

4.0 EXISTING CONDITIONS

Section 4 describes the existing rail corridors and the existing conditions within the study area. The study area, shown in **Figure 4-1**, includes Lee County and portions of Pontotoc and Union Counties.

4.1 RAILROADS

Railroads have been a significant feature of the transportation infrastructure in Northeast Mississippi since the 1800's. Although rail corridors have been created and then abandoned over the years, several major corridors remain key transportation conduits within the region. Two predominately north-south rail corridors are located within the study area surrounding the City of Tupelo. The rail lines within the study area represent portions of a larger system of rail lines operated by the respective railroad companies. To better discuss the rail characteristics, the rail information presented herein provides a more complete picture of the branch lines within the study area.

Burlington Northern Santa Fe Railway

The Burlington Northern Santa Fe Railway (BNSF) has a rail line that runs between Memphis, Tennessee and Birmingham, Alabama. Some of cities located along the route are:



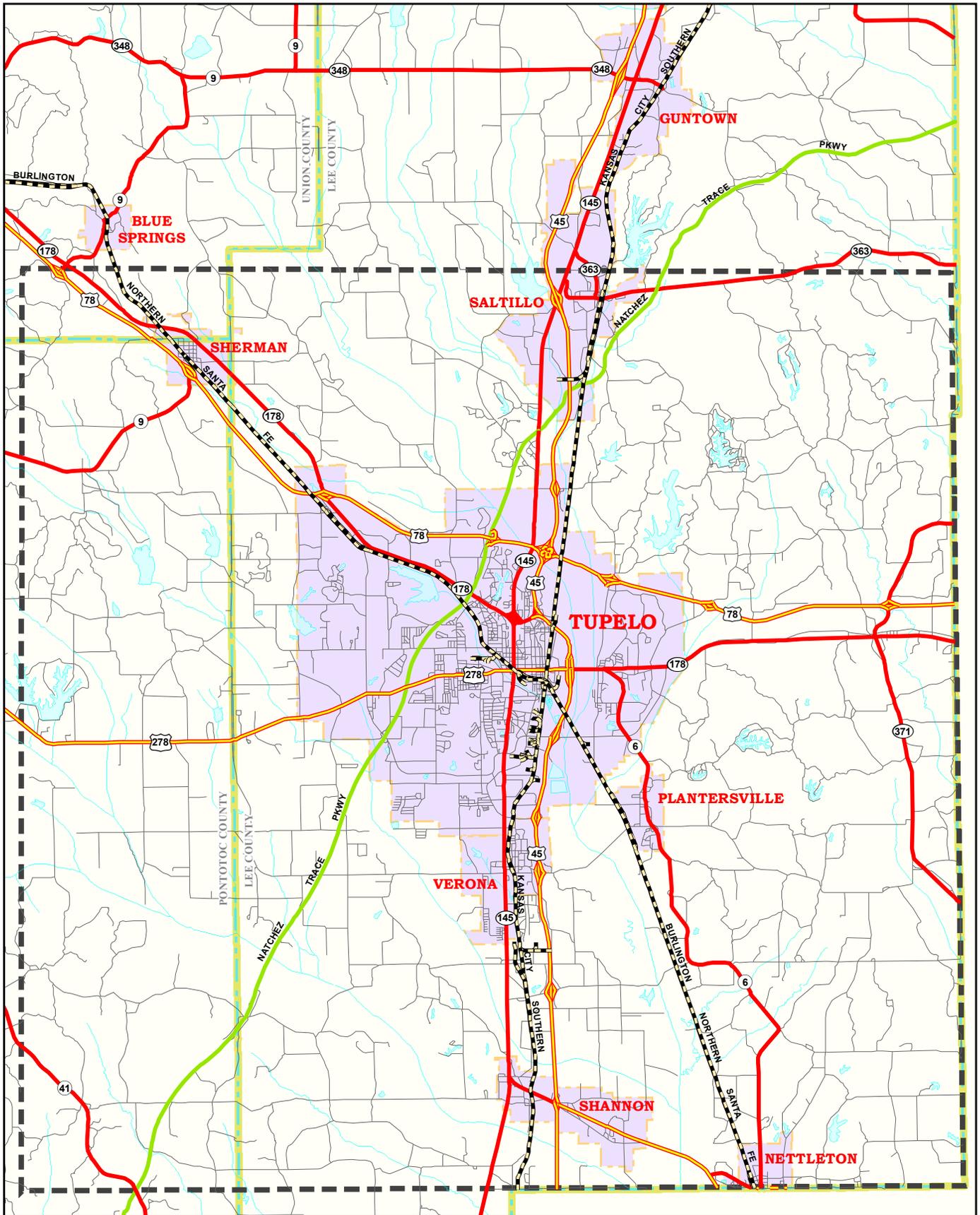
Memphis, Olive Branch, New Albany, Tupelo, Amory, and Birmingham. The segment of the line examined for this study was from New Albany, Mississippi to Amory, Mississippi. This segment is part of the Birmingham Subdivision of the Springfield Division of the BNSF Railway. The Birmingham Subdivision has an intermediate crew change point at Amory, Mississippi which is the away-from-home terminal for both crew districts. While geographically running from the northwest to the southeast, the subdivision is considered to be a north – south railroad operation. The BNSF line crosses and has a limited interchange with the Kansas City Southern (KCS) Railway near downtown Tupelo, Mississippi. The track charts for this segment of the BNSF Railway are included in the “Current Operations Technical Memorandum” in **Appendix D**. The method of operation on this subdivision is Centralized Traffic Control (CTC), with the train dispatcher located in the BNSF network operations center in Fort Worth, Texas.

Kansas City Southern Railway

The KCS Railway operates from Corinth, Mississippi to Meridian, Mississippi. Some of cities located along the route are: Corinth, Baldwin, Tupelo, Artesia, and Columbus. The segment examined for this study was from Baldwin, Mississippi to Okolona, Mississippi. This railroad is part of the Artesia Subdivision. There is an intermediate crew change point at Artesia, Mississippi. Both Artesia and Corinth are home terminals for the crews with one crew home based at each location.



The track charts for this segment of the KCS are included in the “Current Operations Technical Memorandum” in **Appendix D**.



Map Legend	
	Prim. Road
	Sec. Road
	Road
	Study Area
	Cities
	Lakes
	Rivers
	Railroad
	US Highway
	State Highway
	Co. Boundary
	N'tnl Parkway

Tupelo Railroad Relocation Planning and Environmental Study

Study Area

Figure 4-1

Miles

0 1 2 3

This subdivision runs geographically north to south. The method of operation on this subdivision is Direct Traffic Control (DTC) with yard limits in the Tupelo and Saltillo areas. DTC is a method of operation where the rail segment is divided into blocks. The train dispatcher in Shreveport, Louisiana issues verbal authority for trains or track cars to operate in those blocks.

4.1.1 Rail Characteristics

The following is a discussion of the various characteristics of both the BNSF and KCS rail lines. The data were compiled from available track charts received from each railroad. Additional data is provided in the “Current Operations Technical Memorandum” in **Appendix D**.

4.1.1.1 Physical Plant

The physical plant components can be described as the rail, crossties, and roadbed surface. The following is a brief description of the physical plant for the BNSF and KCS lines.

BNSF Line

The BNSF Line utilizes several different rail sections for the corridor. Overall the main line infrastructure appears to be well maintained and consists of a mixture of 132 pound (#), 136#, and 141# continuously welded rail (CWR). The rail was installed between 1957 and 2001. The crossties for the entire rail corridor were replaced between 1990 and 2001. Wood crossties are utilized along the corridor except where concrete ties are utilized in curves over 3 degrees. The concrete ties were installed in the late 80’s and are currently experiencing rail seat abrasion problems. Most of the passing sidings have number 15 turnouts while a few have number 20 turnouts. Industrial siding turnouts are all number 10 turnouts. There are defective equipment (hot bearing and dragging equipment) detectors spaced approximately every twenty (20) miles.

KCS Line

The KCS Line utilizes several different rail sections for the corridor. The mainline track structure consists of 115# CWR south of Tupelo and 90# jointed rail north of Tupelo. The rail was installed between 1938 and 1980. Some wood crossties were replaced between 2002 and 2003 for the entire rail corridor. The line is restricted to four axle locomotives and 268K pound car loads. There are hot bearing and dragging equipment detectors spaced approximately every 20 miles south of Tupelo. No detectors are installed north of Tupelo.

4.1.1.2 Track Vertical Geometry

The track vertical geometry refers to the vertical grades along the roadbed. The vertical geometry of the track can affect the operational characteristics of rail traffic. The train manifest, consisting of number and weight of rail cars, determines the initial requirements for locomotive power. The vertical geometry also is a factor in determining the required locomotive power.

BNSF Line

The BNSF Line contains vertical grades ranging from level to 1%. The ruling grade for the BNSF is 1%.

