ORIGINAL

BEFORE THE

ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF ENTERGY ARKANSAS, INC. FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED TO CONSTRUCT AND OPERATE A 230 KV TRANSMISSION LINE AND ASSOCIATED TRANSMISSION FACILITIES IN JEFFERSON COUNTY, ARKANSAS	)	DOCKET NO. 14-043-U

E X H I B I T S

THE ABOVE-STYLED MATTER came on for hearing before Teresa L. Hollingsworth, Certified Court Reporter, Certificate No. 537, a Notary Public in and for Jefferson County, Arkansas, in Hearing Room Number 1 at the Arkansas Public Service Commission, 1000 Center Street, Little Rock, Arkansas, on October 20, 2014 commencing at 9:33 a.m.

I N D E X

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Mike Beebe
Nathaniel Smith, MD, MPH, Interim Director and State Health Officer

Engineering Section, Slot 37 Ph 501-661-2623 Fax 501-661-2032
www.HealthyArkansas.com/eng/ After Hours Emergency 501-661-2136

May 29, 2014

Kristi Rhude
Arkansas Public Service Commission
PO Box 400
Little Rock, AR 72203-0400

Re: Propose Entergy 230 kV Transmission Line from Woodward Substation to White Bluff Steam Electric Station, Docket No. 14-043-U, Jefferson County.

Dear Ms. Rhude,

A staff review has been made of the information received on the referenced project. Routes A and B will traverse the wellhead protection areas for, and be in proximity to, wells servicing Jefferson-Samples-Dexter Water and United Water Arkansas. For this reason we recommend that Route C be used for this project.

Sincerely,

Lyle Godfrey, P.E.
Chief, Technical Support
Engineering Section

MF:DT:LG:DR:bj

CC: United Water, PO Box 6070, Pine Bluff, AR 71611
Jeffferson-Samples-Dexter Water, PO Box 1, Jefferson, AR 72079
Murry K. Witcher, Entergy, PO Box 551, Little Rock, AR 72203-0551

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EXHIBIT
PENGAD 800-631-6989

ADEQ
ARKANSAS
Department of Environmental Quality

June 24, 2014

Kristi Rhude
Secretary of the Commission
Arkansas Public Service Commission
Post Office Box 400
Little Rock, Arkansas 72203-0400

RE: APSC Docket No. 14-043-U
Proposed Entergy Woodward to White Bluff Substation
230 kV Transmission Line, Jefferson County, Arkansas

Dear Ms. Rhude:

Your recent request for comments concerning the referenced project has been considered. Since the proposed activities will include natural drainage crossings, it is important for the project team to consider obtaining:

- Short Term Activity Authorization prior to working in the wetted area of streams,
- Section 401/404 Certifications,
- And, incorporating best management practices into the design to minimize impacts of construction to surface waters.

Additional information regarding Construction Stormwater and Pesticide Programs are available at:

http://www.adeq.state.ar.us/water/branch_permits/default.htm

If you have any questions concerning these regulations, please contact Mark Hathcote at (501) 682-0028 or Mo Shafii at (501) 682-0616. Thank you for the opportunity to comment.

Sincerely,

Nathaniel P. Nehus
Ecologist
Water Division

Entergy

Entergy Arkansas, Inc.
425 West Capitol Avenue
P. O. Box 551
Little Rock, AR 72203-0551
Tel 501 377 5876
Fax 501 377 4415

Laura Landreaux
Vice President
Regulatory Affairs

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July 24, 2014

Mr. Michael Sappington, Secretary
Arkansas Public Service Commission
P.O. Box 400
1000 Center Street
Little Rock, AR 72203

Re: APSC Docket No. 14-043-U
In the Matter of an Application of Entergy Arkansas, Inc. for a Certificate of Environmental Compatibility and Public Need to Construct and Operate a 230 kV Transmission Line and Associated Transmission Facilities in Jefferson County, Arkansas

Dear Mr. Sappington:

Please find enclosed the following:

- June 17, 2014 letter from the Department of Arkansas Heritage;
- June 23, 2014 letter from the Quapaw Tribe of Oklahoma; and
- June 23, 2014 letter from the Arkansas Geological Survey.

Sincerely,

/s/ Laura Landreaux
Laura Landreaux

Enclosures

c: All Parties of Record

THE DEPARTMENT OF ARKANSAS
HERITAGE

Mike Beebe
Governor

Martha Miller
Director

Arkansas Arts Council

Arkansas Historic Preservation Program

Delta Cultural Center

Mosaic Templars Cultural Center

Old State House Museum

Historic Arkansas Museum

ARKANSAS NATURAL HERITAGE COMMISSION

Arkansas Natural Heritage Commission
323 Center Street, Suite 1500
Little Rock, AR 72201
(501) 324-9619
fax: (501) 324-9618
tdd: (501) 324-9811
e-mail:
arkansas@naturalheritage.com
website:
www.naturalheritage.com

An Equal Opportunity Employer

Date: June 17, 2014
Subject: Proposed Pine Bluff Woodward Substation to White Bluff Steam Electric Station 280 kV Transmission Line
Jefferson County, Arkansas
Docket No. 14-043-U
ANHC No.: P-CORP-14-005

Mr. Murry Witcher
Entergy
Transmission and Substation Construction
5115 Thibault Road
Little Rock, AR 72206

Dear Mr. Witcher:

Staff members of the Arkansas Natural Heritage Commission (ANHC) have reviewed the Certificate of Environmental Compatibility and Public Need for the construction and operation of a 230,000 kV electric transmission line and related terminal station facilities in Jefferson County, Arkansas. The proposed 23-mile new transmission line would connect the existing Pine Bluff Woodward Station to the White Bluff Steam Electric Station located near Redfield. Multiple alternative segments were evaluated through the assessment process. Three final alternative routes were identified. Optional Route A was selected as the proposed alignment.

This agency maintains a database of information on the locations of rare species and high quality natural communities. A database review was conducted of the proposed final transmission line routes. No records of rare species or high quality natural communities have been recorded along the selected alternative (Optional Route A). Several areas of potential concern were identified along Optional Routes B and C:

Optional Route B – north end

An occurrence of Kentucky lady's-slipper orchid (*Cypripedium kentuckiense*), a species of state conservation concern, may occur along a creek valley crossed by Route B in the NW¼ of Section 36, T3S, R11W. This occurrence was relocated from another development site on the White Bluff property in the 1990's.

Optional Route C – Pine Bluff Arsenal

The following rare species have been recorded from the Pine Bluff Arsenal. Some could be present along Optional Route C where it crosses the Arsenal:

Eleocharis flavescens var. *flavescens*, yellow spike-rush – state concern

Myotis austroriparius, southeastern myotis – state concern
Papaipema eryngii, Rattlesnake-master borer moth – Federal Concern (Candidate)
Pycnanthemum verticillatum, whorled mountain-mint – state concern
Regina grahamii, Graham's crayfish snake – state concern
Rhynchospora globularis var. *globularis*, globe beaksedge – state concern
Speyeria diana, Diana Fritillary – state concern
Spiranthes lacera var. *lacera*, northern slender ladies'-tresses – state concern

Optional Route C – north end, ravines along Arkansas River

Work conducted in the 1990's indicated the ravines along the Arkansas River in this area represented a high quality example of a Lowland Pine-Oak Forest. A portion of this forest would be crossed at the northern end of Route C. Nesting Bald Eagles have also been recorded in this vicinity in the past.

Provided Optional Route A remains the preferred alternative, we have no additional concerns. However, should Routes B or C be reconsidered, additional coordination may be appropriate in order to avoid adversely impacting species or communities of special concern. The opportunity to comment is appreciated.

Sincerely,

Cindy Osborne

Cindy Osborne
Data Manager/Environmental Review Coordinator

QUAPAW TRIBE OF OKLAHOMA

P.O. Box 765
Quapaw, OK 74363-0765

(918) 542-1853
FAX (918) 542-4694

6/23/14

Mr. Murry K. Witcher
Regulatory Project Coordinator
Entergy Services, Inc.
P.O. Box 551
Little Rock, Arkansas 72203-0551

Re: Proposed White Bluff (Steam Electric Station) to Woodward Substation, AHPP Tracking Number 85270.1

Dear Mr. Witcher,

The Quapaw Tribe Historic Preservation Office has received the Arkansas Historic Preservation Program review of the White Bluff (Steam Electric Station) to Woodward Substation project proposal and we concur with the AHPP's comments regarding the necessity of timely and complete documentation for Section 106 review as well as their recommendation that a cultural resources survey be conducted.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process are referred to in S101 (d) (6) (A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Quapaw Tribe has vital interests in protecting its historic and ancestral cultural resources. The Quapaw Tribe looks forward to receiving and reviewing the cultural resource survey report for the proposed project. The Quapaw Tribe requires that cultural resource survey personnel and reports follow the Secretary of Interior's standards and guidelines.

Should you have any questions or need any additional information, please feel free to contact me at the number listed below. Thank you for consulting with the Quapaw Tribe on this matter.

Sincerely,

Everett Bandy

Tribal Historic Preservation Office
Quapaw Tribe of Oklahoma
P.O. Box 765
Quapaw, OK 74363
(w) 918-542-1853
ebandy@quapawtribe.com

ARKANSAS GEOLOGICAL SURVEY

VARDELLE PARHAM GEOLOGY CENTER
3815 WEST ROOSEVELT ROAD
LITTLE ROCK, AR 72204-6369

Bekki White
Director
State Geologist

Mike Beebe
Governor

June 23, 2014

Mr. Murry K. Witcher
Entergy Transmission and Substation
5115 Thibault Road
P.O. Box 551
Little Rock, AR 72206

Dear Mr. Witcher:

This letter is a response to your request for comments on the proposed construction of a 230 kv line in Jefferson County between the City of Pine Bluff and the White Bluff Power Plant. The following comment pertains to the geology of the Proposed Route A.

Most of this route is located on the Eocene age Jackson Group. This unit is composed of clays, silts and fine sands. I am not a soil scientist but the Soil Survey for Jefferson County seems to indicate that the soils derived from this unit have poor engineering properties such as low load bearing and high shrink-swell. Corrective engineering may be needed for a more stable installation of the power poles.

If you have any questions about these comments please feel free to contact me at bill.prior@arkansas.gov or at (501)683-0117.

Sincerely,

William Lee Prior
Geologist Supervisor

PHONE: (501) 296-1877: FAX: (501) 663-7360
EMAIL: ags@arkansas.gov
WEBSITE: www.geology.arkansas.gov

Entergy

Entergy Arkansas, Inc.
425 West Capitol Avenue
P. O. Box 551
Little Rock, AR 72203-0551
Tel 501 377 5876
Fax 501 377 4415

Laura Landreaux
Vice President
Regulatory Affairs

October 17, 2014

Mr. Michael Sappington, Secretary
Arkansas Public Service Commission
P.O. Box 400
1000 Center Street
Little Rock, AR 72203

Re: APSC Docket No. 14-043-U
In the Matter of an Application of Entergy Arkansas, Inc. for a Certificate of Environmental Compatibility and Public Need to Construct and Operate a 230 kV Transmission Line and Associated Transmission Facilities in Jefferson County, Arkansas

Dear Mr. Sappington:

Please find enclosed the following:

- August 29, 2014 letter from the Arkansas Department of Health.

Sincerely,

/s/ Laura Landreaux
Laura Landreaux

Enclosures

c: All Parties of Record

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Mike Beebe
Paul K. Halverson, DrPH, FACHE, Director and State Health Officer

Engineering Section, Slot 37 Ph 501-661-2623 Fax 501-661-2032
www.HealthyArkansas.com/eng/ After Hours Emergency 501-661-2136

August 29, 2014

Greg Phillips
GBMc & Associates
219 Brown Ln.
Bryant, AR 72022

Re: Proposed Entergy 230 kV Transmission Line from Woodward Substation to White Bluff Steam Electric Station; Docket No. 14-043-U, Jefferson County, Arkansas.

Dear Mr. Phillips,

We request that if Route A is chosen by the Arkansas Public Service Commission no herbicides be applied and only mechanical removal of vegetation be used in the wellhead protection areas that are crossed.

If you have any questions or comments, please coordinate them through Brad Jones at 501-661-2067.

Sincerely,

Lyle Godfrey, P.E.
Chief, Technical Support
Engineering Section

LG:DR:bj

CC: United Water, PO Box 6070, Pine Bluff, AR 71611
Jeffferson-Samples-Dexter Water, PO Box 1, Jefferson, AR 72079
Murry K. Witcher, Entergy, PO Box 551, Little Rock, AR 72203-0551

Entergy.

GBMc

Entergy Arkansas, Inc.
Environmental Impact Statement
For the White Bluff to Woodward
230 kV Project
(230 kV Transmission Line Project)

April 25, 2014

GBMc & Associates
Strategic Environmental Services

ENVIRONMENTAL IMPACT STATEMENT FOR THE WHITE BLUFF TO WOODWARD 203 KV PROJECT (230 kV TRANSMISSION LINE PROJECT)

Prepared for:

Entergy Arkansas, Inc.

Entergy®

Prepared by:

GBM^c & Associates
219 Brown Lane
Bryant, AR 72022

April 25, 2014

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TABLES

FIGURES

APPENDICES

1.0 PROJECT DESCRIPTION

Entergy Arkansas, Inc. (EAI) is proposing to construct approximately 20 miles of 230 kilovolt (kV) transmission line (T-line) between Redfield and Pine Bluff in Jefferson County, Arkansas. The proposed line will require a 120 foot wide right-of-way (ROW) and extend between EAI's existing substation at the White Bluff Steam Electric Station near Redfield and the Woodward Substation in Pine Bluff. Additional information on the project is provided in Appendix A.

1.1 Purpose and Necessity

In order to continue to provide efficient and reliable electricity to industrial, commercial, agricultural, and residential customers in the southeast Arkansas region, EAI must periodically build new structures and upgrade existing electrical facilities. The demand for energy in southeast Arkansas is projected to continually grow. The present transmission infrastructure is insufficient to accommodate existing demand under certain contingencies. These contingencies cause low voltage and thermal overloads throughout the southeast. For example, loss of a single 115 kV north bus at Woodward causes the 115 kV line from White Bluff to Arsenal "D" to Woodward to overload. This new line will limit such contingencies and improve overall power reliability in the area.

1.2 Location

The proposed project would be located in Jefferson County, Arkansas between Redfield and Pine Bluff (Figure 1). White Bluff Steam Electric Station is located near Redfield (Lat. 34.42585°N, Long. -92.14431°W) and the Woodward Substation is located at 5201 West Barraque Street in Pine Bluff (Lat. 34.1944°N, Long. -92.0592°W). The area sits entirely within the Mississippi Alluvial Plain and South Central Plains geographical regions. The proposed area for the project is shown in Appendix A. The project area is bordered on the north by a forested area immediately southeast of the city of Redfield. The Arkansas River runs adjacent and parallel to the eastern border of the project area. The northern portion of the eastern border runs through the Pine Bluff Arsenal. The southern border of the proposed project area lies just inside Pine Bluff, while the western border of the area is predominantly forested, passing through residential areas along Highway 270 west of Interstate-530. The City of White Hall lies within the proposed project area.

1.3 Structures and ROW

New structures utilized for the proposed 230 kV T-lines will be single modular steel or concrete poles (Figure 2). Typical structure heights will be approximately 110 ft above the ground, but will vary with local conditions to ensure National Electric Safety Code (NESC) clearances are maintained. The standard EAI ROW for a 230 kV line is 100 ft - 125 ft wide which is in accordance with the electrical code of the National Electric Safety Council. The proposed project will utilize a ROW width of approximately 120 ft.

1.4 Project Schedule

- Approval of Certificate of Environmental Compatibility and Public Need (CECPN), Initiate Purchases – 1st Quarter 2014
- Construction Contracts, Mobilize Construction – 2nd Quarter 2014
- Complete Construction, Final Testing, In Service – 2nd Quarter 2016

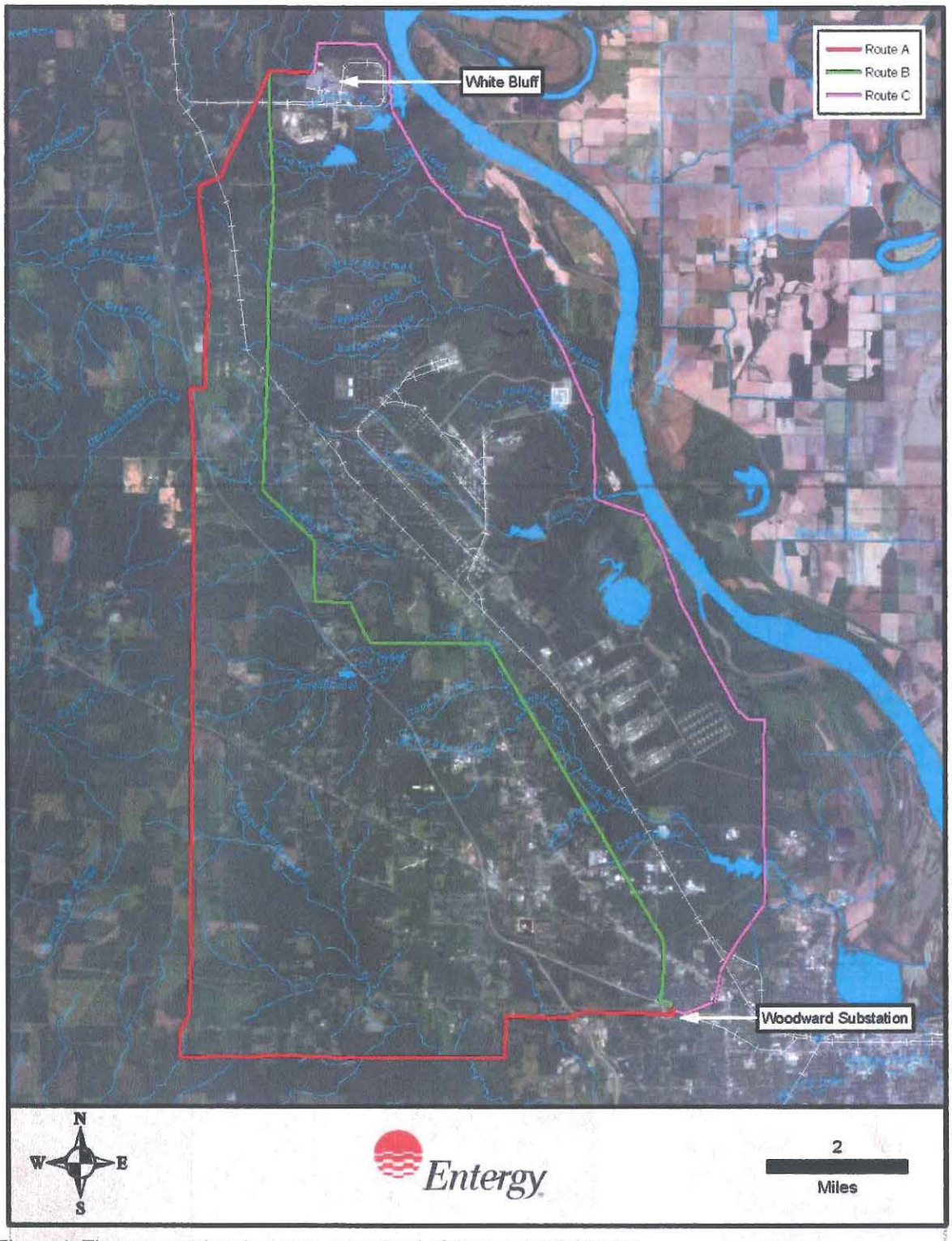

Figure 1. The proposed project area comprised of three potential routes.

Figure 2. Typical T-Line Pole Configuration.

2.0 DESCRIPTION OF EXISITING ENVIRONMENT

2.1 Natural Resources

2.1.1 Land Use & Topography

The project lies near the outskirts of Redfield and Pine Bluff in Jefferson County, Arkansas. Forested land covers the majority of the proposed project area, accounting for 70% of total land use in the area. Approximately 8% of the proposed ROW is marked by herbaceous and woody cover. Urban land use, particularly residential, accounts for approximately 11% of the land use in the proposed project area while intense urban use, marked by a high percentage of roads and parking lots, accounts for another nearly 4% of uses in the project area. Aside from forested cover, herbaceous and woody cover, and urban use, a small amount of the area is covered with seasonal grasses. Land use maps are provided in Appendix B.

The proposed project area lies within the Mississippi Alluvial Plain and South Central Plains. This ecoregion is a nearly-level landscape dominated by agriculture with a limited number of levees, terraces, and swales. The majority of the forested land in the western third of the project area is owned by timber companies and managed for wood products, while the majority of the forested land in the eastern third of the project area is Department of Army land. The project area's elevation decreases from northwest to southeast, with elevations ranging from approximately 300 ft above sea level to 215 ft above sea level.

2.1.2 Soils

Soils in the proposed project area consist primarily of Savannah fine sandy soils, Sacul fine sandy loam, Smithdale fine sandy loam and Crevasse soils. However, a large number of soil types are represented in the area are in a complex matrix, which includes smaller amounts of Amy silt loam, Pheba silt loam, Calloway silt loam, Calloway-Urban, Henry silt loam, Sawyer silt loam, Ouachita soils, and minute amounts of various other soil types. Details regarding each soil type are summarized in Table 1. Additional soils data is provided in Appendix B.

Table 1.Summary of soil characteristics in the proposed project area.

Soil type	Soil texture	Slope	Drainage Class
Amy silt loam	Silt loam	0-1%	Poorly drained
Amy soils, frequently flooded	Silt loam	0-1%	Poorly drained
Amy-Urban land complex	Silt loam	0-1%	Poorly drained
Calloway silt loam	Silt loam	0-1%	Somewhat poorly drained
Calloway silt loam	Silt loam	1-3%	Somewhat poorly drained
Calloway-Urban land complex	Silt loam	1-3%	Somewhat poorly drained
Coushatta soils, occasionally flooded	Silt loam	0-3%	Well drained
Crevasse loamy fine sand	Loamy fine sand	0-1%	Excessively drained
Crevasse soils, frequently flooded	Loamy fine sand	0-1%	Excessively flooded
Grenada silt loam	Silt loam	1-3%	Moderately well drained
Grenada silt loam	Silt loam	3-8%	Moderately well drained
Grenada-Urban land complex	Silt loam	1-3%	Moderately well drained
Grenada-Urban land complex	Silt loam	3-8%	Moderately well drained
Hebert silt loam	Silt loam	0-1%	Somewhat poorly drained
Henry silt loam	Silt loam	0-1%	Poorly drained
Henry-Urban land complex	Silt loam	0-1%	Poorly drained
McGehee silt loam	Silt loam		Somewhat poorly drained
McGehee silt loam, occasionally flooded	Silt loam	0-2%	Somewhat poorly drained
Oklared fine sandy loam, occasionally flooded	Fine sandy loam	0-1%	Well drained
Ouachita soils, frequently flooded	Silt loam	0-1%	Well drained
Perry clay	Clay	0-1%	Poorly drained
Perry clay, occasionally flooded	Clay	0-1%	Poorly drained
Pheba silt loam	Silt loam	0-2%	Somewhat poorly drained
Pheba-Urban land complex	Silt loam	0-2%	Somewhat poorly drained
Portland clay	Clay	0-1%	Somewhat poorly drained
Portland clay, occasionally flooded	Clay	0-1%	Somewhat poorly drained

Soil type	Soil texture	Slope	Drainage Class
Portland-Urban land complex	Clay	0-1%	Somewhat poorly drained
Rilla silt loam	Silt loam	0-1%	Well drained
Ruston fine sandy loam	Silt loam	0-3%	Well drained
Sacul fine sandy loam	Fine sandy loam	1-3%	Moderately well drained
Sacul fine sandy loam	Fine sandy loam	3-8%	Moderately well drained
Savannah fine sandy loam	Fine sandy loam	1-3%	Moderately well drained
Savannah fine sandy loam	Fine sandy loam	3-8%	Moderately well drained
Savannah-Urban land complex	Fine sandy loam	1-3%	Moderately well drained
Savannah-Urban land complex	Fine sandy loam	3-8%	Moderately well drained
Sawyer silt loam	Silt loam	1-3%	Moderately well drained
Sawyer silt loam	Silt loam	3-8%	Moderately well drained
Smithdale fine sandy loam	Fine sandy loam	3-8%	Well drained
Smithdale fine sandy loam	Fine sandy loam	8-12%	Well drained
Wabbeseka-Latanier complex, undulating	Clay	0-3%	Moderately well drained

2.1.3 Watersheds & Streams

The ROW lies predominantly within the Lower Arkansas-Maumelle watershed, while the extreme southern end of the ROW falls just inside the Bayou Bartholemew watershed boundary. The Lower Arkansas-Maumelle watershed lies within the Arkansas River basin, with the Arkansas River serving as the main channel adjacent to the proposed project area. The watershed encompasses the area surrounding the Maumelle River west of Little Rock, which confluences with the Arkansas River, following the southeast course of the river channel to Pine Bluff. The Arkansas River creates the eastern boundary of the project area.

Other streams in the immediate area include, from north to south, Lipscomb Branch Creek, Love Creek, an unnamed tributary of the Arkansas River, Eastwood Bayou, Phillips Creek, Jackson Creek, Tulley Creek, Gamble Creek, Caney Bayou and Bayou Bartholemew. Water quality in the watershed is generally good. One stream within the proposed project area, Bayou Bartholomew, is listed on the Arkansas 303(d) list of Impaired Waterbodies due to elevated lead levels. No streams in the area are listed as Extraordinary Resource Waters.

2.1.4 Wetlands

Wetland boundaries are defined by the hydrology, vegetation, and soil in an area. Specifically, an area must exhibit hydrologic markers that indicate an area of permanent or at least intermittent ground saturation, hydrophytic vegetation, and hydric soils in order to be considered a wetland.

The National Wetlands Inventory provided by the United States Fish and Wildlife Service (USFWS) identifies an extensive array of wetland polygons in the proposed project area. Most of these wetlands are associated with the streams in the project area, and the majority are adjacent to Corridor B, though the wetland complex associated with Caney Bayou extends to cross Corridor C in the southern portion of the proposed ROW. The vast majority of these wetlands fall under the Palustrine classification, which are non-tidal wetlands such as freshwater marshes or swamps. A small amount of Lacustrine wetlands fall within the project area as well as a small number of Riverine wetlands. Lacustrine wetlands are situated in a topographic depression or dammed river channel, lack trees or emergent vegetation, and must exceed 20 acres, while Riverine wetlands are directly associated with a intermittent or perennial channel. Wetland polygons noted are predominantly Palustrine Forested wetlands, Palustrine Scrub-Shrub wetlands, and Palustrine Unconsolidated Bottom wetlands, with a small number of Lacustrine Limnetic Unconsolidated Bottom wetlands and permanent Riverine Unconsolidated Bottom wetlands. Palustrine Forested wetlands consist of an intermittently flooded landscape in a broad-leaved deciduous forest. The Palustrine Forested wetlands within the project area exhibit a range of hydrologic regimes, from temporarily flooded to semi-permanently flooded wetlands. Palustrine Scrub-Shrub wetlands consist of woody vegetation less than twenty feet tall. Species in these areas include true shrubs and saplings. The Scrub-Shrub wetlands within the project area also exhibit a range of hydrologic regimes, from temporarily flooded to semi-permanently flooded wetlands. Palustrine Unconsolidated Bottom wetlands are permanent wetlands with less than 30% vegetated cover. The Unconsolidated Bottom wetlands in the project area mostly resulted from manmade impoundments. The Lacustrine Limnetic Unconsolidated Bottom wetlands in the project area also resulted mainly from manmade impoundments and are an artificially-flooded system. The Riverine Unconsolidated Bottom wetlands in the area result from the flooding and slow drainage of stream channels. An evaluation of soils in the project area indicates a dominance of hydric soils with high potential for wetland occurrence.

2.1.5 Threatened and Endangered Species

Three Jefferson County species are registered on the federal list of endangered species, the bald eagle, the Florida panther, and the interior least tern. The bald eagle (*Haliaeetusleucocephalus*) is federally listed as threatened and quickly recovering throughout the US and Arkansas. In Jefferson County it primarily is sighted along the Arkansas River. The Florida panther (*Puma concolor*) is listed as endangered federally and extremely rare on the state list. The panther is believed to have been eradicated from all Arkansas counties. The interior least tern (*Sterna antillarumathalassos)* lives in bare or sparsely vegetated sandbars

along rivers, sand and gravel pits, or shorelines of reservoirs and lakes. The interior least tern is listed as imperiled throughout most of the southern United States as well as parts of the midwest, and critically imperiled through much of the midwest and Texas.

One plant species in Jefferson County is listed as threatened in the State of Arkansas. The rose pogonia (*Pogoniaophioglosoides)*, also known as the snakemouth orchid, is distributed throughout the eastern United States and is listed as imperiled or endangered in several other southern and midwestern states. Excerpts of USFWS threatened and endangered species tables are provided in Appendix B.

2.1.6 Dominant Flora, Fauna, & Habitats

Pine forests and pine mixed forests dominate the region in undeveloped areas. Dominant flora in the proposed project area includes loblolly pine *(Pinustaeda)* and sweetgum (*Liquidambar styraciflua*) trees. Grasses such as broom sedge (*Andropogonvirginicus*) and maintained areas of turf grasses occur in more developed portions of the project area.

Habitats adjacent to the project area provide habitat for wildlife such as song birds, black bears, waterfowl, alligator snapping turtles, and game species. Dominant aquatic fauna include sunfishes and minnows in the smaller streams and rough fish (carp, buffalo), catfish, and black bass in the Arkansas River.

2.2 Human Resources

This section provides a summary of the human resources and conditions within the study area. Topics to be discussed include population, housing, demographics, major employers, and a cultural resources literature and records search. A discussion of the possible impacts of the preferred and optional T-line routes on the human resources in the study area can be found in Section 4.0.

2.2.1 Community Background

The proposed ROW runs from near Redfield to Pine Bluff. Redfield is located adjacent to the west bank of the Arkansas River approximately 23 miles south of Little Rock and approximately 18 miles northwest of Pine Bluff. Interstate-530 is the main roadway connecting the community to the Little Rock metropolitan area. Highway 365 runs north to south, connecting both areas. Most residents (96%) in Redfield commute out-of-town for work. The mean drive time for commuters is 28.9 minutes (http://www.city-data.com/city/Redfield-Arkansas.html).

The proposed project area passes through White Hall, Arkansas as it runs to the southeast. White Hall is located 38 miles south of Little Rock and approximately 3 miles northwest of Pine Bluff. As with Redfield, Interstate-530 and Hwy 365 are the main roadway's connecting the city to Little Rock and Pine Bluff. The average commute lasts 22 minutes, with 96.4% of residents traveling out of town for employment (www.city-data/city/Pine-Bluff-Arkansas.html).

Pine Bluff is the 3rd largest population center in Arkansas. Pine Bluff sits along the Arkansas River approximately 40 miles south of Little Rock. U.S. Highway 65 bisects Pine Bluff from the east to west. Interstate-530 is the primary highway utilized by commuters from Pine Bluff to the City of Little Rock. The majority (83.4%) of people in Pine Bluff commute to work alone by car, truck, or van (U.S. Census Bureau). The average drive time for people commuting in Pine Bluff is 18.9 minutes and over 6,700 people are commuting out of Pine Bluff during the day for work. Pine Bluff has been nicknamed the 'Bass Capital of the World' due to the success of bass fishing on the nearby Arkansas River. The city is home to several institutions of higher learning, such as the University of Arkansas-Pine Bluff, Jefferson Regional Medical Center School of Nursing, and Southeast Arkansas College.

2.2.2 Socioeconomic Patterns

Population

Redfield is located in Jefferson County, Arkansas. As of 2011, the population of Redfield is 1,297 (Figure 3). The population is primarily Caucasian (92%), followed by African-American (5%).

White Hall is also located in Jefferson County, with a population of 5,516 (Figure 4). Residents of White Hall are predominantly Caucasian (93%), followed by African American (5%) (Figure 4).

Pine Bluff is also located in Jefferson County and has population of 49,009 as of 2011 (Figure 5). The population is predominantly African American (75%) with a Caucasian minority (21%). Portions of Pine Bluff and the suburban area of Watson Chapel are located in and adjacent to the study area.

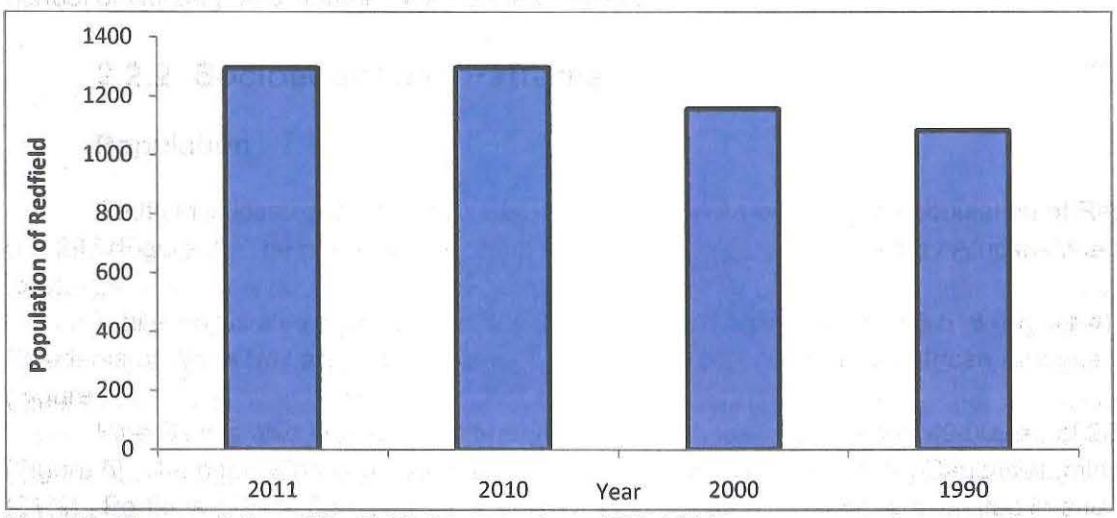

Figure 3. The population of Redfield, Arkansas from 1990-2011.

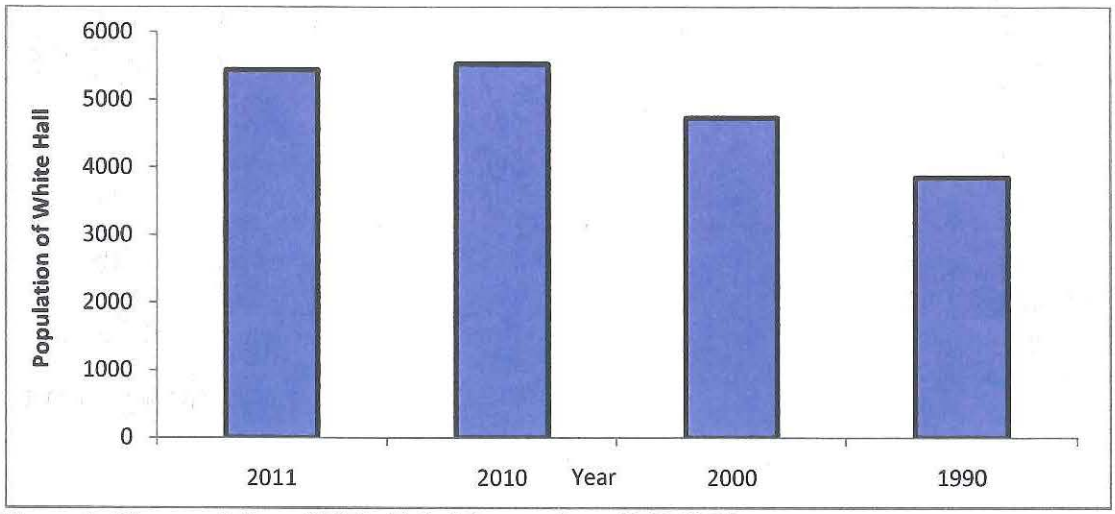

Figure 4. The population of White Hall, Arkansas from 1990-2011.

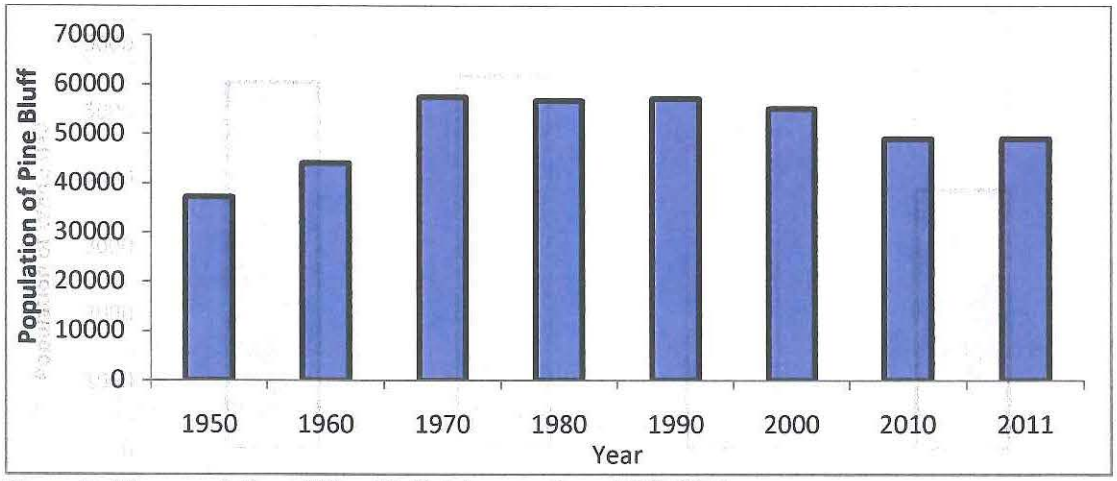

Figure 5. The population of Pine Bluff, Arkansas from 1950-2011.

Housing

Each of the three optional new T-line routes run from Redfield into Pine Bluff. Electricity is the primary source of heat in most homes in Pine Bluff as of 2007.

The median home value in Redfield Arkansas is $99,572 with an average household size of 2.5 individuals. The majority of homes (70.3%) consist of a single or dual parent family. The average income for a family household in Redfield is approximately $36,302/year.

The majority of homes in White Hall are single-unit, detached homes (Table 2). The majority of these homes (29.2%) are valued between $100,000 and $149,999. Average household size is 2.8 residents with an average family household consisting of 3.0 individuals. The average income for a household in White Hall is approximately $74,967/year.

The majority of homes in Pine Bluff are single-unit detached homes (Table 3). A large percentage of the homes in Pine Bluff (41.8%) are valued between $50,000 and $99,999, while 34.4% are valued at less than $50,000. Average household size is 2.6 and average family

household is 3.4. The average income for a family household in Pine Bluff is approximately $43,386/year.

Table 2. Housing units in structure in the city of White Hall.

Housing Units in Structure*	Number*	Percent*
1-unit, detached	*1,609*	78.9%
1-unit, attached	*38*	1.9%
2 units	*42*	2.1%
3 or 4 units	*55*	2.7%
5 to 9 units	*63*	3.1%
10 to 19 units	*27*	1.3%
20 or more units	*10*	0.5%
Mobile home	*160*	7.8%
Boat, RV, van, etc.	*35*	1.7%
* Data taken from U.S. Census Bureau from 2007-2011 American Community Survey, with 2,039 total housing units.		

Table 3. Housing units in structure in the city of Pine Bluff.

Housing Units in Structure*	Number*	Percent*
1-unit, detached	15,232	71.6%
1-unit, attached	376	1.8%
2 units	853	4.0%
3 or 4 units	883	4.2%
5 to 9 units	1,006	4.7%
10 to 19 units	1,128	5.3%
20 or more units	787	3.7%
Mobile home	1,004	4.7%
Boat, RV, van, etc.	0	0%
* Data taken from U.S. Census Bureau from 2007-2011 American Community Survey, with 21,269 total housing units.		

Employment

Specific employment statistics for Redfield were not available. The unemployment rate in the area was 9.0% in March 2012.

The leading employers of residents of White Hall are area schools, Jefferson Regional Medical Center, and other social assistance positions. Other workforce areas occupied by the majority of White Hall residents include retail trade and public administration (Table 4).

Many residents of both Redfield and White Hall commute to Pine Bluff for work. Historically agriculture was the primary source of income for the workforce of Pine Bluff. The leading products in agriculture have been cotton, soybeans, cattle, rice, poultry, timber, and catfish. Recently, Pine Bluff has shifted to an industrial and service oriented economy which includes educational and medical services, cotton processing, wire products, poultry processing, electric transformers, paper and wood products, and metal fabrication (Table 5). Pine Bluff has two paper mills within the area which employ significant numbers of people. Other major employers are Jefferson Regional Medical Center, Simmons First National Bank, Tyson Foods, the Pine Bluff Arsenal, and the Union Pacific Railroad (Pinebluff.com).

Table 4. Employment statistics for the city of White Hall, Arkansas as of 2011.

Occupation	Percentage of people employed for 16 years and over
Agriculture, forestry, fishing and hunting, and mining	0.8%
Construction	2.2%
Manufacturing	5.8%
Wholesale trade	1.5%
Retail trade	16.0%
Transportation and warehousing, and utilities	7.0%
Information	1.1%
Finance and insurance, and real estate and rental and leasing	9.4%
Professional, scientific, and management, and administrative and waste management services	8.8%
Educational services, and health care and social assistance	20.5%
Arts, entertainment, and recreation, and accommodation and food services	9.3%
Other services, except public administration	4.2%
Public administration	13.3%

Table 5. Employment statistics for the city of Pine Bluff, Arkansas as of 2011.

Occupation	Percentage of people employed for 16 years and over
Agriculture, forestry, fishing and hunting, and mining	0.5%
Construction	3.3%
Manufacturing	15.7%
Wholesale trade	1.7%
Retail trade	12.1%
Transportation and warehousing, and utilities	3.5%
Information	1.4%
Finance and insurance, and real estate and rental and leasing	3.2%
Professional, scientific, and management, and administrative and waste management services	5.8%
Educational services, and health care and social assistance	31.2%
Arts, entertainment, and recreation, and accommodation and food services	7.7%
Other services, except public administration	3.4%
Public administration	10.6%

2.2.3 Historical Resources

Panamerican Consultants conducted a cultural resources literature and records search for the proposed project area. The goal of the research was to identify all known cultural resources within the study area and develop a sense of unknown cultural resources that may exist within the study area. The research concluded that there are 65 previously recorded sites located within the proposed project area (Appendix C), of these sites, 6 are listed in the National Register of Historic Places (NHRP), 32 of the sites are not eligible for listings in the NRHP and require no further archaeological management action, and the other 32 sites should be avoided by any proposed work as they have undetermined NRHP statuses, unreported statuses, or are eligible for listing in the NRHP. Thirteen state structures within the project boundaries are listed in the Arkansas Historic Preservation Program (AHPP). A copy of the Panamerican report is provided in Appendix C. Additionally, a Phase I survey was completed on the proposed route and no new sites of significance were discovered (Appendix C).

3.0 EVALUATION OF ALTERNATIVES AND PREFERRED ROUTE SELECTION

3.1 Optional Routes Determination

The Arkansas Public Service Commission (APSC) required that GBMc & Associates (GBMc) developed a multi-route system consisting of three T-line corridors between the Woodward Substation and White Bluff Substation. Corridors A, B, and C can be viewed in Figure 6. Each corridor contained potential routes for the new T-line. The goal was to establish a preferred route and two optional routes. These preliminary routes were selected via a desktop review of aerial photographs (Google Earth), topographic maps, and National Wetland Inventory (NWI) maps. The primary focus of route selection was to avoid environmental and socioeconomic obstacles to the extent practicable. Routes were selected by following/paralleling natural pathways such as property lines, wood lines, field lines, fence lines, trails, roads and existing T-lines to limit impacts to private property and agricultural/silviculture. Other factors that played a significant role in route selection involved avoidance of residential areas, archeological sites, airports/landing strips, wells, wetlands, cropland, open water and radio towers. T-line directional changes (large angles) were also avoided to the extent practicable.

Once three possible route corridors were established, multiple route pathways in each corridor were established. Each route pathway was broken up into smaller segments and numbered (Figure 6). Route segments were developed to allow short sections to be evaluated independently of the entire route. Segments were selected to avoid constraints (social and environmental obstacles) and take advantage of opportunities (such as open fields) to the extent practicable. Adjustments to segment positions were made based on the parameters listed above. In addition, major road crossings, stream crossings, forest clearing and routes near residences were minimized, to the extent practicable. Final numbered segments allowed for the concise examination of specific routes. Segments were numbered by starting at the Woodward Substation and numbering in an ascending fashion to the White Bluff Substation, within each corridor. Corridor A was numbered as a 100 series with 31 segments, Corridor B was numbered as a 200 series with 37 segments and Corridor C was numbered as a 300 series with 34 segments. Numbered segments can also be viewed in Appendix F.

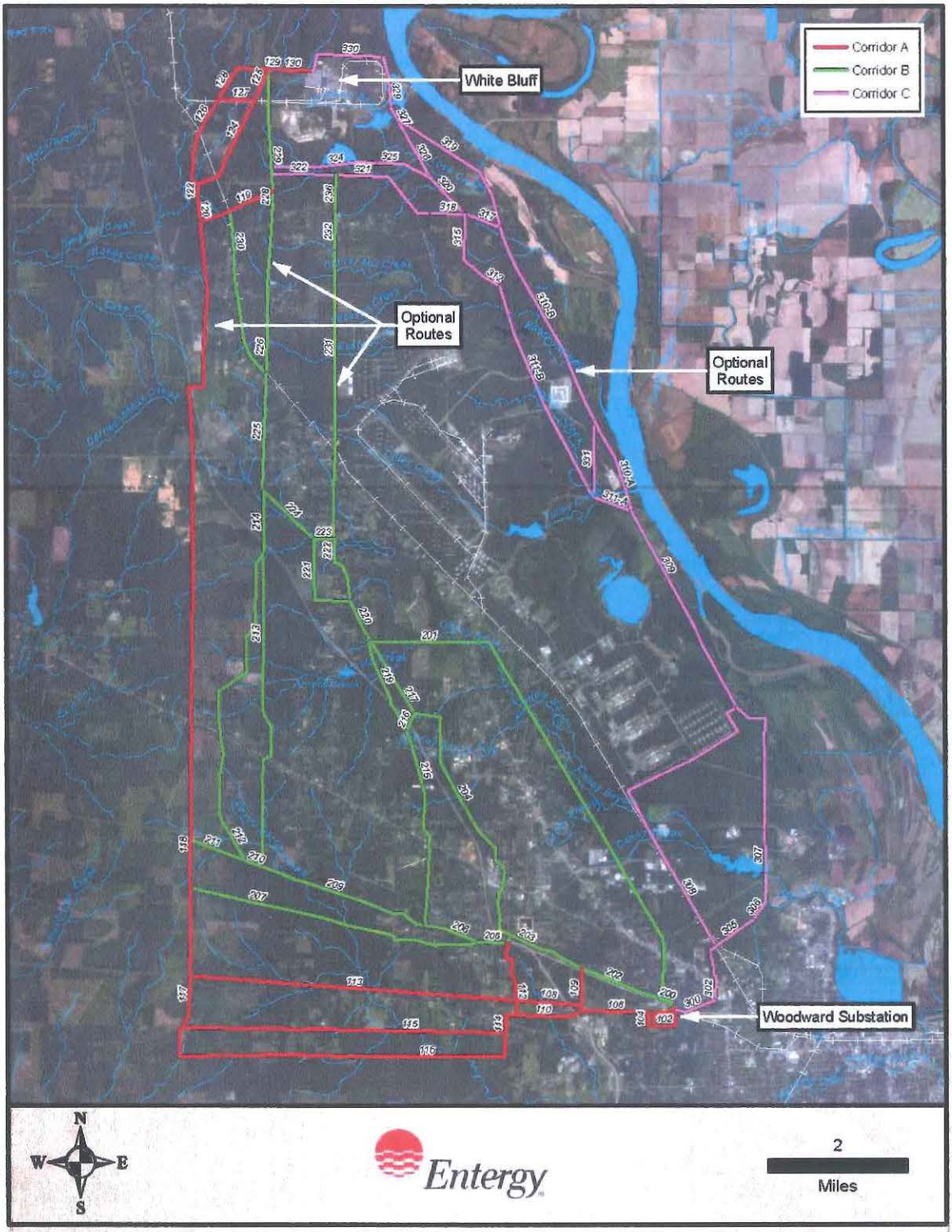

Figure 6. Route/Segment options with segment numbering.

3.2 Decision Support Matrix

GBMc developed a Decision Support Matrix to aid in quantifying constraints for each of the segments. The matrix evaluated each segment independently according to 28 parameters. The detailed data for each segment is found in the Decision Support Matrix which is provided in Appendix F. Parameters were selected based on requirements of the APSC and were designed to encompass the complete scope of each segments impact in the region. Parameters were divided into three categories: Engineering, Socioeconomic, and Environmental/Land Use. Many parameters are based on the proximity of environmental or social factors to the proposed line segment.

Engineering parameters consist of:

- T-line total length,
- total major T-line angles,
- length of new cleared (deforested) ROW,
- T-line adjacent to existing ROW,
- major T-line crossings,
- T-line adjacent to road,
- number of road crossings,
- number of major highway crossings,
- number of trail/driveway crossings, and
- number of railroad crossings.

Socioeconomic parameters consist of:

- number of residences within 50 ft,
- number of residences between 51-200 ft,
- number of residences between 201-300 ft,
- length of T-line in residentially developed area,
- length of T-line in non-residentially developed area,
- number of airports/airfields within 1,350 ft,
- distance in/across agricultural field,
- number of wells within 200 ft,
- number of historical sites within 500 ft,
- number of commercial/industrial structures within 100 ft, and
- number of radio/cell towers.

Accounting of residences out to 300 ft from the T-line compared to only 100 ft for industrial/commercial structures places a higher importance on avoidance of homes.

Environmental/Land Use parameters consist of:

- estimated distance (T-line length) in known forested wetlands,
- estimated distance in non-forested wetlands,
- distance in the US Army Pine Bluff Arsenal (PBA),
- number of navigable river crossings,
- number of perennial stream crossings,
- number of intermittent/ephemeral stream crossings, and
- distance in floodplains.

3.3 Public Involvement

Public involvement was included in the Routing Study. GBMc delivered a topographic map of the proposed project to the local newspaper and provided information about an open house that was scheduled for February 5, 2013 at the Reynolds Community Center in Pine Bluff. Letters describing the project including a map of the proposed routes were sent to local government officials and to land owners adjoining the optional lines to inform them of the project and invite them to the open house. The public was provided questionnaires to document any concerns about the proposed project and any segment in particular. Notable officials from EAI and GBM[c] were present at the open house to field questions and comments. Detailed information about the project as well as general information about typical activities associated with T-line construction, operation, and maintenance was presented on an individual basis for those attending. Large scale aerial and topographic maps were displayed as a visual aid during the meeting. Additionally, a brochure was distributed which provided details about the project, general construction practices associated with building a T-line, a projected schedule, and considerations and steps in selecting the preferred route.

The Jefferson County Judge and the City of Pine Bluff Mayor's office were also contacted independently via phone and email to solicit comments and concerns. None were received. The mayor of White Hall was contacted by phone and expressed that Corridor A and B was not promising and that Corridor C should be used.

Thirty-seven (37) surveys were submitted by the public on this project. Comments varied but were mostly related to concerns with proximity to residences or loss of property usefulness. Survey results are provided in Appendix E. Two meetings have been held with the Pine Bluff Arsenal (PBA) to evaluate the feasibility of Route C, which runs through Department of the Army property. Discussions with the United States Army Corps of Engineers (USACE) Little Rock District Real-Estate Office (which handles Army land issues) have also been held to determine steps required for approval to utilize PBA land for the new transmission line. PBA is open to the possibility of the transmission line being constructed partially on PBA property. However, there are three concerns they have raised which make routing through the PBA problematic.

1. Timing. It will take the Department of Defense (DOD) more than a year to achieve a final yes or no on the project.
2. Access to the property will be controlled by special pass only. Construction personnel and future maintenance staff will require special passes to access the line on PBA property.

3. Construction of the proposed Corridor C runs through areas of the PBA which could contain unexploded ordinance. Special precautions will be required during construction of the line.

3.4 How Segments Were Eliminated/Forcing Issues/Entities

Segments were evaluated and some eliminated prior to the open house based on redundancy and impracticality. Generally, two segments that had equal impacts and ended at the same location were evaluated and the longer and more angled of the two were eliminated as options. Segments with no obvious benefit socioeconomically or environmentally may have also been eliminated if they did not follow a natural course of constructability. Segments 227, 233, 234, 235, 313, 314, 316, 323, and 328 were eliminated using these methods. Segments remaining in each corridor were presented as route options at the open house.

Discussion and comments received during the open house meeting were taken into consideration which triggered manipulation of five of the segments. Segments 116 and 117 were shifted west at the Princeton Pike crossing to avoid residences and transecting two properties. Segment 118 was manipulated in three separate areas. The first area is located between Stagecoach Rd. and Woodland Rd. This shift was due to the fact that Entergy is not able to share the ROW with a gas pipeline. The segment was shifted west enough so that the T-line ROW abuts the gas pipeline ROW. The second area is located off Wishbone Farm Rd. This shift was due to a radio tower guy wire and residence pinch point. The ROW was not able to be located between the two obstacles. A site visit revealed that the landowner preferred the segment be located between his chicken houses and residence following an existing distribution line. The landowner had plans to expand his chicken business to the west of the existing chicken houses so a shift to the west was not good for the landowner. The third area is located at the Highway 270 crossing. This shift was to straighten the segment to avoid unnecessary angles. The original segment avoided a residence that was later found to be uninhabited after a site visit. Segments 124 and 125 were shifted south to move the location of a 500 kV T-line crossing closer to the White Bluff property.

After the open house, and public input received as a result of the open house, the Decision Support Matrix was used to evaluate segments. Each of the parameters identified for the Decision Support Matrix were assigned a numeric value typically representing a linear length or a number count. In the absence of public comment on a specific segment, segments were eliminated by the matrix score alone. All matrix parameters were initially weighted equally (considered of equal importance). In an effort to ensure the matrix parameters would be weighted evenly all values were normalized to a scale of 0-10. Normalization was accomplished by dividing each value by the maximum value in that category then multiplying by ten. This allowed values in each category to remain proportional to one another, but put all parameter values into the same scale. A large number of surveys included comments expressing the need to avoid residences or home sites. As a result this was weighted heavier in the matrix. Residences were weighted 1.5 times greater to emphasize importance to the community. Also, due to the problems encountered on PBA property should Route C be selected, distance on PBA land was weighted 3 times greater. Lower matrix scores indicate fewer constraints.

Parameter scores that reflect beneficial elements (running parallel to roads for example) were subtracted from the total score and negative parameters (obstacles and challenges) were added to the total score. Where multiple segments allowed access to the same location the lower scoring segment received priority. This process was repeated, eliminating the higher scoring segments, until only three possible routes remained (one in each corridor). The Segment Summation Matrix can be viewed in Appendix F. After segment selection in each corridor was complete, final route lengths were 121,089 feet for Route A, 90,998 feet for Route B, and 95,222 feet for Route C. Segments present in each route, matrix scores, and length of each segment are shown in Tables 6 through 8.

Table 6. Segments, matrix scores, and segment lengths along Route A.

Route A		
Segment	**Score**	**Length (ft)**
100	4.12	556
101	7.03	1544
105	1.04	391
106	10.45	4974
110	16.63	4956
114	14.67	2191
116	49.23	28495
117	11.43	3994
118	90.68	57588
120	1.03	1904
122	2.13	894
124	18.42	8116
125	6.40	2451
129	0.39	547
130	13.76	2488
Sum	**247.43**	**121089**

Table 7. Segments, matrix scores, and segment lengths along Route B.

Route B		
Segment	**Score**	**Length (ft)**
200	20.12	1268
201	142.26	39211
218	-0.03	452
220	4.50	2952
221	18.41	7264
224	13.13	5239
225	24.41	8747
226	29.21	12839
228	2.83	866
229	33.71	9125
129	0.39	547
130	13.76	2488
Sum	**302.69**	**90998**

Table 8. Segments, matrix scores, and segment lengths along Route C.

Route C		
Segment	**Score**	**Length (ft)**
300	16.70	3304
301	9.84	2304
303	8.62	4503
306	7.50	1682
307	56.65	16172
309	56.74	16643
311-A	16.74	3065
331	22.65	5711
310-B	30.66	17413
317	4.23	2891
320	5.02	3800
326	9.31	3820
327	4.27	2141
329	3.64	3794
330	15.63	7979
Sum	**268.19**	**95222**

3.5 Preferred Route Selection Summary

A preferred route and two optional routes resulted from the final segment evaluation and elimination (Figure 5). A route from each corridor was selected based on the lowest combined segment scores in that corridor that achieved a complete T-line between the Woodward Substation and the White Bluff Substation. Corridor A's route will be referred to as Option A (Segments 100, 101, 105, 106, 110, 114, 116, 117, 118, 120, 122, 124, 125, 129, and 130), Corridor B's route as Option B (Segments 200, 201, 218, 220, 221, 224, 225, 226, 228, 229, 129, and 130) and Corridor C's route as Option C (Segment 300, 301, 303, 306, 307, 309, 311-A, 331, 310-B, 317, 320, 326, 327, 329, and 330). A final route map from Corridor A, B, and C can be viewed in Appendix F. Route B scored the highest with a sum of 302.69, Route C scored in the middle with 268.19, and Route A scored the lowest with 247.43, making it the most feasible to construct. A summary of each routes score in key environmental and socioeconomic categories is provided in Table 9. Final lengths for Routes A, B, and C were 121,089 feet, 90,998 feet, and 95,222 feet, respectively.

Route A was selected as the preferred route due to its lower score which is largely based on the fact the route avoids the PBA and passes through mostly timber company land, which avoids many other constraints (particularly proximity to residences and historical sites). This route passes through pine stands with sandy soils that contain minimal wetlands. Routes B and C were selected as optional routes. Route A matrix data can be viewed in Appendix F.

Table 9. Summary of Key Attribute Scores.

Total Weighted Scores							Total Score
Route	Number of Residences within 200 ft	Number of Historical Sites within 500 ft	Length in forest (ft)	Number of perennial stream crossings	Distance in wetlands (ft)	Number of commercial structures within 100 feet	All 28 Parameters
A	13.33	0.00	18.71	12.00	1.67	11.82	247.43
B	54.98	2.50	12.02	12.00	11.75	16.36	302.69
C	3.84	17.50	14.02	16.00	8.12	2.73	268.19

4.0 ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT AND PREFERRED ROUTE A

4.1 Natural Resources

- **Hydrology** - Construction and operation of the preferred route (Route A) will have no permanent adverse impacts to hydrology. The ROW will cross Bayou Bartholomew in six locations and unnamed tributaries of Bayou Bartholomew in five locations, unnamed tributaries of Caney Bayou in five locations, unnamed tributaries of Johnson Creek in four areas, unnamed tributaries of Stokes Creek in two areas, unnamed tributaries of Tar Camp Creek in two locations, and Simpson Creek in one location. These waterways are narrow and will be easily spanned. Best management practices (BMP's) and a storm water pollution prevention plan (SWPPP) will be utilized to ensure the streams and waterways within the project area are not adversely affected by sediment during construction.
- **Vegetation** - Disturbance and loss of vegetation will result from the construction and operation of the preferred route. Construction of the 120 ft wide ROW will require the clearing of approximately 281 acres, consisting mostly of pine stands.
- **T&E Species** - Three Jefferson County species are registered on the federal list of endangered species, and one plant species in Jefferson County is listed as threatened in the State of Arkansas. The interior least tern (*Sterna antillarumathalassos),* the bald eagle, *(Haliaectusleucocephalus)* and the Florida panther *(Felisconcolorcoryi)* are listed, but do not occupy a habitat that is located within the preferred route. The rose pogonia (*Pogoniaophioglosoides)* also known as the snakemouth orchid, is threatened in the State of Arkansas. The USFWS has issued a T&E clearance letter for this project (Appendix D) indicating they do not believe the project would have any impact on trust resources.
- **Wetlands** - The National Wetlands Inventory provided by the USFWS identifies eight small wetland polygons in the preferred route ROW. All but two of these wetlands fall under the Palustrine classification, which are non-tidal wetlands such as freshwater marshes or swamps totaling 3.9 acres. Two polygons are under the Riverine classification, which mainly includes all wetland and deep water habitats contained within a channel totaling 0.17 acres. Wetland polygons noted are five Palustrine Forested wetlands, one Palustrine Unconsolidated Bottom wetland, one Riverine Intermittent, and one Riverine Lower Perennial. Physical inspection of the preferred route will be carried out by GBMc personnel in order to assess soils and vegetation in areas that may not be included in the National Wetlands Inventory. A detailed Jurisdictional Determination report will be prepared and submitted to the U.S. Army Corps of Engineers along with appropriate preconstruction notification prior to project initiation.

  To minimize impacts to wetlands, the line will avoid or span wetland areas to the extent practicable. The spacing of poles will avoid or minimize placement in wetlands.

Appropriate permits from the U.S. Army Corps of Engineers will be obtained and complied with for any work activities within wetlands or other jurisdictional waters.

- **Wildlife** - Temporary displacement resulting from disturbance during line construction will likely be the most common occurrence. Based on the approximate 120 ft wide clearing of the ROW, approximately 281 acres of forest habitat will be converted to grassland or scrub/shrub habitat.

