Engineering
Architecture
Planning
Landscape Architecture
Environmental Science
Land Acquisition

PRESNELL ASSOCIATES INC

MEETING MINUTES

Project: US 127

Place: Nashville, Tennessee

Date: June 26, 2001

Prepared by: Presnell Associates, Inc.

In Attendance:

Joe Pendergradt	US Army Corps of Engineers, Real Estate Division	Joe.Pendergradt@USACE.ARMY.MIL
J. Ruben Hernandez	US Army Corps of Engineers, Regulatory	Jose.R.Hernandez@LRN02.USACE.ARMY.MIL
Jay Sadler	US Army Corps of Engineers, Project Management	James.F.Sadler@USACE.ARMY.MIL
Ray Hedrick	US Army Corps of Engineers, Planning	Ray.D.Hedrick@USACE.ARMY.MIL
Tom Hale	US Army Corps of Engineers, Operations – Somerset	Thomas.E.Hale@USACE.ARMY.MIL
Mark Hallar	US Army Corps of Engineers, Operations	Mark.D.Hallar@LRN02.USACE.ARMY.MIL
Bill Barron	US Army Corps of Engineers, Hydrology & Hydraulics	William.R.Barron.Jr@USACE.ARMY.MIL
Joe Cox	Kentucky Department of Highways, District 8	Joe.Cox@MAIL.STATE.KY.US
David Beattie	Kentucky Department of Highways, District 8	DAVID.BEATTIE@MAIL.STATE.KY.US
Paul Francis	Kentucky Department of Highways, District 8	PAUL.FRANCIS@MAIL.STATE.KY.US

Cathi Blair	Kentucky Department of Highways, District 8	CATHI.BLAIR@MAIL.STATE.KY.US
Bob Gustafson	Presnell Associates, Inc.	gustafson@presnellgroup.com
David Smith	Presnell Associates, Inc.	dsmith@presnellgroup.com
Jeff Arnold	American Engineers, Inc.	jarnold@americanengineers.com

- Paul Francis presented some background information on the project and goals for meeting.

- Jay Sadler stated that there would be more involvement if on USACE property and/or close to Wolfe Creek Dam.
  - MP 460.9 is limits of US Coast Guard jurisdiction.

- Reuben Hernandez said that a 404 permit would be required.

- Issues for Permits:
  - Storage not an issue.
  - No net rise certification.
  - Height of bridge.
  - Cut/fill in flood plain – effect on water under bridge.
  - Are any property owners impacted?
  - Corps has received erosion complaints from local farmers.
  - Debris under proposed bridge.

- Corps is studying changes in electrical generation, but anticipate no change in flow (volume), but flow will be shorter duration (Higher Q).
  - Corps will check design for gate opening?

- Issue with flooding across bottom will require detailed modeling.
- 1993 last event water was discharged thru gate.
- Avoid wetlands.
- Some channel/section profile information is available, but don't know extent.
- Probably no Corps property unless it is near outer reaches of streams upstream of dam.
- How far away from dam is blasting as issue? Jody Stanton (615) 736-7906/5686.
- Some HEC-2 modeling may be available.

- David Hendricks, Corps of Engineers, Hydrology & Hydraulics will be our contact at (615) 736-5948.
- Scouring, steep stream profile trail-water impacts may be issues. Location of bridge shown on mapping reviewed at meeting. COE indicated this location may affect tailwater and electric generation operations. Bridge should be located out of trailwater.
- Public Notice for a 404 permit would be sent to all properties owners and government leaders.
- "Detailed hydraulic modeling" – when looking at bridge site rate alternatives – will be needed.
- Get dam discharge information from Corps of Engineers.
- Design for maximum release, need design criteria, flow rates; Mark Haller will give some ideas.
- US F & W (Cookesville) and KY F & W are planning some improvements at fishery. Contact Wayne Davis at KY Fish and Wildlife.
- Wetlands, endangered species, trout stream, mussell survey (?), arch.
- COE would like to be placed on KYTC mailing list for public meetings.
- Access to dam – close road?

