or trees when mortality is due to an act of God or other *force majeure* event that occurs after the short-term criteria are met.

Corrective Actions: In the event the BCMB fails to achieve the short-term success criteria specified in Section 12 of this prospectus, the Sponsor will develop necessary contingency plans and implement appropriate remedial actions for the BCMB in coordination with the Vicksburg District. Corrective actions will be performed in accordance with the following:

1. In the event the Sponsor fails to implement necessary remedial actions within the first growing season following notification by the Vicksburg District of failure in meeting success criteria, the Vicksburg District will notify the Sponsor and applicable authorizing agencies and recommend appropriate remedial actions.
2. Following completion of corrective actions, at the request of the Sponsor, the Vicksburg District will perform a final compliance visit to determine whether all success criteria have been satisfied. Upon satisfaction of the success criteria, any remaining contingency funds will be released to the Sponsor.
3. In the event the Sponsor does not comply with the mitigation bank restoration plan or the Louisiana Conservation Servitude, the Sponsor will be required to immediately perform corrective actions (e.g., replanting and repair or replacement of water-control structures). The Vicksburg District will then convene a meeting with the Sponsor to determine if a reassessment of the management or mitigation potential is necessary. If remedial action is not taken within one year, the Vicksburg District will cease recognition of the BCMB. If placed in default, failure by the Sponsor to replace mitigation will result in forfeiture of a portion of the funds pertaining to the tract for which the Sponsor had been placed in default.

14 CONCLUSION

In summary, establishment of the 273 acre BCMB, will restore approximately 157 acres of bottomland hardwood (BLH) and enhance approximately 110 acres of BLH ecosystem. Restoration and enhancement of Barlow Creek, Big Creek, Two Unnamed Perennial Streams, & Two Unnamed Intermittent Streams will establish approximately 30,375 linear feet of stream mitigation creating approximately 273 acres of bottomland hardwood and stream mitigation.

15 REFERENCES

Stream Restoration Concepts, L.L.C., Fort Worth Texas; Mr. M. Todd Ball

Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. *Web Soil Survey* <http://websoilsurvey.nrcs.usda.gov>.

United States Army Corps of Engineers, Compensatory Mitigation Guidelines Working Draft, Subject to Change Last Revised October 7, 2010, Guidelines for Preparing a Compensatory Mitigation Plan.

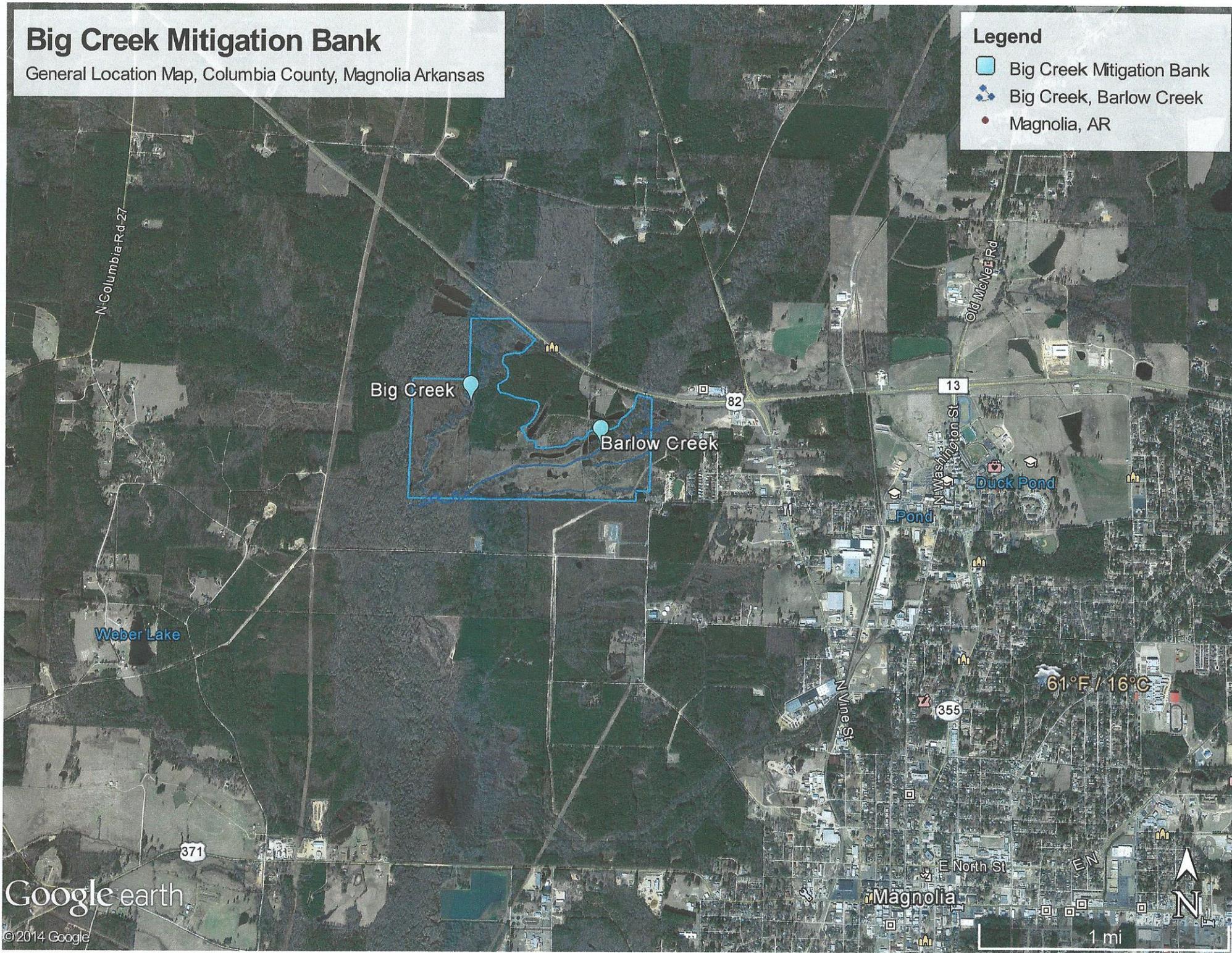
Arkansas Natural Heritage Commission, Falcon Bottoms Natural Area, Columbia, Lafayette and Nevada Counties, Arkansas.