4.2 Human Resources

- **Population** - The installation of the new T-line along the preferred route will not directly result in a change in population size or demographics in the area. Construction is expected to be completed in under a year with workers likely commuting instead of relocating to the area. The local residents, businesses, and industries will all benefit from the increased reliability of the electrical infrastructure provided by the proposed project.
- **Employment and Income** - There will be no significant effect on employment and income in the preferred route area by the construction and operation of the line. Workers will likely commute to and from the work site on a daily or weekly basis. The purchases of lodging, food, fuel, and other merchandise by the workers may result in a slight increase in retail sales in the general vicinity of the project.
- **Urban/Residential Areas** - The preferred route runs through several residential areas near the City of Redfield and through the City of Pine Bluff. Two residences occur within but on the edge of the ROW and twenty-one residences occur within 51-200ft of the ROW centerline. Thirteen residences occur within 201-300ft of the ROW centerline. Thirteen shops/commercial facilities exist within 100 ft of the ROW centerline. The residences nearby will experience temporary short term impacts from construction activities, such as dust, traffic, and noise disruption.
- **Cultural Resources** - There are no known sites that lie within or near the proposed ROW and all reasonable measures will be taken to avoid or minimize impacts to these sites. A Phase I cultural resources field survey was completed on the proposed route and no significant sites or issues were revealed. A request for site clearance was submitted to the Arkansas State Historic Preservation office (SHPO). The SHPO determined no additional field work was required. Any new sites discovered during construction will be avoided and/or protected as necessary.
- **Recreation** - No recreational facilities will be adversely impacted by the construction and operation of the line on the preferred route.
- **Transportation and Utilities** - The preferred route has 35 road crossings, including 4 highway crossings. It also has 34 trail/driveway crossings. Construction for this T-line may occasionally slow traffic, but this is short term and temporary. Driveway permits with the Arkansas Highway Department will be obtained where needed. This includes the installation of stabilized entrances/exits wherever vehicles and equipment will be entering the ROW from roadways.

5.0 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

5.1 Natural Resources

Unavoidable adverse effects to natural resources are generally associated with the additional land clearing required for the new ROW and the construction of the project including ROW access. Specific natural resources affected are listed below.

1. Land clearing activities are required to construct the ROW. ROW widths are established by the National Electrical Safety Council in Section 23 of the code. Entergy construction practices meet or exceed this standard. The construction of the ROW will require that some forested areas be cleared. Clearing of forest area will have the following impacts:
   - Soil loss caused by the erosive properties associated with soil disturbance
   - Loss of forest and conversion to grass or scrub/shrub habitats
   - Loss of forest habitat for wildlife
   - Loss of forested wetland as wetland is converted from forested to emergent wetlands
2. Wildlife may experience temporary disturbance while the project is being constructed. Once the project is complete wildlife habits will return to normal over time.
3. Water quality in Simpson Creek, Bayou Bartholomew, and in unnamed tributaries of Bayou Bartholomew, Caney Bayou, Johnson Creek, Stokes Creek, and Tar Camp Creek may be temporarily affected by surface runoff from the construction site. Disturbance would be primarily in the form of minor sedimentation, which will be minimized through use of soil and erosion control best management practices (BMP's) and implementation of the storm water pollution prevention plan (SWPPP).
4. Impacts to the avian community include some loss of habitat as a result of the land clearing necessary to install the ROW. Avian mortality due to electrical line collisions will continue to be a possibility.

5.2 Human Resources

Unavoidable adverse effects to human resources will be mostly associated with the land clearing required for the new ROW and the construction of the project including ROW access. Specific human resources potentially affected are listed below.

1. Land clearing activities near residences will have the most effect on human resources. The ROW clearing will require that trees adjacent to some residences

be cut down or trimmed. Loss of these trees and the associated encroachment of the T-line ROW will have the following impacts:

- Reduced aesthetic features
- Reduction in shading of home and/or property
- Loss of property usability options within new ROW

2. Construction of the project will require access to the ROW in multiple locations and the use of large construction equipment such as dozers, excavators, dump trucks and cranes. The construction phase of the project will have the following impacts which are all temporary:
   - Increased noise in and near the ROW
   - Increase in traffic in the project area
   - Increase in dust in and near the ROW
3. Cultural/Historical resources will receive minimal impacts as a result of the project. All cultural and historical resources within the project area will be avoided to the extent practicable.

6.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Once this project has been completed there are certain resources that cannot be recuperated. A discussion of these resources is provided below.

Natural Resources

1. Loss of forest will occur due to clearing of the ROW. Although, if the project was abandoned and given enough time the forest will regenerate.
2. Loss of forest habitat for wildlife in areas forest is cleared.
3. Loss of timber land available for harvest and sale.

Human Resources

1. Loss of man hours spent for project construction.
2. Loss of materials used for construction.
3. Loss of operation and maintenance costs for equipment used during construction.

7.0 RECOMMENDED MITIGATION MEASURES

Construction projects that require soil disturbance generally have some level of associated environmental and socioeconomic impacts. These impacts can be mitigated through careful project planning and implementation. The key to mitigating project impacts is focused in two areas: (1) avoidance of critical areas and (2) minimization of the construction footprint (area

of land disturbance). The following section describes the mitigation measures recommended for this project.

Natural Resources

Mitigation for land clearing impacts will center around the SWPPP. The SWPPP for the project will govern how construction activities on the site are conducted and what best management practices are utilized to prevent soil erosion and sedimentation. The SWPPP will include guidelines for:

- Construction staging,
- Soil stabilization BMP's,
- Sediment control BMP's, and
- Vegetation replanting and mulching.

Water quality impacts will also be mitigated largely by the SWPPP. The soil and erosion control BMP's will be designed for protection of water quality with a focus on reduction and/or elimination of sedimentation into streams and wetlands. In addition, stream side buffer zones will be left intact to a width of at least 25 ft where possible. Where the ROW intersects streams in forested areas, trees will be removed, but shrub habitat and herbaceous cover will be left intact along the stream side buffer zone.

Wetlands will be impacted along the ROW, but impacts will be minimized to the extent practicable. Where forested wetlands occur in areas of the ROW that require expansion of width, the trees will have to be removed converting the wetlands to emergent wetlands in these areas. No changes to topography will occur. The conversion (wooded wetlands to emergent wetlands) impacts will be offset through purchase of wetland mitigation credits from an approved mitigation bank. Construction mats will be used when heavy equipment usage is required in wetlands. Placement of T-line poles will be determined in an effort to avoid placement in wetlands to the extent practicable. Where placement of a pole in a wetland is unavoidable the impacts will be offset through purchase of mitigation credits.

Threatened and endangered (T&E) species are not believed to be a concern in the project area. The USFWS provided a clearance letter for this project (Appendix D). Therefore, no specific mitigation measures are required for T&E species.

Avian deterrent features will be placed on the lines at designated intervals to deter birds away from the lines. Placement of these deterrents will limit avian mortality.

Human Resources

Land use impacts are mitigated by minimizing the construction footprint. Clearing of forested land and large trees in the ROW near residences will be avoided and minimized to the extent practicable. Access, in most areas, will be limited to the duration of the construction project. However, long term access at select locations will be required for future maintenance needs.

Permits for road crossings, utility crossings and drive way access to the ROW will be acquired where necessary. The SWPPP will outline BMP's required for crossing road side ditches and construction entrances.

There are minimal impacts to cultural or historical resource sites on this project. These resources have largely been avoided through selection of the existing T-line ROW for the project. A Phase I cultural resources field survey was completed and revealed no new significant sites or issues near the T-line ROW. Any new sites discovered during construction, or any T-line encroachment on existing sites, will be avoided as necessary.

Summary and Conclusions

This project will have a moderate impact on local natural resources or human resources.

- Impacts have been minimized through careful selection of the T-line route.
- Soil erosion and water quality impacts will be minimized through adherence to the SWPPP
- Wetland impacts will be minimized through use of construction mats, which will be used when heavy equipment usage is required in wetlands.
- Residences have been avoided thorough selection of a route that is mostly rural. Where the line crosses near homes, adjustments have been made to minimize impacts.
- There are no significant cultural resources identified within the T-line corridor. All cultural resources within the proposed project area will be avoided to the extent practicable and all impacts will be minimized.

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*Watershed Assessment, Tracking, and Environmental Results http://ofmpub.epa.gov/tmdl_waters10/attains_watershed.control?p_huc=11110207&p_state=AR&p_cycle=2008&p_report_type=

Appendix A
Project Description

Entergy Arkansas, Inc.
Public Open House

February 5, 2013

Donald W. Reynolds Community Center
211 West 3rd Street, Pine Bluff, AR

4 – 7 P.M.

Proposed White Bluff to Woodward
230 kV Transmission Line

Improved Electrical Reliability in Southeast Arkansas

The areas in southeast Arkansas which include the Pine Bluff metro and the communities in Jefferson County have been very successful at continuing to expand existing economic infrastructure as well as promoting new business for the region. Entergy Arkansas, Inc. is pleased to be a part of this success by providing efficient and reliable electricity to industrial, commercial, agricultural, and residential customers that meets the region's needs today and for years to come. To support continued reliability of the system, it is necessary to periodically build new structures and upgrade existing electrical facilities to carry power from where it is generated to where it will be used.

Entergy Arkansas Inc. is planning to construct a new transmission line and upgrade existing transmission lines to 230 kV within the southeast Arkansas region. The current project consists of constructing a new 230 kV transmission line between two existing substations in Jefferson County. The new line, approximately 17 miles in length, will extend between the existing White Bluff

Substation near Red Field and the Woodward Substation in Pine Bluff. Woodward Substation is located at 5201 W. Barraque Street in Pine Bluff. The proposed new transmission line will have highly efficient and reliable terminal facilities consisting of circuit switching and protective relaying devices at the existing substations. These new and upgraded 230 kV facilities will enhance voltage levels and service reliability to all the areas in Pine Bluff and to Jefferson, Desha, Chicot and Arkansas Counties.

Why Are the Transmission Line and Substation Improvements Necessary?

Demand for energy in the southeast Arkansas area is projected to continue to grow. The present transmission infrastructure is insufficient to accommodate the required voltage levels and existing demand under certain contingencies in addition to the current growth rate projections. These contingencies cause low voltages and thermal overloads throughout the southeast area. This project is necessary to provide continued reliable electric service and voltage stability in the southeast region of Arkansas.

Specifically, the 230/115 kV Woodward Substation is a major substation in the Pine Bluff area and under certain contingencies, transmission low voltages occur in the 115 kV transmission network in Pine Bluff and south along the extremely long 115 kV lines connecting to the 230 kV source at Lake Village. A bus-tie breaker fault or stuck bus-tie breaker at Woodward will clear the entire 115 kV bus causing major outages for the area. Loss of the single 115 kV north bus at Woodward causes the 115 kV line from White Bluff to Arsenel 'D' to Woodward to over load, which also causes low voltages in Pine Bluff that extend to the Camden, Monticello, and Dumas areas. The benefits of this project include not having to shed the load at risk in the event that contingencies occur during peak loading conditions and to alleviate the anticipated violation of North American Electric Reliability Corporation Planning Standards.

What Transmission Line Improvements Are Needed?

The company plans to build a new, approximate 17-mile, 230 kV line from the White Bluff Substation to the Woodward Substation which will involve purchasing new right-of-way. The proposed project will consist of rebuilding the Woodward Substation which includes converting the 230 kV switchyard to a ring-bus design and redesigning the 115 kV bus at the station. The company will be using the latest and most highly efficient and reliable technology available in the industry for the new transmission line and switchyard which includes 230 kV polymer braced post insulation, 1200 ampere current carrying conductors, single modular steel pole structures, and installation of an optical fiber communication system for protective switchgear and transmission line relay operations at each terminal substation. The overall project facilities will provide a much needed and upgraded 230 kV transmission source that will furnish back-up power and maintenance capability to the area through substations located in Pine Bluff, Watson Chapel, Monticello, McGehee, Stuttgart, Helena and Lake Village, which substations connect directly or indirectly with the generation plants - White Bluff Steam Electric Station near Red Field, Ritchie Steam Electric Station at Helena, Gerald Andrus Steam Electric Station at Greenville, Mississippi, and the AECC Dam #2 Hydro Electric Station on the Arkansas River. These improvements will protect the southeast Arkansas area from potential

under-voltages and thermal overload problems that would result from the loss of a single line contingency, and also will facilitate needed periodic maintenance outages to the existing Entergy Arkansas transmission system.

This project is being coordinated with an overall expansion of the transmission facilities for southeast Arkansas that include:

- Expanding existing southeast Arkansas substations to tie with 230 kV sources and installing a new 115 kV transmission line between AECC Dam #2 Hydro Generation Station to Gillett;
- Constructing new 230 kV transmission lines to link substations at Lake Village, Reed, Monticello, Watson Chapel, and Woodward; and
- Constructing and/or redesigning new 230 kV switching stations at White Bluff, Reed and Lake Village.

Transmission Line Route Selection Process

In choosing a transmission line route and related facilities, Entergy Arkansas considers several factors, including:

- Input from our customers, area residents, and community leaders;
- Proximity to existing transmission lines, other utilities, and related facilities;
- Proximity to the customers and to the electrical load centers being served;
- Construction costs - terrain, areas of congestion, ease of access, and length of the line all affect construction costs;
- Price of the land - both the land on which the terminal substation facilities are to be expanded and any new transmission line right-of-way that must be purchased. All land and construction costs become part of the rate base and are, therefore, eventually paid by all Entergy Arkansas customers;
- Aesthetic considerations and other environmental factors. We prefer to place substation facilities where they are not highly visible and we try to minimize impacts on the environment;
- We try to use existing manmade and natural corridors, property boundaries, and field edges where economically feasible and electrical reliability is not unduly penalized, and
- These considerations are consistent with rules of the Arkansas Public Service Commission, which require the company to include in its evaluations: cost, health and safety, engineering and technical concerns, ecological/environmental disruptions, disruptions to existing and planned manmade property uses, and aesthetics.

Entergy Arkansas Typical 230 KV Transmission Line Structure

Transmission Line and Right-of-Way Considerations

Entergy Arkansas intends to make improvements in collaboration with community members and key leaders. All final decisions regarding new transmission line facilities will be made only after considering public input through the following sources:

- **Customer feedback** - Input from our customers, area residents, and community leaders is essential in developing an effective and efficient project plan;
- **Public open house** - Entergy Arkansas is sponsoring an open house to enable the public to review the proposed project requirements and offer comments. Entergy personnel who specialize in land and right-of-way, environmental, engineering, transmission operation, construction, regulatory affairs, vegetation management, and customer service will be there to answer questions. All impacted landowners and interested persons are encouraged to attend. Personal invitations have been distributed to the media, local community leaders, city/state/federal government entities, and other organizations. Also, the company has published an open invitation in the Pine Bluff Commercial Newspaper.

- **Notice to landowners** - All landowners of record within reasonable distance from the potential transmission line routing segments(s) have been notified by first class mail. This notification included an invitation to the open house and a transmission line route map that depicts existing and alternative transmission line segments and substations as well as a photograph of a typical transmission line structure.

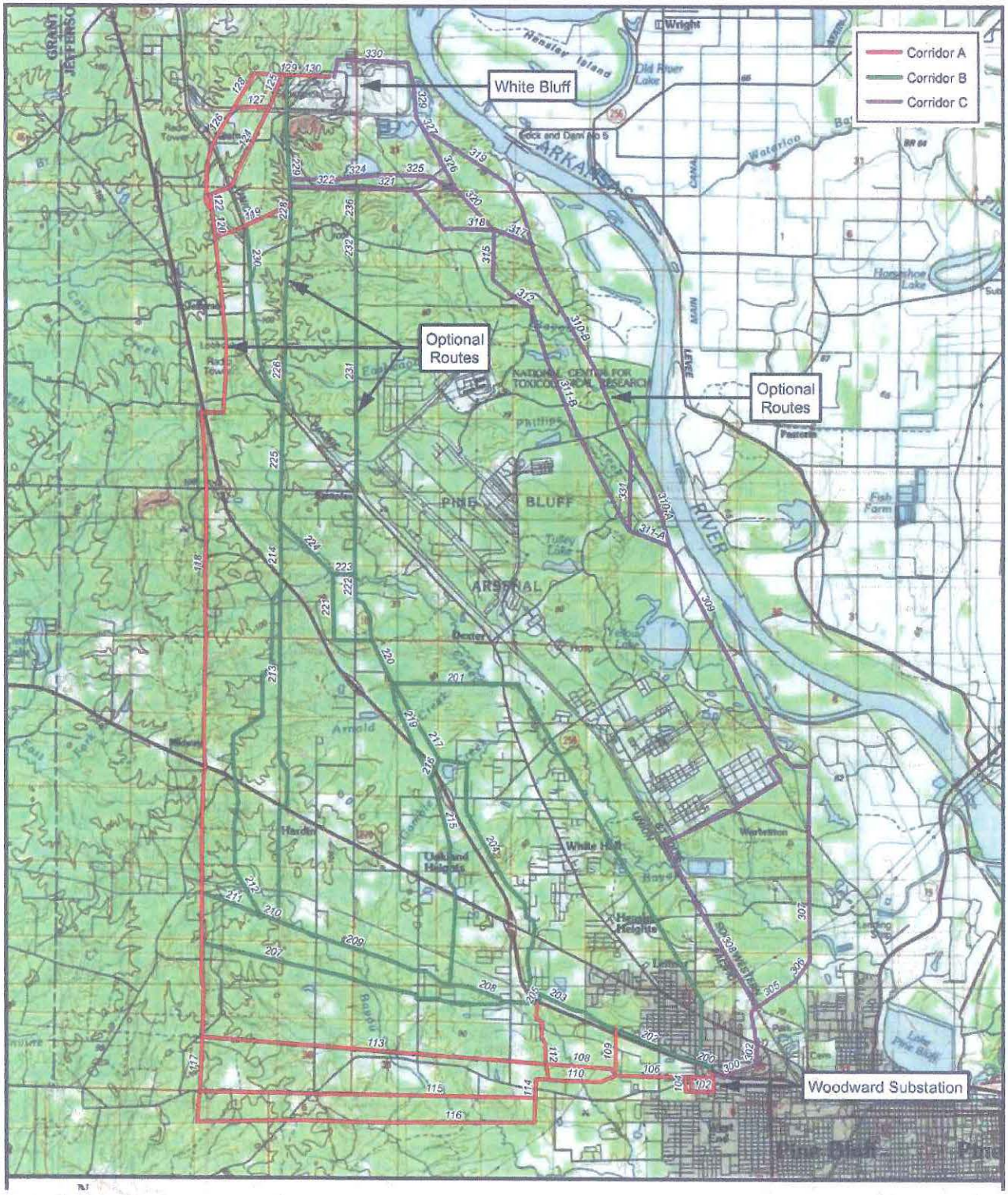
Several factors must be considered when embarking on a project of this scale, including:

- **Construction costs.** Terrain and ease of access affect construction costs. All construction costs become part of the rate base and are, therefore, eventually paid by customers. The current estimated cost of the planned transmission line project is approximately $32 million;
- **Right-of-way for the new transmission line.** Entergy will design its new transmission line under its existing standards for 230 kV right-of-way, which is 125 feet wide based on utilization of single-pole steel or concrete structures. Additional right-of-way may be required above the 125 feet range to accommodate guy wires for angle structures and cutting of danger trees (refer to page 8 of brochure);
- **Aesthetic considerations and other environmental factors.** Single modular steel or concrete poles will be used to provide tangent, angle turns, and dead-ends for the transmission line. These types of transmission line structures were selected to minimize the aesthetic displeasure of the installation;
- **Health and safety.** Safety is a priority with Entergy and, in accordance with the requirements set forth in the National Electrical Safety Code, the company will construct and operate the proposed electrical facilities at its standard voltage design and will observe reasonable safety precautions to prevent jeopardizing the public safety. Construction methods and activities in the field will also meet U.S. Department of Labor Occupational Safety and Health Organization requirements. Entergy also maintains and follows its own safety policies and procedures in the Entergy Transmission and Distribution Safety Manual, most recently updated in 2012, and
- **Regulatory and permitting.** The Arkansas Public Service Commission requires the company to file an application for approval of a Certificate of Environmental Compatibility and Public Need to construct the proposed transmission line. The U.S. Army Corps of Engineers as well as other federal and state agencies require the company to file for approval of various permits for the new transmission line.

Alternative Transmission Facilities

Entergy Arkansas has identified several alternative transmission line segments that will be evaluated and then selected to comprise optional transmission line routes – see map below. Each alternative line segment and line route has advantages and drawbacks. No decisions on a final route will be made until customers and property owners have had an opportunity to offer their input. The alternative transmission line segments shown in the following map consists of 89 optional transmission line segments that extend through Pine Bluff and Jefferson County. Depending on the segments selected, the length of the final transmission line will be approximately 17 miles in length.

Entergy Arkansas 230 KV Transmission Line Segments



Project Schedule

2ND Qtr 2014	4TH Qtr 2014	1ST 2015 – 2ND 2016
Approval of CECPN Right-of-Way Survey Initiate Purchases	Let Construction Contracts, Mobilize Construction	Construction In Process Final Testing In service

Construction dates are tentative at this time and could be subject to change.

Next Steps

- **Customer contact and site access.** Through a contract with external consultants, residents will be contacted for assistance in developing plans to temporarily access new and existing right-of-way prior to construction. These plans may include ground surveys, soil testing and test borings.
- **Construction phase.** The proposed electrical facilities will be designed by Entergy Services, Inc. personnel for Entergy Arkansas. Construction will be performed by pre-qualified electrical contractor crews under the supervision of Entergy Arkansas personnel in a sequential operation of surveying, clearing, structure erection, conductor installation and clean-up. The first operation is to survey the proposed route to establish the centerline, edge of right-of-way, and profile of the transmission line. Centerline staking and profiling may require cutting some trees and undergrowth. Right-of-way clearing, if necessary, will also be performed by contracted crews under the supervision of Entergy Arkansas personnel. Trees outside of the right-of-way that endanger the safe and reliable operation of the transmission line (danger trees – see page 8) will be cut to provide necessary clearance.

  Structure installation takes place in three phases: transporting, assembling, and erecting. Material is transported to each location where structures are assembled, as much as is practical, on the ground; the poles are then set in augured holes and backfilled with appropriate fill material (directly-imbedded). Once the structure is assembled, installing conductor is the next critical step. Many vehicles and items of equipment are required to install the conductor. As with vehicles and equipment associated with other construction phases, crews will exercise care to minimize damage to the terrain and landowner premises.

Contact List

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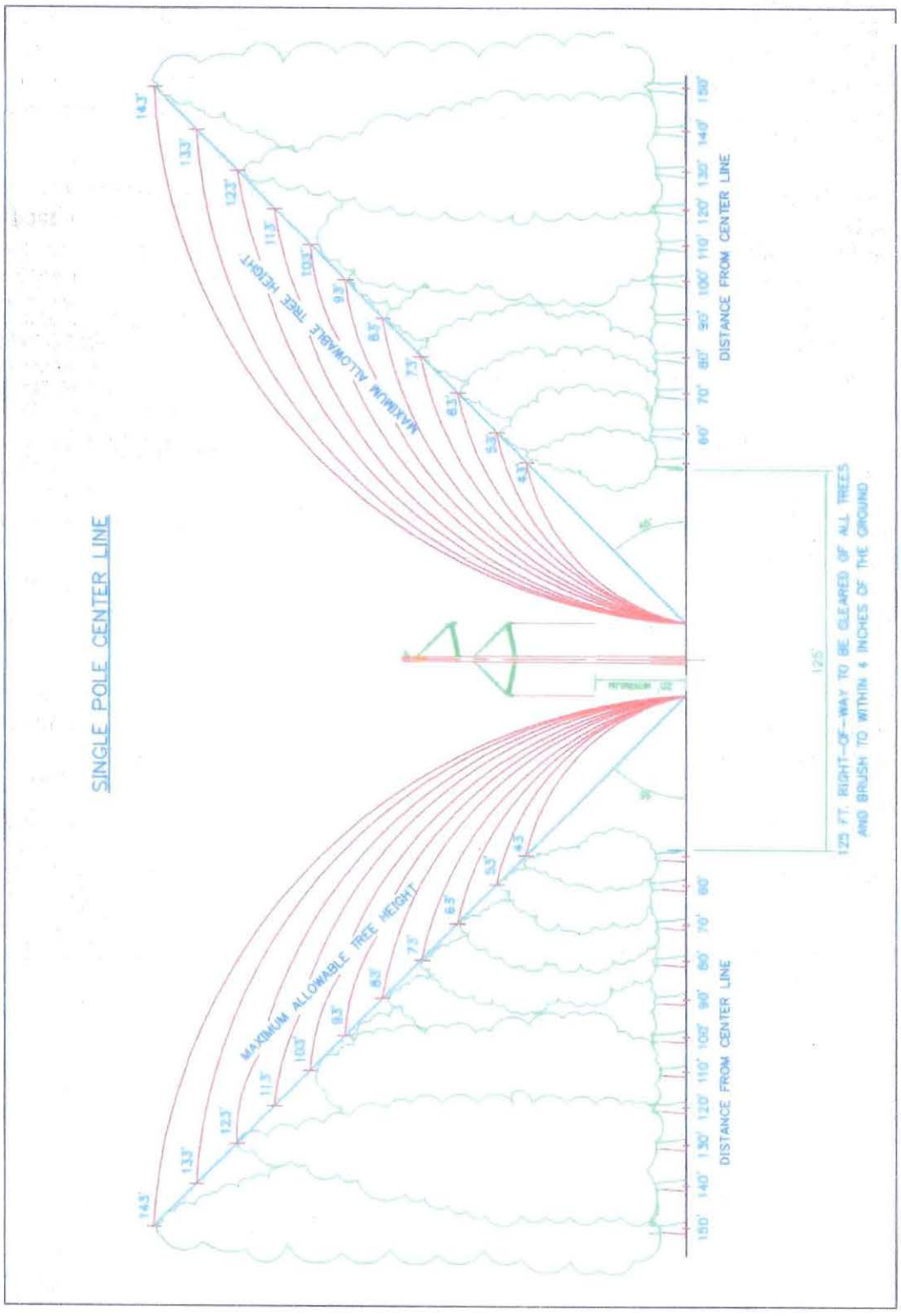
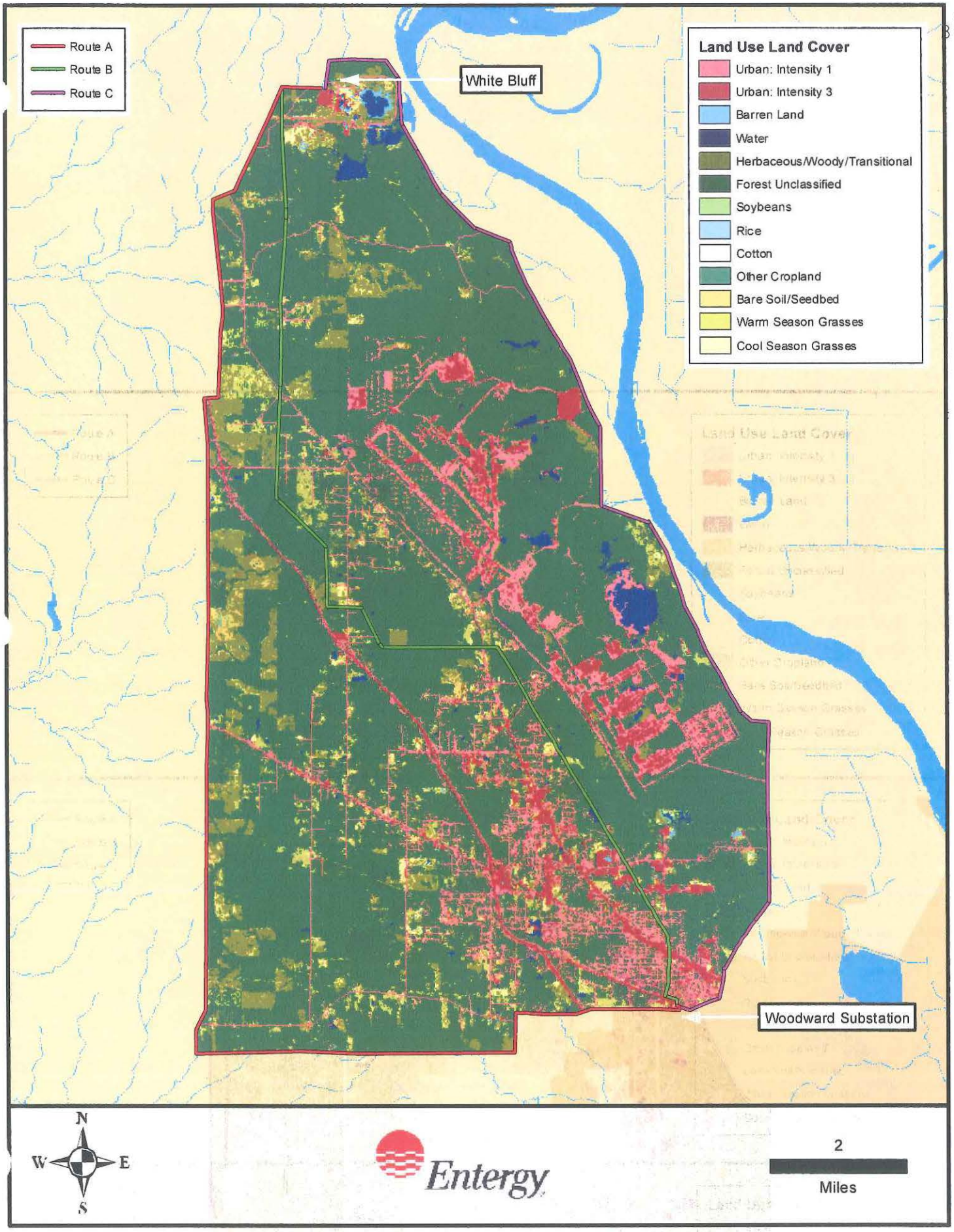
Chattanooga, TN 37402
800 355-6372
423 326-8802
spitt@mesainc.com

Danger Tree Identification



If anyone was unable to attend the open house, and/or would like to voice a comment, please contact Greg Phillips or Steve Pitt shown on the previous page contact list.

Appendix B
Information on Existing Environment


Route A
Route B
Route C
White Bluff
Land Use Land Cover
Urban: Intensity 1
Urban: Intensity 3
Barren Land
Water
Herbaceous/Woody/Transitional
Forest Unclassified
Soybeans
Rice
Cotton
Other Cropland
Bare Soil/Seedbed
Warm Season Grasses
Cool Season Grasses
Woodward Substation
N
W
E
S
Entergy
2
Miles

United States Department of Agriculture

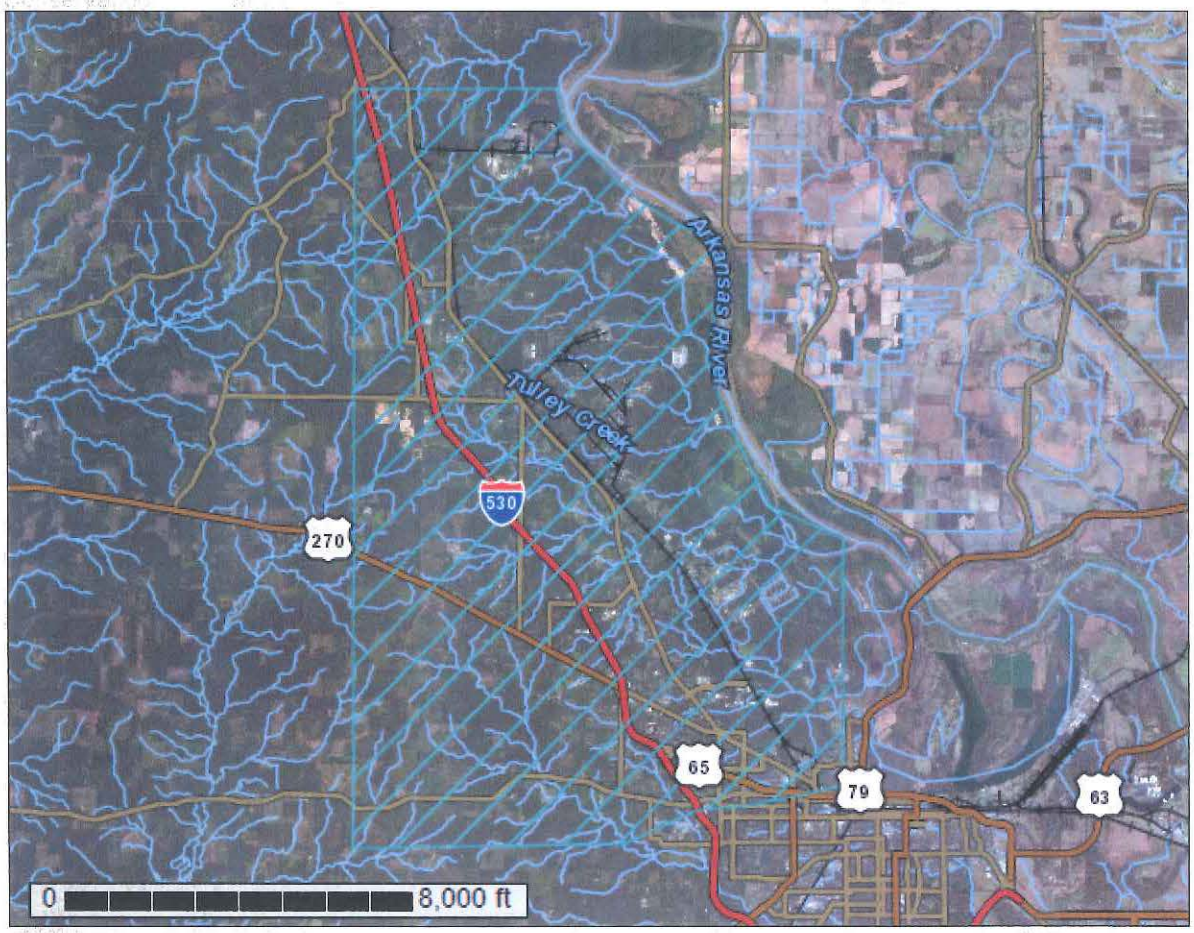
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Jefferson and Lincoln Counties, Arkansas

Pine Bluff Voltage Support Phase 2



September 30, 2013

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

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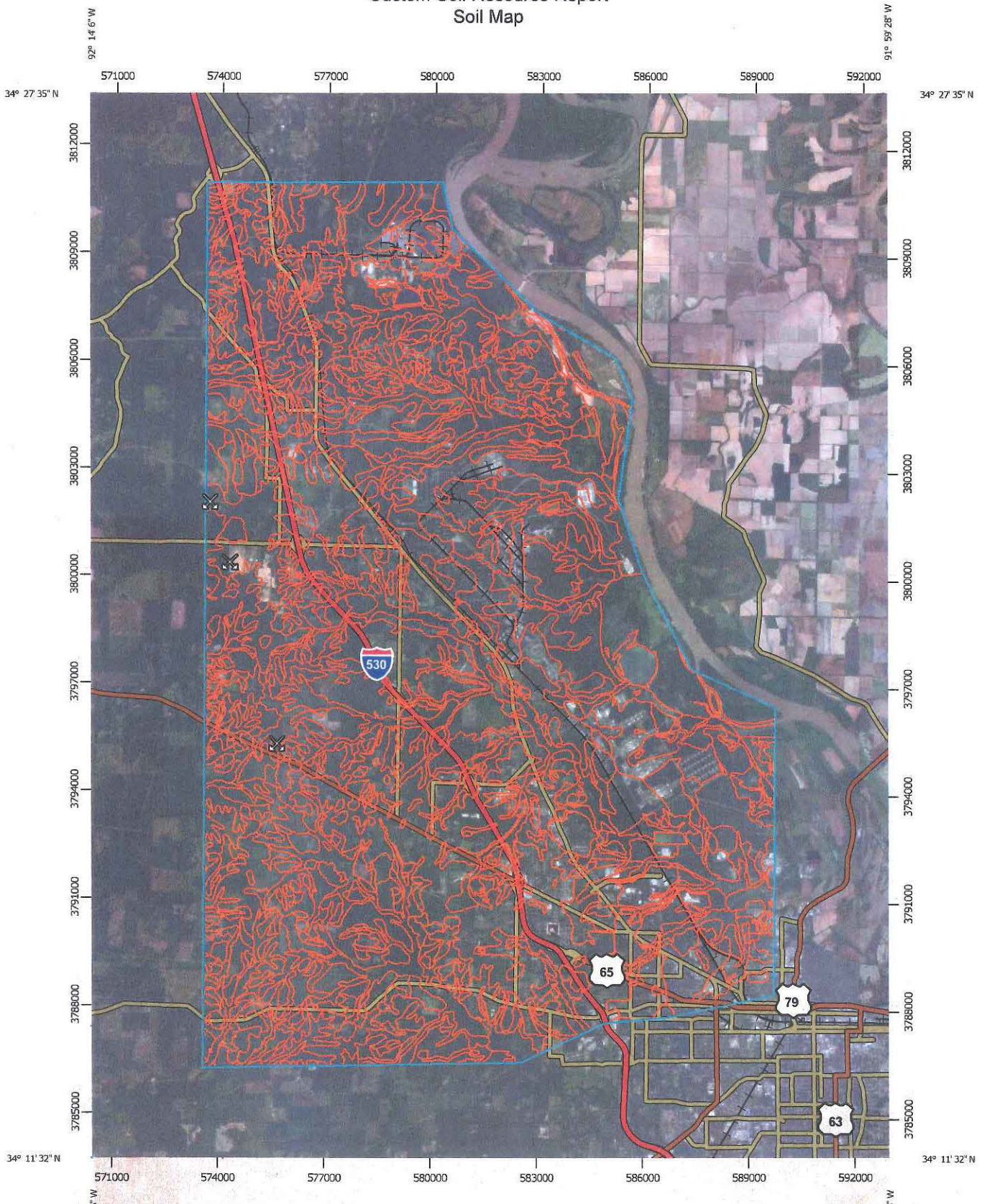
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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: Jefferson and Lincoln Counties, Arkansas
Survey Area Data: Version 9, Sep 28, 2012

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

Date(s) aerial images were photographed: Mar 5, 2010—Jun 5, 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

Jefferson and Lincoln Counties, Arkansas (AR660)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Amy silt loam	2,019.0	2.6%
2	Amy soils frequently flooded	1,763.9	2.3%
3	Amy-Urban land complex	59.9	0.1%
4	Calloway silt loam, 0 to 1 percent slopes	1,352.9	1.7%
5	Calloway silt loam, 1 to 3 percent slopes	1,270.7	1.6%
6	Calloway-Urban land complex	1,502.7	1.9%
9	Coushatta soils, occasionally flooded	196.0	0.3%
11	Crevasse loamy fine sand	15.9	0.0%
12	Crevasse soils, frequently flooded	2,616.8	3.3%
15	Grenada silt loam, 1 to 3 percent slopes	121.3	0.2%
16	Grenada silt loam, 3 to 8 percent slopes	681.3	0.9%
17	Grenada-Urban land complex, 1 to 3 percent slopes	106.8	0.1%
18	Grenada-Urban land complex, 3 to 8 percent slopes	387.6	0.5%
19	Hebert silt loam	9.6	0.0%
20	Henry silt loam	1,169.2	1.5%
21	Henry-Urban land complex	123.6	0.2%
22	McGehee silt loam	191.4	0.2%
23	McGehee silt loam, occasionally flooded	375.9	0.5%
24	Oklared fine sandy loam, occasionally flooded	90.8	0.1%
25	Ouachita soils, frequently flooded	5,210.6	6.7%
26	Perry clay, 0 to 1 percent slopes	21.1	0.0%
27	Perry clay, 0 to 1 percent slopes, occasionally flooded	24.4	0.0%
28	Pheba silt loam, 0 to 2 percent slopes	21,462.7	27.5%
29	Pheba-Urban land complex, 0 to 2 percent slopes	907.8	1.2%
30	Portland clay, 0 to 1 percent slopes	208.8	0.3%
31	Portland clay, 0 to 1 percent slopes, occasionally flooded	297.4	0.4%

Jefferson and Lincoln Counties, Arkansas (AR660)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
33	Rilla silt loam, 0 to 1 percent slopes	1.3	0.0%
38	Ruston fine sandy loam, 1 to 3 percent slopes	218.0	0.3%
39	Sacul fine sandy loam, 1 to 3 percent slopes	881.0	1.1%
40	Sacul fine sandy loam, 3 to 8 percent slopes	7,452.9	9.5%
41	Savannah fine sandy loam, 1 to 3 percent slopes	4,657.2	6.0%
42	Savannah fine sandy loam, 3 to 8 percent slopes	12,821.9	16.4%
43	Savannah-Urban land complex, 1 to 3 percent slopes	388.6	0.5%
44	Savannah-Urban land complex, 3 to 8 percent slopes	195.6	0.3%
45	Sawyer silt loam, 1 to 3 percent slopes	1,300.0	1.7%
46	Sawyer silt loam, 3 to 8 percent slopes	4,522.4	5.8%
47	Smithdale fine sandy loam, 3 to 8 percent slopes	2,506.0	3.2%
48	Smithdale fine sandy loam, 8 to 12 percent slopes	97.5	0.1%
49	Wabbaseka-Latanier complex, undulating	2.3	0.0%
52	Water	873.5	1.1%
54	Dam	12.8	0.0%
Totals for Area of Interest		**78,119.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be

made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Jefferson and Lincoln Counties, Arkansas

1—Amy silt loam

Map Unit Setting

Elevation: 50 to 250 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Amy and similar soils: 90 percent
Minor components: 10 percent

Description of Amy

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.2 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 3w
Hydrologic Soil Group: C

Typical profile

0 to 3 inches: Silt loam
3 to 24 inches: Silt loam
24 to 40 inches: Silty clay loam
40 to 56 inches: Silt loam
56 to 72 inches: Silty clay loam

Minor Components

Pheba

Percent of map unit: 5 percent

Aquults

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

2—Amy soils frequently flooded

Map Unit Setting

Elevation: 50 to 250 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Amy and similar soils: 90 percent
Minor components: 10 percent

Description of Amy

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water capacity: High (about 10.2 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 5w
Hydrologic Soil Group: C

Typical profile

0 to 3 inches: Silt loam
3 to 24 inches: Silt loam
24 to 40 inches: Silty clay loam
40 to 56 inches: Silt loam
56 to 72 inches: Silty clay loam

Minor Components

Ouachita

Percent of map unit: 5 percent

Aquults

Percent of map unit: 5 percent
Landform: Depressions

Down-slope shape: Concave
Across-slope shape: Convex

3—Amy-Urban land complex

Map Unit Setting

Elevation: 50 to 250 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Amy and similar soils: 60 percent
Urban land: 30 percent
Minor components: 10 percent

Description of Amy

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.2 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: C

Typical profile

0 to 3 inches: Silt loam
3 to 24 inches: Silt loam
24 to 40 inches: Silty clay loam
40 to 56 inches: Silt loam
56 to 72 inches: Silty clay loam

Minor Components

Pheba

Percent of map unit: 5 percent

Aquults

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

4—Calloway silt loam, 0 to 1 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Calloway and similar soils: 90 percent
Minor components: 10 percent

Description of Calloway

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 33 to 41 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 7 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2w
Hydrologic Soil Group: C

Typical profile

0 to 6 inches: Silt loam
6 to 21 inches: Silt loam
21 to 37 inches: Silt loam

37 to 67 inches: Silt loam
67 to 75 inches: Silt loam

Minor Components

Henry
Percent of map unit: 5 percent
Landform: Stream terraces

Aqualfs
Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

5—Calloway silt loam, 1 to 3 percent slopes

Map Unit Setting
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition
Calloway and similar soils: 90 percent
Minor components: 10 percent

Description of Calloway

Setting
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Properties and qualities
Slope: 1 to 3 percent
Depth to restrictive feature: 33 to 41 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 7 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups
Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 6 inches: Silt loam
6 to 21 inches: Silt loam
21 to 37 inches: Silt loam
37 to 67 inches: Silt loam
67 to 75 inches: Silt loam

Minor Components

Henry

Percent of map unit: 5 percent
Landform: Stream terraces

Aqualfs

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

6—Calloway-Urban land complex

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Calloway and similar soils: 60 percent
Urban land: 30 percent
Minor components: 10 percent

Description of Calloway

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 33 to 41 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 7 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 6 inches: Silt loam
6 to 21 inches: Silt loam
21 to 37 inches: Silt loam
37 to 67 inches: Silt loam
67 to 75 inches: Silt loam

Minor Components

Henry

Percent of map unit: 5 percent
Landform: Stream terraces

Aqualfs

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

9—Coushatta soils, occasionally flooded

Map Unit Setting

Elevation: 10 to 80 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Coushatta and similar soils: 90 percent
Minor components: 10 percent

Description of Coushatta

Setting

Landform: Flood plains, natural levees
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Stratified loamy alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches

Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 12.0 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2w
Hydrologic Soil Group: B

Typical profile

0 to 8 inches: Silt loam
8 to 15 inches: Silt loam
15 to 30 inches: Silty clay loam
30 to 52 inches: Very fine sandy loam
52 to 60 inches: Silty clay loam

Minor Components

Aquents

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

11—Crevasse loamy fine sand

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Crevasse and similar soils: 95 percent
Minor components: 5 percent

Description of Crevasse

Setting

Landform: Natural levees, channels
Down-slope shape: Convex, concave
Across-slope shape: Convex, linear
Parent material: Sandy alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: RareNone

Frequency of ponding: None
Available water capacity: Very low (about 2.8 inches)

Interpretive groups
Farmland classification: Not prime farmland
Land capability (nonirrigated): 4s
Hydrologic Soil Group: A

Typical profile
0 to 9 inches: Loamy fine sand
9 to 65 inches: Fine sand

Minor Components

Aquents
Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

12—Crevasse soils, frequently flooded

Map Unit Setting
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition
Crevasse and similar soils: 85 percent
Minor components: 15 percent

Description of Crevasse

Setting
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium

Properties and qualities
Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water capacity: Very low (about 2.8 inches)

Interpretive groups
Farmland classification: Not prime farmland

Land capability (nonirrigated): 5w
Hydrologic Soil Group: A

Typical profile
0 to 9 inches: Loamy fine sand
9 to 65 inches: Fine sand

Minor Components

Crevasse, flooded, long
Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Aquents
Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

15—Grenada silt loam, 1 to 3 percent slopes

Map Unit Setting
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition
Grenada and similar soils: 90 percent
Minor components: 10 percent

Description of Grenada

Setting
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Properties and qualities
Slope: 1 to 3 percent
Depth to restrictive feature: 25 to 33 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 4 inches: Silt loam
4 to 26 inches: Silt loam
26 to 29 inches: Silt loam
29 to 72 inches: Silt loam

Minor Components

Calloway

Percent of map unit: 5 percent

Henry

Percent of map unit: 5 percent
Landform: Stream terraces

16—Grenada silt loam, 3 to 8 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Grenada and similar soils: 90 percent
Minor components: 10 percent

Description of Grenada

Setting

Landform: Terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 25 to 33 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C

Typical profile

0 to 4 inches: Silt loam
4 to 26 inches: Silt loam
26 to 29 inches: Silt loam
29 to 72 inches: Silt loam

Minor Components

Henry

Percent of map unit: 5 percent
Landform: Stream terraces

Calloway

Percent of map unit: 5 percent

17—Grenada-Urban land complex, 1 to 3 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Grenada and similar soils: 50 percent
Urban land: 30 percent
Minor components: 20 percent

Description of Grenada

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 25 to 33 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 4 inches: Silt loam
4 to 26 inches: Silt loam
26 to 29 inches: Silt loam
29 to 72 inches: Silt loam

Minor Components

Calloway

Percent of map unit: 10 percent

Henry

Percent of map unit: 10 percent
Landform: Stream terraces

18—Grenada-Urban land complex, 3 to 8 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Grenada and similar soils: 50 percent
Urban land: 30 percent
Minor components: 20 percent

Description of Grenada

Setting

Landform: Terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 25 to 33 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C

Typical profile

0 to 4 inches: Silt loam
4 to 26 inches: Silt loam
26 to 29 inches: Silt loam
29 to 72 inches: Silt loam

Minor Components

Henry

Percent of map unit: 10 percent
Landform: Stream terraces

Calloway

Percent of map unit: 10 percent

19—Hebert silt loam

Map Unit Setting

Elevation: 50 to 90 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Hebert and similar soils: 90 percent
Minor components: 10 percent

Description of Hebert

Setting

Landform: Natural levees
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.8 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2w
Hydrologic Soil Group: C

Typical profile

0 to 7 inches: Silt loam
7 to 44 inches: Silty clay loam
44 to 60 inches: Silt loam

Minor Components

Aquepts

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

20—Henry silt loam

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Henry and similar soils: 90 percent
Minor components: 10 percent

Description of Henry

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 24 to 32 inches to fragipan
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 5 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.1 inches)

Interpretive groups

Farmland classification: Prime farmland if drained

Land capability (nonirrigated): 3w
Hydrologic Soil Group: D

Typical profile
0 to 3 inches: Silt loam
3 to 28 inches: Silt loam
28 to 52 inches: Silty clay loam
52 to 72 inches: Silt loam

Minor Components

Calloway
Percent of map unit: 5 percent

Aqualfs
Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

21—Henry-Urban land complex

Map Unit Setting
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition
Henry and similar soils: 50 percent
Urban land: 30 percent
Minor components: 15 percent

Description of Henry

Setting
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Properties and qualities
Slope: 0 to 1 percent
Depth to restrictive feature: 24 to 32 inches to fragipan
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 5 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: D

Typical profile

0 to 3 inches: Silt loam
3 to 28 inches: Silt loam
28 to 52 inches: Silty clay loam
52 to 72 inches: Silt loam

Minor Components

Calloway

Percent of map unit: 10 percent

Aqualfs

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

22—McGehee silt loam

Map Unit Setting

Elevation: 100 to 240 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Mcgehee and similar soils: 90 percent
Minor components: 10 percent

Description of Mcgehee

Setting

Landform: Natural levees, stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, concave
Across-slope shape: Convex, linear
Parent material: Silty and clayey alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None

Frequency of ponding: None
Available water capacity: High (about 10.5 inches)

Interpretive groups
Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2w
Hydrologic Soil Group: C

Typical profile
0 to 7 inches: Silt loam
7 to 14 inches: Silt loam
14 to 30 inches: Silty clay loam
30 to 60 inches: Silty clay

Minor Components

Perry
Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

Aquents
Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

23—McGehee silt loam, occasionally flooded

Map Unit Setting
Elevation: 100 to 240 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition
Mcgehee and similar soils: 90 percent
Minor components: 10 percent

Description of Mcgehee

Setting
Landform: Stream terraces, flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Available water capacity: High (about 10.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 4w
Hydrologic Soil Group: C

Typical profile

0 to 7 inches: Silt loam
7 to 14 inches: Silt loam
14 to 30 inches: Silty clay loam
30 to 60 inches: Silty clay

Minor Components

Perry

Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

Aquents

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

24—Oklared fine sandy loam, occasionally flooded

Map Unit Setting

Elevation: 300 to 1,000 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Oklared and similar soils: 95 percent
Minor components: 5 percent

Description of Oklared

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Parent material: Loamy alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Available water capacity: Moderate (about 8.3 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2w
Hydrologic Soil Group: B

Typical profile

0 to 12 inches: Fine sandy loam
12 to 70 inches: Stratified fine sandy loam to loamy fine sand

Minor Components

Aquents

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

25—Ouachita soils, frequently flooded

Map Unit Setting

Elevation: 120 to 250 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Ouachita and similar soils: 80 percent
Minor components: 15 percent

Description of Ouachita

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water capacity: High (about 11.2 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 4w
Hydrologic Soil Group: C

Typical profile

0 to 8 inches: Silt loam
8 to 33 inches: Silt loam
33 to 56 inches: Loam
56 to 68 inches: Fine sandy loam
68 to 72 inches: Fine sandy loam

Minor Components

Ouachita, flooded, long

Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Amy

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

26—Perry clay, 0 to 1 percent slopes

Map Unit Setting

Elevation: 40 to 280 feet
Mean annual precipitation: 32 to 87 inches
Mean annual air temperature: 60 to 66 degrees F
Frost-free period: 213 to 271 days

Map Unit Composition

Perry and similar soils: 90 percent
Minor components: 10 percent

Description of Perry

Setting

Landform: Backswamps
Landform position (three-dimensional): Tread

Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 9.0 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 3w
Hydrologic Soil Group: D

Typical profile

0 to 6 inches: Clay
6 to 30 inches: Clay
30 to 80 inches: Clay

Minor Components

Portland

Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

Perry, flooded

Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

27—Perry clay, 0 to 1 percent slopes, occasionally flooded

Map Unit Setting

Elevation: 40 to 280 feet
Mean annual precipitation: 32 to 87 inches
Mean annual air temperature: 60 to 66 degrees F
Frost-free period: 213 to 271 days

Map Unit Composition

Perry and similar soils: 85 percent
Minor components: 15 percent

Description of Perry

Setting

Landform: Backswamps
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water capacity: Moderate (about 9.0 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 4w
Hydrologic Soil Group: D

Typical profile

0 to 6 inches: Clay
6 to 30 inches: Clay
30 to 80 inches: Clay

Minor Components

Portland

Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

Hebert

Percent of map unit: 5 percent
Landform: Natural levees

Perry, non-flooded

Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

28—Pheba silt loam, 0 to 2 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Pheba and similar soils: 90 percent
Minor components: 10 percent

Description of Pheba

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 25 to 33 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 9 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: C

Typical profile

0 to 4 inches: Silt loam
4 to 9 inches: Silt loam
9 to 23 inches: Silt loam
23 to 29 inches: Silt loam
29 to 72 inches: Silt loam

Minor Components

Amy

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

Aquults

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

29—Pheba-Urban land complex, 0 to 2 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Pheba and similar soils: 60 percent
Urban land: 30 percent
Minor components: 10 percent

Description of Pheba

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 25 to 33 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 9 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: C

Typical profile

0 to 4 inches: Silt loam
4 to 9 inches: Silt loam
9 to 23 inches: Silt loam
23 to 29 inches: Silt loam
29 to 72 inches: Silt loam

Minor Components

Amy

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

30—Portland clay, 0 to 1 percent slopes

Map Unit Setting

Elevation: 60 to 220 feet
Mean annual precipitation: 32 to 87 inches
Mean annual air temperature: 60 to 66 degrees F
Frost-free period: 220 to 268 days

Map Unit Composition

Portland and similar soils: 80 percent
Minor components: 20 percent

Description of Portland

Setting

Landform: Backswamps
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.2 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: D

Typical profile

0 to 4 inches: Clay
4 to 30 inches: Clay
30 to 50 inches: Clay
50 to 80 inches: Stratified silty clay

Minor Components

Aquents

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

Perry

Percent of map unit: 5 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

Portland, flooded

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Hebert

Percent of map unit: 5 percent
Landform: Natural levees

31—Portland clay, 0 to 1 percent slopes, occasionally flooded

Map Unit Setting

Elevation: 70 to 220 feet
Mean annual precipitation: 32 to 87 inches
Mean annual air temperature: 60 to 66 degrees F
Frost-free period: 215 to 268 days

Map Unit Composition

Portland and similar soils: 90 percent
Minor components: 10 percent

Description of Portland

Setting

Landform: Backswamps
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 12 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water capacity: High (about 9.2 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 4w
Hydrologic Soil Group: D

Typical profile

0 to 4 inches: Clay
4 to 30 inches: Clay
30 to 50 inches: Clay
50 to 80 inches: Stratified silty clay

Minor Components

Perry

Percent of map unit: 10 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

33—Rilla silt loam, 0 to 1 percent slopes

Map Unit Setting

Elevation: 50 to 100 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Rilla and similar soils: 95 percent
Minor components: 5 percent

Description of Rilla

Setting

Landform: Stream terraces, natural levees
Down-slope shape: Concave, convex
Across-slope shape: Linear, convex
Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Very high (about 12.2 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 1
Hydrologic Soil Group: B

Typical profile

0 to 9 inches: Silt loam
9 to 15 inches: Silt loam
15 to 42 inches: Silt loam
42 to 55 inches: Loam
55 to 72 inches: Loam

Minor Components

Aquepts

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

38—Ruston fine sandy loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 100 to 550 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Ruston and similar soils: 100 percent

Description of Ruston

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: B

Typical profile

0 to 9 inches: Fine sandy loam
9 to 46 inches: Sandy clay loam
46 to 55 inches: Fine sandy loam
55 to 80 inches: Sandy clay loam

39—Sacul fine sandy loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 150 to 450 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Sacul and similar soils: 100 percent

Description of Sacul

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C

Typical profile

0 to 3 inches: Fine sandy loam
3 to 7 inches: Fine sandy loam

7 to 36 inches: Clay
36 to 56 inches: Clay loam
56 to 72 inches: Clay loam

40—Sacul fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 150 to 450 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Sacul and similar soils: 100 percent

Description of Sacul

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.5 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 4e
Hydrologic Soil Group: C

Typical profile

0 to 3 inches: Fine sandy loam
3 to 7 inches: Fine sandy loam
7 to 36 inches: Clay
36 to 56 inches: Clay loam
56 to 72 inches: Clay loam

41—Savannah fine sandy loam, 1 to 3 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Savannah and similar soils: 95 percent
Minor components: 5 percent

Description of Savannah

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 16 to 32 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 16 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 9 inches: Fine sandy loam
9 to 24 inches: Loam
24 to 59 inches: Loam
59 to 72 inches: Sandy loam

Minor Components

Amy

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

42—Savannah fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Savannah and similar soils: 95 percent
Minor components: 5 percent

Description of Savannah

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 16 to 32 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 16 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.5 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C

Typical profile

0 to 9 inches: Fine sandy loam
9 to 24 inches: Loam
24 to 59 inches: Loam
59 to 72 inches: Sandy loam

Minor Components

Amy

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

43—Savannah-Urban land complex, 1 to 3 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Savannah and similar soils: 60 percent
Urban land: 30 percent
Minor components: 10 percent

Description of Savannah

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 16 to 32 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 16 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.5 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 9 inches: Fine sandy loam
9 to 24 inches: Loam
24 to 59 inches: Loam
59 to 72 inches: Sandy loam

Minor Components

Amy

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

44—Savannah-Urban land complex, 3 to 8 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Savannah and similar soils: 60 percent
Urban land: 30 percent
Minor components: 10 percent

Description of Savannah

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 16 to 32 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 16 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.5 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C

Typical profile

0 to 9 inches: Fine sandy loam
9 to 24 inches: Sandy clay loam
24 to 59 inches: Loam
59 to 72 inches: Sandy loam

Minor Components

Amy

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

45—Sawyer silt loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 150 to 450 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Sawyer and similar soils: 95 percent
Minor components: 5 percent

Description of Sawyer

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 5 inches: Silt loam
5 to 12 inches: Silt loam
12 to 36 inches: Silty clay loam
36 to 80 inches: Silty clay

Minor Components

Aquults

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

46—Sawyer silt loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 150 to 450 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Sawyer and similar soils: 100 percent

Description of Sawyer

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.5 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C

Typical profile

0 to 5 inches: Silt loam
5 to 12 inches: Silt loam
12 to 36 inches: Silty clay loam
36 to 80 inches: Silty clay

47—Smithdale fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F

Frost-free period: 220 to 260 days

Map Unit Composition

Smithdale and similar soils: 100 percent

Description of Smithdale

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.2 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 3e
Hydrologic Soil Group: B

Typical profile

0 to 13 inches: Fine sandy loam
13 to 34 inches: Loam
34 to 80 inches: Sandy loam

48—Smithdale fine sandy loam, 8 to 12 percent slopes

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Smithdale and similar soils: 100 percent

Description of Smithdale

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Properties and qualities

Slope: 8 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.2 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 4e
Hydrologic Soil Group: B

Typical profile

0 to 13 inches: Fine sandy loam
13 to 34 inches: Loam
34 to 80 inches: Sandy loam

49—Wabbaseka-Latanier complex, undulating

Map Unit Setting

Elevation: 10 to 250 feet
Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Wabbaseka and similar soils: 60 percent
Latanier and similar soils: 30 percent
Minor components: 10 percent

Description of Wabbaseka

Setting

Landform: Swales
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey alluvium over loamy alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: D

Typical profile

0 to 4 inches: Clay
4 to 18 inches: Clay
18 to 42 inches: Fine sandy loam
42 to 80 inches: Loamy fine sand

Description of Latanier

Setting

Landform: Swales
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey alluvium over loamy alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 5 percent
Available water capacity: High (about 11.2 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 3w
Hydrologic Soil Group: D

Typical profile

0 to 4 inches: Clay
4 to 21 inches: Clay
21 to 26 inches: Clay
26 to 60 inches: Very fine sandy loam

Minor Components

Aquents

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

52—Water

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Water: 100 percent

54—Dam

Map Unit Setting

Mean annual precipitation: 38 to 61 inches
Mean annual air temperature: 52 to 73 degrees F
Frost-free period: 220 to 260 days