KCS Line

The KCS Line contains vertical grades ranging from level to 0.83%. The ruling grade for the KCS is 1%.

4.1.1.3 Track Horizontal Geometry

The track horizontal geometry refers to the tangents and curve between the tangent along the roadbed. The horizontal geometry of the track can affect the operational characteristics of the rail traffic.

BNSF Line

The BNSF Line contains horizontal curves ranging from 0°-57' to 6°-00'.

KCS Line

The KCS Line contains horizontal curves ranging from 0°-30' to 3°-00'.

4.1.1.4 Right-of-Way

Railroad right-of-way widths were taken from the track charts provided by the individual railroads. The exact location of the track within the right-of-way has not been determined.

BNSF Line

The BNSF Line right-of-way width within the study area is typically 100 feet. The right-of-way varies from 100 feet to 250 feet near the sidings located in Sherman, Belden, Tupelo, Plantersville, and Nettleton.

KCS Line

The KCS Line right-of-way width within the study area is typically 100 feet. The right-of-way width varies from 100 feet to 400 feet near the sidings located in Shannon, Verona, Tupelo, and Saltillo.

4.1.1.5 Operating Speed

The operating speed is the maximum allowable speed that a train may travel. The trains operate at lower speeds at a number of locations based on both geometric constraints and speed restrictions. Portions of both corridors have speed restrictions due to local ordinances.

BNSF Line

The operating speed limit typically is 60 miles per hour (mph). However, the speed limit does vary from 20 mph to 60 mph. As trains approach Tupelo, the speed limit begins to decrease from the normal operating speed of 60 mph. The speed limit through downtown Tupelo is 20 mph. The speed restriction is in part due to the lack of electric lock switches in the downtown Tupelo area.

KCS Line

The operating speed limit on the line south of Tupelo is 40 mph. The speed limit through downtown Tupelo is 20 mph. The speed limit for the segment north of Tupelo should be 25 mph, but has been reduced to 10 mph due to poor track conditions. KCS is planning to upgrade the track to return the speed limit back to 25 mph within the next two years (2006-2007).

4.1.1.6 Rail Traffic

Various types of trains operate on the rail lines within the area on a weekly basis. The types of trains include bulk (coal and rock), intermodal, autorack, manifest, and local trains. No passenger traffic is present on either the BNSF or KCS line.

BNSF Line

Currently, the Birmingham Subdivision averages twenty (20) to twenty-five (25) trains per day totaling sixty-five (65) to seventy-five (75) million gross tons (MGT) annually. These consist of one (1) local, four (4) automobile trains, two (2) intermodal trains, two (2) double stack trains, six (6) merchandise trains, eight (8) loaded and empty coal trains, and one (1) taconite train. While most trains are restricted to 7,500 feet in length, coal trains operate with 135 cars and five (5) locomotives (approximately 7,800 feet). The length restriction is in place due to the length of the sidings on the subdivision.

KCS Line

Current train traffic in the Tupelo area consists of one (1) through freight train per day totaling two (2) to three (3) MGT annually. The train alternates operational direction by day, moving northbound one day and southbound the next day. The train usually passes through Tupelo during the middle of the night and usually sets off and picks up cars in Tupelo. The train averages

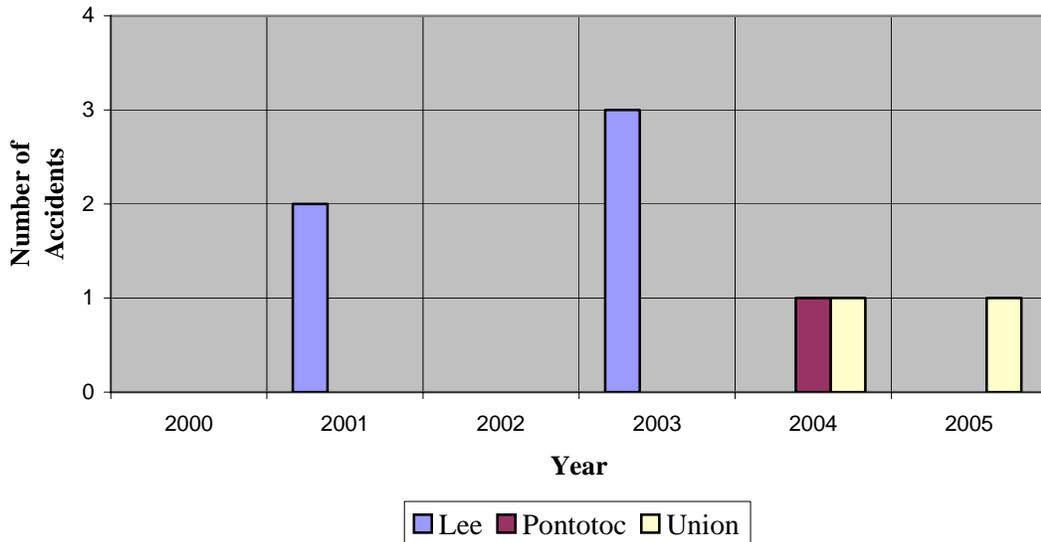
sixty-five (65) to ninety-five (95) cars in length. The only other traffic for KCS in the Tupelo area is the local which operates out of Tupelo and works between Okolona and Baldwin. This train averages ten (10) to twenty-five (25) cars and works south from Tupelo on Monday, Wednesday, and Friday and north of town on Tuesday and Thursday.

4.1.2 Train Accident Data

Data were collected for train accidents and trespass casualties (deaths and injuries) from the Federal Railroad Administration (FRA) for each of the three counties (Lee, Pontotoc, and Union) for the years from 2000 to October, 2005. Train accidents are those accidents within the railroad right-of-way not associated with vehicular crossings. The trespass casualties are defined as deaths and injuries to unauthorized personnel within the railroad right-of-way.

Figure 4-2 presents the data for train accidents within the three county area. Data were available for all years. As shown, two (2) years did not have a recorded accident.

**Figure 4-2
 Train Accidents Per County**



Data for trespass casualties (deaths and injuries) within the railroad right-of-way were available for all three counties for the previously specified timeframe. One (1) causality for the period was recorded in Lee County during 2005.

4.2 ROADWAY CROSSINGS

Over the years, society has moved from rail to automobile as the primary mode of transportation. With the availability of automobiles, the railroads had to be crossed to provide the roadway network in place today. Railroads in the study area are crossed every type of roadway, from low-speed local residential street to high-speed limited access highways. The type of railroad crossing depends on type of roadway facility to be traversed. For example, local streets may have only passive crossbuck signs, urban arterials may have automated gates and flashers to block the crossing for the trains, or high speed highways have grade-separation of the rail from the vehicular traffic. Information on crossings was gathered from FRA Crossing Database, BNSF and KCS track charts, available mapping, and field observations.

4.2.1 Grade-Separated

The grade-separation of vehicular and train traffic provides numerous benefits to the users of both modes of transportation. The vehicular traffic does not experience any delay with the grade-separation. Grade-separations eliminate the potential for an accident between the train and the automobile. The grade-separated locations for the BNSF KCS lines within the study limits are as follows:

BNSF Line (5 separations)

- | | |
|------------------|-------------------------|
| ▪ MS Highway 178 | ▪ Natchez Trace Parkway |
| ▪ US Highway 78 | ▪ US Highway 45 |
| ▪ Coley Rd. | |

KCS Line (7 separations)

- | | | |
|-----------------|-----------------|-------------------------|
| ▪ US Highway 45 | ▪ Franklin St. | ▪ Natchez Trace Parkway |
| ▪ Green St. | ▪ US Highway 45 | |
| ▪ Elliott St. | ▪ US Highway 78 | |

4.2.2 At-Grade Crossings

Some roadways cross the rail line at-grade (the same level). These at-grade crossings are controlled by signs, signals or signals with automated gates. The train has the right-of-way, causing the vehicular traffic to stop and wait for the train to pass. At-grade crossings introduce a conflict point between rail and roadway traffic. The at-grade locations for the BNSF and KCS lines within the study limits are as follows:

BNSF Line (53 crossings)

- | | | |
|------------------------|------------------------|------------------|
| ▪ County Line Rd. | ▪ Jackson St. | ▪ Greene St. |
| ▪ First Ave. | ▪ Rankin Blvd. | ▪ Spring St. |
| ▪ Third St. | ▪ Blair St. | ▪ Elizabeth St. |
| ▪ Sixth Ave. | ▪ Jefferson Ave. | ▪ Eason Blvd. |
| ▪ Endville Rd. | ▪ Park Ave. | ▪ Veterans Blvd. |
| ▪ Colonial Estates Rd. | ▪ Gloster St./Main St. | ▪ Poplar St. |
| ▪ Trace Ave. | ▪ Church St. | ▪ Central St. |
| | | ▪ CR 520 |

- Oak Rd.
- Pine Rd.
- Public (2)
- Private (27)

KCS Line (33 crossings)

-
- | | | |
|------------------|--------------------|-----------------------|
| ▪ CR 506 | ▪ Westmoreland St. | ▪ Barnes Crossing Rd. |
| ▪ Mallard St. | ▪ Whitaker Dr. | ▪ Old Saltillo Rd. |
| ▪ CR 484 | ▪ Eason Blvd. | ▪ Oak St. |
| ▪ Industrial Dr. | ▪ Plant Rd. | ▪ Mobile St. |
| ▪ Carr Vista Rd. | ▪ Elizabeth St. | ▪ E. Water St. |
| ▪ Second St. | ▪ Clark St. | ▪ Cemetery Rd. |
| ▪ E. Main St. | ▪ Main St. | ▪ Public (2) |
| ▪ Eighth St. | ▪ Jefferson St. | ▪ Private (8) |
| ▪ E. Tenth St. | | |

In Union County, there is one (1) at-grade crossing on the BNSF line within the study area. In Pontotoc County, there are seven (7) at-grade crossings on the BNSF line. In Lee County, there are forty-five (45) at-grade crossings on the BNSF line. The thirty-three (33) at-grade crossings on the KCS line within the study area are all located in Lee County.