Big Creek Mitigation Bank

General Location Map, Columbia County, Magnolia Arkansas

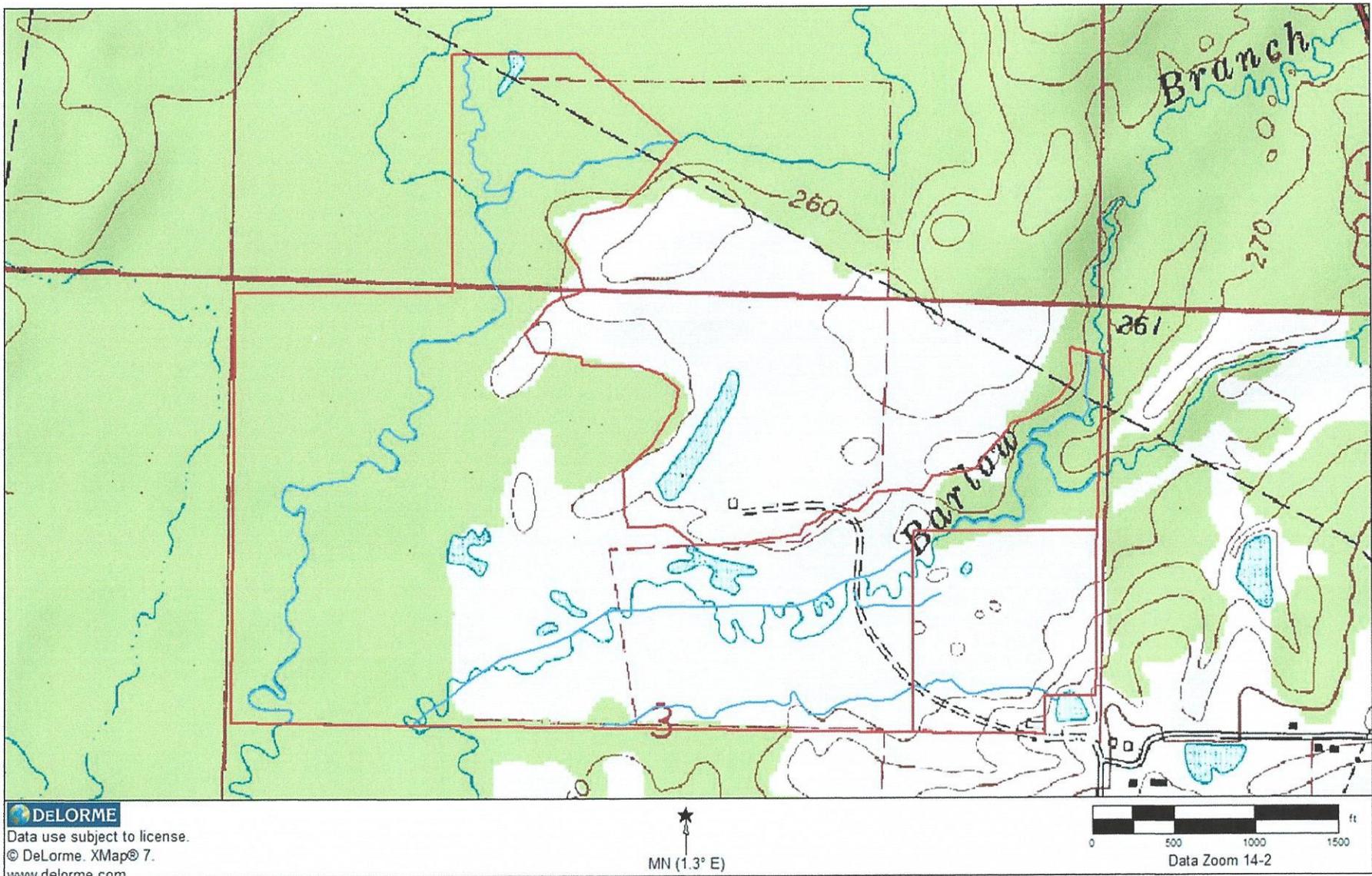
Legend

-  Big Creek Mitigation Bank
-  Big Creek, Barlow Creek
-  Magnolia, AR

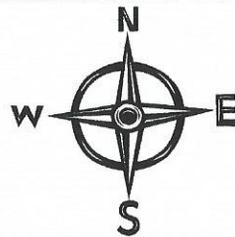


Google earth

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H&T Environmental, Inc.
P.O. Box 239
Elysian Fields, TX 75642
903-633-8224—Office
903-633-8244—Fax
htenvironmental@eastex.net



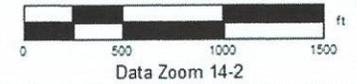
Big Creek Mitigation Bank
Topographic Map Showing Proposed Bank Boundaries
Columbia County, Arkansas

Figure 2



DELORME

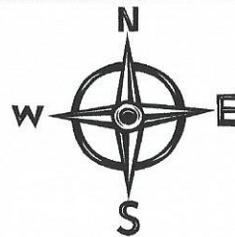
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 www.delorme.com



Data Zoom 14-2



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 htenvironmental@eastex.net



Big Creek Mitigation Bank
 Aerial Map with proposed bank boundaries
 Columbia County, Arkansas

