

# Environmental Overview Final



## US 431 Logan, Muhlenberg, McLean and Daviess Counties Item No. 2-8106.00

April 2004



Prepared for:  
Kentucky Transportation  
Cabinet



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- Appendix C. Listing of Additional Community Sensitive Locations
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## I. Introduction

An environmental footprint was developed for the US 431 project area. Beginning at the Tennessee / Kentucky state line in Logan County, US 431 completely traverses the western part of Kentucky. From Logan County, US 431 extends north through the Kentucky counties of Muhlenberg and McLean. Finally, the route terminates in Daviess County at the Kentucky / Indiana state line. In total, US 431 has approximately 85.9 miles of roadway within Kentucky. A preliminary environmental analysis was completed to identify potential issues and concerns within the defined US 431 study area.

### Issues Considered

- ✓ Natural and Manmade Features
- ✓ Biotic Communities
- ✓ Social, Economic and Environmental Justice Concerns
- ✓ Historic and Archaeological Sites
- ✓ Prime and Unique Farmland
- ✓ UST/HazMat, Oil and Gas Sites

A four-county Geographic Information System (GIS) was assembled for the defined study area using relevant environmental data collected from numerous sources that include: federal, state, and local databases; agency contacts; field investigations; and existing in-house data. Resource information, including contacts and web site locations for each source (as available), is included in **Appendix A**. The compiled data was geo-referenced as needed using the GIS developed for the project.

Windshield surveys were conducted which included consideration of known and unknown environmental issues within the project area. Photo documentation of identified sites was undertaken where possible. Project area photographs for each county are included throughout this report and are located within **Appendix B**. In some instances, the development of graphics was assisted by the use of a global positioning system (GPS) unit for field data collection and application in the GIS database.

This study identified environmental issues that are likely to require consideration during any environmental assessment for the proposed transportation improvements. The environmental issues considered as part of the overview analysis include: Natural and Manmade Features; Biotic Communities; Social, Economic, and Environmental Justice Concerns; Historic and Archaeological Sites; UST/HazMat, Oil and Gas Concerns; and other additional issues. These items are summarized within a 4,000-foot buffer zone centered on the existing US 431 alignment on a county by county basis.

## II. Logan County Environmental Overview

**Figure 1** displays the environmental features identified within Logan County along US 431 in the study area. The study area refers to anything inside of the 4000' buffer zone in Logan County.

It should be noted that features displayed on the map may be deceiving as one graphic feature symbol can often represent more than one of that particular feature. For instance, a graphic symbol indicating one water well may actually represent multiple water wells. The following text addresses such occurrences where possible.

### A. Natural and Manmade Water Features

Natural and manmade features considered as part of this analysis are divided into five (5) categories: water resources, surface water, lakes/ponds, wetlands, and floodplains.

#### 1. Water Resources

A number of manmade water resources are located within the Logan County section of the study area. A summary is provided below:

- There are 67.0 miles of water lines in the study area;
- There are eight (8) water tanks in the study area. Four (4) of these are located within the study area within the Russellville corporate limits. These are represented by two (2) separate water tank symbols, each representing two (2) individual tanks;
- Two (2) public water facilities are found within the study area. These include the Adairville Water Works, located next to the South Fork of the Red River, and Russellville Municipal Water, located adjacent to the Russellville Country Club on the southern edge of town;
- There are 227 water wells located inside the study area. The highest concentrations of water wells can be found in Russellville. In addition, clusters of water wells can be found along US 431 between Russellville and Lewisburg. The primary use of these sites differs mostly between well monitoring locations and domestic usage; and,
- Two (2) water gauges are located within the study area. The first is located on the Red River north of Adairville while the other is found on Wolf Lick Creek north of Lewisburg.

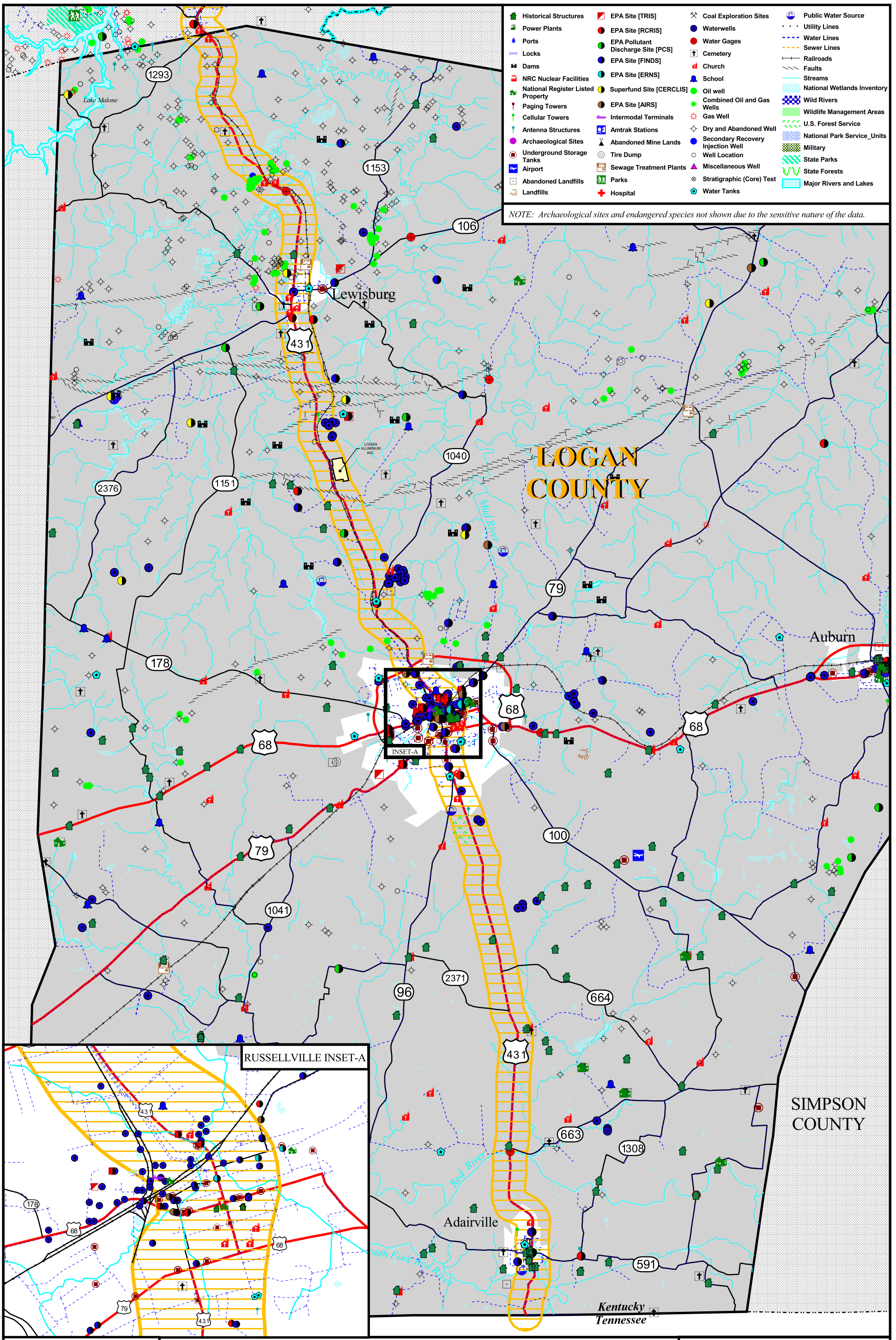
#### 2. Surface Water

The US 431 study area in Logan County is divided into two major watersheds: the Green River watershed and the Cumberland River watershed. The city of Russellville is the geographic dividing line between the two watersheds.

- Streams north of Russellville tend to flow into the Mud River, which in turn, empties into the Green River; and,
- Streams south of Russellville tend to flow into the Red River and South Fork Red River. These two rivers merge and continue south to the Cumberland River in Tennessee.

The Mud River, the Red River and the South Fork of the Red River are the only river systems found within the study area. The Mud River forms just east of Russellville near the intersection of KY 2369 and US 68. The Red River crosses the US 431 corridor just north of Adairville at the junction of US 431 and KY 663. The South Fork Red River flows along the





Historical Structures	EPA Site [TRIS]	Coal Exploration Sites	Public Water Source
Power Plants	EPA Site [RCRIS]	Waterwells	Utility Lines
Ports	EPA Pollutant Discharge Site [PCS]	Water Gages	Water Lines
Locks	EPA Site [FINDS]	Cemetery	Sewer Lines
Dams	EPA Site [ERNS]	Church	Railroads
NRC Nuclear Facilities	Superfund Site [CERCLIS]	School	Faults
National Register Listed Property	EPA Site [AIRS]	Oil well	Streams
Paging Towers	Intermodal Terminals	Combined Oil and Gas Wells	National Wetlands Inventory
Cellular Towers	Amtrak Stations	Gas Well	Wild Rivers
Antenna Structures	Abandoned Mine Lands	Dry and Abandoned Well	Wildlife Management Areas
Archaeological Sites	Tire Dump	Secondary Recovery Injection Well	U.S. Forest Service
Underground Storage Tanks	Sewage Treatment Plants	Miscellaneous Well	National Park Service_Units
Airport	Parks	Stratigraphic (Core) Test	Military
Abandoned Landfills	Hospital	Water Tanks	State Parks
Landfills			State Forests
			Major Rivers and Lakes

NOTE: Archaeological sites and endangered species not shown due to the sensitive nature of the data.

**Legend**

- 4000' Corridor
- U.S. Highways
- State Roads

Scale: 0 to 4 Miles

Compass rose showing North (N), South (S), East (E), and West (W).

Map of Kentucky with a yellow line indicating the location of Logan County.

Logos for:
 

- Kentucky Transportation Cabinet
- EDUCATION PAYS
- Wilbur Smith Associates

**Environmental Footprint**  
 FIGURE 1  
 Logan County  
 Item No. 2-8106.00  
 Phase 1 - Scoping Study for Safety Improvements on US 431 from the McLean/Muhlenberg Co. Line to the Tennessee Border

southern edge of Adairville, crossing the study area near the intersection of US 431 and KY 591.

A total of sixty-five (65) individual streams compose a total of 27.2 miles of streams in the project area. A concentration of stream tributaries can be found within the study area north of Russellville. Tributaries flowing south of Russellville are more limited in number with very few crossing the study area. The southern half of Logan County is located within a *karst* landscape, which is characterized by sinkholes, underground conduits, and caves. Stream patterns are sometimes affected by the *karst* landscape. In some instances, streams are formed underground which could explain a decrease in tributaries in southern Logan County.

#### Natural and Manmade Features

- ✓ Water lines, tanks, and wells
- ✓ Two major watersheds
- ✓ Major River systems
- ✓ 57 wetland areas totaling 182 acres
- ✓ Zone A floodplains

Streams are classified by a hierarchy system called *stream order*. In this system, the smallest stream is designated an Order 1 stream and the largest is designated an Order 8 stream. The Ohio River is an example of an Order 8 stream. As stream segments continue to merge, the Order number increases. Order designations in the study area include:

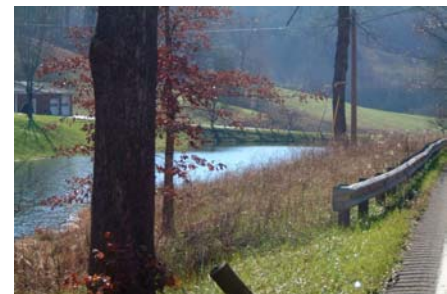
- There are no Order 6, 7, or 8 streams crossing the study area;
- There is one (1) Order 5 stream within the study area, Wolf Lick Creek, which totals 1.0 mile in length. The *Mud River* is an Order 5 stream located just outside of the 4000' buffer zone;
- There are five (5) Order 4 streams within the study area. These streams have a combined total length of 2.5 miles and include the *Red River* and *South Fork of the Red River*;
- There are six (6) Order 3 streams located in the study area. These streams have a combined total length of 3.8 miles;
- There are sixteen (16) Order 2 streams located in the study area. These streams have a combined total length of 4.8 miles; and,
- There are thirty-seven (37) Order 1 streams within the study area. These streams have a combined total length of 15.1 miles.

Information obtained from the Water Quality Branch of the Natural Resources and Environmental Protection Cabinet (NREPC) indicates there are no Outstanding Resource Waters or Wild Rivers within the proposed corridor.

As recommended by the Division of Environmental Analysis, all channel changes should be avoided as part of this project to reduce mitigation needs and permitting requirements.

### 3. Lakes/Ponds

There are no natural or man-made lakes within the US 431 study area in Logan County. However, field review in the northernmost section of the study area indicates that private ponds are found scattered along US 431. In southern Logan County, ponds and sinkholes are found, likely due to increased karst topography in the area.



*Pond located beside US 431*

#### 4. Wetlands

Fifty-seven (57) wetlands are recorded within the study area totaling over 182 acres. Compared to other western Kentucky counties, Logan County does not contain as many wetlands. Similar to the stream data, wetlands are more frequent in the northern half of the county. Stretches of wetlands can be found following linear tracts along stream corridors and floodplains. Smaller, more secluded wetland areas populate the more southern portions of the study area. From Russellville to the Kentucky/Tennessee state line, wetland areas within the study area become increasingly sparse or absent.

A field inspection of each of these areas will be necessary to determine their jurisdictional status (i.e., they may or may not require a nationwide or individual permit from the US Army Corps of Engineers). Furthermore, a more in depth inspection would be beneficial for mitigation assessment purposes, if needed.

#### 5. Floodplains

The available Q-3 digital Federal Emergency Management Agency (FEMA) data for Kentucky floodplains are digital datasets that are available on a county-by-county basis. Based on this data source, the Logan County floodplain data includes the following:

- The city of Adairville is surrounded by the Red River to the north and South Fork Red River to the south. Adairville is within FEMA designated “Zone A” for which Base Flood Elevations (BFEs) have not been determined. Zone A indicates that an area is inundated by 100-year flooding;
- Near Russellville, tributaries of the Mud River cross the study area with 90% of the area designated “Zone AE.” FEMA considers “Zone AE” locations to be inundated by 100-year flooding for which BFEs have been determined. The remaining 10% of the area is categorized “Zone X500,” an area inundated by 500-year flooding. This also includes areas inundated by 100-year flooding with average depths of less than one foot or with drainage areas less than one square mile. In addition, “Zone X500” includes any areas protected from 100-year flooding by levees; and,
- One other area for flood potential within the study area is located along the tributaries of Wolf Lick Creek, which is approximately 2.5 miles north of Lewisburg. This area contains “Zone A” 100-year flood inundation potential, within an area over 533 acres in size.

### B. Biotic Communities

Biotic communities considered as part of this analysis are divided into floral and faunal categories as discussed in the following sections. The Kentucky State Nature Preserves Commission (KSNPC) monitors a number of endangered, threatened, or special concern plants or animals within the US 431 study area. The KSNPC data is updated on a regular basis and may be verified as needed in future phases of this project. To further ensure the accuracy of this analysis, a cross-check was completed with data collected from the United States Fish and Wildlife Service (USFWS).

#### 1. Floral Communities

The KSNPC has determined that six (6) occurrences of monitored vascular plants are recorded within the study area in Logan County. These include:

- Two (2) species have been determined to be **endangered**: *Soft False Gromwell* and the *Rough Rattlesnake-Root*;



- Two (2) species have been given a **threatened** status: *White Heath Aster* and the *Carolina Larkspur*; and,
- Two (2) species are considered to be **special concern** flora: *Blue Wild Indigo* and the *Purple Prairie-Clover*.

The USFWS does not list *Soft False Gromwell* or *Rough Rattlesnake-Root* as **endangered** floral species; nor does it list *White Heath Aster* or *Carolina Larkspur* as **threatened** floral species within the study area.

## 2. Faunal Communities

Based upon the KSNPC's most current information, five (5) occurrences of monitored species are found within the study area including one (1) of each: mammal, fish, amphibian, crustacean, and reptile.

- One (1) species has been determined to be **endangered**: the *Indiana Bat* (mammal);
- No **threatened** species were found within the study area; and,
- Four (4) species are considered to be **special concern** fauna: *Pallid Shiner* (fish), *Barking Treefrog* (amphibian), *Crayfish* (crustacean), and *Copperbelly Water Snake* (reptile).



*Barking Treefrog*  
<http://www.uga/srel>

The *Indiana Bat* is also listed within the USFWS's database as an **endangered** faunal species, while there where no **threatened** faunal species listed by the USFWS within the study area. Also, it should be recognized that **special concern** listings are not displayed within the USFWS database.

It should be noted that the *Copperbelly Water Snake* in this region is subject to the conditions outlined in the Copperbelly Water Snake Conservation Agreement, overseen by the Kentucky Department of Fish and Wildlife Resources.

Another species, the basic *Crayfish* (*Orconectes Pellucidus*) is listed by KSNPC as a "**Sensitive Element.**" This species is located in areas of subterranean waters within the city of Adairville.

## C. Social, Economic, and Environmental Justice Concerns

Socioeconomic concerns considered as part of this analysis include social and economic locations, and environmental justice. These items are discussed in the following sections.

### 1. Social and Economic Locations

Twenty (20) community sensitive locations were identified in the study area. These locations include:

- There are fourteen (14) churches in the study area. Four (4) can be found adjacent to US 431 while the remaining ten (10) are located in and around cites or towns. **Appendix C** provides a listing of the churches;
- One (1) school facility is located within the study area. Stevenson Elementary School is located inside the city limits of Russellville; and,
- Five (5) cemeteries are found in the study area, none of which are identified as historic. Two (2) of the cemeteries were located from a field survey and were not

queried from our database. The remaining three (3) sites were identified as the following: the Fitzhugh Cemetery (near the Muhlenberg County line), the Kinnley Chapel Cemetery (in Lewisburg), and the Lewisburg Cemetery (in Lewisburg).

In addition to the potential community concern areas described above, the study area is composed of various businesses and industry. The major manufacturing area within Logan County is Russellville.

- There are over fifteen (15) major manufacturing sites near Russellville. The largest is Logan Aluminum, Inc., which employs over 1,100 local residents;
- In all, over 4,000 of the 10,000 jobs in Logan County are in manufacturing;
- Retail and local services provide the greater remaining portion of employment in the study area;
- Agriculture is not a major player in regards to area economics;
- Logan County has a per capita personal income (PCPI) of \$20,696. This PCPI ranks 51st in the State and is lower than the state average (\$24,085) and the national average (\$29,469); and,
- The unemployment rate in Logan County as of 2001 is listed at 8.7 percent, which is higher than the State average of 5.5 percent and the U.S. average of 4.8 percent.

## **2. Environmental Justice**

An important consideration for highway reconstruction or new development is environmental justice. For this study, environmental justice was addressed by calculating the percentage of minorities and low-income persons in the project area. Information was gathered from 2000 U.S. Census tract population counts. The study area is located in Census Tracts 9602, 9603, 9604, 9605, and 9606 in Logan County.

Environmental justice concerns related to minority populations may exist based on Census 2000 data for the project area census tracts:

- Census Tracts 9603, 9605, and 9606 have minority populations of 17.9, 12.5, and 13.2 percent, respectively.
- These percentages are higher than average percentages for Kentucky and Logan County (10.0 and 9.7 percent, respectively).

Similarly, field review activities indicate that residential dwellings currently reflect evidence of potential environmental justice issues with respect to low-income housing. Low-income data from the 2000 U.S. Census has not yet been released for the census tracts; however, census bureau information for the year 1999 indicates that three census tracts have a higher percentage of persons living in poverty than Kentucky and Logan County:

- Census Tracts 9602, 9603, and 9604 have poverty rates of 19.5, 17.1 and 16.8 percent, respectively.
- The statewide and countywide rates were 15.8 percent and 15.5 percent, respectively, in 1999.

It should be noted that 2000 minority population and 1999 low-income data sets were the latest available information at the time of this report.

The Green River Area Development District is compiling an Environmental Justice document to be included in the project study report. This document should be referenced for a more in-depth analysis of the environmental justice issues in the study area.

## D. Historic and Archaeological Sites

A number of historic and archaeological sites are located within the study area. A full historic baseline study is recommended early in project development to review cultural landscapes and other historic sites in the study area.

### 1. Historic Sites

There are numerous historical points of interest throughout the US 431 study area in Logan County. Russellville and Adairville each have history dating back to the American Civil War.

- The Russellville Historic District is listed on the National Register of Historic Places and was added in 1976. This district covers 2100 acres in size and includes sixty-one (61) buildings and three (3) structures;
- Russellville has several Confederate Civil War historic markers documenting its extensive and important role in history;
- Russellville was the site of the **Confederate State Convention** on November 20<sup>th</sup>, 1861 in which sixty-four (64) Kentucky counties seceded from the Union; and,
- A small Civil War skirmish was fought in Adairville and headed by Confederate General J.K. Jackson on May 17<sup>th</sup>, 1862.



