

**APPENDIX D:  
ENVIRONMENTAL OVERVIEW AND AGENCY  
CORRESPONDENCE**

## **NATURAL ENVIRONMENT BASELINE**

### ***Aquatic Ecosystems***

#### ***Surface Water***

The study area for Bardwell is located within the major water basin Hatchie-Obion. Four smaller watersheds cover the study area. Truman Creek watershed covers the central and most of the western portions of the study area. Mayfield Creek watershed covers a sizable section of the study area east of Bardwell. Smaller sections of the northwest and southeast portions of the study area are covered by Gray Creek and West Fork of Mayfield watersheds, respectively (United States Geological Survey [USGS] 1983).

All streams in the study area flow short distances into tributaries of the Mississippi River system (the Mississippi River is approximately six miles west of Bardwell). Most blue-line streams and tributaries flow north in the study area. Truman Creek runs north to southwest across the entire study area and crosses US 51 just north Bardwell. Most of the remaining creeks and tributaries are unnamed, but four are named and lie in the southern half of the Bardwell study area. They are Little Shawnee Creek, Buzzard Creek, Central Creek, and Minor Slough.

#### ***Wetlands and Ponds***

National Wetland Inventory (NWI) mapping was reviewed for the presence of wetlands within the project corridor. A total of 137 wetlands were indicated on NWI mapping; no one particular section of the study area is more saturated with wetlands than any other. A limited site visit of the study area was conducted April 19, 2002. Wetlands were observed throughout the study area as indicated on NWI mapping; most appeared to be farm ponds.

The jurisdictional status of 130 of the NWI wetlands would need to be determined in consultation with the US Army Corps of Engineers (USACE). These wetlands, also considered ponds, include 122 that are impounded or diked areas as part of farming operations and another eight that are the result of excavation activities. The remaining seven wetlands appear to be natural in origin based on their type and may be considered jurisdictional by USACE. All seven exist in the northeast quadrant of the study area; most are either along the floodplain of Truman Creek or along the floodplain of an unnamed tributary of Mayfield Creek. Four of these wetlands are significant in size as well, ranging from approximately 8 acres to 32 acres. Attachment A includes a summary of the types and members of NWI wetlands within the study area.

Hydric soils are also found in the study area and suggest the presence of other wetlands in the study area. The soil survey for Carlisle and Hickman Counties, Kentucky (United States Department of Agriculture [USDA] 1997) shows twelve hydric soils have been identified within Carlisle County. Of these twelve, five potential hydric soils are found within the study area: Convent-Mhoon silt loams, Dekoven silt loam overwash, Routon-Center silt loams, Mhoon silt loam, and the most frequent hydric soil in the study area, Convent-Adler silt loams. Convent-Mhoon silt loams and Rhouton-Center silt loams are hydric only in low-lying areas. The low-lying areas within the study boundaries and with potential for these soils are in the alluvial bottoms (along creek valleys).

In an informal interview, Todd Templeton, Carlisle County District Conservationist, noted that the alluvial bottoms in the study area are very likely to contain hydric soils.

### ***Floodplains***

Six 100-year floodplains cover 8.3 percent of the study area (626 acres), with the largest being the Truman Creek floodplain (394 acres) (Federal Emergency Management Agency [FEMA] 1998). As noted previously, Truman Creek runs north to southwest across the entire study area. The other five floodplains are: two unnamed tributaries of Gray Creek (67 acres total), Thomas Creek (19 acres total), an unnamed tributary of Mayfield Creek (75 acres) and an unnamed tributary of Truman Creek (71 acres). The floodplains of the unnamed tributaries of Gray Creek and Thomas Creek are clustered in the upper northwest portion of the study area, while the unnamed tributary of Mayfield Creek is north of US 62 and east of Bardwell. The floodplain of the unnamed tributary of Truman Creek runs through Bardwell and south of the town. Significant floodplains areas lie just north of the study area.

### ***Terrestrial Ecosystems***

#### ***Threatened and Endangered Species***

Correspondence with the US Fish and Wildlife Service (USFWS), Kentucky Department of Fish and Wildlife Resources (KDFWR) and the Kentucky State Nature Preserves Commission (KSNPC) along with a review of KDFWR's online database indicated 12 species listed as potentially occurring in or near the study area. These species and their status are shown in Table 1. Copies of correspondence with agencies are included at the back of this appendix.

**TABLE 1 –THREATENED OR ENDANGERED SPECIES**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
Indiana bat	<i>Myotis sodalis</i>	Federally endangered, state endangered
Interior least tern	<i>Sterna antillarum athalassos</i>	Federally endangered, state endangered
Hooded merganser	<i>Lophodytes cucullatus</i>	State endangered
Spotted sandpiper	<i>Actitis macularia</i>	State endangered
Cypress minnow	<i>Hybognathus hayi</i>	State endangered
Alabama shad	<i>Alosa alabamae</i>	State endangered
Evening bat	<i>Nycticeius humeralis</i>	State threatened
Yellow-crowned night-heron	<i>Nyctanassa violaceus</i>	State threatened
Common moorhen	<i>Gallinula chloropus</i>	State threatened
Least bittern	<i>Ixobrychus exilis</i>	State threatened
Spotted sunfish	<i>Lepomis punctatus</i>	State threatened
Taillight shiner	<i>Notropis maculatus</i>	State threatened

Available habitat indicates whether these 12 species are likely to occur in the study area. Three species are not likely to be found in the study area; these are the Alabama shad, spotted sandpiper, and interior least tern. These three species are likely to find suitable habitat in or very near the Mississippi River.

All other species may occur or have been known to occur in the study area. These species are usually associated with one of four types of habitat found within the study area: streams, ponds, and lakes; marshy ponds and lakes; mature forests with nearby streams; and trees and buildings.

Streams, ponds, lakes, and areas immediately surrounding them are found throughout the study area. These habitats are suitable for the cypress minnow, spotted sunfish, taillight shiner, and yellow-crowned night heron. Marshy ponds and lakes with associated vegetation such as cattails, burreeds, bulrushes, and sedges are suitable nesting habitat for the least bittern and common moorhen.

Mature forests with nearby streams are suitable habitat for the hooded merganser and Indiana bat. Such potential habitat occurs along Truman Creek, Central Creek, and along an unnamed tributary of Gray Creek (No. 1). There is also a block of potential habitat in a forested area south of the unnamed tributary of Mayfield Creek. These same forested areas plus other treed areas and buildings are suitable habitat for the evening bat; such habitat exists throughout the entire study area.

### ***Floral Communities***

Primary plant communities existing in the study area include croplands (soybean, corn, wheat, and tobacco), pasture, residential lawns, and wetlands (Kentucky Natural Resources and Environmental Protection Cabinet [KNREPC]). Such highly disturbed habitats as these areas provide ideal habitat for weeds, exotics, and naturalized and introduced species to thrive. In addition to these highly disturbed habitats, several large blocks of forests exist in the project area, specifically along the unnamed tributaries of Gray Creek, along tributaries of Truman Creek to the west and southwest of Bardwell, and in the headwaters of the tributary of Mayfield Creek.

A review of *Kentucky's Big Trees* (Kentucky Division of Forestry 1995) indicated no national or state champion trees within the study area.

### ***Faunal Communities***

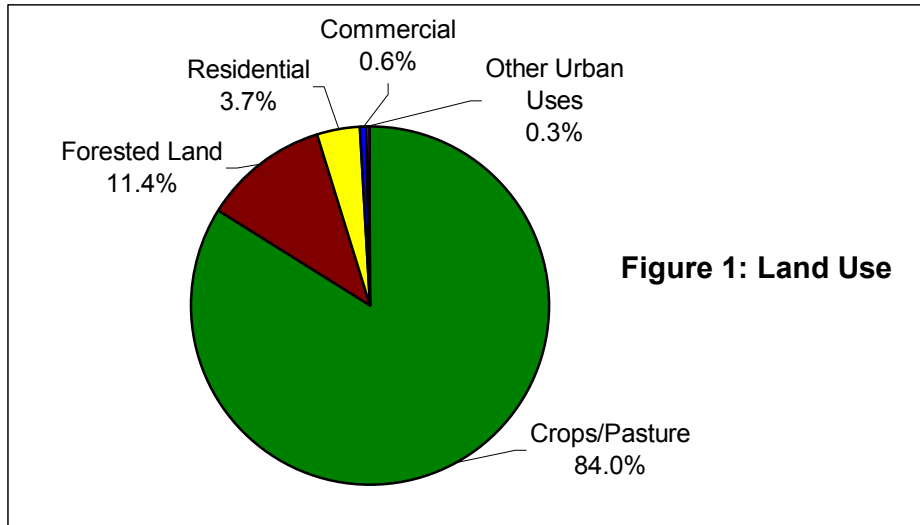
Common mammals that are abundant statewide or have large home ranges are likely to be found in the study area. These include mammals such as whitetail deer, opossum, raccoon, skunk, gray and fox squirrel, and chipmunk. Other species such as the short-tailed shrew and southeastern shrew are likely to inhabit the forested areas of the project area. Southern bog lemming, muskrat, and the swamp rabbit prefer wetland type habitats.

Wetlands in the study area provide habitat for amphibian species such as green frog, bullfrog, spotted salamander, smallmouth salamander, and mole salamander. Midland water snake and yellowbelly water snake will likely be found in the creeks. The early successional fields (found near croplands) and forested areas provide habitat for rat snake, kingsnake, black racer, and several species of lizard. Box turtle is found statewide and would be expected in the study area. Common birds such as robin, cardinals, starling, and mourning dove, are also likely to be found throughout the study area.

## HUMAN ENVIRONMENT BASELINE

### ***Land Use***

The study area covers 7,579 acres. Five types of land use are found within the study area: crops/pasture, forest, residential, commercial, and other urban. Crops/pasture cover 6,359 acres (the largest percentage). Forested land covers the next largest percentage at 864 acres. Residential areas and commercial areas occupy 283 acres and 48 acres, respectively. The smallest land use is for other urban uses, accounting for 23 acres (KNREPC).



The site visit verified these findings; the study area was comprised primarily of crops and pastures. Ribbons of forests separated crops and lined many of the streams. Outside the city limits, houses on farms and other rural homes were scattered. Bardwell is a small city (population 799 for the year 2000 according to the U.S. 2000 Census), and the majority of the residential, commercial, and urban land use in the study area is within the city's corporate limits.



### ***Transportation***

The numbers of connecting roadways branching out beyond Bardwell are limited. US 51 which traverses the study area from northwest to the south is a rural, principal arterial roadway. US 51 is a two-lane, undivided "AAA"-rated roadway. Main east/west routes include US 62 to the east of Bardwell and KY 123 to the west. US 62 also runs concurrently with US 51 north of Bardwell. Other roadways east of US 51 include KY 1377, KY 1181, and local roads Morgan Road and Webb Road. Roadways to the west of US 51 are KY 1591, KY 1022, Truman Road, Stanley Road, and Ida Ireland Road.

The Illinois Central railroad runs northwest to south across the Bardwell study area. Except for the northern end of the study area, the railroad tracks are west of US 51. For nearly two miles, the tracks are adjacent to US 51. The tracks run through Bardwell itself; buildings in the town, in fact, face the railroad rather than US 51, the main street in Bardwell. In the southern portion of the study area, the tracks are further west of US 51 (as much as one-half mile) (USGS 1983).