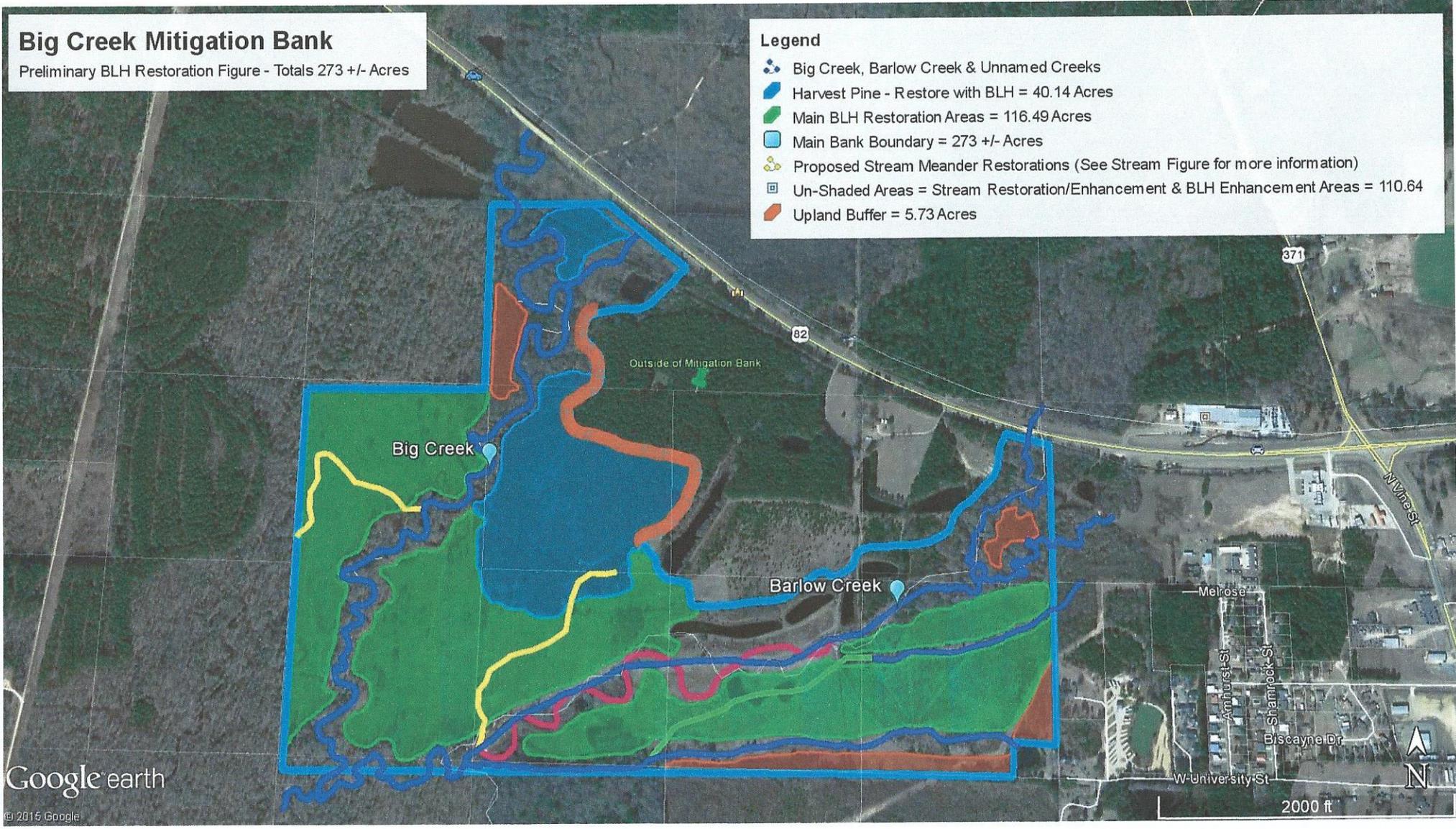
Figure 3

Big Creek Mitigation Bank

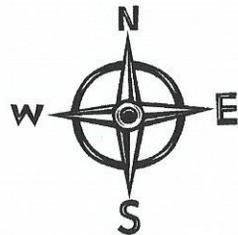
Preliminary BLH Restoration Figure - Totals 273 +/- Acres

Legend

-  Big Creek, Barlow Creek & Unnamed Creeks
-  Harvest Pine - Restore with BLH = 40.14 Acres
-  Main BLH Restoration Areas = 116.49 Acres
-  Main Bank Boundary = 273 +/- Acres
-  Proposed Stream Meander Restorations (See Stream Figure for more information)
-  Un-Shaded Areas = Stream Restoration/Enhancement & BLH Enhancement Areas = 110.64
-  Upland Buffer = 5.73 Acres

