

Appendix B

Environmental Footprint Report

Environmental Footprint FINAL



**US 421
Henry and Trimble Counties
From I-71 to Bedford
Item No. 5-147.00**

June 2004



**Prepared for:
Kentucky Transportation
Cabinet**



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ENVIRONMENTAL FOOTPRINT

US 421 – Henry and Trimble Counties - Item #5-147.00

A. Study Area

An environmental footprint was developed for the US 421 study area, which can be seen in **Figure 1** through **Figure 3**. As shown, the study area extends from Campbellsburg at I-71 (Exit 34) in Henry County northwest to the city of Bedford, primarily following US 421 in Trimble County. The shape of the study area originated from a buffer zone on either side of US 421 from Campbellsburg and gets wider the closer it gets to Bedford to accommodate the possibility of relocating US 421. The buffer zone comprises a portion of US 42 from the northern end of the city of Bedford and south to KY 3175 to address the possibility of using KY 3175 as a corridor. A preliminary environmental analysis was completed to identify potential issues and concerns within the defined US 421 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
- ✓ Additional Concerns such as Noise and Air Quality

The study area is located geographically within the Outer Bluegrass region of northern Kentucky and centrally located between Louisville and Cincinnati. The region can be characterized by long, winding, broad to narrow rolling ridges with short and sometimes steep slopes. Elevation within the study area ranges from 549 feet above sea level at the lowest point to 941 feet at the highest, a difference of 392 feet. The lowest point is located where the Little Kentucky River exits the study area. The highest point is located at the northern end of the study area, 130 feet south of Cutshaw Lane, 0.2 miles east of the intersection of Cutshaw Lane and US 421. Level land (0 to 5 degrees of slope), which constitutes approximately 2,039 acres (28.5%) of the 7,166 total acres in the study area, is primarily in the low lying bottomlands or floodplains and on the ridge tops.

A 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 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 should be considered when developing recommendations for this study as well as for future phases of project development for the proposed transportation improvements. **Figures 1, 2, and 3** show environmental features identified within the study area on a United States Geological Survey (USGS) Topographic Map, on a Digital Elevation Model (DEM), and on a Digital Ortho Quarter Quadrangle (aerial photography), respectively. 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; Prime and Unique Farmlands; Monitored Sites and Wells; Air Quality and Noise; and Additional Concerns.