### ***Total Population, Minority and Low-Income Populations***

The study area lies primarily in census tract 9602 and within a very small portion of census tract 9603. The small portion within tract 9603 is insignificant and omitted from the data presented below.

As released for Census 2000, the population of Carlisle County was 5,351; the population of Bardwell was 799. The racial composition for the state, county, town, and census tracts as released for Census 2000 is shown in Table 2.

**TABLE 2 – RACIAL COMPOSITION OF STATE, COUNTY, TOWN, AND CENSUS TRACT**

	<b>Kentucky</b>	<b>Carlisle County</b>	<b>Bardwell</b>	<b>Census Tract 9602</b>
<b>One Race:</b>				
White	3,640,889	5,232	756	1,920
African American	295,994	51	24	26
Native American	8,616	22	5	7
Asian	29,744	4	0	2
Native Pacific Islander	1,460	0	0	0
Other Race	22,623	12	5	8
Two or more races	42,443	30	9	13
Hispanic Origin*	59,939	44	22	27
Total Minorities**	400,880	119	43	56
Percent Minority	9.9	2.2	5.4	2.8

*\*Hispanic Origin is not considered a separate race. The number shown is counted twice, once as Hispanic Origin and once as one of the other four racial groups listed above.*

*\*\*This number does not include Hispanic Origin in order to avoid duplication.*

*Source: 2000 U.S. Census*

Environmental justice concerns related to minority populations are not likely based on Census 2000 data for census tract 9602. The study area, located in census tract 9602, has a minority population of 2.8 percent. This percentage is similar or lower than percentages for Kentucky, Carlisle County, and Bardwell (9.9, 2.2, and 5.4 percent, respectively). A limited site visit of the study area did not indicate evidence of minority populations.

Environmental justice concerns for low-income populations are more likely for areas within Bardwell as opposed to the areas surrounding the town. The site visit of the study area confirmed the presence of some low-income housing, primarily in Bardwell. For the most part, houses beyond the town were not indicative of low-income residents.

Census 2000 information for low-income populations is not currently available. Yet, 1990 census data as shown in Table 3 indicates a higher probability of low-income populations within the town. Percentages for the county and census tract are similar to that of the state.

**TABLE 3 – INCOME AND POVERTY STATUS**

Region	Median Household Income	Median Family Income	Persons Below Poverty Level	
			Number	Percent
Kentucky	\$22,534	\$27,028	681,827	16.9
Carlisle County	\$19,409	\$24,039	921	17.2
Bardwell	\$15,938	\$18,750	197	24.7
Census Tract 9602	\$18,160	\$21,875	350	18.0

*Source: 1990 U.S. Census*

Additional demographic data for the study area are provided in Attachment B. Tables include those for household types, housing units available, populations by selected age groups, and commuting patterns.

***Local Economy***

Carlisle County has a higher percentage of unemployed persons than does Kentucky or the U.S. The county’s unemployment percentage for 2001 was 6.1 compared to the state at 5.5 and the country at 4.8. The county’s rate has improved since 1990 when it was 8.0 percent. Data from 1995 to 2000 shows the county’s unemployment rate has ranged from a low of 5.1 in 1998 to a high of 6.9 the previous year.

Employment by major industry by place of work for the year 2000 for Carlisle County is shown in Table 4.

**TABLE 4 – EMPLOYMENT BY MAJOR INDUSTRY**

<b>Carlisle County</b>	<b>Employment</b>	<b>Percent</b>
All Industries	855	100.0
Agriculture, Forestry & Fishing	25	2.9
Contract Construction	51	6.0
Manufacturing	132	15.4
Transportation and Public Utilities	14	1.6
Wholesale Trade	0	0.0
Retail Trade	164	19.2
Finance, Insurance and Real Estate	61	7.1
Services	143	16.7
State and Local Government	35	4.1

*Source: Kentucky Economic Development Information System*

The major manufacturers for Bardwell for the year 2002 are shown in Table 5.

**TABLE 5 – MAJOR MANUFACTURERS**

		<b>Employees</b>	<b>Year Established</b>
Carlisle County News	Newspaper publishing	2	1894
Carlisle Manufacturing	Cultured marble sinks, panels, counter tops & products	4	1991
Ford Construction Co.	Ready-mixed concrete & livestock water tanks	5	1957
RBS China Inc.	Lamps (portable lighting)	40	1992

*Source: Kentucky Economic Development Information System*

***Communities and Community Facilities***

Typical community facilities are located within Bardwell, *e.g.*, a city hall, a health department, etc. Based on addresses, nine churches appear to exist in Bardwell; most appear to be located on side streets but at least three are located along US 51. Beyond the town, a limited number of churches were observed scattered throughout the study area.

Other than the town of Bardwell, there are no named subdivisions or communities in the study area.

Three additional community facilities were identified in the study area. These community facilities are two cemeteries and a park. Roselawn Cemetery is located on the west side of US 51 at the intersection of route 118 and US 51; Bardwell Cemetery is located directly opposite on the east side of US 51. Carlisle County Park is located on Morgan Road near US 62 in Bardwell. The park includes such facilities as baseball fields, a basketball court, and a playground.

No public schools are located within the study area. One private school, Mayfield Creek Christian Academy, is located in the county; its location however, could not be determined because of insufficient address. The school was not observed during the site visit.

### ***Agricultural Activity and Prime and Unique Farmland***

As noted under Land Use, agriculture is predominant throughout the study area outside of Bardwell. Substantial farming operations with significant on-farm investments are evident throughout the study area and are not limited to any one portion or portions of the study area.

Data from the 1997 Census of Agriculture also demonstrate the magnitude of agricultural activities in the county. For example, the average farm in Carlisle County covers 279 acres compared to the state average of 162 acres. Thirteen farms in the county cover between 1,000 and 1,999 acres; seven farms have more than 2,000 acres each. Yet, of Kentucky's 120 counties, in terms of total land covered, Carlisle County ranks 106; it is one of the state's smaller counties. In 1998, this small county ranked 16<sup>th</sup> in production of corn for grain, soybeans, and winter wheat. Carlisle County was 3<sup>rd</sup> in dark-fired tobacco production.

The prevalence of agricultural activity in the county and subsequently the study area is in large part attributable to the availability of fertile soils. Of Hickman County's 127,354 acres, 69,752 are considered prime and unique farmland (55.8 percent). Many of the soils considered prime and unique farmland are located in the study area. Prime and unique farmland soils Loring-Adler silt loams and Loring-Memphis soils are the predominant soil types in the study area (USDA 1997).

An informal interview with Todd Templeton, Carlisle County District Conservationist, confirmed the magnitude of agricultural activity in the county as indicated by the Census. He stated that about 60 percent of the land around Bardwell and within the county would be considered prime and unique farmland. Furthermore, he stated that another 30 percent of the land would likely be considered statewide and/or locally important.

Mr. Templeton also confirmed that two agricultural districts plus a portion of another district exists within the study area. Agricultural District 20-05 covers 455 acres to the west and north of Bardwell. Agricultural District 20-04 is south of Bardwell and extends from the railroad east to cross over US 51. A small portion of Agricultural District 20-03 is located in the northeast section of the study area along Webb Road; the entire district covers 1,400 acres.

### ***Underground Storage Tanks/Hazardous Materials***

Environmental Data Resources, Inc. (EDR) was contacted to provide a review of their environmental databases. Twenty-six environmental databases were researched covering a 3-mile radius including the study area. The databases revealed five sites. All five sites came from the Underground Storage Tank (UST) database. Information regarding these five sites is summarized below.

<b>Site Address</b>	<b>Name</b>	<b>Database</b>
Intersection of HWY 62 & 51	Bardwell Roseco	UST
HWY 51 & 62	Motts BP	UST
HWY 51 & 62	Hucks 133	UST
HWY 51 & Orchard	Bardwell CITGO	UST
US 51	Bardwell Ashland Station	UST

In addition to the five sites, 35 unmapped orphan sites with inadequate address information were listed; of these, sixteen were eliminated based on listed city. Locating the remaining orphan sites will require detailed site reconnaissance.

A limited site reconnaissance was conducted in conjunction with the site visit for the social and economic baseline. Potential hazardous materials sites, as indicated by the databases searched, are primarily located in and around the urban limits of Bardwell. One other site was noted: Kenneth Rowland's Body Shop is located on US 51 north of the center of Bardwell. For areas outside Bardwell, hazardous materials location considerations are for the most part connected to agricultural activity. As discussed previously, agricultural activity is extensive throughout much of the study area. Large-scale farming operations often store fuel and oil on-site.

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**ATTACHMENT A – NATIONAL WETLAND INVENTORY WETLANDS**

The following table summarizes the types and members of NWI wetlands within the study area.

**TABLE A-1 – NWI WETLANDS IN STUDY AREA**

<i><b>Wetland Type</b></i>	<b>Number of Wetlands</b>
PUBHx	2
PUBHh	96
PUBFh	2
PEM1Ch	2
PEM1A	1
PFO1A	4
POWHh	21
PFO6F	1
PEM1Fh	1
POWH	1
POWHx	6
<b>Total Wetlands</b>	<b>137</b>

PUBHx = Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated  
PUBHh = Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded  
PUBFh = Palustrine, Unconsolidated Bottom, Semi-Permanently Flooded, Diked/Impounded  
PEM1Ch = Palustrine, Emergent, Persistent, Seasonally Flooded, Diked/Impounded  
PEM1A = Palustrine, Emergent, Persistent, Temporarily Flooded  
PFO1A = Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded  
POWHh = Palustrine, Open Water/Unknown Bottom, Permanently Flooded, Diked/Impounded  
PFO6F = Palustrine, Forested, Deciduous, Semi-Permanently Flooded  
PEM1Fh = Palustrine, Emergent, Persistent, Semi-Permanently Flooded, Diked/Impounded  
POWH = Palustrine, Open Water/Unknown Bottom, Permanently Flooded  
POWHx = Palustrine, Open Water/ Unknown Bottom, Permanently Flooded, Excavated

**ATTACHMENT B - DEMOGRAPHIC DATA**

The household types for state, county, town, and census tract are shown in Table B-1.

**TABLE B-1 – HOUSEHOLD TYPES (2000)**

	Percent Total Households				
	Family Households			Non-family Households	
	Total	Married	Female Head, No Husband	Total	Householder Living Alone
Kentucky	69.4	53.9	11.8	30.6	26.0
Carlisle County	71.3	58.5	9.3	28.7	26.3
Bardwell	62.4	42.0	15.3	37.6	34.9
Census Tract 9602	68.1	53.6	10.5	31.9	29.2

Source: 2000 U.S. Census

The numbers of housing units available for state, county, town, and census tracts are shown in Table B-2.

**TABLE B-2 – HOUSING UNITS AVAILABLE (2000)**

	Total Housing Units	Occupied Housing Units	Vacant Units	Percent	
				Vacant – For Sale	Vacant – For Rent
Kentucky	1,750,927	1,590,647	160,280	12.9	27.6
Carlisle County	2,490	2,208	282	22.3	15.2
Bardwell	425	367	58	34.5	43.1
Census Tract 99602	998	869	129	29.5	22.5

Source: 2000 U.S. Census

The population by selected age groups is shown in Table B-3.