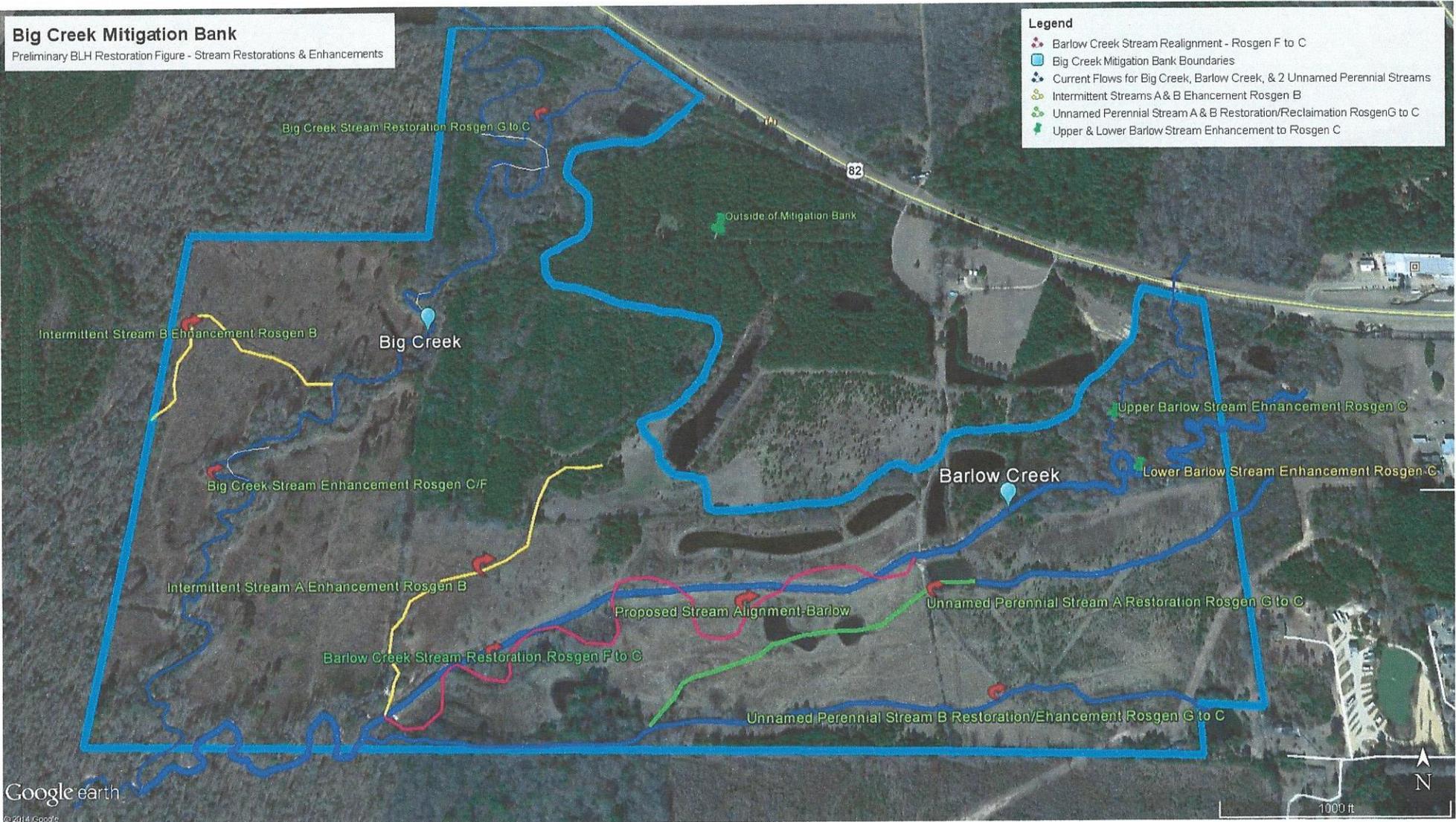


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 htenvironmental@eastex.net

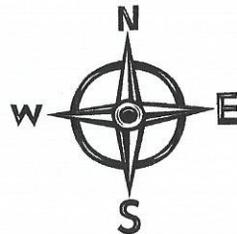


Big Creek Mitigation Bank
 Bottomland Hardwood Restoration Map
 Columbia County, Arkansas

Figure 4

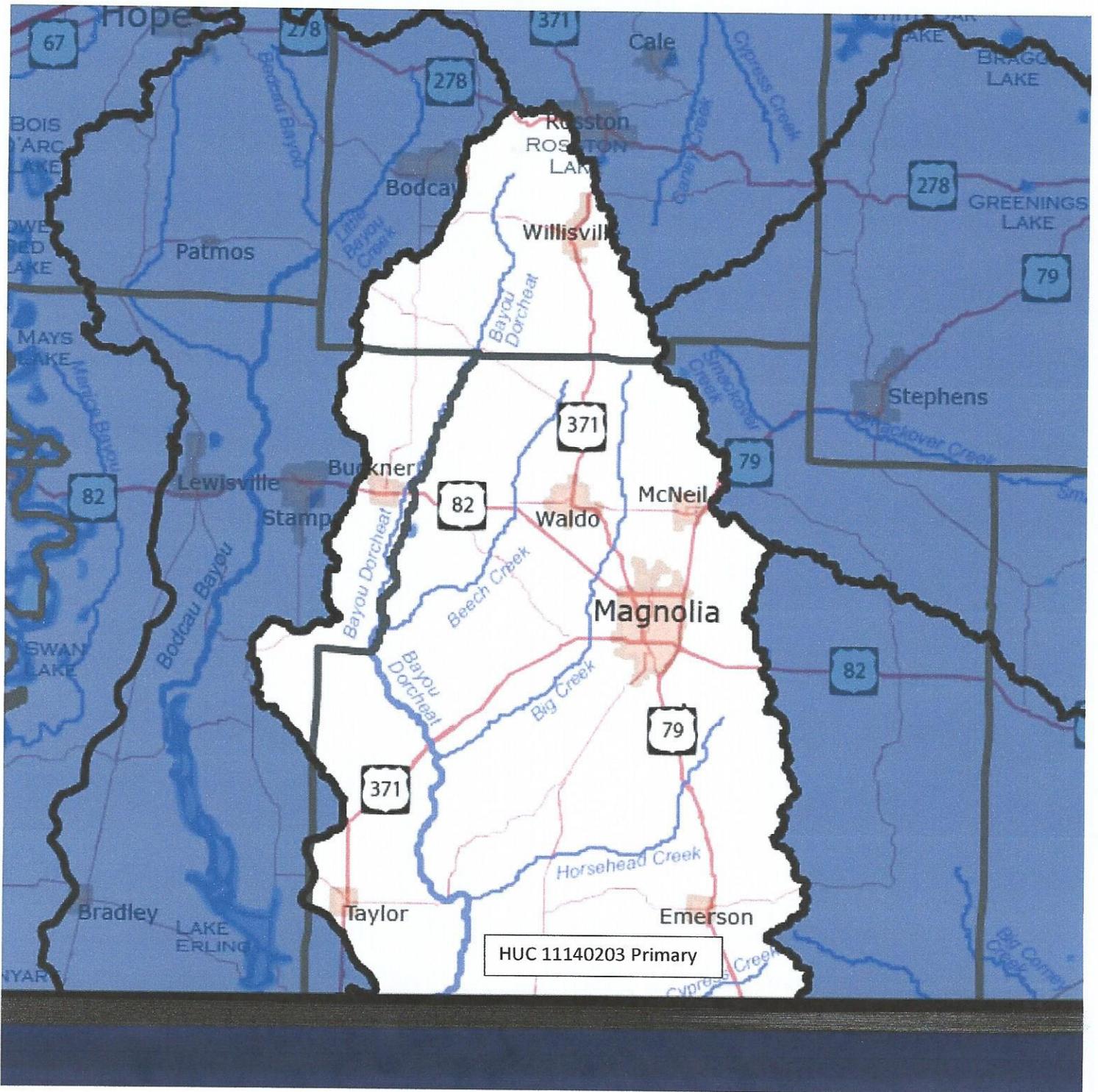


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903-633-8244—Fax
htenvironmental@eastex.net



Big Creek Mitigation Bank
Stream Restoration & Enhancement Map
Columbia County, Arkansas