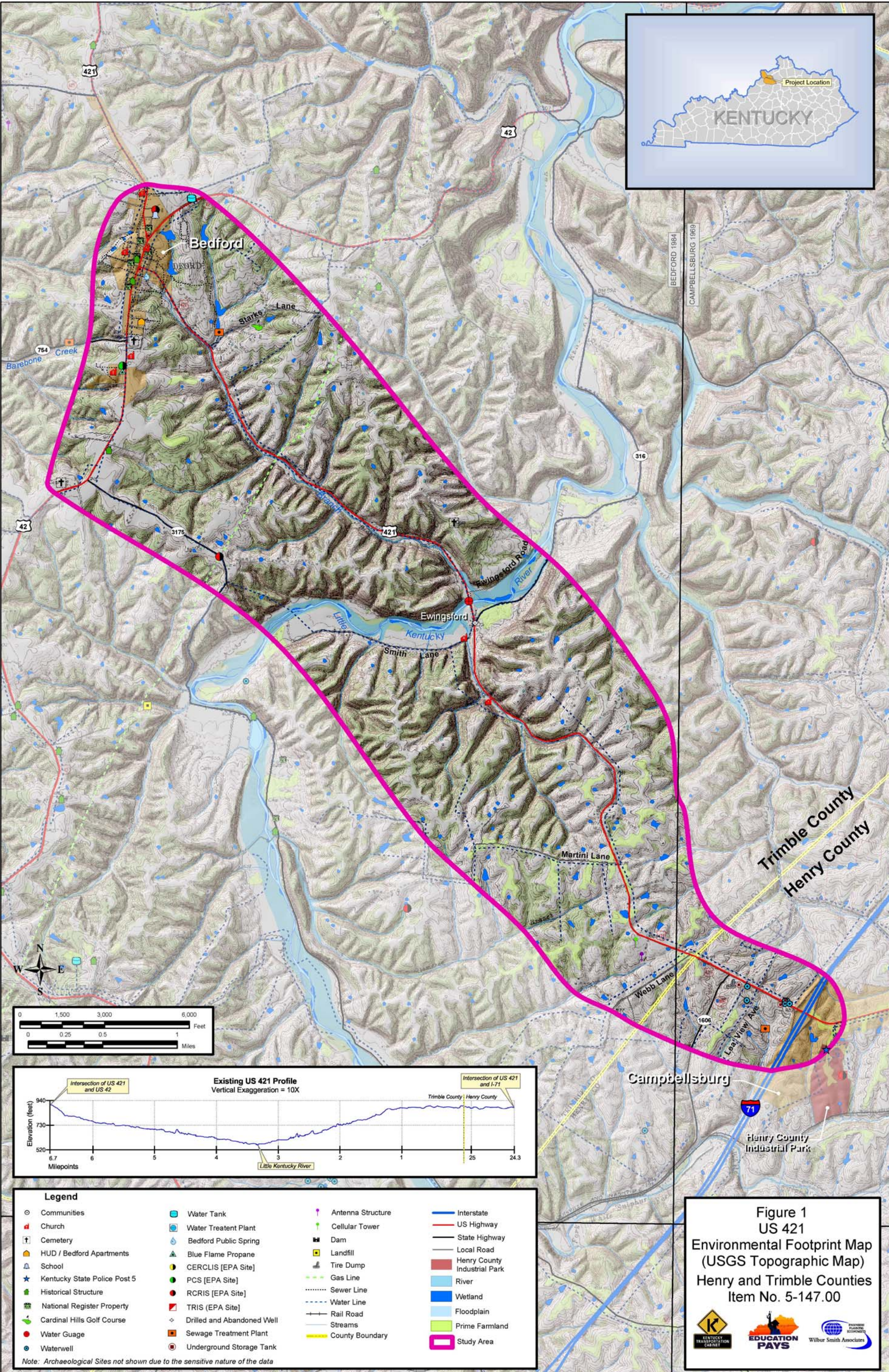
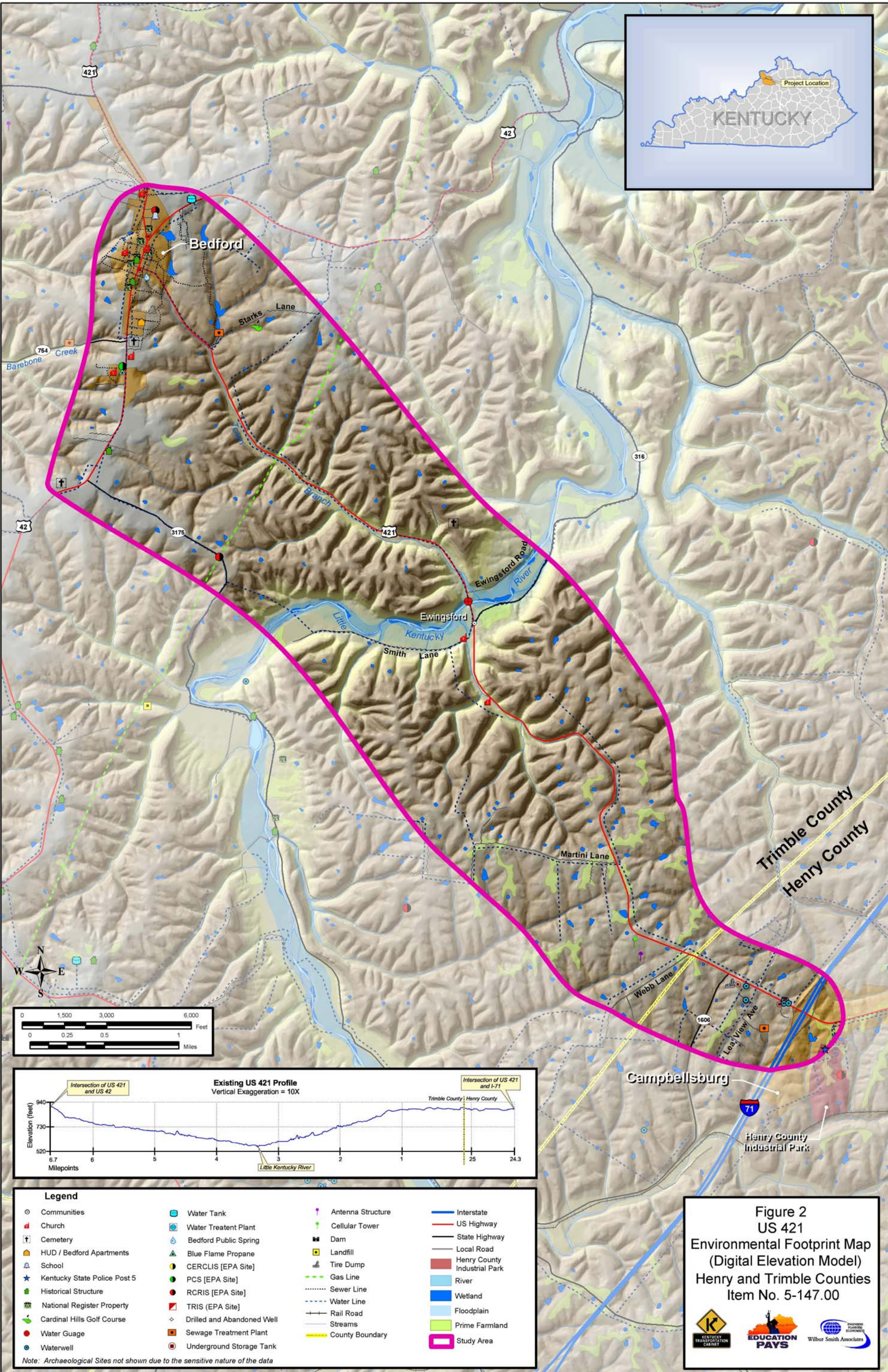
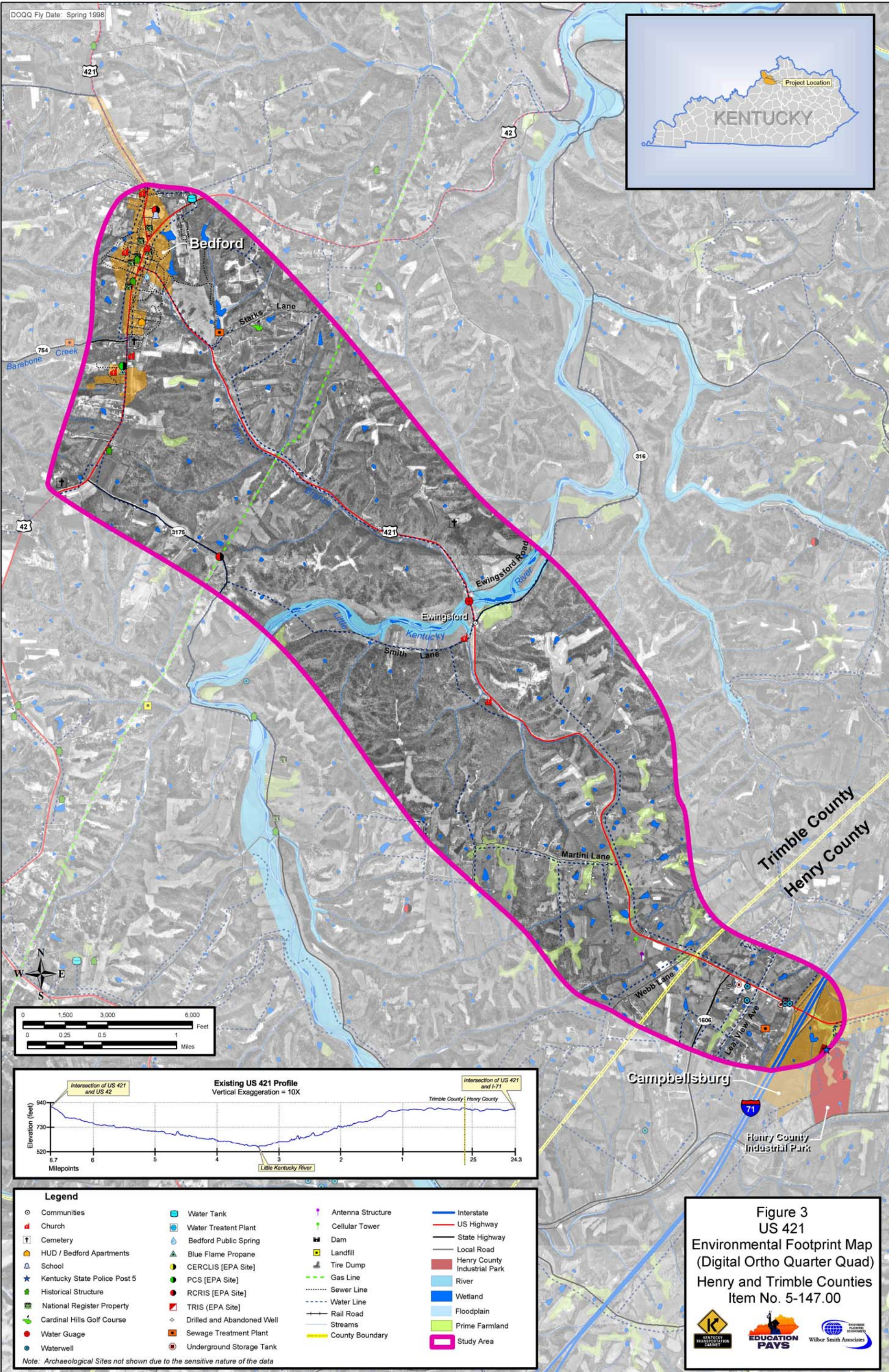