**TABLE B-3 – POPULATION BY SELECTED AGE GROUPS (2000)**

	Total Population	Percent of Total Population				
		Under 18 years	18 to 24 years	25 to 44 years	45 to 64 years	65 years and over
Kentucky	4,041,769	24.6	9.9	30	23	12.5
Carlisle County	5,351	23.4	7.8	26.4	24.1	18.3
Bardwell	799	23.0	7.3	24.4	21.3	24.0
Census Tract 9602	1,976	21.8	7.0	24.9	26.2	20.0

Source: 2000 U.S. Census

The commuting patterns for Carlisle County in 1990 are shown in Table B-4.

**TABLE B-4 – COMMUTING PATTERNS (1990)**

	1990	Percent
<b>Residents of Carlisle County</b>		
Working and Residing In County	821	37.8
Commuting Out of County	1,350	62.2
Total Residents	2,171	100.0
<b>Employees in Carlisle County</b>		
Working and Residing In County	821	81.7
Commuting Into County	184	18.3
Total Employees	1,005	100.0

Source: Kentucky Economic Development Information System



Commonwealth of Kentucky  
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Frankfort, Kentucky 40622

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**Paul E. Patton**  
Governor

**Clifford C. Linkes, P.E.**  
Deputy Secretary

December 11, 2002

(See Attached List)

«Mailing\_Title» «First\_Name» «Last\_Name»«Suffix»  
«Title»  
«Organization»  
«Address1»  
«Address2»  
«City», «State» «Zip»

SUBJECT: Planning Study  
Carlisle County  
Improvements to US 51 in Bardwell  
Item No. 1-183.00

Dear «Letter\_Title» «Last\_Name»:

We are requesting your agency's input and comments on a planning study to determine the need and potential impacts for a proposed highway project. The Kentucky Transportation Cabinet has assembled a study team to evaluate potential improvements to US 51 in Bardwell, Carlisle County. The study is currently in the initial data-gathering stage.

We ask that you identify specific issues or concerns of your agency that could affect the development of the project. This planning study will include a scoping process for the early identification of potential alternatives, environmental issues, and impacts related to the proposed project. We believe that early identification of issues or concerns can help us develop highway project alternatives to avoid or minimize negative impacts.

We respectfully ask that you provide us with your comments by January 30, 2003, to ensure timely progress in this planning effort.

During the development of this planning study, comments will be solicited from Federal, state, and local agencies, as well as other interested persons and the general public, in accordance with principles set forth in the National Environmental Policy Act (NEPA) of 1969. The Federal Highway Administration is partnering with us in these efforts. A copy of a public notice placed



KENTUCKY TRANSPORTATION CABINET  
"PROVIDE A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND, AND FISCALLY RESPONSIBLE TRANSPORTATION SYSTEM  
WHICH PROMOTES ECONOMIC GROWTH AND ENHANCES THE QUALITY OF LIFE IN KENTUCKY."  
"AN EQUAL OPPORTUNITY EMPLOYER M/F/D"

in state in local newspapers concerning this project is attached.

Other Transportation Cabinet offices or consultants working on behalf of the Transportation Cabinet may also contact you seeking more detailed data or information to assist them in completing their environmental studies for this phase of the project.

We have enclosed the following project information for your review and comment:

- Fact Sheet and Attachment Summary
- Study Area Map
- Preliminary Alternatives Map
- 2002 Average Daily Traffic Volumes
- 2002 Levels of Service
- Crash Data by Severity
- Preliminary Natural Environment Map
- Preliminary Human Environment Map

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to David Martin of the Division of Planning at 502/564-7183 or at [charles.martin@mail.state.ky.us](mailto:charles.martin@mail.state.ky.us). Please address all written correspondence to Annette Coffey, P.E., Director, Division of Planning, Kentucky Transportation Cabinet, 125 Holmes Street, Frankfort, KY 40622.

Sincerely,



Annette Coffey, P.E.  
Director  
Division of Planning

AC:CDM:RC

Enclosures

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LouisvilleKY 40299

Kentuckians for The Commonwealth  
105 Reams Street  
P.O. Box 1450  
LondonKY 40743

Mr. Kelvin Combs  
Kentucky Airport Zoning Commission  
State Office Bldg. Anx., 3rd Floor, Mail Code A-3  
125 Holmes Street  
FrankfortKY 40622

Mr. Bob Arnold  
Executive Director  
Kentucky Association of Counties  
380 King's Daughters Drive  
FrankfortKY 40601

Mr. Ken Oilschlager  
President  
Kentucky Chamber of Commerce Executives, Inc.  
464 Chenault Road  
P.O. Box 817  
FrankfortKY 40602

Mr. Pat Simpson  
Commissioner  
Kentucky Department of State Police  
919 Versailles Road  
FrankfortKY 40601

Kentucky Disabilities Coalition  
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FrankfortKY 40602-1589

Mr. Kenneth Frost  
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Kentucky Division of Vehicle Enforcement  
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Mr. John Bird  
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416 Chenault Road  
P.O. Box 1628  
FrankfortKY 40602-1628

Mr. Jim Cobb  
State Geologist & Director  
Kentucky Geological Survey, University of Kentucky  
228 Mining and Mineral Resources Bldg.  
LexingtonKY 40506

Mr. John D. Overing  
Kentucky Heritage Resource Conservation & Development  
Council  
227 Morris Drive  
HarrodsburgKY 40330

Mr. Kevin Graffagnino  
Director  
Kentucky Historical Society  
100 W. Broadway  
FrankfortKY 40601

Kentucky Industrial Development Council, Inc.  
109 Consumer Lane, Ste. A  
FrankfortKY 40601-8489

Ms. Sylvia L. Lovely  
Executive Director  
Kentucky League of Cities, Inc.  
101 East Vine Street, Ste. 600  
LexingtonKY 40507

Mr. Ned Sheehy  
President  
Kentucky Motor Transport Association  
134 Walnut Street  
FrankfortKY 40601

Ms. Vickie Bourne  
Executive Director  
Kentucky Office of Transportation Delivery  
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Mr. Barry Barker  
Executive Director  
Kentucky Public Transit Association  
1000 West Broadway  
LouisvilleKY 40203

Ms. Marcheta Sparrow  
President  
Kentucky Tourism Council  
TARC, 1100 US127 S., Bldg. C  
FrankfortKY 40601

Ms. Ann R. Latta  
Secretary  
Kentucky Tourism Development Cabinet  
Capital Plaza Tower, 24 Floor  
500 Mero Street  
FrankfortKY 40601

Mr. Steve Goodpaster  
Director  
Kentucky Transportation Cabinet, Division of Bridge Design  
State Office Building, 7th Floor, Mail Code 7-1  
FrankfortKY 40622

Mr. Dexter Newman  
Director  
Kentucky Transportation Cabinet, Division of Construction  
State Office Building, 4th Floor, Mail Code 4-1  
FrankfortKY 40622

Mr. David Waldner  
Director  
Kentucky Transportation Cabinet, Division of Environmental  
Analysis  
State Office Bldg. Anx., 1st Floor, Mail Code A-1  
125 Holmes Street  
FrankfortKY 40622



Mr. Wesley Glass  
Acting Director  
Kentucky Transportation Cabinet, Division of Materials  
FrankfortKY 40622

Mr. Chuck Knowles  
Director  
Kentucky Transportation Cabinet, Division of Operations  
State Office Building, 7th Floor, Mail Code 7-2  
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Ms. E. Sue Perkins  
Branch Manager  
Kentucky Transportation Cabinet, Permits Branch  
State Office Building, 1st Floor, Mail Code 1-3  
FrankfortKY 40622

Mr. Boyce Wells  
Acting State Environmental Review Officer  
Natural Resources and Environmental Protection Cabinet  
Frankfort Office Park  
14 Reilly Road  
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Ms. Helen Cleary  
President  
Scenic Kentucky  
P. O. Box 2646  
LouisvilleKY 40201

Mr. Gary Lanthrum  
Director, National Transportation Program  
U. S. Dept. of Energy, Albuquerque Operations Office  
P. O. Box 5400, SC-5  
AlbuquerqueNM 87185-5400

Mr. David Sawyer  
State Conservationist  
U.S. Dept. of Agriculture, Natural Resources Conservation Service  
711 Corporate Drive, Suite 110  
LexingtonKY 40503

Mr. Mike Hill  
Director  
Kentucky Transportation Cabinet, Division of Multimodal  
Programs  
State Office Bldg. Anx., 3rd Floor, Mail Code A-5  
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FrankfortKY 40622

Mr. Simon Cornett  
Director  
Kentucky Transportation Cabinet, Division of Traffic  
State Office Building, 1st Floor, Mail Code 1-3  
FrankfortKY 40622

Mr. Allen D. Rose  
Secretary  
Kentucky Workforce Development Cabinet  
Capital Plaza Tower, 2nd Floor  
FrankfortKY 40601

Mr. James Aldridge  
Director  
Nature Conservancy - Kentucky Chapter  
642 West Main Street  
LexingtonKY 40508

Mr. Oscar Gerald  
Sierra Club  
259 West Short Street  
LexingtonKY 40507

Mr. Heinz Mueller  
Attorney  
U. S. Environmental Protection Agency, Region 4 Office  
13th Floor, Atlanta Federal Ctr.  
61 Forsyth St. SW  
AtlantaGA 30303

Mr. Kenneth W. Holt  
U.S. Dept. of Health & Human Serv., Center for Disease Control,  
Emergency And Environmental Health Services Division  
Mail Stop F-16  
4770 Buford Highway, N.E.  
AtlantaGA 30341-3724

Dr. Lee A. Barclay , Ph.D.  
Field Supervisor  
U.S. Dept. of the Interior, Fish and Wildlife Service  
446 Neal St.  
CookevilleTN 38501

Mr. Roger Wiebusch  
Bridge Administrator  
United States Coast Guard, Bridge Branch  
1222 Spruce Street  
St. LouisMO 63103

The Honorable Jim Bunning  
United States Senator  
United States Senate  
316 Hart Senate Office Building  
WashingtonDC 20510

The Honorable Mitch McConnell  
United States Senator  
United States Senate  
361-A Russell Senate Office Building  
WashingtonDC 20510

Mr. William Howard  
Executive Director  
Kentucky Association of Riverports, Henderson County Riverport  
6200 Riverport Rd.  
HendersonKY 42420

Colonel Jack V. Scherer  
District Engineer  
U. S. Army Corps of Engineers, Memphis District  
167 N. Main Street  
MemphisTN 38103-1894

The Honorable Ed Whitfield  
United States Representative - District 1  
U. S. House of Representatives  
236 Cannon House Office Building  
WashingtonDC 20515

Mr. John Milchick , Jr.  
Kentucky State Coordinator  
U.S. Department of Housing & Urban Development, Ky. State  
Office  
601 West Broadway  
LouisvilleKY 40202

Mr. Kevin W. Lawrence  
Planning Staff Officer  
U.S. Dept. of Agriculture, Forest Service, Daniel Boone Nat'l  
Forest  
1700 Bypass Rd.  
WinchesterKY 40391

The Honorable John Roberts  
Carlisle County Judge/Executive  
Carlisle County Courthouse  
BardwellKY 42023