Map Unit Composition

Dam: 100 percent

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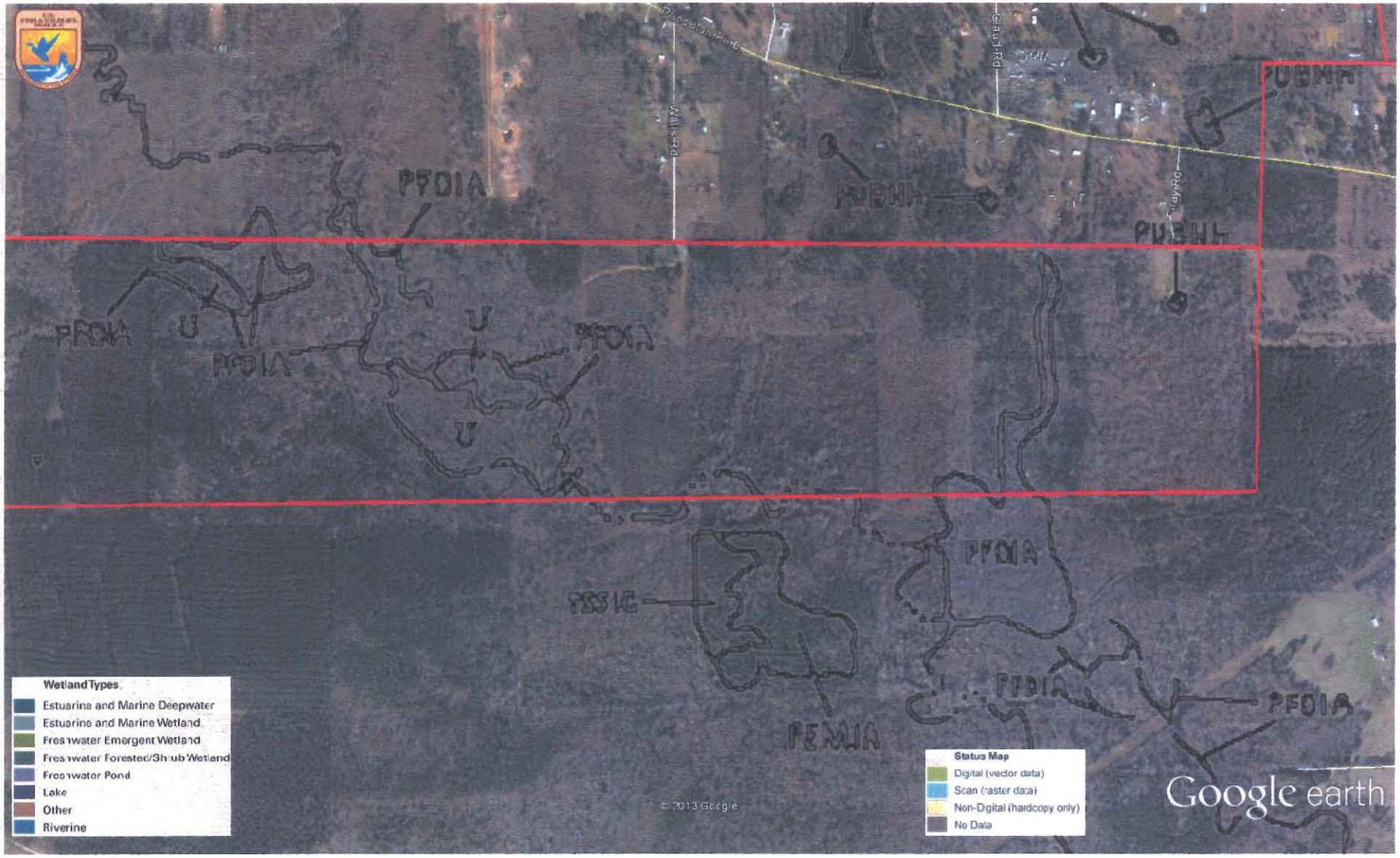

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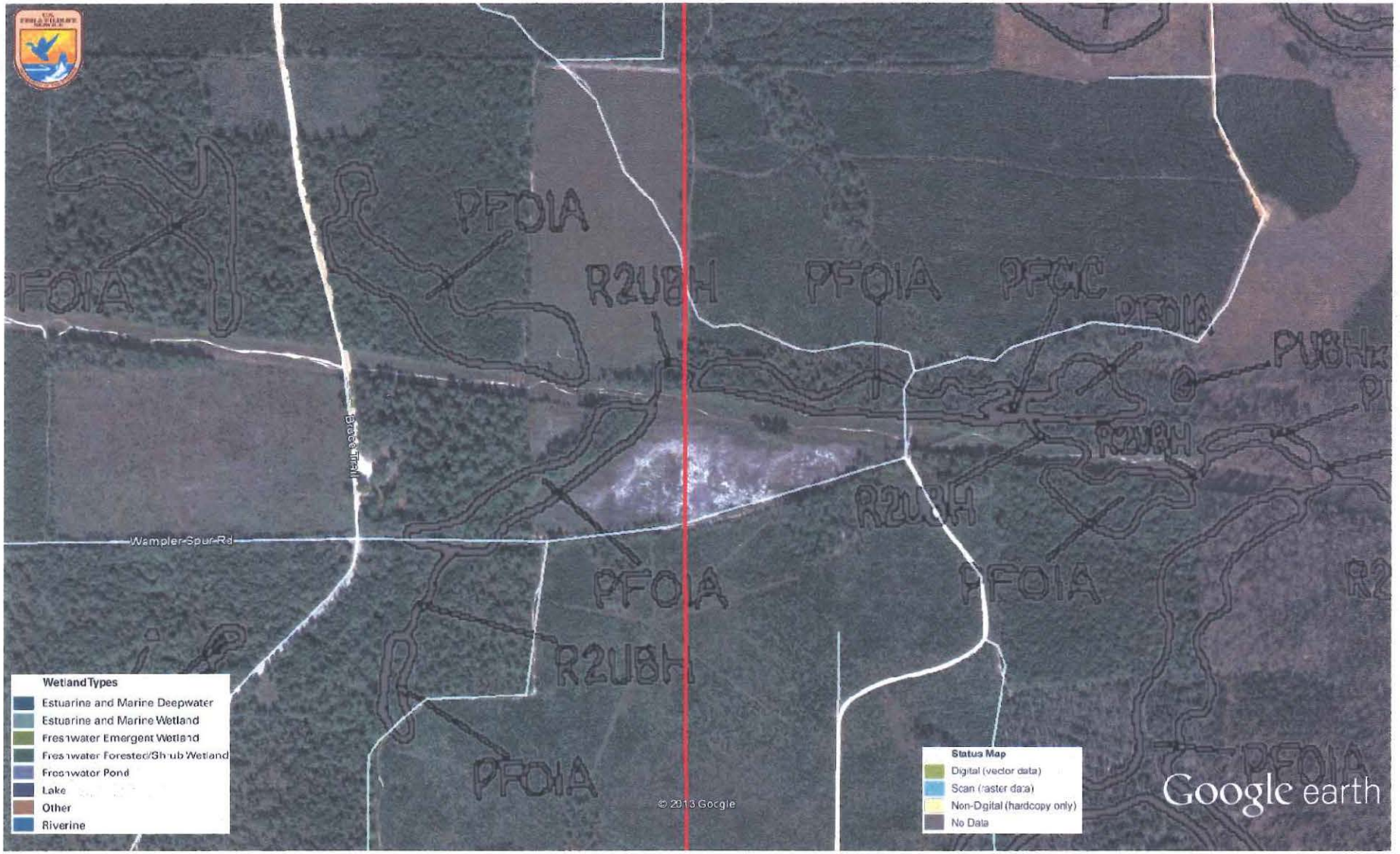
PFO1A
R2UBH
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PFOC
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Bruce Trail
Wampler Spur Rd
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PFO1A
R2UBH
PFO1A
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Wetland Types
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
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Status Map
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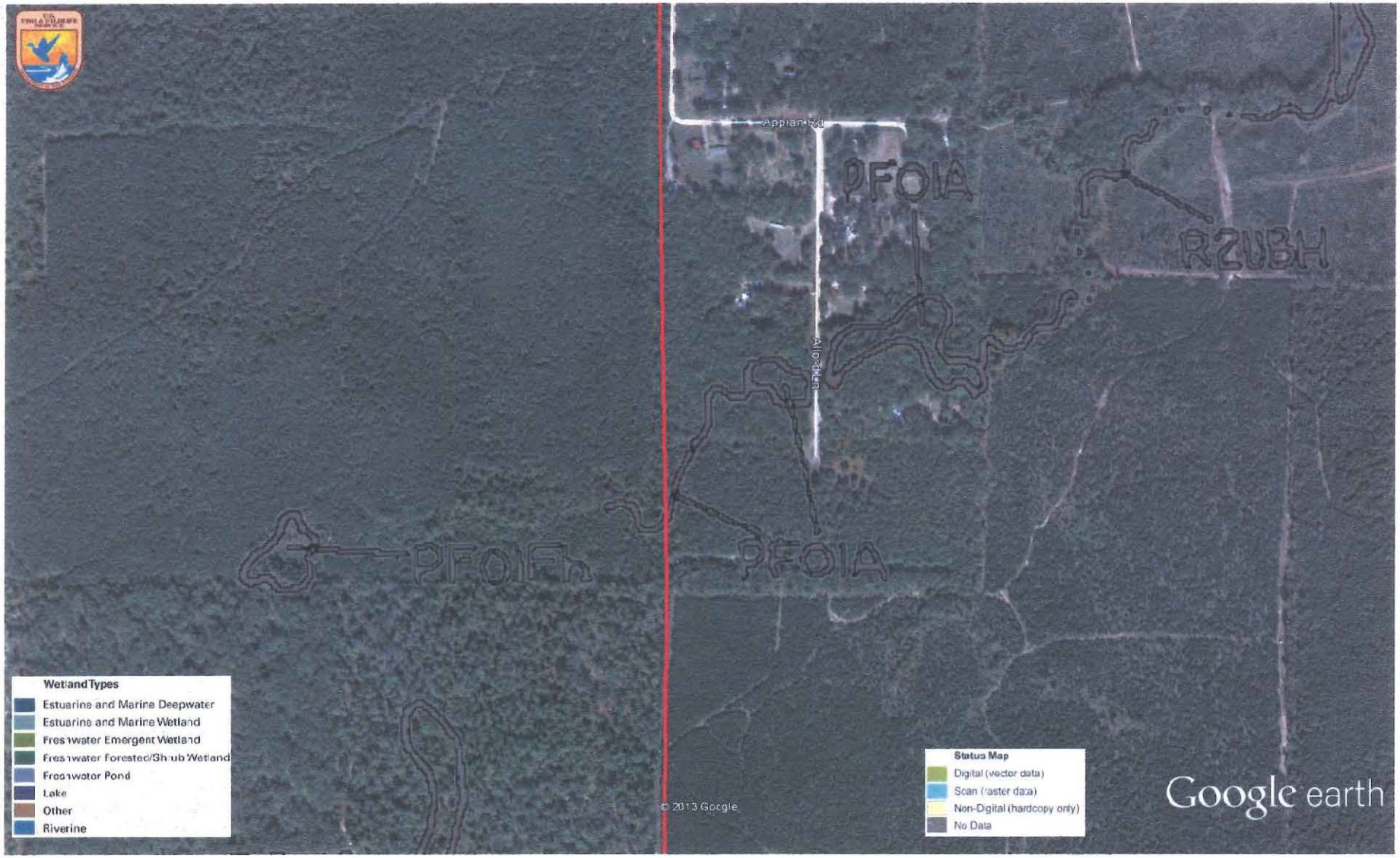

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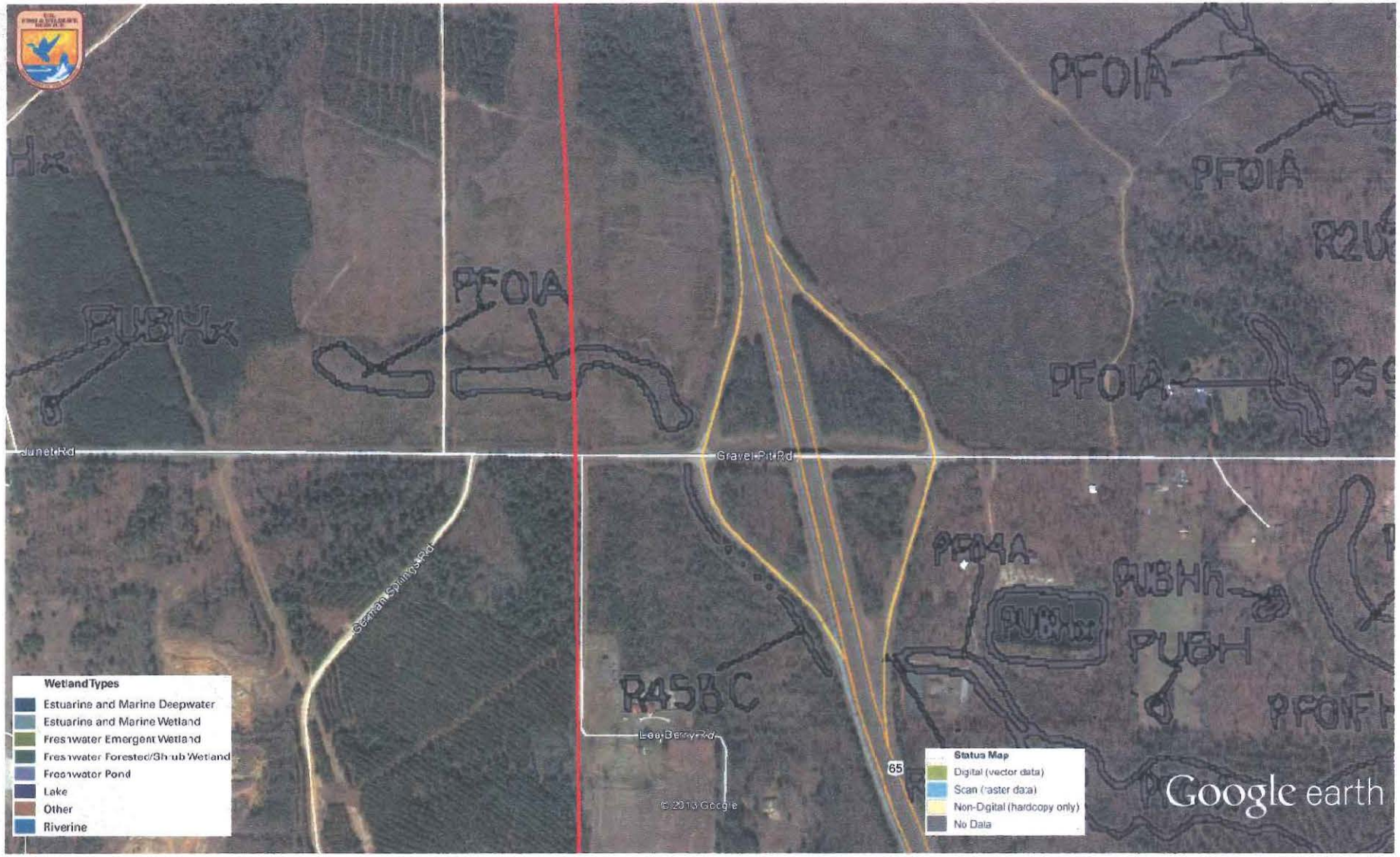

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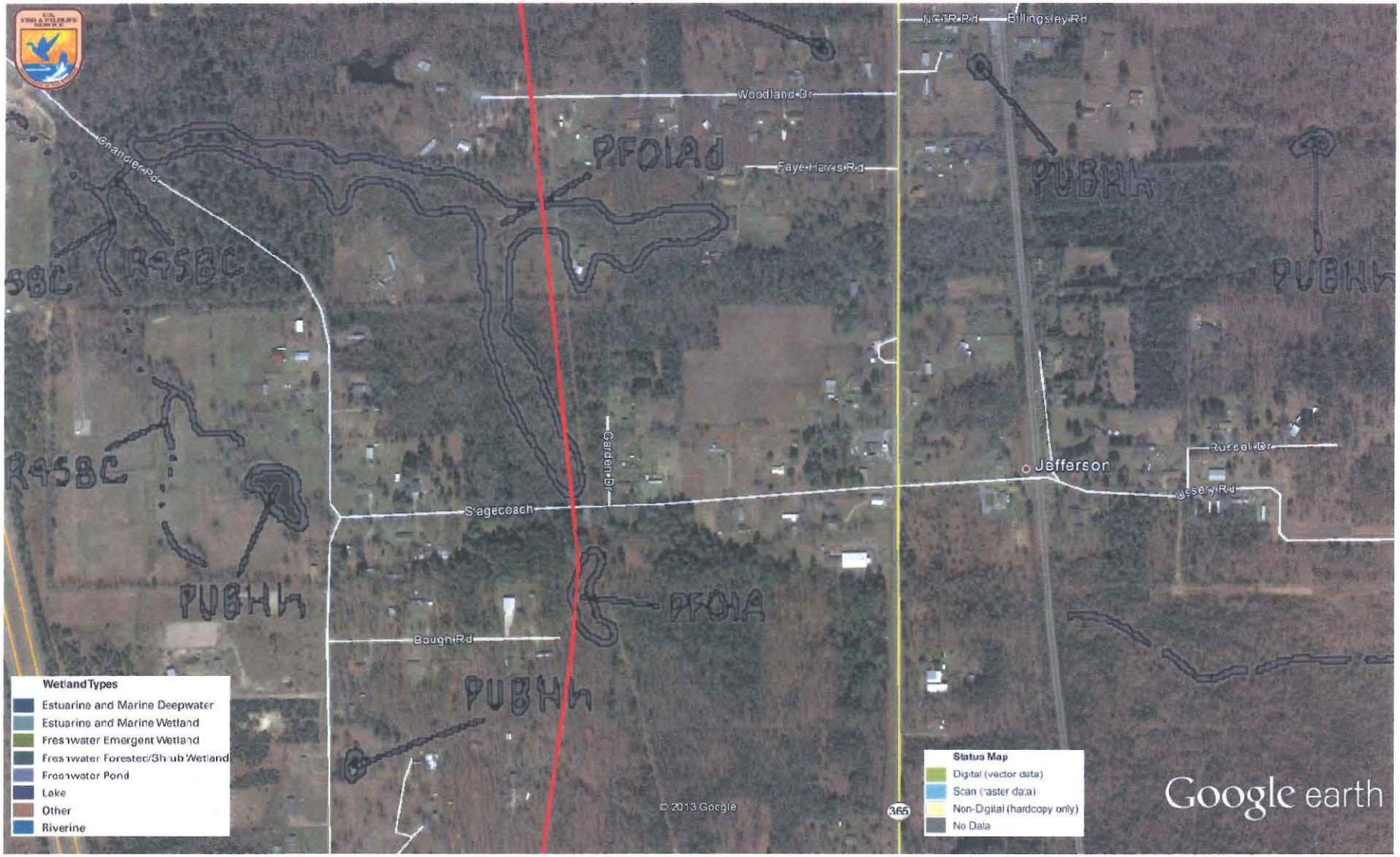

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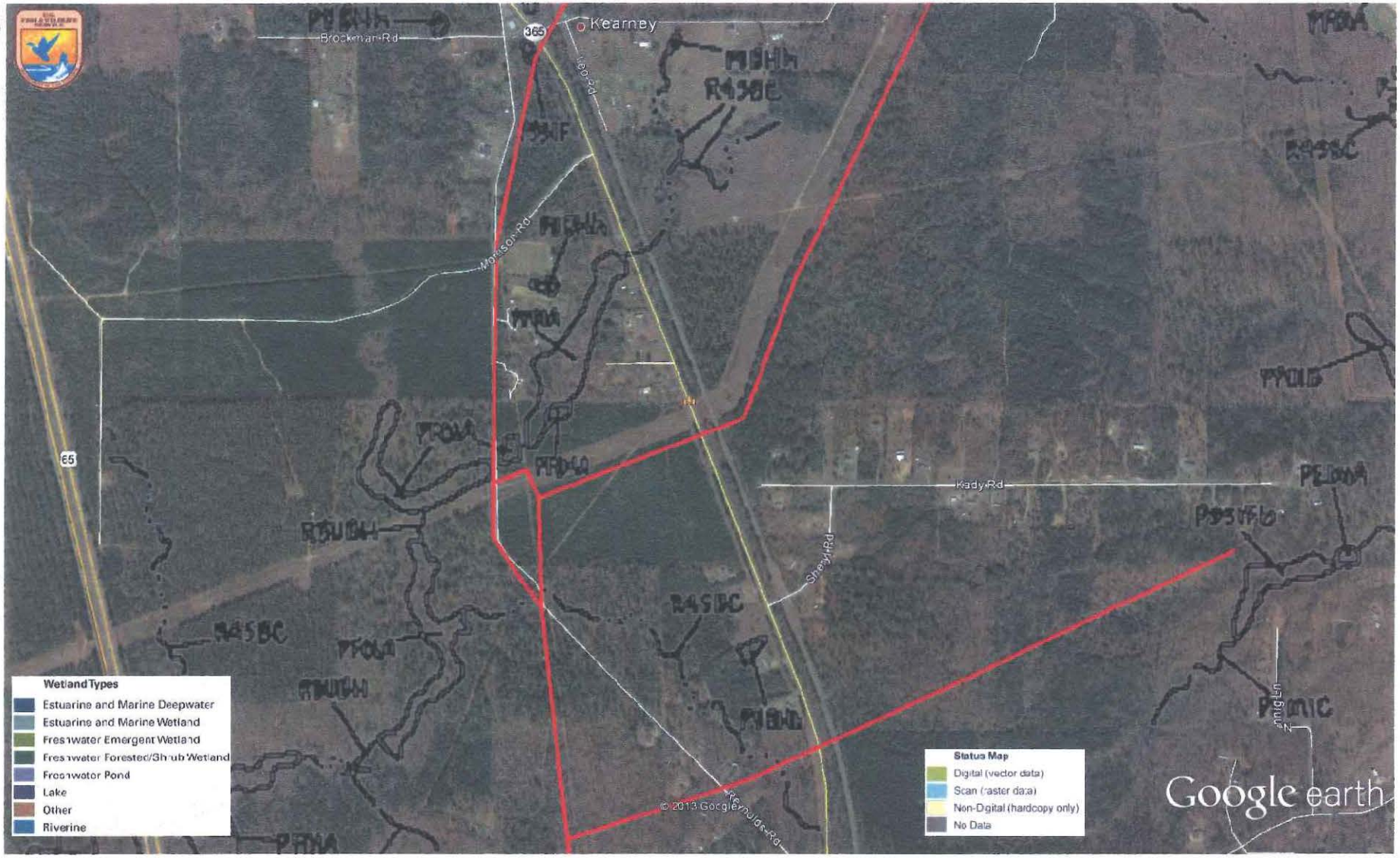

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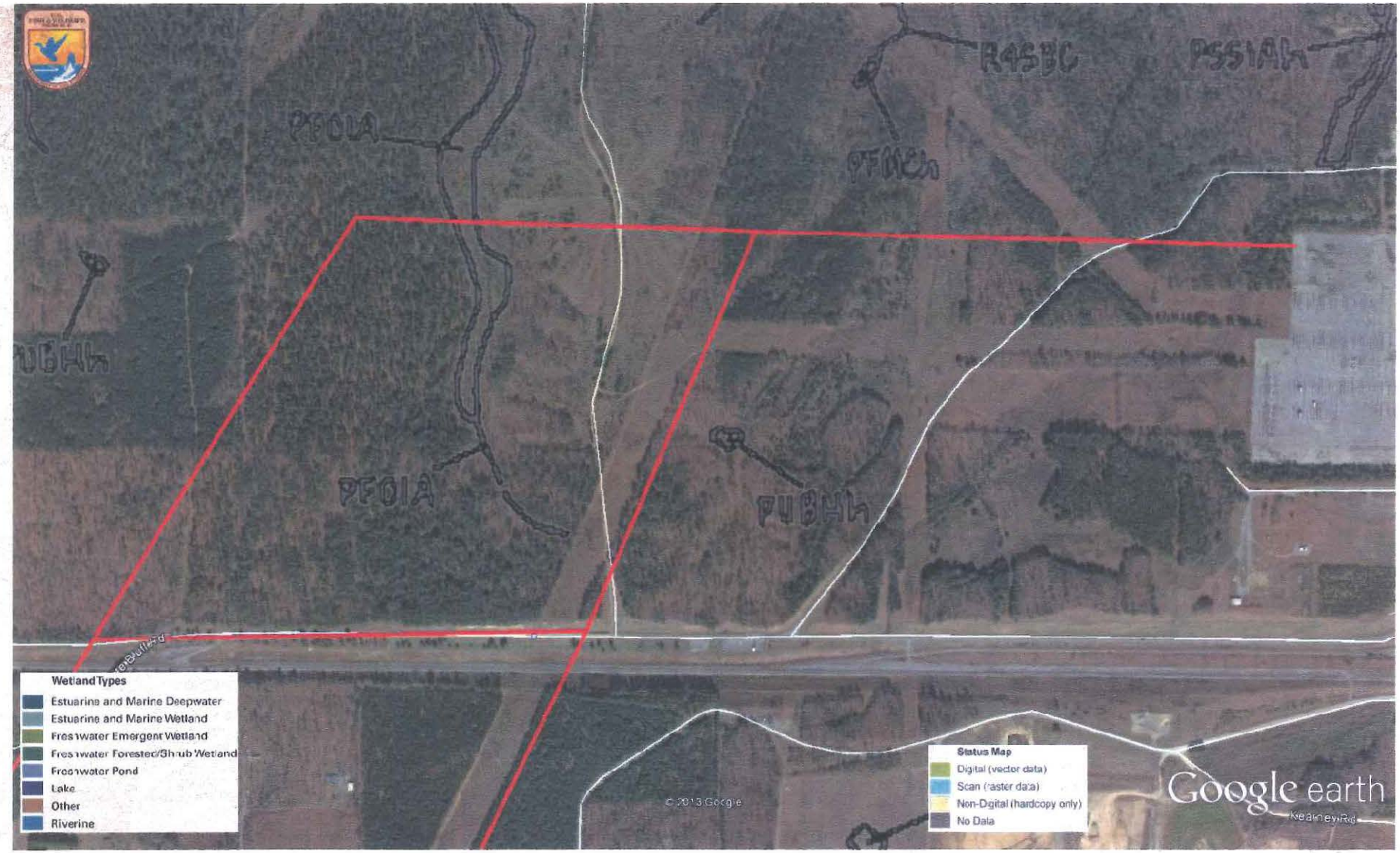

Google earth

feet 5000

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Map Unit Name

Aggregation Method: No Aggregation Necessary
Tie-break Rule: Lower

Jefferson and Lincoln Counties, Arkansas
Survey Area Version and Date: 8 - 12/02/2008

Map symbol	Map unit name	Rating
1	Amy silt loam	Amy silt loam
2	Amy soils frequently flooded	Amy soils frequently flooded
3	Amy-Urban land complex	Amy-Urban land complex
4	Calloway silt loam, 0 to 1 percent slopes	Calloway silt loam, 0 to 1 percent slopes
5	Calloway silt loam, 1 to 3 percent slopes	Calloway silt loam, 1 to 3 percent slopes
6	Calloway-Urban land complex	Calloway-Urban land complex
7	Caspiana silt loam, 0 to 1 percent slopes	Caspiana silt loam, 0 to 1 percent slopes
8	Coushatta silt loam	Coushatta silt loam
9	Coushatta soils, occasionally flooded	Coushatta soils, occasionally flooded
10	Coushatta-Urban land complex	Coushatta-Urban land complex
11	Crevasse loamy fine sand	Crevasse loamy fine sand
12	Crevasse soils, frequently flooded	Crevasse soils, frequently flooded
13	Desha clay	Desha clay
14	Desha clay, occasionally flooded	Desha clay, occasionally flooded
15	Grenada silt loam, 1 to 3 percent slopes	Grenada silt loam, 1 to 3 percent slopes
16	Grenada silt loam, 3 to 8 percent slopes	Grenada silt loam, 3 to 8 percent slopes
17	Grenada-Urban land complex, 1 to 3 percent slopes	Grenada-Urban land complex, 1 to 3 percent slopes
18	Grenada-Urban land complex, 3 to 8 percent slopes	Grenada-Urban land complex, 3 to 8 percent slopes
19	Hebert silt loam	Hebert silt loam
20	Henry silt loam	Henry silt loam
21	Henry-Urban land complex	Henry-Urban land complex
22	McGehee silt loam	McGehee silt loam
23	McGehee silt loam, occasionally flooded	McGehee silt loam, occasionally flooded
24	Oklared fine sandy loam, occasionally flooded	Oklared fine sandy loam, occasionally flooded
25	Ouachita soils, frequently flooded	Ouachita soils, frequently flooded
26	Perry clay	Perry clay
27	Perry clay, occasionally flooded	Perry clay, occasionally flooded
28	Pheba silt loam, 0 to 2 percent slopes	Pheba silt loam, 0 to 2 percent slopes
29	Pheba-Urban land complex, 0 to 2 percent slopes	Pheba-Urban land complex, 0 to 2 percent slopes
30	Portland clay	Portland clay
31	Portland clay, occasionally flooded	Portland clay, occasionally flooded
32	Portland-Urban land complex	Portland-Urban land complex

Map Unit Name

Aggregation Method: No Aggregation Necessary
Tie-break Rule: Lower

Jefferson and Lincoln Counties, Arkansas
Survey Area Version and Date: 8 - 12/02/2008

Map symbol	Map unit name	Rating
33	Rilla silt loam, 0 to 1 percent slopes	Rilla silt loam, 0 to 1 percent slopes
34	Rilla silt loam, undulating	Rilla silt loam, undulating
35	Roxana silt loam	Roxana silt loam
36	Roxana silt loam, occasionally flooded	Roxana silt loam, occasionally flooded
37	Roxana-Urban land complex	Roxana-Urban land complex
38	Ruston fine sandy loam, 1 to 3 percent slopes	Ruston fine sandy loam, 1 to 3 percent slopes
39	Sacul fine sandy loam, 1 to 3 percent slopes	Sacul fine sandy loam, 1 to 3 percent slopes
40	Sacul fine sandy loam, 3 to 8 percent slopes	Sacul fine sandy loam, 3 to 8 percent slopes
41	Savannah fine sandy loam, 1 to 3 percent slopes	Savannah fine sandy loam, 1 to 3 percent slopes
42	Savannah fine sandy loam, 3 to 8 percent slopes	Savannah fine sandy loam, 3 to 8 percent slopes
43	Savannah-Urban land complex, 1 to 3 percent slopes	Savannah-Urban land complex, 1 to 3 percent slopes
44	Savannah-Urban land complex, 3 to 8 percent slopes	Savannah-Urban land complex, 3 to 8 percent slopes
45	Sawyer silt loam, 1 to 3 percent slopes	Sawyer silt loam, 1 to 3 percent slopes
46	Sawyer silt loam, 3 to 8 percent slopes	Sawyer silt loam, 3 to 8 percent slopes
47	Smithdale fine sandy loam, 3 to 8 percent slopes	Smithdale fine sandy loam, 3 to 8 percent slopes
48	Smithdale fine sandy loam, 8 to 12 percent slopes	Smithdale fine sandy loam, 8 to 12 percent slopes
49	Wabbaseka-Latanier complex, undulating	Wabbaseka-Latanier complex, undulating
50	Wabbaseka-Latanier complex, occasionally flooded	Wabbaseka-Latanier complex, occasionally flooded
51	Yorktown silty clay	Yorktown silty clay
52	Water	Water
53	Levee	Levee
54	Dam	Dam

Map Unit Name

Rating Options

Attribute Name: Map Unit Name

A soil map unit is a collection of soil areas or nonsoil areas (miscellaneous areas) delineated in a soil survey. Each map unit is given a name that uniquely identifies the unit in a particular soil survey area.

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value to represent the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. The components in the map unit name represent the major soils within a map unit delineation. Minor components make up the balance of the map unit. Great differences in soil properties can occur between map unit components and within short distances. Minor components may be very different from the major components. Such differences could significantly affect use and management of the map unit. Minor components may or may not be documented in the database. The results of aggregation do not reflect the presence or absence of limitations of the components which are not listed in the database. An on-site investigation is required to identify the location of individual map unit components.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be generated. Aggregation must be done because, on any soil map, map units are delineated but components are not. The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Print Window

Rare Species Search Engine: Find Arkansas Endangered Species

Jefferson

Name	Status		Rank	
	Federal	State	Global	State
Animals - Invertebrates				
Caecidotea dentadactyla (an isopod)	-	INV	GNR	S1
Caecidotea obtusa (an isopod)	-	INV	GNR	S1
Cicindela hirticollis (beach-dune tiger beetle)	-	INV	G5	S2S3
Crangonyx obliquus (an amphipod)	-	INV	G5	S3?
Daedalochila peregrina (white liptooth)	-	INV	G2	SNR
Euphyes dukesi (Duke's skipper)	-	INV	G3	S1S2
Fallicambarus gilpini (a crayfish)	-	INV	G2	S1
Lirceus louisianae (an isopod)	-	INV	GNR	S1
Speyeria diana (Diana)	-	INV	G3G4	S2S3
Synurella bifurca (an amphipod)	-	INV	GNR	S3?
Uniomerus declivis (tapered pondhorn)	-	INV	G5Q	S2
Animals - Vertebrates				
Ambystoma annulatum (ringed salamander)	-	INV	G4	S3
Corynorhinus rafinesquii (Rafinesque's big-eared bat)	-	INV	G3G4	S3
Etheostoma parvipinne (goldstripe darter)	-	INV	G4G5	S2
Gallinula chloropus (Common Moorhen)	-	INV	G5	S1B,S2N
Haliaeetus leucocephalus (Bald Eagle)	-	INV	G5	S2B,S4N
Lasiurus seminolus (Seminole bat)	-	INV	G5	S3
Limnothlypis swainsonii (Swainson's Warbler)	-	INV	G4	S3B
Moxostoma pisolabrum (pealip redhorse)	-	INV	G5	S2?
Myotis austroriparius (southeastern myotis)	-	INV	G3G4	S3
Nerodia cyclopion (Mississippi green water snake)	-	INV	G5	S3
Notropis hubbsi (bluehead shiner)	-	INV	G3	S3
Notropis maculatus (taillight shiner)	-	INV	G5	S3
Regina grahamii (Graham's crayfish snake)	-	INV	G5	S2
Regina rigida sinicola (gulf crayfish snake)	-	INV	G5T5	S3
Sterna antillarum athalassos (Interior Least Tern)	LE	INV	G4T2Q	S2B
Plants - Vascular				
Alophia drummondii (pinewoods-lily)	-	INV	G4	S2
Calopogon tuberosus var. tuberosus (tuberous grass-pink)	-	INV	G5T5	S1
Carex arkansana (Arkansas sedge)	-	INV	G4	S1

Cypripedium kentuckiense (Kentucky lady's-slipper)	-	INV	G3	S3
Dalea lanata var. lanata (woolly prairie-clover)	-	INV	G5TNR	S2S3
Eleocharis flavescens var. flavescens (spike-rush)	-	INV	G5T5	S1S2
Eustoma exaltatum (catchfly prairie-gentian)	-	INV	G5	S2
Fuirena bushii (Bush's umbrella sedge)	-	INV	G5	S3
Gymnopogon brevifolius (short-leaf skeleton grass)	-	INV	G5	S2
Heliotropium convolvulaceum (phlox heliotrope)	-	INV	G5	S2
Leitneria floridana (corkwood)	-	INV	G3	S3
Platanthera cristata (crested fringed orchid)	-	INV	G5	S1S2
Platanthera x channellii (Channell's fringed orchid)	-	INV	GNA	S1
Pogonia ophioglossoides (rose pogonia)	-	ST	G5	S2
Prenanthes barbata (barbed rattlesnake-root)	-	INV	G3	S2
Pycnanthemum verticillatum (Whorled Mountain-mint)	-	INV	G5	S1
Rhynchospora globularis var. globularis (beaksedge)	-	INV	G5?T5?	S2
Solidago tortifolia (twist-leaf goldenrod)	-	INV	G4G5	S2
Spiranthes lacera var. lacera (northern slender ladies'-tresses)	-	INV	G5T5	S1
Utricularia subulata (zigzag bladderwort)	-	INV	G5	S2

Special Elements - Natural Communities

Lowland pine-oak forest	-	INV	GNR	S1
West Gulf Coastal Plain Pine-Hardwood Forest	-	INV	GNR	SNR

ARKANSAS NATURAL HERITAGE COMMISSION
An Agency of the Department of Arkansas Heritage
1500 Tower Building, 323 Center Street
Phone: 501.324.9619 / Fax: 501.324.9618 / TDD: 501.324.9150
arkansas@naturalheritage.org

Hydric Soils

Jefferson and Lincoln Counties, Arkansas

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
3:					
Amy-Urban land complex	Amy	60	Stream terraces	Yes	2B3
	Aquults	5	Depressions	Yes	2B3, 3
25:					
Ouachita soils, frequently flooded	Ouachita, flooded, long	10	Flood plains	Yes	4
	Amy	5	Flood plains	Yes	2B3, 4
41:					
Savannah fine sandy loam, 1 to 3 percent slopes	Amy	5	Depressions	Yes	2B3
43:					
Savannah-Urban land complex, 1 to 3 percent slopes	Amy	10	Depressions	Yes	2B3

Explanation of hydric criteria codes:

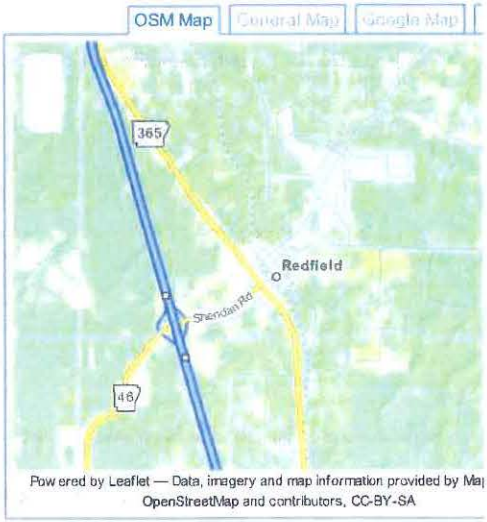
1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1.) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2.) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3.) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Redfield, Arkansas

Back to Redfield, AR housing info, Jefferson County, Arkansas, AR smaller cities, AR small cities, All Cities.

We are giving away $1200 in prizes - enter simply by sending us your own city pictures!
Click here for promotion details and to upload your Redfield, Arkansas photos

70°F
Current weather forecast for Redfield, AR



Jump to a detailed profile or search site with

City, County or Zip Code

Jefferson County

Population in 2011: 1,295. Population change since 2000: +11.9%

Males: 636 (49.1%)
Females: 659 (50.9%)

Median resident age: 38.5 years
Arkansas median age: 42.2 years

Zip codes: 72132.

Estimated median household income in 2009: $47,650 (it was $36,302 in 2000)
Redfield: $47,650
Arkansas: $37,823
Estimated per capita income in 2009: $21,104

Redfield city income, earnings, and wages data

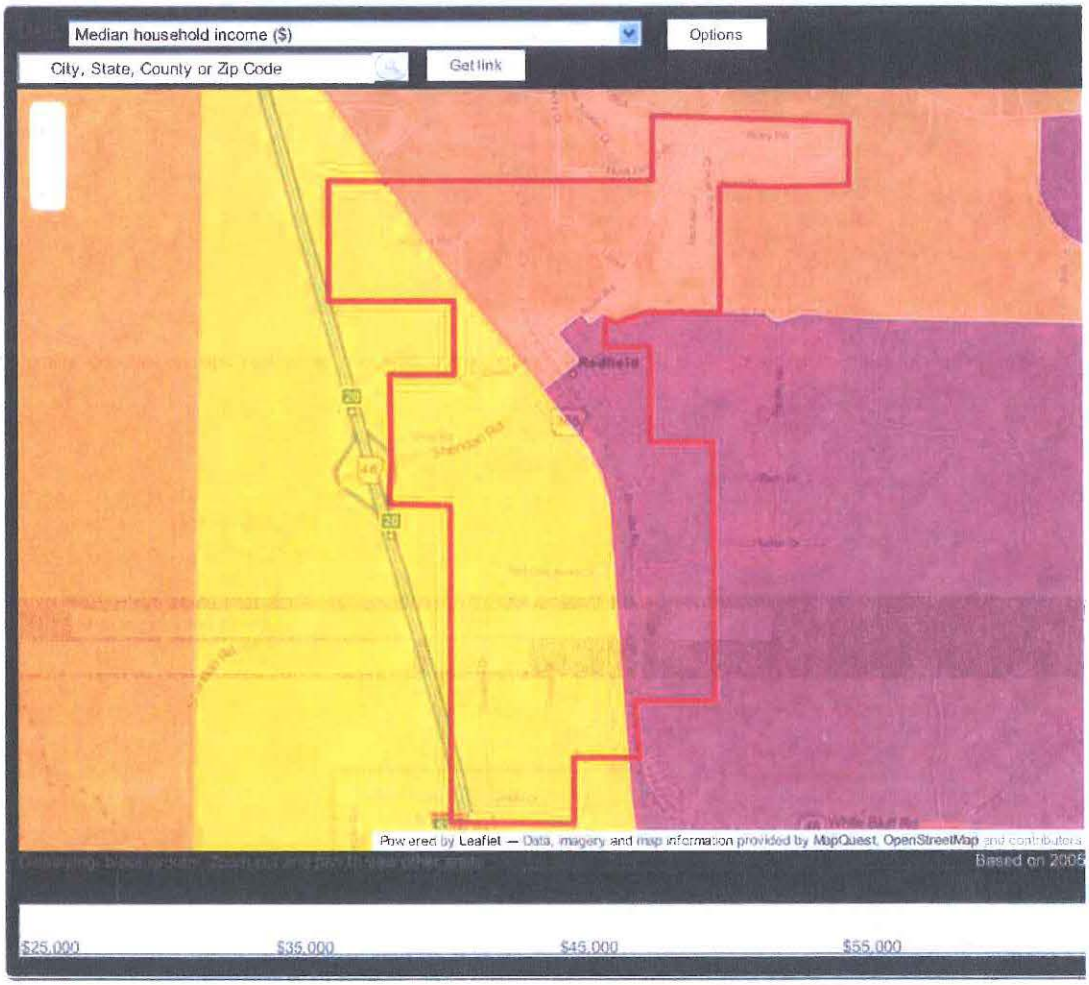
Estimated median house or condo value in 2009: $99,572 (it was $64,300 in 2000)
Redfield: $99,572
Arkansas: $102,900
Mean prices in 2009: All housing units: $109,152; Detached houses: $121,446; In 3-to-4-unit structures: $207,541; Mobile h
$64,365

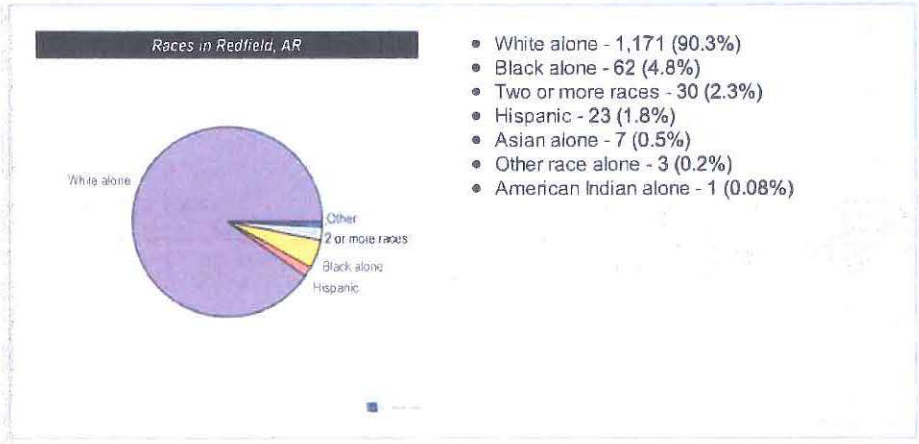
Median gross rent in 2009: $503.

Redfield, AR residents, houses, and apartments details

Profiles of local businesses

- Something Old, Something New and Consignment Too
- Farmers Insurance of East End





Races in Redfield detailed stats: ancestries, foreign born residents, place of birth

Mar. 2012 cost of living index in Redfield: 80.2 (low, U.S. average is 100)

Recent posts about Redfield, Arkansas on our local forum with over 1,500,000 registered users. Redfield is mentioned 22 times in forum:

- **Star City, Rison and Redfield** (9 replies)
- **Relocating to Pine Bluff** (46 replies)
- **Buying Land in Central Arkansas** (0 replies)
- **Is it safe to work in Pine Bluff?** (18 replies)
- **New job in Pine Bluff - Recommended Area to Live** (13 replies)
- **Maybe relocating for job in White Hall, but LR native (21 years ago...)** (2 replies)

Latest news from Redfield, AR collected exclusively by city-data.com from local newspapers, TV, and radio stations

Rita Carol Golliver Families Randolph County News
Golliver of Pocahontas; daughter Annette Cusher of Redfield; three brothers Alan Rogers of Pocahontas, Wayne Rogers of Lettsworth, LA, and Larry Biggers; three sisters Millie Thompson of Hoxie, Patsy Hall and (randolphcounty.kait8.com)

Redfield student writes letter to president to save school todaysthv com
a month ago, asking him to do whatever he can to save Redfield Middle School. It is set to close this fall. (todaysthv.com)

topnews
now only parent have sounded off in the fight to save Redfield Middle School, but now some students are getting involved and taking their concerns a "the top." (todaysthv.com)

Ancestries: United States (18.0%), Irish (13.2%), German (10.5%), English (10.1%), French (6.1%), Scotch-Irish (4.5%).

Current Local Time: 8:55:21 AM CST time zone

Elevation: 301 feet

Land area: 2.69 square miles.

Population density: 482 people per square mile (low).

Home Value Estimate

Address: Unit (optional):

City State Zip

Redfield AR

Get Home Value Estimate

Recent Home Sales

Address:

City: Redfield | State: AR | Zip:

Min Price (optional) | Max Price (optional)

Prioritization: ◉ Sale Date ○ Distance

Get Recent Home Sales

For population 25 years and over in Redfield:

- High school or higher: 83.5%
- Bachelor's degree or higher: 14.0%
- Graduate or professional degree: 4.4%
- Unemployed: 4.2%
- Mean travel time to work (commute): 29.8 minutes

For population 15 years and over in Redfield city:

- Never married: 20.9%
- Now married: 57.1%
- Separated: 1.8%
- Widowed: 7.4%
- Divorced: 12.8%

23 residents are foreign born
This city: 2.0%
Arkansas: 2.8%

Median real estate property taxes paid for housing units with mortgages in 2009: **$465 (0.5%)**
Median real estate property taxes paid for housing units with no mortgage in 2009: **$516 (0.7%)**

Nearest city with pop. 50,000+: Pine Bluff, AR (18.2 miles , pop. 55,085).

Nearest city with pop. 200,000+: Memphis, TN (134.0 miles , pop. 650,100).

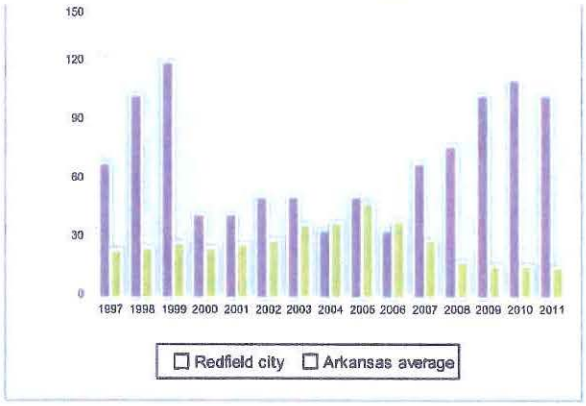
Nearest city with pop. 1,000,000+: Dallas, TX (288.5 miles , pop. 1,188,580).

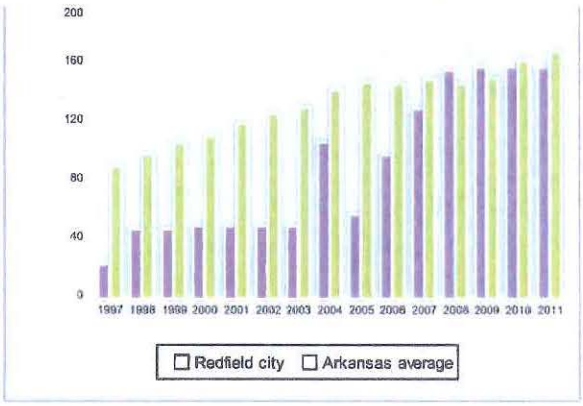
Nearest cities: Hensley, AR (2.1 miles) , Woodson, AR (2.5 miles), East End, AR (3.4 miles), Wrightsville, AR (3.4 miles), White Hall, AR (3.6 miles), Parkers-Iron Springs, AR (3.7 miles), Sherrill, AR (3.7 miles) , England, AR (3.7 miles).

Single-family new house construction building permits:

- 1997: 8 buildings, average cost: $24,400
- 1998: 12 buildings, average cost: $48,200
- 1999: 14 buildings, average cost: $48,200
- 2000: 5 buildings, average cost: $50,000
- 2001: 5 buildings, average cost: $50,000
- 2002: 6 buildings, average cost: $50,000
- 2003: 6 buildings, average cost: $50,000
- 2004: 4 buildings, average cost: $106,500
- 2005: 6 buildings, average cost: $58,300
- 2006: 4 buildings, average cost: $98,400
- 2007: 8 buildings, average cost: $130,000
- 2008: 9 buildings, average cost: $155,600
- 2009: 12 buildings, average cost: $157,900
- 2010: 13 buildings, average cost: $157,900
- 2011: 12 buildings, average cost: $157,900

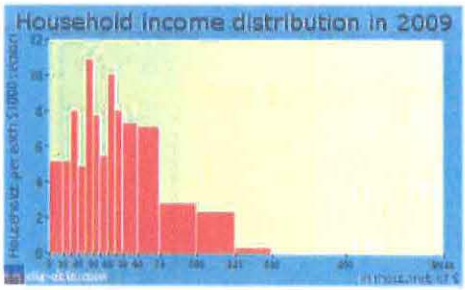
Number of permits per 10,000 residents	*Average cost (in $1000s)*

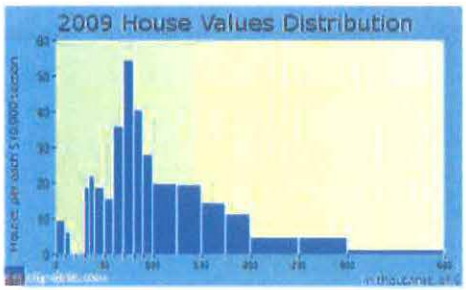




Latitude: 34.45 N, Longitude: 92.18 W

Area code: 501

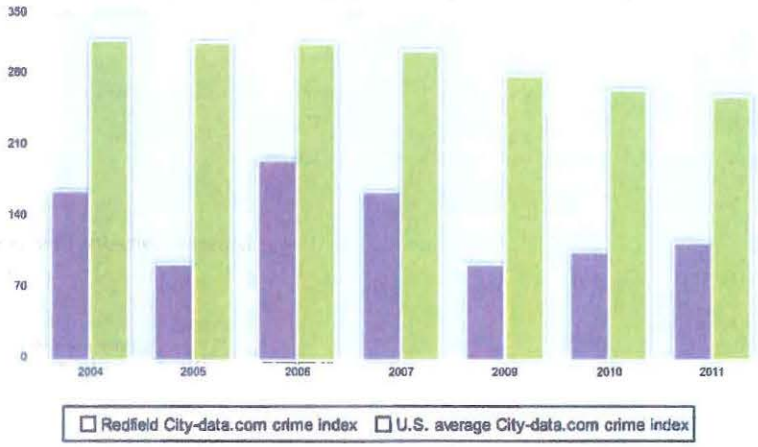




Crime in Redfield by Year

Type	2004	2005	2006	2007	2009	2010	2011
Murders	0	0	0	0	0	0	0
per 100,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rapes	0	0	0	1	0	0	0
per 100,000	0.0	0.0	0.0	85.4	0.0	0.0	0.0
Robberies	0	0	0	0	0	0	0
per 100,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assaults	4	1	2	1	1	1	0
per 100,000	340.4	83.8	168.6	85.4	85.4	84.0	0.0
Burglaries	7	7	15	5	5	9	10
per 100,000	595.7	586.3	1264.8	427.0	427.0	755.7	765.1
Thefts	13	8	12	9	7	10	13
per 100,000	1106.4	670.0	1011.8	768.6	597.8	839.6	994.6
Auto thefts	1	1	4	2	3	0	3
per 100,000	85.1	83.8	337.3	170.8	256.2	0.0	229.5
Arson	1	1	0	1	0	0	0
per 100,000	85.1	83.8	0.0	85.4	0.0	0.0	0.0
City-data.com crime index (higher means more crime, U.S. average = 319.1)	167.4	95.0	197.5	166.2	95.1	107.5	116.3

(click on a table rowto update graph)



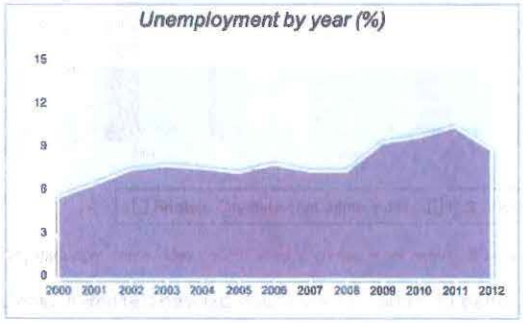
City-data.com crime index counts serious crimes more heavily. It adjusts for the number of visitors and daily workers commuting into cities.

Crime in Redfield detailed stats: murders, rapes, robberies, assaults, burglaries, thefts, arson

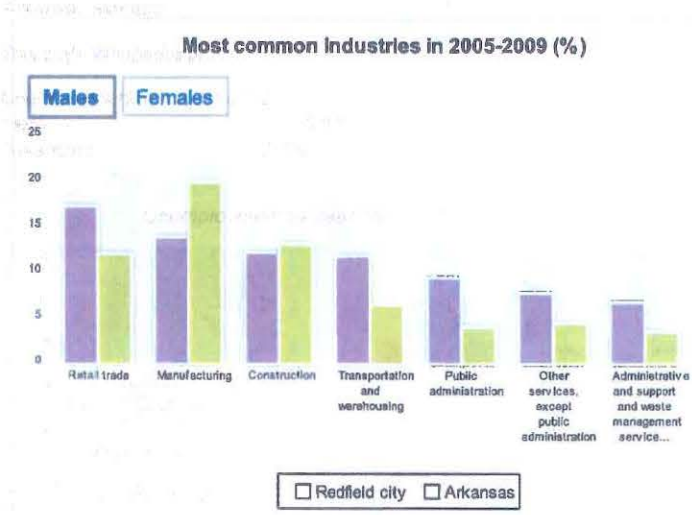
Full-time law enforcement employees in 2011, including police officers: 5 (4 officers).
Officers per 1,000 residents here: 3.06
Arkansas average: 1.97

This city's Wikipedia profile

Unemployment in August 2012:
Here: 9.0%
Arkansas: 7.0%



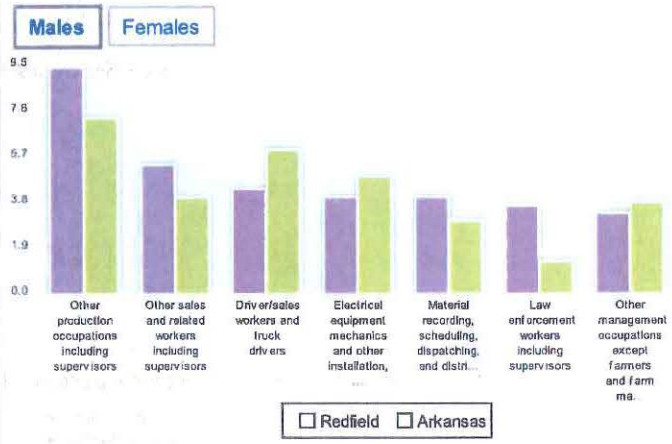
Population change in the 1990s: +75 (+6.9%).



- Retail trade (17%)
- Manufacturing (14%)
- Construction (12%)
- Transportation and warehousing (12%)

- Public administration (9%)
- Other services, except public administration (8%)
- Administrative and support and waste management services (7%)

Most common occupations (%)



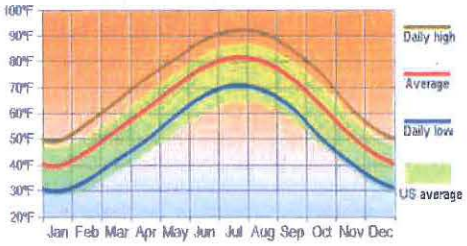
- Other production occupations including supervisors (9%)
- Other sales and related workers including supervisors (5%)
- Driver/sales workers and truck drivers (4%)
- Electrical equipment mechanics and other installation, maintenance, and repair occupations including supervisors (4%)
- Material recording, scheduling, dispatching, and distributing workers (4%)
- Law enforcement workers including supervisors (4%)
- Other management occupations except farmers and farm managers (3%)

Work and jobs in Redfield: detailed stats about occupations, industries, unemployment, workers, commute

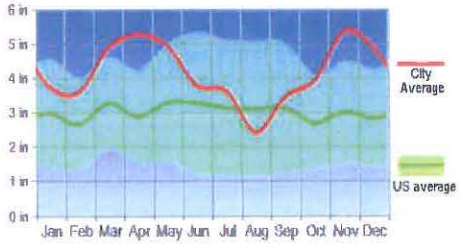
Average climate in Redfield, Arkansas

Based on data reported by over 4,000 weather stations

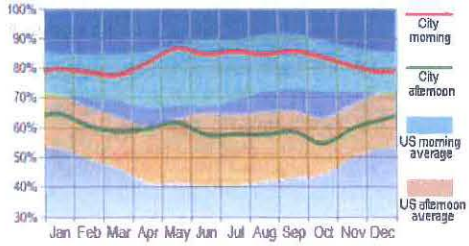
Average Temperatures



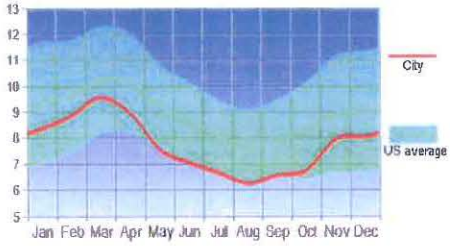
Precipitation



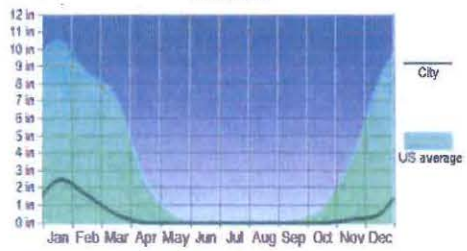
Humidity



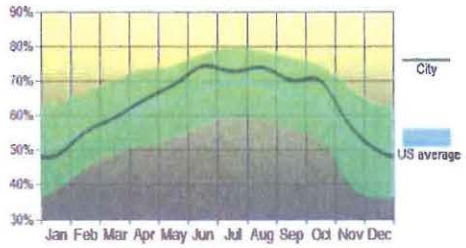
Wind Speed (mph)



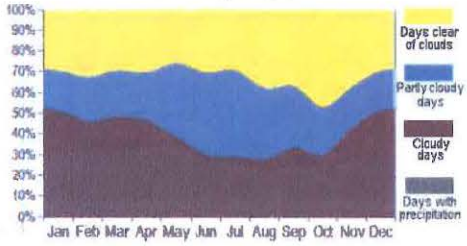
Snowfall



Sunshine



Cloudy Days



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Tornado activity:
Redfield-area historical tornado activity is above Arkansas state average. It is 241% greater than the overall U.S. average.

On 3/1/1997, a category F4 (max. wind speeds 207-260 mph) tornado 15.4 miles away from the Redfield city center killed 5 people and injured 180 people.

On 3/1/1997, a category F4 tornado 17.1 miles away from the city center killed 10 people and injured 40 people.

Earthquake activity:
Redfield-area historical earthquake activity is significantly below Arkansas state average. It is 87% smaller than the overall U.S. average.

On 1/21/1982 at 00:33:54, a magnitude 4.7 (4.5 MB, 4.7 LG, 4.5 LG, Class: Light, Intensity: IV - V) earthquake occurred 50.2 miles away from the city center
On 5/4/2001 at 06:42:12, a magnitude 4.7 (4.2 MB, 4.7 LG, 4.5 LG, Depth: 6.2 mi) earthquake occurred 52.6 miles away from Redfield center
On 6/27/2000 at 01:28:45, a magnitude 3.9 (3.9 LG, 3.7 LG, Depth: 0.1 mi, Class: Light, Intensity: II - III) earthquake occurred 99.1 miles away from the city center
On 3/16/1997 at 19:07:27, a magnitude 3.4 (3.4 LG, Depth: 3.1 mi) earthquake occurred 73.4 miles away from the city center
On 8/11/1996 at 18:17:49, a magnitude 3.5 (3.5 LG, 3.1 MD, Depth: 6.2 mi) earthquake occurred 96.1 miles away from Redfield center
On 4/11/1996 at 21:54:57, a magnitude 3.3 (3.3 LG, Depth: 3.1 mi) earthquake occurred 68.4 miles away from the city center
Magnitude types: regional Lg-wave magnitude (LG), body-wave magnitude (MB), duration magnitude (MD)

Natural disasters:
The number of natural disasters in Jefferson County (13) is near the US average (12).
Major Disasters (Presidential) Declared: 11
Emergencies Declared: 2

Causes of natural disasters: Storms: 9, Floods: 8, Tornadoes: 4, Winter Storms: 2, Heavy Rain: 1, Wind: 1, Flood: 1, Hurricane: 1 (Note: Some incidents may be assigned to more than one category).