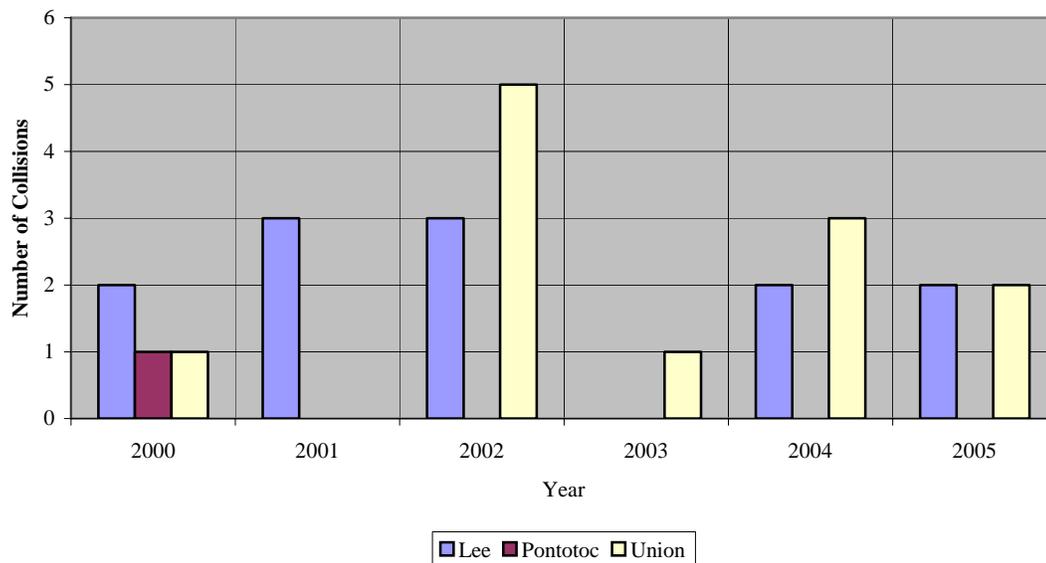
4.2.3 At-Grade Crossing Accident Data

At-grade crossing accident data were collected from the FRA. Available data were collected for each of the three counties (Lee, Pontotoc, and Union) for the years from 2000 to October, 2005. Data collected were for pedestrian/train collisions and fatalities and at-grade crossings for motorized vehicle/train collisions.

A single casualty for pedestrian/train collisions and fatalities was recorded for the timeframe researched in Lee County. There were no reported causalities for Pontotoc and Union Counties.

Figure 4-3 summarizes the data for the three county areas for motorized vehicle/train collisions at at-grade crossings.

Figure 4-3
Motorized Vehicle/Train Collisions at At-Grade
Crossing Per County



4.3 PROPOSED IMPROVEMENTS IN THE REGION

Data were obtained for proposed developments and roadways within the study area, which could have an impact on the viability of the proposed relocation alternatives. The data were collected during field visits and discussions with local officials from the City of Tupelo and the Mississippi Department of Transportation.

4.3.1 Proposed Developments

Several residential subdivisions and an industrial site were identified for inclusion to the existing data.

Residential Subdivisions

The residential subdivisions observed on a January 2006 site visit were added to the existing data. These include Heardtown Estates, Mt. Vernon Acres, North Ridge Crossing, Pritchard Gardens, Westwind, The Summit, Lakeview Gardens, Edgewater Cove, and Ravenwood. These subdivisions had existing homes constructed and/or several lots under construction with new homes.

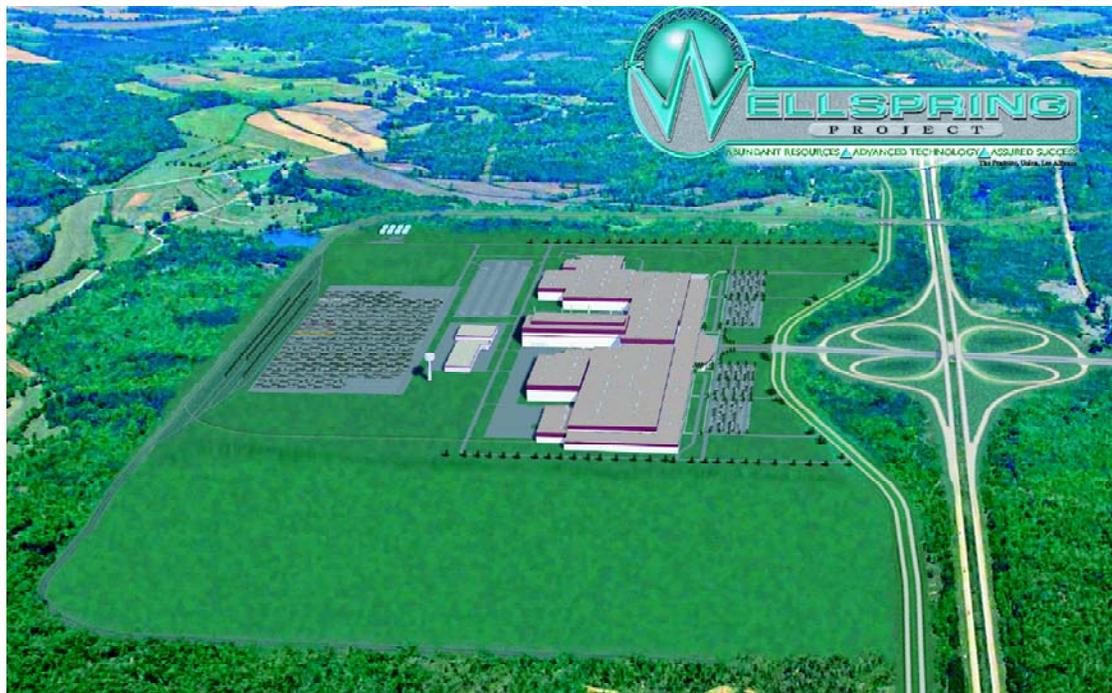


Two subdivisions within study area.

Wellspring Project

The industrial site is part of a collaborative effort by Pontotoc, Union, and Lee Counties (PUL). As discussed in **Section 3.2**, the PUL Alliance (Wellspring Project) is an effort to bring a major automotive assembly factory to the region. The site will include improvements to both the roadway and railroad networks in the vicinity, shown in **Figure 4-4**. The BNSF has agreed on the alignment and extension of a proposed spur off their mainline, which is situated northeast of the site.

Figure 4-4
Wellspring Conceptual Layout



c
 Source: Wellspring Project Website, <http://www.cdfms.org/wellspring/index.cfm>

4.3.2 Roadway Improvements

The Tupelo Major Thoroughfare Program Oversight and Lobbying Committee has developed a list of roadway improvements planned within the study area. The committed roadway improvements have been advanced by the Vision 21 Highway Program of the Mississippi Department of Transportation, and as proposed as a part of the Project Wellspring development of the PUL Alliance. The “E&C Highway Network Technical Memorandum” provided in **Appendix B** contains additional information on the committed roadways within the project study area.

4.3.2.1 Committed Primary Federal/State Highways

There are three state highways located within the proposed study area that are scheduled for construction in the Vision 21 program. Two of these highways, MS Highways 9 and 15, are existing highways that will be widened and improved, while the third, MS Highway 76, will be a new four-lane divided roadway from MS Highway 6 near Pontotoc, Mississippi, to US Highway 45 south of Tupelo.

Federal Highway Administration (FHWA) was notified that US 78 between Memphis, Tennessee and Birmingham, Alabama is to be designated as an interstate corridor, I-22. However, no funds have been allocated to this project by March 2006.