The Honorable Joe Ross  
Mayor City of Bardwell  
City Hall  
P.O. Box 639  
BardwellKY 42023

Ms. Robin Phelps  
Utility Manager  
City of Bardwell  
P.O. Box 639  
BardwellKY 42023

Mr. Larry Kelley  
President  
Carlisle County Chamber of Commerce  
P.O. Box 331  
BardwellKY 42023

Mr. Greg Terry  
County Road Supervisor  
Carlisle County  
Carlisle County Courthouse  
BardwellKY 42023

Mr. Jason Hodge  
Agriculture Agent  
Carlisle County Extension District  
P.O. Box 518  
BardwellKY 42023

Mr. Bob Wilson  
Transportation Director  
Carlisle County School District  
4557 State Route 1377  
BardwellKY 42023

Ms. Becky Hicks  
Project Director  
Carlisle County Senior Citizens  
P.O. Box 505  
BardwellKY 42023

Ms. Sandra Wilson  
Public Affairs Manager  
Westvaco  
P.O. Box 278  
WickliffeKY 42087

Mr. Ernest Lee Williams  
President  
Citizens Deposit Bank  
P.O. Box 10  
ArlingtonKY 42021

Mr. Alan Wilson  
President  
Bardwell Deposit Bank  
422 Front Street  
BardwellKY 42023

The Honorable Charles R. Geveden  
State Representative  
P.O. Box 518  
WickliffeKY 42087

The Honorable Robert L. Jackson  
State Senator  
P.O. Box 1111  
MurrayKY 42071



Reply to  
Attention of:

DEPARTMENT OF THE ARMY  
MEMPHIS DISTRICT CORPS OF ENGINEERS  
167 NORTH MAIN STREET B-202  
MEMPHIS TN 38103-1894

January 23, 2003

Regulatory Branch

Ms. Annette Coffey, P. E.  
Director, Division of Planning  
Kentucky Transportation Cabinet  
125 Holmes Street  
Frankfort, KY 40622

Dear Ms. Coffey:

This is in reference to your letter dated December 12, 2002, concerning early identification of potential environmental issues and impacts related to the project as required during the scoping process.

The Memphis District Regulatory requirements under Section 404 of the Clean Water Act requires a permit to deposit dredged or fill material into waters of the United States and wetlands. These features need to be addressed with each alternative for the US 51 study in the vicinity of Bardwell, Kentucky. Within the study area numerous creeks, streams, ponds, and wetlands exist. Each alternative that crosses one of these features will need to have the impacts addressed and a Section 404 permit for that impact may be required.

The final alternative that is selected must address these issues through the sequencing process of avoidance, minimization, and/or mitigation of environmental impacts.

If you have questions, contact Randy Clark at (901) 544-0735.

Sincerely,

A handwritten signature in cursive script that reads "Larry D. Watson".

Larry D. Watson  
Chief  
Regulatory Branch



January 22, 2003

Annette Coffey, P.E.  
Director, Division of Planning  
Kentucky Transportation Cabinet  
125 Holmes Street  
Frankfort, Kentucky 40622

Dear Ms. Coffey:

This is in response to your letter of December 12, 2002 requesting our agency's input and comments on specific issues or concerns that might affect project alternative development for Planning Studies in Carlisle County, and Improvements to US 51 in Bardwell. We are responding on behalf of the Department of Health and Human Services (DHHS), U.S. Public Health Service.

While we have no project specific comments to offer at this time, we do recommend that the topics listed below be considered during the NEPA process along with other necessary topics, and addressed if appropriate. Mitigation plans which are protective of the environment and public health should be described in the DEIS wherever warranted.

AREAS OF POTENTIAL PUBLIC HEALTH CONCERN:

I. Air Quality

- dust control measures during project construction, and potential releases of air toxins
- potential process air emissions after project completion
- compliance with air quality standards

II. Water Quality/Quantity

- special consideration to private and public potable water supply, including ground and surface water resources
- compliance with water quality and waste water treatment standards
- ground and surface water contamination (e.g. runoff and erosion control)
- body contact recreation

III. Wetlands and Flood Plains

- potential contamination of underlying aquifers
- construction within flood plains which may endanger human health
- contamination of the food chain

IV. Non-Hazardous Solid Waste/Other Materials

- any unusual effects associated with solid waste disposal should be considered

V. Hazardous Materials/Wastes

- identification and characterization of hazardous/contaminated sites
- safety plans/procedures, including use of pesticides/herbicides; worker training
- spill prevention, containment, and countermeasures plan

VI. Noise

- identify projected elevated noise levels and sensitive receptors (i.e. residential, schools, hospitals) and appropriate mitigation plans during and after construction

VII. Occupational Health and Safety

- compliance with appropriate criteria and guidelines to ensure worker safety and health

VIII. Land Use and Housing

- special consideration and appropriate mitigation for necessary relocation and other potential adverse impacts to residential areas, community cohesion, community services
- demographic special considerations (e.g. hospitals, nursing homes, day care centers, schools)
- consideration of beneficial and adverse long-term land use impacts, including the potential influx of people into the area as a result of a project and associated impacts
- potential impacts upon vector control should be considered

IX. Environmental Justice

- federal requirements emphasize the issue of environmental justice to ensure equitable environmental protection regardless of race, ethnicity, economic status or community, so that no segment of the population bears a disproportionate share of the consequences of environmental pollution attributable to a proposed project. (Executive Order 12898)

While this is not intended to be an exhaustive list of possible impact topics, it provides a guide for typical areas of potential public health concern which may be applicable to this project. Any health related topic which may be associated with the proposed project should receive consideration when developing the draft and final EISs. Please furnish us with one copy of the draft document when it becomes available for review.

Sincerely yours,



Paul Joe, DO, MPH  
Medical Officer  
National Center for Environmental Health (F16)  
Centers for Disease Control & Prevention

**Martin, David (KYTC)**

---

**From:** Greer, Daryl (KYTC)  
**Sent:** Tuesday, January 07, 2003 2:20 PM  
**To:** Martin, Charles  
**Cc:** Siria, Bruce; Wilson, Jimmy  
**Subject:** FW: US 51, Item 1-183.00

-----Original Message-----

**From:** Combs, Kelvin (KYTC)  
**Sent:** Tuesday, January 07, 2003 1:59 PM  
**To:** Greer, Daryl (KYTC)  
**Subject:**

Daryl,

The Division of Aeronautics has reviewed the planning study for: Improvements to US 51 in Bardwell (Item # 1-183.00) and we have no negative comments pertaining to this study.

**Kelvin Combs**

Kentucky Airport Zoning Administrator

Division of Aeronautics

(502) 564-4480



Commonwealth of Kentucky  
**Transportation Cabinet**  
Frankfort, Kentucky 40622


James C. Codell, III  
Secretary of Transportation

Paul E. Patton  
Governor

Clifford C. Linkes, P.E.  
Deputy Secretary

**MEMORANDUM**

**TO:** Annette Coffey, P.E.  
Director  
Division of Planning

**FROM:** Edward Sue Perkins, P.E.   
Branch Manager  
Permits Branch

**DATE:** January 24, 2003

**RE:** Carlisle County Study Team of US 51 in Bardwell - Item No. 1-183.00

The Permits Branch has reviewed the data provided for subject study site and wish to offer the following.

1. We urge the Cabinet to classify this project and all new projects as partially controlled access facilities.
2. Assuming the project is partial control access, we encourage all possible access points be set on the plans in accordance with 603 KAR 5:120, even if they are not to be constructed at that time.
3. When buying RW for this and all reconstruction routes, assuming the access control is partial control, new deed for all adjoining property owners need to be executed to identify the access control even if no new RW is acquired,
4. In addition, we would like to make every effort possible to have the design speed to be the same as anticipated posted speed when the project is complete.
5. We would like to see access control fence installed with the project.
6. If the proposed roadway is to be on the N. H. S., early notification of the final line and grade is needed. This enables us to monitor outdoor advertising devices prior to road construction being completed.
7. Please notify this office if the proposed roadway is to be placed on the National Highway System. This information is needed to assist this office in regulating the installation of any outdoor advertising device.

Thank you for the opportunity to verbalize our concerns.

ESP/elc



KENTUCKY TRANSPORTATION CABINET  
"PROVIDE A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND, AND FISCALLY RESPONSIBLE TRANSPORTATION SYSTEM  
WHICH PROMOTES ECONOMIC GROWTH AND ENHANCES THE QUALITY OF LIFE IN KENTUCKY."  
"AN EQUAL OPPORTUNITY EMPLOYER M/F/D"





# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
3761 GEORGETOWN ROAD  
FRANKFORT, KY 40601

DIV OF PLANNING

2003 FEB -3 A 11: 44

January 27, 2003

Ms. Annette Coffey  
Director, Division of Planning  
Kentucky Transportation Cabinet  
125 Holmes Avenue  
Frankfort, Kentucky 40622

2003  
~~000000~~  
A 11: 31  
DIV OF PLANNING

Re: FWS #03-0550

Dear Ms. Coffey:

Thank you for your correspondence of December 12, 2002, regarding the Kentucky Transportation Cabinet's (KTC) proposed US Highway 51 Improvements Project (Item Number 1-183.00) in Carlisle County, Kentucky. The KTC proposes to improve as much as three miles of highway by considering several alternative routes as shown on the attachments to your correspondence. Fish and Wildlife Service (Service) personnel have reviewed the information submitted and the following comments are provided in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service is concerned that highway projects frequently accelerate erosion and sedimentation in streams, resulting in adverse effects to the aquatic environment. The use of heavy equipment to move earth and existing vegetation disrupts natural drainage patterns and exposes large areas of disturbed soil to erosion. Excessive sedimentation can clog stream channels and contribute to increased flooding. It can also increase water temperatures and cause oxygen demands which can damage or destroy fish and invertebrate populations. Deposition of sediment on the channel bottom also degrades aquatic habitat by filling in substrate cavities, burying demersal eggs, and smothering bottom organisms. In addition, turbidity, as induced by accelerated erosion and sedimentation, results in further damage to aquatic systems. Increased particulate matter suspended in the water column may drive fish from the polluted area by irritating the gills, concealing forage, and/or destroying vegetation that may be essential for spawning and cover habitat for particular species. Turbidity also degrades water quality by reducing light penetration, pH and oxygen levels, and the buffering capacity of the water. Degraded water quality may continue far downstream from the point where the erosion occurs.

Prevention of excessive sedimentation can occur only through application of Best Management Practices during daily construction activities. Rigid application of your agency's construction erosion control standards can preclude most sedimentation problems; however, in some cases additional measures will need to be taken by on-site inspectors and construction representatives.