Hospitals/medical centers near Redfield:

- ARKANSAS CHILDREN'S HOSPITAL (Childrens, Voluntary non-profit - Private, provides emergency services, about 22 miles away; LITTLE ROCK, AR)
- JEFFERSON REGIONAL MEDICAL CENTER (Acute Care Hospitals, Voluntary non-profit - Other, provides emergency services, about 22 miles away; PINE BLUFF, AR)
- BAPTIST HEALTH MEDICAL CENTER-LITTLE ROCK (Acute Care Hospitals, Voluntary non-profit - Private, provides emergency services, about 23 miles away; LITTLE ROCK, AR)

Political contributions by individuals in Redfield, AR

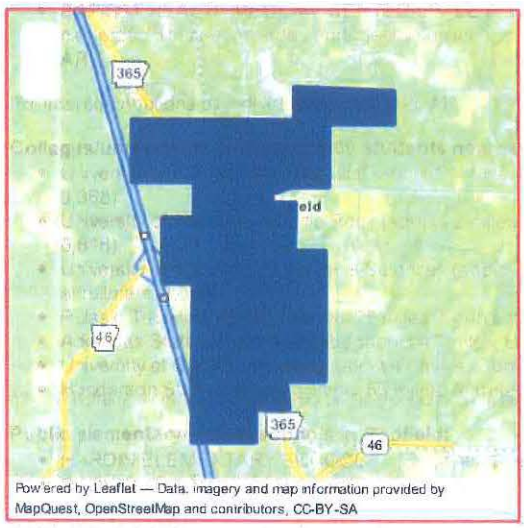
Colleges/universities with over 2000 students nearest to Redfield:

- University of Arkansas at Pine Bluff (about 17 miles; Pine Bluff, AR; Full-time enrollment: 3,368)
- University of Arkansas at Little Rock (about 22 miles; Little Rock, AR; FT enrollment: 6,816)
- University of Arkansas for Medical Sciences (about 23 miles; Little Rock, AR; FT enrollment: 2,068)
- Pulaski Technical College (about 25 miles; North Little Rock, AR; FT enrollment: 4,856)
- Arkansas State University-Beebe (about 47 miles; Beebe, AR; FT enrollment: 2,601)
- University of Central Arkansas (about 47 miles; Conway, AR; FT enrollment: 9,257)
- Henderson State University (about 55 miles; Arkadelphia, AR; FT enrollment: 2,863)

Public elementary/middle schools in Redfield:

- HARDIN ELEMENTARY SCHOOL (Students: 289; Location: 700 SCHOOLWOOD DR; Grades: KG - 06)
- REDFIELD JUNIOR HIGH SCHOOL (Students: 112; Location: 101 SCHOOL ST; Grades: 07 - 09)

See full list of schools located in Redfield



Click to draw/clear city borders

Notable locations in Redfield: Redfield Police Department (A), Redfield Volunteer Fire Department Station 1 (B), Redfield Volunteer Fire Department Station 2 (C). Display/hide their locations on the map

Church in Redfield: Redfield First Southern Baptist Church (A). Display/hide its location on the map

Cemetery: Redfield Cemetery (1). Display/hide its location on the map

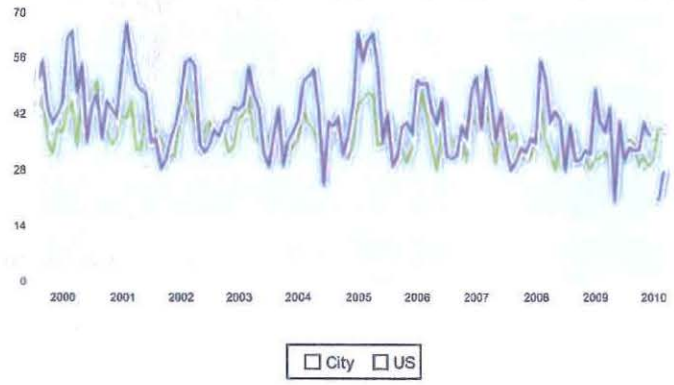
Court: Redfield City - City Court (212 North Brodie Street).

Jefferson County has a predicted average indoor radon screening level less than 2 pCi/L (pico curies per liter) - **Low Potential**

Air pollution and air quality trends
(lower is better)

AQI | $PM_{2.5}$ | CO | SO_2 | NO_2 | Ozone | PM_{10}

Air Quality Index (AQI)



Air Quality Index (AQI) level in 2010 was 36.3. This is about average.
City: 36.3
U.S.: 32.0

Particulate Matter ($PM_{2.5}$) [μ/m^3] level in 2010 was 11.1. This is about average. Closest monitor was 18.2 miles away from the city center.
City: 11.1
U.S.: 9.6

Carbon Monoxide (CO) [ppm] level in 2010 was 0.422. This is worse than average. Closest monitor was 18.2 miles away from the city center.
City: 0.422
U.S.: 0.334

Sulfur Dioxide (SO_2) [ppb] level in 2010 was 1.74. This is better than average. Closest monitor was 18.2 miles away from the city center.
City: 1.74
U.S.: 2.43

Nitrogen Dioxide (NO_2) [ppb] level in 2010 was 9.15. This is about average. Closest monitor was 18.2 miles away from the city center.
City: 9.15
U.S.: 9.39

Ozone [ppb] level in 2010 was 23.5. This is better than average. Closest monitor was 18.2 miles away from the city center.
City: 23.5
U.S.: 28.3

Particulate Matter (PM_{10}) [μ/m^3] level in 2010 was 16.5. This is better than average. Closest monitor was 18.7 miles away from the city center.
City: 16.5
U.S.: 22.1

Percentage of residents living in poverty in 2009: 11.0%
(11.9% for White Non-Hispanic residents, 0.0% for Black residents, 0.0% for Hispanic or Latino residents, 5.0% for two or more races residents)

Average household size:
This city: 2.5 people
Arkansas: 2.4 people

Percentage of family households:
This city: 70.3%
Whole state: 68.2%

Percentage of households with unmarried partners:
This city: 2.9%
Whole state: 3.9%

Likely homosexual households (counted as self-reported same-sex unmarried-partner households)
- Lesbian couples: 0.4% of all households
- Gay men: 0.0% of all households

Detailed information about poverty and poor residents in Redfield, AR

Redfield compared to Arkansas state average:
- Median house value **significantly below** state average.
- Hispanic race population percentage **significantly below** state average.
- Foreign-born population percentage **significantly below** state average.
- Percentage of population with a bachelor's degree or higher **significantly below** state average.

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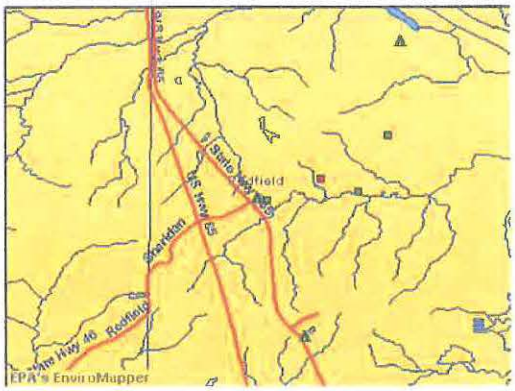
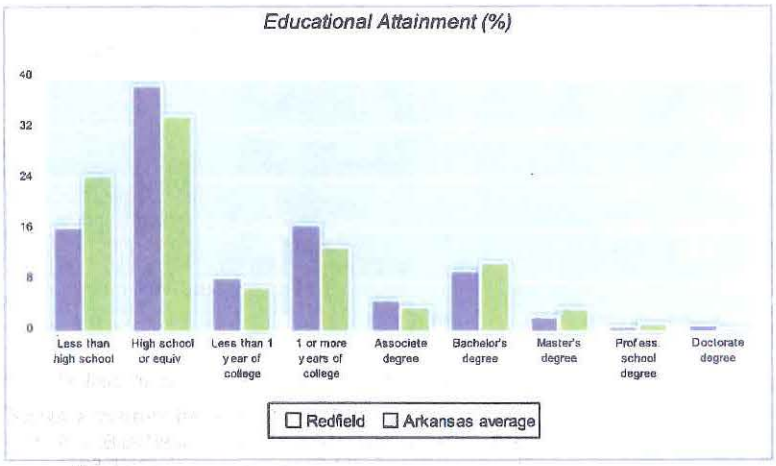
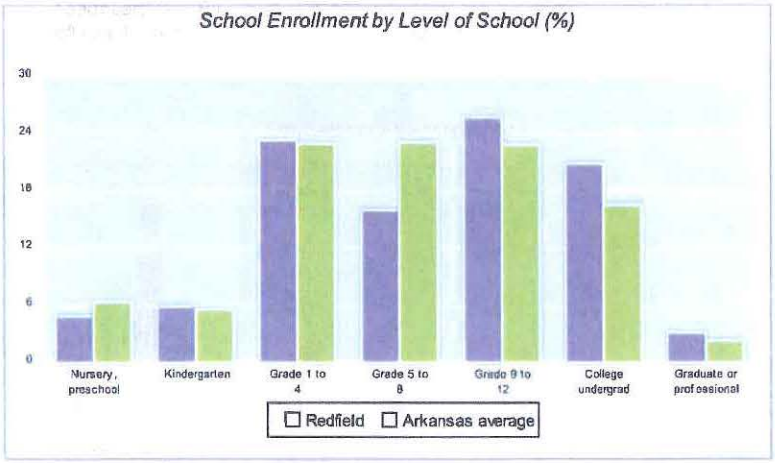
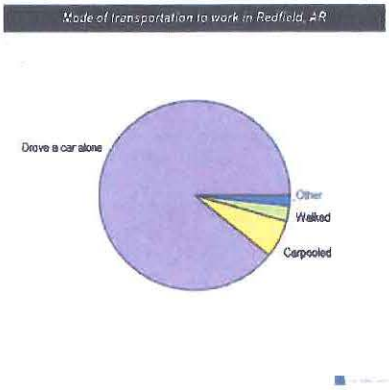
Banks with branches in Redfield (2011 data):

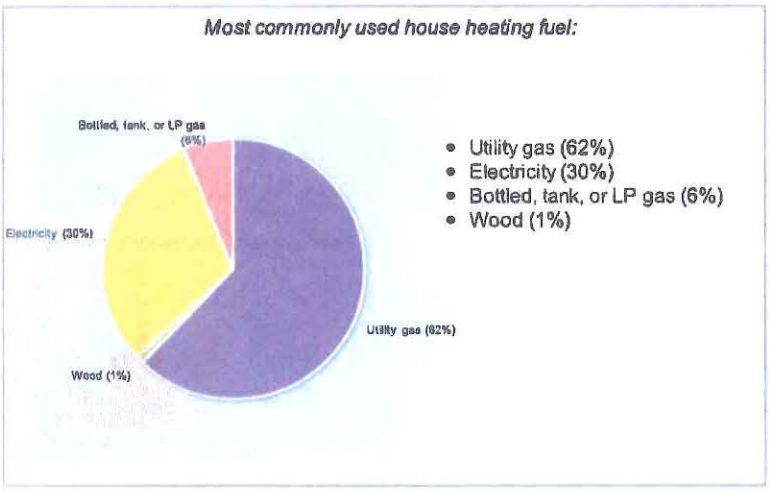
- Pine Bluff National Bank: Redfield Branch at 201 Sheridan Road, branch established on 1988/09/19. Info updated 2006/11/03: Bank assets: $386.2 mil, Deposits: $333.5 mil, headquarters in Pine Bluff, AR, positive income, Agricultural Specialization, 8 total offices, Holding Company: Jefferson Bancshares, Inc.



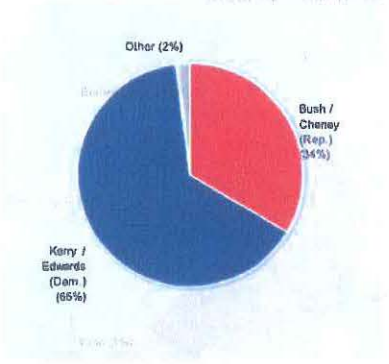




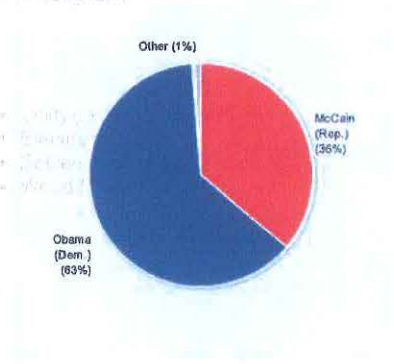




2004 Presidential Election results in Jefferson County Arkansas:



2008 Presidential Election results in Jefferson County Arkansas:



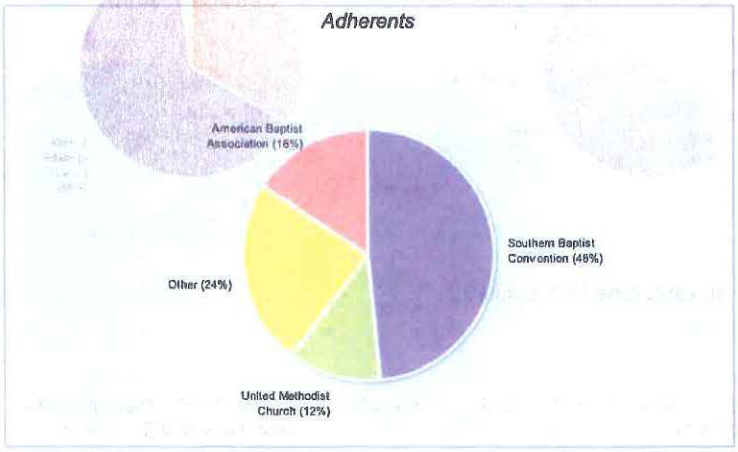
Detailed 2008 election results.

Religion statistics for Redfield (based on Jefferson County data)

Percentage of population affiliated with a religious congregations: 47.81%

Here 47.8%

USA 50.2%



Breakdown of population affiliated with a religious congregations

Name	Southern Baptist Convention	American Baptist Association	United Methodist Church	Catholic Church	Assemblies of God
Adherents	48.4%	15.7%	12.1%	5.0%	3.9%
Congregations	26.7%	12.1%	12.9%	3.4%	5.2%

Name	Presbyterian Church (USA)	Churches of Christ	Baptist Missionary Association of America	Church of God (Cleveland, Tennessee)	Other
Adherents	3.0%	2.7%	2.6%	1.0%	5.7%
Congregations	3.4%	6.6%	6.9%	2.6%	18.1%

Source: Jones, Dale E., et al. 2002. Congregations and Membership in the United States 2000. Nashville, TN: Glenmary Research Center.
Tables represent county-level data

Food Environment Statistics:

Number of grocery stores: 15
Jefferson County: 1.89 / 10,000 pop.
Arkansas: 2.02 / 10,000 pop.
Number of convenience stores (no gas): 2
Jefferson County: 0.25 / 10,000 pop.
Arkansas: 0.59 / 10,000 pop.
Number of convenience stores (with gas): 32
Jefferson County: 4.04 / 10,000 pop.
State: 4.94 / 10,000 pop.
Number of full-service restaurants: 31
Here: 3.92 / 10,000 pop.
State: 6.66 / 10,000 pop.
Adult diabetes rate:
This county: 11.6%
Arkansas: 9.8%
Adult obesity rate:
Jefferson County: 34.9%
Arkansas: 29.1%
Low-income preschool obesity rate:
This county: 8.3%
State: 13.6%

Local government employment and payroll (March 2007)

Function	Full-time employees	Monthly full-time payroll	Average yearly full-time wage	Part-time employees	Monthly part-time payroll
Other Government Administration	1	$2,704	$32,448	7	$975
Judicial and Legal	1	$1,500	$18,000	2	$1,324
Police Protection - Officers	4	$9,222	$27,666	0	$0
Streets and Highways	1	$2,672	$32,064	0	$0
Water Supply	3	$5,590	$22,360	0	$0
Other and Unallocable	0	$0		1	$75
Totals for Government	10	$21,688	$26,026	10	$2,374

Redfield government finances in 2002:

- Charges - Sewerage: $146,000 ($112.74)
  - All Other: $69,000 ($53.28)
- Construction - General: $266,000 ($205.41)
- Current Operations - Police Protection: $197,000 ($152.12)
  - Regular Highways: $144,000 ($111.20)
  - Sewerage: $126,000 ($97.30)
  - Water Utilities: $81,000 ($62.55)
  - Financial Administration: $65,000 ($50.19)
  - Solid Waste Management: $58,000 ($44.79)
  - Fire Protection: $34,000 ($26.25)
  - General - Other: $29,000 ($22.39)
  - Parks & Recreation: $5,000 ($3.86)
- Federal Intergovernmental - All Other: $69,000 ($53.28)
- Local Intergovernmental - General Support: $118,000 ($91.12)
- Miscellaneous - General Revenue, NEC: $133,000 ($102.70)
  - Interest Earnings: $9,000 ($6.95)
- Other Capital Outlay - General - Other: $4,000 ($3.09)
- Other Funds - Cash & Deposits: $617,000 ($476.45)
- Revenue - Water Utilities: $227,000 ($175.29)
- State Intergovernmental - Highways: $72,000 ($55.60)
  - General Support: $21,000 ($16.22)
- Tax - Total General Sales: $294,000 ($227.03)
  - Public Utilities: $77,000 ($59.46)
  - Property: $47,000 ($36.29)
  - NEC: $5,000 ($3.86)
- Total Salaries & Wages: $236,000 ($182.24)

5.38% of this county's 2006 resident taxpayers lived in other counties in 2005 ($27,469 average adjusted gross income)
Here: 5.38%
Arkansas average: 7.98%

0.09% of residents moved from foreign countries ($397 average AGI)
Jefferson County: 0.09%
Arkansas average: 0.10%

Top counties from which taxpayers relocated into this county between 2005 and 2006:
from Pulaski County, AR 0.74% ($28,853 average AGI)
from Grant County, AR 0.37% ($26,667)
from Lincoln County, AR 0.31% ($23,293)

6.52% of this county's 2005 resident taxpayers moved to other counties in 2006 ($34,817 average adjusted gross income)
Here: 6.52%
Arkansas average: 7.29%

0.04% of residents moved to foreign countries ($213 average AGI)
Jefferson County: 0.04%
Arkansas average: 0.04%

Top counties to which taxpayers relocated from this county between 2005 and 2006:
to Pulaski County, AR 1.23% ($36,114 average AGI)
to Grant County, AR 0.36% ($34,281)
to Cleveland County, AR 0.23% ($37,361)

Strongest AM radio stations in Redfield:
- KAAY (1090 AM; 50 kW; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- KGHT (880 AM; 50 kW; SHERIDAN, AR; Owner: METROPOLITAN RADIO GROUP, INC.)
- KMTL (760 AM; daytime; 10 kW; SHERWOOD, AR; Owner: GEORGE V. DOMERESE)
- KARN (920 AM; 5 kW; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- KITA (1440 AM; 5 kW; LITTLE ROCK, AR; Owner: KITA, INCORPORATED)
- KLRG (1150 AM; 5 kW; NORTH LITTLE ROCK, AR; Owner: ARKANSAS RADIO CORPORATION)
- KPBA (1270 AM; 5 kW; PINE BLUFF, AR; Owner: METRO BIRCH ENTERPRISES, INC)
- KLIH (1250 AM; 2 kW; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- KDXE (1380 AM; 5 kW; NORTH LITTLE ROCK, AR; Owner: RADIO DISNEY AM 1380, LLC)
- WCRV (640 AM; 50 kW; COLLIERVILLE, TN; Owner: BOTT BROADCASTING COMPANY/TENNESSEE)
- KBHS (590 AM; 5 kW; HOT SPRINGS, AR; Owner: J & A, INC.)
- KEEL (710 AM; 50 kW; SHREVEPORT, LA; Owner: CITICASTERS LICENSES, L.P.)
- WGSF (1030 AM; 50 kW; MEMPHIS, TN; Owner: FLINN BROADCASTING CORPORATION)

Strongest FM radio stations in Redfield:
- KMSX (94.9 FM; MAUMELLE, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KIPR (92.3 FM; PINE BLUFF, AR; Owner: CITADEL BROADCASTING COMPANY)
- KHTE-FM (96.5 FM; ENGLAND, AR; Owner: ABG ARKANSAS, LLC)
- KVLO (102.9 FM; SHERIDAN, AR; Owner: CITADEL BROADCASTING COMPANY)
- KSSN (95.7 FM; LITTLE ROCK, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KKPT (94.1 FM; LITTLE ROCK, AR; Owner: SIGNAL MEDIA OF ARKANSAS, INC.)
- KABZ (103.7 FM; LITTLE ROCK, AR; Owner: SIGNAL MEDIA OF ARKANSAS, INC)
- KHKN (106.7 FM; BENTON, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KURB (98.5 FM; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- KLAL (107.7 FM; WRIGHTSVILLE, AR; Owner: CITADEL BROADCASTING COMPANY)
- KKZR (93.3 FM; BRYANT, AR; Owner: ABG ARKANSAS, LLC)
- KMJX (105.1 FM; CONWAY, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KDJE (100.3 FM; JACKSONVILLE, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KANX (91.1 FM; SHERIDAN, AR; Owner: AMERICAN FAMILY ASSOCIATION)
- KUAR (89.1 FM; LITTLE ROCK, AR; Owner: BD. OF TRUSTEES OF UNIV. OF ARKANSAS)
- KPBQ-FM (101.3 FM; PINE BLUFF, AR; Owner: M.R.S. VENTURES, INC.)
- KABF (88.3 FM; LITTLE ROCK, AR; Owner: ARKANSAS BROADCASTING FOUNDATION INC)
- KTRN (104.5 FM; WHITE HALL, AR; Owner: BAYOU BROADCASTING, INC.)
- KUAP (89.7 FM; PINE BLUFF, AR; Owner: BOARD OF TRUSTEES OF THE UNIV OF AR)
- KLEC-FM (106.3 FM; LONOKE, AR; Owner: ABG ARKANSAS, LLC)

TV broadcast stations around Redfield:
- KATV (Channel 7; LITTLE ROCK, AR; Owner: KATV, LLC)
- KETS (Channel 2; LITTLE ROCK, AR; Owner: ARKANSAS EDUCATIONAL TELEVISION COMMISSION)
- KASN (Channel 38; PINE BLUFF, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KVTN (Channel 25; PINE BLUFF, AR; Owner: AGAPE CHURCH, INC.)
- KTHV (Channel 11; LITTLE ROCK, AR; Owner: ARKANSAS TELEVISION COMPANY)
- KLRT-TV (Channel 16; LITTLE ROCK, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KARK-TV (Channel 4; LITTLE ROCK, AR; Owner: KARK-TV, INC.)
- KWBF (Channel 42; LITTLE ROCK, AR; Owner: RIVER CITY BROADCASTING, INC.)

- KLRA-LP (Channel 58; LITTLE ROCK, AR; Owner: ARKANSAS MEDIA, L.L.C.)
- KKYK-LP (Channel 22; LITTLE ROCK, AR; Owner: ARKANSAS 49, INC.)
- KJLR-LP (Channel 28; LITTLE ROCK, ETC., AR; Owner: COWSERT FAMILY, L.L.C.)
- K55GE (Channel 55; LITTLE ROCK, AR; Owner: THREE ANGELS BROADCASTING NETWORK INC.)
- KWBK-LP (Channel 36; PINE BLUFF, AR; Owner: ARKANSAS 49, INC.)
- KHUG-LP (Channel 14; LITTLE ROCK, AR; Owner: LITTLE ROCK TV-14, L.L.C.)
- KWBF-LP (Channel 5; SHERIDAN, AR; Owner: ARKANSAS MEDIA, L.L.C.)
- KHTE-LP (Channel 44; LITTLE ROCK, AR; Owner: EQUITY BROADCASTING CORPORATION)
- K27FF (Channel 27; EL DORADO, AR; Owner: MS COMMUNICATIONS, LLC)
- K34FH (Channel 34; LITTLE ROCK, AR; Owner: NATIONAL MINORITY T.V., INC.)
- KIPB-LP (Channel 65; PINE BLUFF, AR; Owner: IMMANUEL BROADCASTING CORPORATION)

Redfield fatal accident list:
Apr 30, 2004 09:33 PM, River Rd, Vehicles: 1, Persons: 1, Fatalities: 1, Drunken drivers: 1
Oct 14, 1994 10:15 AM, 365-14, Vehicles: 1, Persons: 3, Fatalities: 1
Jun 28, 1976 10:10 PM, Vehicles: 1, Persons: 3, Fatalities: 1

FCC Registered Cell Phone Towers: 1 (See the full list of FCC Registered Cell Phone Towers in Redfield)
FCC Registered Antenna Towers: 42 (See the full list of FCC Registered Antenna Towers)
FCC Registered Commercial Land Mobile Towers: 2 (See the full list of FCC Registered Commercial Land Mobile Towers in Redfield, AR)
FCC Registered Private Land Mobile Towers: 5 (See the full list of FCC Registered Private Land Mobile Towers)
FCC Registered Broadcast Land Mobile Towers: 2 (See the full list of FCC Registered Broadcast Land Mobile Towers)
FCC Registered Microwave Towers: 20 (See the full list of FCC Registered Microwave Towers in this town)
FCC Registered Amateur Radio Licenses: 10 (See the full list of FCC Registered Amateur Radio Licenses in Redfield)

Home Mortgage Disclosure Act Aggregated Statistics For Year 2009
(Based on 1 partial tract)

	A) FHA, FSA/RHS & VA Home Purchase Loans		B) Conventional Home Purchase Loans		C) Refinancings		G) Loans On Manufactured Home Dwelling (A B C & D)	
	Number	Average Value	Number	Average Value	Number	Average Value	Number	Average Value
LOANS ORIGINATED	1	$91,350	1	$60,640	2	$116,160	1	$36,090
APPLICATIONS APPROVED, NOT ACCEPTED	0	$0	0	$0	0	$0	0	$0
APPLICATIONS DENIED	0	$0	0	$0	1	$109,630	1	$42,150
APPLICATIONS WITHDRAWN	0	$0	0	$0	1	$64,010	0	$0
FILES CLOSED FOR INCOMPLETENESS	0	$0	0	$0	0	$0	0	$0

Choose year: **2009** 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999

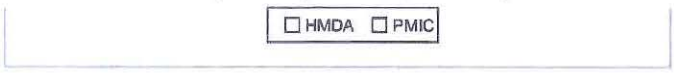
Detailed HMDA statistics for the following Tracts: 0002.00

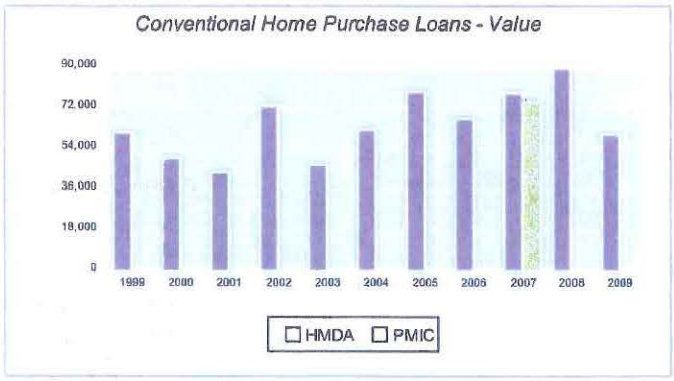
Private Mortgage Insurance Companies Aggregated Statistics For Year 2007
(Based on 1 partial tract)

	A) Conventional Home Purchase Loans	
	Number	Average Value
LOANS ORIGINATED	1	$74,960
APPLICATIONS APPROVED, NOT ACCEPTED	0	$0
APPLICATIONS DENIED	0	$0
APPLICATIONS WITHDRAWN	0	$0
FILES CLOSED FOR INCOMPLETENESS	0	$0

Choose year: **2007** 2003

Detailed PMIC statistics for the following Tracts: 0002.00





2006 National Fire Incident Reporting System Incidents:

- Fire: 26

See full 2006 National Fire Incident Reporting System statistics for Redfield, AR

Most common first names in Redfield, AR among deceased individuals

Name	Count	Lived (average)
James	23	69.6 years
John	22	75.9 years
Robert	11	68.6 years
Mary	11	78.7 years
William	10	77.7 years
Charles	7	66.0 years
Carl	5	66.0 years
Howard	5	70.4 years
Dorothy	4	70.2 years
Willie	4	79.3 years

Most common last names in Redfield, AR among deceased individuals

Last name	Count	Lived (average)
Clark	8	72.4 years
Patterson	7	77.0 years
Bradshaw	7	65.9 years
Croy	7	77.5 years
Smith	6	80.2 years
Sanders	6	74.3 years
Berry	6	78.1 years
Jackson	6	73.0 years
Owens	5	80.8 years
Brown	5	62.6 years

Businesses in Redfield, AR

- Subway: 1

Redfield on our top lists:

- #19 on the list of "Top 101 cities with largest percentage of females in occupations: Education, training, and library occupations:"
- #40 on the list of "Top 101 cities with largest percentage of males in occupations: Drafters, engineering, and mapping technicians"
- #80 on the list of "Top 101 cities with largest percentage of females working in industry: Paper and paper product merchant wholesalers"
- #81 on the list of "Top 101 cities with largest percentage of males in occupations: Physicians and surgeons"
- #87 on the list of "Top 101 cities with the largest city-data.com crime index increase from 2005 to 2006"
- #66 on the list of "Top 101 counties with the largest number of people moving out compared to moving in (pop. 50,000+)"
- #74 on the list of "Top 101 counties with highest percentage of residents voting for 3rd party candidates in the 2004 Presidential Election, pop. 50,000+"
- #84 on the list of "Top 101 counties with highest percentage of residents voting for Kerry (Democrat) in the 2004 Presidential Election"

Top Patent Applicants

Shane Z. Sullivan (1)

Total of 1 patent application in 2008-2013.

Back to Redfield, AR housing info, Jefferson County, Arkansas, AR smaller cities, AR small cities, All Cities.

Back to the top

Add new facts and correct factual errors about Redfield, Arkansas

City-Data.com FORUM

White Hall, Arkansas

Back to White Hall, AR housing info, Jefferson County, Arkansas, AR smaller cities, AR small cities, All Cities.

We are giving away $1200 in prizes - enter simply by sending us your own city pictures!
Click here for promotion details and to upload your White Hall, Arkansas photos

73°F
Current weather forecast for White Hall, AR

Jefferson County

Population in 2011: 5,516. Population change since 2000: +16.6%

Males: 2,600 (47.1%)
Females: 2,916 (52.9%)

Median resident age: 39.9 years
Arkansas median age: 42.2 years

Zip codes: 71602, 71612.

White Hall Zip Code Map

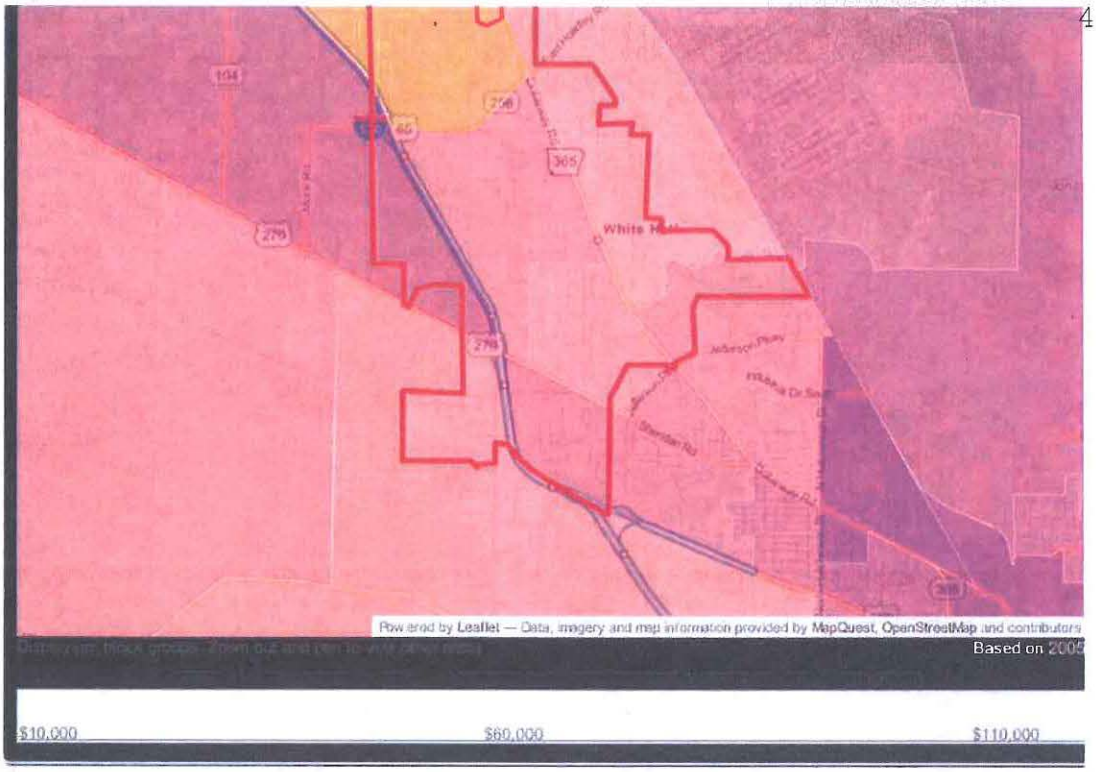
Estimated median household income in 2009: $52,266 (it was $52,045 in 2000)
White Hall: $52,266
Arkansas: $37,823
Estimated per capita income in 2009: $23,411

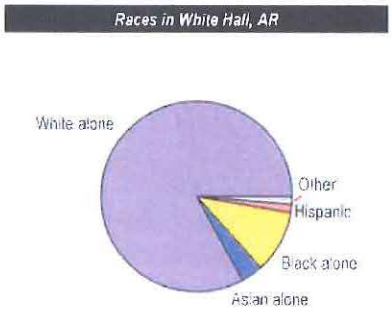
White Hall city income, earnings, and wages data

Estimated median house or condo value in 2009: $140,591 (it was $82,900 in 2000)
White Hall: $140,591
Arkansas: $102,900
Mean prices in 2009: All housing units: $143,386; Detached houses: $150,745; Townhouses or other attached units: $353,7 unit structures: $133,640; Mobile homes: $70,217

Median gross rent in 2009: $687.

White Hall, AR residents, houses, and apartments details





- White alone - 4,584 (83.0%)
- Black alone - 584 (10.6%)
- Asian alone - 207 (3.7%)
- Hispanic - 78 (1.4%)
- Two or more races - 51 (0.9%)
- American Indian alone - 17 (0.3%)
- Other race alone - 3 (0.05%)
- Native Hawaiian and Other Pacific Islander alone - 2 (0.04%)

Races in White Hall detailed stats: ancestries, foreign born residents, place of birth

Mar. 2012 cost of living index in White Hall: **81.7** (low, U.S. average is 100)

Recent posts about White Hall, Arkansas on our local forum with over 1,500,000 registered users. White Hall is mentioned 8 our forum:

- **Maybe relocating for job in White Hall, but LR native (21 years ago...)** (2 replies)
- **Arkansas Census Data** (63 replies)
- **white hall - local newspaper or classified ads** (1 reply)
- **Need realtor in Arkansas (White Hall, Sheridan, etc area)** (1 reply)
- **Museums - small county** (24 replies)
- **Thinking of moving from KY to AR** (8 replies)

Ancestries: United States (17.7%), Irish (10.7%), English (9.1%), German (9.0%), French (2.3%), Scotch-Irish (2.3%).

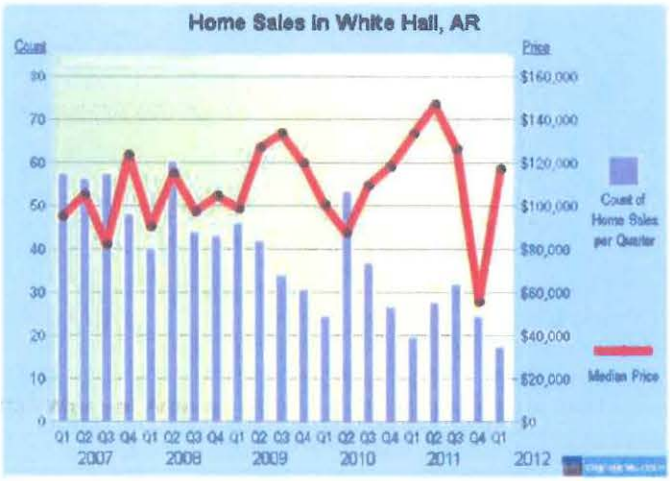
Current Local Time: 8:57:14 AM CST time zone

Incorporated on 06/22/1964

Elevation: 265 feet

Land area: 6.84 square miles.

Population density: 807 people per square mile (low).



Home Value Estimate

Address: Unit (optional):

City State Zip

White Hall AR

Get Home Value Estimate

Recent Home Sales

Address:

City State Zip

White Hall AR

Min Price (optional) Max Price (optional)

Prioritization: ◉ Sale Date ○ Distance

Get Recent Home Sales

For population 25 years and over in White Hall:

- High school or higher: 89.1%
- Bachelor's degree or higher: 23.0%
- Graduate or professional degree: 9.3%
- Unemployed: 4.6%
- Mean travel time to work (commute): 21.4 minutes

For population 15 years and over in White Hall city:

- Never married: 17.2%
- Now married: 65.5%
- Separated: 2.3%
- Widowed: 5.8%
- Divorced: 9.2%

174 residents are foreign born (2.0% Asia, 1.1% Africa).
This city: 3.7%
Arkansas: 2.8%

Median real estate property taxes paid for housing units with mortgages in 2009: $757 (0.6%)
Median real estate property taxes paid for housing units with no mortgage in 2009: $565 (0.4%)

Nearest city with pop. 50,000+: Pine Bluff, AR (5.7 miles , pop. 55,085).

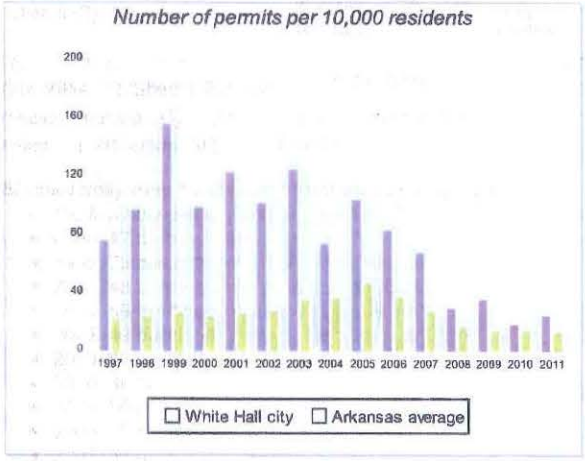
Nearest city with pop. 200,000+: Memphis, TN (134.3 miles , pop. 650,100).

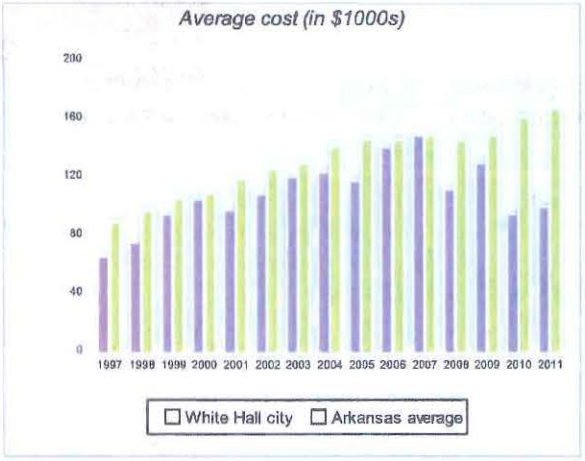
Nearest city with pop. 1,000,000+: Dallas, TX (288.9 miles , pop. 1,188,580).

Nearest cities: Pine Bluff, AR (2.4 miles), Sherrill, AR (3.4 miles), Redfield, AR (3.6 miles), Altheimer, AR (3.8 miles), Hensley, AR (4.1 miles), Sheridan, AR (4.2 miles), Wabbaseka, AR (4.3 miles), Woodson, AR (4.4 miles).

Single-family new house construction building permits:

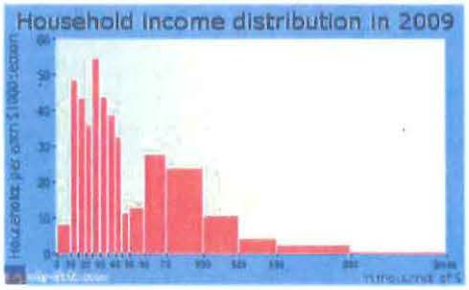
- 1997: 37 buildings, average cost: $67,000
- 1998: 47 buildings, average cost: $77,100
- 1999: 75 buildings, average cost: $95,800
- 2000: 48 buildings, average cost: $105,700
- 2001: 59 buildings, average cost: $99,300
- 2002: 49 buildings, average cost: $109,800
- 2003: 60 buildings, average cost: $121,600
- 2004: 36 buildings, average cost: $125,000
- 2005: 50 buildings, average cost: $118,600
- 2006: 40 buildings, average cost: $141,800
- 2007: 33 buildings, average cost: $150,100
- 2008: 15 buildings, average cost: $112,800
- 2009: 18 buildings, average cost: $130,700
- 2010: 10 buildings, average cost: $96,400
- 2011: 13 buildings, average cost: $100,800

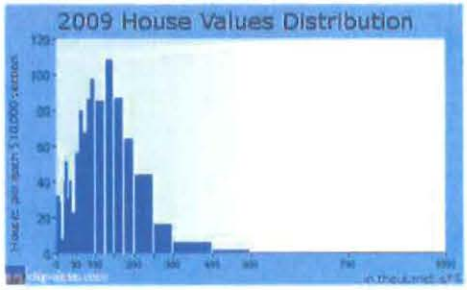




Latitude: 34.27 N, Longitude: 92.10 W

Area code commonly used in this area: 870

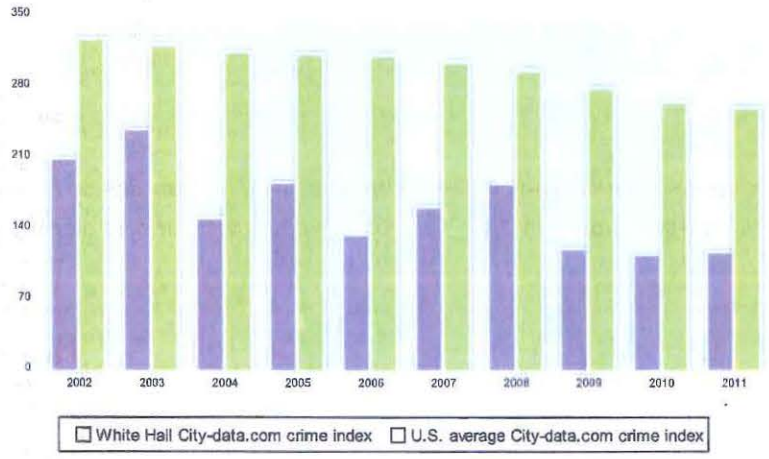




Crime in White Hall by Year

Type	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Murders	0	0	0	0	0	0	0	0	0	0
per 100,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rapes	0	0	0	0	0	0	0	0	1	0
per 100,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	0.0
Robberies	3	1	1	1	1	3	0	0	1	2
per 100,000	62.5	20.3	19.9	19.5	19.3	57.7	0.0	0.0	19.2	35.9
Assaults	7	23	4	2	3	2	15	6	4	1
per 100,000	145.9	466.2	79.6	38.9	58.0	38.5	291.1	116.3	76.7	18.0
Burglaries	28	29	18	33	17	19	13	9	4	27
per 100,000	583.7	587.8	358.0	642.3	328.7	365.7	252.3	174.5	76.7	484.9
Thefts	126	100	105	140	96	106	101	80	80	60
per 100,000	2626.6	2026.6	2088.3	2724.8	1856.1	2040.0	1960.4	1551.0	1533.7	1077.6
Auto thefts	5	5	9	7	10	15	15	12	5	15
per 100,000	104.2	101.3	179.0	136.2	193.3	288.7	291.1	232.6	95.9	269.4
Arson	0	0	0	0	0	0	1	0	0	0
per 100,000	0.0	0.0	0.0	0.0	0.0	0.0	19.4	0.0	0.0	0.0
City-data.com crime index (higher means more crime, U.S. average = 319.1)	210.5	239.0	150.7	185.8	135.4	161.7	184.9	120.9	115.3	117.6

(click on a table rowto update graph)



City-data.com crime index counts serious crimes more heavily. It adjusts for the number of visitors and daily workers commuting into cities.

Crime in White Hall detailed stats: murders, rapes, robberies, assaults, burglaries, thefts, arson

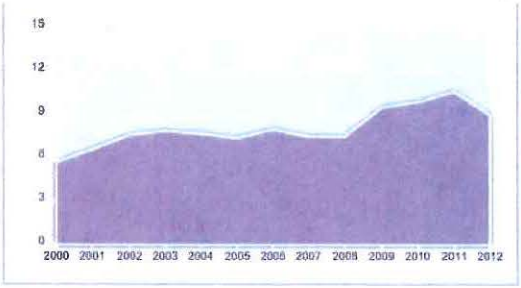
Full-time law enforcement employees in 2011, including police officers: 16 (14 officers).
Officers per 1,000 residents here: 2.51
Arkansas average: 1.97

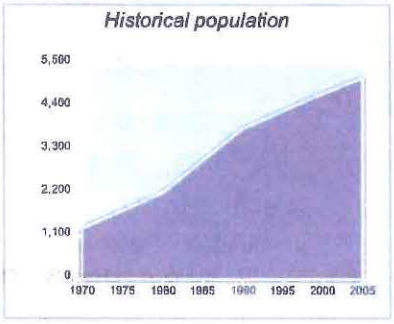
This city's Wikipedia profile

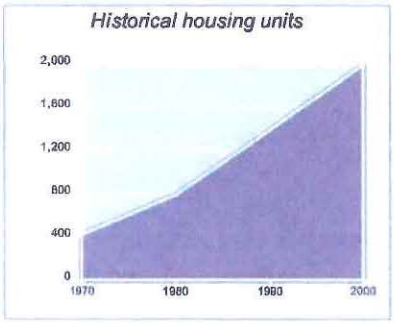
White Hall, Arkansas accommodation, health care - Economy and Business Data

Unemployment in August 2012:
Here: 9.0%
Arkansas: 7.0%

Unemployment by year (%)

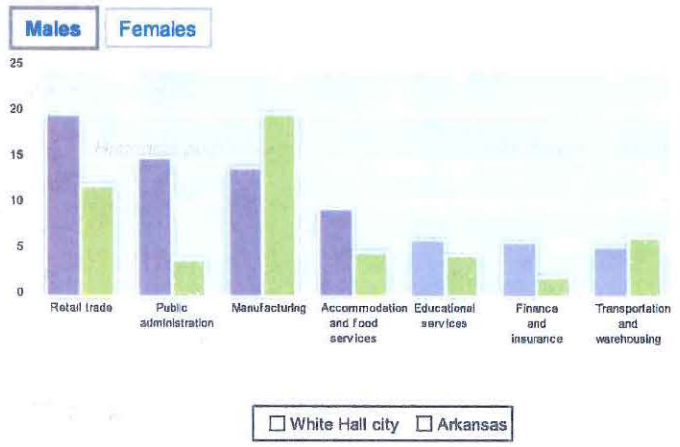






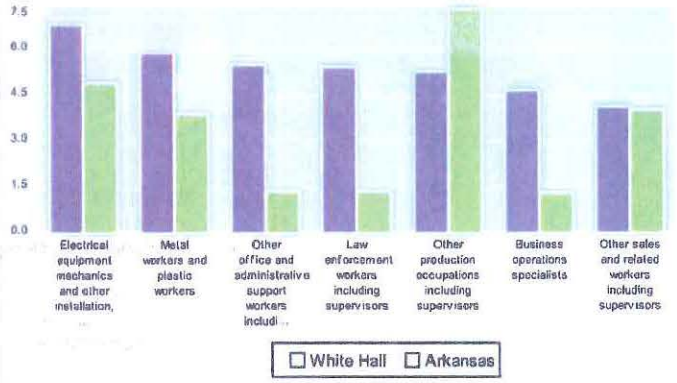
Population change in the 1990s: +227 (+5.0%).

Most common industries in 2005-2009 (%)



- Retail trade (20%)
- Public administration (15%)
- Manufacturing (14%)
- Accommodation and food services (10%)
- Educational services (6%)
- Finance and insurance (6%)
- Transportation and warehousing (5%)

Most common occupations (%)

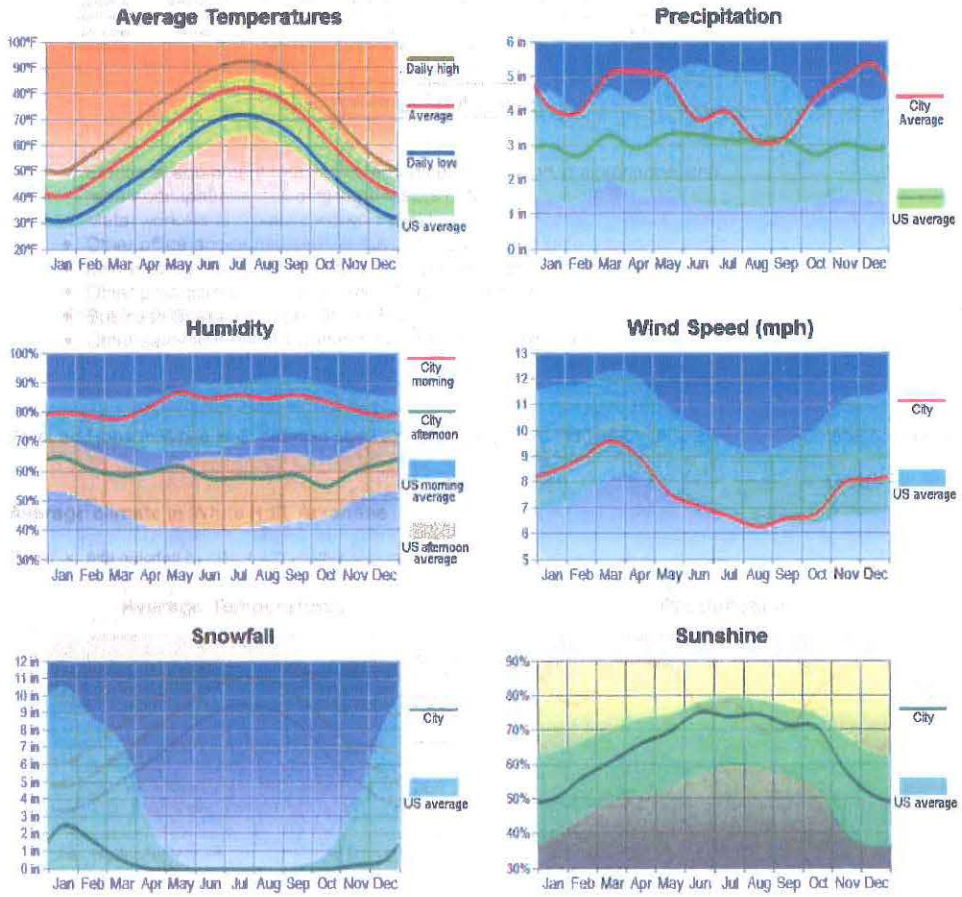


- Electrical equipment mechanics and other installation, maintenance, and repair occupations including supervisors (7%)
- Metal workers and plastic workers (6%)
- Other office and administrative support workers including supervisors (6%)
- Law enforcement workers including supervisors (5%)
- Other production occupations including supervisors (5%)
- Business operations specialists (5%)
- Other sales and related workers including supervisors (4%)

Work and jobs in White Hall: detailed stats about occupations, industries, unemployment, workers, commute

Average climate in White Hall, Arkansas

Based on data reported by over 4,000 weather stations



Cloudy Days

Back to the top

Tornado activity:
White Hall-area historical tornado activity is **slightly above** Arkansas state average. It is **218%** greater than the overall U.S. average.

On **3/1/1997**, a category **F4** (max. wind speeds **207-260 mph**) tornado **28.0** miles away from the White Hall city center killed **5** people and injured **180** people.

On **4/3/1968**, a category **F4** tornado **28.2** miles away from the city center killed **5** people and injured **16** people and caused between **$50,000** and **$500,000** in damages.

Earthquake activity:
White Hall-area historical earthquake activity is **significantly below** Arkansas state average. It is **90% smaller** than the overall U.S. average.

On **1/21/1982** at **00:33:54**, a magnitude **4.7** (**4.5 MB**, 4.7 LG, 4.5 LG, Class: **Light**, Intensity: **IV - V**) earthquake occurred **62.4** miles away from the city center
On **5/4/2001** at **06:42:12**, a magnitude **4.7** (**4.2 MB**, **4.7 LG**, 4.5 LG, Depth: **6.2 mi**) earthquake occurred **64.8** miles away from White Hall center
On **8/11/1996** at **18:17:49**, a magnitude **3.5** (**3.5 LG**, **3.1 MD**, Depth: **6.2 mi**, Class: **Light**, Intensity: **II - III**) earthquake occurred **85.1** miles away from the city center
On **3/16/1997** at **19:07:27**, a magnitude **3.4** (**3.4 LG**, Depth: **3.1 mi**) earthquake occurred **76.6** miles away from the city center
On **4/11/1996** at **21:54:57**, a magnitude **3.3** (**3.3 LG**, Depth: **3.1 mi**) earthquake occurred **71.8** miles away from White Hall center
On **8/4/2001** at **01:13:25**, a magnitude **3.1** (**3.1 LG**, Depth: **3.1 mi**) earthquake occurred **63.7** miles away from the city center
Magnitude types: regional Lg-wave magnitude (LG), body-wave magnitude (MB), duration magnitude (MD)

Natural disasters:
The number of natural disasters in Jefferson County (13) is **near** the US average (12).
Major Disasters (Presidential) Declared: 11
Emergencies Declared: 2

Causes of natural disasters: Storms: 9, Floods: 8, Tornadoes: 4, Winter Storms: 2, Heavy Rain: 1, Wind: 1, Flood: 1, Hurricane: 1 (Note: Some incidents may be assigned to more than one category).

Hospitals/medical centers near White Hall:
- JEFFERSON REGIONAL MEDICAL CENTER (Acute Care Hospitals, Voluntary non-profit - Other, provides emergency services, about 9 miles away; PINE BLUFF, AR)
- ARKANSAS CHILDREN'S HOSPITAL (Childrens, Voluntary non-profit - Private, provides emergency services, about 34 miles away; LITTLE ROCK, AR)
- SALINE MEMORIAL HOSPITAL (Acute Care Hospitals, Voluntary non-profit - Private, about 35 miles away; BENTON, AR)

Political contributions by individuals in White Hall, AR

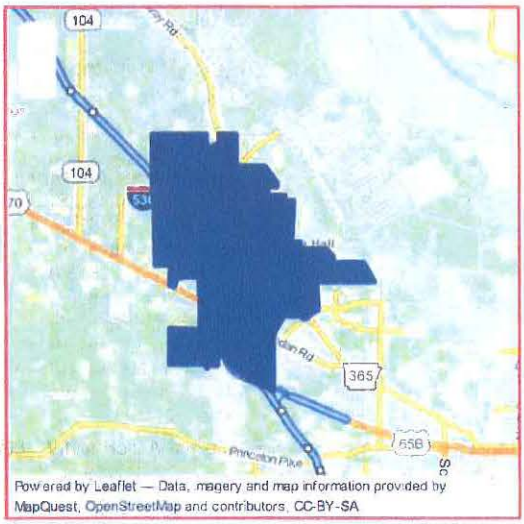
Colleges/universities with over 2000 students nearest to White Hall:
- University of Arkansas at Pine Bluff (about 5 miles; Pine Bluff, AR; Full-time enrollment: 3,368)
- University of Arkansas at Little Rock (about 35 miles; Little Rock, AR; FT enrollment: 6,816)
- University of Arkansas for Medical Sciences (about 36 miles; Little Rock, AR; FT enrollment: 2,068)
- Pulaski Technical College (about 38 miles; North Little Rock, AR; FT enrollment: 4,856)
- University of Arkansas at Monticello (about 51 miles; Monticello, AR; FT enrollment: 2,521)
- Henderson State University (about 56 miles; Arkadelphia, AR; FT enrollment: 2,863)
- Arkansas State University-Beebe (about 57 miles; Beebe, AR; FT enrollment: 2,601)

Public high school in White Hall:
- WHITE HALL HIGH SCHOOL (Students: 701; Location: 700 BULLDOG DR; Grades: 10 - 12)

Public elementary/middle schools in White Hall:
- WHITE HALL JUNIOR HIGH SCHOOL (Students: 622; Location: 8106 DOLLARWAY RD; Grades: 07 - 09)
- TAYLOR ELEMENTARY SCHOOL (Students: 434; Location: 805 WEST ST; Grades: KG - 06)
- MOODY ELEMENTARY SCHOOL (Students: 409; Location: 700 MOODY SCHOOL DR; Grades: KG - 06)

- GANDY ELEMENTARY SCHOOL (Students: 408; Location: 400 GANDY AVE; Grades: KG - 06)

See full list of schools located in White Hall



Click to draw/clear city borders

Notable locations in White Hall: White Hall Volunteer Fire Department (A), White Hall Police Department (B). Display/hide their locations on the map

Shopping Center: White Hall Shopping Center (1). Display/hide its location on the map

Churches in White Hall include: Bethany Church (A), Lemonwood Missionary Baptist Church (B), White Hall United Methodist Church (C), First Baptist Church of White Hall (D). Display/hide their locations on the map

Park in White Hall: White Hall City Park (1). Display/hide its location on the map

Tourist attraction: Jefferson County Of (Cultural Attractions- Events- & Facilities; 300 Anderson Avenue).

Hotels: Super 8 Motel (8000 Sheridan Road), American Inn & Suites (8008 Sheridan Road), Subway Sandwich & Salads (8001 Sheridan Road), Days Inn (8006 Sheridan Road), Highway 65 Motel (5709 Dollarway Road).

Courts: Jefferson-County - Court House Offices- Personal Property- White Hall Br (8512 Dollarway Road), White Hall City - Municipal Court Clerk (9009 Dollarway Road).

Jefferson County has a predicted average indoor radon screening level less than 2 pCi/L (pico curies per liter) - **Low Potential**

Percentage of residents living in poverty in 2009: **10.8%**
(9.6% for White Non-Hispanic residents, 0.0% for Black residents, 0.0% for two or more races residents)

Average household size:
This city: 2.6 people
Arkansas: 2.4 people

Percentage of family households:
This city: 75.1%
Whole state: 68.2%

Percentage of households with unmarried partners:
This city: 2.5%
Whole state: 3.9%

Likely homosexual households (counted as self-reported same-sex unmarried-partner households)
- Lesbian couples: 0.1% of all households
- Gay men: 0.2% of all households

Detailed information about poverty and poor residents in White Hall, AR

White Hall compared to Arkansas state average:
- Median house value **below** state average.
- Black race population percentage **above** state average.
- Hispanic race population percentage **significantly below** state average.
- Foreign-born population percentage **significantly below** state average.
- Renting percentage **below** state average.
- House age **below** state average.

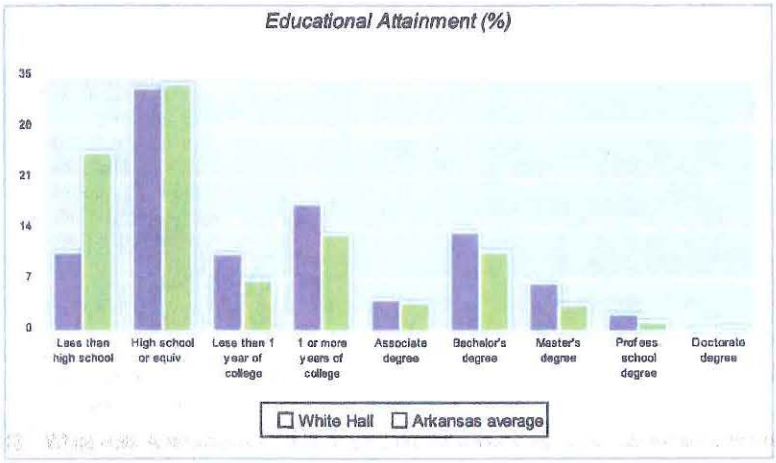
Back to the top

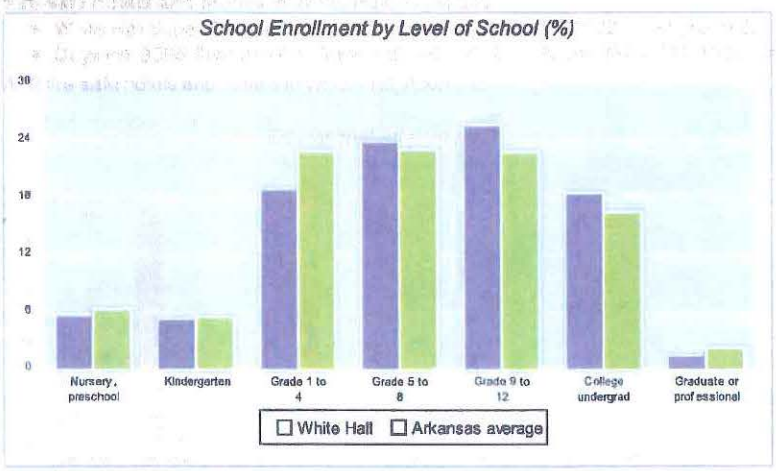
Banks with branches in White Hall (2011 data):
- Fordyce Bank & Trust Co.: White Hall Financial Branch at 7199 Sheridan Road, branch established on 2001/10/15. Info updated 2011/06/20: Bank assets: $123.2 mil, Deposits: $93.2 mil, headquarters in Fordyce, AR, positive income, 5 total offices, Holding Company: Fbt Bancshares, Inc.
- Simmons First National Bank: White Hall Branch at 8107 Dollarway Road, branch established on 1986/12/05. Info updated 2010/10/19: Bank assets: $1,849.8 mil, Deposits: $1,513.0 mil, headquarters in Pine Bluff, AR, positive income, 45 total offices, Holding Company: Simmons First National Corporation
- Bank of Star City: White Hall Branch at 7101 Dollarway Rd, branch established on 2001/08/14. Info updated 2011/09/12: Bank assets: $104.4 mil, Deposits: $83.5 mil, headquarters in Star City, AR, positive income, Commercial Lending Specialization, 5 total offices, Holding Company: Star City Bancshares, Inc.