- Tourism may be key issue more than anything dealing with closure of existing road.

- Day-to-day COE contact will be thru Tom Hale, Somerset office.

- Look at access to dam via loop road to new US 127.

- Existing oil wells. Past experience indicates embankment fill for bridge may push oil out of ground into river.

- Access to State Park and existing roads is an issue.

- William James is Chief of Eastern Regulatory Branch (369-7508).

- Multiple permits will be required – River & Stream crossings.

- Recreational access across new bridge should be considered or use of existing US 127.

- Is US 127 a Scenic Highway?

- Scenic overlooks should be considered.

- Typical section of new bridge will probably be 2-12' lanes, 12'shoulder, (44'minimum) and 48' width.

- If individual permit – USACE will do EA and ask to be cooperating agency.

- Jerry Brown (go through Tom Hale) – Hydro Power Issues, an EA being written to Rehab turbines and rebuild generating equipment (736-2349).

END OF MINUTES

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

September 24, 2002

Devetta Hill, Biologist
Palmer Engineering
273 Shoppers Drive
PO Box 747
Winchester, Kentucky 40392-0747

RE: US 127, Clinton and Russell counties, Item Nos. 8-108.00 and 8-115.00

Dear Ms. Hill:

The Water Quality Branch has reviewed your request for information about the referenced area. There are no Wild Rivers within the proposed corridor. None of the streams in the area are as yet designated as Exceptional Waters (EW). This designation provides extra protection under Kentucky Surface Water Standards. Wetland field delineation should be done prior to final site selection, to avoid impact to wetland areas. If wetlands cannot be avoided, any wetland losses must be mitigated.

We have no biological data from the project area.

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, Exceptional Waters or wetlands, please contact me by phone (502/564-3410) or e-mail (mike.mills@mail.state.ky.us).

Sincerely,

Michael R. Mills, Supervisor
Ecological Support Section

C: file

FAX TRANSMITTAL
from the
COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
GROUNDWATER BRANCH
14 Reilly Road, Frankfort, KY 40601
(502) 564-3410 (VOICE), (502) 564-2741 (FAX)

Number of Pages Transmitted, Including this Cover Sheet: 4

TO: Dave Ha Hicc FROM: Bruce McKinney

COMPANY: Palmer Eng. OFFICE: DOW / GWB

FAX PHONE: (859) 744-1266 DATE: 9/24/02

VOICE PHONE:

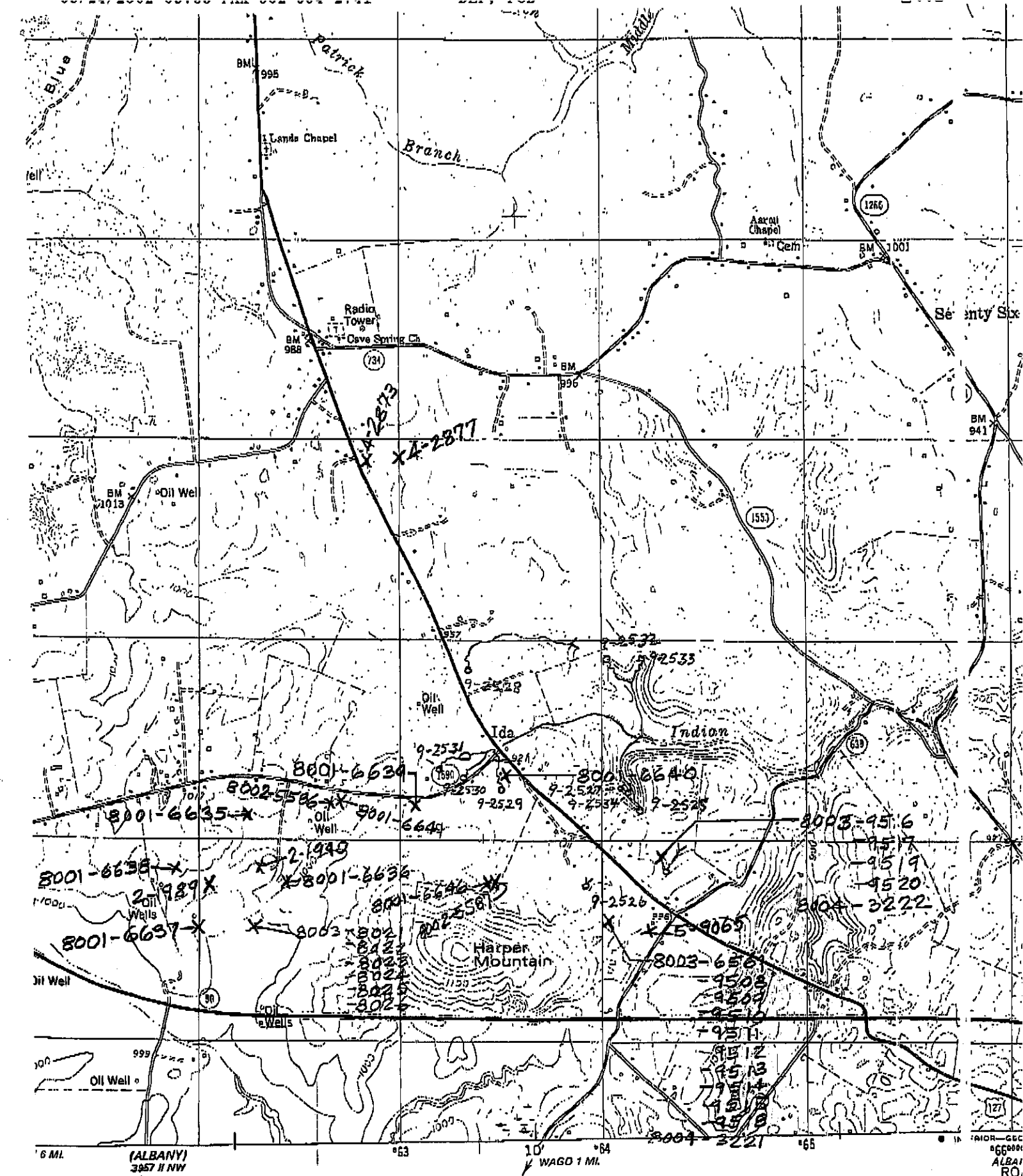
MESSAGE: Dave Ha,

Our records show no well head protection AREAS in the area indicated on your map

I have attached copies of of the sections of the topographic maps where wells are present. most of the wells are monitoring wells (8000/8001/8002, etc.). The others are domestic wells. If you need anything else let me know.

Bruce McKinney

If transmittal is incomplete or illegible please contact sender.