Upon review of the proposed project, we find that the information provided is insufficient to determine if the proposed actions will require U.S. Army Corps of Engineers' permits. Since permit applications could more thoroughly reveal the extent of construction activities affecting aquatic resources, we will provide additional comments during the 404 review process should the project necessitate Corps' permits. However, we would likely have no objection to the issuance of permits if any necessary stream channel work is held to a minimum and Best Management Practices are utilized and enforced, effectively controlling erosion, sedimentation, and other potential hazards. The following conditions are specifically recommended:

1. Erosion and sediment control measures, including but not limited to the following, should be implemented on all vegetatively denuded areas:
  - a. Preventive planning: A well-developed erosion control plan which entails a preliminary investigation, detailed contract plans and specifications, and final erosion and sediment control contingency measures should be formulated and made a part of the contract.
  - b. Diversion channels: Channels should be constructed around the construction site to keep the work site free of flow-through water.
  - c. Silt barriers: Appropriate use should be made of silt fences, hay bale and brush barriers, and silt basins in areas susceptible to erosion.
  - d. Temporary seeding and mulching: All cuts and fill slopes, including those in waste sites and borrow pits, should be seeded as soon as possible.
  - e. Limitation of instream activities: Instream activities, including temporary fills and equipment crossings, should be limited to those absolutely necessary.
2. Channel excavations required for pier placement should be restricted to the minimum necessary for that purpose. Overflow channel excavations should be confined to one side of the channel, leaving the opposite bank and its riparian vegetation intact.
3. All fill should be stabilized immediately upon placement.

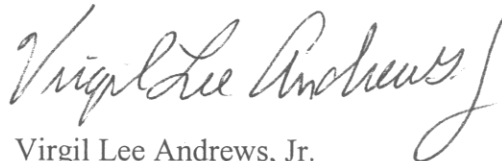
4. Streambanks should be stabilized with riprap or other accepted bioengineering technique(s).
5. Existing transportation corridors should be used in lieu of temporary crossings where possible.
6. Good water quality should be maintained during construction.

Efficient management practices can minimize adverse impacts associated with construction. It is important that these and other measures be monitored and stringently enforced. This will aid in preserving the quality of the natural environment.

According to our records, the federally endangered Indiana bat (*Myotis sodalis*) may occur in the project impact area. A qualified biologist should assess potential impacts and determine if the proposed project may affect the species. A finding of "may affect" could require initiation of formal consultation. The KTC should submit a copy of its assessment and findings to this office for review and concurrence.

Thank you for the opportunity to comment on this proposed action. If you have any questions regarding the information which we have provided, please contact me at 502/695-0468 (ext.221) or Wally Brines of our Cookeville, Tennessee, field office at 931/528-6481 (ext. 222).

Sincerely,



Virgil Lee Andrews, Jr.  
Field Supervisor

xc: Cookeville Field Office

DIV OF PLANNING

2003 FEB 19 A 10:55



UNIVERSITY OF KENTUCKY

**Kentucky Geological Survey**

*Research and Graduate Studies  
228 Mining and Mineral Resources Building  
Lexington, KY 40506-0107  
Phone: (859) 257-5500  
Fax: (859) 257-1147  
[www.uky.edu/kgs](http://www.uky.edu/kgs)*

Summary information on geologic conditions in the vicinity of U.S. 51 planning studies at Clinton and Bardwell, Kentucky

R. A. Smath and G. A. Weisenfluh

**Geologic Summary**

There are seven geologic map units present at the surface in the two study areas, however only two have significant surface extent. Both extensive units are unconsolidated Quaternary deposits; Alluvium along stream drainages and loess sediment on upland surfaces. Neither unit presents severe limitations for road construction.

Areas underlain by alluvium require more extensive geotechnical evaluation because they are often sources of groundwater, sites for archeological settings, and may be susceptible to liquefaction during regional earthquakes. Alluvial valleys along major streams in the two study areas are 2000 to 3000 ft wide, a considerable span where special attention to structures is needed.

Loess sediment is susceptible to mass movement and landslides on slopes that are exposed to moisture. Vertical cuts are more stable.

Continental Deposits composed of gravel occur at the headwaters of small tributaries. These gravels may be a local source for road metal, subgrade, and base materials. They may, however, be locally cemented with iron oxide and difficult to excavate.



C-17 Geotech  
Blevins

A2

**MEMORANDUM**

**TO:** Annette Coffey, P.E.  
Director  
Division of Planning

**FROM:** William Broyles P. E.  
Geotechnical Engineering  
Branch Manager  
Division of Materials

**BY:** Michael Blevins P. G. *MB*  
Geotechnical Branch

**DATE:** January 27, 2003

**SUBJECT:** Carlisle County  
STPR 0051 1047  
FD52 020 0051 000-000 D  
Item 01-183.00  
Mars # 6976301D

At your request, the Geotechnical Branch has reviewed the study area and alternates for the project. There are no major geotechnical concerns anticipated within the study area. The branch has no preferred corridor or alignment location.

The study area is underlain by Loess, Continental and Alluvium deposits. These deposits are mainly made up of silt, sands and gravel. Cut and fill slopes will mainly encounter Loess silt throughout the study area.

Cut slopes in this material are usually erosive and may require some type of slope protection to eliminate erosion. Cuts with high water tables may require 3:1 slopes and extra right-of-way may be needed. Ditchlines will require channel lining to prevent erosion.

Embankments in alluvium should be stable on 2:1 fill slopes. Rock and fabric may be needed in soft and wet areas to provide a working platform for construction.

If there are any questions, please advise.

2003 JAN 31 10:10 AM

DIV OF PLANNING

MeadWestvaco Corporation  
1724 Westvaco Road  
P O Box 278  
Wickliffe, KY 42087  
tel 270 335 4000  
fax 270 335 4110

## MeadWestvaco

January 27, 2003

Annette Coffey, P.E.  
Director, Division of Planning  
Kentucky Transportation Cabinet  
125 Holmes St.  
Frankfort, KY 40622

SUBJECT:	Planning Study Carlisle County Improvements to US 51 in Bardwell Item No. 1-183.00	Planning Study Hickman County Improvements to US 51 in Clinton Item No. 1-182.00
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Dear Ms. Coffey:

This letter is in response to your agency's request for input on planning studies of the two projects listed above. With regard to possible improvements to US 51 at Bardwell and at Clinton, our first concern is for the safety of the communities and the safety for trucks that pass through them delivering wood fiber to the MeadWestvaco paper mill in Wickliffe. We promote safety among our wood suppliers and require compliance with the laws and company rules that apply to safety when suppliers are on our property. We are not in a position to enforce the laws on the highway, but have always cooperated with the authorities in applying the law and punishing offenders.

In both towns in the planning study, the crux of the decision to be made seems to center on whether to make improvements to the existing roadway through town, or to construct some alternative bypass around the town. Again, in both cases our main concern is safety. The local citizens in these towns are most effected by this project and should decide themselves which alternative provides them with the desired balance of safety and business providing traffic for their downtowns. Bypasses would provide some benefits to our wood fiber haulers in terms of speed and time, but at the distances from which most of our fiber comes, the time savings are not very significant.

Traffic counts that are part of this study will show considerable truck traffic hauling wood products through both towns. However, Bardwell will probably show several times the wood hauling traffic than through Clinton. Many of our wood haulers heading west to the mill on US 62 from woodyards and timber tracts in Kentucky stay on US 62 all the way to Bardwell to avoid the narrow roadway on KY 286 and to avoid going through

January 27, 2003  
Annette Coffey, P.E.

Wickliffe on KY 121. Most of the trucks from woodyards in Tennessee go through Mayfield and west on KY 121. Much of this traffic also takes US 62 through Bardwell and up US 51 to the mill to avoid going through Wickliffe. The distance is also about the same. Our concern is that all of this traffic has to stop and make a right turn in Bardwell at the intersection of US 62 and US 51. We would lend our support to proposed improvements to this intersection or possibly to that portion of Alternative 5A that bypasses this intersection and provides a connection from US 62 to US 51 north of Bardwell.

Thank you for the opportunity to comment on these studies.

Sincerely,

A handwritten signature in cursive script that reads "Sandra S. Wilson".

Sandra S. Wilson  
Public Affairs Manager

SSW:pje



United States  
Department of  
Agriculture

Forest  
Service

Daniel Boone  
National Forest

1700 Bypass Road  
Winchester, KY 40391  
859-745-3100

File Code: 1950-5

Date: **FEB. 3 2003**

Annette Coffey, P.E.  
Director  
Division of Planning  
125 Holmes Street  
Frankfort, KY 40622

Dear Ms. Coffey:

I am writing in regards to your letter of December 12, 2002, in which you asked for our input on a planning study to determine the need and potential impacts for a proposed highway project on US 51 in Bardwell, Carlisle County.

You asked us to notify you of specific issues or concerns that we may have that could affect the development of the project described in the information enclosed with the letter.

Because this project is located in the western part of Kentucky, it is well outside the proclamation boundary for the Daniel Boone National Forest. It is also not located upstream from the National Forest in any watersheds that drain into or through the National Forest. For these reasons we have no issues or concerns specific to this project.

Thank you for providing this information and giving us the opportunity to comment on your proposed project.

Sincerely,

KEVIN W LAWRENCE  
Planning Staff Officer

DIV OF PLANNING  
2003 FEB -4 A 10: 18







DIV OF PLANNING

2003 FEB -4 P 12: 38

James C. Codell, III  
Secretary of Transportation

Commonwealth of Kentucky  
**Transportation Cabinet**  
Frankfort, Kentucky 40622

Paul E. Patton  
Governor

Clifford C. Linkes, P.E.  
Deputy Secretary

**MEMORANDUM**

**TO:** Annette Coffey, Director  
Division of Planning

**FROM:** Michael L. Hill, Director *MLH*  
Division of Multimodal Programs

**DATE:** February 3, 2003

**SUBJECT:** Item No. 01-183.00  
US 51 improvements  
Carlisle County

Thank you for the opportunity to comment on the proposed improvements to US 51 in Carlisle County. The project limits are neither within nor contiguous to a Metropolitan Planning Organization (MPO) or a Small Urban Area (SUA). Therefore, this Division's Urban Planning Branch does not have any valuable comments regarding this project.

The railroad impact of the study should be minimal. There is only one railroad crossing, well north of city limits and out of the project limits. However, there may need to be additional right-of-way considerations from a point just south of Truman's Creek and continuing North approximately 1 mile, at which point a separation begins.

The coordination and connectivity of bicycle and pedestrian facilities is important in the early planning and design stages of projects. Design Guidance from the United States Department of Transportation released in February, 2000, states "bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist."

One of the project goals is to enhance vehicle and pedestrian safety along US 51 in the study area. If any of the preliminary alternatives selected include Alternatives 2, 3, 6, or 7, pedestrian and bicycle facilities must be considered. The high concentration of public facilities, including City Hall, the police station, County Courthouse, and the Carlisle County Park, affected by these alternatives make pedestrian facilities imperative. Bicycle facilities, such as bike lanes or shoulder bikeways, should also be considered.



KENTUCKY TRANSPORTATION CABINET

"PROVIDE A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND, AND FISCALLY RESPONSIBLE TRANSPORTATION SYSTEM  
WHICH PROMOTES ECONOMIC GROWTH AND ENHANCES THE QUALITY OF LIFE IN KENTUCKY."  
"AN EQUAL OPPORTUNITY EMPLOYER M/F/D"

If Alternatives 5A or 5B, the Eastern Bypass options, are selected, care must be taken to procure sufficient right-of-way to build a shoulder bikeway (5' paved shoulder) and to include a sidewalk if warranted by future development. Depending on the number and width of lanes, the bypass cross section should include pedestrian islands at intersections. Please contact Paula Nye of this Division for any questions about bicycle and pedestrian concerns.

We look forward to working with your Division to facilitate your study efforts in our SUA and MPO areas, and by increasing awareness of bicycle and pedestrian issues.