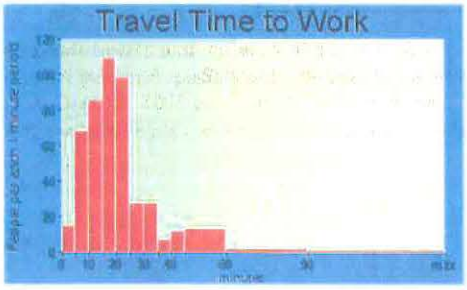
Fire-safe hotels and motels in White Hall, Arkansas:

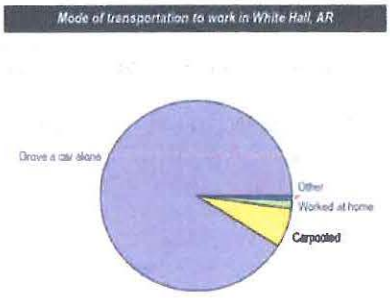
- White Hall Super 8 Motel, 1 Hospitality Ln, White Hall, AR 71602, Phone: (800) 800-8000, Fax: (870) 247-8289
- Days Inn, 8006 Sheridan Rd, White Hall, AR 71602, Phone: (870) 247-1339, Fax: (870) 247-0615

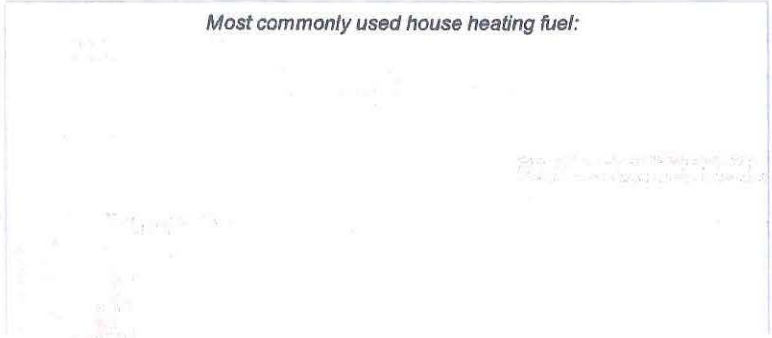
All 2 fire-safe hotels and motels in White Hall, Arkansas

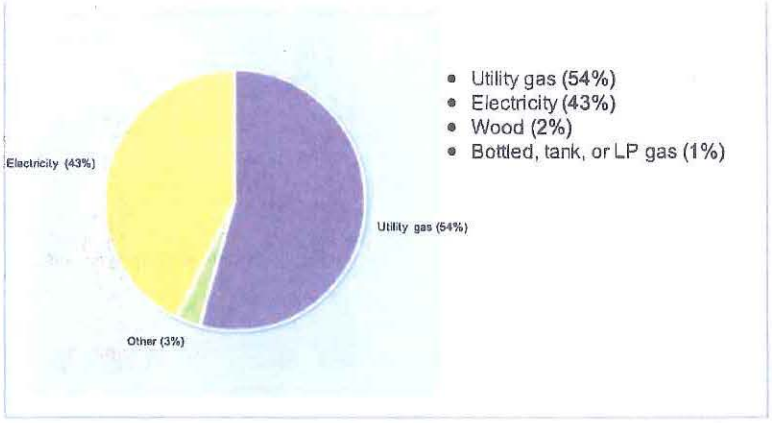




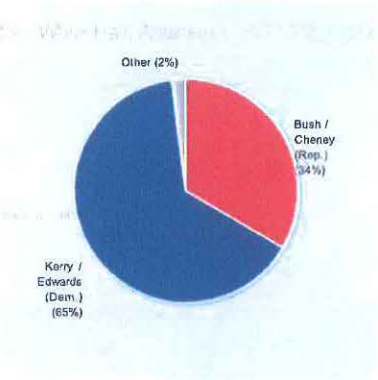




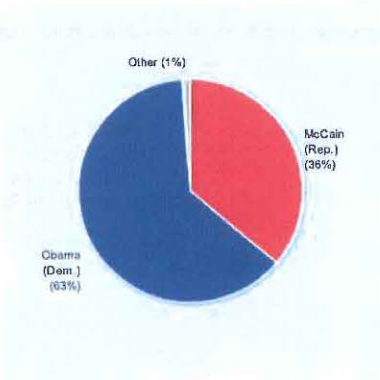




2004 Presidential Election results in Jefferson County Arkansas:



2008 Presidential Election results in Jefferson County Arkansas:



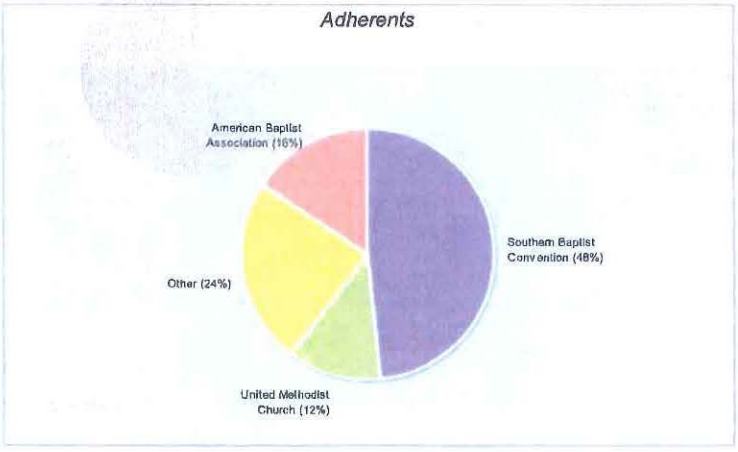
Detailed 2008 election results.

Religion statistics for White Hall (based on Jefferson County data)

Percentage of population affiliated with a religious congregations: 47.81%

Here 47.8%

USA 50.2%



Breakdown of population affiliated with a religious congregations

Name	Southern Baptist Convention	American Baptist Association	United Methodist Church	Catholic Church	Assemblies of God
Adherents	48.4%	15.7%	12.1%	5.0%	3.9%
Congregations	26.7%	12.1%	12.9%	3.4%	5.2%

Name	Presbyterian Church (USA)	Churches of Christ	Baptist Missionary Association of America	Church of God (Cleveland, Tennessee)	Other
Adherents	3.0%	2.7%	2.6%	1.0%	5.7%
Congregations	3.4%	8.6%	6.9%	2.6%	18.1%

Source: Jones, Dale E., et al. 2002. Congregations and Membership in the United States 2000. Nashville, TN: Glenmary Research Center.
Tables represent county-level data

Food Environment Statistics:
Number of grocery stores: 15
Jefferson County: 1.89 / 10,000 pop.
Arkansas: 2.02 / 10,000 pop.
Number of convenience stores (no gas): 2
Jefferson County: 0.25 / 10,000 pop.
Arkansas: 0.59 / 10,000 pop.
Number of convenience stores (with gas): 32
Jefferson County: 4.04 / 10,000 pop.
State: 4.94 / 10,000 pop.
Number of full-service restaurants: 31
Here: 3.92 / 10,000 pop.
State: 6.66 / 10,000 pop.
Adult diabetes rate:
This county: 11.6%
Arkansas: 9.8%
Adult obesity rate:
Jefferson County: 34.9%
Arkansas: 29.1%
Low-income preschool obesity rate:
This county: 8.3%
State: 13.6%

Local government employment and payroll (March 2007)

Function	Full-time employees	Monthly full-time payroll	Average yearly full-time wage	Part-time employees	Monthly part-time payroll
Financial Administration	2	$6,359	$38,154	0	$0
Other Government Administration	1	$5,108	$61,296	6	$2,134
Judicial and Legal	3	$5,887	$23,548	0	$0
Police Protection - Officers	13	$42,861	$39,564	0	$0
Police - Other	2	$4,260	$25,560	0	$0
Streets and Highways	5	$15,308	$36,739	0	$0
Parks and Recreation	0	$0		1	$660
Water Supply	8	$18,865	$28,298	0	$0
Other and Unallocable	1	$1,590	$19,080	1	$788
Totals for Government	35	$100,238	$34,367	8	$3,582

5.38% of this county's 2006 resident taxpayers lived in other counties in 2005 ($27,469 average adjusted gross income)
Here: 5.38%
Arkansas average: 7.98%

0.09% of residents moved from foreign countries ($397 average AGI)
Jefferson County: 0.09%
Arkansas average: 0.10%

Top counties from which taxpayers relocated into this county between 2005 and 2006:
from Pulaski County, AR 0.74% ($28,853 average AGI)
from Grant County, AR 0.37% ($26,667)
from Lincoln County, AR 0.31% ($23,293)

6.52% of this county's 2005 resident taxpayers moved to other counties in 2006 ($34,817 average adjusted gross income)
Here: 6.52%
Arkansas average: 7.29%

0.04% of residents moved to foreign countries ($213 average AGI)
Jefferson County: 0.04%
Arkansas average: 0.04%

Top counties to which taxpayers relocated from this county between 2005 and 2006:
to Pulaski County, AR 1.23% ($36,114 average AGI)
to Grant County, AR 0.36% ($34,281)
to Cleveland County, AR 0.23% ($37,361)

Strongest AM radio stations in White Hall:

- KAAY (1090 AM; 50 kW; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- KGHT (880 AM; 50 kW; SHERIDAN, AR; Owner: METROPOLITAN RADIO GROUP, INC.)
- KPBA (1270 AM; 5 kW; PINE BLUFF, AR; Owner: METRO BIRCH ENTERPRISES, INC)
- KCAT (1340 AM; 1 kW; PINE BLUFF, AR; Owner: JAMES J.B. SCANLON)
- KCLA (1400 AM; 1 kW; PINE BLUFF, AR; Owner: M.R.S. VENTURES, INC.)
- KOTN (1490 AM; 1 kW; PINE BLUFF, AR; Owner: M.R.S. VENTURES, INC.)
- KMTL (760 AM; daytime; 10 kW; SHERWOOD, AR; Owner: GEORGE V. DOMERESE)
- KARN (920 AM; 5 kW; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- WCRV (640 AM; 50 kW; COLLIERVILLE, TN; Owner: BOTT BROADCASTING COMPANY/TENNESSEE)
- KLRG (1150 AM; 5 kW; NORTH LITTLE ROCK, AR; Owner: ARKANSAS RADIO CORPORATION)
- KITA (1440 AM; 5 kW; LITTLE ROCK, AR; Owner: KITA, INCORPORATED)
- KEEL (710 AM; 50 kW; SHREVEPORT, LA; Owner: CITICASTERS LICENSES, L.P.)
- KBHS (590 AM; 5 kW; HOT SPRINGS, AR; Owner: J & A, INC.)

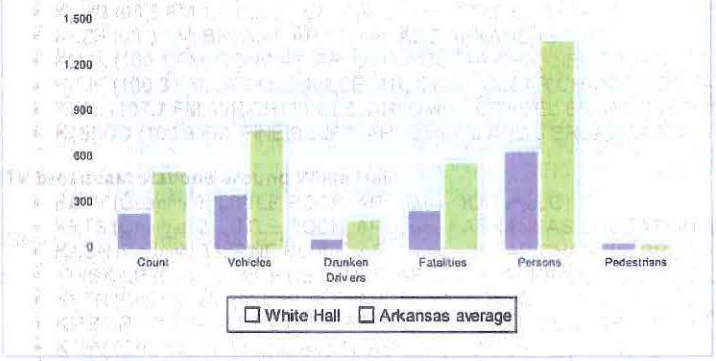
Strongest FM radio stations in White Hall:

- KPBQ-FM (101.3 FM; PINE BLUFF, AR; Owner: M.R.S. VENTURES, INC.)
- KIPR (92.3 FM; PINE BLUFF, AR; Owner: CITADEL BROADCASTING COMPANY)
- KMSX (94.9 FM; MAUMELLE, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KTRN (104.5 FM; WHITE HALL, AR; Owner: BAYOU BROADCASTING, INC.)
- KANX (91.1 FM; SHERIDAN, AR; Owner: AMERICAN FAMILY ASSOCIATION)
- KUAP (89.7 FM; PINE BLUFF, AR; Owner: BOARD OF TRUSTEES OF THE UNIV OF AR)
- K226AG (93.1 FM; PINE BLUFF, AR; Owner: CENTRAL ARKANSAS CHRISTIAN BCG INC)
- KZYP (99.3 FM; PINE BLUFF, AR; Owner: M.R.S. VENTURES, INC.)
- KHTE-FM (96.5 FM; ENGLAND, AR; Owner: ABG ARKANSAS, LLC)
- KSSN (95.7 FM; LITTLE ROCK, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KKPT (94.1 FM; LITTLE ROCK, AR; Owner: SIGNAL MEDIA OF ARKANSAS, INC.)
- KABZ (103.7 FM; LITTLE ROCK, AR; Owner: SIGNAL MEDIA OF ARKANSAS, INC)
- KVLO (102.9 FM; SHERIDAN, AR; Owner: CITADEL BROADCASTING COMPANY)
- KHKN (106.7 FM; BENTON, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KURB (98.5 FM; LITTLE ROCK, AR; Owner: CITADEL BROADCASTING COMPANY)
- KKZR (93.3 FM; BRYANT, AR; Owner: ABG ARKANSAS, LLC)
- KMJX (105.1 FM; CONWAY, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KDJE (100.3 FM; JACKSONVILLE, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KLAL (107.7 FM; WRIGHTSVILLE, AR; Owner: CITADEL BROADCASTING COMPANY)
- K265CD (100.9 FM; PINE BLUFF, AR; Owner: J AND J BROADCASTING)

TV broadcast stations around White Hall:

- KATV (Channel 7; LITTLE ROCK, AR; Owner: KATV, LLC)
- KETS (Channel 2; LITTLE ROCK, AR; Owner: ARKANSAS EDUCATIONAL TELEVISION COMMISSION)
- KASN (Channel 38; PINE BLUFF, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KWBK-LP (Channel 36; PINE BLUFF, AR; Owner: ARKANSAS 49, INC.)
- KVTN (Channel 25; PINE BLUFF, AR; Owner: AGAPE CHURCH, INC.)
- KIPB-LP (Channel 65; PINE BLUFF, AR; Owner: IMMANUEL BROADCASTING CORPORATION)
- KTHV (Channel 11; LITTLE ROCK, AR; Owner: ARKANSAS TELEVISION COMPANY)
- KLRT-TV (Channel 16; LITTLE ROCK, AR; Owner: CLEAR CHANNEL BROADCASTING LICENSES, INC.)
- KARK-TV (Channel 4; LITTLE ROCK, AR; Owner: KARK-TV, INC.)
- KWBF (Channel 42; LITTLE ROCK, AR; Owner: RIVER CITY BROADCASTING, INC.)
- KKYK-LP (Channel 22; LITTLE ROCK, AR; Owner: ARKANSAS 49, INC.)
- KWBF-LP (Channel 5; SHERIDAN, AR; Owner: ARKANSAS MEDIA, L.L.C.)
- KLRA-LP (Channel 58; LITTLE ROCK, AR; Owner: ARKANSAS MEDIA, L.L.C.)

Fatal road traffic accident statistics for 1975 - 2009 (per 100,000 population)



White Hall, Arkansas:

- Fatal accident count: 12
- Vehicles involved in fatal accidents: 18
- Fatal accidents caused by drunken drivers: 4
- Fatalities: 13
- Persons involved in fatal accidents: 31
- Pedestrians involved in fatal accidents: 3

Arkansas average:

- Fatal accident count: 74
- Vehicles involved in fatal accidents: 113
- Fatal accidents caused by drunken drivers: 30
- Fatalities: 82
- Persons involved in fatal accidents: 193
- Pedestrians involved in fatal accidents: 8

See more detailed statistics of White Hall fatal car crashes and road traffic accidents for 1975 - 2009 here

FCC Registered Cell Phone Towers: 1 (See the full list of FCC Registered Cell Phone Towers in White Hall)
FCC Registered Antenna Towers: 38 (See the full list of FCC Registered Antenna Towers)

FCC Registered Private Land Mobile Towers: 3

- 203 Roberts Rd (Lat: 34.267611 Lon: -92.090139), Call Sign: KIG872
  Assigned Frequencies: 154.175 MHz
  Grant Date: 12/26/1996, Expiration Date: 03/12/2002, Cancellation Date: 05/12/2002
  Registrant: City Of White Hall, 101 Parkway Dr, White Hall, AR 71602, Phone: (501) 247-2399
- 203 Roberts Rd (Lat: 34.267611 Lon: -92.090139), Call Sign: KIU368
  Assigned Frequencies: 154.115 MHz
  Grant Date: 12/26/1996, Expiration Date: 03/12/2002, Cancellation Date: 05/12/2002
  Registrant: City Of White Hall, 101 Parkway Dr, White Hall, AR 71602, Phone: (501) 247-2399
- 8012 Sheridan Road (Lat: 34.259722 Lon: -92.100833), Call Sign: WPTY404
  Assigned Frequencies: 469.212 MHz, 469.037 MHz, 469.237 MHz, 469.062 MHz, 469.262 MHz, 469.087 MHz, 469.287 MHz, 469.112 MHz, 469.312 MHz, 469.137 MHz... (+21 more)
  Grant Date: 01/11/2002, Expiration Date: 01/11/2012, Certifier: Stephen M Grimm
  Registrant: Panasonic Information Systems Company, 1707 N Randall Road, E1-D3, Elgin, IL 60123-7847, Phone: (847) 468-5318, Fax: (847) 468-4555, Email: williamsja@panasonic.com

FCC Registered Microwave Towers: 3

- AR-040P, 1808 E. Holland Drive (Lat: 34.286222 Lon: -92.123028), Type: Tower, Structure height: 76.5 m, Overall height: 78 m, Call Sign: WPQX572
  Assigned Frequencies: 6745.00 MHz
  Grant Date: 11/08/2000, Expiration Date: 11/08/2010, Cancellation Date: 01/06/2006, Certifier: Gail Defrates
  Registrant: Nextel Partners, Inc., 16835 Deer Creek Drive, Spring, TX 77379, Phone: (281) 401-6015, Fax: (281) 374-9322, Email: gail.defrates@nextelpartners.com
- NW JEFF CO, South Of Gravel Pit Road And 0.75 Miles East Of I-530. (Lat: 34.345667 Lon: -92.184111), Type: Tower, Structure height: 60.9 m, Overall height: 65.5 m, Call Sign: WQBS348
  Assigned Frequencies: 6600.00 MHz, 6640.00 MHz
  Grant Date: 12/03/2004, Expiration Date: 12/03/2014, Certifier: Dale Saffold
  Registrant: Department Of Information Systems, #1 Capitol Mall, Little Rock, AR 72203, Phone: (501) 683-1339, Fax: (501) 682-4310, Email: bruce.l.lantz@arkansas.gov
- Clear Lake AR 3, 13110 Highway 270 (Lat: 34.299500 Lon: -92.195694), Type: Mast, Structure height: 76.8 m, Overall height: 82.3 m, Call Sign: WQIJ927
  Assigned Frequencies: 10795.0 MHz
  Grant Date: 02/29/2008, Expiration Date: 02/28/2018, Certifier: William Chastain
  Registrant: Radio Dynamics Corporation, Silver Spring, MD 20914, Phone: (301) 493-5171, Fax: (301) 576-4553, Email: workorder@radyn.com

FCC Registered Paging Towers: 1

- Whitehall Cell Site (Lat: 34.269833 Lon: -92.074056), Type: Tower, Structure height: 100.6 m, Overall height: 109.4 m, Call Sign: KNKD950
  Assigned Frequencies: 152.840 MHz
  Grant Date: 03/31/2009, Expiration Date: 04/01/2019, Certifier: Glenn S Rabin
  Registrant: Verizon Wireless, 1120 Sanctuary Pkwy #150 Gasareg, Alpharetta, GA 30009-7630, Phone: (770) 797-1070, Fax: (770) 797-1036, Email: network.regulatory@verizonwireless.com

FCC Registered Amateur Radio Licenses: 39 (See the full list of FCC Registered Amateur Radio Licenses in White Hall)

FAA Registered Aircraft: 10 (See the full list of FAA Registered Aircraft in White Hall)

Home Mortgage Disclosure Act Aggregated Statistics For Year 2009
(Based on 2 partial tracts)

	A) FHA, FSA/RHS & VA Home Purchase Loans		B) Conventional Home Purchase Loans		C) Refinancings		D) Home Improvement Loans		E) Loans on Dwellings For 5+ Families		F) Non-occupant Loans on < 5 Family Dwellings (A B C & D)		G) Loans On Manufactured Home Dwelling (A B C & D)	
	Number	Average Value	Number	Average Value	Number	Average Value	Number	Average Value	Number	Average Value	Number	Average Value	Number	Average Value
LOANS ORIGINATED	18	$131,973	13	$116,355	45	$136,876	7	$25,880	1	$178,490	3	$92,360	2	$50,215
APPLICATIONS APPROVED, NOT ACCEPTED	2	$119,715	2	$53,835	4	$118,653	1	$29,340	0	$0	0	$0	2	$43,240
APPLICATIONS DENIED	3	$120,010	6	$50,712	15	$143,063	3	$41,093	0	$0	1	$43,330	4	$42,195
APPLICATIONS WITHDRAWN	1	$96,440	0	$0	11	$159,037	1	$181,750	0	$0	1	$86,660	0	$0
FILES CLOSED FOR INCOMPLETENESS	1	$66,490	0	$0	3	$125,067	0	$0	0	$0	0	$0	0	$0

Choose year: **2009** 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999

Detailed HMDA statistics for the following Tracts: 0003.02 , 0003.03

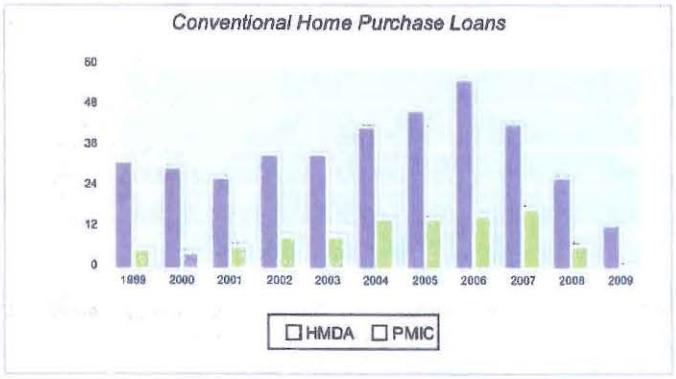
Private Mortgage Insurance Companies Aggregated Statistics For Year 2009
(Based on 2 partial tracts)

	A) Conventional Home Purchase Loans		G) Refinancings	
	Number	Average Value	Number	Average Value
LOANS ORIGINATED	1	$215,200	3	$152,387

APPLICATIONS APPROVED, NOT ACCEPTED	1	$147,350	1	$100,350
APPLICATIONS DENIED	0	$0	0	$0
APPLICATIONS WITHDRAWN	0	$0	0	$0
FILES CLOSED FOR INCOMPLETENESS	0	$0	0	$0

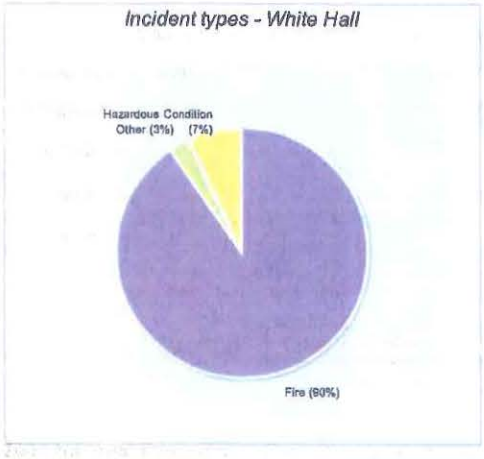
Choose year: **2009** 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999

Detailed PMIC statistics for the following Tracts: 0003.02 , 0003.03



2006 National Fire Incident Reporting System Incidents:

- Fire: 65
- Hazardous Condition: 5
- Service Call: 1
- Good Intent Call: 1



See full 2006 National Fire Incident Reporting System statistics for White Hall, AR

Most common first names in White Hall, AR among deceased individuals

Name	Count	Lived (average)

Most common last names in White Hall, AR among deceased individuals

Last name	Count	Lived (average)

James	77	70.1 years	Smith	50	72.7 years
John	62	70.6 years	Brown	34	72.2 years
Mary	56	74.6 years	Johnson	29	70.8 years
William	56	68.4 years	Jones	21	67.0 years
Charles	40	70.2 years	Ashcraft	19	71.1 years
Robert	39	70.2 years	Jackson	18	68.2 years
Willie	37	74.1 years	Williams	18	76.3 years
Betty	22	71.7 years	Taylor	17	73.2 years
Jessie	20	75.2 years	Davis	17	74.7 years
Dorothy	19	73.2 years	Phillips	16	78.4 years

Name	Count	Name	Count
AT&T	2	Subway	1
Curves	1	Super 8	1
H&R Block	1	Taco Bell	1
McDonald's	1	U-Haul	1
Popeyes	1	UPS	2

White Hall on our top lists:

- #5 on the list of "Top 101 cities with largest percentage of females working in industry: Furniture and home furnishings, and household appliance stores (population 5,000+)"
- #11 on the list of "Top 101 cities with largest percentage of females in occupations: Primary, secondary, and special education school teachers: (population 5,000+)"
- #15 on the list of "Top 101 cities with largest percentage of males in occupations: Cooks and food preparation workers (population 5,000+)"
- #15 on the list of "Top 101 cities with largest percentage of females in occupations: Top executives (population 5,000+)"
- #16 on the list of "Top 101 cities with largest percentage of males in occupations: Personal appearance workers (population 5,000+)"
- #16 on the list of "Top 101 cities with largest percentage of males working in industry: Paper (population 5,000+)"
- #38 on the list of "Top 101 cities with high-earning residents located near cities with low-earning residents (pop 5,000+)"
- #91 (71602) on the list of "Top 101 zip codes with the largest percentage of South African first ancestries (pop 5,000+)"
- #66 on the list of "Top 101 counties with the largest number of people moving out compared to moving in (pop. 50,000+)"
- #74 on the list of "Top 101 counties with highest percentage of residents voting for 3rd party candidates in the 2004 Presidential Election, pop. 50,000+"
- #84 on the list of "Top 101 counties with highest percentage of residents voting for Kerry (Democrat) in the 2004 Presidential Election"

State forum archive:

Arkansas **Pages:** 2 3 4 5 6 7 8 9 10 11 12
Fayetteville - Springdale - Rogers **Pages:** 2 3 4 5
Little Rock - Conway area **Pages:** 2 3 4

Top Patent Applicants

Dwight Miller (4)	Rhonda Hayes Coleman (1)
Richard Beger (4)	Dwight W. Miller (1)
Tom Heinze (3)	J. Scott Howard (1)
David B. Wood (1)	
David Brian Wood (1)	

Total of 9 patent applications in 2008-2013.

Back to White Hall, AR housing info, Jefferson County, Arkansas, AR smaller cities, AR small cities, All Cities.

Back to the top

Add new facts and correct factual errors about White Hall, Arkansas

DP04

SELECTED HOUSING CHARACTERISTICS
2007-2011 American Community Survey 5-Year Estimates

BACK TO ADVANCED SEARCH

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

1 - 141 of 141

Subject	Arkansas				White Hall city, Arkansas			
	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error
HOUSING OCCUPANCY								
Total housing units	1,309,888	+/-337	1,309,888	(X)	2,039	+/-172	2,039	(X)
Occupied housing units	1,121,386	+/-4,189	85.6%	+/-0.3	1,936	+/-136	94.9%	+/-4.2
Vacant housing units	188,502	+/-4,105	14.4%	+/-0.3	103	+/-92	5.1%	+/-4.2
Homeowner vacancy rate	2.5	+/-0.1	(X)	(X)	2.6	+/-4.1	(X)	(X)
Rental vacancy rate	9.7	+/-0.4	(X)	(X)	7.2	+/-10.4	(X)	(X)
UNITS IN STRUCTURE								
Total housing units	1,309,888	+/-337	1,309,888	(X)	2,039	+/-172	2,039	(X)
1-unit, detached	915,389	+/-3,235	69.9%	+/-0.2	1,609	+/-187	78.9%	+/-5.4
1-unit, attached	22,716	+/-1,174	1.7%	+/-0.1	38	+/-45	1.9%	+/-2.2
2 units	40,005	+/-1,386	3.1%	+/-0.1	42	+/-37	2.1%	+/-1.8
3 or 4 units	41,273	+/-1,429	3.2%	+/-0.1	55	+/-68	2.7%	+/-3.3
5 to 9 units	42,720	+/-1,521	3.3%	+/-0.1	63	+/-80	3.1%	+/-3.9
10 to 19 units	43,914	+/-1,438	3.4%	+/-0.1	27	+/-40	1.3%	+/-2.0
20 or more units	31,435	+/-1,205	2.4%	+/-0.1	10	+/-18	0.5%	+/-0.9
Mobile home	170,744	+/-2,585	13.0%	+/-0.2	160	+/-97	7.8%	+/-4.7
Boat, RV, van, etc.	1,692	+/-327	0.1%	+/-0.1	35	+/-52	1.7%	+/-2.6
YEAR STRUCTURE BUILT								
Total housing units	1,309,888	+/-337	1,309,888	(X)	2,039	+/-172	2,039	(X)
Built 2005 or later	80,421	+/-1,896	6.1%	+/-0.1	155	+/-82	7.6%	+/-4.1
Built 2000 to 2004	123,507	+/-2,482	9.4%	+/-0.2	236	+/-111	11.6%	+/-5.3
Built 1990 to 1999	238,156	+/-3,290	18.2%	+/-0.3	485	+/-145	23.8%	+/-7.0
Built 1980 to 1989	213,203	+/-3,174	16.3%	+/-0.2	303	+/-124	14.9%	+/-5.9
Built 1970 to 1979	259,579	+/-2,679	19.8%	+/-0.2	480	+/-153	23.5%	+/-6.8
Built 1960 to 1969	151,888	+/-2,311	11.6%	+/-0.2	194	+/-90	9.5%	+/-4.2
Built 1950 to 1959	106,592	+/-2,033	8.1%	+/-0.2	162	+/-101	7.9%	+/-4.9
Built 1940 to 1949	61,081	+/-1,754	4.7%	+/-0.1	18	+/-27	0.9%	+/-1.3
Built 1939 or earlier	75,461	+/-1,729	5.8%	+/-0.1	6	+/-9	0.3%	+/-0.4
ROOMS								
Total housing units	1,309,888	+/-337	1,309,888	(X)	2,039	+/-172	2,039	(X)
1 room	16,633	+/-966	1.3%	+/-0.1	0	+/-89	0.0%	+/-1.6
2 rooms	23,471	+/-1,018	1.8%	+/-0.1	0	+/-89	0.0%	+/-1.6
3 rooms	87,033	+/-2,315	6.6%	+/-0.2	44	+/-49	2.2%	+/-2.4
4 rooms	241,092	+/-3,100	18.4%	+/-0.2	315	+/-100	15.4%	+/-5.0
5 rooms	353,140	+/-3,563	27.0%	+/-0.3	665	+/-185	32.6%	+/-8.3
6 rooms	270,468	+/-3,234	20.6%	+/-0.2	464	+/-140	22.8%	+/-6.1
7 rooms	152,196	+/-2,510	11.6%	+/-0.2	247	+/-83	12.1%	+/-4.1
8 rooms	83,469	+/-1,761	6.4%	+/-0.1	144	+/-83	7.1%	+/-4.0
9 rooms or more	82,366	+/-2,067	6.3%	+/-0.2	160	+/-82	7.8%	+/-4.0
Median rooms	5.3	+/-0.1	(X)	(X)	5.5	+/-0.3	(X)	(X)
BEDROOMS								
Total housing units	1,309,888	+/-337	1,309,888	(X)	2,039	+/-172	2,039	(X)
No bedroom	18,136	+/-939	1.4%	+/-0.1	0	+/-89	0.0%	+/-1.6
1 bedroom	97,421	+/-2,133	7.4%	+/-0.2	0	+/-89	0.0%	+/-1.6
2 bedrooms	374,248	+/-3,181	28.6%	+/-0.2	576	+/-147	28.2%	+/-6.5
3 bedrooms	646,864	+/-4,025	49.4%	+/-0.3	1,202	+/-187	59.0%	+/-7.7
4 bedrooms	146,325	+/-2,664	11.3%	+/-0.2	188	+/-100	9.2%	+/-4.9
5 or more bedrooms	24,894	+/-970	1.9%	+/-0.1	73	+/-44	3.6%	+/-2.2
HOUSING TENURE								
Occupied housing units	1,121,386	+/-4,189	1,121,386	(X)	1,936	+/-136	1,936	(X)

Owner-occupied	756,915	+/-5,051	67.5%	+/-0.3	1,430	+/-164	73.9%	+/-6.9
Renter-occupied	364,471	+/-3,302	32.5%	+/-0.3	506	+/-140	26.1%	+/-6.9
Average household size of owner-occupied unit	2.55	+/-0.01	(X)	(X)	2.92	+/-0.25	(X)	(X)
Average household size of renter-occupied unit	2.43	+/-0.02	(X)	(X)	2.39	+/-0.40	(X)	(X)
YEAR HOUSEHOLDER MOVED INTO UNIT								
Occupied housing units	1,121,386	+/-4,189	1,121,386	(X)	1,936	+/-136	1,936	(X)
Moved in 2005 or later	477,992	+/-3,344	42.6%	+/-0.3	812	+/-160	41.9%	+/-7.8
Moved in 2000 to 2004	213,150	+/-2,944	19.0%	+/-0.2	384	+/-127	19.8%	+/-6.5
Moved in 1990 to 1999	218,681	+/-2,615	19.5%	+/-0.2	350	+/-108	18.1%	+/-5.6
Moved in 1980 to 1989	96,995	+/-1,777	8.6%	+/-0.2	183	+/-67	9.5%	+/-3.3
Moved in 1970 to 1979	66,687	+/-1,530	5.9%	+/-0.1	162	+/-85	8.4%	+/-4.2
Moved in 1969 or earlier	47,881	+/-1,242	4.3%	+/-0.1	45	+/-39	2.3%	+/-2.0
VEHICLES AVAILABLE								
Occupied housing units	1,121,386	+/-4,189	1,121,386	(X)	1,936	+/-136	1,936	(X)
No vehicles available	73,137	+/-1,546	6.5%	+/-0.1	12	+/-19	0.6%	+/-1.0
1 vehicle available	379,585	+/-3,639	33.8%	+/-0.3	603	+/-144	31.1%	+/-7.2
2 vehicles available	442,004	+/-3,763	39.4%	+/-0.3	747	+/-166	38.6%	+/-8.1
3 or more vehicles available	226,660	+/-2,644	20.2%	+/-0.2	574	+/-129	29.6%	+/-6.3
HOUSE HEATING FUEL								
Occupied housing units	1,121,386	+/-4,189	1,121,386	(X)	1,936	+/-136	1,936	(X)
Utility gas	472,951	+/-4,715	42.2%	+/-0.4	1,052	+/-184	54.3%	+/-8.5
Bottled, tank, or LP gas	98,475	+/-1,568	8.8%	+/-0.1	17	+/-22	0.9%	+/-1.1
Electricity	491,701	+/-4,372	43.8%	+/-0.4	832	+/-175	43.0%	+/-8.5
Fuel oil, kerosene, etc.	1,826	+/-284	0.2%	+/-0.1	0	+/-89	0.0%	+/-1.7
Coal or coke	77	+/-69	0.0%	+/-0.1	0	+/-89	0.0%	+/-1.7
Wood	51,139	+/-1,291	4.6%	+/-0.1	0	+/-89	0.0%	+/-1.7
Solar energy	178	+/-72	0.0%	+/-0.1	0	+/-89	0.0%	+/-1.7
Other fuel	3,036	+/-412	0.3%	+/-0.1	35	+/-52	1.8%	+/-2.7
No fuel used	2,003	+/-312	0.2%	+/-0.1	0	+/-89	0.0%	+/-1.7
SELECTED CHARACTERISTICS								
Occupied housing units	1,121,386	+/-4,189	1,121,386	(X)	1,936	+/-136	1,936	(X)
Lacking complete plumbing facilities	7,585	+/-612	0.7%	+/-0.1	0	+/-89	0.0%	+/-1.7
Lacking complete kitchen facilities	10,898	+/-791	1.0%	+/-0.1	0	+/-89	0.0%	+/-1.7
No telephone service available	47,053	+/-1,584	4.2%	+/-0.1	18	+/-29	0.9%	+/-1.5
OCCUPANTS PER ROOM								
Occupied housing units	1,121,386	+/-4,189	1,121,386	(X)	1,936	+/-136	1,936	(X)
1.00 or less	1,094,089	+/-4,317	97.6%	+/-0.1	1,876	+/-162	96.9%	+/-3.1
1.01 to 1.50	19,680	+/-986	1.8%	+/-0.1	60	+/-59	3.1%	+/-3.1
1.51 or more	7,617	+/-653	0.7%	+/-0.1	0	+/-89	0.0%	+/-1.7
VALUE								
Owner-occupied units	756,915	+/-5,051	756,915	(X)	1,430	+/-164	1,430	(X)
Less than $50,000	144,509	+/-2,266	19.1%	+/-0.3	141	+/-80	9.9%	+/-5.2
$50,000 to $99,999	216,793	+/-3,245	28.6%	+/-0.4	342	+/-118	23.9%	+/-7.6
$100,000 to $149,999	151,852	+/-2,679	20.1%	+/-0.3	418	+/-143	29.2%	+/-9.6
$150,000 to $199,999	105,613	+/-1,887	14.0%	+/-0.2	310	+/-97	21.7%	+/-6.2
$200,000 to $299,999	81,237	+/-2,156	10.7%	+/-0.3	148	+/-74	10.3%	+/-5.3
$300,000 to $499,999	39,847	+/-1,291	5.3%	+/-0.2	37	+/-36	2.6%	+/-2.5
$500,000 to $999,999	13,408	+/-674	1.8%	+/-0.1	34	+/-41	2.4%	+/-2.9
$1,000,000 or more	3,656	+/-454	0.5%	+/-0.1	0	+/-89	0.0%	+/-2.2
Median (dollars)	105,100	+/-760	(X)	(X)	125,500	+/-12,759	(X)	(X)
MORTGAGE STATUS								
Owner-occupied units	756,915	+/-5,051	756,915	(X)	1,430	+/-164	1,430	(X)
Housing units with a mortgage	443,708	+/-4,071	58.6%	+/-0.3	882	+/-131	61.7%	+/-8.0
Housing units without a mortgage	313,207	+/-3,136	41.4%	+/-0.3	548	+/-144	38.3%	+/-8.0
SELECTED MONTHLY OWNER COSTS (SMOC)								
Housing units with a mortgage	443,708	+/-4,071	443,708	(X)	882	+/-131	882	(X)
Less than $300	1,591	+/-274	0.4%	+/-0.1	0	+/-89	0.0%	+/-3.6
$300 to $499	18,880	+/-828	4.3%	+/-0.2	0	+/-89	0.0%	+/-3.6
$500 to $699	67,001	+/-1,740	15.1%	+/-0.3	88	+/-60	10.0%	+/-6.3
$700 to $999	132,929	+/-1,959	30.0%	+/-0.4	238	+/-89	27.0%	+/-9.1
$1,000 to $1,499	131,949	+/-2,324	29.7%	+/-0.5	297	+/-102	33.7%	+/-10.7
$1,500 to $1,999	52,360	+/-1,478	11.8%	+/-0.3	154	+/-73	17.5%	+/-8.1
$2,000 or more	38,998	+/-1,318	8.8%	+/-0.3	105	+/-73	11.9%	+/-7.8
Median (dollars)	1,004	+/-7	(X)	(X)	1,167	+/-131	(X)	(X)
Housing units without a mortgage	313,207	+/-3,136	313,207	(X)	548	+/-144	548	(X)
Less than $100	5,705	+/-421	1.8%	+/-0.1	0	+/-89	0.0%	+/-5.8
$100 to $199	44,305	+/-1,256	14.1%	+/-0.4	44	+/-54	8.0%	+/-9.9
$200 to $299	91,287	+/-1,776	29.1%	+/-0.5	176	+/-96	32.1%	+/-14.1
$300 to $399	79,476	+/-1,831	25.4%	+/-0.5	165	+/-71	30.1%	+/-11.9

$400 or more	92,434	+/-1,606	29.5%	+/-0.5	163	+/-87	29.7%	+/-13.8
Median (dollars)	317	+/-2	(X)	(X)	331	+/-44	(X)	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI)								
Housing units with a mortgage (excluding units where SMOCAPI cannot be computed)	441,752	+/-4,078	441,752	(X)	882	+/-131	882	(X)
Less than 20.0 percent	206,886	+/-3,126	46.8%	+/-0.5	431	+/-129	48.9%	+/-13.6
20.0 to 24.9 percent	68,010	+/-1,704	15.4%	+/-0.3	221	+/-109	25.1%	+/-11.4
25.0 to 29.9 percent	46,267	+/-1,607	10.5%	+/-0.3	75	+/-61	8.5%	+/-6.6
30.0 to 34.9 percent	30,127	+/-1,236	6.8%	+/-0.3	23	+/-27	2.6%	+/-3.0
35.0 percent or more	90,462	+/-1,839	20.5%	+/-0.4	132	+/-65	15.0%	+/-7.0
Not computed	1,956	+/-328	(X)	(X)	0	+/-89	(X)	(X)
Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed)	309,772	+/-3,125	309,772	(X)	548	+/-144	548	(X)
Less than 10.0 percent	142,733	+/-2,202	46.1%	+/-0.5	250	+/-96	45.6%	+/-14.5
10.0 to 14.9 percent	61,772	+/-1,494	19.9%	+/-0.5	131	+/-75	23.9%	+/-12.8
15.0 to 19.9 percent	35,655	+/-1,333	11.5%	+/-0.4	60	+/-40	10.9%	+/-7.7
20.0 to 24.9 percent	21,676	+/-832	7.0%	+/-0.3	55	+/-74	10.0%	+/-12.9
25.0 to 29.9 percent	13,625	+/-657	4.4%	+/-0.2	31	+/-48	5.7%	+/-8.3
30.0 to 34.9 percent	8,454	+/-589	2.7%	+/-0.2	14	+/-21	2.6%	+/-3.8
35.0 percent or more	25,857	+/-1,092	8.3%	+/-0.4	7	+/-13	1.3%	+/-2.4
Not computed	3,435	+/-372	(X)	(X)	0	+/-89	(X)	(X)
GROSS RENT								
Occupied units paying rent	325,121	+/-3,027	325,121	(X)	449	+/-149	449	(X)
Less than $200	8,988	+/-569	2.8%	+/-0.2	0	+/-89	0.0%	+/-7.0
$200 to $299	17,144	+/-945	5.3%	+/-0.3	0	+/-89	0.0%	+/-7.0
$300 to $499	60,230	+/-1,717	18.5%	+/-0.5	21	+/-37	4.7%	+/-8.4
$500 to $749	132,009	+/-2,531	40.6%	+/-0.7	158	+/-104	35.2%	+/-20.2
$750 to $999	70,723	+/-2,153	21.8%	+/-0.6	196	+/-128	43.7%	+/-22.0
$1,000 to $1,499	30,171	+/-1,246	9.3%	+/-0.4	74	+/-71	16.5%	+/-16.0
$1,500 or more	5,856	+/-561	1.8%	+/-0.2	0	+/-89	0.0%	+/-7.0
Median (dollars)	637	+/-4	(X)	(X)	798	+/-88	(X)	(X)
No rent paid	39,350	+/-1,316	(X)	(X)	57	+/-51	(X)	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI)								
Occupied units paying rent (excluding units where GRAPI cannot be computed)	318,402	+/-3,127	318,402	(X)	428	+/-151	428	(X)
Less than 15.0 percent	44,440	+/-1,658	14.0%	+/-0.5	237	+/-146	55.4%	+/-21.0
15.0 to 19.9 percent	41,561	+/-1,608	13.1%	+/-0.5	7	+/-12	1.6%	+/-2.9
20.0 to 24.9 percent	39,508	+/-1,398	12.4%	+/-0.4	11	+/-18	2.6%	+/-4.4
25.0 to 29.9 percent	36,437	+/-1,347	11.4%	+/-0.4	0	+/-89	0.0%	+/-7.3
30.0 to 34.9 percent	28,351	+/-1,309	8.9%	+/-0.4	12	+/-20	2.8%	+/-4.8
35.0 percent or more	128,105	+/-2,748	40.2%	+/-0.8	161	+/-77	37.6%	+/-20.2
Not computed	46,069	+/-1,451	(X)	(X)	78	+/-65	(X)	(X)

Source: U.S. Census Bureau, 2007-2011 American Community Survey

Explanation of Symbols:
An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
An '(X)' means that the estimate is not applicable or not available.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The median gross rent excludes no cash renters.

In prior years, the universe included all owner-occupied units with a mortgage. It is now restricted to include only those units where SMOCAPI is computed, that is, SMOC and household income are valid values.

In prior years, the universe included all owner-occupied units without a mortgage. It is now restricted to include only those units where SMOCAPI is computed, that is, SMOC and household income are valid values.

In prior years, the universe included all renter-occupied units. It is now restricted to include only those units where GRAPI is computed, that is, gross rent and household income are valid values.

City-Data.com FORUM

Pine Bluff, Arkansas

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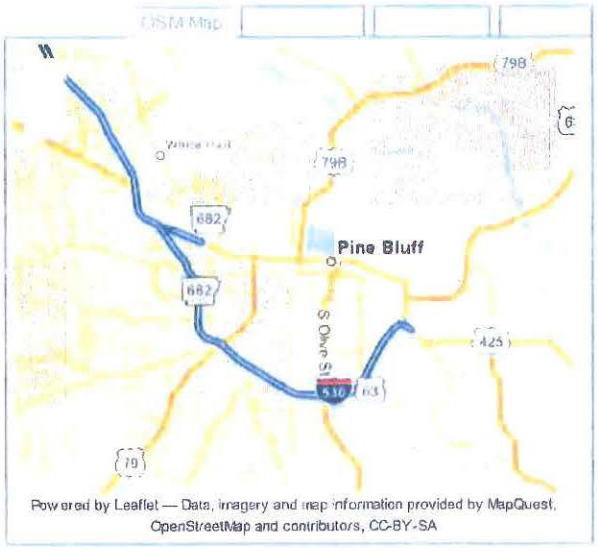
36°F

Current weather forecast for Pine Bluff, AR



Jefferson County

Population in 2011: 49,009. Population change since 2000: -11.0%

Males: 23,290		(47.5%)
Females: 25,719		(52.5%)
Median resident age:	33.4 years	
Arkansas median age:	42.2 years	

Zip codes: **71601**, **71603**, 71611, 71613.

Pine Bluff Zip Code Map

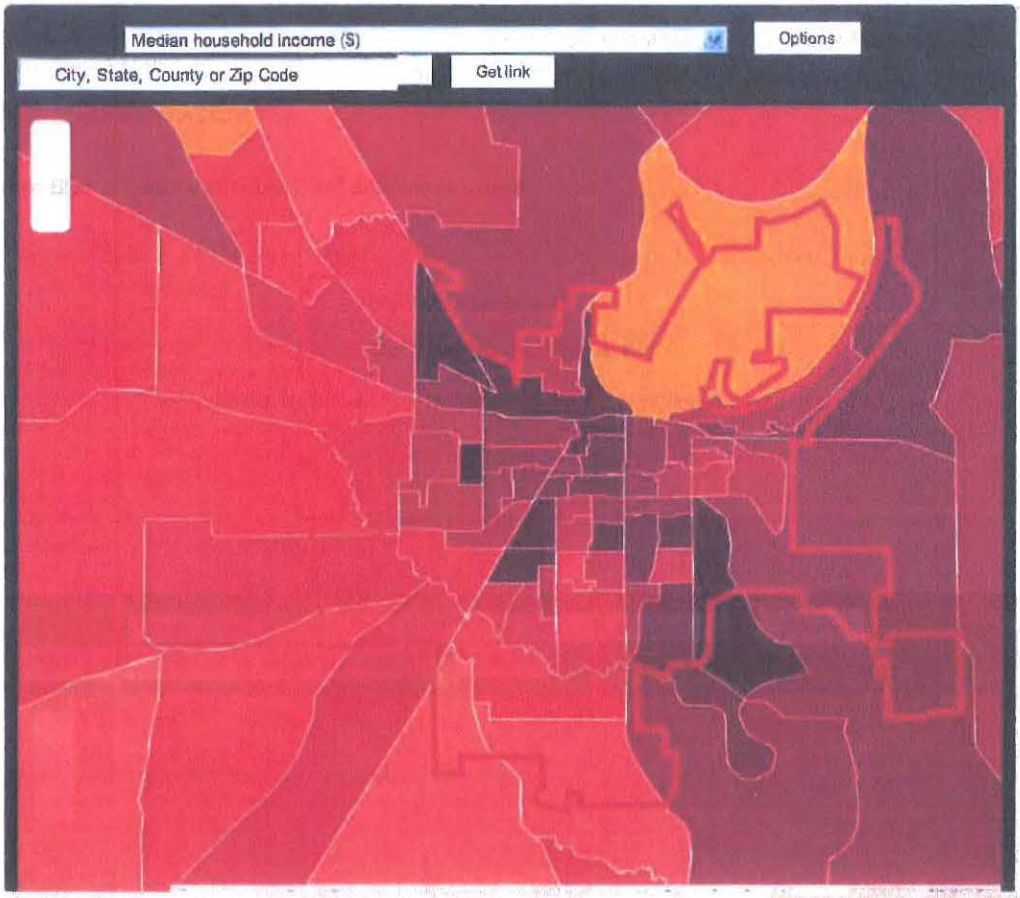
Estimated median household income in 2009: $30,067 (it was $27,247 in 2000)
Pine Bluff: $30,067
Arkansas: $37,823
Estimated per capita income in 2009: $15,497

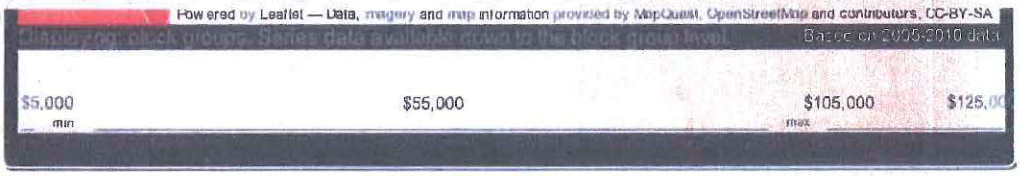
Pine Bluff city income, earnings, and wages data

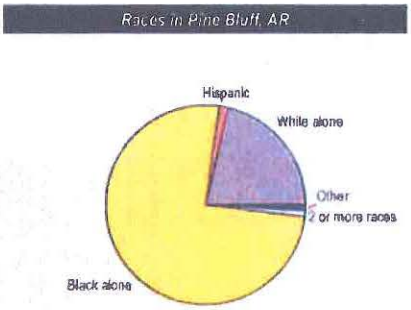
Estimated median house or condo value in 2009: $69,700 (it was $50,000 in 2000)
Pine Bluff: $69,700
Arkansas: $102,900
Mean prices in 2009: All housing units: $81,886; Detached houses: $84,102; Townhouses or other attached units: $104,024; In 2-unit structures: $181,945; In 3-to-4-unit structures: $97,725; In 5-or-more-unit structures: $84,982; Mobile homes: $34,429; Occupied boats, RVs, vans, etc.: $6,261

Median gross rent in 2009: $598.

Pine Bluff, AR residents, houses, and apartments details







- Black alone - 36,946 (75.3%)
- White alone - 10,489 (21.4%)
- Hispanic - 712 (1.5%)
- Two or more races - 509 (1.0%)
- Asian alone - 306 (0.6%)
- American Indian alone - 81 (0.2%)
- Other race alone - 36 (0.07%)
- Native Hawaiian and Other Pacific Islander alone - 4 (0.01%)

Races in Pine Bluff detailed stats: ancestries, foreign born residents, place of birth

Mar. 2012 cost of living index in Pine Bluff: 81.3 (low, U.S. average is 100)

Recent posts about Pine Bluff, Arkansas on our local forum with over 1,500,000 registered users. Pine Bluff is mentioned 535 times on our forum:

- **Thinking of visiting Pine Bluff, some questions on safety** (7 replies)
- **Birthplace in Pine Bluff** (2 replies)
- **Pine Bluff Safety, Specific Area** (1 reply)
- **Is it safe to work in Pine Bluff?** (18 replies)
- **New job in Pine Bluff - Recommended Area to Live** (13 replies)
- **visiting pine bluff** (36 replies)

Ancestries: United States (7.1%), English (3.4%), Irish (2.9%), German (2.8%).

Current Local Time: 11:38:20 AM CST time zone

Incorporated on 01/10/1839

Elevation: 220 feet

Land area: 45.6 square miles.

Population density: 1074 people per square mile (low).

Home Value Estimate

Address: Unit (optional):

City State Zip

Pine Bluff AR

Get Home Value Estimate

Recent Home Sales

Address:

City State Zip

Pine Bluff AR

Min Price (optional) Max Price (optional)

Prioritization: ◉ Sale Date ○ Distance

Get Recent Home Sales

For population 25 years and over in Pine Bluff:

- High school or higher: 73.3%
- Bachelor's degree or higher: 17.6%
- Graduate or professional degree: 5.4%
- Unemployed: 10.1%
- Mean travel time to work (commute): 18.9 minutes

For population 15 years and over in Pine Bluff city:

- Never married: 30.6%
- Now married: 41.8%
- Separated: 3.9%
- Widowed: 10.8%

- Divorced: 12.9%

623 residents are foreign born
This city: 1.1%
Arkansas: 2.8%

According to our research of Arkansas and other state lists there **were 4 registered sex offenders living in Pine Bluff, Arkansas** as of February 20, 2013.
The ratio of number of residents in Pine Bluff to the number of sex offenders is 12,597 to 1.

Median real estate property taxes paid for housing units with mortgages in 2009: $394 (0.6%)
Median real estate property taxes paid for housing units with no mortgage in 2009: $342 (0.6%)

Nearest city with pop. 200,000+: **Memphis, TN** (132.3 miles , pop. 650,100).

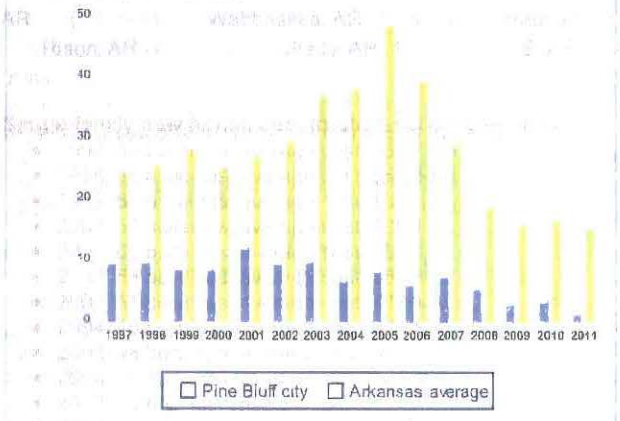
Nearest city with pop. 1,000,000+: **Dallas, TX** (291.7 miles , pop. 1,188,580).

Nearest cities: **White Hall, AR** (2.4 miles), Sherrill, AR (3.5 miles) **Altheimer, AR** (3.5 miles), **Wabbaseka, AR** (4.1 miles), **Redfield, AR** (4.3 miles), **Rison, AR** (4.5 miles), **Grady, AR** (4.6 miles), **Star City, AR** (4.7 miles).

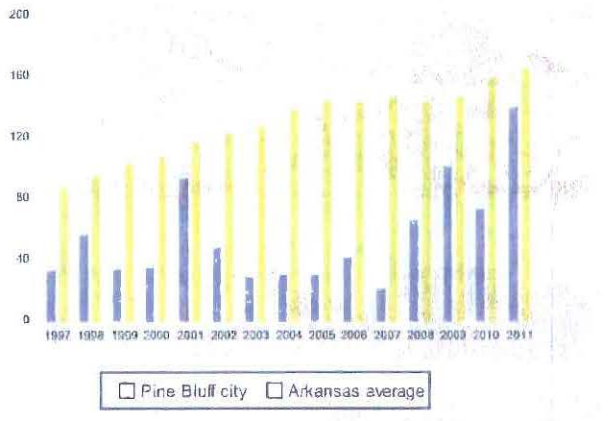
Single-family new house construction building permits:

- 1997: 55 buildings, average cost: $35,700
- 1998: 56 buildings, average cost: $59,300
- 1999: 50 buildings, average cost: $37,400
- 2000: 50 buildings, average cost: $38,100
- 2001: 69 buildings, average cost: $96,100
- 2002: 55 buildings, average cost: $50,600
- 2003: 57 buildings, average cost: $32,400
- 2004: 40 buildings, average cost: $33,400
- 2005: 48 buildings, average cost: $33,100
- 2006: 36 buildings, average cost: $44,500
- 2007: 43 buildings, average cost: $24,300
- 2008: 32 buildings, average cost: $69,000
- 2009: 19 buildings, average cost: $104,200
- 2010: 21 buildings, average cost: $76,300
- 2011: 10 buildings, average cost: $141,500

Number of permits per 10,000 residents



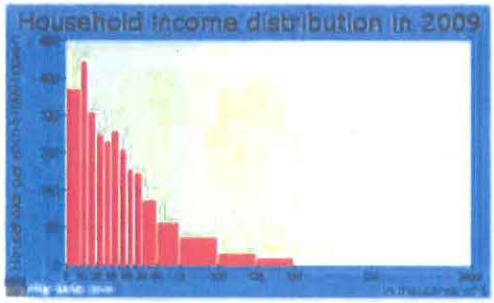
Average cost (in $1000s)

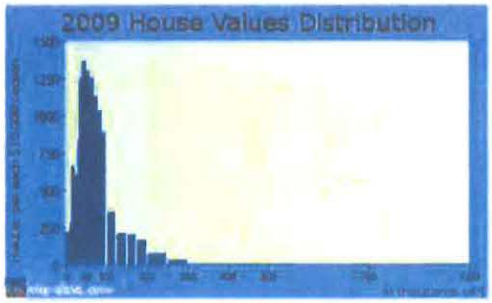


Latitude: 34.22 N, Longitude: 92.02 W

Daytime population change due to commuting: +6,789 (+12.3%)
Workers who live and work in this city: 14,997 (75.7%)

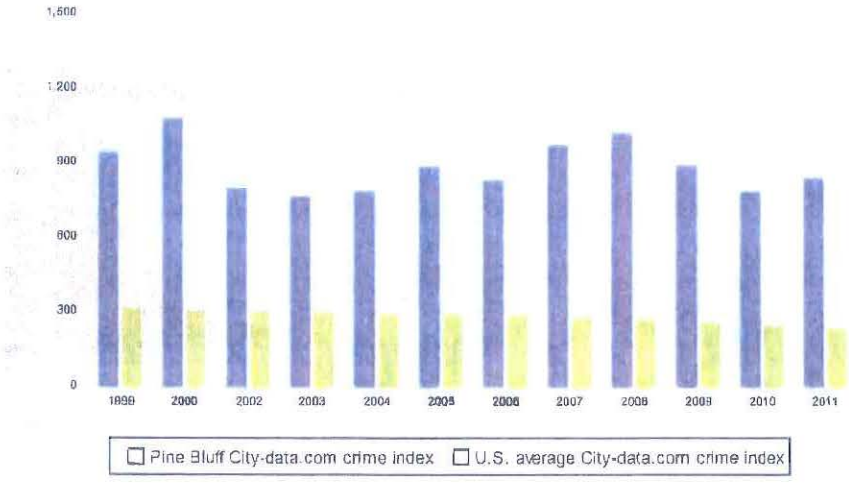
Area code: 870





Type	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Murders	8	14	10	16	9	16	12	15	16	12	7	12
per 100,000	15.0	25.6	17.9	29.4	16.5	29.7	22.5	29.2	31.9	24.0	14.0	24.3
Rapes	50	64	47	44	41	41	36	42	71	50	40	41
per 100,000	93.9	116.9	84.2	80.8	75.3	76.0	67.5	81.9	141.6	100.2	80.0	82.9
Robberies	232	263	230	160	163	209	203	265	248	207	165	152
per 100,000	435.8	480.4	411.9	275.3	299.4	387.5	380.9	516.5	494.6	414.7	330.2	307.4
Assaults	834	821	463	368	381	459	547	567	484	452	475	478
per 100,000	1566.5	1499.6	829.1	675.5	699.9	851.0	1026.4	1105.2	965.2	905.5	950.6	966.6
Burglaries	1,322	1,636	1,012	1,198	1,515	1,681	1,512	1,598	1,596	1,606	1,371	1,565
per 100,000	2483.0	2988.2	1812.3	2198.9	2783.0	3116.8	2837.1	3114.8	3182.6	3217.5	2743.6	3164.6
Thefts	2,047	3,170	3,116	2,930	2,908	2,727	2,053	2,389	2,648	2,185	2,074	2,168
per 100,000	3844.8	5790.2	5580.1	5377.9	5342.0	5056.2	3852.2	4655.6	5280.8	4377.4	4150.4	4383.9
Auto thefts	436	333	408	402	404	412	415	435	430	368	303	275
per 100,000	818.9	608.2	730.6	737.9	742.1	763.9	778.7	847.9	857.5	737.3	606.4	556.1
Arson	52	66	51	59	73	76	77	80	27	29	38	49
per 100,000	97.7	120.6	91.3	108.3	134.1	140.9	144.5	155.9	53.8	58.1	76.0	99.1
City-data.com crime index (higher means more crime, U.S. average = 319.1)	959.1	1097.3	815.3	782.8	805.1	904.0	848.5	989.4	1039.3	908.9	801.8	856.7

(click on a table row to update graph)



City-data.com crime index counts serious crimes more heavily. It adjusts for the number of visitors and daily workers commuting into cities.