Figure 1
US 421
Environmental Footprint Map
(USGS Topographic Map)
Henry and Trimble Counties
Item No. 5-147.00







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 individual well, may actually represent multiple water wells. The following text addresses such occurrences where possible.

B. 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 project study area. A summary is provided below:

- There are 23.9 miles of water lines in the study area. These water lines primarily run parallel with roads within the study area. Of the 23.9 miles:
 - 14.1 miles is owned by Trimble County Water District and piping material for all of these lines is AC (asbestos containing);
 - 9.7 miles is owned by Henry County Water District and piping material for all of these lines is PVC (polyvinyl chloride); and
 - 0.1 miles is owned by the Campellsburg Water Works and piping material for this line is CI (cast iron).
- There are 7.3 miles of municipal sewer lines which are owned by Bedford Wastewater. The sewer treatment plant that processes sewage from these lines is the Bedford Lagoon. All of these sewer lines are PVC pipes.
- There is one (1) water tank in the study area which is located next to US 42 approximately 0.4 miles northeast of the US 42 and US 421 intersection in northern Bedford. This tank, known as the “town tank”, is a 100,000 gallon capacity, elevated steel structure.
- There are fourteen (14) known water wells located in the study area. The primary usage for all of these wells is listed as “monitoring.” All of these known water wells are located near I-71 (exit 34) in Campbellsburg. Additional water wells used for monitoring ground water conditions or for agricultural irrigation are likely to be present.
- One (1) USGS water gauge is located at the Little Kentucky River where US 421 crosses the river.

2. Surface Water

There are two significant watersheds located within the US 421 study area and both are direct tributaries of the Ohio River:

- The Little Kentucky River watershed; and
- The Barebone Creek watershed.

There are a total of 23.7 miles of streams within the study area, including:

- 19.7 miles (83.1%) originating in the study area; and
- 4.0 miles (16.9%) originating outside the study area, such as the Little Kentucky River.



Little Kentucky River at US 421

The Little Kentucky River is the largest stream that passes through the study area and flows for approximately 2.4 miles. It can be characterized as having a “braided” channel in which several small stream channels separate from the main channel and eventually converge back into the main channel. This is a river system of primarily shallow channels, numerous islands, and eroding banks.

A stream is given a stream level number to categorize its status in a stream network. The stream level is a numeric code that identifies the paths of water flow through a drainage network and all tributaries branching from it. The lowest level, Level 1, is given to the main stem of a stream network at its terminus at the ocean all the way upstream to its origin. Any stream that terminates on this

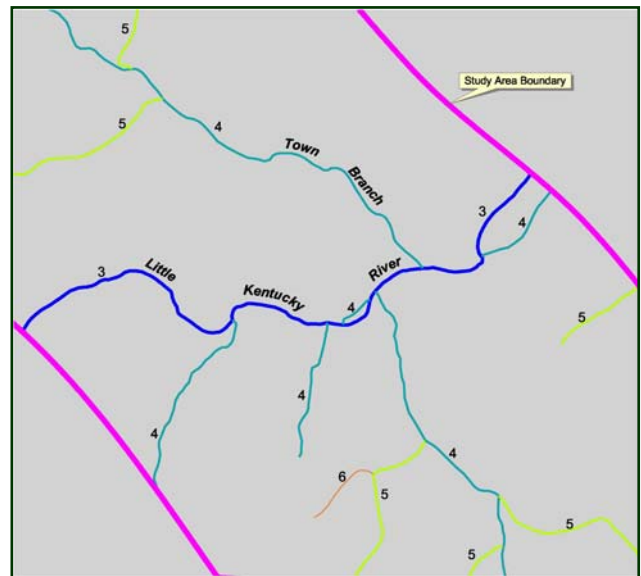
Level 1 main stem is Level 2 over its entire course, any stream that terminates on a Level 2 is a Level 3 over its entire course, and so on. An example of a network could be as follows: the Kentucky River is a Level 3 stream, it empties into the Ohio River which is a Level 2 stream, it empties into the Mississippi River which is a Level 1 stream and it empties into the Gulf of Mexico.

Stream level designations in the study area include:

- There are no streams that are Level 2 or higher in the study area.
- There are two (2) Level 3 streams and both empty into the Ohio River:
 - The Little Kentucky River, which flows for 2.4 miles through the study area; and
 - Barebone Creek, which flows for 0.1 miles.
- There are 8.6 miles of Level 4 streams, including:
 - Town Branch (3.7 miles);
 - Demeree Branch (0.6 miles); and
 - 4.3 miles of unnamed streams.
- There are 9.8 miles of Level 5 streams.
- There are 2.1 miles of Level 6 streams.
- There are 0.7 miles of Level 7 streams.