*Civil War cannon in Russellville*

Other historic sites include:

- Seventy-eight (78) historic structures are recorded within the study area;
- Two (2) **National Register List** structures are found in the study area. Both are located in Russellville:
  - The first structure is a Confederate monument, which is located at the intersection of US 431 and US 68; and,
  - The second structure is the Long-Briggs House, which is located on Cornelius Avenue.

### 2. Archaeological Sites

There are twenty-three (23) archaeological sites officially recorded within the project area in Logan County. Twenty (20) of these sites are located between the cities of Lewisburg and Russellville.

Within the Russellville city limits, seven (7) archaeological sites are located and include:

- Sites 15Lo73, 15Lo91, and 15Lo102 have no components to determine a cultural period of origin;
- Sites 15Lo68, 15Lo70, and 15Lo71 are determined to belong in an undefined *Woodland* cultural period. Site 15Lo71 is the only site in which a family still inhabits the site area. This site is also known as the *Nolan Still Site* (a farm site); and
- 15Lo184 is the only known site to be dated from the *Late Archaic* period.

#### Historic/Archaeological Features

- ✓ Historic District in Russellville
- ✓ Confederate State Convention
- ✓ 78 Historic Structures
- ✓ 2 National Register Listings
- ✓ 23 Archaeological Sites

The fourteen (14) archaeological sites located along US 431 between Russellville and Lewisburg include:

- Sites 15Lo168 (1801-1900), 15Lo167 (1950-2000), 15Lo170 (1801-1850), 15Lo171 (1901-1950), and 15Lo162 (1851-1950) are all *Historic Farm* locations. These sites have been disturbed to an unknown extent.
- Archaeological sites 15Lo159, 15Lo160, 15Lo161, 15Lo164, 15Lo165, 15Lo166, and 15Lo169 are collectively classified as “*open habitation without mounds*.” These sites are also disturbed to an unknown extent;
- 15Lo173 is a late prehistoric site of the Mississippian period that is described as a “*rock shelter*.” This site has also been disturbed to unknown extent; and
- Site 15Lo134 has very limited information regarding its significance. This may be due in part to its unknown extent of disturbance.

The remaining two (2) archaeological sites within the study corridor in Logan County are located just north and south of the city of Adairville. These sites include:

- Site 15Lo74 is located along the Red river, just north of Adairville. This site is classified as an “*open habitation without mounds*” site that is non-historic; and
- Site 15Lo51 is located south of Adairville, just north of the Kentucky/Tennessee state line. This site is also classified as an “*open habitation without mounds*” site and described as non-historic.

## **E. Prime and Unique Farmland Concerns**

An estimated 79% of Logan County is harvested cropland. Soybeans, corn, oats, wheat, and barley are the staple crops in this area. According to the Soil Survey Geographic (SSURGO) database, over 44% of Logan County is covered by prime farmland. The SSURGO database is updated and maintained by the United States Department of Agriculture (USDA). The attribute database contains physical and chemical soil properties for approximately 18,000 soil series recognized in the United States. SSURGO data provides the most detailed level of information and was designed primarily for farm and ranch, landowner/user, township, county, or natural resource planning and management. Using the soil attributes, this data serves as an excellent source for determining soil assessment and development.

One concern relative to farming in southern Logan County involves drainage within the *karst* landscape of this area. As farmers utilize herbicides and pesticides to maintain crops, these chemicals are capable of draining into underground water systems, potentially affecting plant and animal life. Further alteration of the landscape could promote new or additional groundwater and drainage concerns within the study area.

Relocation of the US 431 corridor could result in land use changes and subsequent impacts to prime farmland, including chemical runoff into sinkholes and other drainage concerns.

## **F. Monitored Sites and Wells**

A review of the databases and data source information covering the project area revealed a number of monitored sites, hazardous materials sites, locations with discharge permits, as well as oil and gas wells. A listing of these sites as well as a corresponding address of the sites can be found in **Appendix D**. The most significant issue along the corridor appears to be a site designated within the “Superfund” database, a number of underground storage tank locations, and oil and gas wells. A summary of these issues is presented as follows:

- One (1) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) or “Superfund” site. In 1980, the U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. The intent of this legislation was to regulate the cleanup of disposal sites where hazardous waste was leaking into the environment. The subject site is described as the TVA/Homer L. Owens substation capacitors site, and can be found west of the Lewisburg city limits, approximately 500 feet downstream of Rockwell Branch. Currently, this federal facility, discovered in 1987, is not listed on the National Priority List (NPL) meaning that immediate action for this site is not anticipated under the Superfund Program. However, this site may represent a significant concern for project development considerations and should be avoided unless further investigation reveals this site to be free from environmental hazards;
- A total of 108 underground storage tank (UST) sites are found within the Logan County study corridor. Approximately ninety-two (92) tanks are located within the corporate limits in Russellville, including thirty (30) tanks which are currently in use, seventeen (17) tanks which are not in use and forty-five (45) tanks which have been permanently removed. Adairville accounts for the remaining sixteen (16) underground storage tanks. Of these, five (5) tanks are currently active, while the remaining eleven (11) have been permanently removed. In the development of corridor alignments, consideration should be given to opportunities to avoid the locations where underground storage tanks currently exist or did exist to avoid the need to remove existing tanks or assume liability for right-of-way that may be contaminated;
- Seventeen (17) Resource Conservation and Recovery Information System (RCRIS) sites. These sites are required to provide information about their activities to state environmental agencies. RCRIS is a national information system which supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities which generate, transport, treat, store or dispose of hazardous waste. RCRIS allows the RCRA program staff to track the notification, permit, compliance and corrective action activities required under the RCRA. Thirteen (13) of these sites are found within the corporate limits of Russellville. The remaining four (4) sites are split between Adairville and Lewisburg. Seven (7) of the RCRIS sites were also found in the FINDS database discussed later in this section. Of these seven (7), six (6) are located in Russellville (BTR Precision Die Casting, Inc., Bethel Cleaners, KO Kleeners, Minit Mart #41, Penske Truck Leasing and a private residence) while one (1) can be found in Adairville (Adairville Auto Care). In the development of corridor alignments, further investigation of these locations is warranted in order to better understand their environmental significance and liability risk that they may pose to the Cabinet;
- Five (5) Aerometric Information Retrieval System (AIRS) sites. AIRS sites are used to track emissions and compliance data from industrial plants. AIRS data are utilized by states to prepare State Implementation Plans (SIP) to comply with regulatory programs and by the Environmental Protection Agency (EPA) as an input for the estimation of the total national emissions. All five (5) AIRS sites found in the study corridor are located within the corporate limits of Russellville. Of the five (5):
  - Two (2) are associated with the Carpenter, Co.
  - Two (2) are associated with the Adairville Feed Mill No. 2; and,
  - One (1) is associated with BTR Precision Die Casting.



- One (1) Emergency Response Notification System (ERNS) site, located within the corporate limits of Russellville on 302 N. Main Street at the UNOCAL station. The ERNS is an extensive database revealing notifications of oil and hazardous substance releases that have occurred throughout the United States. This data base is a listing of locations where a release or spill of hazardous material has previously occurred at a federally-determined level and the responsible operator has notified the federal government of the spill. Further investigations of these locations, including soil tests or other appropriate investigations should be undertaken if these locations are going to be potentially impacted during the project development phase;
- Four (4) Permit Compliance System (PCS) sites. The PCS represents companies which have been issued permits to discharge waste water into rivers. PCS is a computerized management information system which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks permit, compliance, and enforcement states of NPDES facilities. The first PCS site is located north of the corporate limits of Russellville on 106 SW Park Square. The other three (3) sites are also listed in the FINDS database. Two (2) of these are located in Russellville (Encon KY Inc at 300 Nashville Road, and Marathon Fuels, Inc on West 2<sup>nd</sup> Street) while the final site is located in Adairville (Adairville STP on Cemetery Street). Sites categorized as PCS sites do not necessarily represent a particular environmental hazard for highway project development considerations, but further investigation of any potentially impacted sites is recommended during the project development process;
- Seventeen (17) Facility Identification Initiative System (FINDS) sites, all of which are located within the corporate limits of Central City. The goal of this system, which was developed in the mid-1990's, was to simplify the reporting of all government sites by using an extensive database relative to all environmental sites monitored by the EPA which are subject to environmental regulation or of environmental interest. The sites contained in this database are facilities that are subject to federal environmental reporting and permitting requirements. Since this database is a compilation of multiple types of sites, there is some overlap between the FINDS sites and those described in the previous bullets. Of the seventeen (17) sites, fourteen (14) are found within the corporate limits of Russellville. The remaining three (3) sites are found in Adairville. Seven (7) of the sites are identified as RCRIS sites, three (3) are identified as PCS sites, while the remaining seven (7) sites do not have a specific designation; and,
- 47 oil and gas wells, mostly near the northern portion of the study area. While these wells do not represent insurmountable obstacles for project development purposes, several issues should be considered if these sites are to be impacted by future construction. First, the KYTC must compensate the owner/operator of the well for its loss. Also, the KYTC must take responsibility for operating issues with the well and eventual closing and plugging. Plugging costs range from \$1,500 for a shallow well to \$6,000 or more for deeper wells or wells with problems. Finally, many oil and gas wells produce a brine wastewater and potentially other contaminants that should be investigated on the sites.

It should be noted that within Figure 1, the mapping legend may contain additional environmental graphic symbols that do not appear on this map.

## **G. Additional Concerns**

Other items identified within the US 431 study area include:

- Areas south of Russellville towards the Tennessee/Kentucky state line become increasingly susceptible to runoff pollution associated with *karst* topography;
- Additional UST/HazMat concerns are likely to be associated with farming operations in the study area;
- Six (6) fault lines cross the study area between Lewisburg and areas north of Logan Aluminum, Inc.; and,
- A Sewage Treatment Plant is located along the outer edge of the 4000' study corridor, just north of Russellville's corporate limits.

## **H. Summary of Environmental Issues**

The potential environmental concerns identified for the study area in Logan County have been identified through this preliminary analysis. Environmental issues that are likely to require consideration during future phases of this project include:

- Potential water quality, wetland, and floodplain issues related to the Mud River, Red River, and the South Fork of the Red River and their tributaries;
- Public and private water sources, such as water lines, wells, tanks, and facilities;
- Churches, schools, and cemeteries;
- Potential habitat for threatened, endangered, or special concern species;
- Potential environmental justice issues related to high percentages of minority and low-income populations in the project area census tracts;
- Two National Register Listed structures located along US 431;
- Prime farmland throughout the study route;
- Underground storage tanks, sewage treatment plants, and gas/oil wells; and,
- Fault lines located between the community of Lewisburg and Logan Aluminum, Inc.

### III. Muhlenberg County Environmental Overview

**Figure 2** displays the environmental features identified within Muhlenberg County along US 431 in the study area. The study area refers to anything inside of the 4000' buffer zone in Muhlenberg County.

It should be noted that the features displayed on the map may be deceiving in that one symbol representing a feature can often represent more than one of that particular feature. For instance, a symbol indicating one water well may actually represent more than one water well. The following text addresses such occurrences where possible.

#### A. Natural and Manmade Water Features

Natural and manmade features considered as part of this analysis are divided into five (5) categories: water resources, surface water, lakes/ponds, wetlands, and floodplains.

##### 1. Water Resources

A number of manmade water resources are located within the Muhlenberg County section of the study area. A summary is provided below:

- There are 77.1 miles of water lines in the study area;
- There are four (4) water tanks in the study area. Two (2) are located in Central City, one (1) is located in Drakesboro, and the final one (1) is located between the two cities;
- There are no public water facilities found within the study area;
- There are eleven (11) water wells located in the study area. Many of these are located in the northern portion of Muhlenberg County. In addition, a high concentration of water wells is found in Central City. The water wells within the study area are listed as abandoned and therefore, have no general usage; and,
- No water gauges are located within the study area.

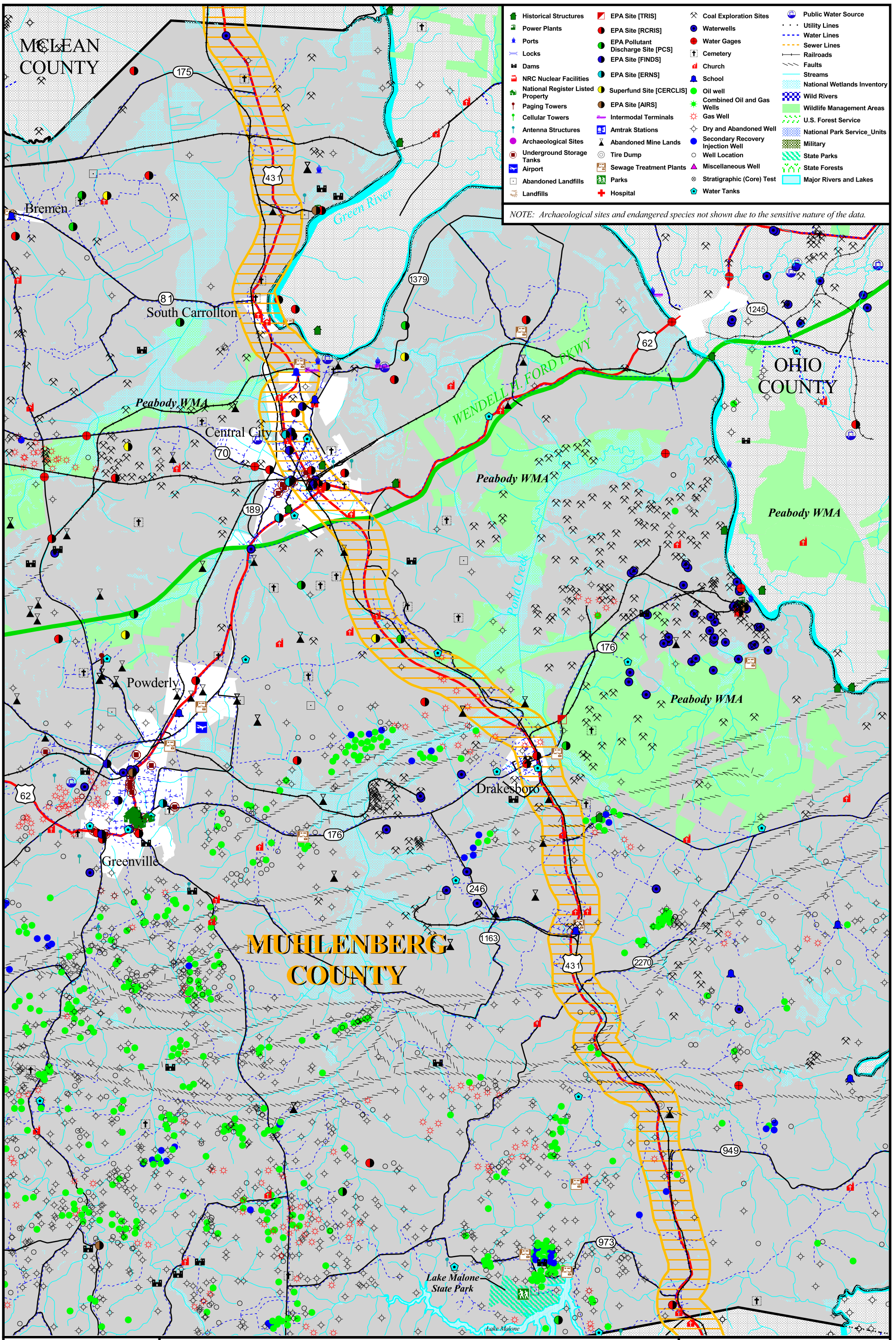
##### 2. Surface Water

The US 431 study area in Muhlenberg County is contained within the Green River watershed. This watershed encompasses the entire county and topographically directs all stream flows into the Green River. The Green River is the only river system found within the study area. This river is located along the eastern border of Muhlenberg County and western border of Ohio County.

A total of 101 individual streams compose 35.3 miles of streams in the project area.

Streams are classified by a hierarchy system called *stream order*. In this system, the smallest stream is designated an Order 1 stream and the largest is designated an Order 8 stream. The Ohio River is an example of an Order 8 stream. As stream segments continue to merge, the Order number increases. Order designations in the study area include:

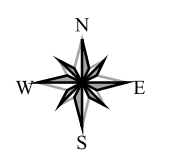
- There is one (1) Order 8 stream in the study area, the Green River. It has a length of 0.5 miles in the study area;
- There are no Order 6 or 7 streams crossing the study area;



- |                                   |                                    |                                   |                             |
|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------|
| Historical Structures             | EPA Site [TRIS]                    | Coal Exploration Sites            | Public Water Source         |
| Power Plants                      | EPA Site [RCRIS]                   | Waterwells                        | Utility Lines               |
| Ports                             | EPA Pollutant Discharge Site [PCS] | Water Gages                       | Water Lines                 |
| Locks                             | EPA Site [FINDS]                   | Cemetery                          | Sewer Lines                 |
| Dams                              | EPA Site [ERNS]                    | Church                            | Railroads                   |
| NRC Nuclear Facilities            | Superfund Site [CERCLIS]           | School                            | Faults                      |
| National Register Listed Property | EPA Site [AIRS]                    | Oil well                          | Streams                     |
| Paging Towers                     | Intermodal Terminals               | Combined Oil and Gas Wells        | National Wetlands Inventory |
| Cellular Towers                   | Amtrak Stations                    | Gas Well                          | Wild Rivers                 |
| Antenna Structures                | Abandoned Mine Lands               | Dry and Abandoned Well            | Wildlife Management Areas   |
| Archaeological Sites              | Tire Dump                          | Secondary Recovery Injection Well | U.S. Forest Service         |
| Underground Storage Tanks         | Sewage Treatment Plants            | Miscellaneous Well                | National Park Service_Units |
| Airport                           | Parks                              | Stratigraphic (Core) Test         | Military                    |
| Abandoned Landfills               | Hospital                           | Water Tanks                       | State Parks                 |
| Landfills                         |                                    |                                   | State Forests               |
|                                   |                                    |                                   | Major Rivers and Lakes      |

NOTE: Archaeological sites and endangered species not shown due to the sensitive nature of the data.

- Legend**
- 4000' Corridor
  - Parkways
  - U.S. Highways
  - State Roads



2 0 2 4 Miles



**Environmental Footprint**

FIGURE 2  
 Muhlenberg County  
 Item No. 2-8106.00  
 Phase 1 - Scoping Study for Safety Improvements on US 431 from the McLean/Muhlenberg Co. Line to the Tennessee Border



- One (1) Order 5 stream can be found inside the study area. *Pond Creek* has a total length of 1.1 miles;
- There are eleven (11) Order 4 streams located in the study area. These streams have a combined total length of 2.4 miles, with the largest of these tributaries being *Little Cypress Creek*;
- Six (6) Order 3 streams are located within the study area. These streams have a combined total length of 1.2 miles;
- There are 24 Order 2 streams located in the study area. These streams have a combined total length of 9.8 miles; and,
- Order 1 streams make up the largest number with a count of 55 streams within the study area. These streams have a combined total length of 20.3 miles.

As is common to this area, dendritic stream patterns are found throughout the study area. Dendritic streams have a varying tributary order, as tributaries join the “trunk,” or stream channel at oblique angles. An example of this pattern would be the appearance of veins in tree leaves.

Information obtained from the Water Quality Branch of the Natural Resources and Environmental Protection Cabinet (NREPC) does not indicate any Outstanding Resource Waters or Wild Rivers within the proposed corridor.

As recommended by the Division of Environmental Analysis, all channel changes should be avoided as part of this project to reduce mitigation needs and permitting requirements.

### 3. Lakes/Ponds

There are no natural or man-made lakes within the study area portion of Muhlenberg County. However, the regional landscape of gentle to rolling topography promotes ponds of many sizes. These ponds are scattered along the study area.

### 4. Wetlands

Ninety (90) wetlands are recorded within the study area, totaling 906 acres. The primary wetlands within the study corridor are located north and south of Drakesboro. Larger stretches of wetlands can be found following linear tracts along stream corridors and floodplains. Some areas exhibit a more level landscape and feature wetland areas that stretch out away from stream beds and cover a more extensive area.

A field inspection of each of these areas would be necessary to determine their jurisdictional status (i.e., they may or may not require a nationwide or individual permit from the US Army Corps of Engineers). Furthermore, a more in depth inspection would be beneficial for mitigation assessment purposes, if needed.

### 5. Floodplains

The Q-3 digital Federal Emergency Management Agency (FEMA) data for Kentucky floodplains are digital datasets that are available on a county-by-county basis. Based on this data source, the Muhlenberg County floodplain data includes the following:

Natural and Manmade Features	
✓	Water lines, tanks and wells
✓	One major watershed
✓	90 wetland areas totaling 906 acres
✓	Zone A floodplains

- Just north of KY 949, 174 acres of potential floodplain cross the US 431 buffer zone. FEMA has classified this area a “Zone A” area, in which Base Flood Elevations



(BFEs) have not been determined. “Zone A” indicates that this is an area inundated by 100-year flooding;

- Near Drakesboro, 335 acres of floodplains not only cross the study area, but parallel it as well. FEMA has classified this area as “Zone A;”
- Floodplain tributaries can also be found throughout the Central City area as well as north of Central City. This large area has been given a “Zone X” rating, which describes areas that are determined to be outside the 100 and 500 year floodplains; and,
- Near South Carrollton, “Zone X” areas continue across the study area until the study area shifts to the Green River, and changes classification to “Zone A” and then “Zone AE” to the north.