4.3.2.2 Committed Secondary State Highways

MS Highway 6 is proposed for relocation to the south of the City of Tupelo. The existing highway goes through the center of downtown Tupelo. The proposed route will provide an alternative east-west roadway around Tupelo. The proposed highway will begin from the existing Green Street interchange of US Highway 45 south of downtown Tupelo and extend west to the existing MS Highway 6 west of Coley Road.

4.3.2.3 Committed City Streets

The Tupelo Major Thoroughfare Program Phase IV, shown in **Figure 4-5**, involves the improvement of several existing local streets and also the construction of the Coley Road extension. The Coley Road extension would extend from the northern terminus of Coley Road to the north, with an interchange with US Highway 78, following the northern city limits to the east over the Natchez Trace Parkway and tying into Barnes Crossing Road

Three (3) widening and improvement projects include the following:

- East Main Street from US Highway 45 to MS Highway 6;
- West Jackson Street from the Natchez Trace Parkway to McCullough Boulevard; and

- South Gloster Street from Garfield Street to Green Street / MS Highway 76.

All of these projects will involve the widening of the existing street to provide either a three-lane or five-lane section with a continuous turn lane.

4.4 NATURAL AND BIOLOGICAL FEATURES

GIS data was collected from the Mississippi Automated Resource Information System (MARIS) Technical Center. Data were collected in areas of floodplain, wetlands, natural features, biological features, cultural features, and community services.

4.4.1 FEMA Floodplain

This database is derived from the Flood Insurance Rate Maps (FIRMs) published by the Federal Emergency Management Agency (FEMA), shown in **Figure 4-6**. Specifications for the horizontal control flood data files are consistent with those required for mapping at a scale of 1:24,000. The FIRMs, containing information about flood zones, are the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP).

For Lee County, the data is current as of 1996. For Pontotoc County, the data were created by digitizing the FIRMs available from FEMA. The Pontotoc County FIRMs represent information dated 1987. No floodplain data is available for Union County (either from FEMA or Union County).

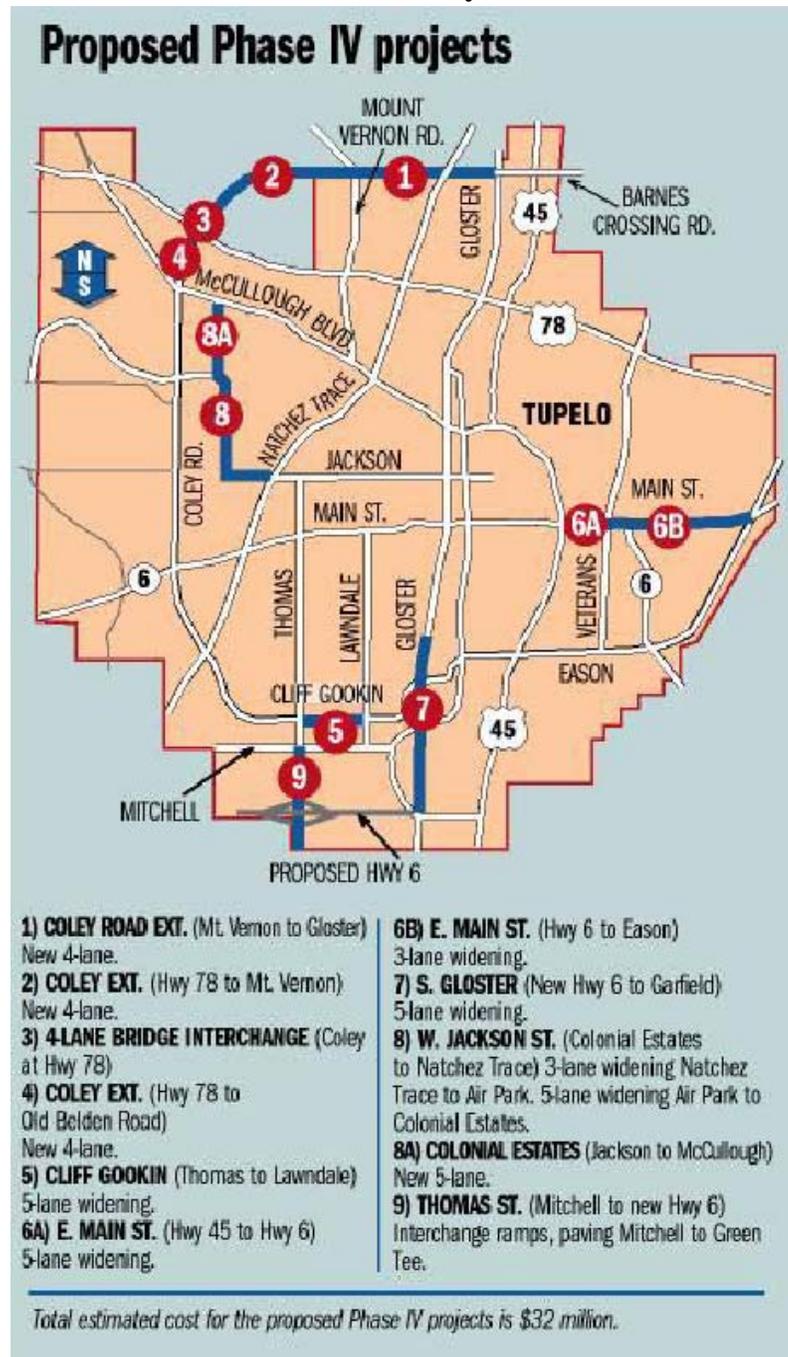
4.4.2 National Wetlands Inventory

This database contains information on the location and classification of wetlands based on the National Wetlands Inventory (NWI), shown in **Figure 4-7**. The United States Fish and Wildlife Service maintains the database, last updated on February 19, 2003. The data was collected to meet U.S. Fish & Wildlife Service's mandate to map the wetlands and deepwater habitats of the United States.

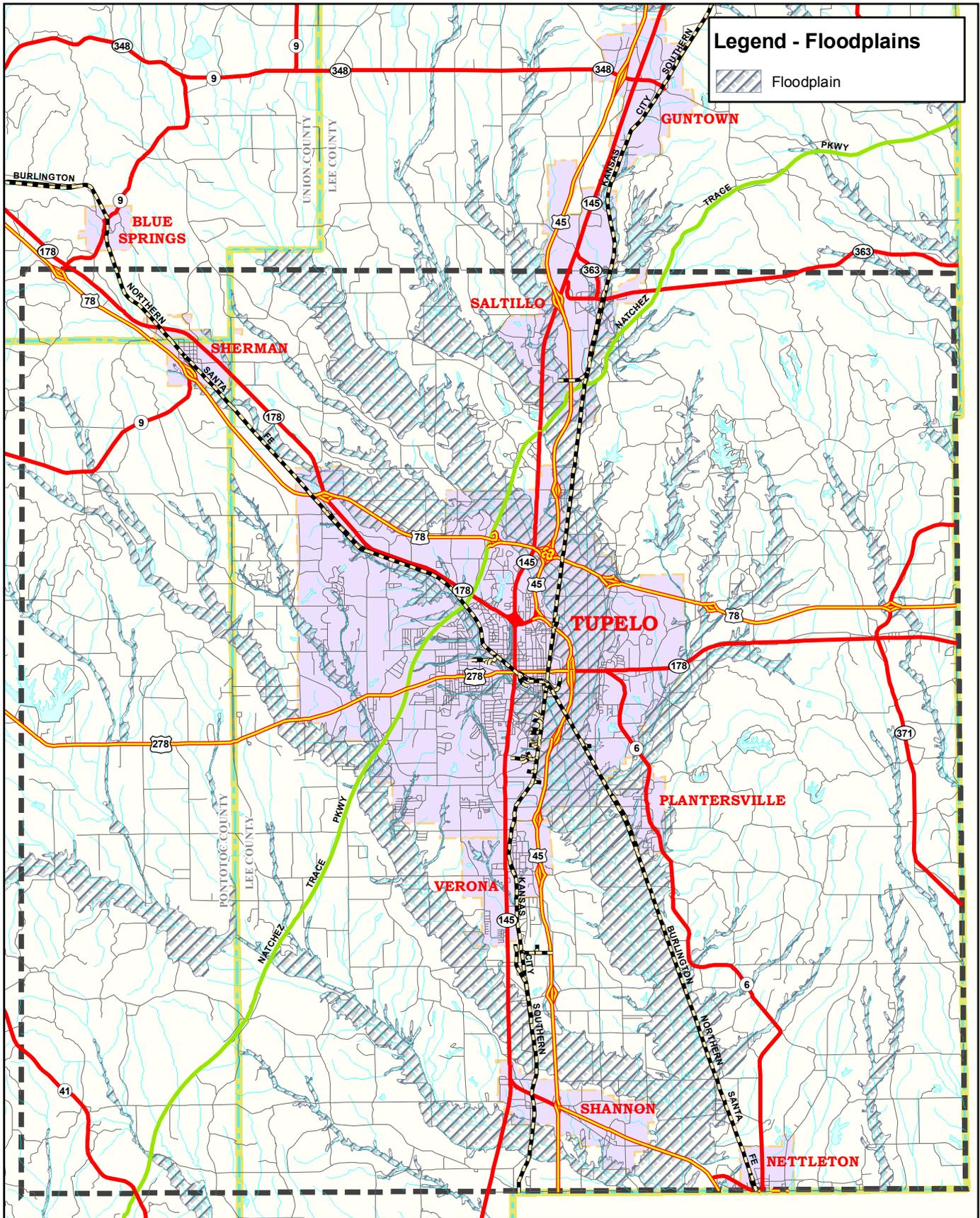
4.4.3 Environmentally Sensitive Areas

This dataset contains the approximate locations of rare and endangered species and unique ecological areas, shown in **Figure 4-8**. The data is updated regularly by the Natural Heritage Program. The dataset were first published in May 2001 by the Natural Heritage Program of the Mississippi Department of Wildlife, Fisheries, and Parks.