MLH/LJS/PEN/AJT



**PAUL E. PATTON**  
GOVERNOR

CABINET FOR WORKFORCE DEVELOPMENT  
**OFFICE OF THE SECRETARY**  
CAPITAL PLAZA TOWER, 2nd FLOOR  
500 MERO STREET  
FRANKFORT, KENTUCKY 40601  
PHONE (502) 564-6606 FAX (502) 564-7967

**ALLEN D. ROSE**  
SECRETARY

March 18, 2003  
Ms. Annette Coffey, P.E.  
Director  
Division of Planning  
Kentucky Transportation Cabinet  
125 Holmes Street  
Frankfort, Kentucky 40601

Dear Ms. Coffey:

The Cabinet for Workforce Development appreciates the opportunity to comment on:

- planning studies for Hickman County (improvements to US 51 in Clinton) and Carlisle County (improvements to US 51 in Bardwell)
- planning study regarding possible construction of I-66 from 1-24 in Marshall or McCracken Counties in Missouri
- widening/relocation of KY 7 in Elliott and Morgan Counties from KY 711 in Morgan County to KY 32 in Elliott County

At this time, the proposed projects do not affect the Cabinet and its agencies.

Again, thank you for the opportunity to comment.

Sincerely,

Allen D. Rose  
Secretary

ADR/SGS



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Education, Arts and Humanities Cabinet  
JUL 17 1 58 PM '03

## KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Paul E. Patton  
Governor  
Marlene M. Helm  
Cabinet Secretary

David L. Morgan  
Executive Director and  
SHPO

June 28, 2003

Mr. David M. Waldner, Director  
Division of Environmental Analysis  
Kentucky Transportation Cabinet  
125 Holmes Street  
Frankfort, KY 40622

**Re: Cultural Historic Overview Survey and Determinations of Eligibility for the US 51 Corridor in Bardwell, Carlisle County, Kentucky (1-183.00)**

Dear Mr. Waldner:

The State Historic Preservation Office has received for review the above referenced historic overview survey and determinations of eligibility completed by Rebecca Lawlin McCarley of Cultural Resource Analysts, Inc. We concur that Site 14 (CE-B-11), Site 15 (CE-B-21), Site 20 (CE-B-23), Site 22 (CE-B-24), Site 32 (CE-B-5), Site 43 (CE-B-27), Site 45 (CE-B-28), and Site 60 (CE-B-29) are eligible for listing in the National Register of Historic Places.

We are in disagreement, however, with the determination that Site 1 (CE-B-20), Site 16 (CE-B-22), Site 31 (CE-B-25), and Site 37 (CE-B-26) are ineligible for listing. We are highly concerned about potential impacts to these properties and request that pre-coordination continue. Please contact Craig Potts of my staff at 502-564-7005 in order to continue this discussion.

Sincerely,

David L. Morgan, Director  
Kentucky Heritage Council and  
State Historic Preservation Officer

300 Washington Street  
Frankfort, Kentucky 40601  
An equal opportunity employer M/F/D



Telephone (502) 564-7005  
FAX (502) 564-5820  
Printed on recycled paper

\*\* TOTAL PAGE.03 \*\*



Commonwealth of Kentucky  
**Transportation Cabinet**  
Frankfort, Kentucky 40622

James C. Codell, III  
Secretary of Transportation

Paul E. Patton  
Governor

Clifford C. Linkes, P.E.  
Deputy Secretary

August 19, 2003

Mr. Frank Slade  
Parsons Brinckerhoff Quade & Douglas, Inc.  
2333 Alumni Park Plaza, Suite 330  
Lexington, Kentucky 40517

Dear Mr. Slade:

SUBJECT: Cultural Historic Overview and Determinations  
Of Eligibility US 51 Corridor in Bardwell  
Carlisle County, Kentucky  
Item No. 1-183.00

Attached please find a copy of the letter from the State Historic Preservation Officer (SHPO) on the above subject survey. The SHPO concurs that Sites 14, 15, 20, 22, 32, 43, 45, and 60 are eligible for the National Register. The SHPO, however, disagrees with the determination that Sites 1, 16, 31, and 37 are not eligible and is concerned about potential effects to those properties. This office is requesting that the historic consultant provide further information concerning Sites 1, 16, 31 and 37. This information will be provided to the SHPO for further review.

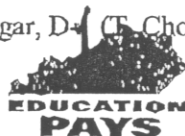
Your reply is requested by September 15, 2003. If you have any questions please contact Rebecca Turner or me at 502-564-7250.

Very truly yours,

A handwritten signature in cursive script, appearing to read "David M. Waldner".

David M. Waldner, P.E., Director  
Division of Environmental Analysis

c: K. Sperry, P. Rawlings, T. Vinegar, D. (T. Choate), R.H. Turner, FHWA



KENTUCKY TRANSPORTATION CABINET  
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Education, Arts and Humanities Cabinet

**KENTUCKY HERITAGE COUNCIL**

The State Historic Preservation Office

Paul E. Patton  
Governor  
Marienc M. Helm  
Cabinet Secretary

David L. Morgan  
Executive Director and  
SHPO

Nov 16 2 05 PM '03

TRANSPORTATION CABINET  
DIVISION OF  
ENVIRONMENTAL ANALYSIS

RECEIVED  
P B Q & D  
LOUISVILLE, KY

November 7, 2003

DEC 15 2003

Mr. David M. Waldner, Director  
Division of Environmental Analysis  
Kentucky Transportation Cabinet  
125 Holmes Street  
Frankfort, KY 40622

**Re: Additional Information for Sites 31, 16 and Historic District; Cultural  
Historic Overview Survey and Determinations of Eligibility for the US 51  
Corridor in Bardwell, Carlisle County, Kentucky (Item No. 1-183.00)**

Dear Mr. Waldner:

Thank you for providing this office with additional information regarding the above referenced project. We are in agreement with the recommendation of Dean A. Doerrfeld of Cultural Resource Analysts, Inc. that better examples of the Tudor Revival style exist within the project vicinity than Site 31. Furthermore, we are convinced by the argument regarding the loss of integrity for Site 16 specifically and the potential historic district generally. Therefore, it is the determination of this office that Site 31, Site 16, and the potential historic district are not eligible for listing on the National Register of Historic Places. Should you have any questions regarding these comments, please contact Craig Potts of my staff at 502-564-7005.

Sincerely,

David L. Morgan, Director  
Kentucky Heritage Council and  
State Historic Preservation Officer

Cc: Dean A. Doerrfeld





DIV OF PLANNING

2003 JAN 23 A 10:51

Commonwealth of Kentucky  
**Transportation Cabinet**  
Frankfort, Kentucky 40622

James C. Codell, III  
Secretary of Transportation

Paul E. Patton  
Governor

Clifford C. Linkes, P.E.  
Deputy Secretary

December 12, 2002

Mr. Roger Wiebusch  
Bridge Administrator  
United States Coast Guard, Bridge Branch  
1222 Spruce Street  
St. Louis, MO 63103



SUBJECT: Planning Study  
Carlisle County  
Improvements to US 51 in Bardwell  
Item No. 1-183.00

Dear Mr. Wiebusch:

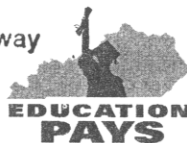
We are requesting your agency's input and comments on a planning study to determine the need and potential impacts for a proposed highway project. The Kentucky Transportation Cabinet has assembled a study team to evaluate potential improvements to US 51 in Bardwell, Carlisle County. The study is currently in the initial data-gathering stage.

We ask that you identify specific issues or concerns of your agency that could affect the development of the project. This planning study will include a scoping process for the early identification of potential alternatives, environmental issues, and impacts related to the proposed project. We believe that early identification of issues or concerns can help us develop highway project alternatives to avoid or minimize negative impacts.

We respectfully ask that you provide us with your comments by January 30, 2003, to ensure timely progress in this planning effort.

During the development of this planning study, comments will be solicited from Federal, state, and local agencies, as well as other interested persons and the general public, in accordance with principles set forth in the National Environmental Policy Act (NEPA) of 1969. The Federal Highway Administration is partnering with us in these efforts. A copy of a public notice placed

Pursuant to the Coast Guard Authorization Act of 1982, it has been determined this is not a waterway over which the Coast Guard exercises jurisdiction for bridge administration purposes. A Coast Guard bridge permit is not required.



*RK Wiebusch*  
ROGER K WIEBUSCH  
Bridge Administrator  
Eighth Coast Guard District (obr)

1/16/03

KENTUCKY TRANSPORTATION CABINET  
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in state in local newspapers concerning this project is attached.

Other Transportation Cabinet offices or consultants working on behalf of the Transportation Cabinet may also contact you seeking more detailed data or information to assist them in completing their environmental studies for this phase of the project.

We have enclosed the following project information for your review and comment:

- Fact Sheet and Attachment Summary
- Study Area Map
- Preliminary Alternatives Map
- 2002 Average Daily Traffic Volumes
- 2002 Levels of Service
- Crash Data by Severity
- Preliminary Natural Environment Map
- Preliminary Human Environment Map

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to David Martin of the Division of Planning at 502/564-7183 or at [charles.martin@mail.state.ky.us](mailto:charles.martin@mail.state.ky.us). Please address all written correspondence to Annette Coffey, P.E., Director, Division of Planning, Kentucky Transportation Cabinet, 125 Holmes Street, Frankfort, KY 40622.