Figure 5



H & T ENVIRONMENTAL, INC. Big Creek Mitigation Bank ~ Service Area HUC

**ENVIRONMENTAL PERMITTING, MITIGATION,
LAND RECLAMATION & WILDLIFE**

ELYSIAN FIELDS, TEXAS 75642-0239

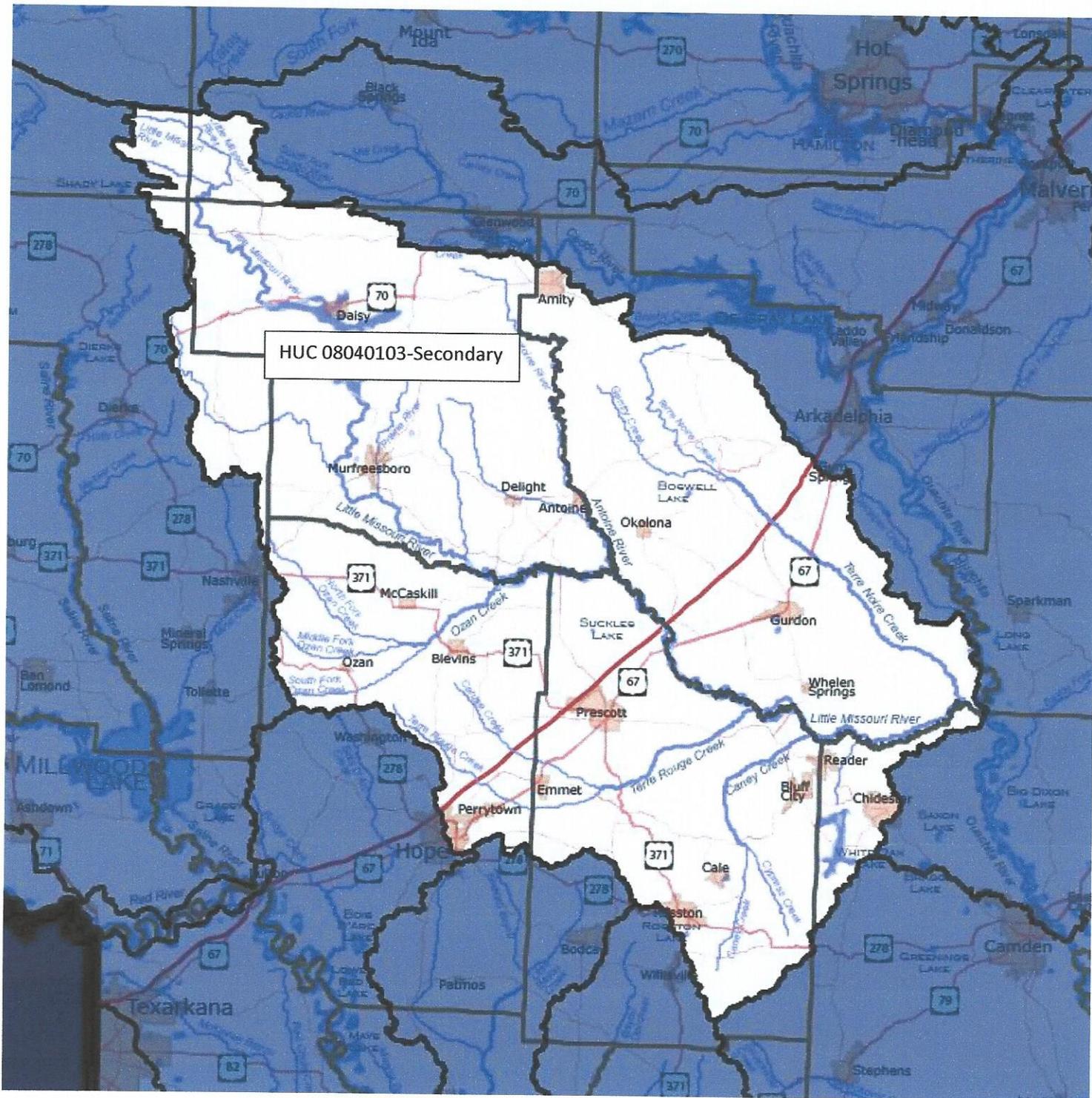
PH.: (903) 633-8224; FAX: (903) 633-8244