Figure 4-5
 Committed Roadways



Source: Tupelo Major Thoroughfare Program Oversight and Lobbying Committee



Legend - Floodplains
 Floodplain

Map Legend 	Prim. Road	Cities	US Highway
	Sec. Road	Lakes	State Highway
Road	Rivers	Co. Boundary	Study Area
Railroad	N'tnl Parkway		

**Tupelo Railroad Relocation
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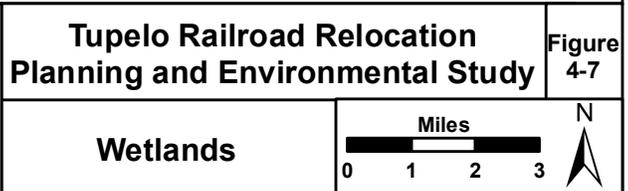
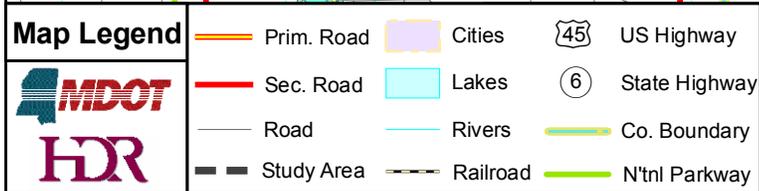
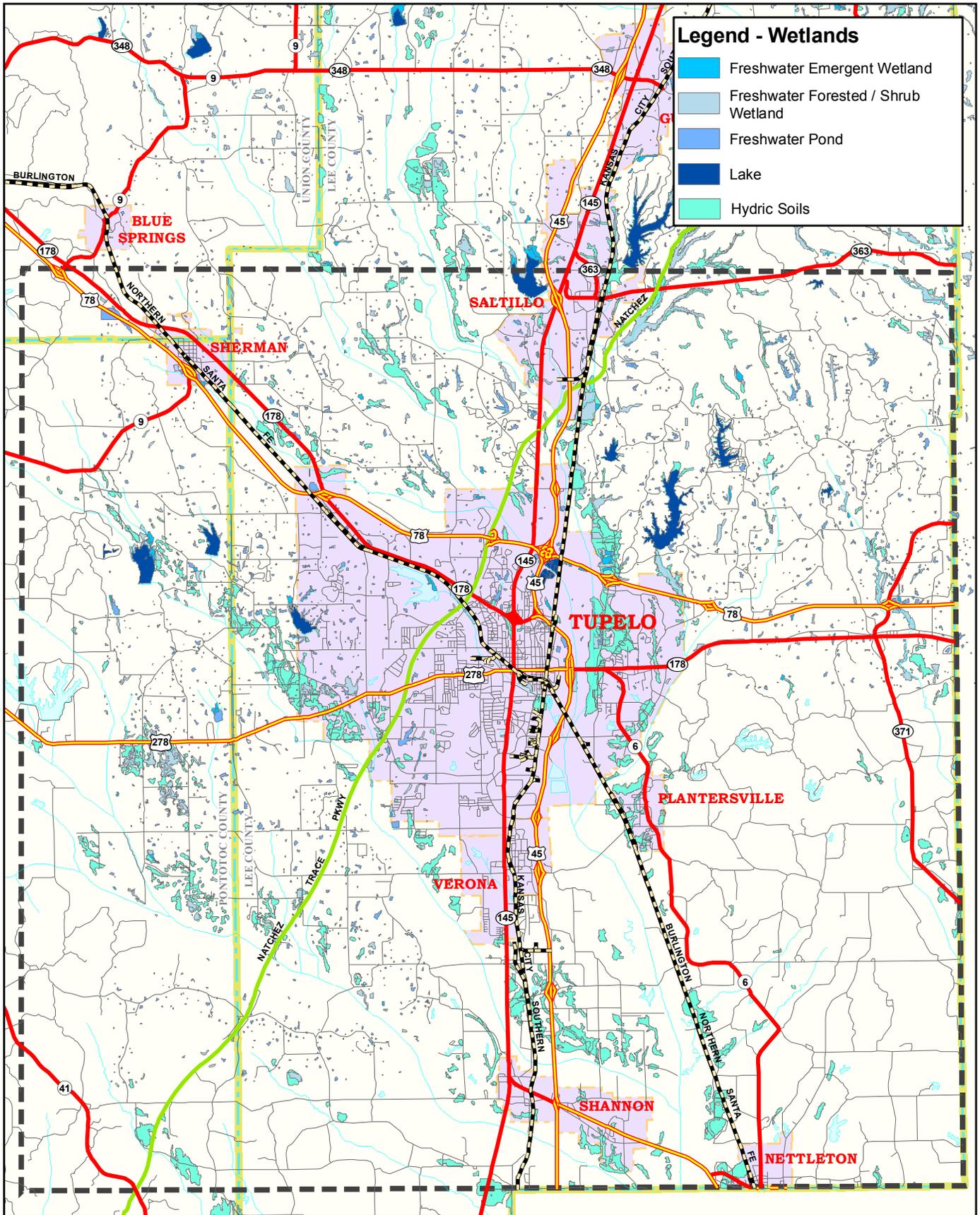
Figure 4-6