Crime in Pine Bluff detailed stats: murders, rapes, robberies, assaults, burglaries, thefts, arson

Full-time law enforcement employees in 2011, including police officers: 173 (149 officers).
Officers per 1,000 residents here: 3.01
Arkansas average: 1.97

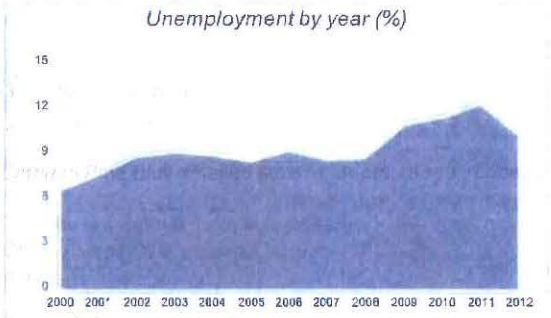
This city's Wikipedia profile

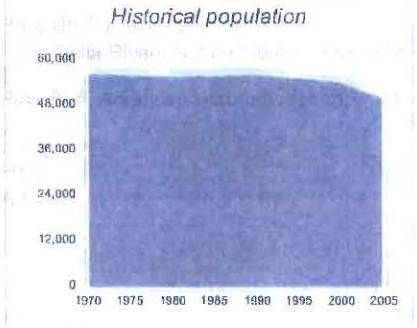
Pine Bluff tourist attractions:

- **Delta Rivers Nature Center - Pine Bluff AR - Delta Rivers Nature Center hike wildlife**

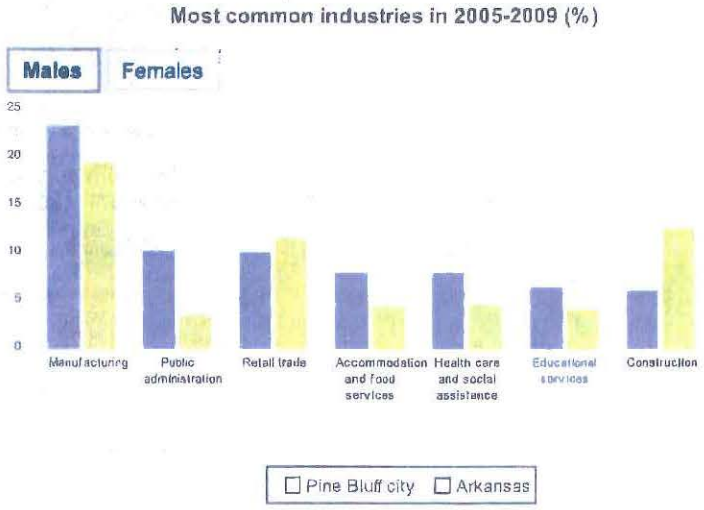
Pine Bluff, Arkansas accommodation, waste management, arts - Economy and Business Data

Unemployment in August 2012:
Here: 10.3%
Arkansas: 7.0%





Population change in the 1990s: -1,915 (-3.4%).



DP03 **SELECTED ECONOMIC CHARACTERISTICS**
2007-2011 American Community Survey 5-Year Estimates

BACK TO ADVANCED SEARCH

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the **Data and Documentation** section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the **Methodology** section.

Subject	Pine Bluff city, Arkansas			
	Estimate	Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS				
Population 16 years and over	38,157	+/-332	38,157	(X)
In labor force	22,088	+/-800	57.9%	+/-2.1
Civilian labor force	22,040	+/-797	57.8%	+/-2.1
Employed	18,068	+/-732	47.4%	+/-1.9
Unemployed	3,972	+/-408	10.4%	+/-1.1
Armed Forces	48	+/-33	0.1%	+/-0.1
Not in labor force	16,069	+/-819	42.1%	+/-2.1
Civilian labor force	22,040	+/-797	22,040	(X)
Percent Unemployed	(X)	(X)	18.0%	+/-1.7
Females 16 years and over	20,273	+/-287	20,273	(X)
In labor force	11,897	+/-455	58.7%	+/-2.3
Civilian labor force	11,886	+/-456	58.6%	+/-2.3
Employed	10,130	+/-439	50.0%	+/-2.2
Own children under 6 years	3,969	+/-243	3,969	(X)
All parents in family in labor force	2,963	+/-326	74.7%	+/-6.0
Own children 6 to 17 years	7,481	+/-384	7,481	(X)
All parents in family in labor force	5,472	+/-462	73.1%	+/-5.5
COMMUTING TO WORK				
Workers 16 years and over	17,479	+/-727	17,479	(X)
Car, truck, or van -- drove alone	14,577	+/-702	83.4%	+/-2.2
Car, truck, or van -- carpooled	1,647	+/-319	9.4%	+/-1.8
Public transportation (excluding taxicab)	84	+/-73	0.5%	+/-0.4
Walked	391	+/-194	2.2%	+/-1.1
Other means	592	+/-226	3.4%	+/-1.3
Worked at home	188	+/-92	1.1%	+/-0.5
Mean travel time to work (minutes)	18.6	+/-1.2	(X)	(X)
OCCUPATION				
Civilian employed population 16 years and over	18,068	+/-732	18,068	(X)
Management, business, science, and arts occupations	4,758	+/-422	26.3%	+/-2.2
Service occupations	4,308	+/-424	23.8%	+/-2.2
Sales and office occupations	4,556	+/-434	25.2%	+/-2.1
Natural resources, construction, and maintenance occupations	1,154	+/-283	6.4%	+/-1.4
Production, transportation, and material moving occupations	3,292	+/-391	18.2%	+/-2.0
INDUSTRY				
Civilian employed population 16 years and over	18,068	+/-732	18,068	(X)
Agriculture, forestry, fishing and hunting, and mining	94	+/-63	0.5%	+/-0.3
Construction	600	+/-165	3.3%	+/-0.9
Manufacturing	2,840	+/-398	15.7%	+/-2.0
Wholesale trade	304	+/-132	1.7%	+/-0.7
Retail trade	2,185	+/-340	12.1%	+/-1.8
Transportation and warehousing, and utilities	629	+/-161	3.5%	+/-0.9
Information	249	+/-94	1.4%	+/-0.5
Finance and insurance, and real estate and rental and leasing	576	+/-159	3.2%	+/-0.9
Professional, scientific, and management, and administrative and waste management services	1,041	+/-223	5.8%	+/-1.3
Educational services, and health care and social assistance	5,629	+/-516	31.2%	+/-2.8
Arts, entertainment, and recreation, and accommodation and food services	1,392	+/-288	7.7%	+/-1.6
Other services, except public administration	620	+/-127	3.4%	+/-0.7

Public administration	1,909	+/-322	10.6%	+/-1.7
CLASS OF WORKER				
Civilian employed population 16 years and over	18,068	+/-732	18,068	(X)
Private wage and salary workers	12,271	+/-678	67.9%	+/-2.9
Government workers	5,202	+/-555	28.8%	+/-2.7
Self-employed in own not incorporated business workers	595	+/-155	3.3%	+/-0.8
Unpaid family workers	0	+/-89	0.0%	+/-0.2
INCOME AND BENEFITS (IN 2011 INFLATION-ADJUSTED DOLLARS)				
Total households	17,587	+/-467	17,587	(X)
Less than $10,000	2,735	+/-275	15.6%	+/-1.5
$10,000 to $14,999	1,903	+/-277	10.8%	+/-1.6
$15,000 to $24,999	2,634	+/-314	15.0%	+/-1.8
$25,000 to $34,999	2,206	+/-302	12.5%	+/-1.6
$35,000 to $49,999	2,759	+/-368	15.7%	+/-2.0
$50,000 to $74,999	2,741	+/-321	15.6%	+/-1.8
$75,000 to $99,999	1,300	+/-194	7.4%	+/-1.1
$100,000 to $149,999	878	+/-158	5.0%	+/-0.9
$150,000 to $199,999	262	+/-96	1.5%	+/-0.5
$200,000 or more	169	+/-70	1.0%	+/-0.4
Median household income (dollars)	31,600	+/-1,619	(X)	(X)
Mean household income (dollars)	43,386	+/-2,124	(X)	(X)
With earnings	12,613	+/-490	71.7%	+/-2.1
Mean earnings (dollars)	45,114	+/-2,670	(X)	(X)
With Social Security	6,048	+/-349	34.4%	+/-1.8
Mean Social Security income (dollars)	13,747	+/-605	(X)	(X)
With retirement income	2,832	+/-315	16.1%	+/-1.7
Mean retirement income (dollars)	17,535	+/-1,819	(X)	(X)
With Supplemental Security Income	1,802	+/-239	9.1%	+/-1.4
Mean Supplemental Security Income (dollars)	7,392	+/-754	(X)	(X)
With cash public assistance income	689	+/-154	3.9%	+/-0.9
Mean cash public assistance income (dollars)	3,632	+/-1,387	(X)	(X)
With Food Stamp/SNAP benefits in the past 12 months	4,545	+/-419	25.8%	+/-2.2
Families	10,803	+/-376	10,803	(X)
Less than $10,000	986	+/-224	9.2%	+/-2.0
$10,000 to $14,999	786	+/-192	7.1%	+/-1.7
$15,000 to $24,999	1,473	+/-261	13.6%	+/-2.4
$25,000 to $34,999	1,452	+/-230	13.4%	+/-2.1
$35,000 to $49,999	1,877	+/-258	17.4%	+/-2.4
$50,000 to $74,999	2,082	+/-287	19.3%	+/-2.6
$75,000 to $99,999	1,008	+/-177	9.3%	+/-1.6
$100,000 to $149,999	770	+/-153	7.1%	+/-1.4
$150,000 to $199,999	218	+/-98	2.0%	+/-0.9
$200,000 or more	161	+/-72	1.5%	+/-0.7
Median family income (dollars)	39,722	+/-2,810	(X)	(X)
Mean family income (dollars)	52,838	+/-3,577	(X)	(X)
Per capita income (dollars)	16,656	+/-848	(X)	(X)
Nonfamily households	6,784	+/-406	6,784	(X)
Median nonfamily income (dollars)	17,923	+/-2,049	(X)	(X)
Mean nonfamily income (dollars)	25,921	+/-2,000	(X)	(X)
Median earnings for workers (dollars)	21,376	+/-1,171	(X)	(X)
Median earnings for male full-time, year-round workers (dollars)	36,360	+/-2,459	(X)	(X)
Median earnings for female full-time, year-round workers (dollars)	28,390	+/-1,162	(X)	(X)
HEALTH INSURANCE COVERAGE				
Civilian noninstitutionalized population	(X)	(X)	(X)	(X)
With health insurance coverage	(X)	(X)	(X)	(X)
With private health insurance	(X)	(X)	(X)	(X)
With public coverage	(X)	(X)	(X)	(X)
No health insurance coverage	(X)	(X)	(X)	(X)
Civilian noninstitutionalized population under 18 years	(X)	(X)	(X)	(X)
No health insurance coverage	(X)	(X)	(X)	(X)
Civilian noninstitutionalized population 18 to 64 years	(X)	(X)	(X)	(X)
In labor force:	(X)	(X)	(X)	(X)
Employed:	(X)	(X)	(X)	(X)
With health insurance coverage	(X)	(X)	(X)	(X)
With private health insurance	(X)	(X)	(X)	(X)
With public coverage	(X)	(X)	(X)	(X)
No health insurance coverage	(X)	(X)	(X)	(X)
Unemployed:	(X)	(X)	(X)	(X)
With health insurance coverage	(X)	(X)	(X)	(X)

With private health insurance	(X)	(X)	(X)	(X)
With public coverage	(X)	(X)	(X)	(X)
No health insurance coverage	(X)	(X)	(X)	(X)
Not in labor force:	(X)	(X)	(X)	(X)
With health insurance coverage	(X)	(X)	(X)	(X)
With private health insurance	(X)	(X)	(X)	(X)
With public coverage	(X)	(X)	(X)	(X)
No health insurance coverage	(X)	(X)	(X)	(X)
PERCENTAGE OF FAMILIES AND PEOPLE WHOSE INCOME IN THE PAST 12 MONTHS IS BELOW THE POVERTY LEVEL				
All families	(X)	(X)	23.2%	+/-2.6
With related children under 18 years	(X)	(X)	35.5%	+/-4.0
With related children under 5 years only	(X)	(X)	53.1%	+/-11.1
Married couple families	(X)	(X)	9.1%	+/-2.5
With related children under 18 years	(X)	(X)	15.9%	+/-5.8
With related children under 5 years only	(X)	(X)	30.4%	+/-22.1
Families with female householder, no husband present	(X)	(X)	38.1%	+/-4.6
With related children under 18 years	(X)	(X)	45.3%	+/-5.8
With related children under 5 years only	(X)	(X)	58.6%	+/-15.2
All people	(X)	(X)	25.0%	+/-2.5
Under 18 years	(X)	(X)	40.6%	+/-5.1
Related children under 18 years	(X)	(X)	40.6%	+/-5.1
Related children under 5 years	(X)	(X)	50.5%	+/-6.8
Related children 5 to 17 years	(X)	(X)	36.6%	+/-5.5
18 years and over	(X)	(X)	24.7%	+/-2.1
18 to 64 years	(X)	(X)	26.4%	+/-2.4
65 years and over	(X)	(X)	16.7%	+/-3.0
People in families	(X)	(X)	26.4%	+/-3.2
Unrelated individuals 15 years and over	(X)	(X)	39.6%	+/-4.3

Source: U.S. Census Bureau, 2007-2011 American Community Survey

Explanation of Symbols:
An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
An '(X)' means that the estimate is not applicable or not available.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

There were changes in the edit between 2009 and 2010 regarding Supplemental Security Income (SSI) and Social Security. The changes in the edit loosened restrictions on disability requirements for receipt of SSI resulting in an increase in the total number of SSI recipients in the American Community Survey. The changes also loosened restrictions on possible reported monthly amounts in Social Security income resulting in higher Social Security aggregate amounts. These results more closely match administrative counts compiled by the Social Security Administration.

Workers include members of the Armed Forces and civilians who were at work last week.

Industry codes are 4-digit codes and are based on the North American Industry Classification System 2007. The industry categories adhere to the guidelines issued in Clarification Memorandum No. 2, "NAICS Alternate Aggregation Structure for Use By U.S. Statistical Agencies," issued by the Office of Management and Budget.

Census occupation codes are 4-digit codes and are based on the Standard Occupational Classification (SOC). The Census occupation codes for 2010 and later years are based on the 2010 revision of the SOC. To allow for the creation of 2007-2011 and 2009-2011 tables, occupation data in the multiyear files (2007-2011 and 2009-2011) were recoded to 2011 Census occupation codes. We recommend using caution when comparing data coded using 2011 Census occupation codes with data coded using Census occupation codes prior to 2010. For more information on the Census occupation code changes, please visit our website at http://www.census.gov/hhes/www/ioindex/.

While the 2007-2011 American Community Survey (ACS) data generally reflect the December 2009 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2000 data. Boundaries for urban areas have not been updated since Census 2000. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau | American FactFinder

Appendix C

Panamerican Cultural Resources Report

PCI REPORT NO. 32235

PANAMERICAN CONSULTANTS, INC.

CULTURAL RESOURCES
LITERATURE AND RECORDS SEARCH FOR THE PROPOSED NEW 16.5-MILE, 230-KV TRANSMISSION LINE FROM WOODWARD TO WHITE BLUFF, JEFFERSON COUNTY, ARKANSAS (ENTERGY RFP 32321)

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NOVEMBER 2012

THIS REPORT CONTAINS SITE-SENSITIVE INFORMATION AND IS NOT INTENDED FOR PUBLIC DISTRIBUTION

CULTURAL RESOURCES
LITERATURE AND RECORDS SEARCH FOR THE PROPOSED NEW 16.5-MILE, 230-KV TRANSMISSION LINE FROM WOODWARD TO WHITE BLUFF, JEFFERSON COUNTY, ARKANSAS

(ENTERGY RFP 32321)

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NOVEMBER 2012

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INTRODUCTION

At the request of GBM^c & Associates, Panamerican Consultants, Inc. (Panamerican) conducted a cultural resources literature and records search (a.k.a., a "desktop" study) for the proposed Entergy transmission line options located northwest of Pine Bluff, Arkansas. The goal of a "desktop" study is to identify all known cultural resources within the study area and develop a sense of what unknown/unrecorded cultural resources can be expected to exist within the study area.

A desktop study includes conducting standard Phase I cultural resources background research and the preparation of a context statement. No fieldwork was conducted. The information provided in the context statement is intended to assist project managers in planning the proposed undertaking. In the event that a standard Phase I cultural resources field survey becomes necessary, then the information from the desktop study can be re-cycled (assuming there is not a lengthy time duration between the two studies).

STUDY AREA

The project area is located in central Jefferson County near Pine Bluff. Jefferson County is in central Arkansas, and is bounded by Pulaski and Prairie counties to the north, Arkansas and Lincoln Counties to the east, Lincoln and Cleveland counties to the south, and Grant County to the west. Pine Bluff is located in the central section of the county west of the Arkansas River. It has a population of over 50,000 people. In terms of physiography, the project area is on the Pleistocene Fluvial Terraces portion of the South Central Plains.

The desktop review area is a rough rectangle oriented north to south. It is bounded on the east by the Arkansas River, on the south by the Township 6/7 North line, on the west by the Range 11/12 West line, and on the north by multiple Section lines. This area can be found on the Pine Bluff, Pine Bluff NW, Redfield, and Whitehall, ARK 7.5-minute quadrangles.

The proposed new transmission line will be 16.5 mi. long and located somewhere in the large rectangle shown in Figure 1.

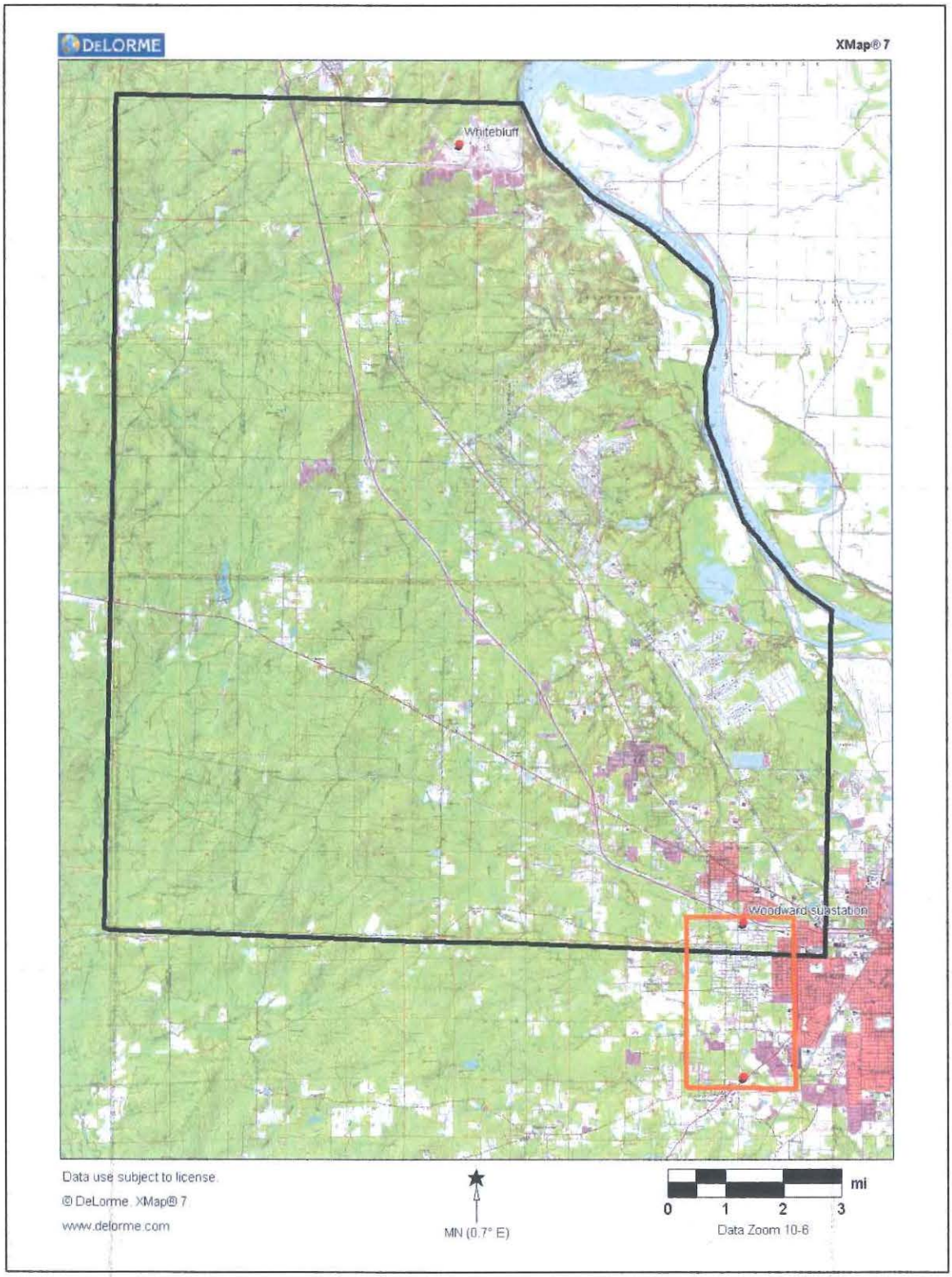

Figure 1. Quad map locator for the proposed project area (inside black outline; map provided by GBMc, Inc., includes portions of the Pine Bluff, Pine Bluff NW, Redfield, and White Bluff, ARK 7.5-min. quads; note: orange rectangle is for a different project).

ARKANSAS ARCHEOLOGICAL SURVEY SITE FILES

Ms. Leslie Walker conducted a review of the records and files at the Arkansas Archeological Survey (AAS) office in Fayetteville for this project on 9 October 2012. A standard site files check was performed, and prior archaeological work in the proposed study area was researched. The search area was limited to the area shown in Figure 1.

The site files research revealed that there are 65 previously recorded site located within the proposed project area (Table 1). Thirty-two of these sites are recommended as not eligible for listing in the National Register of Historic Places (NRHP) and require no further archaeological management action. Thirty-two of the sites have an undetermined NRHP status, or none was given on the site form, and should be avoided until a NRHP status can be made. One site, 3JE443 (Fort Pleasant/Fort Weightman), is considered eligible for listing in the NRHP and should be avoided.

Table 1. Previously Recorded Archaeological Sites Within the Study Area.

Site	Description	[redacted]	Northing	Recorder/Date	NRHP Status
3GR2	Spillyard Site; Dalton period site			Robinson 19?1	not stated
3GR164	Morris Cemetery and School; mid to late Archaic, historic cemetery		3800930	Shaw, Farmer and White 2002	undetermined
3JE007	Archaic			Webb 1961	not stated
3JE008	Dalton period site			Robinson 1961	not stated
3JE025	Dalton period site			Robinson 1961	not stated
3JE039	unknown prehistoric			Robinson 1961	not stated
3JE118	unknown prehistoric			Watts 1972	not stated
3JE132	historic		3803320	Leslie 1978	not stated
3JE133	Doylestown (early 20th century lumber village)			Farmer 1978	not stated
3JE134	unknown prehistoric			Watts 1978	not stated
3JE144	Archaic; Poverty Point			House 1978	undetermined
3JE167	historic (Euroamerican?)			1979	undetermined
3JE168	unknown prehistoric			1979	not eligible
3JE215	unknown prehistoric		3791040	Bennett 1984	not eligible
3JE216	unknown prehistoric (Archaic?)		3788000	House 1984	not eligible
3JE218	Dalton, Historic 1880-1920		3798460	House and Farmer 1983	undetermined

Site	Description	[redacted]	Northing	Recorder/Date	NRHP Status
3JE260	Archaic	[redacted]	3794880	Farmer 1988	undetermined
3JE261	Archaic	[redacted]	3794940	Farmer 1988	undetermined
3JE262	unknown historic	[redacted]	3810160	Northrip 1987	not stated
3JE264	Archaic?	[redacted]	3807000	Guendling and Kerr 1988	undetermined
3JE265	prehistoric isolated find	[redacted]	3803820	Guendling and Kerr 1988	not eligible
3JE272	prehistoric isolated find	[redacted]	3792240	Farmer 1988	not stated
3JE283	20th century historic	[redacted]	3797290	AAI 1990	not eligible
3JE284	unknown historic	[redacted]	3976490	AAI 1990	not eligible
3JE285	Woodland	[redacted]	3803840	AAI 1990	undetermined
3JE286	unknown prehistoric and historic	[redacted]	3803350	AAI 1990	not eligible
3JE287	historic	[redacted]	3801480	AAI 1990	not eligible
3JE288	unknown prehistoric	[redacted]	3799910	AAI 1990	not eligible
3JE289	unknown historic	[redacted]	3799840	AAI 1990	not eligible
3JE290	Woodland	[redacted]	3800520	AAI 1990	undetermined
3JE291	unknown historic	[redacted]	3800320	AAI 1990	not eligible
3JE292	unknown historic	[redacted]	3799360	AAI 1990	not eligible
3JE293	unknown historic	[redacted]	3799310	AAI 1990	not eligible
3JE294	20th century historic	[redacted]	3799360	AAI 1990	not eligible
3JE295	20th century historic	[redacted]	3799320	AAI 1990	not eligible
3JE296	unknown prehistoric	[redacted]	3798700	AAI 1990	not eligible
3JE297	unknown prehistoric	[redacted]	3798140	AAI 1990	not eligible
3JE298	unknown prehistoric	[redacted]	3800470	AAI 1990	not eligible
3JE299	historic	[redacted]	3800910	AAI 1990	not eligible
3JE300	historic	[redacted]	3798270	AAI 1990	not eligible
3JE301	historic	[redacted]	3799830	AAI 1990	not eligible
3JE302	historic	[redacted]	3795970	AAI 1990	not eligible
3JE303	historic	[redacted]	3793150	AAI 1990	not eligible
3JE304	historic	[redacted]	3793070	AAI 1990	not eligible
3JE305	historic	[redacted]	3793120	AAI 1990	not eligible
3JE306	historic	[redacted]	3793310	AAI 1990	not eligible
3JE307	historic	[redacted]	3793110	AAI 1990; House et al. 2000	undetermined
3JE308	historic	[redacted]	3793180	AAI 1990	not eligible
3JE309	historic	[redacted]	3792720	AAI 1990	not eligible
3JE310	historic	[redacted]	3793030	AAI 1990; House et al. 2000	undetermined
3JE311	historic	[redacted]	3793110	AAI 1990	not eligible

Site	Description	[redacted]	Northing	Recorder/Date	NRHP Status
3JE341	historic	[redacted]	3793540	Hoffman and Wick 1992	not eligible
3JE365	Haywood College (early African-American college)	[redacted]	3791380	Farmer 1994	not stated
3JE381	unknown prehistoric	[redacted]	3804560	Spears 2000	not eligible
3JE443	Fort Pleasant/Fort Weightman (Civil War defensive fortification)	[redacted]	3795944	Early 2002	eligible
3JE444	Hardin Cemetery (early 20th century)	[redacted]	3791320	Early 2003	undetermined
3JE447	Pharisee Wesley Cemetery (mid 20th century)	[redacted]	3791660	House 2004	undetermined
3JE461	Early Archaic	[redacted]	3791455	Shaw 2006	undetermined
3JE462	White Bluff fortification (Civil War era)	[redacted]	3809120	Imhoff 2006	undetermined
3JE463	White Bluff Camp site (Civil War era)	[redacted]	3808080	Imhoff 2006	undetermined
3JE464	White Bluff Infantry Camp site (Civil War era)	[redacted]	3808120	Imhoff 2006	undetermined
3JE465	White Bluff Camp site dump (Civil War era)	[redacted]	3807920	Imhoff 2006	undetermined
3JE466	Heutt Cemetery (late 19th/late 20th century)	[redacted]	3788800	Farmer 2007	not stated
3JE467	Lovell Cemetery (early 20th century)	[redacted]	3798680	Farmer 2007	not stated
3JE479	Plainview Housing Complex (WWII era)	[redacted]	3796284	DeMaris 2009	not eligible

Previous Archaeological Investigations

Review of Automated Management of Archeological Site Data in Arkansas (AMASDA) files resulted in the identification of five prior studies in the project area. These studies are summarized below (Table 2). These reports can be found in the *References Cited* section at the end of this report.

Table 2. AMASDA Projects Within the Study Area.

AMASDA #	Author(s) and Publication Date	Findings
141	Dinnel and Trubowitz 1979	Three historic sites recommended for further work; one prehistoric isolated find recommended not eligible
829	Bennett and Stewart-Abernathy 1982	No cultural resources identified
946	Price 1983	Six previously recorded sites revisited, five new sites recorded;
985	Bennett n.d.	One new site identified and recorded; recommended not eligible
1102	Miller 1985	14 previously recorded sites revisited, 18 new sites recorded, 12 probability areas investigated

AMASDA #	Author(s) and Publication Date	Findings
1167	Zahn 1986	Three sites identified and recorded, all recommended not eligible
1237	Miller 1987	26 sites were identified and recorded, eight within the impact zone; seven recommended as not eligible, one recommended for additional work
1281	Hinkle 1987	No new sites identified; one previously recorded site recommended not eligible.
1313	Bennett et al. 1989	Predictive model for the area, no sites recorded
1702	Bennett et al. 1993	46 sites identified; seven recommended for additional work, 39 recommended not eligible
2090	Hoffman and Waddell 1992	One previously recorded site revisited and two newly identified sites recorded; two were determined to be outside project area, third not eligible
2616	Barnes 1993	No cultural resources identified
2759	Hoffman and Waddell 1993	No cultural resources identified
2794	Dunn 1988b	No cultural resources identified
2795	Dunn 1988a	No cultural resources identified
3925	McAlexander 1994c	No cultural resources identified
3929	McAlexander 1994b	No cultural resources identified
3931	McAlexander 1994a	No cultural resources identified
4262	Spears and Johnson 2000	Nine previously recorded sites revisited, and five newly identified sites recorded; two sites recommended potentially eligible
4263	House et al. 2001	Phase II testing of seven sites: three recommended eligible, three recommended not eligible, one undetermined
4931	Klinger 2003	Literature and records search; no sites recorded in project area
5634	Klinger et al. 2001	No sites identified
5839	Klinger 2008	No sites identified
5858	Sharpe 2009	One historic (1940s) site identified, not eligible

Arkansas Historic Preservation Program Structure Files

F. Preston Buchner, Esq. conducted a review of the records and files at the Arkansas Historic Preservation Program (AHPP) office in Little Rock for this project on 9 October 2012. This research revealed that there are 13 previously recorded properties within the project boundaries (Table 3). Many of these are related to railroads and are former rail cars. Six of the properties are listed in the NRHP (shown in italics).

Table 3. AHPP Listed Properties Within the Study Area.

AHPP #	Date Listed	Property Name
JE0189	*8/5/2005*	*Railway Coach #661*
JE0219	10/30/2008	Arkansas Lime Company Car
JE0283	*11/19/1987*	*Dollarway Road*
JE0347	8/5/2005	Locomotive #303
JE0349	4/24/2006	Caboose #2214
JE0360	4/24/2006	Locomotive #513
JE0374	8/26/2004	Iron Mountain Depot
JE0549	*7/8/1994*	*Bellingrath House*
JE0562	5/10/2000	Mammoth Orange Café
JE0573	6/6/2002	Fort Pleasant

AHPP #	Date Listed	Property Name
JE0574	1/9/2003	St Louis Southwestern #819
JE0575	1/9/2003	St Louis Southwestern Engine #336
JE0673	*6/7/2005*	*Lone Star Baptist Church*
JE0676	*7/13/2005*	*Caboose #2325*
JE0677	7/13/2005	Milwaukee Railroad Locomotive #985
JE0686	4/24/2006	Wabash Alloys Locomotive
JE0690	4/24/2006	Us Army Snow Plow #Sn-87
JE0908	8/8/2007	#2 Complex
JE0912	*7/23/2009*	*Taylor Field*
JE0927	4/29/1992	Bridge #M2572

National Register of Historic Places Listings

As of this writing, there are 70 NRHP-listed properties in Jefferson County (National Register of Historic Places 2012; Table 4). By property type, they include 49 buildings or structures, two historic districts, two cemeteries, nine railroad related properties, three roads, two monuments, one field, and one sign. There are no listed archaeological sites within the county.

Table 4. NRHP Listed Properties in Jefferson County, Arkansas.

NRHP Reference No.	Property Name	Location
78000596	Elms, The	Altheimer
75000394	Lake Dick	Altheimer
78000597	Roselawn	Altheimer
82000846	Gracie House	New Gascony
01000480	Arkansas Louisiana Gas Company Building	Pine Bluff
79000442	Boone-Murphy House	Pine Bluff
04001493	Brown, Floyd B., House	Pine Bluff
82000843	Caldwell Hall	Pine Bluff
07000442	Central Texas Gravel Locomotive #210	Pine Bluff
04000507	Community Theatre	Pine Bluff
77000258	Dilley House	Pine Bluff
07000441	DODX Guard Car #G-56	Pine Bluff
74000478	Du Bocage	Pine Bluff
78000598	Ferguson House	Pine Bluff
82000845	Fox House	Pine Bluff
91000694	Gibson--Burnham House	Pine Bluff
79000443	Hotel Pines	Pine Bluff
82000847	Howson House	Pine Bluff
82000848	Hudson House	Pine Bluff
71000126	Hudson-Grace-Borreson House	Pine Bluff
82000849	Johnson House	Pine Bluff
82000850	Katzenstein House	Pine Bluff
75000395	Knox, R. M., House	Pine Bluff
82002118	Lee, R. E., House	Pine Bluff
76000422	MacMillan-Dilley House	Pine Bluff
78000599	Masonic Temple	Pine Bluff
06000411	McDonald's Store #433 Sign	Pine Bluff
78000600	Merchants and Planters Bank Building	Pine Bluff
98000584	Mills House	Pine Bluff
01000112	National Guard Armory--Pine Bluff	Pine Bluff

NRHP Reference No.	Property Name	Location
93001201	Nichol House	Pine Bluff
98000622	O'Bryant, W.E., Bell Tower	Pine Bluff
03000947	Parker Sr., Dr. John Walter, House	Pine Bluff
89000335	Parkview Apartments	Pine Bluff
05000496	Pine Bluff Civic Center	Pine Bluff
08000438	Pine Bluff Commercial Historic District	Pine Bluff
96000464	Pine Bluff Confederate Monument	Pine Bluff
80000777	Pine Bluff Fifth Avenue Historic District	Pine Bluff
86000720	Prigmore House	Pine Bluff
82000851	Puddephatt House	Pine Bluff
76000423	Roth-Rosenzweig House	Pine Bluff
95000348	Saenger Theater	Pine Bluff
86002276	Sorrells, Walter B., Cottage	Pine Bluff
06000413	St. Louis San Francisco (Frisco) Railway Coach #661	Pine Bluff
06000074	St. Louis Southwestern Railway (Cotton Belt Route) Caboose #2325	Pine Bluff
07000471	St. Louis Southwestern Railway (Cotton Belt Route) Relief Train	Pine Bluff
06001276	St. Louis Southwestern Railway (Cotton Belt Route) Steam Locomotive #336	Pine Bluff
03000401	St. Louis Southwestern Railway Steam Locomotive #819	Pine Bluff
00001265	Strengthen the Arm of Liberty Monument--Pine Bluff	Pine Bluff
09001250	Taylor Field	Pine Bluff
82000840	Temple House	Pine Bluff
74000479	Trinity Episcopal Church	Pine Bluff
79000444	Trulock-Cook House	Pine Bluff
78003199	Trulock-Gould-Mullis House	Pine Bluff
78000601	Union Station	Pine Bluff
06001273	United States Army Snow Plow #SN-87	Pine Bluff
07000444	Wabash Alloys Locomotive	Pine Bluff
05001073	Watson, John Brown, Memorial Library Building	Pine Bluff
78000602	Yauch-Ragar House	Pine Bluff
75000396	Plum Bayou Homesteads	Pine Bluff
98000617	St. Peter's Cemetery	Pine Bluff
05001076	Lone Star Baptist Church	Redfield
74000480	Dollarway Road	Redfield
99000822	Dollarway Road (Boundary Increase)	Redfield
95000609	West James Street Overpass	Redfield
02000487	Sherrill Methodist Episcopal Church, South	Sherrill
04001512	Camp White Sulphur Springs Confederate Cemetery	Sulphur Springs
05000538	Tucker School	Tucker
02001073	Wabbaseka Methodist Episcopal Church, South	Wabbeseka
94001410	Bellingrath House	White Hall

NATIONAL ARCHAEOLOGICAL DATABASE

The National Archeological Database (NADB) is a bibliographic inventory of over 350,000 reports on archeological investigation and planning, mostly of limited circulation (i.e., "gray literature;" National Archeological Database 2012). NADB was last updated in August 2004. We searched NADB for Jefferson County, Arkansas literature. The Jefferson County query resulted in 39 "hits" and several of these have to do with earlier transmission line projects (Table 5).

Table 5. NADB Reports for Jefferson County, Arkansas.

Author(s)	Date	*Title*
Bennett, W. J., Jr.	1993	*Humanly Altered Landscape: the Archeological Records at the Pine Bluff Arsenal, Jefferson County, Arkansas*. AAI Report (142). Archeological Assessments, Inc., Nashville, AR 71852.
Campbell, L. Janice	1981	*Archaeological Investigations at Flat Bayou Watershed, Jefferson County, Arkansas*. New World Research, Inc., Pollock, LA. Submitted to National Park Service, Southeast Region, Atlanta.
Chowning, Robert	1982	Some Memories of Collecting Indian Relics With Frank E. Chowning. *Arkansas Archeological Society Field Notes* 185:36.
Dieste, Tony and Lorraine Heartfield	1985	*Archeological Overview and Management Plan for the Pine Bluff Arsenal, Jefferson County, Arkansas*. Woodward Clyde Consultants & Heartfield, Price & Greene, Inc. Submitted to U.S. Army Materiel Development and Readiness Command.
Dinnel, Katherine and Neal L. Trubowitz	1979	*Archeological Reconnaissance On a Proposed 500 Kilovolt Transmission Line from the White Bluff Power Station To the West Bank of the Arkansas River, Jefferson County, Arkansas (White Bluff To Keo, Phase III, Part I).* Arkansas Archeological Survey, Fayetteville. Submitted to Arkansas Power and Light Co., Little Rock.
Floyd, Dale E. and David W. Lowe	1993	*Civil War Sites Advisory Commission Report on the Nation's Civil War Battlefields Technical Volume II: Battle Summaries*. Civil War Sites Advisory Commission, National Park Service. Submitted to U.S. Senate, U.S. House of Representatives, Sec'y Interior.
Ford, James A.	1961	*Menard Site: the Quapaw Village of Osotouy On the Arkansas River*. American Museum of Natural History, Anthropological Papers 2(48). unknown, New York.
Gill, Hiram V., Fred C. Larance, and Thomas W. Fortner	1980	*Soil Survey of Jefferson and Lincoln Counties, Arkansas*. United States Department of Agriculture, Washington, DC.
Heartfield, Lorraine and Tony Dieste	1985	*Archeological Overview and Management Plan for the Pine Bluff Arsenal, Jefferson County, Arkansas*. Woodward Clyde Consultants, Walnut Creek, CA. Submitted to National Park Service, Southeast Region.
Heartfield, Price & Greene, Inc. and Others	1982	*Cultural Resources Survey of the Regional Wastewater Transmission and Treatment Facility for the City of Pine Bluff, Arkansas*. Heartfield, Price and Greene, Inc., Monroe, LA. Submitted to City of Pine Bluff.
House, John H.	1983	*Noble Lake: Quapaw Phase Occupation in the Arkansas River Lowland, Eastern Arkansas*. Paper presented at Southeastern Archeological Conference, Columbia, SC, 1983.
House, John H.	1985	*Noble Lake: a Quapaw Phase Archeological Site in Jefferson County, Arkansas*. Paper presented at The Quapaw: A Living Tradition Conference, Pine Bluff, 1985.
Hrdlicka, Ales	1908	Report On a Collection of Crania from Arkansas. *Journal of The Academy of Natural Sciences of Philadelphia* 13:558-563.

Author(s)	Date	*Title*
Hrdlicka, Ales	1909	Report On an Additional Collection of Skeletal Remains from Arkansas and Louisiana. *Journal of The Academy of Natural Sciences of Philadelphia* 14:173-249.
Jeter, Marvin D., Jerome C. Rose, G. Ishmael Williams, Jr., and Anna M. Harmon	1989	*Archeology and Bioarcheology of the Lower Mississippi Valley and Trans-Mississippi South in Arkansas and Louisiana*. Research Series (37). Arkansas Archeological Survey, Fayetteville, AR.
Jones, Robert D. and Frank Rackerby	1981	*Report On a Cultural Resources Survey of the Pine Bluff Harbor Extension, Jefferson County, Arkansas*. Arkansas Archeological Survey, Fayetteville. Submitted to U.S. Army Corps of Engineers, Vicksburg District.
Jones, V. Stephen	1997	*Mechanical Stripping of Jane Oliver Cemetery, University of Arkansas at Pine Bluff, Jefferson County, Arkansas*. Office of Archaeological Services, Univ of Alabama Museums. Submitted to Nelson Architectural Group, Pine Bluff, AR.
Jones, V. Stephen and James C. Wilkins	1997	*Ground Penetrating Radar Survey of Jane Oliver Cemetery, University of Arkansas at Pine Bluff, Jefferson County, Arkansas, A*. Office of Archaeological Services, Univ of Alabama Museums. Submitted to Nelson Architectural Group, Pine Bluff, AR.
Jurney, David H.	1977.	*Archeological Site Potential Along Proposed Corridors of the Pine Bluff Railroad Relocation Project, Pine Bluff, Arkansas*. Arkansas Archeological Survey, Fayetteville. Submitted to Harland Bartholomew and Associates
Jurney, David H.	1979	*Archeological Survey of the Proposed Pine Bluff Railroad Relocation Transect*. Arkansas Archeological Survey, Fayetteville. Submitted to Harland Bartholomew and Associates, Memphis.
Lafferty, Robert H. III	1980	*Archeological Survey of the Proposed Wastewater Treatment Facilities and Collection Lines for the City of Wabbaseka, Jefferson County, Arkansas*. Arkansas Archeological Survey, Fayetteville. Submitted to City of Wabbaseka.
McClurkan, Burney B.	1974	*Preliminary Report: Archaeology and Archeological Resources in the Pine Bluff Urban Water Management Area*. Arkansas Archeological Survey, Fayetteville. Submitted to VTN Corporation.
McClurkan, Burney B.	1974	*Assessment of the Archeological Resources at the Location of the White Bluff Power Plant*. Arkansas Archeological Survey, Fayetteville. Submitted to Arkansas Power and Light Co., Little Rock.
McClurkan, Burney B.	1975	*Survey of Pine Bluff Municipal Airport Lighting Facilities*. Arkansas Archeological Survey, Fayetteville. Submitted to City of Pine Bluff.
Merkowsky, Patty	1977	*Archeological Assessment of the Pine Bluff Southeast Sanitary Sewer Project*. Arkansas Archeological Survey, Fayetteville. Submitted to Office of the Mayor, City of Pine Bluff.
Miller, John E. III	1985	*Archeological Survey of Three Alternative Routes of the Proposed Bartholomew Freeway*. Arkansas Highway and Transportation Department, Little Rock. Submitted to Office of the State Archeologist, Fayetteville.
Moore, Clarence B.	1908	Mounds and Cemeteries of the Lower Arkansas River. *Journal of The Academy of Natural Sciences of Philadelphia* 13:479-557.
Moore, Clarence B.	1908	Certain Mounds of Arkansas and Mississippi. *Journal of The Academy of Natural Sciences of Philadelphia* 13:481-600.
Niquette, Charles M.	1979	*Archeological Survey of the Proposed Sewage Improvements for the City of Redfield, Jefferson County, Arkansas*. Arkansas Archeological Survey, Fayetteville. Submitted to Affiliated Engineers, Inc., Hot Springs.
Padgett, Thomas J.	1977	*Archeological Reconnaissance of the White Bluff-Keo Power Transmission Corridor*. Arkansas Archeological Survey, Fayetteville. Submitted to Arkansas Power and Light Co., Little Rock.

Author(s)	Date	*Title*
Palmer, Edward	1917	Arkansas Mounds. *Arkansas Historical Society Publications* 4:390-448.
Parsons Engineering Science	1999.	*Archeological Phase I Survey of Three 90th Regional Support Command Facilities in Arkansas*. Parsons Engineering Science. Submitted to United States Army, North Little Rock, AR
Robinson, Thomas H.	1962	Craig Site (3Je11). *Arkansas Archaeologist* 3(1):3-5.
Robinson, Thomas H.	1963	Two Caddoan-Like Vessels from the Lower Arkansas River. *Arkansas Archaeologist* 4(6):14
Robinson, Thomas H.	1964	Walt Site: a Late Baytown Site in East Central Arkansas. *Arkansas Archaeologist* 5(1):9
Scholtz, James A. and Michael P. Hoffman	1968	*Archeological Survey of the Arkansas River Navigation Projects in Arkansas*. University of Arkansas Museum, Fayetteville. Submitted to National Park Service, Southeast Region, Atlanta.
Thomas, C.	1894.	*Report On the Mound Explorations of the Bureau of Ethnology*. Annual Report (12). Bureau of Ethnology, US
Thomas, Cyrus	1894	Report on Mound Explorations of the Bureau of Ethnology. In *Twelfth Annual Report of the Bureau of Ethnology To the Secretary of the Smithsonian Institution, 1890-'91*. Edited by Powell, John W., pp. 33, Bureau of American Ethnology. Washington, DC.
Trubowitz, Neal L. and Katherine Dinnel	1979	*Archeological Reconnaissance On Proposed 500 Kilovolt Transmission Line from the Arkansas River To the Keo Substation (White Bluff To Keo, Phase III, Part 2)*. Arkansas Archeological Survey, Fayetteville. Submitted to Arkansas Power and Light Co., Little Rock.

SUMMARY

At the request of GBM^c & Associates, Panamerican conducted a cultural resources literature and records search (a.k.a., a "desktop" study) for the proposed transmission line options located in Jefferson County northwest of Pine Bluff, Arkansas.

The site files research revealed that there are 65 previously recorded sites located within the proposed project area (see Table 1). Thirty-two of these sites are recommended as not eligible for listing in the NRHP and require no further archaeological management action. Thirty-two of the sites have an undetermined status, or none was given on the site form, and should be avoided until a NRHP status can be made. One site, 3JE443 (Fort Pleasant/Fort Weightman), is considered eligible for listing in the NRHP and should be avoided.

There are 11 historic properties listed in the AHPP files within the project boundaries, six of which are listed in the NRHP.

RECOMMENDATION

Due to the presence of an eligible site and unassessed sites within the project vicinity, the transmission corridor should be subjected to an intensive cultural resources survey that conforms to the Arkansas State Historic Preservation Officer's guidelines for survey level investigations found in Appendix B of the *Arkansas State Plan*, "Guidelines for Cultural Resources Fieldwork and Report Writing in Arkansas" (Arkansas Archeological Survey 2010).

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Appendix D

Agency Correspondence

219 Brown Lane Bryant, AR 72022 (501) 847-7077 (501) 847-7943 fax

July 23, 2013

Casey Cox
Arkansas Field Office
110 South Amity Road
Suite 300
Conway, AR 72032

Re: Endangered Species Clearance – Pine Bluff Voltage Support Phase 2
Transmission Line Right of Way
GBM^c No. 2044-12-311

Dear Mr. Cox:

In order to comply with Section 7 of the Endangered Species Act (ESA), we are requesting Endangered Species Clearance from your office on behalf of Entergy, Arkansas Incorporated. This project is for the construction of the proposed Pine Bluff Voltage Support Phase 2 transmission line in Pine Bluff, Jefferson County, Arkansas. Attached to this letter is a topographic map and aerial photograph of the site with the two proposed transmission line corridors identified (Corridors A and B) and the project boundary is noted with a yellow line. The transmission line will run north to south in the White Hall Quadrangle. Land clearing is anticipated to create a right-of-way to a width of 120 feet wide.

The geographical coordinates for the north terminus (Whitebluff Substation) of both Corridors A and B are N34.42585° Latitude, and W92.14431° Longitude. The geographical coordinates for the south terminus (Woodward Substation) of both Corridors A and B are N34.23255° Latitude, and W92.05750° Longitude.

The USFWS lists the bald eagle (*Haliaeetus leucocephalus*), the interior least tern (*Sterna antillarum athalassos*), the Florida panther (*Felis concolor coryi*), the Pink Mucket (*Lampsilis abrupt*), the Rabbitsfoot (*Quadrula cylindrica cylindrica*), and the Winged Mapleleaf (*Quadrula fragosa*) as endangered species located in Jefferson County, Arkansas. The urban and suburban location of the transmission line is not generally considered favorable habitat for these species. The bald eagle prefers forested areas with large canopy trees near open water. While the Arkansas River and Lake Saracen (Lake Pine Bluff) are nearby, the project area has mostly stands of pines that are frequently logged by timber companies. Likewise, the Florida panther prefers forested areas away from populated areas. The interior least tern prefers sparsely vegetated sandy areas near or adjacent to open waters, and the project area is located greater than a mile from the Arkansas River and Lake Saracen. The pink mucket prefers gravel and sandy substrates of large rivers and the rabbitsfoot prefers sand and gravel substrates of medium to large rivers or in gravel bottomed small to medium, swift flowing streams. Lastly, the winged mapleleaf prefers riffles with clean gravel, sand or rubble bottoms and in clear, high quality water. None of these preferred aquatic habitats occur in the project area.

The line has the potential to cross Eastwood Bayou, Caney Bayou, Bayou Bartholomew, along with numerous other perennial, intermittent and ephemeral streams that provide adequate habitat for mussel species. However the projects construction activities will not be within the

waters crossed and will likely have no impact on these species. During the construction process, sediment and erosion control practices will be implemented to prevent/minimize sediment transport off site or to any waters.

In addition to the location maps, we have attached the Endangered and Threatened Species Evaluation Form. The form has been filled out and to the best of our knowledge it is accurate.

If you have questions or need additional information please contact me or Greg Phillips at (501) 847-7077. Thank you for your assistance in this matter.

Sincerely,
GBM^c & ASSOCIATES

Kevin Butzlaff
Environmental Scientist

Enclosures

Endangered and Threatened Species Evaluation Form

Note: This form is not to be used for any Oil and/or Gas extraction or pipeline projects

The enclosed endangered and threatened species evaluation form may be used to obtain clearance, in most instances, from the U.S. Fish and Wildlife Service when applying for a NPDES or SWPPP permit from the Arkansas Department of Environmental Quality (ADEQ). Incomplete packages may delay evaluation of the proposed project and ultimately the issuance of your ADEQ permit.

Return the completed form and following information to:

U. S. Fish and Wildlife Service
Arkansas Field Office
110 South Amity Road, Suite 300
Conway, Arkansas 72032

Forms will not be accepted unless they include the following information:

1. A letter detailing the proposed project, a project name, the county in which the project occurs, the estimated disturbance area, geographic coordinates of the project location.

2. High quality detailed maps (preferably a USGS quadrangle map and aerial photo) that contain an outline/polygon of the proposed project area.

3. Contact information. Please include name, mailing address, e-mail and phone number.

If there is a question that you cannot answer on this evaluation form or a concurrence letter is required from the U.S. Fish and Wildlife Service, send the above information to the U.S. Fish and Wildlife Service's Arkansas Field Office, via Fax, mail, e-mail, or phone call. (Fax number (501) 513-4480, e-mail address FW4ESConway@fws.gov, phone number (501) 513-4470).

Include the completed form in your request for an ADEQ storm water or NPDES permit.

Endangered and threatened species consultation requests are processed in the order they are received. Response to endangered species consultation requests that require more detailed biologist evaluation may take as long as 30 days after they were received by this

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110 SOUTH AMITY ROAD, SUITE 300 / CONWAY, ARKANSAS 72032
PHONE 501-513-4470 / FAX 501-513-4480 / www.fws.gov / Revision Date 10/28/2010

office. If you have any questions or concerns please call (501) 513-4470.

U. S. Fish and Wildlife Service comments and recommendations are provided in accordance with the Endangered Species Act (87 Stat. 84, as amended: 16 U.S.C. 1531 et seq.), Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712), and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d).

INSTRUCTIONS

Evaluate individual project sites for federally listed threatened or endangered species using the step process presented below.

STEP 1

Does your project occur within 660 feet of a bald eagle nest?

Yes ☐ **See instructions below.**

No ☒ **All other projects proceed to Step 2, unless your project occurs in the following counties then proceed to Step 9.**

Cleveland	☐
Greene	☐
Lincoln	☐
Lonoke	☐
Nevada	☐

Projects occurring within 660 feet of a bald eagle nest, including alternate nests, are likely to disturb nesting bald eagles (a potential violation of the Bald and Golden Eagle Protection Act). Proceed to the U. S. Fish and Wildlife Service website (http://www.fws.gov/southeast/es/baldeagle) to determine if the new or intermittent activity is likely to disturb nesting bald eagles and measures that you can take to avoid that disturbance. **Print three copies of the bald eagle signature (Determination) page and submit one with your ADEQ permit application package, submit one copy to the U.S. Fish and Wildlife Service at 110 South Amity Road Suite 300, Conway, AR, and keep one copy for your records.**

Once the above is completed, projects occurring in Cleveland, Greene, Lincoln, Lonoke, or Nevada counties proceed directly to Step 10, all others proceed to Step 2.

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STEP 2

Does your project occur within one of the following counties AND contain pine stands 40 years or older?

Yes ☐ **See instructions below.**
No ☒ **Proceed to Step 3.**

Ashley	☐	Grant	☐
Bradley	☐	Lafayette	☐
Calhoun	☐	Monroe	☐
Clark	☐	Polk	☐
Columbia	☐	Scott	☐
Dallas	☐	Union	☐
Drew	☐		

If you answered "Yes" to Step 3, refer to the U. S. Fish and Wildlife Service Private Lands Guidelines (http://www.fws.gov/rcwrecovery/private_lands_guidelines.pdf) for potentially harmful activities that may harass and/or harm red-cockaded woodpeckers (a violation of the Endangered Species Act). **Checking "Yes" to Step 2 requires a concurrence letter from the U. S. Fish and Wildlife Service that should accompany your ADEQ permit application package and possibly a permit from the U. S. Fish and Wildlife Service (501-513-4481).** Any and all other endangered species issues will be evaluated when your information is submitted to the U.S. Fish and Wildlife Service. Please contact the Arkansas ES Field Office, as soon as possible, to start the evaluation for endangered species that may be affected by the project.

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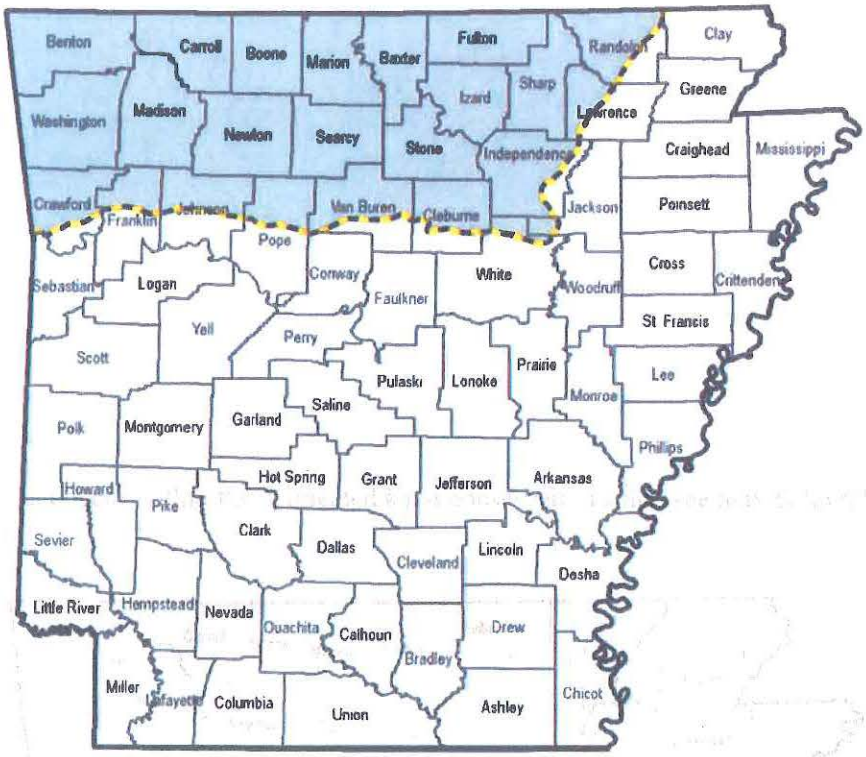
STEP 3

Does your project occur within the delineated karst conservation zone (see map below)?



Yes ☐ **See instructions below and then proceed to Step 4.**

No ☒ **Proceed to Step 4.**

If you answered "Yes" to Step 3, contact the US Fish and Wildlife Service (Service) Arkansas Field Office (501-513-4470) in advance of permit application as a concurrence letter from the Service may be necessary as a part of your NPDES/SWPPP application package. It may also require a Service section 10 endangered species permit. While the Service is interested in the proposed project due to its location, many areas within the karst conservation zone only require the standard recommendations below. Early contact with this office allows time to develop site specific recommendations which streamlines the permit issuance process. Any and all other endangered species issues will be evaluated when your information is submitted to the U.S. Fish and Wildlife Service.

The karst region in Arkansas is as an area with a relatively shallow soil profile where climatic events or storm water runoff quickly infiltrates and is transported through

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underground passages contributing to the groundwater basin. The karst region in Arkansas supports 6 endangered species including the Ozark cavefish (*Amblyopsis rosae*), the Benton cave crayfish (*Cambarus aculabrum*), the Hell creek crayfish (*Cambarus zophonastes*), the gray bat (*Myotis grisescens*), the Indiana bat (*Myotis sodalis*), the Ozark big-eared bat (*Corynorhinus townsendii ingens*), and 19 globally imperiled karst dependent species.

If your project occurs inside the delineated karst conservation zone (map above) the Service recommends, at a minimum, the following conservation measures.

1) Survey for karst features including caves, springs, and sinkholes prior to initiating project activities. If such a feature is found, establish a 300 foot conservation zone around its location and contact the Service for an onsite karst evaluation.

2) If caves are excavated during construction activities, the Service requests that work efforts cease within 300 feet of the opening. The opening should be adequately marked, fill material should not be placed in the cave, personnel shouldn't enter the cave, and the Service should be contacted immediately for an onsite evaluation.

3) While sediment mobilization is the primary concern during construction; storm water runoff following project completion may contain oil/grease, sealants, tar, brake dust, herbicides, pesticides, and additional sediment. To reduce threats to surface and groundwater from these contaminants, the Service recommends the use of post construction storm water management techniques including detention basins or separation systems with a 100 foot bioswale. However, other post construction storm water management methods are available; these would be considered if documentation of successful use is provided to the Service prior to installation.

4) Apply and maintain construction BMP's that were developed specific for the project site.

Proceed to Step 4.

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STEP 4

Does your project occur in the watershed of one the following streams (defined herein as any location within the catchment area of the following streams, including their tributaries)?