E-MAIL: HTEnvironmental@eastex.net

Figure – 6---HUC # 11140203

Loggy Bayou

Big Creek-Dorcheat Bayou



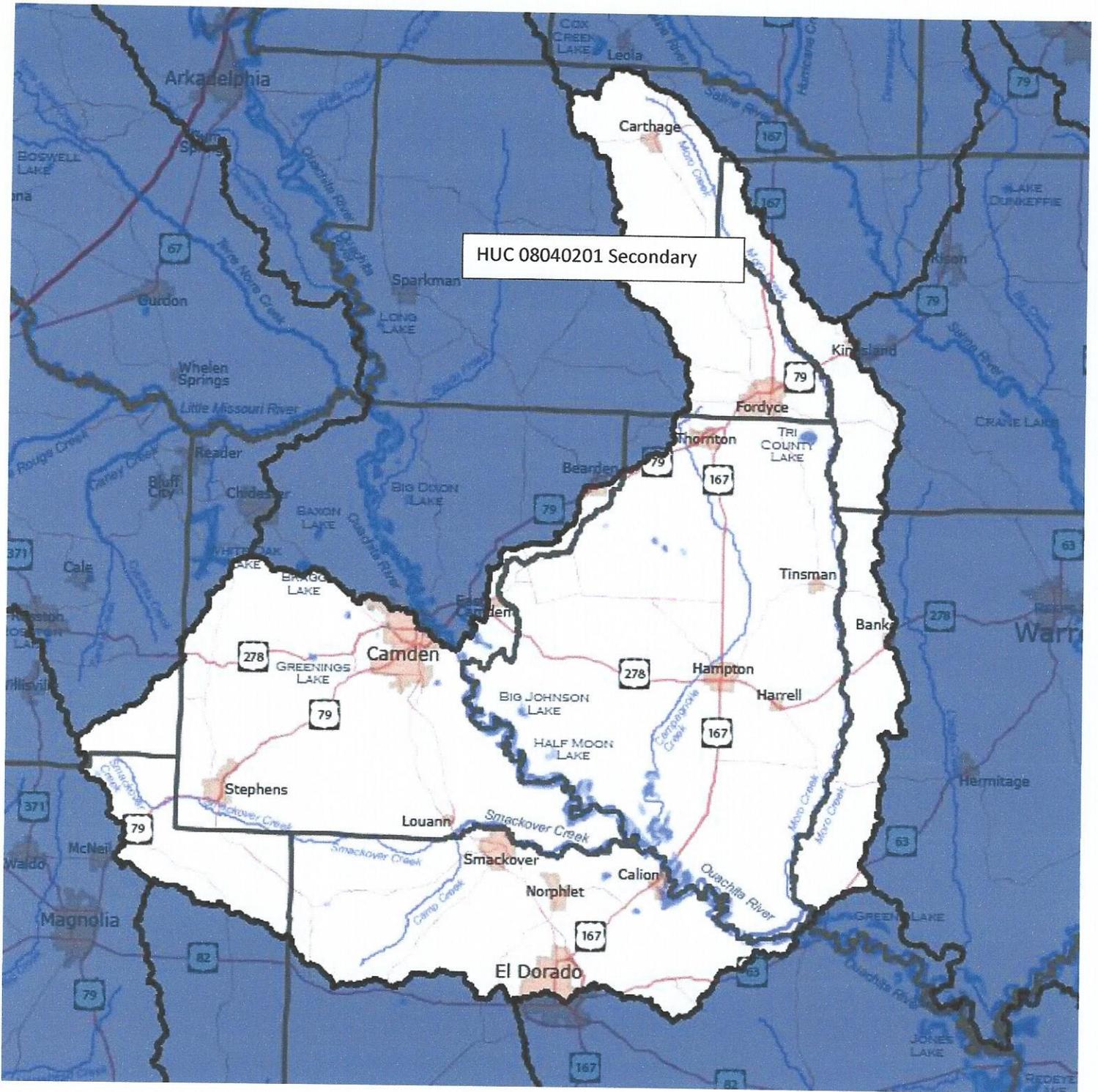
HUC 08040103-Secondary



H & T ENVIRONMENTAL, INC. Big Creek Mitigation Bank ~ Service Area HUC

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 E-MAIL: HTEnvironmental@eastex.net

Figure – 6—HUC # 08040103
 Little Missouri Bayou
 Secondary Area
 Big Creek–Dorcheat Bayou