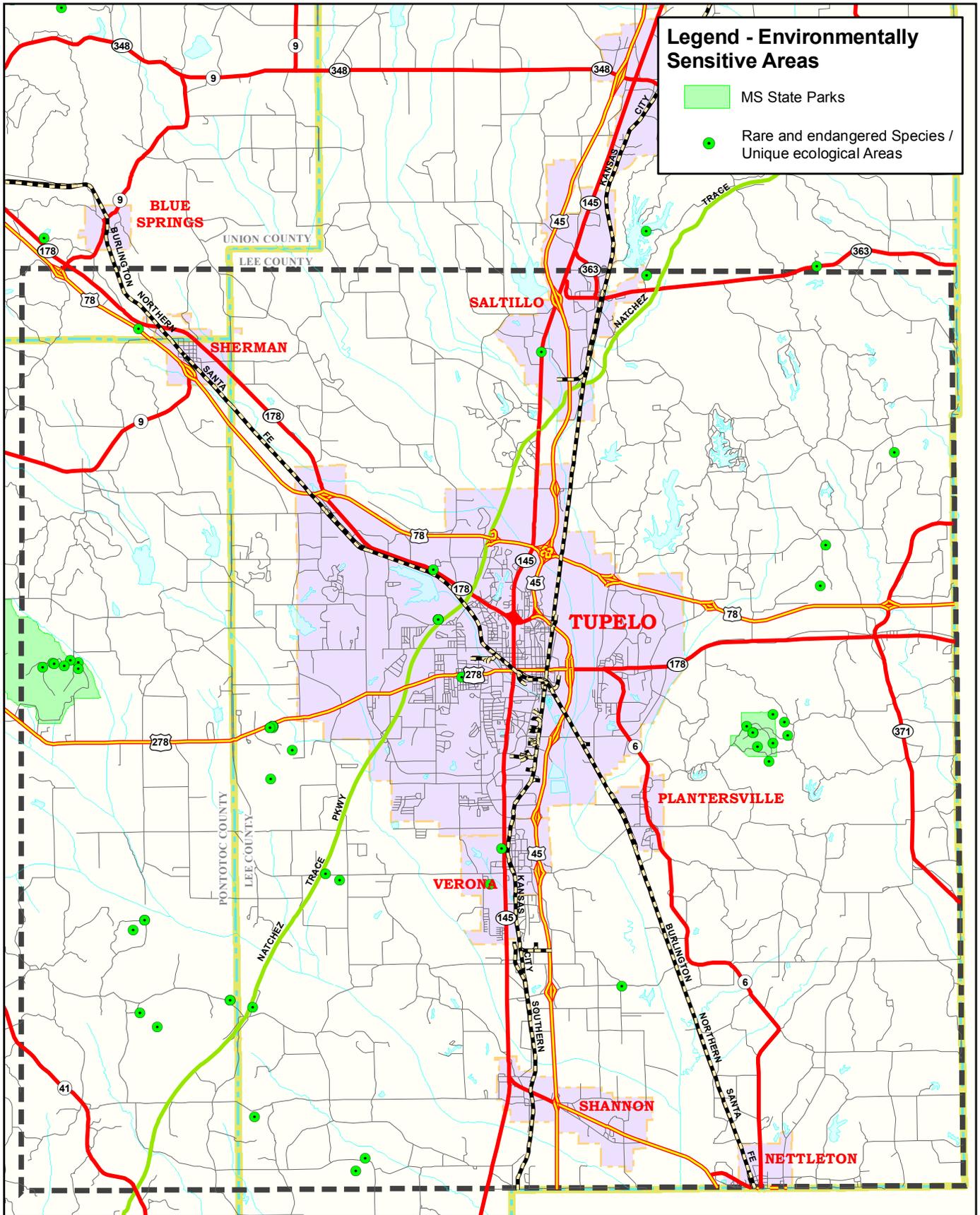
FEMA Floodplains

Miles

0 1 2 3

N





Legend - Environmentally Sensitive Areas

- MS State Parks
- Rare and endangered Species / Unique ecological Areas

<p>Map Legend</p>	<ul style="list-style-type: none"> Prim. Road Sec. Road Road Study Area 	<ul style="list-style-type: none"> Cities Lakes Rivers Railroad 	<ul style="list-style-type: none"> 45 US Highway 6 State Highway Co. Boundary N'tnl Parkway
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**Tupelo Railroad Relocation
Planning and Environmental Study**

Environmentally Sensitive Areas

Figure 4-8

Miles

0 1 2 3

N

4.4.4 Mississippi State Parks

The dataset contains information about boundaries and names of State Parks in Mississippi, shown in **Figure 4-8**. Boundaries were scanned off 1:24,000 USGS quadrangle maps, vectorized, edited, and coded by the MARIS Technical Center. The data was first published in 1997 by the Mississippi Department of Wildlife, Fisheries, & Parks.

4.4.5 Natchez Trace Parkway

The Natchez Trace Parkway transects the study area from the southwest to northeast. The Natchez Trace Parkway is a part of the National Park Service. The 444-mile Natchez Trace Parkway commemorates an ancient trail that connected southern portions of the Mississippi River to salt licks in central Tennessee. Over the centuries, the Choctaw, Chickasaw, and other American Indians left their marks on the Trace. The Natchez Trace Parkway is a National Scenic Byway and an All-American Road used for driving, hiking, biking, horseback riding, and camping.

4.5 CULTURAL FEATURES AND COMMUNITY SERVICES

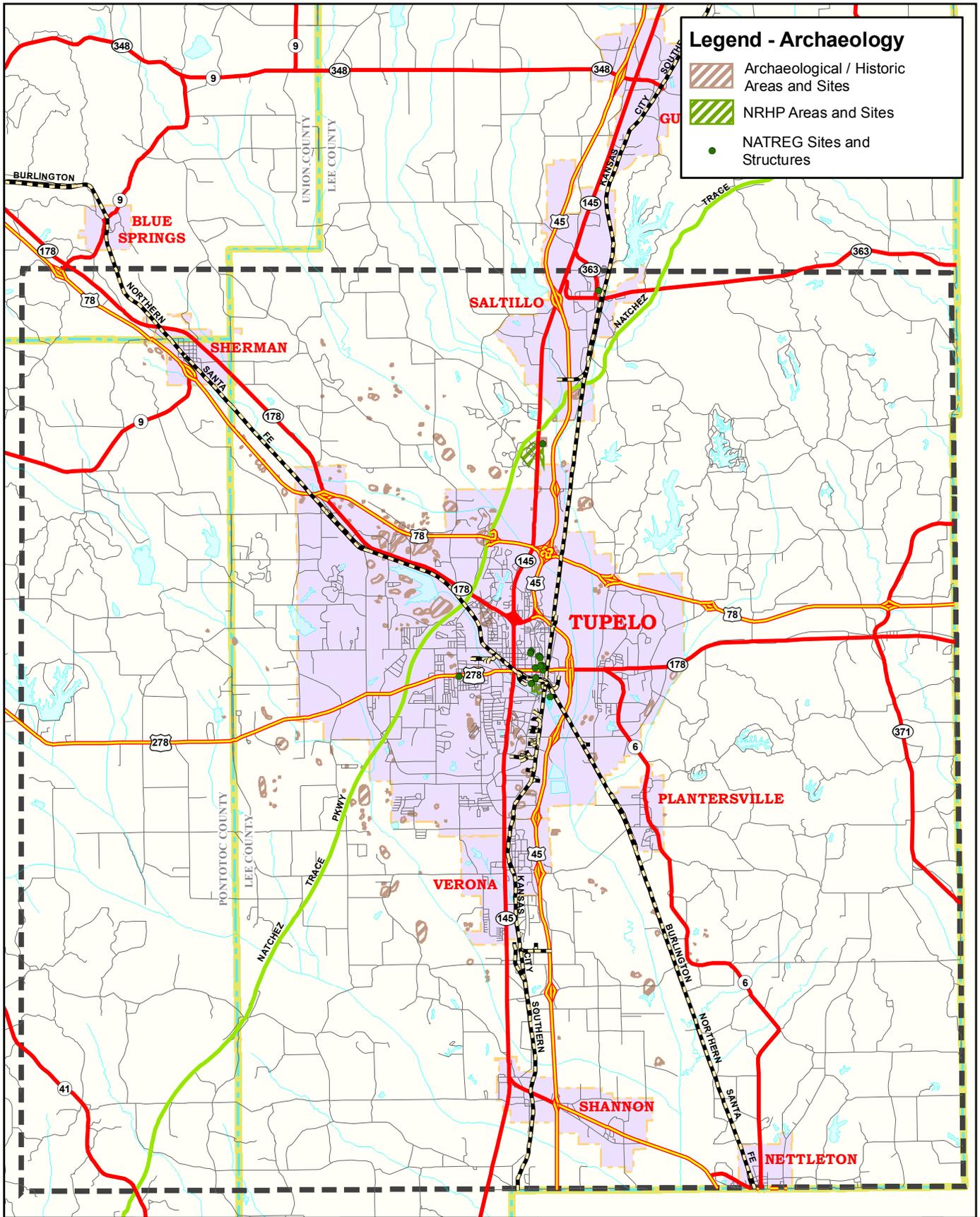
An inventory was conducted using GIS data of the area's cultural features and community services. The inventory included historical sites, archaeological sites, hazardous materials sites, schools, hospitals, churches, and recreational facilities. The GIS data, collected from the MARIS Technical Center was the most recent information during the data collection phase.

4.5.1 Historical & Archeological Sites

This dataset contains information on the location of Mississippi's Historic Registry Sites (1,050 sites), shown in **Figure 4-9**. This coverage was created by the MARIS Technical Center by downloading the database as provided from the National Register of Historic Places (NRHP). There were 200 locations in Mississippi that were "address restricted" and thus had no geographic locations. The data was published in June 1998 by the NHRP.

4.5.2 Hazardous Materials Sites

Several different databases were used to identify hazardous materials sites, shown in **Figure 4-10**. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site dataset contains locations of sites and facilities regulated by the U.S. Environmental Protection Agency (EPA) under the CERCLA superfund waste control programs. Most locations were calculated from points on 7.5 minute topographic maps. However, some points are locations of post office boxes and should be verified during future phases. The data was first published in 1994 by the Mississippi Department of Environmental Quality, Office of Pollution Control.