There is a public spring located off of Victory Avenue within the city of Bedford. This spring was Bedford’s only source of water from 1806 to 1955. It is thought to have been used by Native Americans as well. During the 1930’s, the Works Progress Administration (WPA) built a stone spring house to basically serve as a dam to make the water more assessable. Many wells were dug in the area to tap into the spring but it never affected its endless flow.

Correspondence with 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.



Stream Levels

As recommended by the Department of Environmental Analysis, all channel changes should be avoided as part of this project, if possible.

3. Lakes/Ponds

There are no lakes in the study area. There are, however, numerous manmade ponds throughout. These ponds, many of which are also considered wetlands, are discussed further in the following section.

4. Wetlands

According to the National Wetlands Inventory (NWI) mapping for Henry and Trimble Counties, the study area includes 156 individual wetlands, totaling 71.2 acres.

- Of the total wetland acreage, 66.0 acres (92.7%) are considered to be Palustrine wetlands, which include all wetlands dominated by trees, shrubs, emergent plants, emergent mosses or lichens, shallow depth, permanent or intermittent water bodies (ponds).
- The remaining 5.2 wetland acres (7.3%) are considered Riverine wetlands, which occur in floodplains and along streams, except those dominated by vegetation. Typical Riverine communities include sand bars, mud flats, and gravel/cobble bars.



Wetland located along Starks Lane

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).

Also, further inspection of these wetlands would have to take place in order to determine whether any are considered critical. A wetland is considered to be critical when a floral or faunal species exclusively relies on it for existence.

5. Floodplains

The Q-3 digital Federal Emergency Management Agency (FEMA) data for Kentucky floodplains are digital representations of FEMA's Flood Insurance Rate Map (FIRM). Floodplain management, risk assessment, disaster response activities, land-use planning, and environmental analyses are just some of its uses. The Q3 data shows floodplains in the Little Kentucky River valley totaling 124 acres. This area is the 100 year floodplain (Zone A).

The geographic characteristics of the rest of the study area are inconsistent with floodplains. These areas are either ridge tops where the elevation is higher and where many streams originate, or small valleys with intermittent streams and narrow valley bottoms. In these two types of regions, there is no evidence of floodplains.



Little Kentucky River Floodplain along Ewingsford Road

C. Biotic Communities

The *Standard Occurrence Report* is a document submitted by the Kentucky State Nature Preserves Commission (KSNPC) after a “request for data” inquiry has been established. The KSNPC monitors a number of endangered, threatened, or special concern plants or animals within the US 421 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 Kentucky Department of Fish and Wildlife (KDFW) and the United States Fish and Wildlife Service (USFWS). Biotic communities considered as part of this analysis are divided into floral and faunal categories as discussed in the following sections. Due to the sensitive nature of the data, potential habitat locations are not shown in **Figures 1, 2 or 3**.

1. Floral Communities

According to the KSNPC, USFWS and KDFW database information, there are no known threatened or endangered floral communities within the study area.

While no occurrences of monitored floral species are recorded, the project area is located within a large forest block. Forest blocks are now monitored by the KSNPC, which are defined as 900 or more acres of contiguous forest in areas west of the Cumberland Plateau, and 4500 or more contiguous acres in areas east of the Cumberland Plateau. Forest fragmentation is one of the primary impacts to plants and animals that require large tracts of forest for all parts of their life cycles. Fragmenting or impacting large forest blocks should be avoided.

2. Faunal Communities

Based upon the KSNPC's most current information, the following species are monitored in the study area:

- One occurrence of an endangered species, the American Burying Beetle (*Nicrophorus americanus*), is recorded within the US 421 study area. This species can be generally found near carrion (animal remains) and vegetation structures or certain soil types within a given area.
- One threatened species, the Evening Bat (*Nycticeius humeralis*) is known to occur near the US 421 study area. Summer habitats include bottomland forests, swamps, and riparian corridors. A thorough survey for this species should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat.



The Endangered American Burying Beetle

www.chaparraltree.com/mn/tomentose-mitesclose-th.jpg

Data collected from the KDFW is based on the Bedford and Campbellsburg USGS Quad maps and is not specifically listed for the study area. The KDFW information revealed the following:

- The Great Blue Heron (*Ardea Herodias*), listed as a special concern species, is known to occur in the Bedford Quad area.
- No species are listed for the Campbellsburg Quad area.

Data from the USFWS for the same two Quad areas indicates the presence of four (4) endangered species with “partial status.” Partial status refers to only a portion of the species’ range, which may include a population defined by geopolitical boundaries or defined administratively, such as experimental populations. These include the following:

- The Broad-Winged Hawk (*Buteo Platypterus*) in the Bedford Quad area;
- The Eastern Fox Squirrel (*Sciurus Niger*) in the Bedford Quad area;
- The Grasshopper Sparrow (*Ammodramus Savannarum*) in the Campbellsburg Quad area; and
- The Northern Bobwhite (*Colinus Virginianus*) in the Campbellsburg Quad area.

D. 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

A number of community sensitive locations were identified in the study area. These locations include eight (8) churches, one (1) school, three (3) cemeteries, and one (1) public housing complex.

The eight (8) churches located in the study area include:

- Antioch Baptist, established in 1870, is located on US 421, 0.5 miles south of the intersection of US 421 and KY 316;
- Apostolic Pentecostal Church of the Living God is located along Smith Lane approximately 0.2 miles from US 421 in the community of Ewingsford;
- Bedford Christian Church is located in Bedford at the intersection of Main Street (US 42) and Miller Avenue;
- New Life Community Assemblies of God is located in Bedford at the end of Church Street;
- Fellowship Baptist Church is located in Bedford on Smith Lane between Church Street and Luckett Avenue;
- Bedford United Methodist Church is located in Bedford at the northern tip of the study area at the intersection of US 421 and Fairview Road;
- Bedford Pentecostal Church is located in Bedford on US 42, approximately 0.1 miles south of the intersection of US 42 and KY 754; and
- Bedford Springs Church is located on Shepherd Lane in Bedford, approximately 0.1 miles west of the intersection of Shepherd Lane and US 421.