## B. Biotic Communities

Biotic communities considered as part of this analysis are divided into floral and faunal categories as discussed in the following sections. The Kentucky State Nature Preserves Commission (KSNPC) monitors a number of endangered, threatened, or special concern plants or animals within the US 431 study area. The KSNPC data is updated on a regular basis and may be verified as needed in future phases of this project. To further ensure the accuracy of this analysis, a cross-check was completed with data collected from the United States Fish and Wildlife Service (USFWS).

### 1. Floral Communities

The KSNPC has determined that three (3) occurrences of monitored vascular plants are recorded within the study area in Muhlenberg County. These include:

- No **endangered** species were found within the study area;
- Two (2) species have been given a **threatened** status: *Least Bittern* and *Water Hickory*. *Least Bittern* is a unit of vegetation found only within the Peabody Wildlife Management Area in and around marsh or mangrove swamp areas in the study area. *Water Hickory* is found inside two different areas in Central City, and usually located within bottomlands and floodplain swamps; and,
- One (1) **special concern** species, *Water-Purslane*, is located near Rosewood. This species is usually found within shallow waters and around margins of sloughs, ponds, and slow streams.

The USFWS does not list *Least Bittern* or *Water Hickory* as **threatened** floral species; nor does it list any potential **endangered** floral species within the study area.

### 2. Faunal Communities

Based upon the KSNPC’s most current information, five (5) occurrences of monitored species are found within the study area including one (1) bivalve, one (1) amphibian, and three (3) birds.

- One (1) species has been determined to be **endangered**: the *Pyramid Pigtoe*, a bivalve found along parts of the Green River;
- No **threatened** species were found within the study area;



Adult Male Henslow's Sparrow  
<http://www.wbu.com>

- One (1) species is considered to be a **special concern** fauna: the *Eastern Hellbender* (amphibian); and,
- Three (3) birds are **monitored** within the study area: the *Henslow's Sparrow*, the *Great Blue Heron*, and the *Lark Sparrow*.

The *Pyramid Pigtoe* is also listed within the USFWS's database as an **endangered** faunal species. No **threatened** species were listed in the USFWS database within the study area. Also, it should be recognized that **special concern** listings are not displayed within the USFWS database.

It should also be noted that portions of the US 431 corridor are located within the **Peabody Wildlife Management Area**. Over 264 acres are found within the study area and should be considered in future phases of this project.

## C. Social, Economic, and Environmental Justice Concerns

Socioeconomic concerns considered as part of this analysis include social and economic locations, and environmental justice. These items are discussed in the following sections.

### 1. Social and Economic Locations

Seventeen (17) community sensitive locations were identified in the study area.

- There are eleven (11) churches in the study area, each adjacent to US 431. **Appendix C** provides a listing of the churches;
- Two (2) school facilities are found within the study area; the *Central City Elementary School* in north Central City and the *Hughes-Kirk Elementary School* located south of Drakesboro. Both schools are adjacent to US 431; and,
- Four (4) cemeteries are located within the study area, none of which are identified as historic.

In addition to these potential community concern areas, the study area is comprised of various businesses and industry.

- The major industrial area within Muhlenberg County is Central City;
- There are over 11 major manufacturing sites near Central City;
- Of the 9,500 jobs in Muhlenberg County, retail trade (19.5%) and services (19.0%) make up the largest majority of employment within the study area;
- Manufacturing employment ranks third, with a 15.0% employment share;
- Muhlenberg County has a per capita personal income (PCPI) of \$19,480. This PCPI ranks 59th in the State and is lower than the state average (\$24,085) and the national average (\$29,469); and,
- The unemployment rate in Muhlenberg County as of 2001 is listed at 10.3 percent, which is nearly double the State average of 5.5 percent and the U.S. average of 4.8 percent.

### 2. Environmental Justice

An important consideration for highway reconstruction or new development is environmental justice. For this study, environmental justice was addressed by calculating the percentage of minorities and low-income persons in the project area. Information was

gathered from 2000 U.S. Census tract population counts in Muhlenberg County. The study area is located in Census Tracts 9601, 9602, 9607, and 9608.

Environmental justice concerns related to minority populations should be considered in future phases of this project based on Census 2000 data for the project area census tracts:

- Census Tracts 9601, 9602, 9607, and 9608 have minority populations of 8.3, 8.9, 6.0, and 0.8 percent, respectively.
- All four percentages are lower than the average percentage for Kentucky (10.0%), but three of the four are higher than the average percentage for Muhlenberg County (5.8%).

Field review of the project area indicates that residential dwellings currently reflect evidence of low-income housing. Low-income data from the 2000 U.S. Census has not yet been released for the census tracts; however, census bureau information for the year 1999 indicates that the four census tracts have a higher percentage of persons living in poverty than Kentucky and Muhlenberg County:

- Census Tracts 9601, 9602, 9607, and 9608 have poverty rates of 30.2, 20.5, 22.2, and 24.1 percent, respectively; and,
- The statewide and countywide rates were 15.8 percent and 19.7 percent, respectively, in 1999.

It should be noted that 2000 minority population and 1999 low-income data sets were the latest available information at the time of this report.

The Green River Area Development District is compiling an Environmental Justice document to be included in the project study report. This document should be referenced for a more in-depth analysis of the environmental justice issues in the study area.

<b>Historic/Archaeological Features</b>	
✓	One (1) Historic Structure
✓	One (1) Historic Land marker
✓	Twenty-three (23) archaeological sites

## **D. Historic and Archaeological Sites**

A number of historic and archaeological sites are located within the study area. A full historic baseline study is recommended early in project development to review cultural landscapes and other historic sites in the study area.

### **1. Historic Sites**

There is one (1) historic structure and one (1) land marker within the US 431 study area in Muhlenberg County. These include:

- The Robert Thomas House, located at 516 Broad Street in Central City, is the only historic structure found in the study area. This historic structure is not recognized as a National Register Listing; and,
- An historic land marker recognizing John W. I. Godman, Muhlenberg County's first elected judge, is found along US 431 near his original farm.

There are no other historic sites or Historic Districts identified within the study area at this time.

### **2. Archaeological Sites**

There are eighteen (18) archaeological sites listed within the project area in Muhlenberg County. All but five (5) of these sites are located north of Drakesboro. Most locations are

generally found north of South Carrollton extending northward, reaching the county boundary of McLean/Muhlenberg. None of the eighteen (18) sites in this project area are eligible for listing on the National Register of Historic Places; however, further baseline studies of the corridor are likely to identify sites that may be considered to be eligible or potentially eligible.

Sites 15MU9, 15MU216, 15MU223, and 15MU235 are located closest to US 431 in the project area in Muhlenberg County.

- Site 15MU9 lists no specific cultural period, but is unique as this site is classified as a “special activity area”. This site has seen vandalism and is considered disturbed to an unknown percentage;
- Site 15MU216 is located within a Phase 1 Archaeological Survey for a proposed telecommunications tower. This area is located south of Drakesboro and west of the town of Browder. Situated on the west side of US 431, this study did not provide any other recordable sites.
- Site 15MU223 is classified from an historic non-Indian cultural period (1901-1950), which is determined to be over 75% disturbed; and,
- Site 15MU235 has been linked to the late archaic cultural period, with over thirty (30) different items collected at this location. A physical description of this site is classified as an “open habitation without mounds.” A historic date range was not determined for this site.



*Historic Land Marker in  
Muhlenberg County*

Sites 15MU67, 15MU183, 15MU184, and 15MU133 are collectively located near Drakesboro.

- Site 15MU67 is located within the town of Drakesboro. This site is listed as archaic, but indeterminate in regard to its age or time period. The site type is described as “open habitation without mounds” and has also been disturbed to an unknown percentage;
- Site 15MU183 is located south of Drakesboro. This site is considered prehistoric indeterminate, as no definite cultural time period was assessed. The site type is described as “open habitation without mounds” and has also been disturbed to an unknown percentage;
- Site 15MU184 is located just east of Site 15MU183. This site is also considered prehistoric indeterminate, with no definite cultural time period. Similar to Site 15MU183, this site is described as “open habitation without mounds” and has also been disturbed to an unknown percentage; and,
- Site 15MU133 is the southernmost site in McLean County. This particular site is described as late archaic indeterminate from the early woodland period. This site is considered historic, with Euro-American influence and occupied the time period from 1851-1950. The site type is listed as a “rock shelter” that is determined disturbed between 76-99%.

The remaining sites are located north of Central City. They include Sites 15MU17, 15MU220, 15MU234, 15MU233, 15MU232, 15MU91, 15MU225, 15MU237, 15MU224, and 15MU236.

- Site 15MU17 is located south of South Carrollton and described as an “open habitation without mounds” site type. This site has also been vandalized and has been disturbed to a unknown percentage;
- Site 15MU220 is located west of South Carrollton. Site survey data was not cataloged at time of visit.
- Site 15MU234 is located north of South Carrollton. This site is represented by a late Woodland/Mississippian cultural period within an “open habitation without mounds” site type. This site has also been vandalized and disturbed to an unknown percentage;
- 15MU233 is located north of South Carrollton and is closely adjacent to sites 15MU232 and 15MU235. This site is represented by a late Woodland/Mississippian cultural period. The historic date range is listed as 1851-1959. The site type is similar to other sites in the study area described as an “open habitation without mounds.” Disturbance has been determined somewhere between 76-99%;
- 15MU232 is located north of South Carrollton and closely adjacent to sites 15MU233 and 15MU235. This site is described as having an historic non-Indian cultural period and a historic date range listed as 1851-1900. The site type is a cemetery which has been undisturbed;
- 15MU91 is located north of South Carrollton and only has a small portion within the study area. One particular section (Area “B”), yielded primary artifacts inside the site belonging to late archaic/early woodland, late woodland/mississippian, and prehistoric late woodland/early mississippian cultural periods;
- 15MU225 is located south of the Muhlenberg/McLean County line. This site is described as an early archaic cultural period and is found within an “open habitation without mounds.” Disturbance has been estimated between 76-99%;
- 15MU237 is located north of site 15MU225 along the 4000’ buffer edge. This site is represented by an historic non-Indian cultural period and lists an historic date range from 1801-1950. The site type is considered to be an “open habitation without mounds” and has been disturbed by an unknown percentage;
- 15MU224 is located south of the Muhlenberg/McLean County line. This site is represented by a late archaic cultural period. The site type is considered to be an “open habitation without mounds” and has been disturbed by 76-99%.
- 15MU236 is located south of the Muhlenberg/McLean County line. This site is described having an historic non-Indian cultural period that is unassigned and has an historic date range from 1801-1950. This site type is listed as an “open habitation without mounds” that has been disturbed by an unknown percentage.

## **E. Prime and Unique Farmland Concerns**

An estimated 35% of Muhlenberg County is harvested cropland. With respect to crops, Muhlenberg County is similar to other Western Kentucky counties. Corn, soybeans, wheat, and barley are the staple crops in this area. Once considered a major player in the coal industry, Muhlenberg County now boasts a \$47,000,000 dollar agriculture economy. In a recent survey, only 221 farm operators reported farming as their principal occupation. An additional 300 people consider farming to be a part-time occupation. Most farmland areas would not be affected by construction, but irregular runoff and poor drainage caused by new development could affect farming areas bordering US 431.



According to the most recently updated Soil Survey Geographic (SSURGO) database, Muhlenberg County digital soil data sets are **not** completed for downloading. The soil data obtained from SSURGO is the most detailed and accurate soil information available. The SSURGO database is updated and maintained by the United States Department of Agriculture (USDA).

Relocation of the US 431 corridor could result in land use changes and subsequent impacts to prime farmland, including chemical runoff into sinkholes and other drainage concerns.

## **F. Monitored Sites and Wells**

A review of the databases and data source information covering the project area revealed a number of monitored sites, hazardous materials sites, locations with discharge permits, as well as oil and gas wells. A listing of these sites as well as a corresponding address of the sites can be found in **Appendix D**. The most significant issue along the corridor appears to be a site designated within the “Superfund” database, a number of underground storage tank locations, and oil and gas wells. A summary of these issues is presented as follows:

- One (1) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) or “Superfund” site. In 1980, the U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. The intent of this legislation was to regulate the clean up of disposal sites where hazardous waste was leaking into the environment. The subject site is described as the AMAX, Inc. Ayrgem Mine. The site is located south of Central City, just one quarter mile west of US 431. It is classified as an “Archived Site” under the Superfund program meaning that no further remedial action is planned for this site under the Superfund Program. However, the status of cleanup at the site is uncertain and it is likely to represent a significant concern for project development considerations and should be avoided unless further investigation reveals this site to be free from environmental hazards;
- Twenty-one (21) underground storage tank (UST) sites are found within the Muhlenberg County study corridor. All twenty-one (21) sites are located within the corporate limits of Central City. Six (6) underground storage tanks are currently active, while the remaining fifteen (15) have been removed. In the development of corridor alignments, consideration should be given to opportunities to avoid the locations where underground storage tanks currently exist or did exist to avoid the need to remove existing tanks or assume liability for right-of-way that may be contaminated;
- Nine (9) Resource Conservation and Recovery Information System (RCRIS) sites. They are required to provide information about their activities to state environmental agencies. RCRIS is a national information system which supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities which generate, transport, treat, store or dispose of hazardous waste. RCRIS allows the RCRA program staff to track the notification, permit, compliance and corrective action activities required under the RCRA. Five (5) of these sites are located within Central City, two (2) in Drakesboro, one (1) located in Dunmor, and one (1) found between Central City and Drakesboro. Two (2) of the sites located in Central City are also noted in the FINDS database, discussed later in this section. One (1) additional RCRIS site (Central City Auto Parts) was noted in the FINDS database but not in the RCRIS database. In the development of corridor alignments, further investigation of all RCRIS sites is warranted in order to better understand their environmental significance and liability risk that they may pose to the Cabinet;

- Two (2) Emergency Response Notification System (ERNS) sites. Both sites are located within the corporate limits of Central City. The first site is found adjacent to 818 N 2<sup>nd</sup> Street, within an open drainage ditch, while the second is located at 131 Reservoir Avenue at Carl Mitchell and Son. The ERNS is an extensive database revealing notifications of oil and hazardous substance releases that have occurred throughout the United States. The database includes a listing of locations where a release or spill of a hazardous material has previously occurred at a federally-determined level and the responsible operator has notified the federal government of the spill. Further investigations of these locations, including soil tests or other appropriate investigations should be undertaken if these locations are going to be potentially impacted during the project development phase;
- Five (5) Permit Compliance System (PCS) sites. This first site facility, Drakesboro STP, is located between Central City and Drakesboro, adjacent to US 431 and is found in the PCS database. However, four (4) additional PCS sites in Central City were identified using the FINDS database. These include Central City Municipal Water & Sewer, Central City STP, Conrad & Smith, Inc, and Quality Oil Company. The PCS represents companies which have been issued permits to discharge waste water into rivers. PCS is a computerized management information system which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks permit, compliance, and enforcement states of NPDES facilities. Sites categorized as PCS sites do not necessarily represent a particular environmental hazard for highway project development considerations, but further investigation of any potentially impacted sites is recommended during the project development process;
- Eight (8) Facility Identification Initiative System (FINDS) sites, all which are located within the corporate limits of Central City. The goal of this system, which was developed in the mid-1990's, was to simplify the reporting of all government sites by using an extensive database relative to all environmental sites monitored by the EPA which are subject to environmental regulation or of environmental interest. The sites contained in this database are facilities that are subject to federal environmental reporting and permitting requirements. Since this database is a compilation of multiple types of sites, there is some overlap between the FINDS sites and those described in the previous bullets. Of the eight (8) sites, three (3) are RCRIS sites, four (4) are PCS sites, and the remaining site is only identified as Stewarts IGA Foodliner on South 2<sup>nd</sup> Street in Central City; and,
- Forty-four (44) oil and gas wells, mostly located south of Central City. While these wells do not represent insurmountable obstacles for project development purposes, several issues should be considered if these sites are to be impacted by future construction. First, the KYTC must compensate the owner/operator of the well for its loss. Also, the KYTC must take responsibility for operating issues with the well and eventual closing and plugging. Plugging costs range from \$1,500 for a shallow well to \$6,000 or more for deeper wells or wells with problems. Finally, many oil and gas wells produce a brine wastewater and potentially other contaminants that should be investigated on the sites.

It should be noted that within **Figure 2**, the mapping legend may contain additional environmental graphic symbols that do not appear within the project corridor.

Muhlenberg County has seen a high amount of geotechnical activity through the years, due to its location within the **Western Kentucky Coal Field**. It should be noted that the potential for environmental hazard/contamination is increased within the study area due to higher amounts of

geotechnical activity. These hazards apply to a majority of Muhlenberg County where oil and gas drilling is more prominent.

## G. Additional Concerns

Other items identified within the US 431 study area include:

- Additional UST/HazMat concerns are likely to be associated with farming operations in the study area;
- Nine (9) fault lines crossing the study area were also located. Four (4) of these are located near Drakesboro and most are in the southern half of the county;
- Three (3) Sewage Treatment Plants located north of Central City, east of Drakesboro, and near the KY 246/US 431 intersection in southern Muhlenberg County respectively; and,
- A tire dump located north of the KY 949/US 431 intersection in southern Muhlenberg County.

## H. Summary of Environmental Issues

The potential environmental concerns identified for the study corridor have been identified through this preliminary analysis. Environmental issues that are likely to require consideration during future phases of this project include:

- Potential water quality and floodplain issues related to the Green River, its tributaries, and wetland areas;
- Public and private water sources, such as water lines, wells, tanks, and facilities;
- Churches, schools, and cemeteries;
- Potential habitat for threatened, endangered, or special concern species;
- Potential environmental justice issues related to high percentages of low-income and minority populations in the project area census tracts;
- Historic structures and archaeological sites, but none listed on the National Register of Historic Places;
- The **Peabody Wildlife Management Area** should be considered in future project phases;
- Prime farmland along the US 431 corridor and chemical runoff considerations; and,
- Underground storage tanks, sewage treatment plants, and gas/oil wells.

## IV. McLean County Environmental Overview

**Figure 3** displays the environmental features identified within McLean County along US 431 in the study area. The study area refers to anything inside of the 4000' buffer zone in McLean County.

It should be noted that features displayed on the map may be deceiving as one graphic feature symbol can often represent more than one of that particular feature. For instance, a graphic symbol indicating one water well may actually represent multiple water wells. The following text addresses such occurrences where possible.

### A. Natural and Manmade Water Features

Natural and manmade features considered as part of this analysis are divided into five (5) categories: water resources, surface water, lakes/ponds, wetlands, and floodplains.

#### 1. Water Resources

A number of manmade water resources are located within the McLean County section of the study area. A summary is provided below:

- There are 38.0 miles of water lines in the study area;
- There are three (3) water tanks in the study area. Two of the three are located in Livermore while the third can be found north of the intersection of US 431 and KY 250;
- There are no public water facilities found within the study area;
- There are thirty (30) water wells located inside the study area. All of these wells are located near the McLean/Daviess county line. The primary use of these wells is for monitoring purposes; and,
- One (1) water gauge is located within the study area. This gauge, located in the city of Livermore, is used to obtain readings from the Green River.