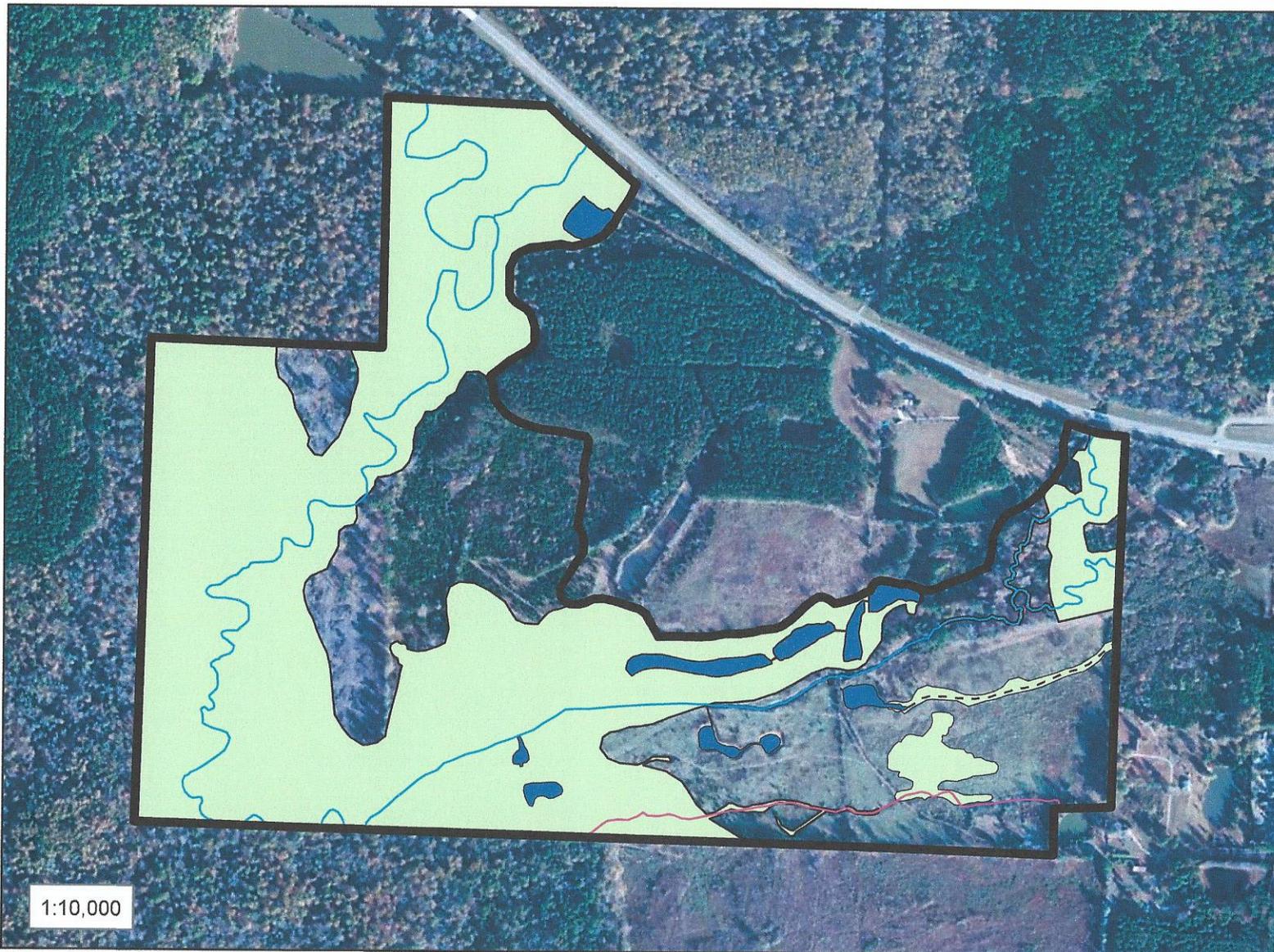
HUC 08040201 Secondary



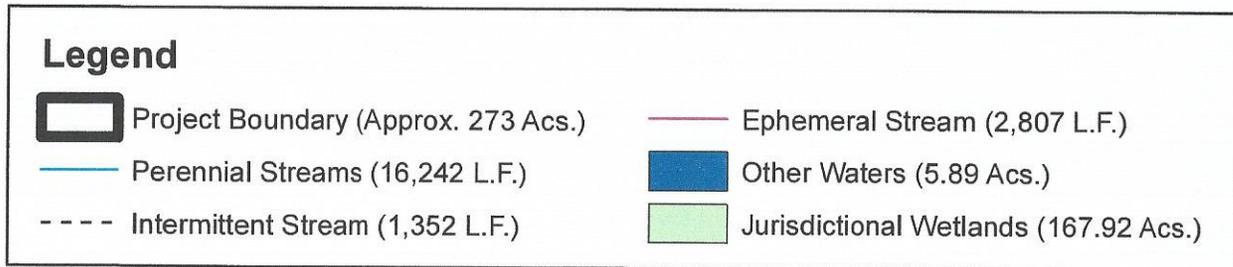
H & T ENVIRONMENTAL, INC. Big Creek Mitigation Bank ~ Service Area HUC

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 ELYSIAN FIELDS, TEXAS 75642-0239
 PH.: (903) 633-8224; FAX: (903) 633-8244
 E-MAIL: HTEnvironmental@eastex.net

Figure – 6—HUC # 08040201
 Lower Ouachita/Smackover
 Secondary Area
 Big Creek–Dorcheat Bayou



There are jurisdictional waters of the U.S. within the project boundary. A permit is required for any work activities that involve the discharge of dredged or fill material into a jurisdictional water of the U.S.



30 December 2014
MVK-2012-632
 Jurisdictional Determination
 Big Creek Mitigation Bank
 Mr. Steve Whitehead
 Columbia County, Arkansas
**Preliminary
 Jurisdictional Determination**
 Prepared by
 Arel Simpson



**US Army Corps
of Engineers***

**Regulatory Branch
Enforcement Section**

0 230 460 920 Feet

Enclosure 1

Figure 8

The "B" Stream Type

The "B" stream types exist primarily on moderately steep to gently sloped terrain, with the predominant landform seen as a narrow and moderately sloping basin. Many of the "B" stream types are the result of the integrated influence of structural contact zones, faults, joints, colluvial-alluvial deposits, and structurally controlled valley side-slopes which tend to result in narrow valleys that limit the development of a wide floodplain. "B" stream types are moderately entrenched, have a cross-section width/depth ratio (greater than 12), display a low channel sinuosity, and exhibit a "rapids" dominated bed morphology. Bedform morphology, which may be influenced by debris constrictions and local confinement, typically produces scour pools (pocket water) and characteristic "rapids." Stream-bank erosion rates are normally low as are the channel aggradation/degradation process rates. Pool-to-pool spacing is generally four to five bankfull widths, decreasing with an increase in slope gradient. Meander width ratios (belt width/bankfull width) are generally low which reflect the low rates of lateral extension. "B" stream types are usually found within valley types II, III, and VI.

The "C" Stream Type

The "C" stream types are located in narrow to wide valleys, constructed from alluvial deposition. The "C" type channels have a well developed floodplain (slightly entrenched), are relatively sinuous with a channel slope of 2% or less and a bedform morphology indicative of a riffle/pool configuration. The shape and form of the "C" stream types are indicated by cross-sectional width/depth ratios generally greater than 12, and sinuosities exceeding 1.2. The "C" stream type exhibits a sequencing of steeps (riffles) and flats (pools), that are linked to the meander geometry of the river where the riffle/pool sequence or spacing is on the average one-half a meander wavelength or approximately 5-7 bankfull channel widths. The primary morphological features of the "C" stream type are the sinuous, low relief channel, the well developed floodplains built by the river, and characteristic "point bars" within the active channel. The channel aggradation/degradation and lateral extension processes, notably active in "C" stream types, are inherently dependent on the natural stability of streambanks, the existing upstream watershed conditions and flow and sediment regime. Channels of the "C" stream type can be significantly altered and rapidly destabilized when the effects of imposed changes in bank stability, watershed condition, or flow regime are combined to cause an exceedance of a channel stability threshold. "C" stream types may be observed in valley types IV, V, VI, VIII, IX and X. They can also be found on the lower slope positions of the very low gradient valley type III.

The "E" Stream Type

The "E" type stream channels are conceptually designated as evolutionary in terms of fluvial process and morphology. The "E" stream type represents the developmental "end-point" of channel stability and fluvial process efficiency for certain alluvial streams undergoing a natural dynamic sequence of system evolution. The "E" type system often develops inside of the wide, entrenched and meandering channels of the "F" stream types, following floodplain development on and vegetation recovery of the former "F" channel beds. The "E" stream types are slightly entrenched, exhibit very low channel width/depth ratios, and display very high channel sinuosities which result in the highest meander width ratio values of all the other stream types. The bedform features of the "E" stream type are predominantly a consistent series of riffle/pool reaches, generating the highest number of pools per unit distance of channel, when compared to other riffle/pool stream types (C, DA, and F). "E" type stream systems generally occur in alluvial valleys that exhibit low elevational relief characteristics and physiographically range from the high elevations of alpine meadows to the low elevations of coastal plains. While the "E" stream types are considered as highly stable systems, provided the floodplain and the low channel width/depth characteristics are maintained, they are very sensitive to disturbance and can be rapidly adjusted and converted to other stream types in relatively short time periods. The "E" stream type typically develops within valley types VIII, X, and XI.