Sincerely,



Annette Coffey, P.E.  
Director  
Division of Planning

AC:CDM:RC

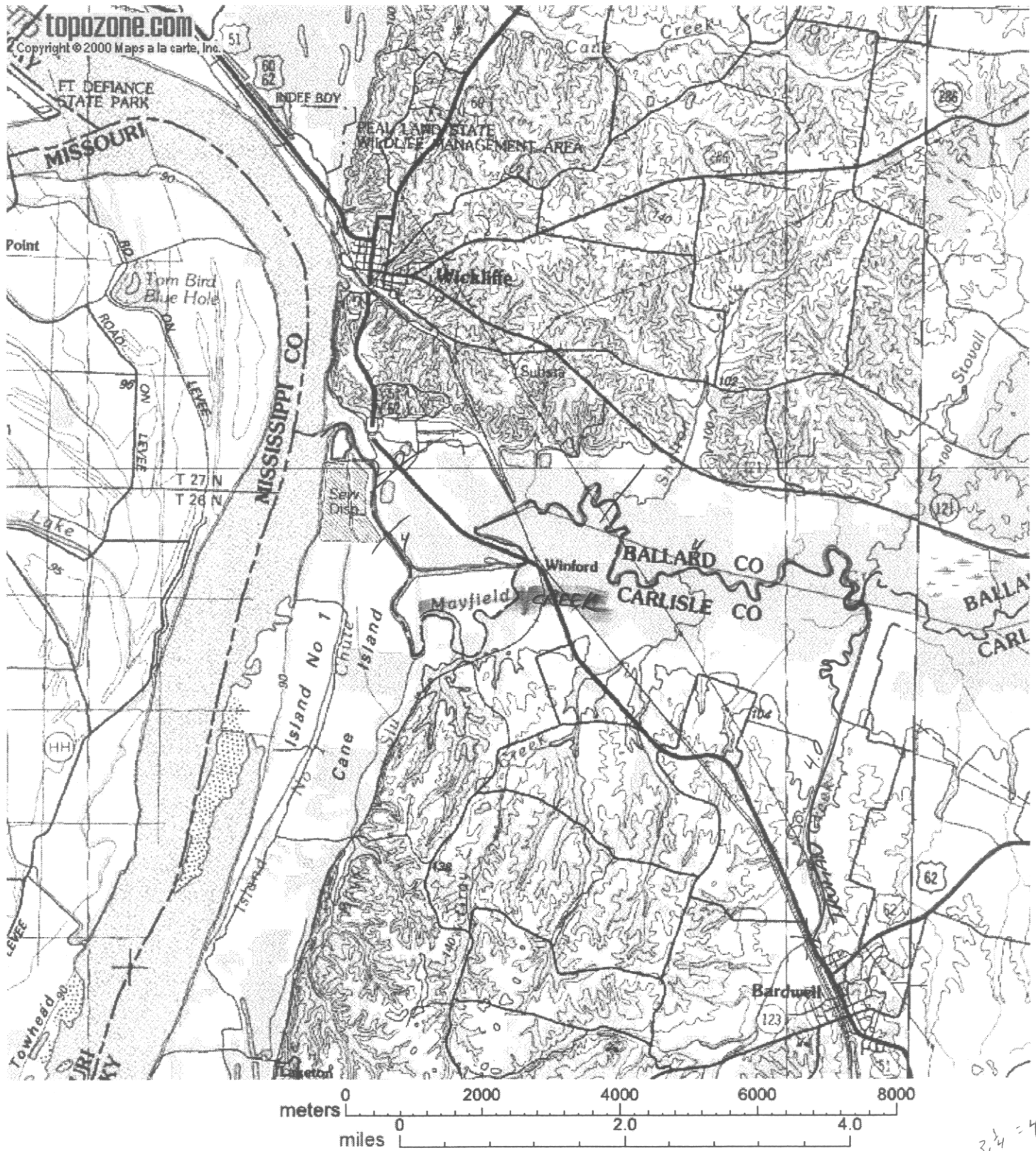
Enclosures

c: Jose Sepulveda (w/a)  
Glenn Jilek (w/a)  
Barbara Michael, PB  
Robert Frazier, PB  
Wayne Mosley  
Tim Choate  
Allen Thomas  
Steve Hoefler  
David Waldner  
Richard Davis  
Stacey Courtney, Purchase ADD





Map center is UTM 16 319020E 4088888N - **WICKLIFFE** quad [Quad Info]



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# United States Department of the Interior

## NATIONAL PARK SERVICE

Long Distance Trails Group Office - Santa Fe

P.O. Box 728

Santa Fe, New Mexico 87504-0728

IN REPLY REFER TO:

D18(TRTE)

January 6, 2002

Ms. Annette Coffey  
Division of Planning (A-2)  
Kentucky Transportation Cabinet  
125 Holmes St.  
Frankfort, KY 40622

Dear Ms. Coffey:

Thank you for your letter of January 25, 2002, regarding the initiation of a planning study for the proposed Interstate 66 Highway project from McCracken County, Kentucky to Mississippi County, Missouri (KYTC Item #1-23.00). As the National Park Service office responsible for the administration of the Trail of Tears National Historic Trail, we are grateful to the Kentucky Transportation Cabinet for taking into consideration the potential impacts that this highway project might have on the historic trail and its associated resources.

Two variant routes traveled by the Cherokee during their forced migration in 1838-1839 have been designated as the Trail of Tears National Historic Trail. The first, the Water Route, follows the course of the Tennessee River from the Chattanooga area to its confluence with the Ohio River, down that river to the course of the Mississippi River, and then up the Arkansas River to Fort Smith. The second variant, known as the Northern Route, began at the Cherokee Agency, near present day Charleston, Tennessee. This was an overland course that passed through the cities of Nashville, Tennessee; Hopkinsville, Kentucky; Jonesboro, Illinois; Rolla and Springfield, Missouri; Fayetteville, Arkansas; and Tahlequah, Oklahoma. The Trail of Tears National Historic Trail Auto Tour Route closely follows the Northern Route. In addition to these two primary routes, there are several variants that are currently under study for possible designation as part of the National Historic Trail. Among these is a unique route traveled by the John Benge detachment, which left the Wills Valley near Ft. Payne, Alabama, and ran south of the Northern Route, passing through Tennessee, far southwestern Kentucky, southern Missouri, northern Arkansas, and ending near Tahlequah. To assist in your planning process, we've included maps that will give you a better understanding of the route variants through Kentucky.

RECEIVED  
TRANSPORTATION CABINET  
DIVISION OF PLANNING  
FEB 18 2 05 PM '02

The proposed Highway project is in the general area of the three trail variants mentioned above. The Water Route follows the main channel of the Mississippi River in western Kentucky. Currently, we are working with the U.S. Army Corps of Engineers to identify the historic river channel, which is likely marked today by old river remnants or oxbow lakes that may be eligible for the National Register of Historic Places based on their association to the Trail of Tears. It appears that the Northern Route is not within the 50-mile corridor you've identified in the Public Notice. Nonetheless, there are several key resources along the route in Kentucky that have either been certified by the National Park Service as a trail component, such as the Whitepath and Fly Smith Graves in Hopkinsville, or may be eligible for the National Register, such as Mantle Rock in Livingston County. The route traveled by the John Benge detachment may enter the 50-mile project corridor. This route is still under study but we have identified it tentatively as crossing Fulton, Hickman, and Carlisle Counties before crossing the Mississippi River at the Iron Banks near Columbus, and traversing Mississippi County, Missouri. Although we have not surveyed this section of the trail, our experience leads us to believe that there are probably extant trail segments in this part of Kentucky that are eligible for the National Register. There is strong public interest in support of adding the Benge Route to the National Historic Trail.

Our principle concerns are directed towards preserving and protecting all historic resources associated with the Trail of Tears, and creating appropriate public recreation and education opportunities along the trail. At this early stage in your planning process, it is impossible to say if and how trail resources will be impacted by this project, but we request that you continue to consider us an interested party as you proceed. We also would like to review any cultural resource reports that are produced associated with this project, and that any archeological testing or historical investigations account for the possibility of Trail of Tears-associated resources.

Feel free to direct any questions or requests for additional information to NPS Historian Aaron Mahr in this office at (505) 988-6736, or at [aaron\\_mahr@nps.gov](mailto:aaron_mahr@nps.gov).

Sincerely,



David M. Gaines  
Superintendent

Enclosures



2514 Regency Road, Suite 104  
Lexington, Kentucky 40503

Ph: 859-977-2000  
Fax: 859-977-2001

June 18, 2002

James S. Lane Jr.  
Wildlife Biologist II  
Kentucky Department of Fish & Wildlife Resources  
Environmental Section  
#1 Game Farm Road  
Frankfort, Kentucky 40601

Re: *US 51 Studies at Clinton & Bardwell  
Hickman & Carlisle Counties  
KYTC Item No's 1-182.00/1-183.00*

Dear Mr. Lane:

We are gathering data for an environmental overview for the above-referenced project. The project consists of an evaluation of potential improvements to US 51, including possible new roadway alignments, in the vicinity of Clinton, Kentucky (Hickman County) and Bardwell, Kentucky (Carlisle County). At this point, we are interested in obtaining information regarding the following:

- identified natural areas and unique, sensitive, or critical wildlife habitats in the study areas
- any federal or state endangered, threatened, or rare species listed for the study areas

Please note that the Kentucky Transportation Cabinet will contact you in the near future regarding your agency's specific issues and concerns related to the project.

The study area lies within multiple USGS 7.5-minute quadrangles (Cayce, Clinton, Cruthfield, Oakton, Arlington, Blandville, Milburn, and Wickliffe); a map of each study area is enclosed. Thank you for your help.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael A. Floyd".

Michael A. Floyd, PhD  
[mfloyd@thirdrockconsultants.com](mailto:mfloyd@thirdrockconsultants.com)

Enclosures (2)

pc: David Martin, Kentucky Transportation Cabinet  
Barbara Michael, Parsons Brinckerhoff Quade & Douglas, Inc.  
Robert Frazier, Parsons Brinckerhoff Quade & Douglas, Inc.

FISH & WILDLIFE COMMISSION

Mike Boatwright, Paducah  
Tom Baker, Bowling Green  
Allen K. Gailor, Louisville  
Ron Southall, Elizabethtown  
Dr. James R. Rich, Taylor Mill, Chairman  
Ben Frank Brown, Richmond  
Doug Hensley, Hazard  
Dr. Robert C. Webb, Grayson  
David H. Godby, Somerset



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF FISH AND WILDLIFE RESOURCES  
C. THOMAS BENNETT, COMMISSIONER

June 24, 2002

Dr. Michael A. Floyd, Ph.D.  
ThirdRock Consultants  
2514 Regency Road, Suite 104  
Lexington, KY 40503

RE: US 51 Studies at Clinton & Bardwell  
Hickman & Carlisle Counties  
KYTC Item No's 1-182.00/1-183.00

Dear Dr. Floyd:

I have reviewed the information that was provided on the above-referenced projects. Accordingly, I offer the following information.

Please find attached a list of rare and/or endangered species known to occur from the USGS topographic quadrangles listed in your letter. This list is from our Kentucky Fish and Wildlife Information System (KFWIS) and is located on the web at [www.kfwis.state.ky.us](http://www.kfwis.state.ky.us). The information provided is the current information known. Changes to this system are made periodically so this information should be updated from time to time.

One other species that is not on these lists but that is known from the area is the Indiana bat (*Myotis sodalis*), a federally endangered species. This area of western Kentucky is known to harbor summer maternity colonies of this species under the loose bark of trees along or adjacent to streams and rivers. Any project should examine the impact on this species.

Finally, there is a great potential for impact to wetlands by both of these projects. The National Wetland Inventory maps should be consulted for preliminary locations and then field studies should be conducted to determine if any alignment would impact this important habitat type.



Arnold L. Mitchell Bldg. #1 Game Farm Road Frankfort, Ky 40601  
An Equal Opportunity Employer M/F/D

Page Two  
Dr. Floyd  
June 24, 2002

If you or anyone in your office should have any questions regarding my comments, please feel free to contact me at 502/564-7109, ext. 365.

Sincerely,

A handwritten signature in black ink that reads "Wayne L. Davis". The signature is written in a cursive style with a large, stylized initial "W".