Bedford Christian Church



*Independent Order of Odd Fellows (IOOF)
Cemetery located on both sides US 42
(Bedford)*

The one (1) school located in the study area is:

- Trimble County Middle School (grades 6 through 8), located at the northern tip of the study area at the intersection of US 421 and Wentworth Avenue.

The three (3) cemeteries located in the study area are all found in Trimble County:

- One cemetery, known as The Independent Order of Odd Fellows (IOOF) Cemetery, is located on both sides of US 42 in Bedford at the intersection of US 42 and KY 754;
- Another cemetery is located at the westernmost corner of the study area north of US 42, 0.2 miles southwest of the intersection of US 42 and KY 3175; and
- The remaining cemetery is located off of Burton Hill Road, north of the community of Ewingsford.

There is one housing complex located within the study area: Bedford Apartments HUD Housing is located at the intersection of Pendleton Avenue and McDowell Lane in Bedford.

Other than these potential community sensitive locations, the study area is comprised mostly of rural areas with agricultural activity. To a lesser extent, it is also comprised of small urban areas with little industry in Bedford and Campbellsburg. With the exception of the area within the city limits of Bedford, there are few uniform residential areas or designated commercial areas. Characteristics of the area include:

- There are several commercial businesses including facilities such as restaurants, gas station/convenience marts, government offices, and banks in the city of Bedford and to a lesser extent in Campbellsburg.
- The Henry County Industrial Park is partially located within the study area on Citation Lane in Campbellsburg near I-71 (Exit 34). The site is served with water, sewer, gas, and electricity. It is zoned (I-I) light industrial with land tracts that are still available for purchase. The industrial park currently includes: the Kentucky State Police Post # 5, which serves Carroll, Gallatin, Henry, Oldham, Owen, and Trimble Counties; Calhoon Trucking; and an automotive parts manufacturing plant, Arvin Sango Inc.
- Of the approximate 7166 total acres in the study area, 301.1 acres (4.2%) are within city boundaries. The city of Campbellsburg comprises 119.5 acres (1.7%) of the study area while Bedford totals 181.6 acres (2.5%). Most economic activity takes place in these two cities. The remaining 95.8% of the study area is primarily rural agricultural with houses located sporadically throughout.
- Evidence of family clusters was not detected as part of this environmental overview or preliminary field review.
- Historically, tobacco has been the main farm product of this region and still remains an important cash crop. According to the *Trimble County Comprehensive Plan*¹, prepared by the Trimble County Agriculture Development Council, there has been a decline in tobacco quotas in recent years making it less profitable than in the past. As a result there has been an increased conversion of farmland to housing developments. In spite of a 65 percent reduction in quota from 1998 to 2001, tobacco continues to account for almost 60 percent of all agricultural income. However, agriculture



Tobacco field located along KY 3175

¹ <http://www.uky.edu/Agriculture/AgPrograms/tobacco/councils/louisville/trimble1.html>

accounted for only 4.3 percent of total personal income in 1997. Agriculture accounts for 35.9 percent of all jobs in Trimble County.

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 residing in the project area. Information was gathered from U.S. Census Bureau Block Group level population counts. The Kentuckiana Regional Planning and Development Agency (KIPDA) is compiling an Environmental Justice document to be included in the final project study report. This document should be referenced for a more in-depth analysis of the environmental justice issues in the study area.

The study is located within the following geographical areas:

- In Henry County, Block Group 001 (in Census Tract 901) and Block Group 003 (in Census Tract 902); and
- In Trimble County, Block Groups 002 and 003 (in Census Tract 1002).

Environmental justice concerns related to minority populations will not likely exist based on Census 2000 data for the project area:

- The study area block groups have minority populations ranging from 2.2 to 5.4 percent.
- This percentage is lower than that for Kentucky and the U.S. (9.9 and 24.9 percent, respectively).

Census 2000 data related to average income revealed low-income populations in the project area:

- The study area block groups have low-income populations ranging from 8.3 to 20.6 percent.
- The average low-income percentages for Kentucky and the U.S. are 15.8 and 12.4 percent, respectively, which indicates that low-income populations should be considered in the study area in future phases of this project.
- Block Group 001 in Census Tract 901 in Henry County and Block Group 002 in Census Tract 1002 in Trimble County are of particular concern with low-income populations of 13.3 and 20.6 percent, respectively. The first of these is located at the eastern most tip of the study area. The second includes most of the northeastern half of the study area.

E. Historic and Archaeological Sites

Henry County got its name for the Revolutionary statesman and patriot Patrick Henry, most known for his "Give me liberty or give me death" speech. According to *Kentucky Atlas & Gazetteer*² the city of Campbellsburg, as a settlement, was first named Campbellsville, possibly after a local family. However, by legislative act on January 29, 1840 it was established as the town of Chiltonsville, named for Charles Chilton. Three weeks later another act changed the town name to Campbellsburg.

According to the historical marker in front of the courthouse, Trimble County was named in 1836 for Robert Trimble, U.S. Supreme Court Justice from 1826-1828, appointed by President John Quincy Adams. The city of Bedford, according to *Kentucky Place Names*³, is said to have been settled around 1808 by the family of Richard Bell who built his home on the hill above what was to become

² <http://www.uky.edu/KentuckyAtlas/ky-campbellsburg.html>

³ *Kentucky Place Names*, Robert N. Rennick, 1984, The University Press of Kentucky

the famed antebellum resort of Bedford Springs. The town was chartered in 1816 and is believed to be named for Bell's Virginia hometown.

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 31 historic structures recorded within the study area. Six (6) of these are listed on the National Register of Historic Places, one (1) structure's National Register status is pending, one (1) structure meets National Register criteria, and the remaining 23 are listed as historic structures with the Kentucky Heritage Council (KHC). All of these structures are located within or in close proximity to the city of Bedford. Locations of these structures were taken from the historic structures database and may not reflect their exact location.

Note: TMB and TM stand for Trimble while TOC stands for "turn of the century."