Alum Fork Saline River	☐
Archey Fork Little Red River	☐
Bayou Dorcheat	☐
Beech Fork Little Red River	☐
Big Creek (south flowing tributary to Little Red River)	☐
Black River	☐
Buffalo Creek (Polk County)	☐
Buffalo River	☐
Caddo River	☐
Clabber Creek	☐
Cossatot River	☐
Current River	☐
Devils Fork Little Red River	☐
Ditches, sloughs, and bayous in the St. Francis River basin	☐
Eleven Point River	☐
Fiddler's Creek (Montgomery County)	☐
Fourche LaFave River (Scott County)	☐
Frog Bayou	☐
Gailey Hollow (Benton County)	☐
Healing Spring (Washington County)	☐
Illinois River	☐
Irons Fork Ouachita River (Montgomery and Yell counties)	☐
L'Anguille River	☐
Left Hand Chute Little River	☐
Little Missouri River	☐
Little River	☐
Middle Fork Little Red River	☐
Middle Fork Saline River	☐
Mississippi River (only instream activities apply)	☐
Mountain Fork Little River	☐
Muddy Creek (Montgomery County)	☐
Mulberry River	☐
Myatt Creek (Fulton County)	☐
North Fork Ouachita River	☐
North Fork Saline River	☐

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Osage Creek and spring fed tributaries	☐
Ouachita River	☐
Palmer Hollow (Benton County)	☐
Poteau River	☐
Right Hand Chute Little River	☐
Robinson Creek	☐
Saline River (both Saline Rivers)	☐
Spring River	☐
South Fork Little Red River	☐
South Fork Ouachita River	☐
South Fork Saline River	☐
South Fork Spring River	☐
St. Francis River	☐
Strawberry River	☐
Turkey Creek (Little Red River)	☐
Tyronza River	☐
White River (downstream of Batesville)	☐
Wildcat Creek (Washington County)	☐
Wilson Spring (Washington County)	☐

Yes ☐ **See instructions below.**
No ☒ **Proceed to Step 5.**

If you answered "Yes" to Step 4, a concurrence letter from the U. S. Fish and Wildlife Service must accompany your ADEQ permit application package. **MUSSEL SURVEYS MAY BE REQUIRED BY THE U. S. FISH AND WILDLIFE SERVICE PRIOR TO THEIR CONCURRENCE ON THE PROJECT. AT MINIMUM, YOU MUST PROPERLY INSTALL AND MAINTAIN EROSION CONTROLS MEASURES AT THE ONSET OF GROUND DISTURBING ACTIVITIES UNTIL 95% OF BARE ERODIBLE SOILS ARE REVEGETATED OR OTHERWISE DEVELOPED (i.e., impervious surfaces).** Planning ahead is strongly advised in this situation. Any and all other endangered species issues will be evaluated when your information is submitted to the U.S. Fish and Wildlife Service.

The following map shows watershed boundaries and counties for the above referenced stream.

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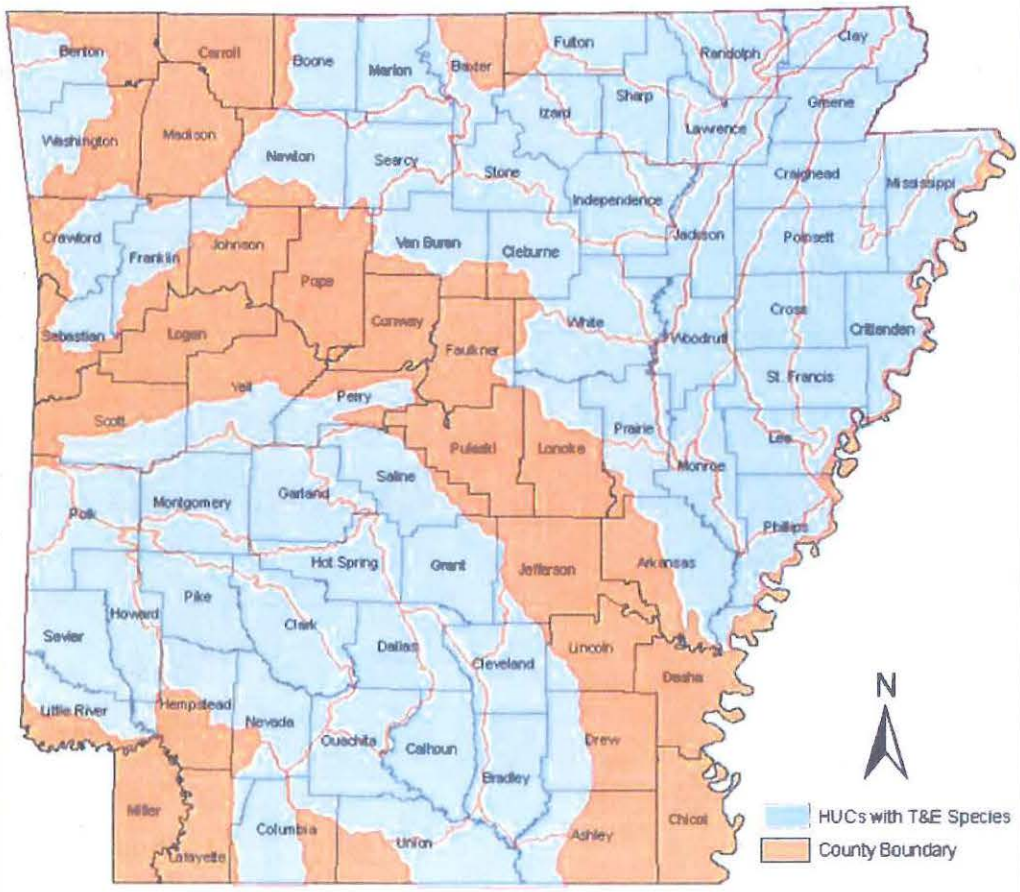
Arkansas Watersheds with Federally Listed or Candidate Species



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Conway, Arkansas 72032
Tel.: 501/513-4470 Fax: 501/513-4480

Rev 11-20-2009

STEP 5

Does your project occur within 0.5 mile of the Arkansas River, White River, Mississippi River, or Red River?

Yes ☐ **Follow instructions below.**
No ☒ **Proceed to Step 6.**

If you answered "Yes" and are willing to implement the recommendations below, a concurrence letter from the U. S. Fish and Wildlife Service is not necessary and you can proceed to Step 6. If you are unable to implement the guidelines below, a concurrence letter from the U. S. Fish and Wildlife Service should accompany your ADEQ permit application package. Implementing the following U. S. Fish and Wildlife Service guidelines to will prevent harassment and/or harm of Interior Least Tern populations.

1. The critical nesting period for the Interior Least Tern is between 15 May and 1 August. Nesting may extend beyond these dates depending on river stage elevations. If surveys reveal Interior Least Tern breeding activities within 0.5 mile of a proposed activity during this time period, no activity should proceed unless otherwise approved by the U. S. Fish and Wildlife Service (501-513-4470).

2. No activities should take place closer than 1,000 feet of the shoreline of a nesting colony location. The U. S. Fish and Wildlife Service should be contacted for further consultation if activities are to proceed within 1,000 feet of the shoreline of a nesting colony location. Limited construction outside of the active nesting season may not affect Interior Least Tern. Detailed project description, designs, and construction date information is necessary for U. S. Fish and Wildlife Service concurrence.

3. Employees and/or contractors should be instructed that under no circumstances (other than emergencies) are they permitted on a nesting island during the aforementioned time period and until after the young have fledged.

4. If, in the process of conducting work, an Interior Least Tern colony is discovered at another location in the vicinity, the above restrictions apply to that colony as well. The U. S. Fish and Wildlife Service should be contacted for consultation and to determine if further action would have any affect.

5. Further consultation with the U. S. Fish and Wildlife Service may be necessary and should be requested if any of these criteria can not be met.

Proceed to Step 6.

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STEP 6

Does your project occur within Arkansas, Desha, Monroe, Phillips, Prairie, or Woodruff counties **AND** occur in one or more of the following locations?

1. The mostly contiguous forest primarily in the lower White River floodplain encompassing the U. S. Fish and Wildlife Service's Cache River and White River National Wildlife Refuges, the Arkansas Game and Fish Commission's Dagmar and Wattensaw Wildlife Management Areas, and adjacent forested private lands. The Ivory-billed Woodpecker potential range generally follows the edge of the large, contiguous forest but also includes:

    a. Forested corridors containing potentially suitable habitat extending outward from the edge of the core contiguous forest until the width decreases to less than 0.25 mile for a distance of more than 0.25 mile, and

    b. Forested corridors containing potentially suitable habitat along Bayou DeView and Bayou LaGrue extending upstream about ten miles from the forest core.

2. The batture lands of the Mississippi River extending from the vicinity of the mouth of the White River to about 8 – 10 miles south of the mouth of the Arkansas River in Desha County, AR.

3. The forest encompassing the AGFC Black Swamp WMA and Cache River NWR, and adjacent forested private lands.

4. The portions of the lower Arkansas River floodplain inside the levees in Desha, Lincoln, and Jefferson counties from the confluence of the Arkansas and Mississippi rivers to about 12 miles upstream of Dam 2.

Yes ☐ **See instructions below.**
No ☒ **Proceed to Step 7.**

If you check "Yes" to Step 6, a concurrence letter from the U. S. Fish and Wildlife Service should accompany your permit application package. Planning ahead is strongly advised in this situation. **The U. S. Fish and Wildlife Service may require surveys and more detailed consultation.** Any and all other endangered species issues will be evaluated when your information is submitted to the U.S. Fish and Wildlife Service.

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STEP 7

Does your project occur within the area defined below in Crawford, Franklin, Johnson, Logan, Sebastian, Scott, or Yell counties and include three or more acres of ground disturbance?

Yes ☐ **See instructions below.**
No ☒ **Proceed to Step 8.**

Projects resulting in a ground disturbance of three acres or more in areas shaded in light gray in the figure below or private in-holdings within publicly-owned properties (dark gray shaded areas) and not meeting one of the habitat characteristics listed below must complete an American Burying Beetle survey, and possibly trap and relocation if presence is detected, prior to permit issuance. The following is a description of the boundary for the ABB survey area:

Crawford County: Beginning where Interstate 40 crosses the Arkansas/Oklahoma state line, follow the state line north to the Ozark National Forest boundary west of Uniontown, Arkansas. At this point, follow the Ozark National Forest boundary east to Old 88 Road and then south Arkansas Highway 60 South to its junction with Arkansas Highway 348. Follow Arkansas Highway 348 west of Rudy, Arkansas, east to Arkansas Highway 282. Follow Arkansas Highway 282 east to U.S. Highway 71 and then north along U.S. Highway 71 to Mountainburg, Arkansas. At this point, follow the Ozark National Forest boundary south and then east to the Crawford County line. Follow the Crawford County line south and then west to Arkansas Highway 59 south of Van Buren, Arkansas. Follow Arkansas Highway 59 north to Interstate 540; follow Interstate 540 to Interstate 40. Follow Interstate 40 west to the beginning point at the Arkansas/Oklahoma state line.

Franklin County: Beginning at the Crawford and Franklin County line and the southern boundary of the Ozark National Forest west of Piney, Arkansas, follow the Ozark National Forest boundary east to the Franklin County line. All of Franklin County south of these two points is included in the ABB survey area.

Johnson County: Beginning at the Franklin and Johnson County line and southern boundary of the Ozark National Forest southwest of Oak Grove, Arkansas, follow the Ozark National Forest boundary east to the Johnson and Pope County line. All of Johnson County south of these two points is included in the ABB survey area.

Logan County: Beginning at Arkansas Highway 22, the area extends north of Arkansas Highway 22 to the Arkansas River (county line). All areas in Logan County west of Arkansas Highway 309, extending south from Paris, Arkansas to the Logan and Yell county line is included in the area.

Sebastian County: Beginning at the Arkansas/Oklahoma state line near Enterprise, Arkansas (south of Fort Smith), the area extends northeast along Arkansas Highway 45 from Enterprise to Interstate 540 North. From this point follow Interstate 540 north to Phoenix Avenue. Follow Phoenix Avenue east to Arkansas Highway 22 and then follow Arkansas Highway 22 eastward to Arkansas Highway 59 near Barling, Arkansas. Continue north along Arkansas Highway 59 to the Arkansas River. The boundary follows the Sebastian County line from this point to Arkansas Highway 96 at Mansfield,

U. S. FISH AND WILDLIFE SERVICE ARKANSAS FIELD OFFICE
110 SOUTH AMITY ROAD, SUITE 300 / CONWAY, ARKANSAS 72032
PHONE 501-513-4470 / FAX 501-513-4480 / www.fws.gov / Revision Date 10/28/2010

Arkansas. Follow Arkansas Highway 96 west to the Arkansas/Oklahoma state line (west of Hartford) and then north to the beginning point near Enterprise, Arkansas.
Scott County: Beginning at the Yell and Scott County line in Scott County, follow Arkansas Highway 80 to U.S. Highway 71 Business (in Waldron, Arkansas). From this point, follow U.S. Highway 71 Business to U.S. Highway 71 north to Elm Park, Arkansas. From Elm Park, Arkansas follow Arkansas Highway 378 to the Scott and Sebastian County line. All areas north and east of these highways are included in the area.
Yell County: Beginning at the Logan and Yell County line in Yell County, the area extends east from Blue Mountain, Arkansas, along the southern boundary of the Ozark National Forest to Arkansas Highway 307. The eastern boundary follows Arkansas Highway 307 south from the Ozark National Forest boundary to Bellville, Arkansas and then Yell County Road17 to Shark, Arkansas. Arkansas Highway 80 from Shark, Arkansas to the Yell and Scott County line forms the southern boundary of the area.

Please include site photographs or other supporting information to help the Service further evaluate whether these characteristics are present. In general, but not limited to, any one of the following project characteristics exclude the need to conduct an American Burying Beetle survey:

1. Projects with less than three acres of soil disturbance.
2. Soil that is greater than 70 percent sand.
3. Soil that is greater than 70 percent clay.
4. Land where greater than 80 percent of the soil surface is comprised of rock.
5. Land where greater than 80 percent of the subsurface soil structure within the top four inches is comprised of rock.
6. Land that has already been developed and no longer exhibits topsoil or leaf litter.
7. Land that is tilled on at least an annual basis.
8. Land that meets the U.S. Army Corps of Engineers definition of wetland.
9. Pine plantations planned for mechanical treatment where stocking density is 750 or more trees per acre (little sunlight to forest floor).
10. Shortleaf pine or mixed pine-hardwood forest stands with 110 square feet per acre or greater overstory basal area and more than 700 stems per acre occupying midstory and understory positions.
11. Land that is bordered by dense urban development (when in doubt request Service concurrence).
12. Dense cedar thickets.

The Service evaluates numerous other project characteristics such as type, duration, permanency, land use, location, time/season, and habitat to determine if a survey is required. If you have questions regarding the need for a survey, please contact the U. S. Fish and Wildlife Service at 501-513-4470. **American Burying Beetle surveys can only be conducted between May 20 and September 20 and are valid for one year. Please plan ahead.** If you answered "Yes" to Step 7, a concurrence letter from the U. S.

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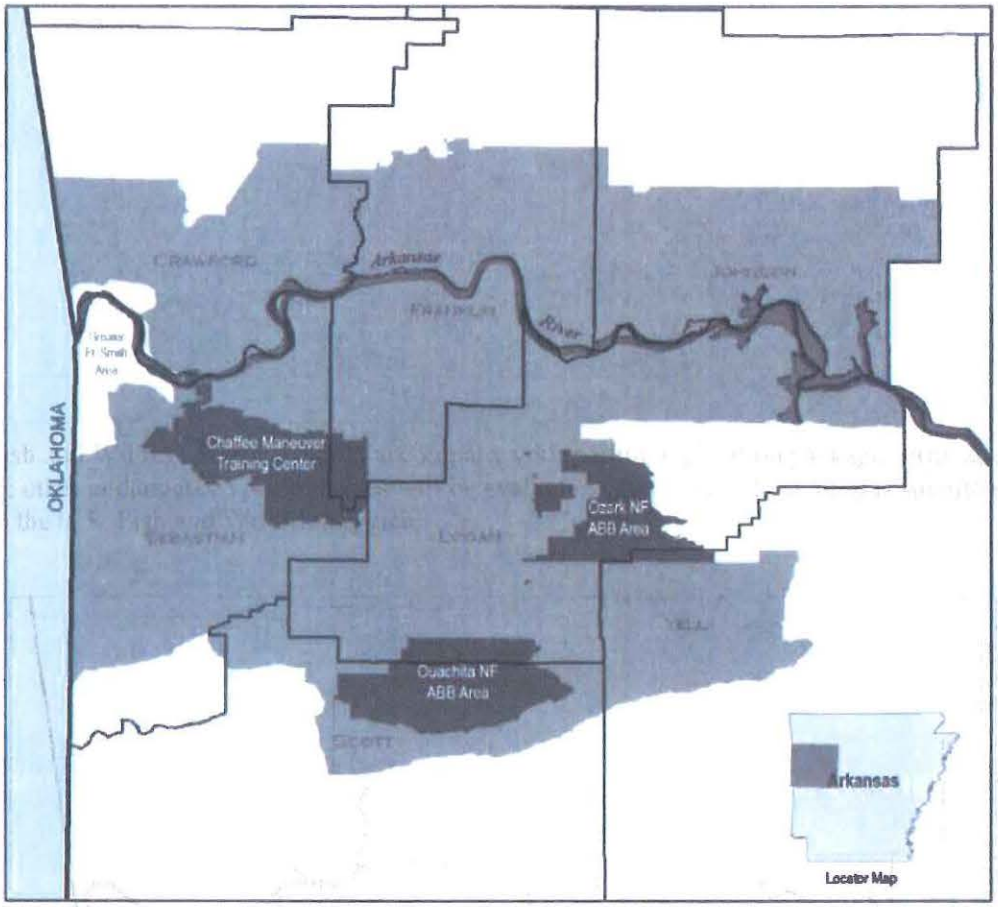
Fish and Wildlife Service should accompany your permit application package. Any and all other endangered species issues will be evaluated when your information is submitted to the U.S. Fish and Wildlife Service.



STEP 8

Does your project occur in Ashley, Bradley, Clay, Drew, Izard, Jackson, Lawrence, Washington, or Woodruff counties **AND** are one or more of the following federally listed plants present (Virginia Sneezeweed, Missouri Bladderpod, Pondberry, Running Buffalo Clover, and/or *Geocarpon minimum*). Should one of these plants be discovered on the property during project implementation, see instructions below and contact U. S. Fish and Wildlife Service for additional technical assistance to avoid violating the prohibitions of section 9 of the Endangered Species Act.

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Yes ☐ **See instructions below.**
No ☒ **Proceed to the Certification section.**

1. Avoid use of pre-emergent herbicides in areas with federally listed species and state species of concern.

2. Avoid herbicide use at any known site inhabited by federally listed plants during the following time periods:

    a. Virginia Sneezeweed *(Helenium virginicum)*: Spring "green up" until first frost.

    b. *Geocarpon minimum*: February through June.

    c. Missouri Bladderpod (*Physaria* (*Lesquerella*) *filiformis*): July through September

    d. Pondberry (*Lindera melissifolia*): Bud inhibitor agents could damage plants during December through February. Plants flower in early spring before leaves are active, avoid herbicide applications from flowering through February.

    e. Running Buffalo Clover (*Trifolium stoloniferum*): August through February.

    f. Harparella (*Ptilimnium nodosum*): May through October. Since this species occurs in stream channels and is typically underwater during this time, we assume it is dormant. It begins growing as stream waters recede in the spring and flowers and fruits in the summer when water in the stream channel is low.

3. Maintain native glade and sinkhole pond vegetation by minimizing or avoiding activities in this habitat type.

4. Pondberry is a wetland plant that is often found in sand pond habitats in eastern Arkansas, low sandy ridges in hardwood bottoms in the St. Francis Sunken Lands, and in the Ouachita River bottoms. BMPs directed toward minimizing runoff and erosion or introduction of contaminants into these areas should be employed.

If you answered "Yes" to Step 8 AND cannot implement the four recommendations listed above OR the project will have direct impacts on federally listed plants, contact the U. S. Fish and Wildlife Service for conservation recommendations prior to project implementation. Any and all other endangered species issues will be evaluated when your information is submitted to the U.S. Fish and Wildlife Service.

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STEP 9

There are currently no federally listed threatened or endangered species present in the area of your project.

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CERTIFICATION

If you are able to implement the recommendations in this checklist, disturbance of federally listed endangered and threatened species is unlikely. If you can not adopt these recommendations, we suggest that you contact the U. S. Fish and Wildlife Service's Arkansas Field Office for further assistance in determining whether your activity may disturb federally listed species.

KB (initial) "I certify that, to the best of my knowledge and belief, all of the information on and attached to this evaluation form is correct, complete, and made in good faith."

KB (initial) "I understand that false or fraudulent information on or attached to this evaluation form may subject me to criminal or civil prosecution should the provisions of the Endangered Species Act or Bald and Golden Eagle Protection Act be violated."

KB (initial) "I understand that any information given may be verified."

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Kevin Butzlaff / Environmental Scientist
Print Name and Title

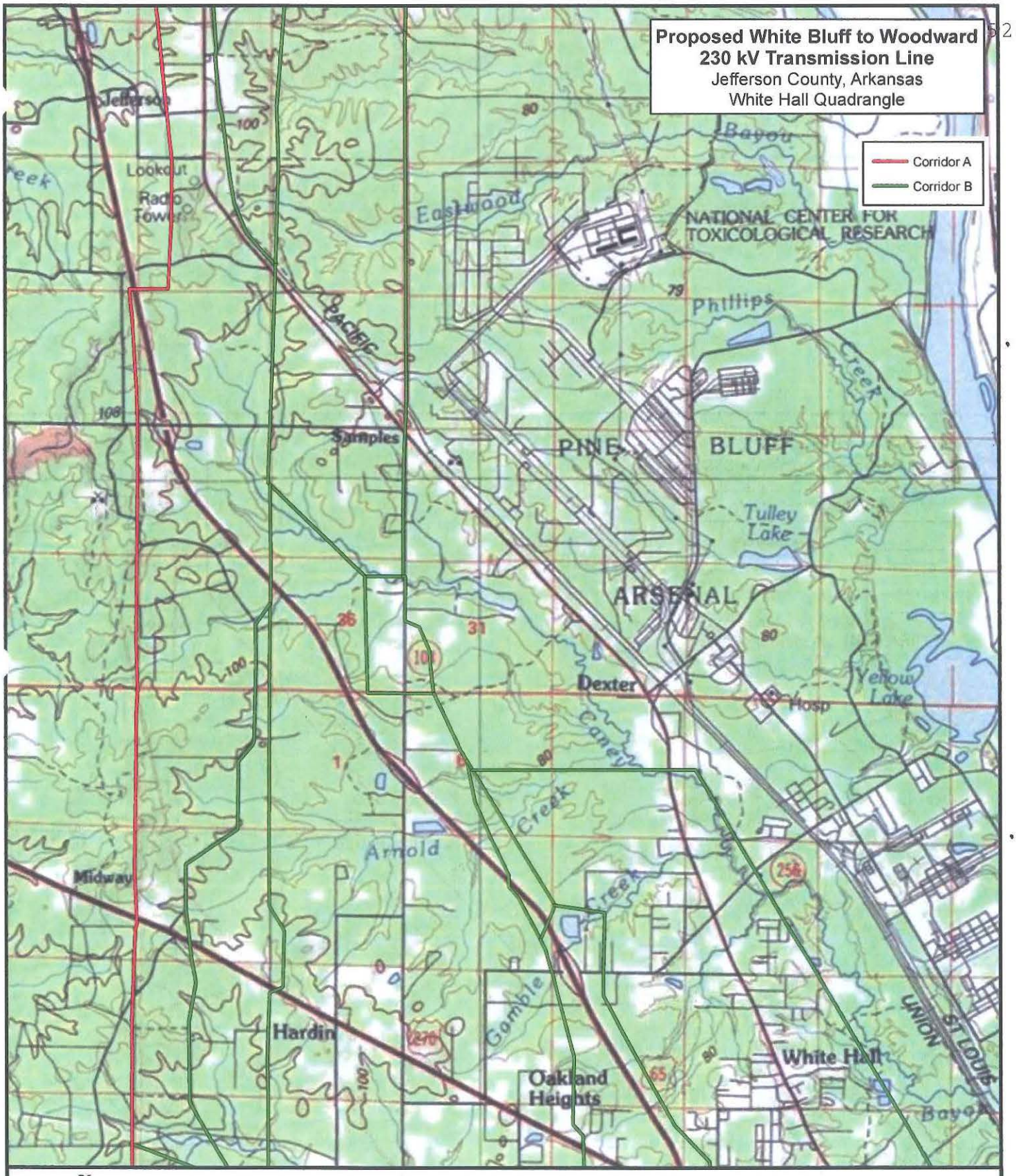
Signature

7-15-13
Date

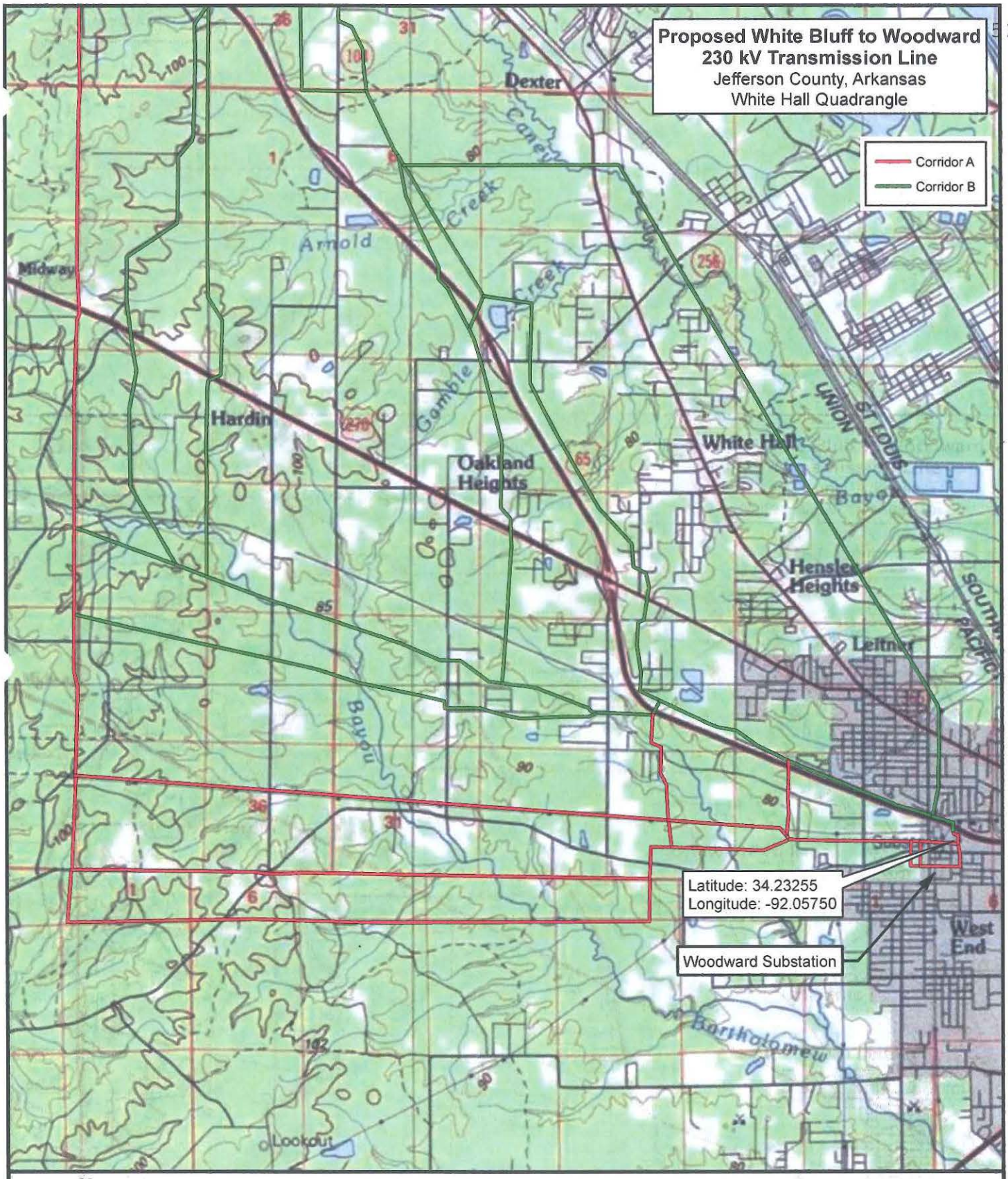
We recommend printing this evaluation, signing and dating it, submitting copies to the U.S. Fish and Wildlife Service (address listed on page 1) and the Arkansas Department of Environmental Quality, and keeping a copy for your records.

U. S. FISH AND WILDLIFE SERVICE ARKANSAS FIELD OFFICE
110 SOUTH AMITY ROAD, SUITE 300 / CONWAY, ARKANSAS 72032
PHONE 501-513-4470 / FAX 501-513-4480 / www.fws.gov / Revision Date 10/28/2010

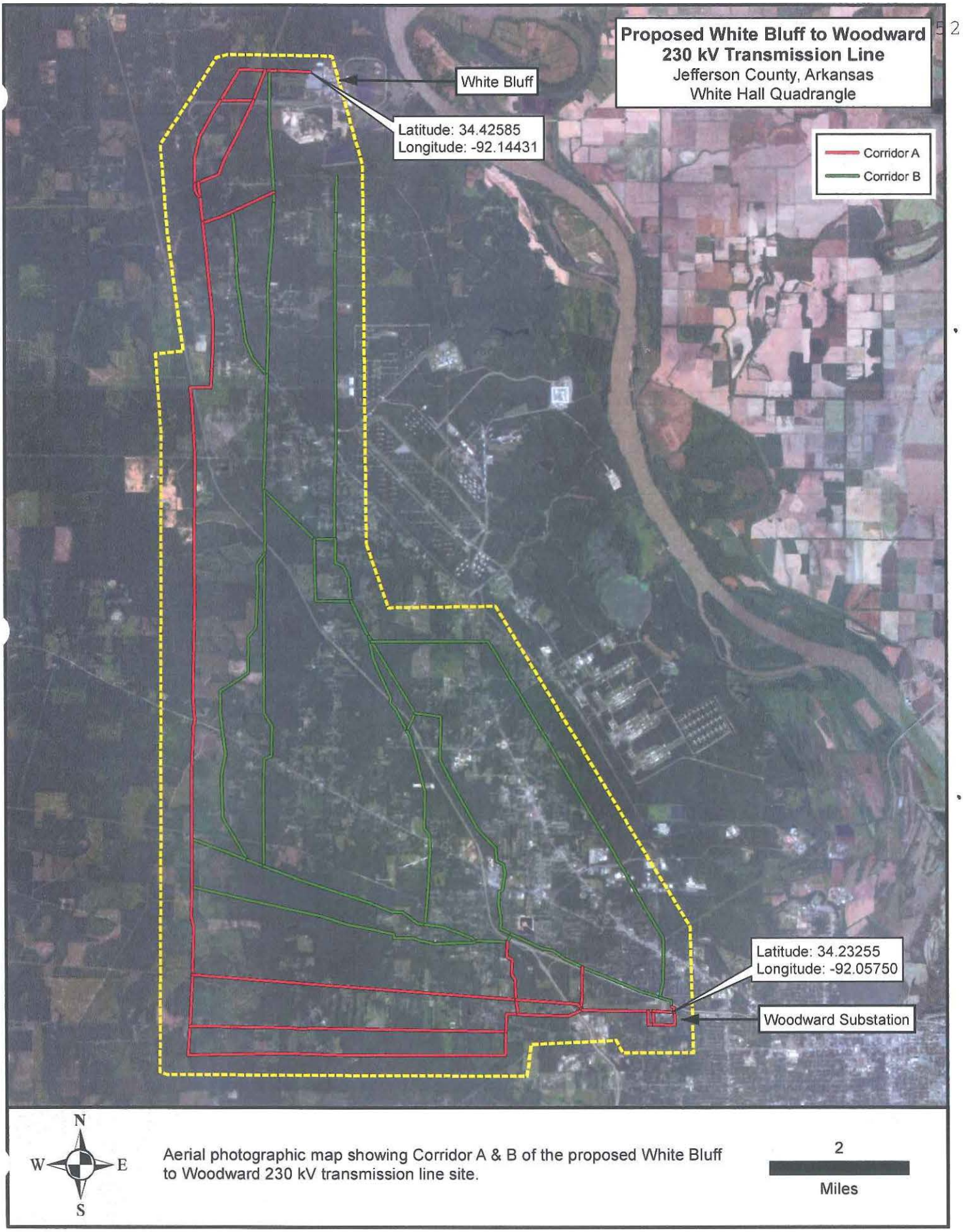
Topographic map showing Corridor A & B of the proposed White Bluff to Woodward 230 kV transmission line site.



Topographic map showing Corridor A & B of the proposed White Bluff to Woodward 230 kV transmission line site.



Topographic map showing Corridor A & B of the proposed White Bluff to Woodward 230 kV transmission line site.



Aerial photographic map showing Corridor A & B of the proposed White Bluff to Woodward 230 kV transmission line site.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
110 S. Amity Road, Suite 300
Conway, Arkansas 72032
Tel.: 501/513-4470 Fax: 501/513-4480

IN REPLY REFER TO:

August 1, 2013

Reference: TA0715

Kevin Butzlaff
GBM[c]
219 Brown Lane
Bryant, AR 72022

Dear Mr. Butzlaff:

The U.S. Fish and Wildlife Service (Service) has reviewed the information supplied in your letter dated July 23, 2013, regarding the proposed construction of an electrical transmission line near the City of Pine Bluff, Jefferson County, Arkansas. Our comments are submitted in accordance with the Endangered Species Act (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.).

The following federally listed threatened and endangered species are known to occur in this region: Florida Panther (*Felis concolor coryi*), Interior Least Tern *(Sterna Antillarum athalassos),* Pink Mucket *(Lampsilis abrupta),* Piping Plover *(Charadrius melodus),* and Wimged Mapleleaf *(Quadrula fragosa).* In addition, the federally protected Bald Eagle (*Haliaeetus leucocephalus*) and proposed threatened Rabbitsfoot (*Quadrula cylindrica cylindrica*) are also known to occur in this region. The Saline River provides proposed critical habitat to the Rabbitsfoot.

The proposed designation of critical habitat for the Rabbitsfoot by the Service considers physical or biological features essential to the conservation of these species. These include, but are not limited to:

1. Space for individual and population growth and for normal behavior;
2. Food, water, air, light, minerals, or other nutritional or physiological requirements; and
3. Sites for breeding, reproduction, or rearing; and

Primary constituent elements are those specific elements of the physical or biological features that provide for a species' life history processes and are essential to the conservation of these species. Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain life history processes for the Rabbitsfoot, the primary constituent elements specific to these species are:

1. Primary Constituent Element 1— Geomorphically stable river channels and banks (channels that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation) with habitats that support a

diversity of freshwater mussel and native fish (such as, stable riffles, sometimes with runs, and mid–channel island habitats that provide flow refuges consisting of gravel and sand substrates with low to moderate amounts of fine sediment and attached filamentous algae).

2. Primary Constituent Element 2— A hydrologic flow regime (the severity, frequency, duration, and seasonality of discharge over time) necessary to maintain benthic habitats where the species are found and to maintain connectivity of rivers with the floodplain, allowing the exchange of nutrients and sediment for maintenance of the mussel's and fish host's habitat, food availability, spawning habitat for native fishes, and the ability for newly transformed juveniles to settle and become established in their habitats.
3. Primary Constituent Element 3— Water and sediment quality (including, but not limited to, conductivity, hardness, turbidity, temperature, pH, ammonia, heavy metals, and chemical constituents) necessary to sustain natural physiological processes for normal behavior, growth, and viability of all life stages.
4. Primary Constituent Element 4— The presence and abundance (currently unknown) of fish hosts necessary for recruitment of the Rabbitsfoot. The occurrence of natural fish assemblages, reflected by fish species richness, relative abundance, and community composition, for each inhabited river or creek will serve as an indication of appropriate presence and abundance of fish hosts until appropriate host fish can be identified.
5. Primary Constituent Element 5— Either no competitive or predaceous invasive (nonnative) species, or such species in quantities low enough to have minimal effect on survival of freshwater mussels.

Sediment and/or nutrient transport from the proposed project location may have direct, indirect, and/or cumulative effects to mussels, host fish(es), and/or their habitat(s). The effects of sedimentation and nutrients (e.g., ammonia, etc.) on mussels, fish, and their habitats are well documented in the scientific literature. Adverse effects associated with sedimentation and nitrification from all phases of construction activities may be minimized and/or alleviated through proper implementation and maintenance of erosion control best management practices and maintaining vegetative buffers. Buffer width is dependent upon slope, vegetation type, and soil types. The Service can provide additional technical assistance on appropriate vegetative buffer widths upon request.

From the information provided, we see this project occurs in close proximity to the Arkansas River. This stream and any associated wetlands may be considered Waters of the United States and may have adjacent wetlands that would require a Clean Water Act Section 404 permits prior to being altered. Therefore, we recommend that you contact the U.S. Army Corps of Engineers Little Rock District office for additional information. They can be contacted at (501) 324-5295.

The comments herein are for the sole purpose of providing technical assistance to the action agency or for individual pre-project planning assistance. These comments and opinions should not be misconstrued as an "effect determination" or considered as concurrence with any

proceeding determination(s) by the action agency in accordance with Section 7 of the ESA. These comments do not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, a finding concurrence letter, etc.) from the Service, both lethal and nonlethal "take" of protected species are in violation of the ESA.

We appreciate your interest in the conservation of endangered species. If you have any questions, please contact the Arkansas Ecological Services Staff at (501) 513-4487.

Sincerely,

Jim Boggs
Project Leader

219 Brown Lane Bryant, AR 72022 (501) 847-7077 (501) 847-7943 fax

July 24, 2013

Martha Miller
State Historic Preservation Officer
1500 Tower Building
323 Center Street
Little Rock, Arkansas 72201

Re: SHPO Clearance request – Pine Bluff Voltage Support Phase 2
Transmission Line Right-of-Way
GBM^c No. 2044-12-311

Dear Ms. Miller:

On behalf of Entergy Arkansas Inc., GBMc & Associates requests your review of the proposed Pine Bluff Voltage Support Phase 2 transmission line (Corridor A and B) being considered for construction. Before proceeding with the proposal, your certification of each corridor is required to ensure no archeological impacts are suffered during implementation of the project on one of the corridors.

Attached to this letter is a aerial and topographic map of the site with the proposed transmission line identified, as well as the project boundary noted with a yellow line. The transmission line will run north to south through the middle of the project area boundary. Land clearing is anticipated to create a right of way to a width of 120 feet wide.

This project is for the construction of a transmission line in Pine Bluff, Jefferson County, Arkansas. The geographical coordinates for the north terminus (Whitebluff Substation) of both Corridors A and B are N34.42585 Latitude, and W92.14431 Longitude. The geographical coordinates for the south terminus (Woodward Substation) of both Corridors A and B are N34.23255 Latitude, and W92.05750 Longitude. Please evaluate each corridor independently.

If you have questions or need additional information please contact me or Greg Phillips at (501) 847-7077. Thank you for your assistance in this matter.

Sincerely,
GBM^c & ASSOCIATES

Kevin Butzlaff
Environmental Scientist

The Department of
Arkansas
Heritage

Mike Beebe
Governor

Martha Miller
Director

Arkansas Arts Council

Arkansas Natural Heritage Commission

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars Cultural Center

Old State House Museum

Arkansas Historic Preservation Program

323 Center Street, Suite 1500
Little Rock, AR 72201
(501) 324-9880
fax: (501) 324-9184
tdd: (501) 324-9811
e-mail:
info@arkansaspreservation.org
website:
www.arkansaspreservation.org

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August 26, 2013

Mr. Kevin Butzlaff
Environmental Scientist
GBM^c & Associates
219 Brown Lane
Bryant, Arkansas 72201

Re: Jefferson County – General
Section 106 Review – USDA-RUS
Proposed Pine Bluff Voltage Support Phase 2 Transmission Line
GBM^c Project Number 2044-12-311
AHPP Tracking Number 85270

Dear Mr. Butzlaff:

This letter is in regards to your inquiry regarding properties of archeological, architectural, or historic significance in the area of the above-referenced proposed undertaking. The staff of the Arkansas Historic Preservation Program has reviewed records pertaining to the area in question. They report that there are two previously recorded archeological sites (3JE135 and 3JE198) within or adjacent to the proposed Corridor A and two previously recorded archeological sites (3JE118 and 3JE283) within or adjacent to the proposed Corridor B. In addition, property JE283, Dollarway Road, is adjacent to, or perhaps even within, proposed corridor B. We are very concerned that placing an electric transmission line adjacent to this property could adversely affect the view shed of this historic property. Therefore, we recommend that Corridor A be selected.

However, both proposed corridors cross numerous areas that have a very high potential for containing both prehistoric and historic archeological sites and architectural properties. Therefore, it is highly likely that any final route chosen will require a cultural resources survey to determine the presence of historic properties within the proposed corridor. When a final route is selected, it should be submitted to this office for review and comment.

Thank you for the opportunity to review this undertaking, and look forward to reviewing a final proposed route in the future. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Eric Gilliland of my staff at 501-324-9270.

Sincerely,

Frances McSwain

Frances McSwain
Deputy State Historic Preservation Officer

cc: Dr. Richard Allen, Cherokee Nation of Oklahoma
Mr. Earl J. Barbry, Jr., Tunica-Biloxi Tribe of Louisiana, Inc.
Mr. Robert Cast, Caddo Nation
Mr. Larry Duncan, USDA
Dr. Ann Early, Arkansas Archeological Survey
Ms. Jean Ann Lambert, Quapaw Tribe of Oklahoma
Ms. Lisa LaRue-Baker, United Keetoowah Band of Cherokee Indians

219 Brown Lane Bryant, AR 72022 (501) 847-7077 (501) 847-7943 fax

August 28, 2013

Martha Miller
State Historic Preservation Officer
1500 Tower Building
323 Center Street
Little Rock, Arkansas 72201

Re: SHPO Clearance request – Pine Bluff Voltage Support Phase 2, Route A
Transmission Line Right-of-Way
GBM^c No. 2044-12-311
AHPP Tracking No. 85270

Dear Ms. Miller:

On behalf of Entergy Arkansas Inc., GBMc & Associates requests your review of the proposed Pine Bluff Voltage Support Phase 2 transmission line being considered for construction. We have previously submitted Corridor A and B for your review (AHPP Tracking Number 85270) and a route within Corridor A has been selected, labeled Route A. Before proceeding with the proposal, your certification of Route A is required to ensure no archeological impacts are suffered during implementation of the project.

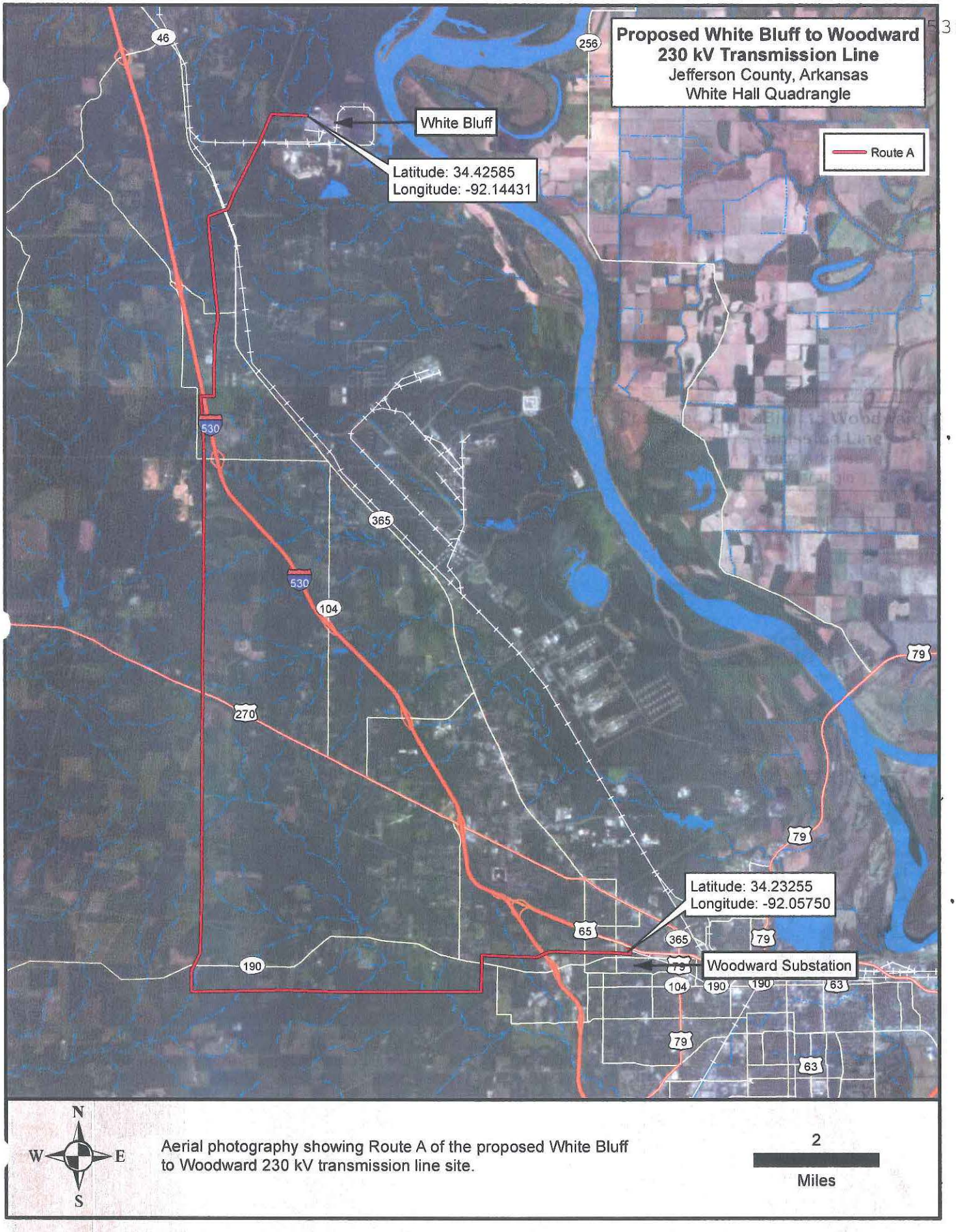
Attached to this letter is a aerial and topographic map of the site with the proposed Route A identified. The transmission line will run north to south through the middle of the project area. Land clearing is anticipated to create a right of way to a width of 120 feet wide.

This project is for the construction of a transmission line in Pine Bluff, Jefferson County, Arkansas. The geographical coordinates for the north terminus (Whitebluff Substation) are N34.42585 Latitude, and W92.14431 Longitude. The geographical coordinates for the south terminus (Woodward Substation) are N34.23255 Latitude, and W92.05750 Longitude.

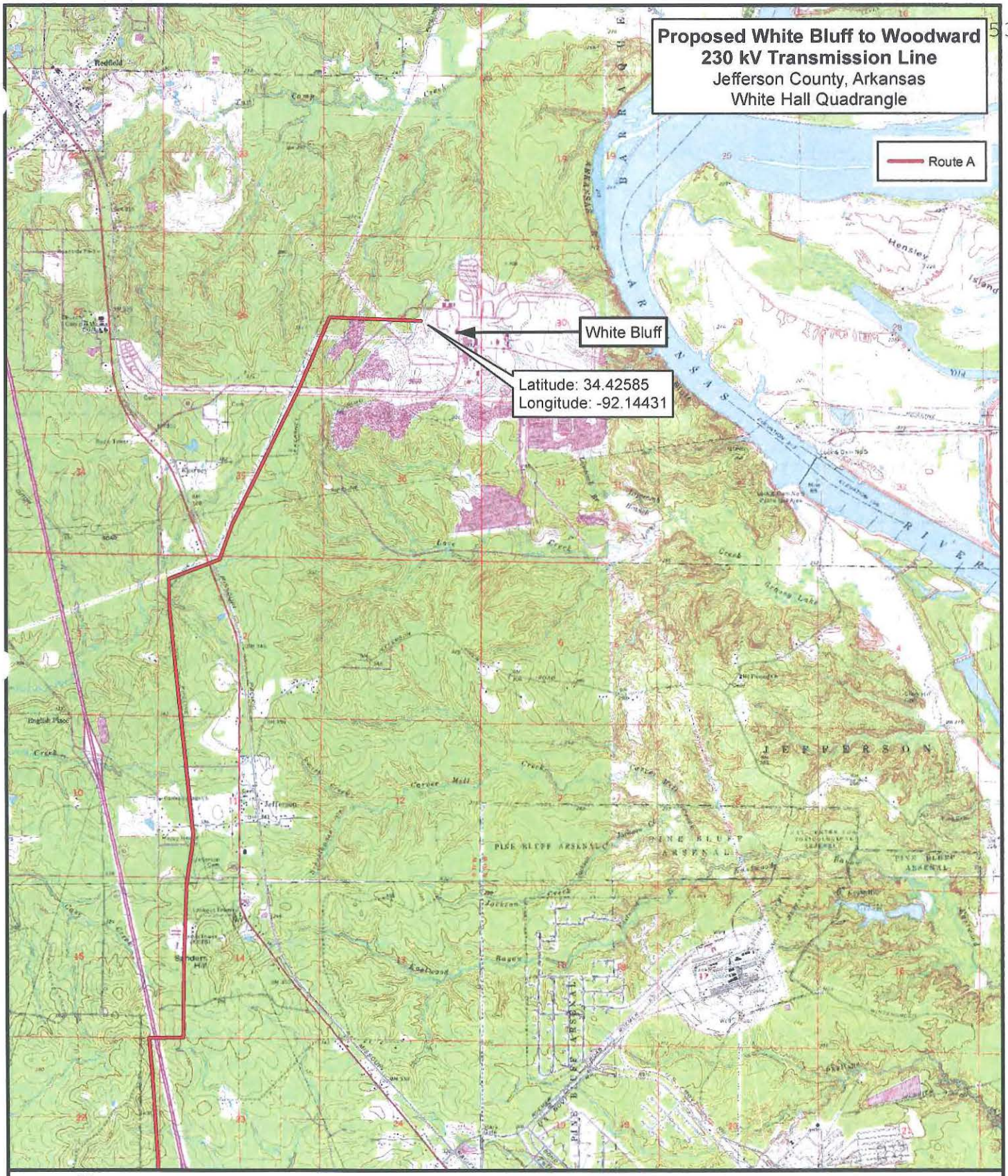
If you have questions or need additional information please contact me or Greg Phillips at (501) 847-7077. Thank you for your assistance in this matter.

Sincerely,
GBM^c & ASSOCIATES

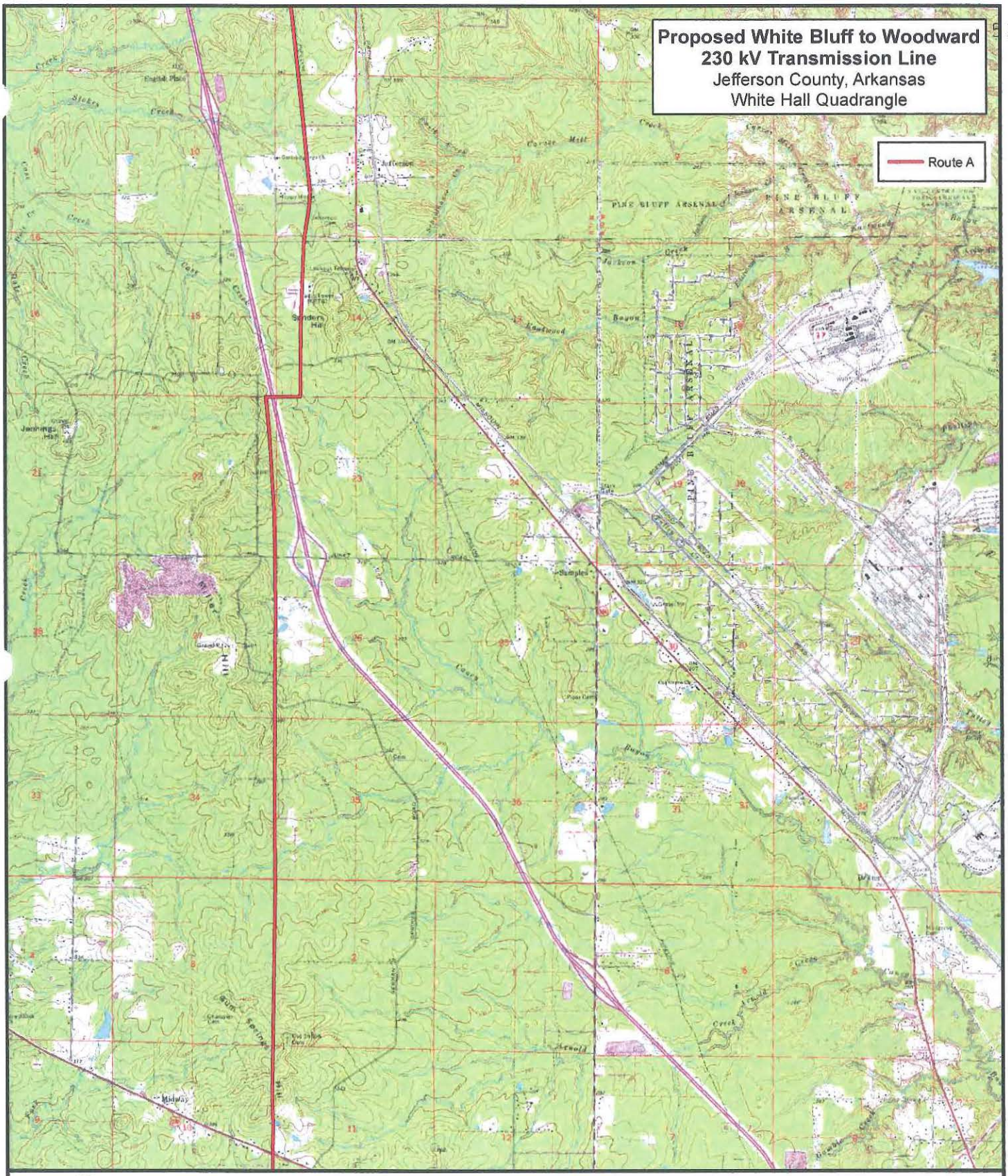
Kevin Butzlaff
Environmental Scientist



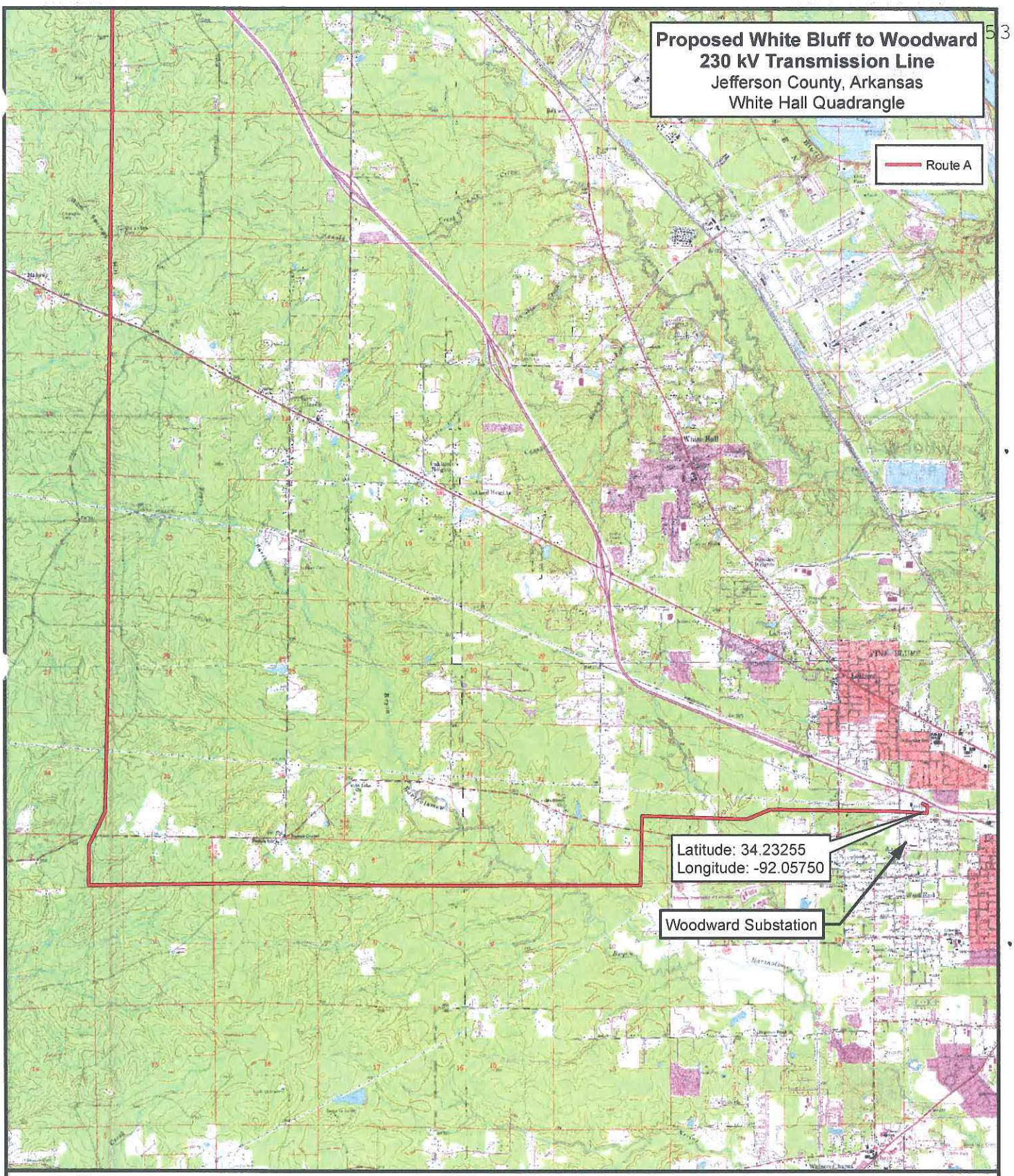
Aerial photography showing Route A of the proposed White Bluff to Woodward 230 kV transmission line site.



Topographic map showing Route A of the proposed White Bluff to Woodward 230 kV transmission line site.



Topographic map showing Route A of the proposed White Bluff to Woodward 230 kV transmission line site.



Topographic map showing Route A of the proposed White Bluff to Woodward 230 kV transmission line site.

The Department of
Arkansas
Heritage

Mike Beebe
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Arkansas Arts Council

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Delta Cultural Center

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info@arkansaspreservation.org
website:
www.arkansaspreservation.org

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April 22, 2014

Mr. Kevin Butzlaff
Environmental Scientist
GBM^c & Associates
219 Brown Lane
Bryant, Arkansas 72022

Re: Jefferson County – General
Section 106 Review – FERC
Response for *Cultural Resources Survey of the Proposed Entergy 230-kV Transmission Line From Woodward to White Bluff, Jefferson County, Arkansas*
AHPP Tracking Number 85270

Dear Mr. Butzlaff:

The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed the above referenced report for the proposed undertaking. We offer the following comments and recommendations.

- The **Project Background** section should cite the AHPP initial review letter at the first mention of high- and low-probability areas. The phrase 'desktop study' requires an explanation.
- The second paragraph in the **Project Location** section contains several errors.
- **Figures 1-05–1-06** do not label the two alternatives.
- Some of the project information is supplied from south to north and some north to south. Every section of the report needs to follow one protocol.
- Most of the topographic maps are upside down and need to be turned so that north is up or toward the binding (left) side of the pages. Be sure to change Appendix D also.
- The use of mathematic symbols in text does not follow American Antiquity's *Style Guide* as they are not part of formulae.
- For the **Literature and Records Search** section, we commend you on restricting most of the review to a reasonable buffer. We strongly recommend that in future reports you do not include superfluous information such as presented in **Table 4-03**. While the References Cited section is carefully edited, 10 of the Author entries in this Table contain punctuation errors. There needs to be an entry for the AHPP historic structures search. In the **Summary and Recommendations** section of the report it is stated that a review of the AHPP files failed to locate any historic structures along the project corridor. This is incorrect. Provide citations for the source of the General Land Office maps.

• Use the AHPP Resource Number when discussing recorded historic structures. The AHPP database lists the Dollarway Road as JE283, with the segment under discussion along Reynolds Road also known as JE561.

• The recommendation for spanning the National Register of Historic Places listed Dollarway Road, (JE283 and JE561) is insufficient. The placement of the line over the site may constitute an adverse effect. Thus, the poles should be placed as far as possible from the site. When the engineering of the line is further along and there is a plan for pole placements, this office will require additional consultation concerning this crossing.

• Edit the Comments column in **Appendix C** for consistency and do not use abbreviations without explanations.

Table 4-03 can be left as is. However, we recommend that the errors and other comments be addressed and that the report be resubmitted. We concur that Locus #1, Locus #2 and Structure #1 are ineligible for the NRHP and no further work is required at them. Formal site numbers are required for the final report. No additional archeological fieldwork is required. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please contact Wm. Lane Shields of my staff at (501) 324-9784.