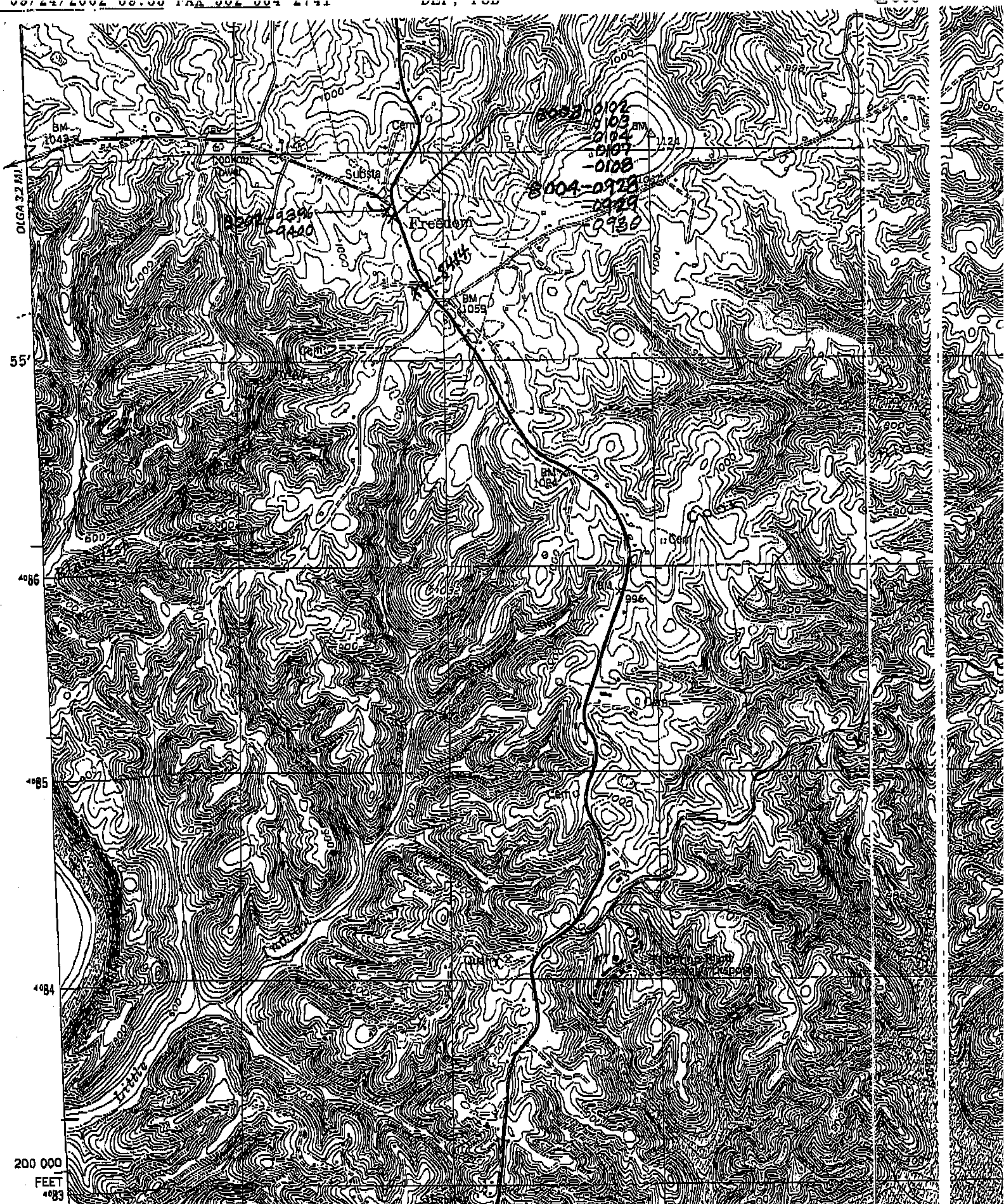
Ground Water Section

Do not remove from room!