Properties listed on the National Register include:

- TMB 7 – Unnamed House on Main Street, single dwelling, two story Greek Revival, frame construction, weatherboard exterior, in poor condition and sits vacant, built between 1825 and 1849.
- TMB 12 – Hancock House on Main Street, single dwelling, two story Greek Revival, frame construction, weatherboard exterior, in excellent condition, built between 1850 and 1874.
- TMB 15 – Peak House on Smith Drive at Spring Street, single dwelling, two story Federal, brick flemish-bond exterior, good condition, built between 1825 and 1849.
- TMB 19 – Trimble County Jail on Main Street, two story Vernacular-Antebellum, stone/mortar structure, cut stone exterior, in fair condition, built between 1825 and 1849.
- TMB 29 – Coleman House on Main Street, single dwelling, 1½ story Federal, brick flemish-bond exterior, in excellent condition, built between 1800 and 1824.
- Old Kentucky Tavern on US 42, single dwelling, Federal, built between 1825 and 1849.



Trimble County Jail Listed on the National Register of Historic Places

The structure with National Register Status pending is:

- TMB 25 – Unnamed House on Main Street, single dwelling, two story Vernacular-Settlement, log structure with weatherboard exterior, good condition and sits vacant, built between 1800 and 1824.



TMB 23 - Clem Building

Another structure which meets National Register Criteria is:

- TMB 17 – Trimble County Courthouse on Main Street, two story Romanesque, stone mortar construction, cut stone exterior, good condition, built between 1875 and 1899.

Other listed Historic Structures include the following. With the exception of TM 14, all are represented in **Figure 1** by one historic structure symbol in the center of Bedford:

- TMB 1 – Unnamed House on US 421, two story Vernacular-Victorian, in fair condition;
- TMB 2 – Unnamed House on US 421, two story Vernacular-TOC, in fair condition;
- TMB 3 – Callus House on US 421, two story Vernacular-TOC, in fair condition;
- TMB 4 – W.R. Logan House on US 421, two story Vernacular-TOC, in good condition;
- TMB 5 – Dr. Trout House on US 421, two story Vernacular-TOC, sits vacant in poor condition;
- TMB 6 – Boires/McMann House on US 421, two story Vernacular-Victorian, multiple dwelling, in good condition;
- TMB 8 – Unnamed House on Main Street, two story Vernacular-TOC, in fair condition;
- TMB 9 – Unnamed House, 2½ story Colonial Revival, sits vacant in poor condition;
- TMB 10 – Unnamed House, two story Greek Revival, in good condition;
- TMB 11 – John Stanley House, two story Greek Revival, business structure, in good condition;
- TMB 13 – Commercial Building on Main Street, 1½ story Commercial-TOC, in good condition;
- TMB 14 – Unnamed House on Main Street, 1½ story Vernacular-TOC, in good condition;
- TM 14 – Unnamed House on US 42, two story Vernacular-Settlement house, sits vacant and in ruins;
- TMB 16 – Unnamed House, two story Vernacular-TOC, in good condition;
- TMB 18 – County Office Building behind the court house, one story Commercial-20th Century, in good condition;
- TMB 20 – Science Hollow School/Bedford Post Office, one story, Vernacular-TOC, in good condition;
- TMB 21 – Unnamed House, two story Vernacular-TOC, in good condition;
- TMB 22 – Bedford United Methodist Church, 1½ story Gothic Revival, in good condition;
- TMB 23 – Clem Building on Main Street, two story Commercial-20th Century, in good condition;
- TMB 24 – Unnamed House on Main Street, two story Vernacular-TOC, in good condition;
- TMB 26 – Unnamed House on Main Street, two story Vernacular-TOC, in good condition;
- TMB 27 – Unnamed House on US 42, two story Vernacular-TOC, in good condition; and
- TMB 28 – Unnamed House on US 42, two story Vernacular-TOC, in good condition.

There are three (3) historic markers located in the study area and two (2) of these are located in front of the Trimble County courthouse:

- The first marker, titled “County Named,” describes who Trimble County was named after.
- The second marker, titled “Trimble County Jail,” describes the history and significance of the jail which is located adjacent to the courthouse.
- The other historic marker in the study area, titled “Bedford Springs and Hotel,” is located at the former location of Bedford Springs Hotel on Shepherd Lane. According to the marker, the hotel was built near where mineral springs were discovered in 1840. It became a well known health resort and fostered Bedford’s growth. The hotel burned in 1967.

2. Archaeological Sites

There are two (2) archaeology sites officially recorded within the study area. Review of information at the Office of State Archaeology revealed site survey forms for both sites. Based on the available database and site survey form information, the study area archaeological sites are summarized below.

- 15Tm29: This site is classified as an indeterminate prehistoric, open habitation site without mounds. The midden (previous living surface) is listed as absent (none found); the site has not been vandalized; condition is 50 – 75% disturbed; initial land use was woods and present land use is forest; physiographic location is in the Outer Bluegrass; landform described as dissected uplands; and the locality is listed as a ridge. National Register eligibility for this site was not assessed.
- 15Hy31: This site is dated from 1851-1950 and is listed as historic farm/residence; the midden is listed as absent; the site has not been vandalized; condition is listed as “apparently undisturbed”; present land use is pastureland; physiographic location is in the Outer Bluegrass; landform described as dissected uplands; and the locality is listed as a slope. Investigation revealed that this site is not eligible for the National Register.

F. Prime and Unique Farmland Concerns

Prime farmland is defined by the United States Department of Agriculture (USDA) and Soil Conservation Service as “land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops.” Cropland, pastureland, rangeland, forest land or other land, but not urban built-up land or water, can be prime farmland.

A review of the Soil Survey Geographic (SSURGO) Database obtained from the USDA reveals that there are prime or unique farmlands within the study area. In this area of Kentucky, prime farmland is usually located in or near the low lying bottomlands and floodplains or on the top of broad ridge tops. The narrow ridge tops and the steep slopes are areas where prime farmland is not found.

There are a total of 156.4 acres of prime farmland found within the study area. Additionally, there are 304.0 acres exclusively in the Little Kentucky River Valley that if protected from flooding or not frequently flooded during the growing season would also be considered prime farmland.



*Prime Farmland
(Little Kentucky River Valley)*

According to the *Trimble County Comprehensive Plan*⁴, prepared by the Trimble County Agriculture Development Council, the breakdown of agricultural crops grown in the area includes tobacco, corn, soybean, winter wheat, alfalfa hay, and other hay. A breakdown of horticultural crops grown in the area includes apples, peaches, strawberries, brambles, grapes, tomatoes, sweet corn, cabbage, pumpkins, melons, and summer squash.