The "F" Stream Type

The "F" stream types are the classic "entrench-ed, meandering" channels described by early day geomorphologists, and are often observed to be working towards re-establishment of a functional floodplain inside the confines of a channel that is consistently increasing its width within the valley. "F" stream types are deeply incised in valleys of relatively low elevational relief, containing highly weathered rock and/or erodible materials. The "F" stream systems are characterized by very high channel width/depth ratios at the bankfull stage, and bedform features occurring as a moderated riffle/pool sequence. "F" stream channels can develop very high bank erosion rates, lateral extension rates, significant bar deposition and accelerated channel aggradation and/or degradation while providing for very high sediment supply and storage capacities. The "F" stream types occur in low relief valley type III, and in valley types IV, V, VI, VIII, IX, and X

The "G" Stream Type

The "G" or "gully" stream type is an entrenched, narrow, and deep, step/pool channel with a low to moderate sinuosity. Channel slopes are generally steeper than .02, although "G" channels may be associated with gentler slopes where they occur as "down-cut" gullies in meadows. The "G" stream type channels are found in a variety of landtypes to include alluvial fans, debris cones, meadows, or channels within older relic channels. The "fanhead trench" which is a channel feature deeply incised in alluvial fans is typical of "G" type stream channels. With the exception of those channels containing bedrock and boulder materials, the "G" stream types have very high bank erosion rates and a high sediment supply. Exhibiting moderate to steep channel slopes, low channel width/depth ratios and high sediment supply, the "G" stream type generates high bedload and suspended sediment transport rates. Channel degradation and sideslope rejuvenation processes are typical. The valley types supporting the "G" stream types are I, III, V, VI, VII, VIII, and X. The "G" stream type can also be observed in valley types II, VI, VIII and X, under conditions of instability or disequilibrium that are often imposed by watershed changes and/or direct channel impacts.

Soil Map—Columbia County, Arkansas
(Big Creek Mitigation Bank ~ Columbia County, AR)



Map Scale: 1:10,600 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

1/6/2015
Page 1 of 3

Soil Map—Columbia County, Arkansas
(Big Creek Mitigation Bank ~ Columbia County, AR)

MAP LEGEND

Area of Interest (AOI)			Spoil Area
	Area of Interest (AOI)		Stony Spot
Soils			Very Stony Spot
	Soil Map Unit Polygons		Wet Spot
	Soil Map Unit Lines		Other
	Soil Map Unit Points		Special Line Features
Special Point Features		Water Features	
	Blowout		Streams and Canals
	Borrow Pit	Transportation	
	Clay Spot		Rails
	Closed Depression		Interstate Highways
	Gravel Pit		US Routes
	Gravelly Spot		Major Roads
	Landfill		Local Roads
	Lava Flow	Background	
	Marsh or swamp		Aerial Photography
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Columbia County, Arkansas
Survey Area Data: Version 16, Sep 18, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 1, 2010—Jan 26, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Columbia County, Arkansas (AR027)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Bibb fine sandy loam, frequently flooded	2.6	0.9%
16	Guyton silt loam, frequently flooded	239.9	88.5%
17	Harleston very fine sandy loam, 1 to 3 percent slopes	5.0	1.8%
23	Ruston fine sandy loam, 1 to 3 percent slopes	2.6	0.9%
25	Sacul fine sandy loam, 3 to 8 percent slopes	6.0	2.2%
27	Smithdale fine sandy loam, 3 to 8 percent slopes	15.0	5.5%
Totals for Area of Interest		271.0	100.0%



DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS

4155 CLAY STREET

VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

February 7, 2013

Operations Division

SUBJECT: Preliminary Jurisdictional Determination - Proposed
Big Creek Mitigation Bank, Columbia County, Arkansas

Mr. Ben Daily
H & T Environmental
Incorporated
Post Office Box 239
Eylsian Fields, Texas 75642-0239

COPY

Dear Mr. Daily:

I refer to the information you submitted, on behalf of Mr. Steve Whitehead, in regards to a request for a jurisdictional determination on property located in section 3, T17S-R21W and section 34, T16S-R21W, Columbia County, Arkansas (enclosure 1).

Based upon the information provided, it appears that there are jurisdictional wetlands and other waters of the United States located on the property subject to regulation pursuant to Section 404 of the Clean Water Act. Please note that this preliminary determination is for planning purposes only. For your information, I have enclosed a copy of our appeals form (enclosure 2) for this preliminary jurisdictional determination.

You should also be aware of possible requirements under the Food Security Act. For more information, please contact your local office of the Natural Resources Conservation Service.

For your convenience, I am enclosing a Department of the Army permit application package with instructions (enclosure 3). Your application for any proposed work in wetlands or other waters of the United States should be submitted at least 120 days in advance of the proposed starting date. To expedite the evaluation process, please reference the identification no. MVK-2012-632 when submitting the application.

The Vicksburg District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the Customer Service Survey found on our web site at <http://per2.nwp.usace.army.mil/survey.html>. If it is more convenient for you, please complete and return the enclosed postage-paid post card (enclosure 4).

If you have any questions, please contact Mr. Arel Simpson of this office, telephone (601) 631-5996, fax (601) 631-5459 or e-mail address: regulatory@usace.army.mil.

Sincerely,



Charles R. Allred, Jr.
Chief, Enforcement Section
Regulatory Branch

Enclosures



DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS

4155 CLAY STREET

VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

December 18, 2014

Operations Division

SUBJECT: Preliminary Jurisdictional Determination – Proposed Big Creek Mitigation Bank, 38-Acre Addition, Columbia County, Arkansas

Mr. Ben Daily
H & T Environmental, Incorporated
Post Office Box 239
Elysian Fields, Texas 75642-0239

Dear Mr. Daily:

I refer to the information you submitted in regards to the proposed development of a mitigation bank on property located in section 3, T17S-R21W, Columbia County, Arkansas (enclosure 1).

Based upon the information provided, we have determined that there are jurisdictional waters of the United States located at the proposed project site subject to regulation pursuant to Section 404 of the Clean Water Act. For your information, I have enclosed a copy of our appeals form (enclosure 2) for this preliminary jurisdictional determination.

Since the proposed activity involves the discharge of dredged and/or fill material into jurisdictional waters, a Department of the Army Section 404 permit is required.

We are currently evaluating your request for a proposed mitigation bank. If you have any questions, please refer to identification no. MVK-2012-632, and contact Mr. Arel D. Simpson of this office, telephone 601-631-5996, fax 601-631-5459, or e-mail address: arel.d.simpson@usace.army.mil.

Sincerely,

A handwritten signature in black ink that reads "Charles R. Allred, Jr.".

Charles R. Allred, Jr.
Chief, Enforcement Section
Regulatory Branch

Enclosures