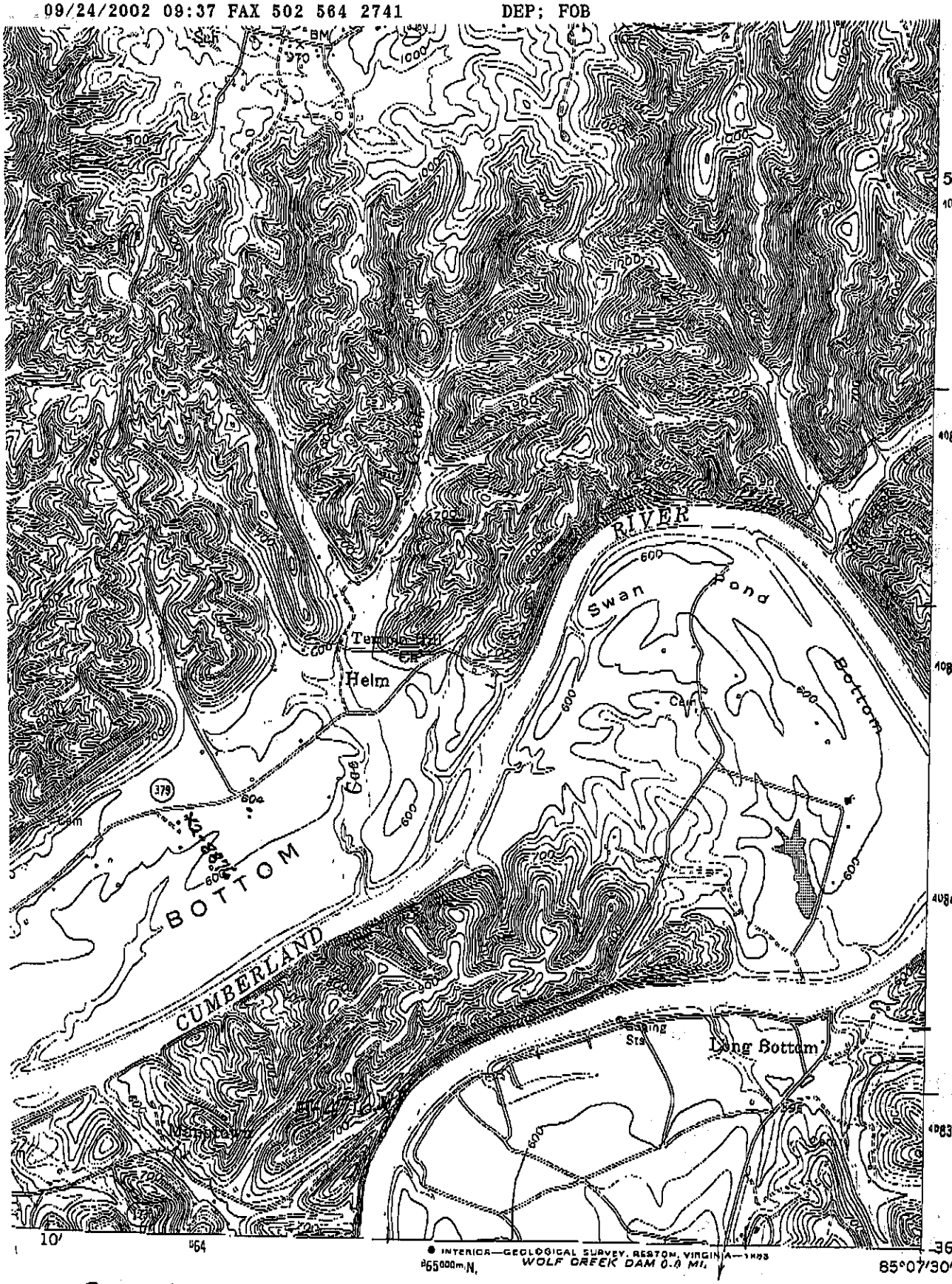
Primary highway, hard surface

Secondary highway, hard surface

Interstate Route



Mapped, edited, and published by the Geological Survey



ILE **Ground Water Section**

Do not remove from room!

ROAD CLASSIFICATION

Heavy-duty ——— Light-duty _ _ _

Medium-duty ——— Unimproved dirt ———

U. S. Route State Route

KENTUCKY

QUADRANGLE LOCATION

CREELSBORO, KY.

NW/4 JAMESTOWN 15' QUADRANGLE

N3652.5—W8507.5/7.5

(CUMBERLAND CITY) 39mi SE

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

September 26, 2002

Devetta Hill
Palmer Engineering Inc.
PO Box 747
273 Shoppers Drive
Winchester, KY 40392-0747

Threatened and Endangered Species Review: Relocation of US 127 in Clinton and Russell Counties, Kentucky

Dear Ms. Hill:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that no federally threatened or endangered fish and wildlife are known to occur in the Creelsboro, Jamestown, and Wolf Creek Dam 7.5 minute USGS quadrangle(s). Due to the nature of the project, KDFWR does not anticipate impacts to fish and wildlife. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

The KDFWR recommends the following for the portions of the project that cross intermittent and perennial streams:

1. Development/excavation during a low flow period to minimize disturbance;
2. Return all disturbed instream habitat to its original condition upon completion of construction in the area, and;
3. Preservation of tree canopy overhanging the stream.