G. Monitored Sites and Wells

Oil wells, gas wells and sites monitored by the Environmental Protection Agency (EPA) were considered as part of this study. Sites identified within the US 421 study area are identified below:

⁴ <http://www.uky.edu/Agriculture/AgPrograms/tobacco/councils/louisville/trimble1.html>

- There are four (4) known underground storage tank (UST) sites within the study area, including:
 - Kwik-E-Mart Marathon located at I-71 (Exit 34) in Campbellsburg;
 - Citgo located at I-71 (Exit 34) in Campbellsburg;
 - Shell in Bedford at the intersection of US 421 and US 42; and
 - Marathon in northern Bedford at the intersection of US 421 and US 42.

Monitored Sites and Wells

- ✓ Four (4) known UST locations
- ✓ One (1) probable UST location
- ✓ Two (2) RCRIS sites
- ✓ One (1) PCS site
- ✓ Two (2) Sewer Treatment Plants

- One (1) probable underground storage tank (UST) site is located within the study area. This is an abandoned truck stop located at the intersection of Carmen Creek Road and US 421 in Henry County.
- There are two (2) Resource Conservation and Recovery Information System (RCRIS) sites in the study area. RCRIS is a national information system which supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of facilities which generate, transport, treat, store or dispose of hazardous waste. The two (2) RCRIS sites that were verified within the study area include:
 - One site located at the Trimble County Board of Education on Wentworth Avenue next to the Trimble County Middle School; and
 - A site owned by Louisville Gas and Electric located on KY 3175, one mile southeast of the intersection with US 42. A 26 inch gas pipeline that passes through the study area crosses at this location.
- There is one (1) Permit Compliance System (PCS) site in the study area. PCS is a computerized management information system which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. The one (1) PCS site located in the study area, Bedford Health Care Center, is located at the intersection of US 42 and Shepherd Lane. 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.
- Two (2) Sewer Treatment Plants are also located in the study area, including:
 - One site located along Paul Nora Drive approximately 0.2 miles from the intersection with Lea View Avenue in Henry County; and
 - The Bedford Municipal Sewer Plant on Starks Lane, approximately 0.1 miles from the intersection with US 421.
- Field review identified a tire dump located at an abandoned truck stop at the intersection of Carmen Creek Road and US 421 near I-71 (Exit 34) in Henry County.

Additional UST/HazMat concerns are likely to be associated with farming operations in the study area. 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.

H. Air Quality and Noise

The United States Environmental Protection Agency (EPA) has established criteria for ambient levels of transportation related air pollutants, which have also been adopted by the Kentucky Natural Resources and Environmental Protection Cabinet (KNREPC). Trimble and Henry Counties

are part of the North Central Kentucky Intrastate Air Quality Control Region. The project area is currently in attainment for all criteria pollutants and does not require transportation control measures. With respect to the latest conforming Statewide Transportation Improvement Program (STIP) for FY 2003-2008, the proposed project is located on page 209. There are no air quality monitors within the project area that are part of the EPA's Aerometric Information Retrieval System (AIRS).

The Federal Highway Administration (FHWA) has established noise impact criteria for various land uses close to highways. These criteria are also supported by the KYTC's Noise Abatement Policy. The study area includes residential units and public areas that may be sensitive to traffic noise impacts related to the proposed project. Potential receptor sites include residential areas, churches and a school in the urban areas of Bedford and Campbellsburg, as well as additional church locations just south of the Little Kentucky River. A project specific noise impact analysis will be required in upcoming project phases to identify potential noise impacts on receptors within the project area.

I. Additional Concerns

Other items identified within the US 421 study area include:

- A 26-inch diameter Gas Pipeline passes through the study area, crossing both US 421 and KY 3175;
- Blue Flame propane distribution site located at the intersection of Shepherd Lane and US 42;
- Cardinal Hills Golf Course located along Starks Lane, an 18-hole course built in 1969; and
- Cell tower and antenna structures located along US 421 in Trimble County near the Henry and Trimble County line.

J. Summary of Environmental Issues

The potential environmental concerns identified for the US 421 study area have been identified through this preliminary analysis. Environmental issues that are likely to require consideration during future phases of this project include the following:

- Water quality issues related to the Little Kentucky River, Town Branch, Barebone Creek, and the associated tributaries should be considered. Water resources in the project area may be affected by increased erosion and runoff during construction activities and increased non-point source pollution after construction is complete. Erosion control measures and methods to decrease non-point source pollution should be considered in future phases.
- There are many small wetland and ponding water areas throughout the study area. A field inspection of each of the wetland 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). Also, further inspection of these wetlands will be necessary to determine whether any are considered critical (i.e., a floral or faunal species exclusively relies on it for existence). The project area ponds will not require mitigation, but replacement should be considered to maintain sediment retention capabilities and wildlife habitats.
- There are a number of public and private water sources in the study area, such as water lines, wells, tanks and other facilities. Since groundwater is typically impacted by the same pollution sources that influence surface water quality, erosion control measures and methods to decrease non-point source pollution should be considered to decrease potential impacts to wells in the project area. Other water sources in the project area should be avoided where possible to minimize interruption of service.