Legend - Archaeology

- Archaeological / Historic Areas and Sites
- NRHP Areas and Sites
- NATREG Sites and Structures

	Prim. Road	Cities	US Highway
	Sec. Road	Lakes	State Highway
Road	Rivers	Co. Boundary	Study Area
Railroad	N'tnl Parkway		

**Tupelo Railroad Relocation
Planning and Environmental Study**

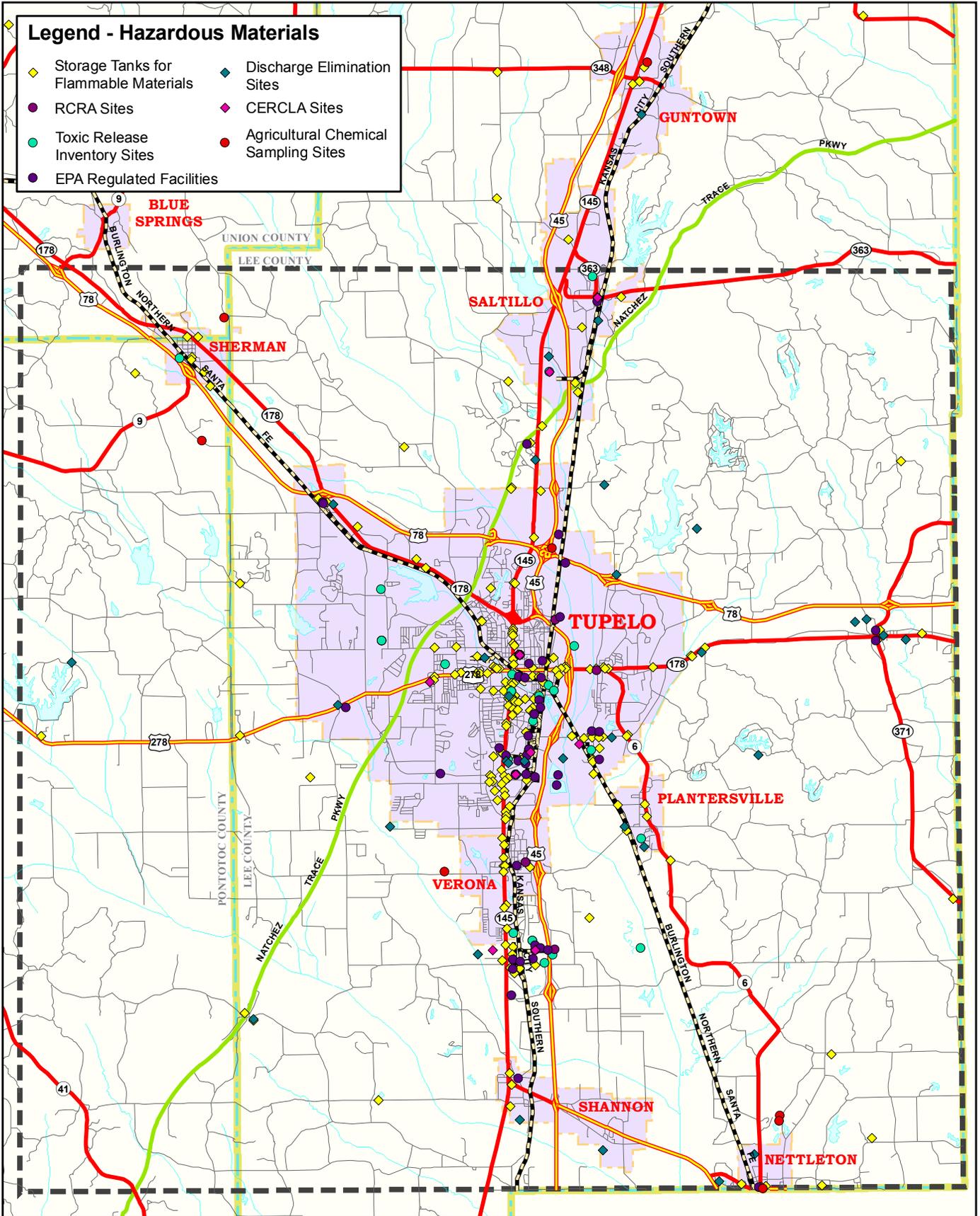
Figure 4-9

**Archaeological /
Hist. Areas & Sites**

Miles

Legend - Hazardous Materials

- ◆ Storage Tanks for Flammable Materials
- RCRA Sites
- Toxic Release Inventory Sites
- EPA Regulated Facilities
- ◆ Discharge Elimination Sites
- ◆ CERCLA Sites
- Agricultural Chemical Sampling Sites



Map Legend

- Prim. Road
- Sec. Road
- Road
- Study Area
- Cities
- Lakes
- Rivers
- Railroad
- 45 US Highway
- 6 State Highway
- Co. Boundary
- N'tnl Parkway

**Tupelo Railroad Relocation
Planning and Environmental Study**

Hazardous Material Sites

Figure 4-10

The Toxic Release Inventory (TRI) Sites and Facilities dataset contains information about the locations of sites and facilities regulated by the U.S. EPA under TRI waste control programs. Most locations were calculated from points on 7.5 minute topographic maps. However, some points are locations of post office boxes and should be verified during future phases. The dataset was first published in 1994 by the Mississippi Emergency Management Agency.

The Sampling Sites for Agricultural Chemicals dataset contains information about locations of sampling sites for agricultural chemicals. Sampling locations were located using differential GPS, and should be accurate to +/- five (5) meters. The data was first published in January 2000 by the Mississippi Department of Environmental Quality, and approximately one hundred (100) new sampling sites are added each year.

The National Pollutant Discharge Elimination System Sites dataset contains information about the locations of National Pollutant Discharge Elimination System sites. Most locations were digitized off 7.5 minute topographic maps. New dischargers are added as they become online. The data was first published in 1992 by the Mississippi Department of Environmental Quality, Office of Pollution Control, Surface Water Division.

The EPA Controlled Facilities dataset contains information about EPA controlled facilities. No further detailed information was available for the EPA sites.

The Resource Compliance Recovery Act (RCRA) Facilities dataset contains locations of sites and facilities regulated by the U.S. EPA under RCRA waste control programs. Most locations were calculated from points on 7.5 minute topographic maps. However, some points are locations of post office boxes and should be verified during future phases. The dataset was first published in 1994 by the Mississippi Department of Environmental Quality, Office of Pollution Control.

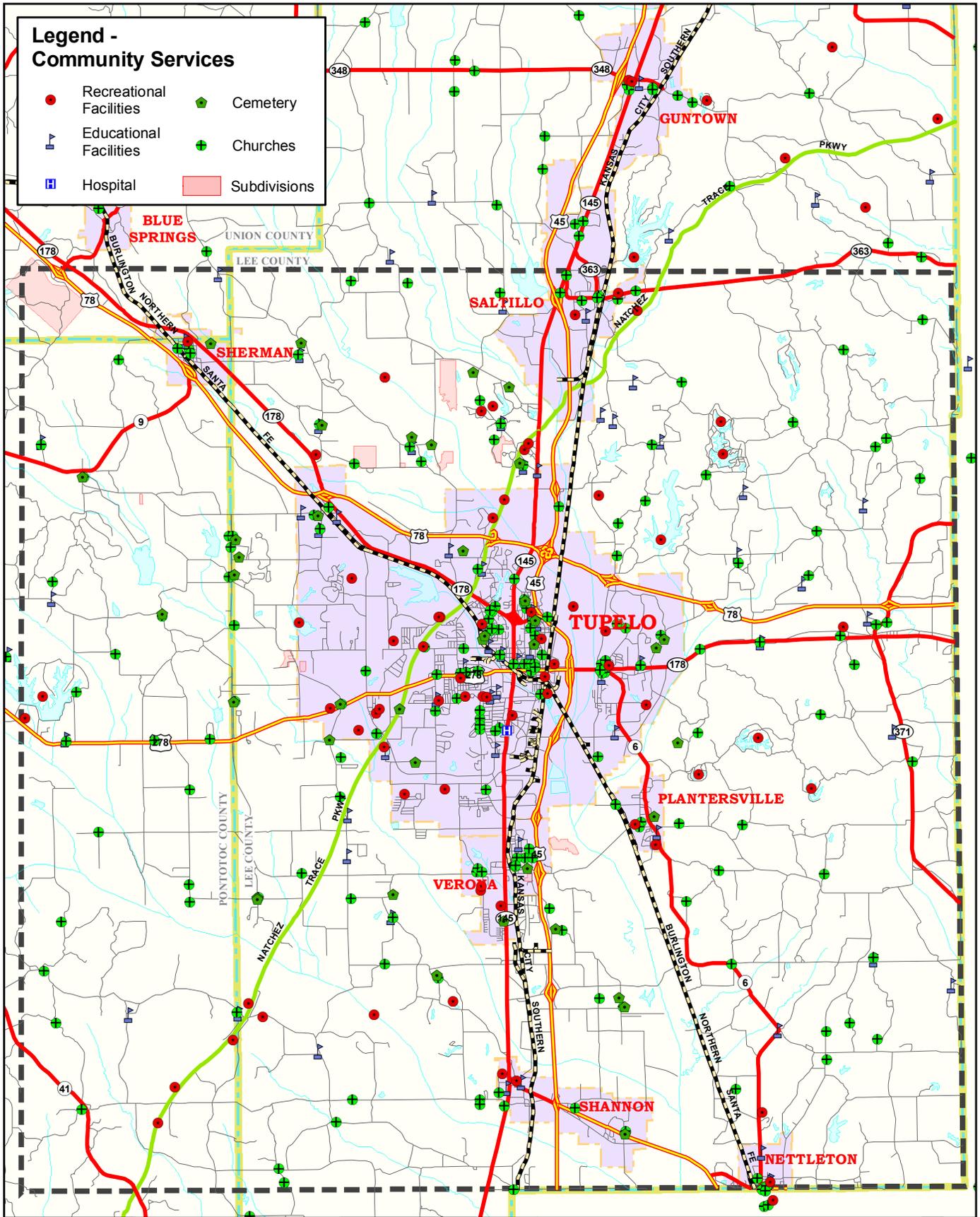
The Underground Storage Tanks dataset contains information about the locations of underground storage tanks. This data includes point locations of storage tanks used for gasoline, diesel fuel, aviation fuel, oil, and waste oil. This data was first published in 1988 by the MARIS Technical Center.