Wayne L. Davis  
Environmental Section Chief

cc: Environmental Section Files

## Kentucky Threatened & Endangered Species Reported from CAYCE Quadrangle

Common Name	Scientific Name	Status Code	Reference
cypress darter	<i>Etheostoma proeliare</i> (Hay, 1881)	223,302,602,999	Reference

KFWIS HOME

## Kentucky Threatened & Endangered Species Reported from CRUTCHFIELD Quadrangle

Common Name	Scientific Name	Status Code	Reference
yellow-crowned night-heron	Nyctanassa violaceus (undescribed)	223,121,602	Reference

KFWIS HOME



## Kentucky Threatened & Endangered Species Reported from ARLINGTON Quadrangle

Common Name	Scientific Name	Status Code	Reference
hooded merganser	<i>Lophodytes cucullatus</i> (Linnaeus, 1758)	121,601,221	Reference

KFWIS HOME

## Kentucky Threatened & Endangered Species Reported from OAKTON Quadrangle

Common Name	Scientific Name	Status Code	Reference
hooded merganser	Lophodytes cucullatus (Linnaeus, 1758)	121,601,221	Reference

KFWIS HOME

## Kentucky Threatened & Endangered Species Reported from MILBURN Quadrangle

Common Name	Scientific Name	Status Code	Reference
spotted sandpiper	<i>Actitis macularia</i> (Linnaeus, 1766)	223,121,601	Reference

[KFWIS HOME](#)

## Kentucky Threatened & Endangered Species Reported from WICKLIFFE Quadrangle

Common Name	Scientific Name	Status Code	Reference
yellow-crowned night-heron	Nyctanassa violaceus (undescribed)	223,121,602	Reference
interior least tern	Sterna antillarum athalassos (undescribed)	223,101,121,601	Reference

KFWIS HOME



2514 Regency Road, Suite 104  
Lexington, Kentucky 40503

Ph: 859-977-2000  
Fax: 859-977-2001

June 18, 2002

Jeff Pratt  
Kentucky Division of Water  
Ecological Support Section  
Water Quality Branch  
18 Reilly Road  
Frankfort, Kentucky 40601

Re: *US 51 Studies at Clinton & Bardwell  
Hickman & Carlisle Counties  
KYTC Item No's 1-182.00/1-183.00*

Dear Mr. Pratt:

We are gathering data for an environmental overview for the above-referenced project. The project consists of an evaluation of potential improvements to US 51, including possible new roadway alignments, in the vicinity of Clinton, Kentucky (Hickman County) and Bardwell, Kentucky (Carlisle County). At this point, we are interested in obtaining information regarding the following:

- outstanding resource waters, wild rivers, or wetlands in the study areas
- results of previous biological (macroinvertebrates or fish) and physiochemical sampling from streams within the study areas

Please note that the Kentucky Transportation Cabinet will contact you in the near future regarding your agency's specific issues and concerns related to the project.

The study area lies within multiple USGS 7.5-minute quadrangles (Cayce, Clinton, Cruthfield, Oakton, Arlington, Blandville, Milburn, and Wickliffe); a map of each study area is enclosed. Thank you for your help.

Sincerely,

A handwritten signature in cursive script that reads "Michael A. Floyd".

Michael A. Floyd, PhD  
[mfloyd@thirdrockconsultants.com](mailto:mfloyd@thirdrockconsultants.com)

Enclosures (2)

pc: David Martin, Kentucky Transportation Cabinet  
Barbara Michael, Parsons Brinckerhoff Quade & Douglas, Inc.  
Robert Frazier, Parsons Brinckerhoff Quade & Douglas, Inc.

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1664

JAMES E. BICKFORD  
SECRETARY



PAUL E. PATTON  
GOVERNOR

COMMONWEALTH OF KENTUCKY  
**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
FRANKFORT OFFICE PARK  
14 REILLY RD  
FRANKFORT KY 40601

June 24, 2002

Michael A. Floyd, Ph.D.  
Third Rock Consultants, LLC  
2514 Regency Road, Suite 104  
Lexington, Kentucky 40503

RE: US 51 Studies at Clinton and Bardwell  
Hickman and Carlisle counties  
KYTC Item Nos. 1-182.00 and 1-183.00

Dear Dr. Floyd:

The Water Quality Branch has reviewed your request for information about the referenced area. There are no Outstanding Resource Waters or Wild Rivers within the proposed corridor. Biological data for both Clinton and Hickman counties are available, but none from within the study boundaries. Physiochemical data is probably not extant, since no major streams occur in the corridor. There are numerous wetlands within the study areas. Detailed wetland maps should be consulted when determining highway alignments.

For future reference, information on Special Use Waters can be found on the Division of Water web site (<http://water.nr.state.ky.us/dow/dwhome.htm>). Click on Topics and Programs within the Division, then scroll down and click on Special Use Waters. This list is frequently updated as new streams are added.

If you have any questions or need further information on biological communities, ORWs or wetlands, please contact me by phone (502/564-3410) or e-mail ([mike.mills@mail.state.ky.us](mailto:mike.mills@mail.state.ky.us)).

Sincerely,

A handwritten signature in cursive script that reads "Michael R. Mills".

Michael R. Mills, Supervisor  
Ecological Support Section

c: File



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2514 Regency Road, Suite 104  
Lexington, Kentucky 40503

Ph: 859-977-2000  
Fax: 859-977-2001

June 18, 2002

Sara Hines  
Data Manager  
Kentucky State Nature Preserves Commission  
801 Schenkel Lane  
Frankfort, Kentucky 40601-1403

Re: *US 51 Studies at Clinton & Bardwell  
Hickman & Carlisle Counties  
KYTC Item No's 1-182.00/1-183.00*

Dear Ms. Hines:

We are gathering data for an environmental overview for the above-referenced project. The project consists of an evaluation of potential improvements to US 51, including possible new roadway alignments, in the vicinity of Clinton, Kentucky (Hickman County) and Bardwell, Kentucky (Carlisle County). At this point, we are interested in obtaining information concerning endangered, threatened, or special concern plants and animals and exemplary natural communities that may exist in the project areas. Please note that the Kentucky Transportation Cabinet will contact you in the near future regarding your agency's specific issues and concerns related to the project.

The study area lies within multiple USGS 7.5-minute quadrangles (Cayce, Clinton, Cruthfield, Oakton, Arlington, Blandville, Milburn, and Wickliffe); a map of each study area and a completed data license are enclosed. Thank you for your help.

Sincerely,

A handwritten signature in black ink that reads "Michael A. Floyd". The signature is written in a cursive, flowing style.

Michael A. Floyd, PhD  
[mfloyd@thirdrockconsultants.com](mailto:mfloyd@thirdrockconsultants.com)

Enclosures (3)

pc: David Martin, Kentucky Transportation Cabinet  
Barbara Michael, Parsons Brinckerhoff Quade & Douglas, Inc.  
Robert Frazier, Parsons Brinckerhoff Quade & Douglas, Inc.

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DONALD S. DOTT, JR.  
DIRECTOR



PAUL E. PATTON  
GOVERNOR

COMMONWEALTH OF KENTUCKY  
**KENTUCKY STATE NATURE PRESERVES COMMISSION**

801 SCHENKEL LANE  
FRANKFORT, KENTUCKY 40601-1403  
(502) 573-2886 VOICE  
(502) 573-2355 FAX

July 8, 2002

Michael A. Floyd  
Third Rock Consultants, LLC  
2514 Regency Road  
Lexington, KY 40503

Data Request 02-204

Dear Mr. Floyd:

This letter is in response to your data request of June 19, 2002 for the US-51 Studies at Clinton and Bardwell project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur in the areas shown on the map provided. Based on our most current information, we have determined that five occurrences of the plants or animals and no occurrences of the exemplary natural communities that are monitored by KSNPC are reported as occurring in the Clinton project area. There were no occurrences of plants, animals, or communities that are monitored by KSNPC in the Bardwell project area.

The Bayou de Chien drainage supports the only known relict darter (*Etheostoma chienense*) population in the world. Consequently, we recommend that stream alterations or disturbances be avoided or held to a minimum. All construction activities should be completed during periods of low flow. A written erosion control plan should be developed and implemented that includes stringent erosion control methods (e.g., (?) [i.e.,] straw bales, silt fences and erosion mats, immediate seeding and mulching of disturbed areas) which are placed in a staggered manner to provide several stages of control. All erosion control measures should be monitored periodically to ensure that they are functioning as planned. Heavy equipment should not be used in Bayou de Chien or any of its tributaries. We recommend that you consult the United States Fish and Wildlife Service, Cookeville, Tennessee, field office for additional information.



AN EQUAL OPPORTUNITY EMPLOYER M/F/D



I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request over the Internet. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,



Sara Hines  
Data Manager

smf/SGH

Enclosures: Data Report and Interpretation Key



2514 Regency Road, Suite 104  
Lexington, Kentucky 40503

Ph: 859-977-2000  
Fax: 859-977-2001

June 18, 2002

Dr. Lee A. Barclay  
Department of the Interior  
Fish & Wildlife Service  
446 Neal Street  
Cookeville, Tennessee 38501

Re: *US 51 Studies at Clinton & Bardwell  
Hickman & Carlisle Counties  
KYTC Item No's 1-182.00/1-183.00*

Dear Dr. Barclay:

We are gathering data for an environmental overview for the above-referenced project. The project consists of an evaluation of potential improvements to US 51, including possible new alignments, in the vicinity of Clinton, Kentucky (Hickman County) and Bardwell, Kentucky (Carlisle County). At this point, we are interested in obtaining information concerning federally endangered and threatened species that may exist in the study areas. Please note that the Kentucky Transportation Cabinet will contact you in the near future regarding your agency's specific issues and concerns related to the project.

The study area lies within multiple USGS 7.5-minute quadrangles (Cayce, Clinton, Cruthfield, Oakton, Arlington, Blandville, Milburn, and Wickliffe); a map of each area is enclosed. Thank you for your help.

Sincerely,

A handwritten signature in cursive script that reads "Michael A. Floyd".

Michael A. Floyd, PhD  
[mfloyd@thirdrockconsultants.com](mailto:mfloyd@thirdrockconsultants.com)

Enclosures (2)

pc: David Martin, Kentucky Transportation Cabinet  
Barbara Michael, Parsons Brinckerhoff Quade & Douglas, Inc.  
Robert Frazier, Parsons Brinckerhoff Quade & Douglas, Inc.



# United States Department of the Interior

**FILE**  
filed

FISH AND WILDLIFE SERVICE  
446 Neal Street  
Cookeville, TN 38501

July 23, 2002

Dr. Michael A. Floyd  
Third Rock Consultants  
2514 Regency Road, Suite 104  
Lexington, Kentucky 40503

Re: FWS# 02-2097

Dear Dr. Floyd:

Thank you for your letter and enclosures of June 18, 2002, concerning the environmental studies for the reconstruction of U.S. 51 (including potential bypasses around Clinton and Bardwell) in Hickman and Carlisle Counties, Kentucky. Fish and Wildlife Service (Service) personnel have reviewed the information submitted and we provide the following comments in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The federally endangered Indiana bat (*Myotis sodalis*) and relict darter (*Etheostoma chienense*) potentially occur in the project impact area. You should assess potential impacts and determine if the proposed project may affect these species. A finding of "may affect" could require initiation of formal consultation. We recommend that you submit a copy of your assessment and finding to this office for review and concurrence.

Thank you for providing us an opportunity to comment on this action. If you have any questions, please contact Rob Tawes of my staff at 931/528-6481, ext. 213.

Sincerely,

Lee A. Barclay, Ph.D.  
Field Supervisor

xc: Wayne Davis, KDFWR, Frankfort, KY

USGS topographic mapping was obtained from the Kentucky Geological Survey for the Arlington, Blandville, Milburn and Wickliffe 7.5' quadrangles.



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[www.thirdrockconsultants.com](http://www.thirdrockconsultants.com)

**US 51 STUDY AT BARDWELL  
CARLISLE COUNTY  
STUDY AREA MAP**