- The project area is located within a large forest block. Forest fragmentation is one of the primary impacts to plants and animals that require large tracts of forest for all parts of their life cycles. Fragmenting or impacting large forest blocks should be avoided.
- Potential occurrences of monitored faunal species have been identified within or near the project area, including endangered, endangered with partial status, threatened and special concern species. Further fieldwork will be necessary in future project phases to determine if these species exist within the project's corridor.
- Community sensitive locations such as churches, schools, cemeteries and public housing are located within the project area. The majority of these facilities are located in the urban area of Bedford on the northern end of the project corridor, with a few located further south along the corridor near the Little Kentucky River. Present locations of these resources should be noted for future design corridor considerations to minimize potential impacts and relocations. In addition, any affected cemetery will require future evaluation for cultural significance.
- Federal Environmental Justice standards require that the transportation project development process avoids or minimizes disproportionately affecting minority and low-income populations. The standards also ensure the full and fair participation by all potentially affected communities in the transportation decision-making process. Low-income populations identified in several study area tracts and block groups through this preliminary analysis should be verified through detailed Environmental Base Studies in subsequent phases of this project. Future public involvement efforts for this project should strive to involve study area low-income populations in the decision making process.
- There are some local industry and commercial developments within the urban areas of Bedford and Campbellsburg. It is expected that any transportation improvements in this area would provide increased traffic and potential benefit to local industry. The remaining portion of the study area is primarily rural agricultural, including about 150 acres of prime farmland. While a decline in tobacco quotas in recent years has made agriculture in this area less profitable, consideration should be given to limiting the net loss of farmland within the project area.
- There are a number of historic structures and archaeological sites within the project area. These include six structures listed on the National Register of Historic Places, as well as other historic and archaeological sites which have not been assessed or have pending eligibility. A full historic baseline study is recommended early in project development to review cultural landscapes and other historic sites in the study area. The presence of previously recorded archaeological sites within the project area suggests that unrecorded archaeological sites may be found upon further investigation.
- The project area includes a number of underground storage tanks, sewage treatment plants, and EPA monitored sites. An Environmental Site Assessment of the project area should be conducted in future phases of this project to determine if any of these sites could potentially impact decisions about transportation improvements in the area.
- Air and noise considerations should be carried through future phases of this project. At this time, the project area is in attainment for all criteria air pollutants and does not require transportation control measures. The study area includes residential units and public areas that may be sensitive to traffic noise impacts related to the proposed project. A project specific noise impact analysis will be required in upcoming project phases to identify potential noise impacts on receptors within the project area.

APPENDIX A
Environmental Resource Information

Appendix A

Granting Agency		
Contact Information		Data Obtained
Department of Fish & wildlife Resources		
Web Address	fw.ky.gov/navigation.asp?cid=267	Wetlands Information - U.S. Department of Fish and Wildlife Quad Maps, 1983-1987
Mailing Address	#1 Game Farm Road Frankfort, KY 40601	
Phone Number	(800) 858-1549	
Kentucky Division of Waste Management / Underground Storage Tank Division		
Web Address	www.waste.ky.gov/programs/ust	Underground Storage Tank Data
Mailing Address	14 Reilly Road Frankfort, KY 40601	
Phone Number	(502) 564-6716	
Kentucky Natural Resources and Environmental Protection Cabinet		
Web Address	www.environment.ky.gov	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
Mailing Address	500 Mero Street 5th Floor,CPT Frankfort, KY 40601	
Phone Number	(502) 564-3350	
Kentucky Heritage Council		
Web Address	www.state.ky.us/agencies/khc/khchome.htm	Archaeological Sites Historic Structures
Mailing Address	300 Washington Street Frankfort, KY 40601	
Phone Number	(502) 564-7005	

Appendix A (continued)

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

Appendix A (continued)

Granting Agency		
Contact Information		Data Obtained
Abandoned Mine Land Program		
Web Address	www.osmre.gov/aml/intro/intro2.htm	Abandoned Mine Lands Data
Mailing Address	2521 Lawrenceburg Road Frankfort, KY 40601	
Phone Number	(502) 564-2141	
U.S. Geological Survey		
Web Address	gnis.usgs.gov	GNIS (Geographical Name Information Server) DRG (Digital Raster Graphic)
Mailing Address	523 National Center Reston, VA 20192	
Phone Number	(703) 648-7411	
National Park Service		
Web Address	www.nps.gov/gis	Dataset for 340 National Park System Unit Boundaries
Mailing Address	1848 C Street, NW Washington, DC 20240	
Phone Number	(202) 208-4621	
National Forest Service		
Web Address	www.southernregion.fs.fed.us/gis	Polygon Coverage Showing Surface Ownership / Jurisdictions of Lands
Mailing Address	1400 Independence Ave, SW Washington, DC 20250	
Phone Number	(202) 205-8333	

Appendix A (continued)

Granting Agency		
Contact Information		Data Obtained
<i>Bureau of Transportation</i>		
<i>Web Address</i>	<i>www.bts.gov/programs/geographic_information_services</i>	<i>United States Military Installations Database</i>
<i>Mailing Address</i>	<i>400 7th Street, SW Room 310 Washington, DC 20590</i>	
<i>Phone Number</i>	<i>(800 853-1351</i>	
<i>Environmental Protection Agency</i>		
<i>Web Address</i>	<i>www.epa.gov/region4/gis/index.html</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>U.S. EPA Region 4 Sam Nunn Atlanta Federal Center 61 Forsyth St., S.W. Atlanta, Georgia USA</i>	
<i>Phone Number</i>	<i>(404) 562-8027</i>	

APPENDIX B
Project Area Photographs



US 421 and I-71 (Exit 34)



Kentucky State Police Post #5
located on Citation Lane in Campbellsburg
(Henry County Industrial Park)



Marathon Kwik-E-Mart located on US 421
at the intersection of US 421 and I-71 (Exit 34)



Abandoned Truck Stop located on US 421
0.5 miles West of the intersection of
US 421 and I-71 (Exit 34)



Communication Antennas located along US 421,
0.4 miles west of the Henry and Trimble County line



Tire Dump located beside the
Abandoned Truck Stop
(see picture above)



Pond located along US 421
at milepoint 0.6



Summerfield Trace Subdivision
located on Martini Lane



Antioch Baptist Church located on US 421 near
milepoint 2.7



Curvy Section of US 421 at milepoint 2.3



Intersection of US 421 and KY 316



Apostolic Pentecostal Church of the Living God
located on Smith Lane



Little Kentucky River (Main Channel)



Little Kentucky River (Braided Channel)



Intermittent Unnamed Tributary of the
Little Kentucky River



Hay Field
Little Kentucky River Valley



Potential Historic Structure
located on Smith Lane



Bedford Municipal Sewer Plant



Cardinal Hills Golf Course
located on Stark Lane



Trimble County Court House



TMB 15 - Peak House (Bedford Inn)
Listed on the National Register of Historic Places



Main Street Bedford



TMB 12 - Hancock House
Listed on the National Register of Historic Places



Fellowship Baptist Church



Trimble County Middle School



Stop N' Go Marathon
US 421 and US 42 intersection (north)



Bedford United Methodist Church



Bedford Springs Church



Louisville Gas & Electric Check Station
located on KY 3175



Gas Pipeline Right-of-Way