4.5.3 Community Services

Databases collected for Community Services include schools, hospitals, churches, and cemeteries, shown in **Figure 4-11**. U.S. Geographic Names Information System (GNIS) is an automated inventory of the proper names and locations of physical and cultural geographic features located throughout the United States and its Territories. GNIS promotes geographic feature name standardization and serves as the Federal Government's repository of information regarding feature name spellings and

**Legend -
Community Services**

- Recreational Facilities
- ▤ Educational Facilities
- ▣ Hospital
- ◆ Cemetery
- + Churches
- Subdivisions



Map Legend

- Prim. Road
- Sec. Road
- Road
- Study Area
- Cities
- Lakes
- Rivers
- Railroad
- 45 US Highway
- 6 State Highway
- Co. Boundary
- N'tnl Parkway

**Tupelo Railroad Relocation
Planning and Environmental Study**

Figure 4-11

Community Services

Miles

applications. The names listed in the inventory can be published on Federal maps, charts, and in other documents. The feature information has been used in emergency preparedness, marketing, site-selection, and analysis, genealogical and historical research, and transportation routing applications. The largest scale when displaying the data is 1:100,000. The initial dataset was updated with new data collected in the field (January 2006).

The schools in the project area were derived from the GNIS databases. The Institutes of Higher Learning (IHL) dataset includes information about the locations and names of all public universities, community colleges, their branches, and off-site campuses. Points are approximate locations of the center of the campus. This data was first published in 1992 by the MARIS Technical Center.

The locations of acute care hospitals in the dataset were extracted from the "1993 Annual Report on Hospitals Licensed by Mississippi State Department of Health" published in April 1994, excluding the state's five (5) federally funded hospitals. The data was first published in October 1994 by the Division of Medicaid, Office of the Governor.

The churches in the project area were derived from the GNIS databases. The initial dataset was updated with new data collected in the field in January 2006.

The cemeteries dataset contain historic and current locations of cemeteries were derived from the GNIS databases. Updates were included by incorporating additional entries from field data collection in January 2006.

The subdivision dataset contains information about the locations and names of subdivisions. The data was collected through a field review in January 2006.

4.5.4 Recreational Facilities

This dataset contains the location, name, and type of recreational facilities including parks and historic sites, shown in **Figure 4-11**. Point locations were compiled in the field by interviewing federal, state, and private personnel. The points were drawn on maps of varying scales, and then transferred to digital form via onscreen digitizing. The data were first published in July 1995 by the Mississippi Department of Wildlife, Fisheries, and Parks.

4.5.5 Utilities

Data were collected for the major utility corridors within the study area. These include the public water wells, natural gas pipelines, and power transmissions lines.

The USGS Public Wells dataset contains information about the location and identification of publicly owned water wells monitored by the United States

Geological Survey (USGS), shown in **Figure 4-12**. The data was first published in 1992 by the U.S. Geological Survey, WATSTORE National Water Data Storage and Retrieval System.

The Public Water Supply Wells dataset contains information about the location and name of Public water supply wells monitored by the Environmental Division of the Mississippi Department of Health, shown in **Figure 4-12**. The data was first published in 1993. The Office of Land and Water Resources is updating the location of all public supply water wells and these points will be added periodically.

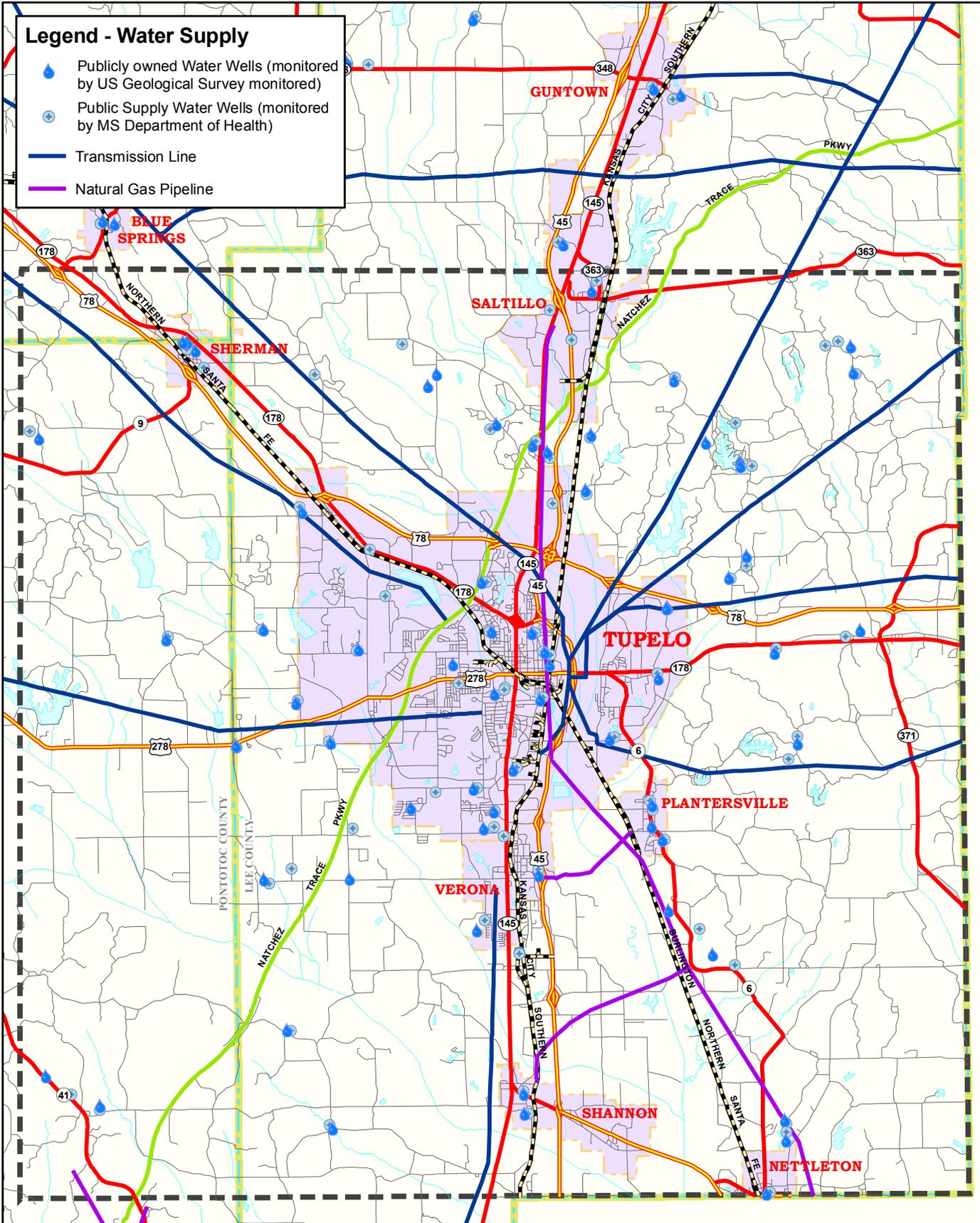
The Natural Gas Pipelines dataset contains information about the location of natural gas pipelines, shown in **Figure 4-12**. The attribute data includes information about source, company, type, size, and number of lines. The dataset was first published in 1993 by the University of Mississippi, Mineral Resources Institute.

The Transmission Lines dataset contains information about electrical power transmission lines, shown in **Figure 4-12**. Features may be missing or non-contiguous because of inconsistencies in source materials. The dataset was first published in 1993 by the U.S. Bureau of the Census (TIGER file and USGS 1:100,000 maps).

Additional existing utility owners and their service areas are located in the study area. These include potable water distribution systems, sewer collection systems, electric power distribution, natural gas distribution, telephone, and TV cable. The detailed information is included in the “Utility Services Technical Memorandum” in **Appendix C**.

Legend - Water Supply

- Publicly owned Water Wells (monitored by US Geological Survey monitored)
- Public Supply Water Wells (monitored by MS Department of Health)
- Transmission Line
- Natural Gas Pipeline



 	Prim. Road	Cities	US Highway
	Sec. Road	Lakes	State Highway
Road	Rivers	Co. Boundary	Study Area
Study Area	Railroad	N'tnl Parkway	

**Tupelo Railroad Relocation
Planning and Environmental Study**

Figure 4-12

Utilities

Miles

0 1 2 3