#### 2. Surface Water

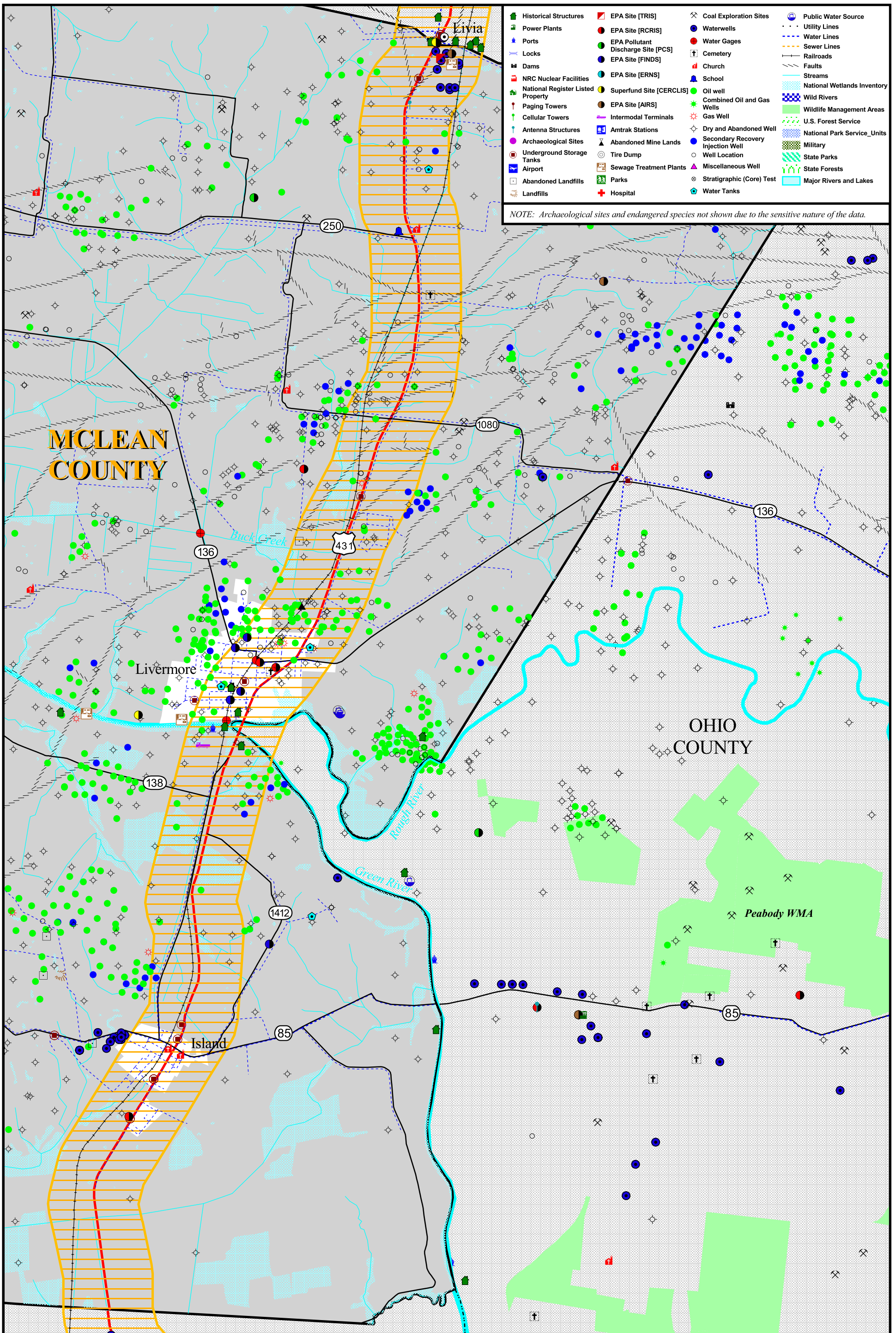
The US 431 study area in McLean County is included in one major watershed, the Green River watershed. This watershed encompasses the entire county and topographically directs all stream flows into the Green River.

This Green River system nearly splits McLean County in half as it traverses the study area. Certain area tributaries merge into the Green River Basin at different locations.



*Green River along US 431*

- Streams south of the Green River tend to flow in a north/northwest direction and merge with the Green River as it meanders westward through McLean County; and,
- Streams north of the Green River tend to flow south/southwest into the Rough River, which in turn, merges into the Green River in the town of Livermore. The famous Livermore Bridge crosses both of these river systems. This bridge will be discussed more in depth in the historical section of this report.



NOTE: Archaeological sites and endangered species not shown due to the sensitive nature of the data.

**Legend**

- 4000' Corridor
- U.S. Highways
- State Roads

1 0 1 2 Miles

**KENTUCKY**

**Environmental Footprint**

FIGURE 3

**McLean County**  
Item No. 2-8106.00

Phase 2 - Scoping Study for Safety Improvements on US 431 from the McLean/ Muhlenberg Co. Line to the Indiana Border



The Green River and the Rough River are the only river systems within the study area. The Green River is the larger of the two and forms McLean County's eastern border. It is one of Kentucky's largest, longest, and most navigable rivers. The Rough River, on the other hand, is smaller in size and enters from Ohio County to the east. The Green River merges with the Rough River at a point south of Livermore.

#### Natural and Manmade Features

- ✓ Water lines, tanks and wells
- ✓ One major watershed
- ✓ 65 wetland areas / over 328 acres
- ✓ Zone A floodplains

A total of forty-five (45) individual streams compose a total of 22.7 miles of streams in the project area.

Streams are classified by a hierarchy system called *stream order*. In this system, the smallest stream is designated an Order 1 stream and the largest is designated an Order 8 stream. The Ohio River is an example of an Order 8 stream. As stream segments continue to merge, the Order number increases. Order designations in the study area include:

- One (1) Order 8 stream is located within the study area. The Green River has a total length of 0.8 miles in the study area and is considered the major river system in McLean County;
- There are no Order 7 streams within the study area;
- There is one (1) Order 6 stream in the study area. The Rough River has a total length of 0.7 miles in the study area and merges with the Green River at Livermore;
- There are no Order 5 streams within the study area;
- Six (6) separate tributaries of one (1) Order 4 stream are found within the study area. Buck Creek has a total length of 1.7 miles;
- Six (6) Order 3 streams are located within the study area. These streams have a total combined length of 3.0 miles;
- There are twelve (12) Order 2 streams in the study area. These streams have a total combined length of 4.7 miles; and,
- There are twenty-four (24) Order 1 streams in the study area. These streams have a total combined length of 11.8 miles.

As is common to this area, dendritic stream patterns are found throughout the study area. Dendritic streams have a varying tributary order, as tributaries join the "trunk" or stream channel at oblique angles. An example of this pattern would be the appearance of veins in tree leaves.

Information obtained from the Water Quality Branch of the Natural Resources and Environmental Protection Cabinet (NREPC) indicates there are no Outstanding Resource Waters or Wild Rivers within the proposed corridor.

As recommended by the Division of Environmental Analysis, all channel changes should be avoided as part of this project to reduce mitigation needs and permitting requirements.

### 3. Lakes/Ponds

There are no natural or man-made lakes within the study area of McLean County. However, private ponds exist in limited numbers along the US 431 corridor.

#### **4. Wetlands**

McLean County contains sixty-five (65) separate wetland areas, covering an estimated 328 acres within the study area. Sizeable stretches of wetlands can be found following tributaries of smaller order streams which merge into the Green River Basin. The occurrence of wetland areas is greater in the study area due to the confluence of the Green and Rough Rivers. The major wetland areas are located north and south of Livermore. Locations in and around the Green and Rough River floodplain tend to promote an increasing number of wetland areas.

A field inspection of each of these areas will be necessary to determine their jurisdictional status (i.e., they may or may not require a nationwide or individual permit from the US Army Corps of Engineers). Furthermore, a more in depth inspection would be beneficial for mitigation assessment purposes, if needed.

#### **5. Floodplains**

The Q-3 digital Federal Emergency Management Agency (FEMA) data for Kentucky floodplains are digital datasets that are available on a county-by-county basis. Based on this data source, the McLean County floodplain data includes the following:

- Between the Muhlenberg/McLean County line and just south of the town of Island, FEMA has designated areas east of the study corridor “Zone AE” and sections to the west as “Zone A.” FEMA considers “Zone AE” locations inundated by 100-year flooding for which Base Flood Elevations (BFEs) have been determined. “Zone A” areas indicate that this is an area inundated by 100-year flooding for which BFEs have not been determined;
- FEMA has established a “Zone X” classification for land areas encircling the small town of Island. “Zone X” standards determine areas outside the 100 and 500-year floodplains. The town of Island is completely within a “Zone ANI” (Area Not Included) classification. This classification is given to an area which is located within a community or county that is not mapped on any published Flood Insurance Rate Map (FIRM);
- Near the town of Livermore, floodplains alter significantly due to the convergence of the Green and Rough River systems. FEMA has given areas in and around the Green River Basin a “Zone AE” classification. On the other hand, the town of Livermore, which is located at the confluence of both river systems, has been designated “Zone X”; and,
- The remaining portions of the study area vary between “Zone A” and “Zone X” classifications. This is due in part to Buck Creek and its tributary flow across the study corridor. After crossing this section, “Zone X” designations continue to the McLean/Daviess county line.

#### **B. Biotic Communities**

Biotic communities considered as part of this analysis are divided into floral and faunal categories as discussed in the following sections. The Kentucky State Nature Preserves Commission (KSNPC) monitors a number of endangered, threatened, or special concern plants or animals within the US 431 study area. The KSNPC data is updated on a regular basis and may be verified as needed in future phases of this project. To further ensure the accuracy of this analysis, a cross-check was completed with data collected from the United States Fish and Wildlife Service (USFWS).

## 1. Floral Communities

The KSNPC has determined that two (2) occurrences of monitored vascular plants are recorded within the study area in McLean County.

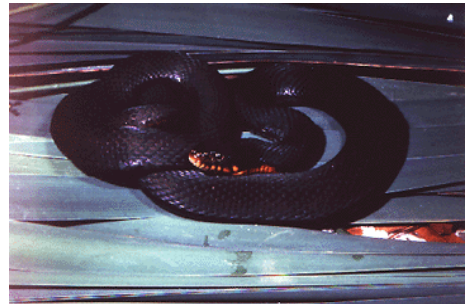
- No **endangered** species were found within the study area;
- Two (2) species have been given a **threatened** status: *Eastern Blue-Star* and *American Frog's-Bit*; and,
- No **special concern** species were found within the study area.

The USFWS does not list the *Eastern Blue-Star* or the *American Frog's-Bit* as a **threatened** floral species, nor does it list any potential **endangered** floral species within the study area.

## 2. Faunal Communities

Based upon the KSNPC's most current information, four (4) occurrences of monitored species are found within the study area including one (1) of each: bird, bi-valve, fish, and reptile.

- No **endangered** species were found within the study area;
- One (1) species has been given a **threatened** status: *Northern Harrier* (bird); and,
- Three (3) species are considered to be **special concern** fauna: *Little Spectaclecase* (bi-valve), *Pallid Shiner* (fish), and *Copperbelly Water Snake* (reptile).



*Copperbelly Water Snake*  
<http://www.fws.gov>

The USFWS does not list the *Northern Harrier* as a **threatened** species in Kentucky, nor does it list any potential **endangered** faunal species within the study area. Also, it should be recognized that **special concern** listings are not displayed within the USFWS database.

It should be noted that the *Copperbelly Water Snake's* habitat in the study area is subject to the conditions outlined in the Copperbelly Water Snake Conservation Agreement, which is overseen by the Kentucky Department of Fish and Wildlife Resources.

## C. Social, Economic, and Environmental Justice Concerns

Socioeconomic concerns considered as part of this analysis include social, economic, and environmental justice related issues. These items are discussed in the following sections.

### 1. Social and Economic Locations

In comparison to other counties within the study area, McLean County has very few community sensitive locations. Six (6) community sensitive locations were identified in the study area.

- There are three (3) churches in the study area. **Appendix C** provides a listing of the churches;
- Only one (1) school facility is located within the study area. Liberty School is located at the intersection of KY 250 and US 431 in the northern section of the study area; and,



*Buck Creek Church in McLean County*

- Two (2) cemeteries are found within the study area, neither of which are identified as historic. The first is located within the town of Livermore and the second is located near the KY 250 / US 431 intersection in northern McLean County.

Other than these potential community concern areas, the study area is composed of a small amount of business and industry.

- There are 1,800 county-wide jobs in industry-related fields;
- The major industrial area within McLean County is Livermore, where five (5) major industrial sites are found;
- The largest industrial site is Advanced Drainage Systems, Inc., which employs 59 people;
- Excluding industry, retail and local services combine for the greatest remaining portion of employment in the study area;
- Agriculture is not a major contributor to area economics;
- McLean County has a per capita personal income (PCPI) of \$25,158. This PCPI ranks 18th in the State and is higher than the state average (\$24,085), but less than the national average (\$29,469); and,
- The unemployment rate in McLean County as of 2001 is listed at 7.1 percent which is higher than the State average of 5.5 percent, and the U.S. average of 4.8 percent.

## **2. Environmental Justice**

An important consideration for highway reconstruction or new development is environmental justice. For this study, environmental justice was addressed by calculating the percentage of minorities and low-income persons in the project area. Information was gathered from 2000 U.S. Census tract population counts in McLean County. The study area is located in Census Tracts 9701 and 9704.

Environmental justice concerns related to minority populations are not likely, based on Census 2000 data for the project area census tracts:

- Census Tracts 9701 and 9704 have minority populations of 0.7 and 0.0 percent, respectively.
- These percentages are lower than average percentages for Kentucky and McLean County (10.0 and 1.7 percent, respectively).

Environmental justice concerns related to low-income populations should be monitored throughout future phases of this project. Low-income data from the 2000 U.S. Census has not yet been released for the census tracts; however, census bureau information for the year 1999 indicates that one (1) census tract has a higher percentage of persons living in poverty than Kentucky and McLean County.

- Census Tracts 9701 and 9704 have poverty rates of 16.9 and 15.4 percent, respectively.
- The rates for Kentucky and McLean County were 15.8 percent and 16.0 percent, respectively, in 1999.

It should be noted that 2000 minority population and 1999 low-income data sets were the latest available information at the time of this report.

The Green River Area Development District is compiling an Environmental Justice document to be included in the project study report. This document should be referenced for a more in-depth analysis of the environmental justice issues in the study area.

Historic/Archaeological Features	
✓	Historic Livermore Bridge
✓	Historic Neighborhood in Livermore
✓	21 Historic sites
✓	10 Archaeological sites

## D. Historic and Archaeological Sites

A number of historic and archaeological sites are located within the study area. A full historic baseline study is recommended early in project development to review cultural landscapes and other historic sites in the study area.

### 1. Historic Sites

There are several historic points of interest throughout the US 431 study area in McLean County. Overall, there are twenty-one (21) historic sites found within the study area in McLean County.

- The most prominent historical area is within the town of Livermore. According to the National Register of Historic Places, Livermore does not list a “Historical District.” However, within the heart of the town, sixteen (16) individual historic sites are located within a street block. It should be noted that one historic graphic symbol may represent multiple historic sites on the associated digital mapping. These historical sites include the following:
  - Two (2) historical sites are eligible for National Register Status: the *Livermore Hotel* and *Victorian Manor*;
  - Six (6) historical sites have been given an Inventory Site status;
  - Five (5) historical sites have been given a Survey Site status; and
  - The other three (3) structures have not been given a status at this time.
- Another site with historic value is the *Livermore Bridge*. When this bridge structure was built, it was claimed to be the only river bridge in the world that begins and ends in the same county (McLean), spans two rivers (Green and Rough), and crosses another county (Ohio). The Livermore Bridge is 1,350 feet long, and was dedicated on November 13, 1940;
- This area also contains three (3) historic sites within or just beyond the city of Livermore:
  - Archaeological site 15McL26 is also a historic site located in southern Livermore and has a current *pending* National Register status. The site type is open habitation without earth mounds and has been disturbed to an unknown percentage;



*Livermore Bridge Marker*



*Historic Livermore Bridge*



- The Seaboard Railroad Bridge (#13.5-14) is located in Livermore, spanning the Green River. This site has been determined eligible for National Register status by agreement; and,
- The Butterfield Site (15McL7) is another historic archaeological site located just south of Livermore, adjacent to US 431. The site type is described as a pre-historic shell mound (levee), with scattered shell fragments found within the area. This site is on the National Register of Historic Places.
- A 20<sup>th</sup> century historic house is located near the Daviess County/McLean County line. This historical structure holds no National Register status at this time.

## 2. Archaeological Sites

There are ten (10) archaeological sites officially recorded within the project area in McLean County. Eight (8) of these sites are located in close proximity to the existing route between the towns of Island and Livermore. The remaining two (2) sites can be found near US 431 in the southernmost portion of the study area in McLean County.

- Archaeological sites 15McL26, 15McL7, 15McL116 and 15McL117 are located near Livermore:
  - The Butterfield Site (15McL7) is an historic archaeological site located just south of Livermore, adjacent to US 431. This site is a prehistoric shell mound (levee) and has an *archaic/woodland* cultural affiliation, dating within the 1801-1900 range. This site is also important due to its potential to contain prehistoric native North American human remains. Site 15McL7 is listed on the National Register of Historic Places;
  - Site 15McL26 is an historic archaeological site located in southern Livermore. This particular site has an *archaic/late woodland-mississippian* cultural affiliation within the 1801-1900 date range. Site 15McL26 is listed on the National Register of Historic Places; and,
  - Sites 15McL116 and 15McL117 are archaeological sites located south of Livermore. Both sites have an *historic non-Indian* cultural affiliation and are dated within the 1801-1900 range. These sites have no National Register affiliation.
- Sites 15McL129, 15McL184, 15McL185, and 15McL140 are located north of the community, Island:
  - Sites 15McL184 and 15McL185 have a *late woodland/historic non-Indian* cultural affiliation. Both sites have a date range within 1801-1900 and have no National Register affiliation;
  - Site 15McL129 has an *historic non-Indian* cultural affiliation and a date range from 1801-1900; and,
  - Site 15McL140 has an *unassigned* cultural affiliation and a date range from 1801-1900.
- Sites 15McL6 and 15McL8 are located in the southernmost portion of the study area, near the McLean/Muhlenberg border:
  - Site 15McL6 is considered a late prehistoric site with *late woodland-mississippian* cultural affiliation without a date range given. The site type is an earth mound which has been disturbed to an unknown percentage; and,

- Site 15McL8 does not list any cultural affiliation or site date, but states that this site is an open habitation without mounds which has been disturbed to an unknown percentage.

## E. Prime and Unique Farmland Concerns

An estimated 65% of McLean County is harvested cropland. Soybeans, corn, wheat, and barley are the staple crops in this area. The confluence of the Green and Rough Rivers also yield excellent floodplain farming within areas on both sides of these river systems.

One concern relative to farming in McLean County is the potential for crop damage from flooding. As the floodplains of the Green and Rough Rivers are extremely fertile, the possibility of actual flood damage is ever-present. One single flood could potentially ruin an entire crop base if planted within these flood prone areas.

According to the most recently updated Soil Survey Geographic (SSURGO) database, Muhlenberg County digital soil data sets are **not** completed for downloading. The soil data obtained from SSURGO is the most detailed and accurate soil information available. The SSURGO database is updated and maintained by the United States Department of Agriculture (USDA).

Relocation of the US 431 corridor could result in land use changes and subsequent impacts to prime farmland, including chemical runoff into sinkholes and other drainage concerns.

## F. Monitored Sites and Wells

A review of the databases and data source information covering the project has revealed the monitored sites and wells described in the following paragraphs. A listing of these sites as well as a corresponding address of the sites can be found in **Appendix D**.

- Twenty-eight (28) underground storage tank (UST) sites are located within the McLean County study corridor. Fourteen (14) of these tanks are located in or around the town of Island. Of these fourteen (14), seven (7) tanks are currently active, six (6) have been permanently removed, and one (1) is not in use. The remaining fourteen (14) underground storage tank sites are located in and around the communities of Livermore (3) and Livia (11), which is found along the McLean/Daviess county line. Within Livermore, all three (3) tanks have been permanently removed. In Livia, eight (8) tanks are determined to have been permanently removed, while the remaining three (3) are temporarily closed. In the development of corridor alignments, consideration should be given to opportunities to avoid the locations where underground storage tanks currently exist or did exist to avoid the need to remove existing tanks or assume liability for right-of-way that may be contaminated;
- Five (5) Resource Conservation and Recovery Information System (RCRIS) sites. These sites are required to provide information about their activities to state environmental agencies. RCRIS is a national information system which supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities which generate, transport, treat, store or dispose of hazardous waste. RCRIS allows the RCRA program staff to track the notification, permit, compliance and



*Oil well in McLean County*

corrective action activities required under the RCRA. Three (3) of these sites are located within Livermore while the remaining two (2) sites are split between Island and Livia. One (1) of the sites located in Livermore, the Livermore Gulf & Body Shop on US 431, is also noted in the FINDS database, which is discussed later in this section. In the development of corridor alignments, further investigation of all RCRIS sites is warranted in order to better understand their environmental significance and liability risk that they may pose to the Cabinet;

- Four (4) Aerometric Information Retrieval System (AIRS) sites. AIRS sites are used to track emissions and compliance data from industrial plants. AIRS data are utilized by states to prepare State Implementation Plans (SIP) to comply with regulatory programs and by the Environmental Protection Agency (EPA) as an input for the estimation of the total national emissions. All four (4) AIRS sites found in the study corridor are located near the community of Livia (McLean/Daviess county line) and are associated with Barmet of Kentucky;
- One (1) Toxic Release Inventory (TRIS) site. TRIS sites contain information about the release of toxic chemicals by manufacturers. The data reported from these sites are important for both the government and public so that potential chemical risks can be assessed. This site, Barmet Aluminum Company, is located along US 431 near the community of Livia, along the McLean/Daviess county line;
- One (1) Permit Compliance System (PCS) site. This facility was identified in the FINDS database as Livermore STP on 3<sup>rd</sup> Street. PCS sites represent companies which have been issued permits to discharge waste water into rivers. PCS is a computerized management information system which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks permit, compliance, and enforcement states of NPDES facilities. Sites categorized as PCS sites do not necessarily represent a particular environmental hazard for highway project development considerations, but further investigation of any potentially impacted sites is recommended during the project development process;
- Five (5) Facility Identification Initiative System (FINDS) sites. Three (3) of the sites are located within the town of Livermore, while the remaining sites are found near the community of Livia, near the McLean/Daviess county line. The goal of this system, which was developed in the mid-1990's, was to simplify the reporting of all government sites by using an extensive database relative to all environmental sites monitored by the EPA which are subject to environmental regulation or of environmental interest. The sites contained in this database are facilities that are subject to federal environmental reporting and permitting requirements. Since this database is a compilation of multiple types of sites, there is some overlap between the FINDS sites and those described in the previous bullets. Of the five (5) sites, one (1) is an RCRIS site (Livermore Gulf & Body Shop), one (1) is a PCS site (Livermore STP), and the remaining three (3) sites include Livermore IGA on US 431, U.S. Army Livermore Armory at 3<sup>rd</sup> and Main Street, and Wonderest Chair Co, Inc on 4<sup>th</sup> Street; and,
- Forty-seven (47) oil and gas wells, with the majority of these sites located in and around the community of Livermore. While these wells do not represent insurmountable obstacles for project development purposes, several issues should be considered if these sites are to be impacted by future construction. First, the KYTC must compensate the owner/operator of the well for its loss. Also, the KYTC must take responsibility for operating issues with the well and eventual closing and plugging. Plugging costs range from \$1,500 for a shallow well to \$6,000 or more for deeper wells or wells with problems.