We also make these additional recommendations regarding the project:

1. The applicant use a comprehensive sediment control plan consisting of silt barriers, diversion ditches, and immediate seeding and mulching of disturbed areas during and upon completion of the project.

2. Any excavation of stream channel for placement of bridge piers should be kept at a minimum.

3. The existing transportation corridors should be used as the main crossing of the stream during bridge construction if possible to minimize impacts to the aquatic resources.

I hope this information will be helpful to you. Should you require additional information , please contact me at (502) 564-7109 ext. 367.

Sincerely,

Marla T. Barbour
Fisheries Biologist III

Cc: Environmental Section

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

September 27, 2002

Devetta Hill
Biologist
Palmer Engineering
273 Shoppers Drive
PO Box 747
Winchester, KY 40392-0747

Subject:
US 127
Clinton & Russell counties, KY
Item No. 8-108.00 & 8-115.00

Dear Ms. Hill:

The southern portion of the project begins in the vicinity of Indian Creek, in karst terrane formed in the lower St. Louis Limestone and the Warsaw Limestone (Lewis and Thaden, 1962; USGS GQ-177). Figure 1 illustrates about 12 dye traces that have been conducted by QORE for the Cagle's-Keystone Poultry Processing Plant, Albany, Kentucky. Numerous karst springs are shown in this vicinity, generally perched near the St. Louis/Warsaw contact. The poultry processing-plant property also contains numerous groundwater monitoring wells.

This portion of the karst watershed drains into Lake Cumberland at Seventy Six Falls. Local karst drainage occurs in similar soluble rock units on the upland to the northwest and in ravines draining to the Cumberland River in the mid-portion of the project. Ravine karst drainage is likely to be developed in reef limestone within the Fort Payne Formation and in Leipers Limestone (see GQ-177). A few domestic water wells are recorded in the bottoms of the Cumberland River.

At the northern portion of the project, the St. Louis and Warsaw limestones occur on the uplands (Thaden and Lewis, 1962; USGS GQ-182). Although no tracer tests or hydrologic features are recorded, numerous springs and conduit flow routes are to be expected in this area. At least 10 groundwater monitoring wells and one domestic water well are recorded in the vicinity of Freedom.

The relocation of US 127 in this area and the construction of a new bridge over Cumberland River will undoubtedly require major resources. Protection of the complex and sensitive karst drainage systems should be a high priority if this extensive project is undertaken.

Sincerely,

Joseph A. Ray, P.G.
Groundwater Hydrologist III
Groundwater Branch
Division of Water

United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

October 8, 2002

Ms. Devetta Hill
Biologist
Palmer Engineering
273 Shoppers Drive
P.O. Box 747
Winchester, Kentucky 40392-0747

Re: FWS #02-2744

Dear Ms. Hill:

Thank you for your letter and enclosure of September 19, 2002, regarding the Kentucky Transportation Cabinet's (KTC) proposed US Highway 127 Relocation Project (Item Numbers 8-108.00 and 8-115.00) in Clinton and Russell counties, Kentucky. KTC proposes to relocate approximately 18 miles of existing highway from Kentucky Highway 90 to the Jamestown Bypass as shown on the attachment to your correspondence. Fish and Wildlife Service (Service) personnel have reviewed the information submitted and we offer the following comments, which are provided in accordance with 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 action 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 agency 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. Concrete box culverts should be placed in a manner that prevents any impediment to low flows or to movement of indigenous aquatic species.

3. 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.

4. All fill should be stabilized immediately upon placement.

5. Streambanks should be stabilized with riprap or other accepted bioengineering technique(s).

6. Existing transportation corridors should be used in lieu of temporary crossings where possible.

7. 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.

Endangered species collection records available to the Service do not indicate that federally listed or proposed endangered or threatened species occur within the impact area of the projects. We note, however, that collection records available to the Service may not be all-inclusive. Our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality. However, based on the best information available at this time, we believe that the requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of the proposed actions that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed actions are subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed actions.

Thank you for the opportunity to comment on these proposed actions. If you have any questions regarding the information which we have provided, please contact Wally Brines of my staff at 931/528-6481, extension 222.