Sincerely,

Frances McSwain

Frances McSwain
Deputy State Historic Preservation Officer

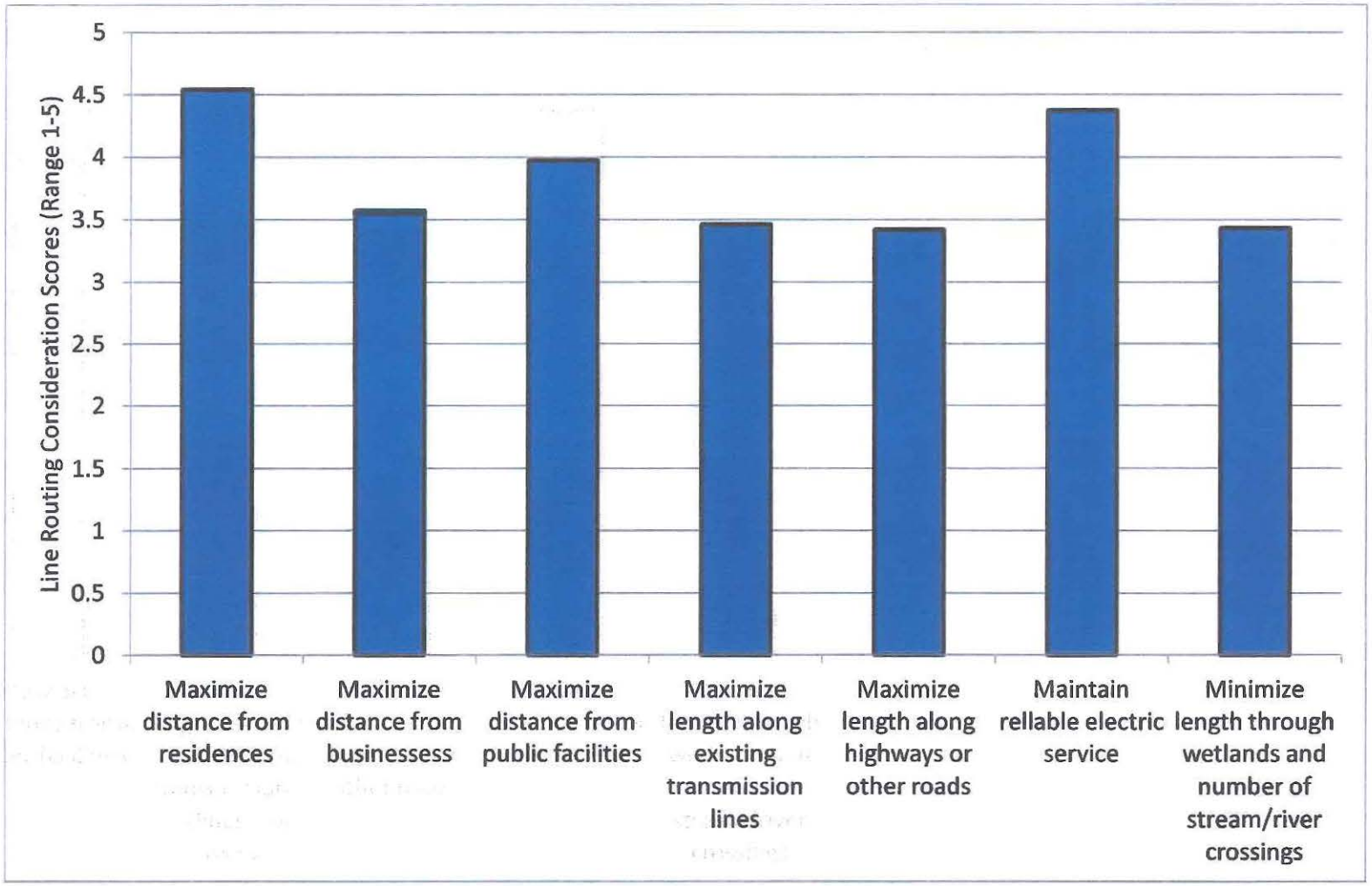
cc: Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Mr. C. Andrew Buchner, Panamerican Consultants, Inc.
Mr. Robert Cast, Caddo Nation
Dr. Ann Early, Arkansas Archeological Survey

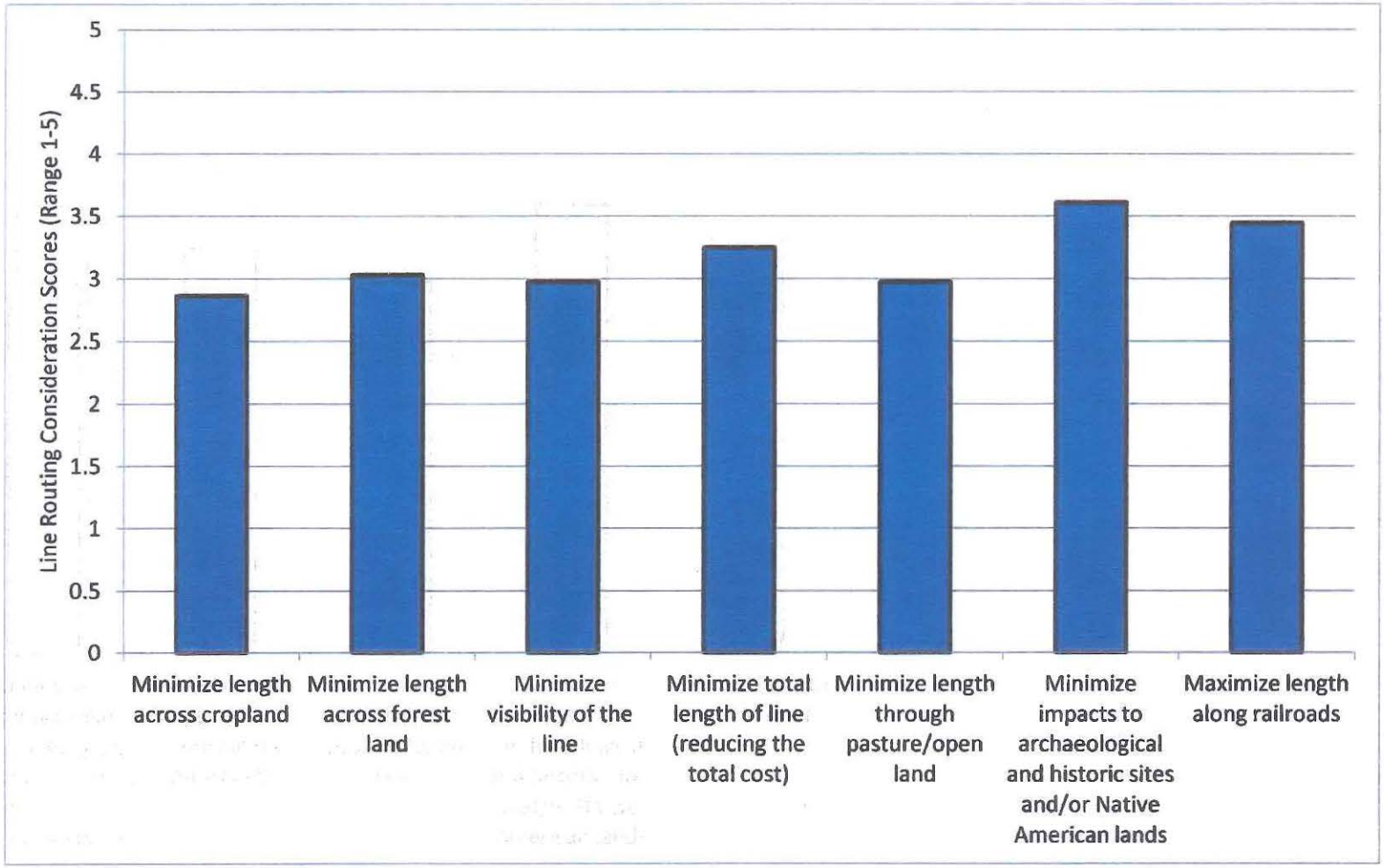
Appendix E

Public Comments/Survey Results

Summary of White bluff to Woodward Open House Survey Results

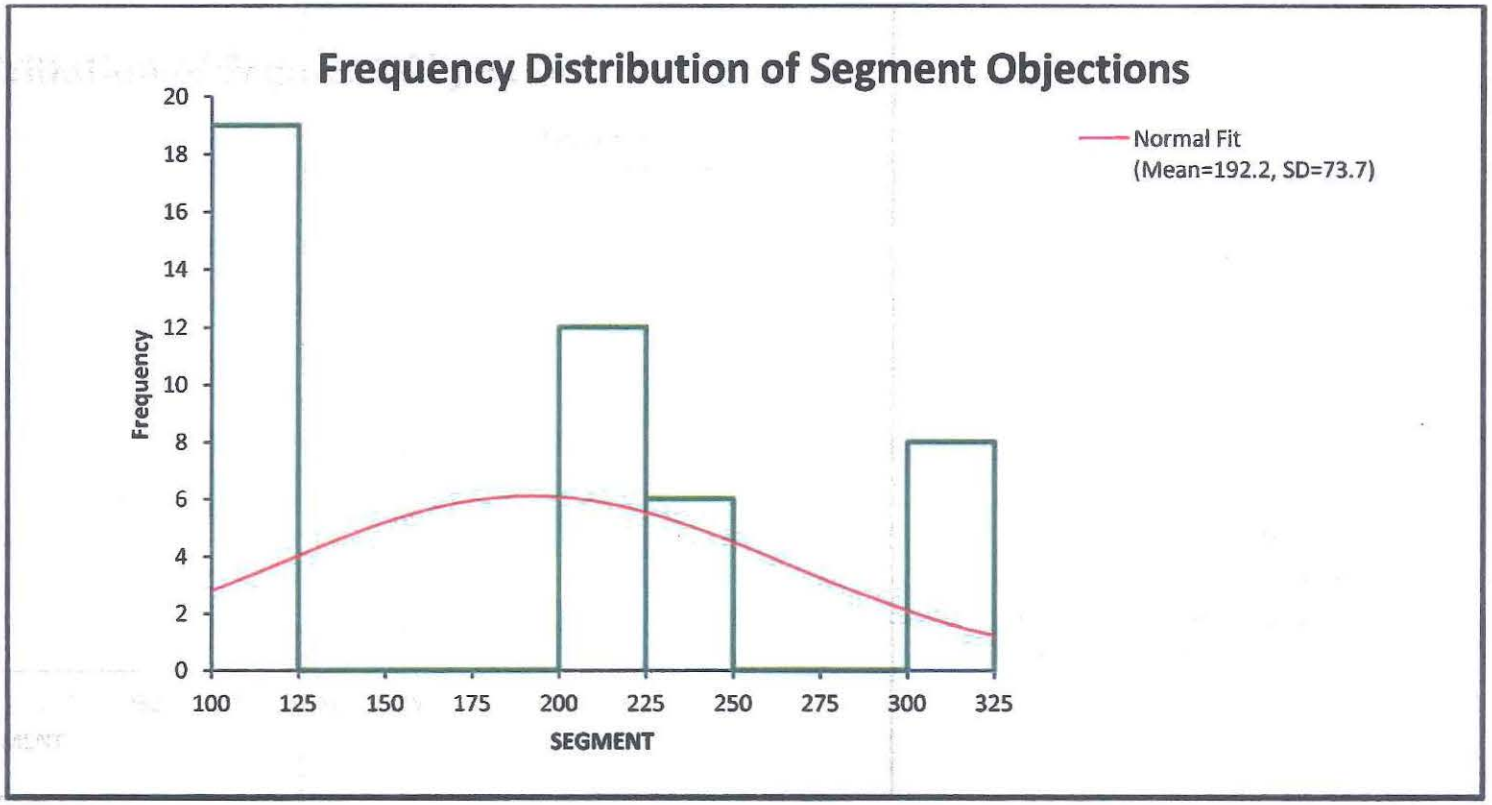
The two charts that follow summarize the survey question scores.

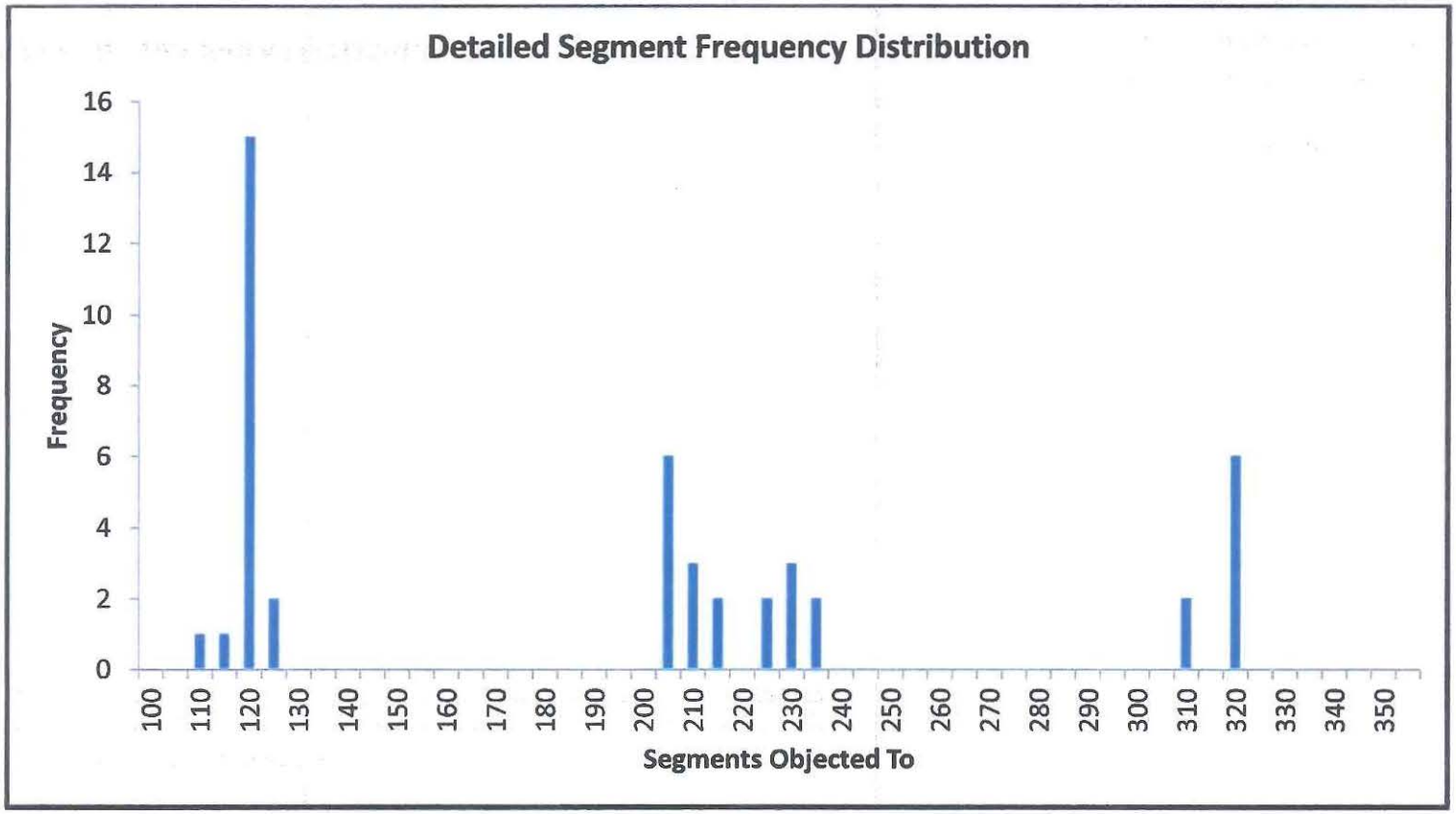



Line Routing Consideration Scores (Range 1-5)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Minimize length across cropland
Minimize length across forest land
Minimize visibility of the line
Minimize total length of line (reducing the total cost)
Minimize length through pasture/open land
Minimize impacts to archaeological and historic sites and/or Native American lands
Maximize length along railroads

- There were 37 total surveys received as of February 22, 2013
- 14 of the 37 respondents suggested use of Corridor C
- 2 out of 37 respondents suggested use of Corridor A
- The majority of negative comments were received on Corridor A & B (segments numbered in the 100's and 200's)

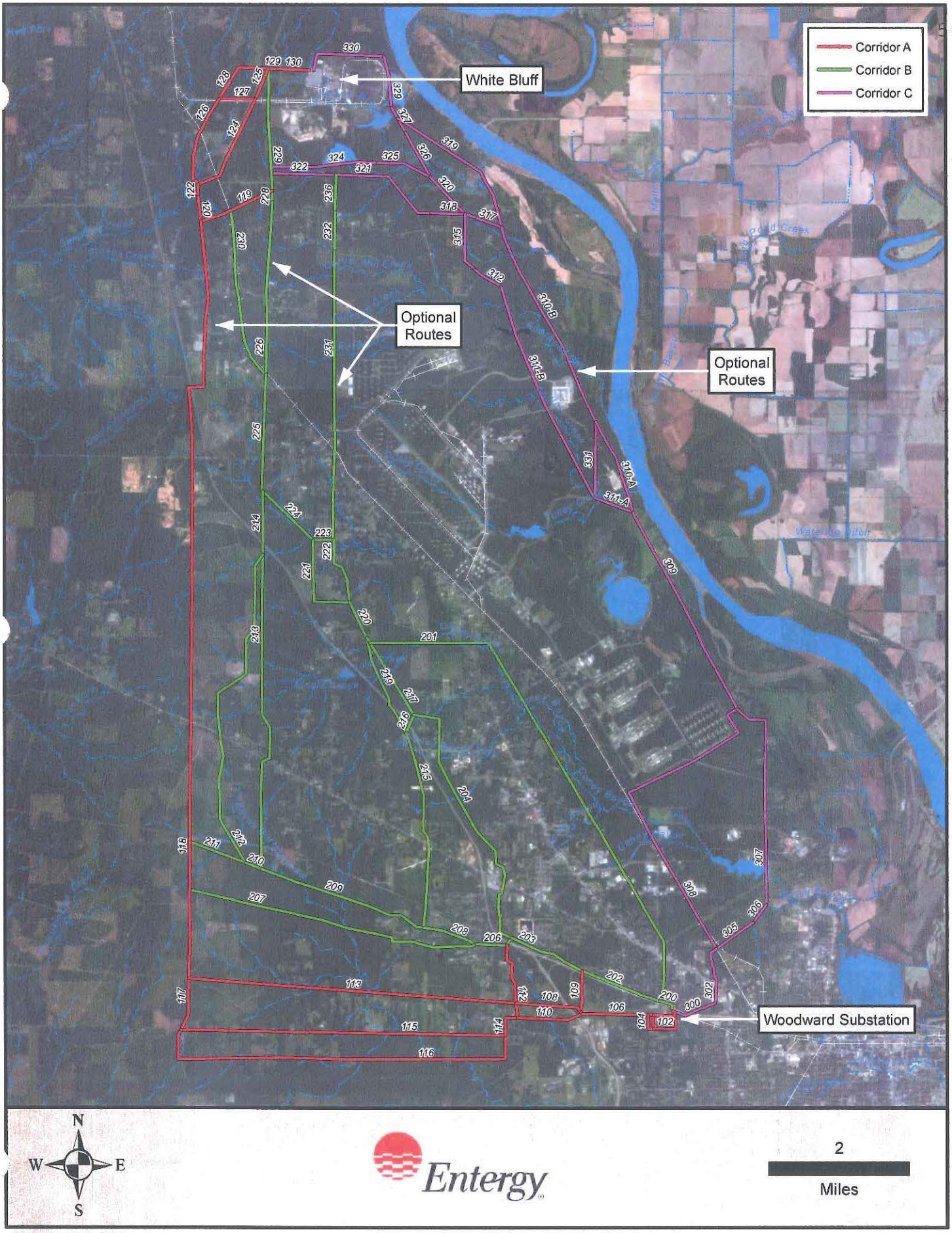
The following two charts depict the number of objections (negative comments) received on specific segments.

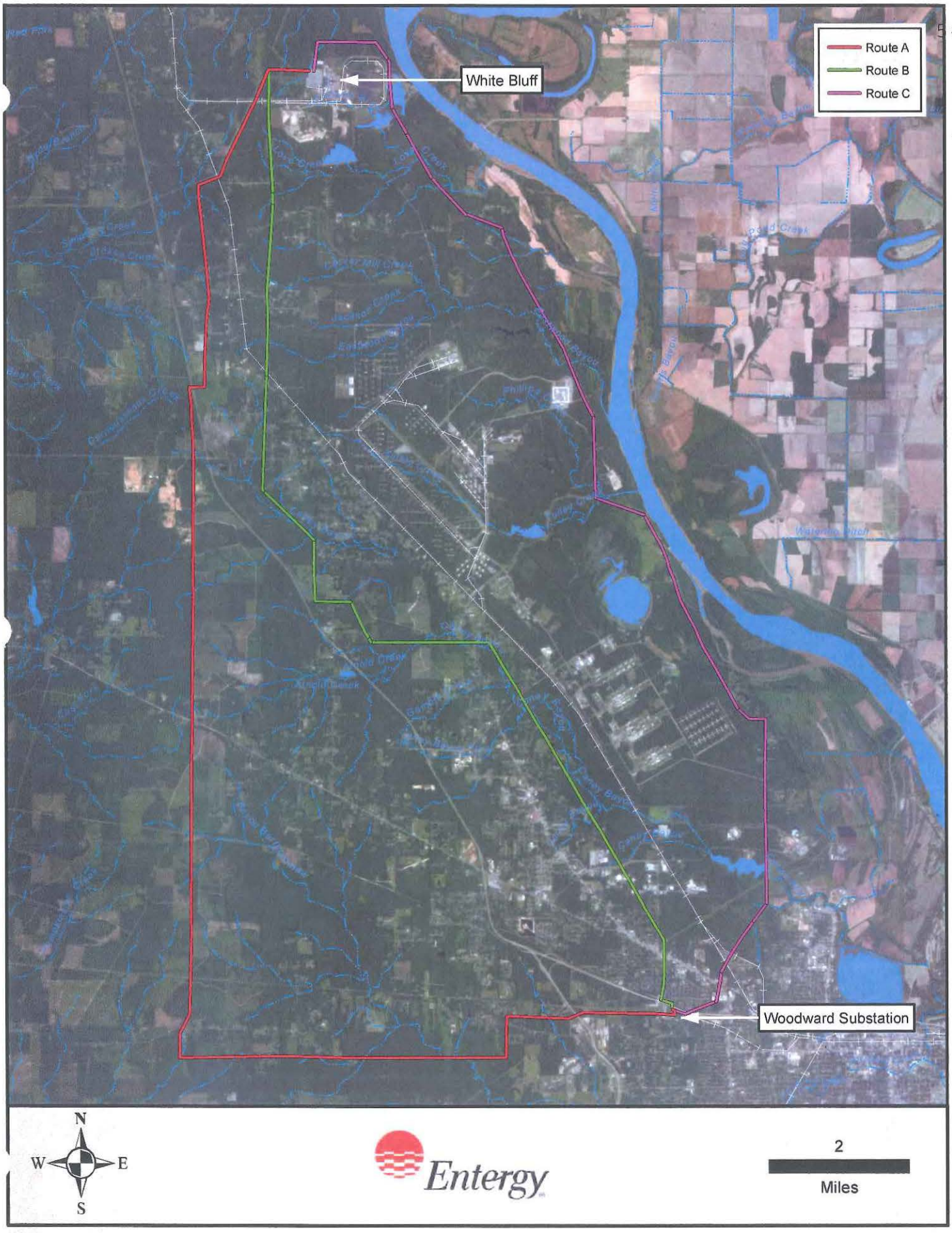



Detailed Segment Frequency Distribution
Frequency
16
14
12
10
8
6
4
2
0
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
290
300
310
320
330
340
350
Segments Objected To

Appendix F

Maps, Routes and Decision Support Matrix


Corridor A
Corridor B
Corridor C
White Bluff
Optional Routes
Optional Routes
Woodward Substation
N
W
E
S
Entergy
2
Miles


Route A
Route B
Route C
White Bluff
Woodward Substation
N
W
E
S
Entergy
2
Miles

Route A	Engineering											Socio-Economic											Environmental/Land Use									
Segment	Total Length	Major Angles	New Cleared ROW	Adj to Existing ROW	Major T-Line Crossing	Adj to Road	Road Crossing	Highway Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 0-50ft	Number of Residences within 51-200ft	Number of Residences within 201-300ft	Distance within Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial/Industrial Structures within 100ft	Airport/Airfield within 1,350ft	Distance in Ag Field	Distance across Ag Field	Wells within 200ft	Historical Site within 500ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Distance in DOD Land	Navigable River Crossings	Perennial Stream Crossings	Intermittent/ Ephemeral Stream Crossings	Ditch Crossings	Distance in Floodplain	Notes	
	ft	No	ft	ft	No	ft	No	No	No	No	No	No	No	ft	ft	No	No	ft	ft	No	No	ft	ft	ft	No	No	No	No	ft		
100	556	1	0	0	0	0	0	0	2	0	0	0	1	0	556	1	0	0	0	0	0	0	0	0	0	0	0	0	255		0
101	1544	0	222	0	0	0	2	0	1	0	0	0	0	0	1544	1	0	0	0	0	0	0	0	0	0	0	1	0	1137		0
105	391	0	391	0	0	0	0	0	1	0	0	0	0	0	391	0	0	0	0	0	0	0	0	0	0	0	0	0	391		0
106	4974	0	3635	3059	1	0	2	0	1	0	0	3	1	0	4976	0	0	0	0	0	0	0	0	0	0	0	0	0	1426		0
110	4956	1	4632	0	0	0	1	1	1	0	0	2	0	0	4956	0	0	0	0	1	0	0	0	0	0	1	0	0	998		0
114	2191	1	2149	0	0	0	1	0	0	0	0	1	1	0	2198	1	1	0	0	0	0	0	0	0	0	0	0	0	0		0
116	28495	2	26201	0	0	1181	2	0	8	0	0	3	2	0	27906	2	0	0	0	0	5	556	0	0	0	5	8	0	3946		0
117	3954	1	3789	0	1	0	2	0	1	0	0	0	0	0	3889	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0
118	57588	2	54558	0	0	11852	16	2	16	0	2	12	8	0	58058	6	0	0	0	1	6	841	0	0	0	0	8	0	0	600 ft from radio tower	
120	1904	0	1836	0	0	0	0	0	0	0	0	0	0	0	1836	0	0	0	0	0	0	0	0	0	0	0	0	0	96		0
122	894	0	0	772	0	0	1	0	0	0	0	0	0	0	1198	0	0	0	0	0	0	0	0	0	0	0	1	0	285		0
124	8116	1	1148	8119	0	0	2	1	1	2	0	0	0	0	7844	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
125	2451	0	621	2445	1	0	1	0	1	0	0	0	0	0	2430	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
129	547	0	835	0	0	0	0	0	0	0	0	0	0	0	835	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
130	2488	0	2058	0	2	0	1	0	1	0	0	0	0	0	2615	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0
Parameter Totals	121089	9	102075	14395	5	13033	31	4	34	2	2	23	13	0	121232	13	1	0	0	2	0	1397	0	0	0	6	20	0	8534		
Route A Total	381918																														

Route B	Engineering											Socio-Economic											Environmental/Land Use									
Segment	Total Length	Major Angles	New Cleared ROW	Adj to Existing ROW	Major T-Line Crossing	Adj to Road	Road Crossing	Highway Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 0-50ft	Number of Residences within 51-200ft	Number of Residences within 201-300ft	Distance within Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial/Industrial Structures within 100ft	Airport/Airfield within 1,350ft	Distance in Ag Field	Distance across Ag Field	Wells within 200ft	Historical Site within 500ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Distance in DOD Land	Navigable River Crossings	Perennial Stream Crossings	Intermittent/ Ephemeral Stream Crossings	Ditch Crossings	Distance in Floodplain	Notes	
	ft	No	ft	ft	No	ft	No	No	No	No	No	No	No	ft	ft	No	No	ft	ft	No	No	ft	ft	ft	No	No	No	No	ft		
200	1268	1	786	0	1	905	0	1	0	0	1	6	6	1268	0	0	0	0	0	0	0	0	0	0	0	0	1	0	211		0
201	39211	2	22676	30345	0	565	15	2	5	1	5	43	29	12710	26481	11	1	635	0	0	1	8372	0	0	0	3	6	0	18732		0
218	452	0	0	0	0	452	0	0	0	0	0	0	0	0	452	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
220	2952	0	2338	0	0	624	0	0	1	0	0	2	2	500	2452	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0
221	7264	1	5218	0	0	0	0	1	2	0	1	1	4	0	7264	1	0	0	0	0	0	308	0	0	0	0	1	0	45		0
224	5239	0	5239	0	0	0	1	0	3	0	0	0	0	0	5239	0	0	0	0	0	0	797	0	0	0	2	1	0	3103		0
225	8747	1	7600	0	0	0	3	1	1	1	1	3	3	0	8747	1	0	0	0	0	0	108	0	0	0	0	0	0	0		0
226	12839	0	11140	0	0	3528	7	0	1	0	2	6	6	0	12839	3	0	0	0	0	0	253	0	0	0	1	3	0	0		0
228	866	0	866	0	0	0	0	0	0	0	0	1	2	0	866	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0
229	9125	0	6858	0	1	0	2	1	4	1	1	1	1	0	9125	2	0	0	0	0	0	0	0	0	0	0	4	0	0		0
129	547	0	835	0	0	0	0	0	0	0	0	0	0	0	835	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
130	2488	0	2058	0	2	0	1	0	1	0	0	0	0	0	2615	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0
Parameter Totals	90938	5	65564	30345	4	6074	29	6	18	3	11	63	53	14498	76915	18	1	635	0	0	1	9836	0	0	0	6	19	0	22091		
Route B Total	317193																														

Route C	Engineering											Socio-Economic											Environmental/Land Use									
Segment	Total Length	Major Angles	New Cleared ROW	Adj to Existing ROW	Major T-Line Crossing	Adj to Road	Road Crossing	Highway Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 0-50ft	Number of Residences within 51-200ft	Number of Residences within 201-300ft	Distance within Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial/Industrial Structures within 100ft	Airport/Airfield within 1,350ft	Distance in Ag Field	Distance across Ag Field	Wells within 200ft	Historical Site within 500ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Distance in DOD Land	Navigable River Crossings	Perennial Stream Crossings	Intermittent/ Ephemeral Stream Crossings	Ditch Crossings	Distance in Floodplain	Notes	
	ft	No	ft	ft	No	ft	No	No	No	No	No	No	No	ft	ft	No	No	ft	ft	No	No	ft	ft	ft	No	No	No	No	ft		
300	3304	1	1594	0	0	0	1	1	0	0	0	5	9	3304	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2412		0
301	2304	1	555	0	0	0	2	1	1	0	0	0	0	1954	350	0	0	0	0	0	0	0	0	0	0	0	0	0	1812		0
303	4503	0	3543	0	0	0	0	0	1	1	0	0	0	0	4503	0	0	0	0	0	0	450	0	0	0	0	0	0	470		0
306	1682	0	1508	0	0	0	1	0	0	0	0	0	0	0	1682	0	0	0	155	0	0	201	0	0	0	2	0	0	1145		0
307	16172	1	11944	0	1	6033	4	0	1	1	0	6	1	1620	14552	0	0	0	435	0	1	3651	0	10253	0	1	1	0	3304		0
309	16643	0	10839	0	0	1327	5	0	3	0	0	0	3	0	16643	0	0	0	0	0	1	373	0	15422	0	1	1	0	13433		0
311-A	3065	0	2699	0	0	0	0	0	1	0	0	0	0	0	3065	0	0	0	0	0	1	142	0	3065	0	1	0	0	2683		0
331	5711	0	5426	0	0	549	2	0	0	0	0	0	0	0	5711	0	0	0	0	0	1	213	0	5711	0	1	0	0	543		0
310-B	17413	0	14717	0	0	0	4	0	2	0	0	0	0	0	17413	0	0	0	0	0	0	283	0	4995	0	1	3	0	4478		0
317	2891	0	2318	0	0	0	1	0	2	0	0	0	0	0	2996	1	0	0	0	0	0	0	0	0	0	0	0	0	0		0
320	3800	0	3704	0	0	0	0	0	2	0	0	0	0	0	3800	0	0	0	0	0	0	160	0	0	0	0	1	0	637		0
326	3820	0	3820	0	0	0	0	0	1	0	0	0	0	0	3820	0	0	0	0	0	1	650	0	0	0	0	2	0	1655		0
327	2143	0	1519	0	0	0	0	0	2	0	0	0	0	0	2141	0	0	0	0	0	0	0	0	0	0	1	0	0	0		0
329	3794	1	2443	0	0	0	1	0	0	0	0	0	0	0	3794	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
330	7979	2	7771	0	0	646	3	0	3	0	0	0	0	0	7979	1	0	0	0	0	0	673	0	0	0	0	3	0	0		0
Parameter Totals	95222	6	76500	0	1	10555	24	2	19	2	0	11	13	6878	88449	3	0	0	590	0	7	6794	0	39446	0	8	12	0	32572		
Route C Total	357114																														

Route A

	Engineering											Socio-Economic												Environmental/Land Use									
Segment	Total Length	Major Angles	New Cleared ROW	Adj to Existing ROW	Major T-Line Crossing	Adj to Road	Road Crossing	Highway Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 0-50ft	Number of Residences within 51-200ft	Number of Residences within 201-300ft	Distance within Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial/Industrial Structures within 100ft	Airport/Airfield within 1,350ft	Distance in Ag Field	Distance across Ag Field	Wells within 200ft	Historical Site within 500ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Distance in OOD Land	Navigable River Crossings	Perennial Stream Crossings	Intermittent/ Ephemeral Stream Crossings	Ditch Crossings	Distance in Floodplain	Notes	
	ft	No	ft	ft	No	ft	No	No	No	No	No	No	No	ft	ft	No	No	ft	ft	No	No	ft	ft	ft	No	No	No	No	No		
100	0.39	1.25	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.00	0.38	0.00	0.10	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0
101	0.27	0.00	0.04	0.00	0.00	0.00	1.25	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.37	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.67	0
108	0.07	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0
106	0.88	0.00	0.67	1.01	5.00	0.00	1.25	0.00	0.63	0.00	0.00	1.05	0.38	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0
110	0.88	1.25	0.85	0.00	0.00	0.00	0.63	5.00	0.63	0.00	0.00	0.70	0.00	0.00	0.85	0.00	0.00	0.00	0.00	3.33	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.53	0
114	0.38	1.25	0.38	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.35	0.38	0.00	0.38	0.91	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
116	4.95	2.50	4.80	0.00	0.00	-8.49	1.25	0.00	5.00	0.00	0.00	1.05	0.77	0.00	4.81	1.82	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	10.00	10.00	0.00	2.11	0
117	0.69	1.25	0.69	0.00	5.00	0.00	1.25	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.00	0
118	10.00	2.50	10.00	0.00	0.00	-8.87	10.00	10.00	10.00	0.00	6.00	4.19	3.08	0.00	10.00	5.45	0.00	0.00	0.00	3.33	0.00	1.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	600 ft from radio tower
120	0.33	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0
122	0.16	0.00	0.00	0.25	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.15	0
124	1.41	1.25	0.21	-2.68	0.00	0.00	1.25	5.00	0.63	10.00	0.00	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
126	0.43	0.00	0.11	-0.91	5.00	0.00	0.63	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
129	0.09	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
130	0.43	0.00	0.38	0.00	10.00	0.00	0.63	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0
Parameter Totals	21.03	11.25	18.71	-4.74	25.00	-5.36	19.38	20.00	21.25	10.00	6.00	7.33	5.00	0.00	20.88	11.82	10.00	0.00	0.00	6.67	0.00	1.67	0.00	0.00	0.00	12.00	25.00	0.00	4.56	
Route A Total	247.43																													

Route B

	Engineering											Socio-Economic												Environmental/Land Use									
Segment	Total Length	Major Angles	New Cleared ROW	Adj to Existing ROW	Major T-Line Crossing	Adj to Road	Road Crossing	Highway Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 0-50ft	Number of Residences within 51-200ft	Number of Residences within 201-300ft	Distance within Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial/Industrial Structures within 100ft	Airport/Airfield within 1,350ft	Distance in Ag Field	Distance across Ag Field	Wells within 200ft	Historical Site within 500ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Distance in OOD Land	Navigable River Crossings	Perennial Stream Crossings	Intermittent/ Ephemeral Stream Crossings	Ditch Crossings	Distance in Floodplain	Notes	
	ft	No	ft	ft	No	ft	No	No	No	No	No	No	No	ft	ft	No	No	ft	ft	No	No	ft	ft	ft	No	No	No	No	No		
200	0.22	1.25	0.14	0.00	5.00	-0.37	0.00	5.00	0.00	0.00	3.00	2.09	2.31	0.12	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.13	0
201	8.81	2.50	4.15	10.00	0.00	-0.23	8.36	10.00	3.13	5.00	15.00	15.00	11.15	1.18	4.56	10.00	10.00	8.64	0.00	0.00	2.50	10.00	0.00	0.00	0.00	6.00	7.50	0.00	10.00	0
218	0.08	0.00	0.00	0.00	0.00	-0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
220	0.53	0.00	0.43	0.00	0.00	-0.26	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0
221	1.26	1.25	0.96	0.00	0.00	0.00	0.00	5.00	1.25	0.00	1.00	0.35	1.04	0.00	1.25	0.91	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	1.25	0.00	0.92	0
224	0.95	0.00	0.96	0.00	0.00	0.00	0.63	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	4.00	1.25	0.00	1.66	0
225	1.52	1.25	1.39	0.00	0.00	0.00	1.88	5.00	0.63	5.00	3.00	1.05	1.15	0.00	1.51	0.91	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
226	2.23	0.00	2.04	0.00	0.00	-1.45	4.38	0.00	0.63	0.00	6.00	2.09	2.31	0.00	2.21	2.73	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	2.00	3.75	0.00	0.00	0
228	0.15	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.77	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0
229	1.58	0.00	1.26	0.00	5.00	0.00	1.25	5.00	2.50	5.00	3.00	0.35	0.38	0.00	1.57	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0
129	0.09	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
130	0.43	0.00	0.38	0.00	10.00	0.00	0.63	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.00	0
Parameter Totals	15.80	6.25	12.02	-10.00	20.00	-2.50	18.13	30.00	11.25	15.00	31.00	21.98	20.38	1.34	13.25	16.36	10.00	8.64	0.00	0.00	2.50	11.75	0.00	0.00	0.00	12.00	23.75	0.00	11.79	
Route B Total	302.69																													

Route C

	Engineering											Socio-Economic												Environmental/Land Use									
Segment	Total Length	Major Angles	New Cleared ROW	Adj to Existing ROW	Major T-Line Crossing	Adj to Road	Road Crossing	Highway Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 0-50ft	Number of Residences within 51-200ft	Number of Residences within 201-300ft	Distance within Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial/Industrial Structures within 100ft	Airport/Airfield within 1,350ft	Distance in Ag Field	Distance across Ag Field	Wells within 200ft	Historical Site within 500ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Distance in OOD Land	Navigable River Crossings	Perennial Stream Crossings	Intermittent/ Ephemeral Stream Crossings	Ditch Crossings	Distance in Floodplain	Notes	
	ft	No	ft	ft	No	ft	No	No	No	No	No	No	No	ft	ft	No	No	ft	ft	No	No	ft	ft	ft	No	No	No	No	No		
300	0.57	1.25	0.29	0.00	0.00	0.00	0.63	5.00	0.00	0.00	0.00	1.74	3.48	0.31	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	1.29	0
301	0.40	1.25	0.10	0.00	0.00	0.00	1.25	5.00	0.63	0.00	0.00	0.00	0.00	0.18	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0
303	0.78	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.63	5.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0
306	0.29	0.00	0.28	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	1.16	0.00	0.00	0.24	0.00	0.00	0.00	4.00	0.00	0.00	0.61	0
307	2.81	1.25	2.56	0.00	5.00	3.30	2.50	0.00	0.63	5.00	0.00	2.09	0.38	0.15	2.51	0.00	0.00	0.00	3.26	0.00	2.50	4.36	0.00	19.94	0.00	2.00	1.25	0.00	1.78	0
309	2.89	0.00	2.01	0.00	0.00	-0.55	3.13	0.00	1.88	0.00	0.00	0.00	1.15	0.00	2.87	0.00	0.00	0.00	0.00	0.00	2.50	0.45	0.00	30.00	0.00	2.00	1.25	0.00	7.17	0
311-A	0.53	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	5.00	0.17	0.00	5.96	0.00	2.00	0.00	0.00	1.43	0
331	0.99	0.00	0.99	0.00	0.00	-0.73	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	5.00	0.25	0.00	11.31	0.00	2.00	0.00	0.00	0.29	0
310-B	3.02	0.00	2.70	0.00	0.00	0.00	2.50	0.00	1.25	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	9.72	0.00	2.00	3.75	0.00	2.33	0
317	0.59	0.00	0.42	0.00	0.00	0.00	0.63	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.52	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
320	0.66	0.00	0.68	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	1.25	0.00	0.34	0
326	0.66	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	2.50	0.78	0.00	0.00	0.00	0.00	2.50	0.00	0.88	0
327	0.37	0.00	0.28	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0
329	0.66	1.25	0.45	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
330	1.39	2.50	1.42	0.00	0.00	-0.27	1.88	0.00	1.88	0.00	0.00	0.00	0.00	0.00	1.37	0.91	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	3.75	0.00	0.00	0
Parameter Totals	16.34	7.50	14.02	0.00	5.00	-4.34	15.00	10.00	11.88	10.00	0.00	3.84	5.00	0.64	15.13	2.73	0.00	0.00	4.42	0.00	17.50	8.12	0.00	76.73	0.00	16.00	15.00	0.00	17.39	
Route C Total	268.19																													

	Total Weighted Scores						Total Score
Route	Number of Residences within 200 ft	Number of Historical Sites within 500 ft	Length in forest (ft)	Number of perennial stream crossings	Distance in wetlands (ft)	Number of commercial structures within 100 feet	
A	13.93	0.00	18.71	12.00	1.67	11.82	247.43
B	54.98	2.50	12.02	12.00	11.75	16.36	302.69
C	3.84	17.50	14.02	16.00	8.12	2.73	268.19

	Engineering											Socio-Economic							Environmental and Land Use																		
Segment	Total Length ft	Number of major angles number	New cleared ROW ft	Adjacent to Existing ROW ft	Major T-Line Crossing number	Adjacent to Road ft	Road Crossing number	Highway Crossing number	Total Road Crossing number	Trail/Driveway Crossing number	Railroad Crossing number	Number of Residences within 50 ft number	Number of Residences within 51-200 ft number	Number of Residences within 300 ft number	Distance in Residentially Developed Area ft	Distance in Non-Residentially Developed Area ft	Number of Commercial / Industrial Structures within 100 ft number	Airport / Airfield within 1,350 ft number	Distance in Agricultural Field ft	Distance across Agricultural Field ft	Distance to Well ft	Wells within 200 ft number	Estimated Distance in Known Forested Wetlands ft	Estimated Distance in Known Non-Forested Wetlands ft	Total Estimated Distance in Known Wetlands ft	Wetlands in ROW acres	Distance in Department of Defense Land ft	Historical Site within 500 ft number	Archaeological Sites within ROW number	Navigable River Crossing number	Perennial Stream Crossing number	Intermittent / Ephemeral Stream Crossing number	Ditch Crossing number	Total number of river / stream / pitch crossings number	Distance across Floodplain ft	Notes
100	556	1	0	0	0	0	0	0	0	2	0	0	0	1	0	556	1	0	0	0	6621	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	255	
101	1544	0	222	0	0	0	2	0	2	1	0	0	0	0	0	1544	3	0	0	0	3242	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	1137	
102	2552	1	1473	0	0	606	3	0	3	1	0	1	11	7	1852	690	3	0	0	0	3966	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
103	1015	0	689	0	0	0	1	0	1	0	0	0	2	0	0	1015	1	0	0	0	1234	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	606	
104	1432	1	709	0	0	0	1	0	1	0	0	0	2	2	0	1432	0	0	0	0	2948	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	534	
105	391	0	391	0	0	0	0	0	0	1	0	0	0	0	0	391	0	0	0	0	2946	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	391	
106	4976	0	3635	3059	1	0	2	0	2	1	0	0	3	3	1	0	4976	0	0	0	0	1331	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	1426	
107	188	0	188	0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	0	0	1250	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
108	5044	1	3516	4600	1	207	1	1	2	4	0	0	0	1	0	5044	0	1	0	0	999	0	0	279	279	TBD	0	0	TBD	0	1	0	0	1	1089	
109	3081	0	1698	0	1	0	2	1	3	0	0	0	4	4	686	2395	3	0	0	0	1253	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
110	4956	1	4642	0	0	0	1	1	2	1	0	0	0	2	0	0	4956	0	0	0	0	32	1	0	0	0	TBD	0	0	TBD	0	1	0	0	1	998	
111	1108	0	1009	0	1	0	0	0	0	1	0	0	0	4	0	0	1108	0	1	0	0	2221	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
112	4667	4	2410	0	0	1197	1	0	1	1	0	0	0	2	2	0	4667	0	1	610	0	2985	0	0	60	60	TBD	0	0	TBD	0	0	2	0	2	2780	
113	24543	0	18795	24541	0	0	9	0	9	11	0	5	13	15	1329	23212	5	1	0	0	2720	0	293	0	293	TBD	0	0	TBD	0	1	6	0	7	4245	
114	2198	1	2149	0	0	0	1	0	1	0	0	0	0	1	1	0	2198	1	1	0	0	650	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
115	23884	0	16329	0	0	7555	6	0	6	8	0	4	22	4	0	23884	1	1	0	267	235	0	318	0	318	TBD	0	0	TBD	0	1	6	0	7	1653	
116	27906	7	26701	0	2	0	2	0	2	8	0	0	4	2	0	27906	4	0	0	0	617	0	556	0	556	TBD	0	0	TBD	0	5	8	0	13	3946	
117	3889	0	3789	0	1	0	2	0	2	1	0	0	0	1	0	3889	0	0	0	0	14135	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	0	
118	58058	2	54558	0	0	3363	16	2	18	16	0	2	13	8	0	58058	6	0	0	0	133	1	841	0	841	TBD	0	0	TBD	8	0	8	0	8	0	600 ft from radio tower
119	5889	0	5776	0	0	0	1	1	2	0	0	0	4	2	0	5889	0	0	0	0	5514	0	0	0	0	TBD	0	0	TBD	3	0	1	0	1	0	
120	1836	0	1836	0	0	0	0	0	0	0	0	0	0	0	0	1836	0	0	0	0	5489	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	96	
121	1221	1	695	0	1	1221	0	0	0	0	0	0	0	0	0	1221	0	0	0	0	6908	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	310	
122	1198	0	0	1198	1	0	1	0	1	0	0	0	0	0	0	1198	0	0	0	0	6613	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	285	
123	288	0	220	288	0	0	1	0	1	0	0	0	0	0	0	288	0	0	0	0	6585	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
124	7844	1	1148	7844	0	0	2	1	3	1	2	0	2	1	0	7844	1	0	0	0	1068	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
125	2430	0	621	1809	0	0	1	0	1	1	0	0	0	0	0	2430	0	0	0	0	1503	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
126	6703	2	4736	0	0	1967	7	1	8	1	2	0	6	2	0	6703	0	0	0	0	1498	0	56	0	56	TBD	0	0	TBD	0	0	1	0	1	566	
127	2517	0	128	0	0	2517	3	0	3	1	0	0	0	0	0	2517	0	0	0	0	1502	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
128	4746	1	4746	0	0	0	1	0	1	2	0	0	0	0	0	4746	0	0	0	0	3217	0	120	0	120	TBD	0	0	TBD	0	0	1	0	1	0	
129	835	0	835	0	0	0	0	0	0	0	0	0	0	0	0	835	0	0	0	0	9728	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
130	2615	1	2058	0	2	0	1	0	1	1	0	0	0	0	0	2615	0	0	0	0	3935	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	0	

	Engineering											Socio-Economic							Environmental and Land Use																
Segment	Total Length	Number of major angles	New cleared ROW	Adjacent to existing ROW	Major T-Line Crossing	Adjacent to Road	Road Crossing	Highway Crossing	Total Road Crossing	Trail/Driveway Crossing	Railroad Crossing	Number of Residences within 50 ft	Number of Residences within 51-200 ft	Number of Residences within 300 ft	Distance in Residentially Developed Area	Distance in Non-Residentially Developed Area	Number of Commercial / Industrial Structures within 100 ft	Airport / Airfield within 3,350 ft	Distance in Agricultural field	Distance across agricultural field	Distance to Well	Wells within 200 ft	Estimated Distance in Known Forested Wetlands	Estimated Distance in Known Non-Forested Wetlands	Total Estimated Distance in Known Wetlands	Wetlands in ROW	Distance in Department of Defense Land	Historical Site within 500 ft	Archaeological Sites within ROW	Navigable River Crossing	Perennial Stream Crossing	Intermittent / Ephemeral Stream Crossing	Ditch Crossing	Total number of river / stream / ditch crossings	Distance across Floodplain	Notes
	ft	number	ft	ft	number	ft	number	number	number	number	number	number	number	number	ft	ft	number	number	ft	ft	ft	number	ft	ft	ft	acres	ft	number	number	number	number	number	number	number	ft	
200	1268	1	788	0	1	909	0	1	1	0	0	1	6	6	1268	0	0	0	0	0	3151	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	211	
201	39211	2	22626	30345	0	585	15	2	17	5	1	5	43	29	12730	26481	11	1	635	0	659	0	8372	0	8372	TBD	0	1	TBD	0	3	6	0	9	1873	
202	6307	0	0	6307	1	6307	2	0	2	1	0	2	43	39	6307	0	2	0	0	0	35	3	0	0	0	TBD	0	0	TBD	0	0	0	0	0	358	
203	5913	1	2490	3423	1	5913	0	0	0	3	0	0	5	10	3137	4776	1	1	0	0	3088	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	444	
204	20833	8	17385	0	1	913	7	1	8	5	0	2	40	20	108103	9830	4	1	0	0	8315	0	1917	0	1917	TBD	0	0	TBD	0	1	3	0	4	2156	40 ft from water tower
205	655	0	415	0	1	0	1	1	2	0	0	0	0	0	0	655	0	1	0	0	7583	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	159	
206	2250	0	1823	0	1	309	2	0	2	1	0	0	5	6	734	1516	0	1	0	0	7170	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	2250	
207	22408	2	19756	0	0	2117	7	0	7	5	0	1	16	14	5385	17023	4	1	0	0	4768	0	905	0	905	TBD	0	0	TBD	0	1	0	0	1	2495	
208	4201	0	3706	0	0	455	1	0	1	1	0	0	10	11	1830	2381	1	1	0	0	7194	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	132	
209	13057	1	11992	0	0	0	2	0	2	1	0	0	3	2	3076	9981	1	1	0	0	2567	0	2693	0	2693	TBD	0	2	TBD	0	2	4	0	6	3841	
210	1335	0	1335	0	0	0	0	0	0	0	0	0	0	0	0	1335	0	1	0	0	5335	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
211	4477	0	4444	0	0	0	2	0	2	1	0	0	0	0	0	4477	0	1	0	0	6482	0	268	0	268	TBD	0	0	TBD	0	1	0	0	1	0	
212	25056	6	19978	0	1	18814	0	1	1	7	0	0	0	0	0	25056	0	1	0	0	4303	0	427	0	427	TBD	0	0	TBD	0	2	6	0	8	804	
213	23980	4	22759	0	1	2188	0	1	1	7	0	1	9	4	2471	21489	0	1	0	0	4786	0	1513	0	1513	TBD	0	0	TBD	0	2	6	0	8	1610	
214	4719	0	4464	0	0	0	0	1	1	0	0	0	0	0	0	4719	0	0	0	0	3357	0	215	0	215	TBD	0	0	TBD	0	2	0	0	2	579	
215	14880	2	11636	0	1	0	3	1	4	1	0	3	9	8	5468	9412	2	1	0	0	7376	0	1428	0	1428	TBD	0	0	TBD	0	0	6	0	6	1656	
216	1476	0	1245	0	0	0	0	1	1	0	0	0	0	0	0	1476	0	1	0	0	9251	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
217	6291	0	6291	0	0	0	0	0	0	0	0	0	0	0	0	6291	0	1	0	0	3338	0	1655	0	1655	TBD	0	0	TBD	0	0	3	0	3	2600	
218	452	0	0	0	0	452	0	0	0	0	0	0	0	0	0	452	0	0	0	0	2932	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
219	7797	2	7125	0	0	7797	0	1	1	1	0	0	0	0	0	7797	0	1	0	0	2932	0	630	0	630	TBD	0	0	TBD	0	0	3	0	3	3102	
220	2952	0	2338	0	0	924	0	0	0	1	0	0	2	2	500	2452	0	0	0	0	1719	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	0	
221	7264	1	5216	0	0	0	0	1	1	2	0	1	1	4	0	7264	1	0	0	0	1719	0	308	0	308	TBD	0	0	TBD	0	0	1	0	1	45	
222	5213	3	5145	0	0	1776	2	1	3	1	0	0	7	7	1461	3752	1	0	0	0	1711	0	0	0	0	TBD	0	0	TBD	0	1	2	0	3	1250	
223	1523	0	1260	0	0	0	0	0	0	0	0	0	0	0	0	1523	0	0	0	0	5273	0	413	0	413	TBD	0	0	TBD	0	1	0	0	1	1523	
224	5239	0	5239	0	0	0	1	0	1	1	0	0	0	0	0	5239	0	0	0	0	3416	0	797	0	797	TBD	0	0	TBD	0	2	1	0	3	3103	
225	8747	1	7600	0	0	0	3	1	4	1	1	1	3	3	0	8747	1	0	0	0	2660	0	108	0	108	TBD	0	0	TBD	0	0	0	0	0	0	
226	12839	0	11140	0	0	3528	7	0	7	1	0	2	6	6	0	12839	3	0	0	0	2632	0	251	0	251	TBD	0	0	TBD	0	1	3	0	4	0	
228	866	0	866	0	0	0	0	0	0	0	0	0	1	2	0	866	0	0	0	0	5558	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	0	
229	9125	0	6858	0	1	0	2	1	3	4	1	1	1	1	0	9125	2	0	0	0	825	0	0	0	0	TBD	0	0	TBD	0	0	4	0	4	0	
230	12797	0	10975	0	0	0	2	0	2	0	2	0	9	12	2778	10019	1	0	0	0	828	0	106	0	106	TBD	0	0	TBD	0	0	1	0	1	0	
231	21456	0	17910	0	6	19802	8	1	9	6	1	2	17	7	7552	13906	4	0	0	0	260	0	1059	0	1059	TBD	10934	1	TBD	0	1	5	0	6	900	
232	2817	0	2456	0	0	0	2	0	2	1	0	0	2	0	0	2917	0	0	0	0	2716	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
236	2773	0	2773	0	1	0	0	0	0	0	0	0	0	0	0	2773	0	0	0	0	4605	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	

5 & 8

	Engineering											Socio-Economic							Environmental and Land Use																				
Segment	Total Length ft	Number of major angles number	New cleared ROW ft	Adjacent to Existing ROW ft	Major T-Line Crossing number	Adjacent to Road ft	Road Crossing number	Highway Crossing number	Total Road Crossing number	Trail/Driveway Crossing number	Railroad Crossing number	Number of Residences within 50 ft number	Number of Residences within 51-200 ft number	Number of Residences within 300 ft number	Distance in Residentially Developed Area ft	Distance in Non-Residentially Developed Area ft	Number of Commercial / Industrial Structures within 100 ft number	Airport / Airfield within 1,350 ft number	Distance in Agricultural field ft	Distance across agricultural field ft	Distance to Well ft	Wells within 200 ft number	Estimated Distance in Known Forested Wetlands ft	Estimated Distance in Known Non-Forested Wetlands ft	Total Estimated Distance in Known Wetlands ft	Wetlands in ROW acres	Distance in Department of Defense Land ft	Historical Site within 500 ft number	Archaeological Sites within ROW number	Navigable River Crossing number	Perennial Stream Crossing number	Intermittent / Ephemeral Stream Crossing number	Ditch Crossing number	Total number of river / stream / ditch crossings number	Distance across Floodplain ft	Notes
300	3304	1	1594	0	0	0	1	1	2	0	0	0	5	9	3304	0	1	0	0	0	4445	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	2412	
301	2304	1	555	0	0	0	2	1	3	1	0	0	0	0	1954	350	0	0	0	0	7153	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	1812	
302	4293	3	2596	0	0	1876	2	1	3	1	1	0	0	1	1959	2544	3	0	0	0	6573	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	1674	
303	4503	0	3543	0	0	0	0	0	0	1	1	0	0	0	0	4503	0	0	0	0	3957	0	450	0	450	TBD	0	0	TBD	0	0	0	0	0	470	
304	7063	1	5485	0	0	2366	1	0	1	5	1	0	2	0	0	7063	0	0	0	144	2196	0	0	0	0	TBD	0	0	TBD	0	2	6	0	2	671	
305	3391	0	3391	0	0	0	0	0	0	0	0	0	0	0	0	3391	0	0	0	0	3989	0	466	0	466	TBD	0	0	TBD	0	0	1	0	1	490	
306	1682	0	1508	0	0	0	1	0	1	0	0	0	0	0	0	1682	0	0	0	155	2159	0	201	0	201	TBD	0	0	TBD	0	2	0	0	2	1145	
307	16172	1	13944	0	1	8093	4	0	4	1	1	0	6	1	1620	14552	0	0	0	435	1632	0	3651	0	3651	TBD	10753	1	TBD	0	1	1	0	2	3304	
308	25267	3	23635	0	1	24333	8	0	8	1	1	1	1	0	0	25267	0	0	0	0	3838	0	3514	0	3514	TBD	14555	0	TBD	0	1	6	0	7	3556	near water tower
309	16643	0	10938	0	0	1327	5	0	5	3	0	0	0	3	0	16643	0	0	0	0	1546	0	373	0	373	TBD	15422	1	TBD	0	1	1	0	2	13433	
310-A	7376	0	6694	0	0	569	1	0	1	1	0	0	0	0	0	7376	0	0	0	0	719	0	0	0	0	TBD	7376	0	TBD	1	0	0	0	1	1859	
310-B	17413	0	14717	0	0	0	4	0	4	2	0	0	0	0	0	17413	0	0	0	0	719	0	281	0	281	TBD	4935	0	TBD	0	3	3	0	4	4478	
311-A	3065	0	2695	0	0	0	0	0	0	1	0	0	0	0	0	3065	0	0	0	0	293	0	142	0	142	TBD	3065	2	TBD	0	1	0	0	1	2683	
311-B	17309	0	16647	0	0	0	4	0	4	1	0	0	0	0	0	17309	0	0	0	0	364	0	1689	0	1689	TBD	10461	4	TBD	0	4	2	0	6	8813	
312	2314	0	791	0	0	0	2	0	2	0	0	0	0	0	0	2314	0	0	0	0	7013	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
315	4485	1	4260	0	0	0	1	0	1	0	0	0	0	0	0	4485	0	0	0	0	5927	0	0	0	0	TBD	0	0	TBD	0	0	1	0	1	0	
317	2831	0	2318	0	0	0	1	0	1	2	0	0	0	0	0	2996	1	0	0	0	8549	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
318	2542	0	2542	0	0	0	0	0	0	1	0	0	0	0	0	2542	0	0	0	0	4350	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
319	11821	1	8547	0	0	1618	2	0	2	8	0	1	5	0	0	11821	1	0	735	1334	8856	0	126	0	126	TBD	0	2	TBD	0	0	2	0	2	2715	
320	3800	0	3704	0	0	0	0	0	0	2	0	0	0	0	0	3800	0	0	0	0	6072	0	160	0	160	TBD	0	0	TBD	0	0	1	0	1	637	
321	8493	2	8493	7502	0	0	0	0	0	1	0	0	0	0	0	8493	0	0	0	0	3558	0	1012	0	1012	TBD	0	1	TBD	0	0	4	0	4	1413	
322	4824	0	4659	3774	1	0	0	0	0	1	0	0	0	0	0	4824	0	0	0	0	4200	0	779	0	779	TBD	0	0	TBD	0	0	3	0	3	140	
324	7846	0	7731	0	1	0	0	0	0	4	0	0	0	0	0	7846	0	0	0	0	3751	0	531	0	531	TBD	0	0	TBD	0	0	6	0	6	1222	
325	4367	1	4367	0	0	0	0	0	0	2	0	0	0	0	0	4367	0	0	0	0	6247	0	309	0	309	TBD	0	0	TBD	0	0	1	0	1	429	
326	3820	0	3820	0	0	0	0	0	0	1	0	0	0	0	0	3820	0	0	0	0	6317	0	650	0	650	TBD	0	1	TBD	0	0	2	0	2	1655	
327	2141	0	1519	0	0	0	0	0	0	2	0	0	0	0	0	2141	0	0	0	0	10078	0	0	0	0	TBD	0	0	TBD	0	1	0	0	1	0	
329	3794	1	2443	0	0	0	1	0	1	0	0	0	0	0	0	3794	0	0	0	0	9906	0	0	0	0	TBD	0	0	TBD	0	0	0	0	0	0	
330	7979	2	7771	0	0	646	3	0	3	3	0	0	0	0	0	7979	1	0	0	0	5466	0	673	0	0	TBD	0	0	TBD	0	0	3	0	3	0	
331	5711	0	5426	0	0	549	2	0	2	0	0	0	0	0	0	5711	0	0	0	0	284	0	213	0	213	TBD	5711	2	TBD	0	1	0	0	1	543	