Finally, many oil and gas wells produce a brine wastewater and potentially other contaminants that should be investigated on the sites.

It should be noted that within **Figure 3**, the mapping legend may contain additional environmental graphic symbols that do not appear on this map.

McLean County has seen a high amount of geotechnical activity through the years, due to its location within the **Western Kentucky Coal Field** belt. It should be noted that the potential for environmental hazard/contamination is increased within the study area due to higher amounts of geotechnical activity. These hazards apply throughout the entire study area where oil and gas drilling is more prominent.

## **G. Additional Concerns**

Other items identified within the US 431 study area include:

- Eight (8) fault lines crossing the study area between the Green river and the McLean/Daviess County line to the north;
- One (1) Sewage Treatment Plant located in northern McLean County near the Daviess County line;
- The Livermore Wharf (river port) located on the Green River at Livermore is used primarily for loading/unloading of grain. This port, owned by the Bunge Corporation, is connected to the CSX Railroad and has a storage capacity of 2,296,000 bushels; and,
- The Perdue Farms Elevator located just outside Livermore adjacent to US 431. This intermodal terminal site is used for grain retrieval and storage.

## **H. Summary of Environmental Issues**

The potential environmental concerns identified for the study corridor have been identified through this preliminary analysis. Environmental issues that are likely to require consideration during future phases of this project include:

- Potential water quality and floodplain issues related to the Green River, its tributaries, and wetland areas;
- Public and private water sources, such as water lines, wells, tanks, and facilities;
- Churches, schools, and cemeteries;
- Historic structures such as the Livermore Bridge and historic archaeological sites in and around the town of Livermore;
- Potential habitat for threatened, endangered, or special concern species;
- Prime farmland along the US 431 corridor and chemical runoff concerns;
- Underground storage tanks, sewage treatment plant, and gas/oil wells; and,
- Fault lines located between the Green River and the McLean/Daviess County line.

## V. Daviess County Environmental Overview

**Figure 4** displays the environmental features identified within Daviess County along US 431 in the study area. The study area refers to anything inside of the 4000' buffer zone in Daviess County.

It should be noted that the features displayed on the map may be deceiving as one graphic feature symbol can often represent more than one of that particular feature. For instance, a graphic symbol indicating one water well may actually represent multiple water wells. The following text addresses such occurrences where possible.

### A. Natural and Manmade Water Features

Natural and manmade features considered as part of this analysis are divided into five (5) categories: water resources, surface water, lakes/ponds, wetlands, and floodplains.

#### 1. Water Resources

A number of manmade water resources are located within the Daviess County section of the study area. A summary is provided below:

- There are 38.0 miles of water lines in the study area;
- There is one (1) water tank in the study area. It is located within the Owensboro city limits;
- Two (2) public water facilities are found within the study area. The facilities are found at two separate locations but generally located along US 431 between US 60 and the Ohio River. Both facilities are operated by Owensboro Municipal Utilities. These facilities depend on an underground aquifer to supply the city with water. As a result, the Ohio River is not used for public water in Owensboro;
- Two (2) water treatment plants are located within the study area in Daviess County;
- There are 41 water wells located within the study area. There is a high concentration of these water wells at the McLean/Daviess County Line. In addition, many water wells are located in the Owensboro city limits. The primary use of these well sites is for well monitoring purposes; and,
- No water gauges are located within the study area.

#### 2. Surface Water

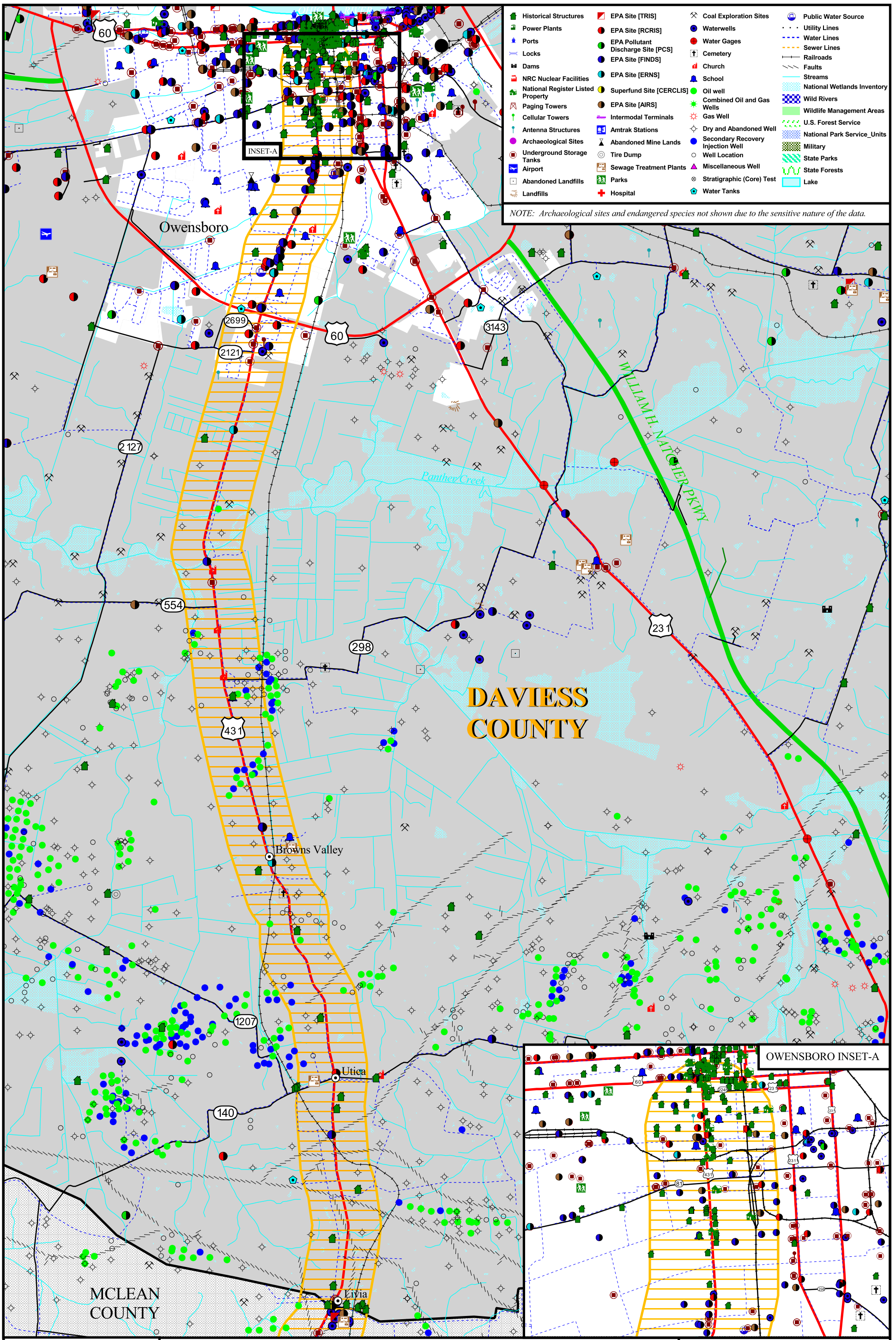
The US 431 study area in Daviess County is contained in one major watershed, the Green River watershed.

All streams south of Owensboro flow in a southwest manner, collectively emptying into the Green River in McLean County. In addition, a large number of streams merge into the Panther Creek. This creek is located near the intersection of KY 554 and US 431.



*Ohio River at Owensboro*





- |                                   |                                    |                            |                             |
|-----------------------------------|------------------------------------|----------------------------|-----------------------------|
| Historical Structures             | EPA Site [TRIS]                    | Coal Exploration Sites     | Public Water Source         |
| Power Plants                      | EPA Site [RCRIS]                   | Waterwells                 | Utility Lines               |
| Ports                             | EPA Pollutant Discharge Site [PCS] | Water Gages                | Water Lines                 |
| Locks                             | EPA Site [FINDS]                   | Cemetery                   | Sewer Lines                 |
| Dams                              | EPA Site [ERNS]                    | Church                     | Railroads                   |
| NRC Nuclear Facilities            | Superfund Site [CERCLIS]           | School                     | Faults                      |
| National Register Listed Property | EPA Site [AIRS]                    | Oil well                   | Streams                     |
| Paging Towers                     | Intermodal Terminals               | Combined Oil and Gas Wells | National Wetlands Inventory |
| Antenna Structures                | Amtrak Stations                    | Gas Well                   | Wild Rivers                 |
| Archaeological Sites              | Abandoned Mine Lands               | Dry and Abandoned Well     | Wildlife Management Areas   |
| Underground Storage Tanks         | Tire Dump                          | Injection Well             | U.S. Forest Service         |
| Airport                           | Sewage Treatment Plants            | Miscellaneous Well         | National Park Service Units |
| Abandoned Landfills               | Parks                              | Stratigraphic (Core) Test  | Military                    |
| Landfills                         | Hospital                           | Water Tanks                | State Parks                 |
|                                   |                                    |                            | State Forests               |
|                                   |                                    |                            | Lake                        |

NOTE: Archaeological sites and endangered species not shown due to the sensitive nature of the data.

# DAVIESS COUNTY

- Legend**
- 4000' Corridor
  - Parkways
  - U.S. Highways
  - State Roads



**Environmental Footprint**  
 FIGURE 4  
 Daviess County  
 Item No. 2-8106.00  
 Phase 2 - Scoping Study for Safety Improvements on US 431 from the McLean / Muhlenberg Co. Line to the Indiana Border



Despite not being part of the watershed in the study area, the Ohio River is a major river system found within the study area. The Ohio River is located along Owensboro's northern boundary and is considered the third largest river system in North America. The Ohio River is also Kentucky's northern boundary, separating the state from Ohio, Indiana, and Illinois.

Daviess County has numerous man-made ditches in and around Owensboro and has experienced significant flooding in areas. In addition, there are a large number of stream tributaries spanning the study area. A total of 83 individual streams compose a total of 20.2 miles of streams in the project area. As previously mentioned, Panther Creek is the major creek system that crosses the study area.

Streams are classified by a hierarchy system called *stream order*. In this system, the smallest stream is designated an Order 1 stream and the largest is designated an Order 8 stream. The Ohio River is an example of an Order 8 stream. As stream segments continue to merge, the Order number increases. Order designations in the study area include:

- There are no Order 6, 7, or 8 streams crossing the study area, although the Ohio River is just north of the study area;
- One (1) Order 5 stream is located within the study area. Panther Creek has a total length of approximately 1.0 mile;
- One (1) Order 4 stream is located within the study area. Rhodes Creek is located in the middle of the study area near the intersection of US 431 and KY 554. This stream has a total length of 1.2 miles;
- There are no Order 3 streams in the study area;
- One (1) Order 2 stream is located within the study area. This stream has a total length of 0.2 miles; and,
- There are 80 Order 1 streams in the study area. These streams have a combined total length of 17.8 miles, with most tributaries belonging to Panther Creek.

As is common to this area, dendritic stream patterns are found throughout the study area. Dendritic streams have a varying tributary order, as tributaries join the "trunk" or stream channel at oblique angles. An example of this pattern would be the appearance of veins in tree leaves.

Information obtained from the Water Quality Branch of the Natural Resources and Environmental Protection Cabinet (NREPC) indicates there are no Outstanding Resource Waters or Wild Rivers within the proposed corridor.

As recommended by the Division of Environmental Analysis, all channel changes should be avoided as part of this project to reduce mitigation needs and permitting requirements.

### **3. Lakes/Ponds**

There are no natural or man-made lakes within the study area portion of Daviess County. Though private ponds were located from previous base mapping, they were nearly non-existent during field review of the study area.

### **4. Wetlands**

Seventy-six (76) wetlands were recorded within the study area totaling over 163 acres. The primary wetland areas are associated with Panther Creek and Rhodes Creek, located just north of the KY 554 / US 431 intersection.

A field inspection of each of these areas will be necessary to determine their jurisdictional status (i.e., they may or may not require a nationwide or individual permit from the US Army Corps of Engineers). Furthermore, a more in depth inspection would be beneficial for mitigation assessment purposes, if needed.

## 5. Floodplains

The Q-3 digital Federal Emergency Management Agency (FEMA) data for Kentucky floodplains are digital datasets that are available on a county-by-county basis. Based on this data source, the Daviess County floodplain data includes the following:

### Natural and Manmade Features

- ✓ Water lines, tanks, and wells
- ✓ One major watershed
- ✓ 76 wetland areas totaling 163 acres
- ✓ "Zone X" floodplains

- South of the intersection of US 431 and KY 554, FEMA has designated floodplain areas "Zone X." This zone designates areas that are outside of 100 to 500-year floodplains;
- A section of "Zone X500" floodplain can be found near the KY 298/US 431 intersection. An area with a "Zone X500" classification, describes floodplains which are inundated by 500-year flooding. This classification also includes areas inundated by 100-year flooding with average depths of less than one foot or with drainage areas less than one square mile and any areas protected by levees from 100-year flooding;
- Tributaries north of Panther Creek on either side of US 431 possess "Zone AE" classifications. "Zone AE" status is described as having locations inundated by 100-year flooding for which Base Flood Elevations (BFEs) have been determined;
- Near the intersection of US 431 and US 60, another flood potential site within the study area exists. This area contains different segments of "Zone X," with one small section containing "Zone X500"; and,
- The remaining floodplain data indicates "Zone X" classifications extending the length of the study area north toward the Ohio River.

## B. Biotic Communities

Biotic communities considered as part of this analysis are divided into floral and faunal categories as discussed in the following sections. The Kentucky State Nature Preserves Commission (KSNPC) monitors a number of endangered, threatened, or special concern plants or animals within the US 431 study area. The KSNPC data is updated on a regular basis and may be verified as needed in future phases of this project. To further ensure the accuracy of this analysis, a cross-check was completed with data collected from the United States Fish and Wildlife Service (USFWS).

### 1. Floral Communities

The KSNPC and USFWS have determined that no occurrences of monitored vascular plants are found within the study area in Daviess County.

### 2. Faunal Communities

Based upon the KSNPC's most current information, five (5) occurrences of monitored species are found within



*Northern Crawfish Frog*  
<http://www.herpnet.net>

the study area including two (2) bi-valves, one (1) amphibian, one (1) bird, and one (1) reptile.

- One (1) species has been determined to be **endangered**: *Rabbitsfoot* (bi-valve); and,
- Four (4) species are considered to be **special concern** fauna: *Sheepnose* (bi-valve), *Barn Owl* (bird), *Northern Crawfish Frog* (amphibian), and *Copperbelly Water Snake* (reptile).

The USFWS does not list *Rabbitsfoot* (bi-valve) as an **endangered** species in Kentucky, nor does it match any potential **threatened** faunal species from the KSNPC's listings. Also, it should be recognized that **special concern** listings are not displayed within the USFWS database.

It should be noted that the *Copperbelly Water Snake* is subject to the conditions outlined in the Copperbelly Water Snake Conservation Agreement, which is overseen by the Kentucky Department of Fish and Wildlife Resources.

## C. Social, Economic, and Environmental Justice Concerns

Socioeconomic concerns considered as part of this analysis include social and economic locations and environmental justice. These items are discussed in the following sections.

### 1. Social and Economic Locations

Fourteen (14) community sensitive locations were identified in the study area.

- There are four (4) churches in the study area. Of the churches, three (3) are located south of Panther Creek and the other one (1) within the Owensboro City limits. These are listed in **Appendix C**;
- Nine (9) school facilities are located within the study area. Of the school facilities, two (2) are colleges, including:
  - Brescia College; and
  - Kentucky Wesleyan College. These colleges are located on either side of US 431 in Owensboro;
  - Seven (7) other schools were identified and are listed in Appendix C; and
- One (1) cemetery located within the study area has not been identified as historic.



*Brescia College*

In addition to these potential community concern areas, the study area is composed of various businesses and industry. The major industrial area within Daviess County is Owensboro.

- There are over twenty (20) major industrial sites within Owensboro;
- The largest industries according to Year 2000 economic data include:
  - Services, 23.6 percent of earnings;
  - State and local government, 16.4 percent; and
  - Retail trade, 11.0 percent.

- Agriculture is not a major player in regards to area economics;
- Daviess County has a per capita personal income (PCPI) of \$24,238. This PCPI ranks 22nd in the State and is greater than the state average (\$24,085), but less than the national average (\$29,469);
- Also, Owensboro has a total personal income (TPI) of \$2,220,460, which ranks 6th in the State, and accounts for 2.3 percent of the state total; and,
- The unemployment rate in Daviess County as of 2001 is listed at 5.4 percent, which is lower than the State average of 5.5 percent but higher than the U.S. average of 4.8 percent.

## **2. Environmental Justice**

An important consideration for highway reconstruction or new development is environmental justice. For this study, environmental justice was addressed by calculating the percentage of minorities and low-income persons in the project area. Information was gathered from 2000 U.S. Census tract population counts. The study area is located in Census Tracts 2, 3, 5, 7, 8, 10, 11, and 12 in Daviess County.

Environmental justice concerns related to minority populations may exist based on Census 2000 data for the project area census tracts:

- Census Tracts 2, 3, and 5 have minority populations of 28.8, 12.2, and 10.3 percent, respectively.
- These percentages are higher than average percentages for Kentucky and Daviess County (10.0 and 6.1 percent, respectively).

Field review of the study area indicates that, residential dwellings currently reflect evidence of potential environmental justice issues with respect to low-income housing. Low-income data from the 2000 U.S. Census has not yet been released for the census tracts; however, census bureau information for the year 1999 indicates that three census tracts have a higher percentage of persons living in poverty than Kentucky and Daviess County:

- Census Tracts 2, 3, and 5 have poverty rates of 35.0, 37.4, and 17.6 percent, respectively.
- The statewide and countywide rates were 15.8 percent and 12.3 percent, respectively, in 1999.

It should be noted that 2000 minority population and 1999 low-income data sets were the latest available information at the time of this report.

The Green River Area Development District is compiling an Environmental Justice document to be included in the project study report. This document should be referenced for a more in-depth analysis of the environmental justice issues in the study area.

## **D. Historic and Archaeological Sites**

A number of historic and archaeological sites are located within the study area. A full historic baseline study is recommended early in project development to review cultural landscapes and other historic sites in the study area.

## 1. Historic Sites

There are numerous historical points of interest throughout the US 431 study area in Daviess County, including markers, structures and districts. Historic markers and monuments in the study area include the following:

- North of the intersection of US 431 and KY 140 in Daviess County, a Civil War Historical Marker was established identifying a Civil War skirmish, dated September 19, 1862. The marker details how Confederate forces had occupied the area and refused to surrender as Union soldiers moved into the area. A skirmish followed as Union forces obtained reinforcements from the Indiana Legion. Outnumbered, the Confederates retreated with 36 killed and over 70 wounded. Union forces losses were minimal with 3 killed and 35 wounded. This site has not been assessed for potential listing on the National Register of Historic Places.
- The town of Owensboro has several War Memorial monuments on the banks of the Ohio River. The most prominent is the Ernest E. Shelton monument for Prisoners of War (POW) and those Missing In Action (MIA). A U.S. Air Force POW, Ernest E. Shelton was never found and eventually was documented as killed in action. This monument honors these soldiers who gave their lives for their country.
- A Confederate Congressional Medal of Honor state marker is located on the Ohio River in Owensboro. Though this historic marker falls just outside the study corridor, its significance should be recognized. It was erected in 1997 and has been given a National Register Listing.

Historic structures within the study area include:

- 121 historic structures have been located within the study area;
- Twenty-two (22) of these historic structures are listed on the National Register of Historic Places. All of these are located within Owensboro.

Four (4) Historic Districts are located within the Owensboro corporate limits:

- The Phillips Court District centers on a three block area of Frederica St. and includes approximately 118 acres, with twenty-six (26) contributing buildings. Two (2) outstanding structures within this district are the Italianate Triplett House and the Second Empire Building;
- The J.Z. Moore District consists of a 130 acre, twelve (12) block area of late Victorian and Classical Revival style homes and buildings. Forty-nine (49) building lots comprise the entire district;
- Doctor's Row is a five (5) acre Historic District of late 19th century commercial architecture. This District was significant in establishing Owensboro as a regional medical center; and,



*Historical Marker in Daviess County, along US 431*



*POW/MIA War Memorial in Owensboro*



- Owensboro Historic Commercial District is located between Lewis Street, the Ohio River in the north, and St. Ann Street to the south. This district includes forty-three (43) separate buildings and 80 acres.

## 2. Archaeological Sites

According to the Office of State Archaeology, there are no archaeological sites officially recorded within the project area in Daviess County. However, according to the Division of Environmental Analysis (DEA), it should be noted that the 121 historic structures listed in the previous section have a likely potential of being archaeological sites. Due to the lack of previous archaeological research in this area, documentation of known sites is nonexistent. It should also be noted that numerous archaeological sites do exist outside the study area with many located in and around the city of Owensboro.

## E. Prime and Unique Farmland Concerns

An estimated 64% of Daviess County is harvested cropland. Soybeans, corn, oats, wheat, and hay are the staple crops in this area, along with some tobacco. Daviess County carries the distinction of the state's top producer of soybeans with over 82,639 acres of beans harvested. In addition, it ranks second in corn production in the state, with over 76,500 acres harvested.

According to the most recently updated Soil Survey Geographic (SSURGO) database, Daviess County digital soil data sets are **not** completed for downloading. The soil data obtained from SSURGO is the most detailed and accurate soil information available. The SSURGO database is updated and maintained by the United States Department of Agriculture (USDA).

Relocation of the US 431 corridor could result in land use changes and subsequent impacts to prime farmland, including chemical runoff into sinkholes and other drainage concerns.

## F. Monitored Sites and Wells

A review of the databases and data source information covering the project area revealed a number of monitored sites, hazardous materials sites, locations with discharge permits, as well as oil and gas wells. A listing of these sites as well as a corresponding address of the sites can be found in **Appendix D**. The most significant issue along the corridor appears to be a site designated within the "Superfund" database, a number of underground storage tank locations, and oil and gas wells. A summary of these issues is presented as follows:

- One (1) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) site. In 1980, the U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. The intent of this legislation was to regulate the cleanup of disposal sites where hazardous waste was leaking into the environment. The subject site is located along US 431 in Livia, just north of the Daviess/McLean County line and is known as Barnet of Kentucky. The current status of this site indicates that it is not on the National Priority List (NPL) and that no further remedial action is planned for this site under the Superfund Program. However, this site may present a significant concern for project development considerations and should be avoided unless further investigation reveals this site to be free from environmental hazards;



*Oil well in Daviess County*

- 197 underground storage tank (UST) sites within the Daviess County study corridor. Of these 197 tank sites, 180 tanks are found inside Owensboro's corporate limits. Of these, there are thirty-four (34) tanks which are currently active, five (5) tanks that have been closed, nine (9) tanks that have been temporarily closed, and 132 tanks which have been permanently removed. The remaining seventeen (17) underground storage tanks can be found in Browns Valley (9) and Livia (8). Four (4) tanks within Browns Valley are currently active, while four (4) more have been removed, and one (1) has been temporarily closed. Within the community of Livia, all eight (8) underground storage tanks have been permanently removed. In the development of corridor alignments, consideration should be given to opportunities to avoid the locations where underground storage tanks currently exist or did exist to avoid the need to remove existing tanks or assume liability for right-of-way that may be contaminated;
- Forty-five (45) Resource Conservation and Recovery Information System (RCRIS) sites. They are required to provide information about their activities to state environmental agencies. RCRIS is a national information system which supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities which generate, transport, treat, store or dispose of hazardous waste. RCRIS allows the RCRA program staff to track the notification, permit, compliance and corrective action activities required under the RCRA. Of these sites, forty-four (44) are located within the corporate limits of Owensboro. The remaining site is found in Utica (1). Twenty-four (24) of the sites located in Owensboro are also noted in the FINDS database, discussed later in this section. In addition, seven (7) RCRIS sites were noted in the FINDS database but not the RCRIS database. In the development of corridor alignments, further investigation of all RCRIS sites is warranted in order to better understand their environmental significance and liability risk that they may pose to the Cabinet;
- Eighteen (18) Aerometric Information Retrieval System (AIRS) sites. Seventeen (17) sites are currently located within the corporate limits in Owensboro. The remaining site is located near Browns Valley. AIRS sites are used to track emissions and compliance data from industrial plants. AIRS data are utilized by states to prepare State Implementation Plans (SIP) to comply with regulatory programs and by the Environmental Protection Agency (EPA) as an input for the estimation of the total national emissions. It should be noted that nine (9) of the eighteen sites were identified in the FINDS database, described later in this section;
- One (1) Toxic Release Inventory (TRIS) site. TRIS sites contain information about the release of toxic chemicals by manufacturers. The data reported from these sites are important for both the government and public so that potential chemical risks can be assessed. This site, MPD Inc., is located along on East 9<sup>th</sup> Street in Owensboro;
- Five (5) Emergency Response Notification System (ERNS) sites. Four (4) sites are located within the corporate limit of Owensboro, while the remaining site is found within the community of Browns Valley. The ERNS is an extensive database revealing notifications of oil and hazardous substance releases that have occurred throughout the United States. This data base is a listing of locations where a release or spill of hazardous material has previously occurred at a federally-determined level and the responsible operator has notified the federal government of the spill. It should be noted that these sites are also affiliated with the aforementioned FINDS sites. Further investigations of these locations, including soil tests or other appropriate investigations

should be undertaken if these locations are going to be potentially impacted during the project development phase;

- Three (3) Permit Compliance System (PCS) sites. The PCS represents companies which have been issued permits to discharge waste water into rivers. PCS is a computerized management information system which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks permit, compliance, and enforcement states of NPDES facilities. The three (3) sites were identified from the FINDS database. Two (2) of these are located in Owensboro (Daviness County Detention Center on St. Elizabeth Street and Owensboro Grain Company on East Second Street) while the final site is located in Utica (Browns Valley MHP on US 431). Sites categorized as PCS sites do not necessarily represent a particular environmental hazard for highway project development considerations, but further investigation of any potentially impacted sites is recommended during the project development process;
- Fifty-one (51) Facility Identification Initiative System (FINDS) sites, all but two (2) of which are located within the corporate limits of Owensboro. The goal of this system, which was developed in the mid-1990's, is to simplify the reporting of all government sites by using an extensive database relative to all environmental sites monitored by the EPA which are subject to environmental regulation or of environmental interest. The sites contained in this database are facilities that are subject to federal environmental reporting and permitting requirements. Since this database is a compilation of multiple types of sites, there is some overlap between the FINDS sites and those described in the previous bullets. Of the fifty-one (51) sites, thirty (30) are RCRIS sites, three (3) are PCS sites, nine (9) are AIRS sites, and the remaining nine (9) sites do not include any other specific site type; and,
- Eighty-eight (88) oil and gas wells primarily concentrated in the southern half of the county. While these wells do not represent insurmountable obstacles for project development purposes, several issues should be considered if these sites are to be impacted by future construction. First, the KYTC must compensate the owner/operator of the well for its loss. Also, the KYTC must take responsibility for operating issues with the well and eventual closing and plugging. Plugging costs range from \$1,500 for a shallow well to \$6,000 or more for deeper wells or wells with problems. Finally, many oil and gas wells produce a brine wastewater and potentially other contaminants that should be investigated on the sites.

It should be noted that within **Figure 4**, the mapping legend may contain additional environmental graphic symbols that do not appear on this map.

Also, the potential for environmental hazard/contamination is increased within the study area due to higher amounts of geotechnical activity. These hazards apply to the southern section of Daviess County where oil and gas drilling is more prominent.

## **G. Additional Concerns**

Other items identified within the US 431 study area include:

- Additional UST/HazMat concerns are likely to be associated with farming operations in the study area;
- Seven (7) fault lines cross the study area, primarily in the southern portion of Daviess County;

- Two (2) sewage treatment plants located near the KY 140/US 431 intersection and south of KY 298, adjacent to St. Anthony's School along US 431; and,
- According to the Division of Environmental Analysis, noise could be a concern in Daviess County.

## **H. Summary of Environmental Issues**

The potential environmental concerns identified for the study corridor have been identified through this preliminary analysis. Environmental issues that are likely to require consideration during future phases of this project include:

- Potential water quality and floodplain issues related to the streams such as Panther Creek, their tributaries and wetland areas;
- Public and private water sources, such as water lines, wells, tanks, and facilities;
- Churches, schools, and cemeteries;
- Potential environmental justice issues related to high percentages of minority and low-income populations in the project area census tracts;
- Prime farmland along the US 431 corridor;
- Historic structures and Historic Districts, including those listed on the National Register of Historic Places;
- Underground storage tanks and gas/oil wells;
- Fault lines located in the southern portion of Daviess County; and,
- Potential habitat for threatened, endangered, or special concern species.

## **APPENDIX A**

### **Environmental Resource Information**



Appendix A

<b>Granting Agency</b>		
<b>Contact Information</b>		<b>Data Obtained</b>
<b><i>Department of Fish &amp; wildlife Resources</i></b>		
<i>Web Address</i>	<i>http://www.fws.gov/data/stata/kydata.html</i>	<i>Wetlands Information - U.S. Department of Fish and Wildlife Quad Maps, 1983-1987</i>
<i>Mailing Address</i>	<i>#1 Game Farm Road Frankfort, KY 40601</i>	
<i>Phone Number</i>	<i>(800) 858-1549</i>	
<b><i>Kentucky Division of Waste Management / Underground Storage Tank Division</i></b>		
<i>Web Address</i>	<i>www.waste.ky.gov/programs/ust/</i>	<i>Underground Storage Tank Data</i>
<i>Mailing Address</i>	<i>14 Reilly Road Frankfort, KY 40601</i>	
<i>Phone Number</i>	<i>(502) 564-6717</i>	
<b><i>Kentucky Natural Resources and Environmental Protection Cabinet</i></b>		
<i>Web Address</i>	<i>www.nr.state.ky.us</i>	<i>Tire Dump Locations Sewage Treatment Plants Public Water Supply Lakes - based on National Wetlands Inventory, 1981 Permitted Landfills, recorded 1965-1985 Wildlife Management Areas State Parks - Kentucky Department of Parks, 1991 Facilities Guide State Forests</i>
<i>Mailing Address</i>	<i>Capital Plaza Tower</i>	
<i>Phone Number</i>	<i>(502) 564-3350</i>	
<b><i>Kentucky Heritage Council</i></b>		
<i>Web Address</i>	<i>www.state.ky.us/agencies/khc/khchome.htm</i>	<i>Archaeological Sites Historic Structures</i>
<i>Mailing Address</i>	<i>300 Washington Street Frankfort, KY 40601</i>	
<i>Phone Number</i>	<i>(502) 564-7005</i>	

Appendix A (continued)

<b>Granting Agency</b>		
<b>Contact Information</b>		<b>Data Obtained</b>
<b><i>Kentucky Geological Survey</i></b>		
<i>Web Address</i>	<i>www.uky.edu/KGS/home.htm</i>	<i>Faults Blueline Streams Oil and Gas Wells Coal Exploration USGS Water Monitoring Sites Water Wells</i>
<i>Mailing Address</i>	<i>228 Mining and Mineral Resources Building University of Kentucky Lexington, KY 40506-0107</i>	
<i>Phone Number</i>	<i>(859) 257-5500</i>	
<b><i>Kentucky State Nature Preserves Commission</i></b>		
<i>Web Address</i>	<i>www.naturepreserves.ky.gov/dataservices/download_reports.htm</i>	<i>Threatened and Endangered Species</i>
<i>Mailing Address</i>	<i>801 Schenkel Lane Frankfort, KY 40601</i>	
<i>Phone Number</i>	<i>(502) 573-2886</i>	
<b><i>Kentucky Department for Surface Mining Reclamation and Enforcement</i></b>		
<i>Web Address</i>	<i>www.surfacemining.ky.gov/data/gis/spatial/</i>	<i>Graphic database for all mining activities since 1961</i>
<i>Mailing Address</i>	<i>2 Hudson Hollow Frankfort, KY 40601</i>	
<i>Phone Number</i>	<i>(502) 564-6940</i>	
<b><i>U.S. Army Corps of Engineers</i></b>		
<i>Web Address</i>	<i>www.usace.army.mil</i>	<i>Dams (National Inventory of Dams, 1998-1991) Locks Ports</i>
<i>Mailing Address</i>	<i>20 Massachusetts Ave, NW Washington, DC 20314</i>	
<i>Phone Number</i>	<i>(202) 761-0001</i>	

Appendix A (continued)

<b>Granting Agency</b>		
<b>Contact Information</b>		<b>Data Obtained</b>
<b><i>Abandoned Mine Land Program</i></b>		
<i>Web Address</i>	<i>www.surfacemining.ky.gov/data/gis/spatial/</i>	<i>Abandoned Mine Lands Data</i>
<i>Mailing Address</i>	<i>2521 Lawrenceburg Road Frankfort, KY 40601</i>	
<i>Phone Number</i>	<i>(502) 564-2141</i>	
<b><i>U.S. Geological Survey</i></b>		
<i>Web Address</i>	<i>www.usgs.gov</i>	<i>GNIS (Geographical Name Information Server) for Schools, Cemeteries, Churches, and Hospitals</i>
<i>Mailing Address</i>	<i>12201 Sunrise Valley Drive Reston, VA 20192</i>	
<i>Phone Number</i>	<i>(703) 648-7411</i>	<i>DRG (Digital Raster Graphic)</i>
<b><i>National Park Service</i></b>		
<i>Web Address</i>	<i>www.nps.gov</i>	<i>Dataset for 340 National Park System Unit Boundaries</i>
<i>Mailing Address</i>	<i>1848 C Street, NW Washington, DC 20240</i>	
<i>Phone Number</i>	<i>(202) 208-4621</i>	
<b><i>National Forest Service</i></b>		
<i>Web Address</i>	<i>www.nfs.fed.us</i>	<i>Polygon Coverage Showing Surface Ownership / Jurisdictions of Lands</i>
<i>Mailing Address</i>	<i>1400 Independence Ave, SW Washington, DC 20250</i>	
<i>Phone Number</i>	<i>(202) 205-1760</i>	
<b><i>Bureau of Transportation Statistics</i></b>		
<i>Web Address</i>	<i>www.bts.gov</i>	<i>United States Military Installations Database (BTS) Railroad Linear Data</i>
<i>Mailing Address</i>	<i>400 7th Street, SW Washington, DC 20590</i>	
<i>Phone Number</i>	<i>(202) 366-1111</i>	

Appendix A (continued)

<b>Granting Agency</b>		
<b>Contact Information</b>		<b>Data Obtained</b>
<b><i>Federal Communications Commission</i></b>		
<i>Web Address</i>	<i>www.fcc.gov</i>	<i>Paging, Cellular, and Antenna Spatial Data</i>
<i>Mailing Address</i>	<i>445 12<sup>th</sup> Street SW Washington, DC 20554</i>	
<i>Phone Number</i>	<i>(202) 418-0615</i>	
<b><i>U.S. Department of Transportation</i></b>		
<i>Web Address</i>	<i>www.dot.gov</i>	<i>Highway and Road Networks Utility Line Linear Data</i>
<i>Mailing Address</i>	<i>400 7th Street, SW Washington, DC 20590</i>	
<i>Phone Number</i>	<i>(202) 366-4000</i>	
<b><i>Environmental Protection Agency</i></b>		
<i>Web Address</i>	<i>www.epa.gov</i>	<i>AFS (AIRS Facility Subsystem) CERCL (Comprehensive Environmental Response, Compensation and Liability) ERNS (Emergency Response Notification System) FINDS (Facility Identification Initiative) PCS (Permit Compliance System) RCRIS (Resource Conservation and Recovery Information System) TRIS (Toxics Release Inventory System)</i>
<i>Mailing Address</i>	<i>W1200 W. Tower of Waterside Mall 401 M Street, SW Washington, DC 20460</i>	
<i>Phone Number</i>	<i>(202) 260-4700</i>	
<b><i>Natural Resource Conservation Service (NRCS)</i></b>		
<i>Web Address</i>	<i>www.nrcs.usda.gov</i>	<i>Prime &amp; Unique Farmland Concerns</i>
<i>Mailing Address</i>	<i>U.S. Department of Agriculture 1400 Independence Avenue Washington, DC 20250</i>	
<i>Phone Number</i>	<i>(202) 720-2600</i>	

**APPENDIX B**  
**Project Area Photographs**





Logan Memorial Hospital  
(Logan Co.)



Civil War Monument  
(Russellville-Logan Co.)



Four-lane section of US 431  
(Russellville-Logan Co.)



Logan Aluminum, Inc.  
(Logan Co.)



Lewisburg Water Treatment Plant  
(Lewisburg-Logan Co.)



Hillcrest Church of Christ  
(Logan Co.)



Hughes-Kirk Elementary School  
(Muhlenberg Co.)



Potential Historic General Store  
(Drakesboro-Muhlenberg Co.)



Bevier Presbyterian Church  
(Muhlenberg Co.)



First Methodist Church  
(Central City-Muhlenberg Co.)



US 431 / US 62 intersection  
(Central City-Muhlenberg Co.)



New Hope Cemetery  
(Muhlenberg Co.)

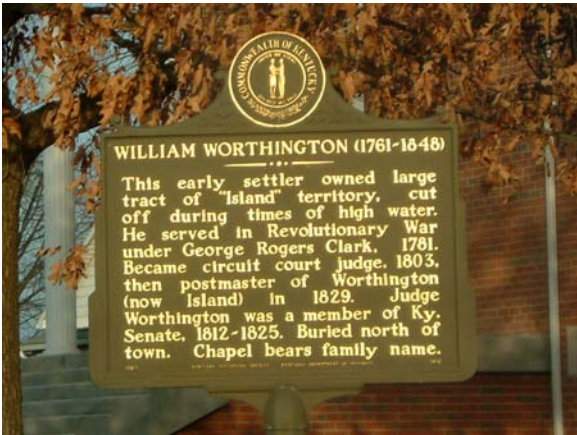




Prime Farmland along US 431  
(McLean County)



Grain Elevators along Green River  
(McLean Co.)



Historic Marker (William Worthington)  
(McLean Co.)



Historic Livermore Bridge  
(Green and Rough Rivers-McLean Co.)



Gas Station w/ UST's  
(Island-McLean Co.)



Poultry Barns (chicken)  
(McLean Co.)



Civil War Historic Marker  
(Davies Co.)



Oil well along US 431  
(Davies Co.)



Historic House along US 431  
(Owensboro-Davies Co.)



US 431 North in Owensboro  
(Owensboro-Davies Co.)



Owensboro High School  
(Owensboro-Davies Co.)



War Memorial with Owensboro Bridge  
(Owensboro-Davies Co.)

## **APPENDIX C**

### **Listing of Additional Community Sensitive Locations**

## Appendix C

### Churches in Logan County:

1. Hillcrest Church of Christ
2. Baptist Church
3. Oak Forest Missionary Baptist Church
4. Cumberland Presbyterian Church
5. Church of Christ
6. The Temple Pentecostal Church
7. Northside Congregation Church of Christ
8. Russellville United Methodist Temple
9. First Baptist Church
10. Trinity Episcopal Church
11. Grace Baptist Church
12. Southern Heights Baptist Church
13. Church of Christ of Adairville
14. Berea Church

### Churches in Muhlenberg County:

1. Church of Jesus Christ
2. Beechmont Church of Christ
3. Belton Beechmont Baptist Church
4. South Carrollton Missionary Baptist Church
5. Maple Grove General Baptist Church
6. Temple Missionary Baptist Church
7. First Church of the Nazarene
8. First United Methodist Church
9. Church of God of Prophecy
10. Bevier Presbyterian Church
11. Dunmor Missionary Baptist Church

### Churches in McLean County:

1. Voice of the Lord Tabernacle
2. Island Baptist Church
3. Buck Creek Church

### Churches in Daviess County:

1. Bellevue Church
2. New Hope Church
3. Panther Creek Church
4. Rushing Church



## Schools in Daviess County

1. Longfellow School
2. Newton Parrish School
3. Our Lady of Lourdes School
4. St. Anthony School
5. Sutherland Consolidated School
6. Western School
7. Owensboro High School

**APPENDIX D**  
**Listing of Sites and Wells**





Site Name	Street Address	City	State	Zip	Tank Status	Substance	Date Installed	Date Removed	Date Closed
DON MOORE CHEVROLET-CADILLAC	600 W 2ND ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1975	3/1/1990	
DON MOORE CHEVROLET-CADILLAC	600 W 2ND ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	3/1/1990	
NTCC	1209 MOSELEY ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1978	2/9/1990	
OWENSBORO RIVER SAND & GRAVEL	701 E 2ND ST	OWENSBORO	KY	42301	TRM	DSL	1/1/1975	1/30/1992	
OWENSBORO RIVER SAND & GRAVEL	701 E 2ND ST	OWENSBORO	KY	42301	TRM	DSL	1/1/1972	1/30/1992	
JUMPIN JACKS 418 (FORMERLY C J'S CHEVRON	1035 TAMARACK RD	OWENSBORO	KY	42301	TAC	GAS	1/1/1990	00000000	
JUMPIN JACKS 418 (FORMERLY C J'S CHEVRON	1035 TAMARACK RD	OWENSBORO	KY	42301	TAC	GAS	1/1/1990	00000000	
JUMPIN JACKS 418 (FORMERLY C J'S CHEVRON	1035 TAMARACK RD	OWENSBORO	KY	42301	TAC	GAS	1/1/1990	00000000	
SERVICE STATION	623 W 9TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1956	10/12/1990	
SERVICE STATION	623 W 9TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1956	10/12/1990	
JUNIOR LEAGUE OF OWENSBORO	1009 ALLEN ST	OWENSBORO	KY	42303	TRM	KER	1/1/1950	12/1/1990	
VAN SLYKE VOLKSWAGON INC	4216 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	12/7/1990	
VAN SLYKE VOLKSWAGON INC	4216 FREDERICA ST	OWENSBORO	KY	42301	TRM	OIL	1/1/2001	12/7/1990	
KAISER-ESTECH	HWY 431 S	UTICA	KY	42376	TR8	GAS	1/1/2001	1/1/2000	
ACE LUBE INC	3425 FREDERICA ST	OWENSBORO	KY	42301	TRM	UOL	8/1/1983	11/6/1998	
ACE LUBE INC	3425 FREDERICA ST	OWENSBORO	KY	42301	TRM	NOL	8/1/1983	11/6/1998	
R A ALEXANDER & SONS INC	7120 US 431	OWENSBORO	KY	42301	TRM	DSL	8/1/1972	2/10/1999	
R A ALEXANDER & SONS INC	7120 US 431	OWENSBORO	KY	42301	TRM	GAS	8/1/1972	2/10/1999	
R A ALEXANDER & SONS INC	7120 US 431	OWENSBORO	KY	42301	TRM	DSL	8/1/1972	2/10/1999	
ANTIQUE SHOP (EMPTY)	410 W 2ND ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	11/15/1991	
ANTIQUE SHOP (EMPTY)	410 W 2ND ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	11/15/1991	
OWENSBORO COCA COLA BOTTLING CO	4801 FREDERICA ST	OWENSBORO	KY	42302	TRM	DSL	1/1/1972	12/18/1991	
OWENSBORO COCA COLA BOTTLING CO	4801 FREDERICA ST	OWENSBORO	KY	42302	TRM	GAS	1/1/1972	12/18/1991	
OWENSBORO COCA COLA BOTTLING CO	4801 FREDERICA ST	OWENSBORO	KY	42302	TR8	EMP	1/1/1978	4/1/1983	
OWENSBORO COCA COLA BOTTLING CO	4801 FREDERICA ST	OWENSBORO	KY	42302	TR8	EMP	1/1/1978	4/1/1983	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TCP	HAZ	1/1/1974	00000000	14-Jun-90
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TCP	HAZ	1/1/1974	00000000	14-Jun-90
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1974	3/18/1991	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1974	3/18/1991	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TRM	DSL	1/1/1978	6/1/1990	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1978	6/1/1990	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TCP	HAZ	1/1/1978	00000000	18-May-90
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TCP	HAZ	1/1/1978	00000000	18-May-90
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TEX	HAZ	1/1/1974	00000000	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TEX	HAZ	1/1/1974	00000000	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TRM	FOL	1/1/1985	1/11/1994	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TRM	FOL	1/1/1976	5/1/1990	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TCP	DSL	1/1/1958	00000000	14-Jun-90
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TUR	UNK	1/1/1974	9/1/1989	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TUR	UNK	1/1/1974	9/1/1989	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TUR	UNK	1/1/1974	9/1/1989	
OWENSBORO GRAIN CO INC	719 E 2ND ST	OWENSBORO	KY	42301	TUR	UNK	1/1/1974	9/1/1989	
FASTWAY #10	919 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1976	12/16/1999	
FASTWAY #10	919 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1976	12/16/1999	
FASTWAY #10	919 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1976	12/16/1999	
SOUTHTOWN BP	2402 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1957	7/26/1999	
SOUTHTOWN BP	2402 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1957	7/26/1999	
SOUTHTOWN BP	2402 FREDERICA ST	OWENSBORO	KY	42301	TRM	DSL	1/1/1957	7/26/1999	
SOUTHTOWN BP	2402 FREDERICA ST	OWENSBORO	KY	42301	TUR	OIL	1/1/1957	4/1/1992	
MR MUFFLER & BRAKE CENTER	2432 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	11/24/1992	
MR MUFFLER & BRAKE CENTER	2432 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	11/24/1992	
MR MUFFLER & BRAKE CENTER	2432 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	11/24/1992	
MR MUFFLER & BRAKE CENTER	2432 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	11/24/1992	
MR MUFFLER & BRAKE CENTER	2432 FREDERICA ST	OWENSBORO	KY	42301	TRM	OIL	1/1/2001	11/24/1992	
DAVIS DISTRIBUTORS INC	211 E 13TH ST	OWENSBORO	KY	42301	TUR	EMP	1/1/1945	8/1/1989	
DAVIS DISTRIBUTORS INC	211 E 13TH ST	OWENSBORO	KY	42301	TUR	DSL	1/1/1945	8/1/1989	
DAVIS DISTRIBUTORS INC	211 E 13TH ST	OWENSBORO	KY	42301	TUR	GAS	1/1/1945	8/1/1989	
COLONIAL BAKING CO	300 E 24TH ST	OWENSBORO	KY	42301	TRM	DSL	1/1/1973	1/1/1990	
COLONIAL BAKING CO	300 E 24TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1959	1/1/1990	
COLONIAL BAKING CO	300 E 24TH ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1990	00000000	
COLONIAL BAKING CO	300 E 24TH ST	OWENSBORO	KY	42301	TAC	DSL	1/1/1990	00000000	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TR8	GAS	1/1/1967	1/1/1983	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TR8	GAS	1/1/1967	1/1/1983	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TR8	GAS	1/1/1967	1/1/1983	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TR8	OIL	1/1/1967	1/1/1983	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1983	00000000	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1983	00000000	
JUMPING JACKS #4	902 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1983	00000000	
JUMPIN JACKS #2	715 PARRISH AVE	OWENSBORO	KY	42301	TAC	GAS	1/1/1983	00000000	
JUMPIN JACKS #2	715 PARRISH AVE	OWENSBORO	KY	42301	TAC	GAS	1/1/1983	00000000	
JUMPIN JACKS #2	715 PARRISH AVE	OWENSBORO	KY	42301	TAC	GAS	1/1/1983	00000000	
THE WRIGHT SUPPLY COMPANY INC	320 E 4TH ST	OWENSBORO	KY	42301	TRM	UOL	1/1/2001	11/23/1994	
CITY OF OWENSBORO	427 ST ANN ST	OWENSBORO	KY	42302	TEX	GAS	1/1/2001	00000000	
CITY OF OWENSBORO	427 ST ANN ST	OWENSBORO	KY	42302	TEX	GAS	1/1/2001	00000000	
OWENSBORO POLICE DEPARTMENT	330 ALLEN ST	OWENSBORO	KY	42302	TR8	GAS	1/1/2001	6/1/1973	
OWENSBORO POLICE DEPARTMENT	330 ALLEN ST	OWENSBORO	KY	42302	TR8	GAS	1/1/2001	6/1/1973	
OWENSBORO DAVIESS CO AIRPORT HAN	3800 FREDERICA ST	OWENSBORO	KY	42301	TAC	JET	1/1/1980	00000000	
OWENSBORO DAVIESS CO AIRPORT HAN	3800 FREDERICA ST	OWENSBORO	KY	42301	TAC	JET	1/1/1980	00000000	
TEXAS GAS TRANSMISSION CORP	3800 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1978	00000000	
TEXAS GAS TRANSMISSION CORP	3800 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1978	00000000	
TEXAS GAS TRANSMISSION CORP	3800 FREDERICA ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1981	10/7/1991	
UNKNOWN/CONST SITE (DOT)	431 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	2/28/1994	
UNKNOWN/CONST SITE (DOT)	431 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	2/28/1994	
DON MOORE CHEVROLET-CADILLAC	230 CEDAR ST	OWENSBORO	KY	42301	TUR	UNK	1/1/2001	3/1/1990	
DON MOORE CHEVROLET-CADILLAC	230 CEDAR ST	OWENSBORO	KY	42301	TUR	UNK	1/1/2001	3/1/1990	
TRANSIT MIX CONCRETE CO	1533 MOSELEY ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1971	12/1/1988	
DYNALECTRIC COMPANY	300 WALNUT ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1971	1/6/1994	
QUALITY OIL MASSIE CLARKE DEV	3633 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	9/10/1993	
QUALITY OIL MASSIE CLARKE DEV	3633 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	9/10/1993	
QUALITY OIL MASSIE CLARKE DEV	3633 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	9/10/1993	
QUALITY OIL MASSIE CLARKE DEV	3633 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	9/10/1993	
QUALITY OIL MASSIE CLARKE DEV	3633 FREDERICA ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1961	9/10/1993	
BOWEN TIRE (FORMER PLAZA SHELL)	2600 FREDERICA ST	OWENSBORO	KY	42301	TR8	GAS	1/1/1961	12/15/1988	
BOWEN TIRE (FORMER PLAZA SHELL)	2600 FREDERICA ST	OWENSBORO	KY	42301	TR8	GAS	1/1/1961	12/15/1988	
BOWEN TIRE (FORMER PLAZA SHELL)	2600 FREDERICA ST	OWENSBORO	KY	42301	TR8	DSL	1/1/1961	12/15/1988	
BOWEN TIRE (FORMER PLAZA SHELL)	2600 FREDERICA ST	OWENSBORO	KY	42301	TRM	UOL	1/1/1961	12/18/1989	
BOWEN TIRE (FORMER PLAZA SHELL)	2600 FREDERICA ST	OWENSBORO	KY	42301	TEX	FOL	1/1/1961	00000000	
TICHENORS SHELL	1236 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1958	4/2/1998	
TICHENORS SHELL	1236 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1958	4/2/1998	
TICHENORS SHELL	1236 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1958	4/2/1998	
TICHENORS SHELL	1236 FREDERICA ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1958	4/2/1998	
QUALITY QUICK #8	4625 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1978	00000000	
QUALITY QUICK #8	4625 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1978	00000000	
QUALITY QUICK #8	4625 FREDERICA ST	OWENSBORO	KY	42301	TAC	GAS	1/1/1978	00000000	
KINGS SHELL	2449 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	8/4/1992	
KINGS SHELL	2449 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	8/4/1992	
KINGS SHELL	2449 FREDERICA ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1961	8/4/1992	
KINGS SHELL	2449 FREDERICA ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1961	8/4/1992	

Site Name	Street Address	City	State	Zip	Tank Status	Substance	Date Installed	Date Removed	Date Closed
QUINNS SHELL	622 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1956	2/12/1990	
QUINNS SHELL	622 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1956	2/12/1990	
QUINNS SHELL	622 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1956	2/12/1990	
QUINNS SHELL	622 E 4TH ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1956	2/12/1990	
QUINNS SHELL	622 E 4TH ST	OWENSBORO	KY	42301	TRM	OIL	1/1/1956	2/12/1990	
QUALITY QUICK 3	501 W 2ND ST	OWENSBORO	KY	42303	TR8	GAS	1/1/1966	1/1/1986	
QUALITY QUICK 3	501 W 2ND ST	OWENSBORO	KY	42303	TR8	GAS	1/1/1966	1/1/1986	
QUALITY QUICK 3	501 W 2ND ST	OWENSBORO	KY	42303	TR8	GAS	1/1/1966	1/1/1986	
QUALITY QUICK 3	501 W 2ND ST	OWENSBORO	KY	42303	TAC	GAS	1/1/1986	00000000	
QUALITY QUICK 3	501 W 2ND ST	OWENSBORO	KY	42303	TAC	GAS	1/1/1986	00000000	
QUALITY QUICK 3	501 W 2ND ST	OWENSBORO	KY	42303	TAC	GAS	1/1/1986	00000000	
RE 269	304 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1971	1/10/1990	
RE 269	304 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1971	1/10/1990	
RE 269	304 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/1971	1/10/1990	
RE 269	304 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	1/10/1990	
RE 269	304 E 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	1/10/1990	
RE 269	304 E 4TH ST	OWENSBORO	KY	42301	TRM	OIL	1/1/2001	1/10/1990	
PETROLEUM LOCATION BP	E 14TH ST	OWENSBORO	KY	42301	TUR	GAS	1/1/1975	2/22/1989	
PETROLEUM LOCATION BP	E 14TH ST	OWENSBORO	KY	42301	TUR	GAS	1/1/1975	2/22/1989	
ROBERTS MOTOR SALES INC	200 E 18TH ST	OWENSBORO	KY	42301	TR8	UNK	1/1/1960	1/1/1988	
ROBERTS MOTOR SALES INC	200 E 18TH ST	OWENSBORO	KY	42301	TR8	OIL	1/1/1960	1/1/1988	
ATHERTONS GROCERY	HWY 431	UTICA	KY	42376	TRM	GAS	1/1/1974	10/13/1992	
ATHERTONS GROCERY	HWY 431	UTICA	KY	42376	TRM	DSL	1/1/1974	10/13/1992	
ATHERTONS GROCERY	HWY 431	UTICA	KY	42376	TRM	GAS	1/1/1974	10/13/1992	
BOWEN TIRE	711 PARRISH	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	3/26/1990	
BOWEN TIRE	711 PARRISH	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	3/26/1990	
BOWEN TIRE	711 PARRISH	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	3/26/1990	
BOWEN TIRE	711 PARRISH	OWENSBORO	KY	42301	TRM	OIL	1/1/2001	3/26/1990	
RABEN TIRE COMPANY	824 FREDERICA ST	OWENSBORO	KY	42301	TRM	UOL	1/1/1974	10/27/1993	
J BACON & SONS	5000 FREDERICA ST	OWENSBORO	KY	42301	TEX	DSL	1/1/1978	00000000	
J & L AUTOMOTIVE	600 W 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	10/21/1998	
J & L AUTOMOTIVE	600 W 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	10/21/1998	
J & L AUTOMOTIVE	600 W 4TH ST	OWENSBORO	KY	42301	TRM	GAS	1/1/2001	10/21/1998	
J & L AUTOMOTIVE	600 W 4TH ST	OWENSBORO	KY	42301	TRA	UOL	1/1/2001	10/21/1998	
SUBURBAN PROPANE	308 E 25TH ST	OWENSBORO	KY	42302	TRM	UOL	1/1/2001	12/2/1998	



**RCRIS Sites**

Facility ID	Facility Name	Street Address	City	State	Zip Code	Contact Name	Contact Phone
<b>LOGAN COUNTY</b>							
KYD985112317	ACTION AUTOMOTIVE GROUP INC.	620 NORTH MAIN STREET	RUSSELLVILLE	KY	42276	SHOOK TIM	5027263694
KYR000010249	ADAIRVILLE AUTO CARE	N MAIN ST	ADAIRVILLE	KY	42202	BLAKE THURMAN	5025394341
KYD049937832	CARPENTER COMPANY	200 FORREST PARK DRIVE	RUSSELLVILLE	KY	42276	BAKER WADE	5027269513
KYR000004952	CLAYS AUTO BODY	591 WEST 2ND STREET	RUSSELLVILLE	KY	42276	BILYEU CLAY	5027268092
KYR000012377	HALLIGAN FOOD MART	3203 LEWISBURG RD	LEWISBURG	KY	42256	HALLIGAN WILLIAM	5739982836
KYD990876252	ILLINOIS TOOL WORKS INC	CLARKSVILLE ROAD	RUSSELLVILLE	KY	42276	ARNOLD LARRY	5027269531
KYD985094143	J. S. TECHNOS CORP.	188 EARL DAVIS DRIVE	RUSSELLVILLE	KY	42276	WILLIAMS JERRY	5027266122
KYR000003723	KENTUCKY DEPT OF HIGHWAYS	US 431	RUSSELLVILLE	KY	42276	SMITH BOBBY G.	5025647111
KY0001019264	PRIVATE RESIDENCE	214 EAST 1ST STREET	RUSSELLVILLE	KY	42276	MATHIS GARY	5027810577
KYR000009639	STOP & SHOP MARKET	HWY 106 & 8TH ST	LEWISBURG	KY	42256	LOGSDON DOROTHY	5027554556
KYR000019042	TRIMBLE'S SERVICE CENTER	100 N MAIN ST	ADAIRVILLE	KY	42202	TRIMBLE JIM	5025396741
KYR000000851	4TH ST UNOCAL	4TH ST	RUSSELLVILLE	KY	42276	CHESTNUT JAMES MICHAEL	5027265848
KYD981804925	BETHEL CLEANERS	212 BETHEL SHOPPING CENTE	RUSSELLVILLE	KY	42276	HARDIN GARY	5027262115
KYD006379945	BTR PRECISION DIE CASTING, INC.	232 HOPKINSVILLE ROAD	RUSSELLVILLE	KY	42276	INMAN THOMAS H.	2707260268
KYD135322030	KO KLEENERS	520 WEST NINTH ST.	RUSSELLVILLE	KY	42276	GOWER J. L.	5027262501
<b>MUHLENBERG COUNTY</b>							
KYD000773382	AMAX INC AYRGEM MINE	1/4 MI OFF KY HWY 431 SOUTH	CENTRAL CITY	KY	42330	HUGHES MICHAEL,R	5023386240
KYR000019331	DRAKESBORO CITY BUILDING	HWY 176 MAIN ST.	DRAKESBORO	KY	42337	BRAKE EDDIE	5024768986
KYR000008581	FASTWAY #5	HWY 62 & RESERVOIR ST	CENTRAL CITY	KY	42330	BALL DAVID C	5022987401
KYR000012229	PRYOR'S GULF SERVICE	HWY 431	DRAKESBORO	KY	42337	RICHARDSON DONNA B	5027541525
KYD981807472	SHAVER'S BODY SHOP	ROUTE 4, PARK STREET	CENTRAL CITY	KY	42330	SHAVER BARRY	5027541484
KY0000851923	SHAVER'S BODY SHOP LLC	HWY 62 EAST EVERLY BROTH	CENTRAL CITY	KY	42330	SHAVER BARRY	5027541484
KYD985086925	VERBLE CHEVROLET, INC.	HWY. 62 & SOUTH 4TH STREET	CENTRAL CITY	KY	42330	ROEDER FRED	5027542600
KYR000019638	WAYNE'S PLACE	11061 HWY 431 SOUTH	DUNMOR	KY	42339	JOHNSON HARRY	5026572636
<b>MCLEAN COUNTY</b>							
KYD082391012	BARMET ALUMINUM CORP.	HIGHWAY 431 SOUTH	LIVIA	KY	42376	TUTTLE DAVID G.	5027334381
KYR000017723	CASTEEL'S ISLAND SERVICE	165 ADAMS ST	ISLAND	KY	42350	JOHNSON JERRY W	5024863292
KYD985115252	HELMERICH & PAYNE INT'L DRILLING CO	4407 HIGHWAY 1080, RIG 79	LIVERMORE	KY	42352	WILLIAMS JR. D. KENYON	9187425531
KYD980847198	LIVERMORE BRASS & SILVER SHOP	HIGHWAY 136	LIVERMORE	KY	42352	RANBURGER JR SHELLY	5022782181
KYR000009167	LIVERMORE GULF & BODY SHOP	HWY 431	LIVERMORE	KY	42352	RATLIFF DAVID	5022782196
<b>DAVISS COUNTY</b>							
KYD985083591	ACE LUBE INC.	3425 FREDERICA STREET	OWENSBORO	KY	42301	ALEXANDER JOE S.	5026842270
KYD985080688	BASKIN ROBBINS USA CO. (MIDWEST DIV.)	1017 LOCUST STREET	OWENSBORO	KY	42301	SANDIFER SCOTT D.	5026832466
KYD980563639	BELL SOUTH TELECOMMUNICATIONS 53334	720 FREDERICA STREET	OWENSBORO	KY	42302	GABHART RICK	5025828604
KYD985087352	BELL SOUTH TELECOMMUNICATIONS 53338	605 FULTON DRIVE	OWENSBORO	KY	42301	GABHART RICK	5025828604
KYD981855273	CHAMPION FORD LINCOLN MERCURY MAZDA	322 WEST FOURTH STREET	OWENSBORO	KY	42301	TABER RON	5026841441
KY0000134593	CHEVRON USA PRODUCTS CO 42765	902 FREDERICA & 9TH STREET	OWENSBORO	KY	42301	JOHNSON JENNIFER L	7709844135
KY0000065680	DAIRY MART #203	817 LAFAYETTE DRIVE	OWENSBORO	KY	42303	WILLIAMS C. KEITH	5025845765
KYD024140410	DON MOORE CHEVROLET	600 WEST SECOND STREET	OWENSBORO	KY	42301	LOGSDON DON	5026855551
KYD985085760	FELDHaus-SCHWARTZ COMPANY	410 E. 14TH STREET	OWENSBORO	KY	42301	BURNS JOE	5026838934
KYR000020537	MARVIN'S MARKET #3 DBA UTICA FOOD MART	10615 US 431	UTICA	KY	42301	JENNINGS L.D.	5029263124
KYD006394423	MPD INC	316 E. 9TH STREET	OWENSBORO	KY	42303	WESSEL ROBERT A.	5026856303
KY0000065789	OWENSBORO BOARD OF EDUCATION	1335 WEST 11TH STREET	OWENSBORO	KY	42302	HOWARD ALLEN	5026861076
KYD985080621	OWENSBORO MUNICIPAL UTILITIES/FREDERICA	4230 FREDERICA STREET	OWENSBORO	KY	42301	FRIZZELL KEVIN	5029263200

Facility ID	Facility Name	Street Address	City	State	Zip Code	Contact Name	Contact Phone
KY0000851949	SEARS, ROEBUCK AND COM. -2950	35 TOWNE SQUARE MALL	OWENSBORO	KY	42301	WHITNEY MARGE	7082868616
KYR000021089	SOUTHTOWN BP	2402 FREDERICA ST	OWENSBORO	KY	42301	BALL DAVID	2702987401
KYR000007187	SUPERAMERICA #5568	2224 FREDERICA ST	OWENSBORO	KY	42303	BLANTON RUSS	6063572522
KYR000002808	SUPERAMERICA #9269	304 EAST 4TH STREET	OWENSBORO	KY	42303	HISER SCOTT	6063572522
KYD985097104	TEXAS GAS TRANSMISSION	3800 FREDERICA STREET	OWENSBORO	KY	42301	ADAMS SHEILA R	5026886958
KYD981854409	BILL'S QUALITY CLEANERS	341 WASHINGTON AVE.	OWENSBORO	KY	42301	WAHL BILLY G.	5026852507
KYD981805872	CONVENIENT FOOD MART #202	353 WASHINGTON STREET	OWENSBORO	KY	42301	WINNER MARC	5024513800
KYD980843361	DOVE TRANSPORTATION CO INC	1301 DAVIESS STREET	OWENSBORO	KY	42301	BURTON THOMAS M.	5026844294
KYD981754534	E.A. CARTER SUPPLY	508 W. SECOND STREET	OWENSBORO	KY	42301	CHAPMAN LARRY	5026849292
KYD981805112	GIPE AUTOMOTIVE	425 WEST FOURTH STREET	OWENSBORO	KY	42301	GIPE FRED	5026852901
KYD981014897	GIPE AUTOMOTIVE INC	510 W 4TH ST	OWENSBORO	KY	42301	GIPE FRED N.	5026852901
KYD024136822	GIPE AUTOMOTIVE INC MFG'S AUTO WHSE	510 WEST 4TH ST	OWENSBORO	KY	42301	GIPE FRED	5026852901
KYD981854847	GOODYEAR AUTO SERVICE CENTER	824 FREDERICA STREET	OWENSBORO	KY	42301	SCHHELP D. L.	5026843241
KY0000032383	MASSEY CLARK DEVELOPMENT	3633 FREDERICA STREET	OWENSBORO	KY	42301	APPLEBY DAVID	5026848771
KYD024138935	MOTOR & ELECTRIC INC	425 WEST 4TH ST	OWENSBORO	KY	42301	THOMPSON DON	5026849483
KY0000229815	NU-LOOK CLEANERS	1070 TAMARACK ROAD	OWENSBORO	KY	42301	MILLS ROBERT M.	5028266834
KYD981803638	OWENSBORO PUBLISHING COMPANY	1401 FREDERICA STREET	OWENSBORO	KY	42301	MARTIN PHILLIP C.	5029260123
KYD115960866	OWENSBORO VOCATIONAL TECHNICAL SCHOOL	1501 FREDERICA STREET	OWENSBORO	KY	42301	PARKER TARA	5026849871
KYD024140196	ROBERTS MOTOR SALES INC.	200 E. 18TH STREET	OWENSBORO	KY	42301	ROBERTS BILL	5026836282
KYD985087501	RYDER TRUCK RENTAL	515 SALEM DRIVE, BLDG. 7	OWENSBORO	KY	42303	STANLEY TOM	3178447783
KYD985112143	SOUTHTOWN BP	2400 FREDERICA STREET	OWENSBORO	KY	42301	BARTLETT JEFF	5026846247
KYD024140543	SWAN CLEANERS & SHIRT LAUNDRY, INC.	1228 WALNUT STREET	OWENSBORO	KY	42301	HICKS RONALD L.	5026840268
KYD024141426	VOGUE CLEANERS	2318 FREDERICA STREET	OWENSBORO	KY	42301	GOYAL DINESH	5026847506
KYD981473887	VOGUE CLEANERS, INC.	3600 FREDERICA STREET	OWENSBORO	KY	42301	GOYAL DINESH	5026847506
KYD024141699	WESTERN PLATING CO., INC.	1728 MOSELEY STREET	OWENSBORO	KY	42302	TOOMEY MARK	5026843882

## AIRS Sites

Plant Name	Plant ID	Street Address	City	State	Zip	Air Program Code
<b>LOGAN COUNTY</b>						
CARPENTER CO	12	PO BOX 190	RUSSELLVILLE	KY	42276	0
CARPENTER CO	12	PO BOX 190	RUSSELLVILLE	KY	42276	7
ADAIRVILLE FEED MILL #2	59	342 W SECOND ST	RUSSELLVILLE	KY	42202	0
ADAIRVILLE FEED MILL #2	59	342 W SECOND ST	RUSSELLVILLE	KY	42202	9
BTR PRECISION DIE CASTING INC	22	232 HOPKINSVILLE RD	RUSSELLVILLE	KY	42276	0
<b>MCLEAN COUNTY</b>						
BARMET OF KY INC	1	HIGHWAY 431,SOUTH	UTICA	KY	42376	0
BARMET OF KY INC	1	HIGHWAY 431,SOUTH	UTICA	KY	42376	6
BARMET OF KY INC	1	HIGHWAY 431,SOUTH	UTICA	KY	42376	7
BARMET OF KY INC	1	HIGHWAY 431,SOUTH	UTICA	KY	42376	9
<b>DAVISS COUNTY</b>						
COTTRELL,J S & CO	67	21 MOSELEY STREET	OWENSBORO	KY	42301	0
DAVIS FUNERAL HOME	69	3000 FREDERICA ST.	OWENSBORO	KY	42301	0
LEE CONCRETE PRODUCTS	19	301 E 14TH ST	OWENSBORO	KY	42301	0
MPD, INC.	16	316 EAST NINTH STRT	OWENSBORO	KY	42301	0
MPD, INC.	16	316 EAST NINTH STRT	OWENSBORO	KY	42301	7
OWENSBORO GRAIN CO.	83	108 CRITTENDON	OWENSBORO	KY	42301	0
OWENSBORO GRAIN CO.	83	108 CRITTENDON	OWENSBORO	KY	42301	7
READY MIX CONCRETE	24	304 EAST 25TH STREET	OWENSBORO	KY	42301	0
TRANSIT MIX CONCRETE	21	1533 MOSELEY STREET	OWENSBORO	KY	42301	0

**FINDS Sites**

Facility ID	Facility Name	Address	City	State	Zip Code	RCRIS	PCS	AFS	CERCLIS	TRIS
<b>LOGAN COUNTY</b>										
KYD006379945	BTR PRECISION DIE CASTING INC	232 HOPKINSVILLE RD	RUSSELLVILLE	KY	42276	X	X	X		X
KY0002125789	ADAIRVILLE AUTO CARE	N MAIN ST	ADAIRVILLE	KY	42202	X				
KYD981804925	BETHEL CLEANERS	212 BETHEL SHOPPING CENTER	RUSSELLVILLE	KY	42276	X				
KYD135322030	KO KLEENERS	520 W NINTH ST	RUSSELLVILLE	KY	42276	X				
KY0001365733	MINIT MART #41	1120 SPORTSMANS CLUB RD	RUSSELLVILLE	KY	42276	X				
KYD981804339	PENSKE TRUCK LEASING	HOPKINSVILLE RD, HWY 68	RUSSELLVILLE	KY	42276	X				
KY0001019264	PRIVATE RESIDENCE	214 E 1ST ST	RUSSELLVILLE	KY	42276	X				
KYD985087907	ADAIRVILLE STP	CEMETARY ST	ADAIRVILLE	KY	42202		X			
KY0000498352	ENCON KY INC	300 NASHVILLE RD	RUSSELLVILLE	KY	42276		X			
KYD985091339	MARATHON FUELS INC	202 W 2ND ST	RUSSELLVILLE	KY	42276		X			
KY0001003896	ADAIRVILLE FEED MILL	103 E GALLATIN	ADAIRVILLE	KY	42202					
KY0000959353	ENCON OF KY INC	500 CARDINAL DR	RUSSELLVILLE	KY	42276					
KY0000959239	RUSSELLVILLE CONCRETE PRODUCTS	330 S CHERRY ST	RUSSELLVILLE	KY	42276					
KY0001294412	RUSSELLVILLE ELECTRIC PLT BOARD	165 E FOURTH ST PO BOX 418	RUSSELLVILLE	KY	42276					
KY0000959338	S & W RECYCLING	HOPKINSVILLE RD	RUSSELLVILLE	KY	42276					
KY0000959320	SOUTHERN STATES	CORNELIUS AVE	RUSSELLVILLE	KY	42276					
KY0000959262	SUN OIL CO	210 HOPKINSVILLE ST	RUSSELLVILLE	KY	42276					
<b>MUHLENBERG COUNTY</b>										
KYD985114685	CENTRAL CITY AUTO PARTS	202 S 2ND ST	CENTRAL CITY	KY	42330	X				
KYD981807472	SHAVER'S BODY SHOP	ROUTE 4, PARK STREET	CENTRAL CITY	KY	42330	X				
KYD985086925	VERBLE CHEVROLET INC	JCT HWY #62 TO 4TH ST	CENTRAL CITY	KY	42330	X				
KYD982113151	CENTRAL CITY MUNI WTR & SEWER	208 N FIRST ST	CENTRAL CITY	KY	42330		X			
KYD985088541	CENTRAL CITY STP	WHITMER ST	CENTRAL CITY	KY	42330		X			
KYD985100866	CONRAD & SMITH INC	821 N 2ND ST	CENTRAL CITY	KY	42330		X			
KYD985100882	QUALITY OIL CO	300 W 1ST AVE	CENTRAL CITY	KY	42330		X			
KY0000960021	STEWARTS IGA FOODLINER	219 S 2ND ST	CENTRAL CITY	KY	42330					
<b>MCLEAN COUNTY</b>										
KY0002126936	LIVERMORE GULF & BODY SHOP	HWY 431	LIVERMORE	KY	42352	X				
KYD985104892	LIVERMORE STP	3RD ST	LIVERMORE	KY	42352		X			
KY0000961284	LIVERMORE IGA	US HWY 431	LIVERMORE	KY	42352					
KY0001030501	USARMY LIVERMORE ARMORY	3RD & MAIN STREETS	LIVERMORE	KY	42352					
KY0000961300	WONDEREST CHAIR CO INC	4TH ST	LIVERMORE	KY	42352					
<b>DAVISS COUNTY</b>										
KYD006394423	MPD INC	316 E 9TH ST	OWENSBORO	KY	42301	X		X		X
KYD985080688	BASKIN ROBBINS USA CO MIDWEST DIV	1017 LOCUST ST	OWENSBORO	KY	42301	X				
KYD981855273	CHAMPION FORD LINCOLN MERCURY MAZDA	322 W FOURTH ST	OWENSBORO	KY	42301	X				
KY0000134593	CHEVRON USA PRODUCTS #42765	902 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD981022874	CONCORD CUSTOM CLEANERS #6101	218 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD981805872	CONVENIENT FOOD MART #202	353 WASHINGTON ST	OWENSBORO	KY	42301	X				
KYD024140410	DON MOORE CHEVROLET CADILLAC	600 WEST SECOND STREET	OWENSBORO	KY	42301	X				
KYD980843361	DOVE TRANSP CO INC	1301 DAVIESS ST	OWENSBORO	KY	42301	X				
KYD981754534	E A CARTER SUPPLY	508 W 2ND ST	OWENSBORO	KY	42301	X				
KYD981805112	GIPE AUTOMOTIVE	425 W FOURTH ST	OWENSBORO	KY	42301	X				
KYD981014897	GIPE AUTOMOTIVE INC	510 W 4TH ST	OWENSBORO	KY	42301	X				
KYD981854847	GOODYEAR AUTO SERVICE CENTER	824 FREDERICA STREET MAIL-8544 PAGE BLVD	OWENSBORO	KY	42301	X				
KY0000032383	MASSEY CLARK DEVELOPMENT	3633 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD985083591	MCQUIKS OILUBE	3425 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD024138935	MOTOR & ELECTRIC INC	425 W 4TH ST	OWENSBORO	KY	42301	X				
KY0000229815	NU-LOOK CLEANERS	1007 TAMARACK RD	OWENSBORO	KY	42301	X				
KYD985080621	OWENSBORO MUNICIPAL UTILITIES/FREDERICA	4230 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD981803638	OWENSBORO PUBLISHING CO	1401 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD115960866	OWENSBORO VOCATIONAL TECHNICAL SCHOOL	1501 FREDERICA STREET	OWENSBORO	KY	42301	X				
KYD981854409	QUALITY CLEANERS	341 WASHINGTON AVE	OWENSBORO	KY	42301	X				
KYD024140196	ROBERTS MOTOR SALES INC.	200 E. 18TH STREET	OWENSBORO	KY	42301	X				
KYD088429196	SHERWIN WILLIAMS CO	2510 WESLEYAN PARK PLAZA	OWENSBORO	KY	42301	X				
KYD985087352	SOUTH CENTRAL BELL	605 FULTON DR	OWENSBORO	KY	42301	X				
KYD980563639	SOUTH CENTRAL BELL-OWBOKYMA 53	720 FREDERICA ST MAIL-3535 COLONNADE PKWY	OWENSBORO	KY	42301	X				
KYD985112143	SOUTHTOWN BP	2400 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD000836064	SUNOCO SVC STA	WESLEYAN PARK PLAZA	OWENSBORO	KY	42301	X				
KYD024140543	SWAN CLEANERS & SHIRT LAUNDRY,	1228 WALNUT STREET	OWENSBORO	KY	42301	X				
KYD985097104	TEXAS GAS TRANSMISSION CORP	3800 FREDERICA ST	OWENSBORO	KY	42301	X		X		
KYD024141426	VOGUE CLEANERS	2318 FREDERICA STREET	OWENSBORO	KY	42301	X				
KYD981473887	VOGUE CLEANERS INC	3600 FREDERICA ST	OWENSBORO	KY	42301	X				
KYD024141699	WESTERN PLATING CO	1728 MOSLEY	OWENSBORO	KY	42301	X			X	
KYD985106913	DAVIESS CNTY DETENTION CTR	110 ST ELIZABETH ST	OWENSBORO	KY	42301		X			
KYD985090828	BROWNS VALLEY MHP	HWY 431	UTICA	KY	42376		X			
KYD099772642	OWENSBORO GRAIN CO	719 E SECOND ST	OWENSBORO	KY	42301		X	X		X
KYD006393227	COTTRELL J S & CO	21 MOSELEY ST	OWENSBORO	KY	42301			X		
KYD024136145	DAVIS FUNERAL HOME	3000 FREDERICA STREET	OWENSBORO	KY	42301			X		
KY0002217180	EQUITABLE LIFE ASSURANCE	111 1/2 FREDERICA ST	OWENSBORO	KY	42301			X		
KY0001273762	GE CO	316 E 9TH ST	OWENSBORO	KY	42301			X		
KYD006392666	KATTIJOHN CONCRETE PRODUCTS	301 E 14TH ST	OWENSBORO	KY	42301			X		
KYD980242408	READY MIX CONCRETE	304 EAST 25TH STREET	OWENSBORO	KY	42301			X		
KYD024140972	TAYLORS MARKET	2517 FREDERICA ST	OWENSBORO	KY	42301			X		
KYD985074244	TRANSIT MIX CONCRETE	1533 MOSELEY STREET	OWENSBORO	KY	42301			X		
KYD985071810	BAILEY & BAILEY	424 HILL AVE	OWENSBORO	KY	42301					
KYD985095702	BRESCIA COLLEGE	171 FREDERICA	OWENSBORO	KY	42301					
KYD985084342	CATHEDRAL SCHOOL	600 LOCUST ST	OWENSBORO	KY	42301					
KYD985085521	DAVIESS CNTY COURTHOUSE	212 ST ANN ST	OWENSBORO	KY	42301					
KY0000959569	GREEN RIVER DSPL LDFL	111 FREDERICA ST	OWENSBORO	KY	42301					
KY0000300798	HUMAN RESOURCES BUILDING	311 W 2ND	OWENSBORO	KY	42301					
KY0000576231	IMC AGRIBUSINESS	11236 HWY 431 S	UTICA	KY	42376					
KY0002023372	LEEPER OIL	1404 LOCUST ST	OWENSBORO	KY	42301					
KY0000959478	TOMCO CONCRETE PRODUCTS	7060 US HWY 431	OWENSBORO	KY	42301					

**ERNS Sites**

Facility Name	Street Address	Regional Code	Incident State	Incident County	Spill Date	Material Spilled	Action Taken
<b>LOGAN COUNTY</b>							
	302 N MAIN ST	94-1995	KY	RUSSELLVILLE	3/22/1994	ETHYLENE GLYCOL	NONE
<b>MUHLENBERG COUNTY</b>							
	DRAINAGE DITCH BEHIND 818 N 2ND STREET	92-8127	KY	CENTRAL CITY	6/6/1992	UNKNOWN MATERIAL	NONE
CARL MITCHELL AND SON	131 RESERVOIR AVE	96-0275	KY	CENTRAL CITY	11/11/1995	ETHYLENE GLYCOL	NONE
<b>DAVISS COUNTY</b>							
	9048 HIGHWAY 431	89-492	KY	UTICA	4/20/1989	ALUMINUM DROSS	TRUCKING COMPANY WITH CLEANUP.
BASKINS ROBBINS	1017 LOCUST ST	96-1627	KY	OWENSBORO	4/30/1996	AMMONIA, ANHYDROUS	RELEASE SECURED
HENRY'S HEATING & COOLING	518 E 5TH ST	94-3549	KY	OWENSBORO	8/5/1994	FREON	NONE
KINGS TRANSFER	US HWY 431	94-1975	KY	OWENSBORO	3/18/1994	DIMETHENAMID	UPPER LIMIT OF EGY WAS 66.7 LBS, ATZ 300 LBS, DIMET
TEXAS GAS TRANSMISSION CO	3800 FREDERICA STREET	94-4088	KY	OWENSBORO	9/26/1994	SULFURIC ACID	ACID AND WATER MIXTURE//25 GALLONS WAS ACID//CONTAI

**PCS Sites**

EPA ID	Site ID	County Name	Facility Name	Street Address	Street Address (Continued)	City	State	Zip Code
<b>LOGAN COUNTY</b>								
KYD000875625	KY0020877	LOGAN	RUSSELLVILLE STP	KEN SMITH, MAYOR	106 SW PARK SQUARE	RUSSELLVILLE	KY	42276
<b>MUHLENBERG COUNTY</b>								
	KY0066575	MUHLENBERG	DRAKESBORO STP	CITY HALL	PO BOX 129	DRAKESBORO	KY	42337



**CERLIS Sites**

EPA ID	County Name	Site Name	Street Address	City	State	Zip	Date of Site
<b>LOGAN COUNTY</b>							
KY8890090006	LOGAN	TVA/HOMER L OWENS SUBSTATION CAPACITORS	ROCKWELL BRANCH, 500 FT DWNSTRM OF	RUSSELLVILLE	KY	42276	11/4/1987
<b>MUHLENBERG COUNTY</b>							
KYD000773382	MUHLENBERG	AMAX INC AYRGEM MINE	1/4 MI OFF KY HWY 431 S	CENTRAL CITY	KY	42330	8/1/1980
<b>DAVISS COUNTY</b>							
KYD082391012	DAVISS	BARMET OF KENTUCKY	ROUTE 431 S	UTICA	KY	42376	11/1/1980

**TRIS Sites**

Site ID	EPA ID	County	Company Name	Street Address	City	State	Zip Code	Contact Person	Contact Number
<b><i>MCLEAN COUNTY</i></b>									
42376BRMTLHWY43	KYD082239101	MC LEAN	BARMET ALUMINUM CORP.	HWY. 431 S.	LIVIA	KY	42376	KEVIN MORRIS	5027334381
<b><i>DAVIESS COUNTY</i></b>									
42303MPDNC316E9	KYD006394423	DAVIESS	MPD INC.	316 E. 9TH ST.	OWENSBORO	KY	423033511	C. W. MATTINGLY	5026856200