Sincerely,

Lee A Barclay

Lee A. Barclay, Ph.D.
Field Supervisor

DONALD S. DOTT, JR.
DIRECTOR

RECEIVED
OCT 1 4 2002
PALMER
ENGINEERING

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

October 10, 2002

Devetta Hill
Palmer Engineering
273 Shoppers Drive P.O. Box 747
Winchester, KY 40392-0747

Data Request **03-037**

Dear Ms. Hill:

This letter is in response to your data request of September 19, 2002 for the US 127 in Clinton and Russell Counties 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 near the project area on the Creelsboro, Jamestown, and Wolf Creek USGS quadrangles. Based on our most current information, we have determined that 97 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 specified area. Please see the attached report for more information.

Many of the aquatic species found in the area are historic or extirpated records from the time before Wolf Creek Dam was constructed.

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. 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

Enclosures: Data Report and Interpretation Key(s)
Endangered, Threatened, and Special Concern Plants and Animals of Kentucky
Plants and Animals Presumed Extinct or Extirpated from Kentucky
Monitored Natural Communities of Kentucky

Architecture
Engineering
Construction

MEETING MINUTES

Project:	US 127
Purpose:	Site Review
Place:	Clinton & Russell Counties, Kentucky
Meeting Date:	April 23, 2003
Prepared By:	David Smith
In Attendance:	Joe Cox, District 8
	Cathi Blair, District 8
	Greg Potts, SHPO
	Rebecca Turner, DEA
	Helen Powell, Helen Powell & Company
	David Smith, Qk4

- Looked at Swan Pond Bottom, Creelsboro Historic District.
- David Smith said that USACE did a study in 1989, was reviewed by SHPO, determined expansion of Historic District was eligible.
- Helen set preliminary APE.
- Cathi will check with USACE or USFWS on plan or designation of uses for land below dam.
- There may not be an avoidance alternative; may all be 4 (f).

Next Steps:

- Move Blue line away from McClure closer to Blackfish Creek.
- Move red line to take out curve.
- Maybe move both red and gold lines a little west.

Architecture
Engineering
Construction

MEETING MINUTES

Project:	US 127 Russell/Clinton Counties	
Item Nos.:	8-108.00/115.00	
Purpose:	KYTC, USACE, Consultant meeting to discuss Section 4(f) avoidance alternatives for US 127	
Place:	USACE Regulatory office in Nashville, Tennessee	
Meeting Date:	August 5, 2004 (10:30 CDT)	
Prepared By:	Larry W. Ginthum – Qk4	
In Attendance:	Joe Cox	KYTC – District 8
	David Beattie	KYTC – District 8
	Cathi Blair	KYTC – District 8
	Alex Godsey	KYTC – District 8
	Wes Hagerman	KYTC – DEA
	Dave Harmon	KYTC – DEA
	Rebecca Turner	KYTC – DEA
	Carl R. Shields	KYTC – DEA
	Tom Hale	USACE – EKY/A
	Ray Hedrick	USACE - Environmental
	Bill Barron	USACE – Hydrology and Hydraulics
	Deb Tuck for J. Ruben Hernandez	USACE - Regulatory
	Joe Pendergradt	USACE – Real Estate
	Rob Karwedsky	USACE
	Jay Sadler	USACE
	Andreas Patterson	USACE
	Jeff Arnold	American Engineers, Inc.
	David Smith	Qk4
	Larry W. Ginthum	Qk4

A meeting was held in the U.S. Army Corps of Engineers, Nashville District office on Thursday, August 5, 2004 at 10:30 am CDT. The purpose of the meeting was to review the revised Creelsboro Historic District boundary and identify and discuss reasonable Section 4(f) avoidance alternatives for US 127.

Joe Cox opened the meeting with introductions and a brief overview of the project, which is the reconstruction/realignment of US 127 from KY 90 north to the proposed Jamestown Bypass. The three preliminary alignments currently being studied within the selected corridor were identified on the USGS color exhibit. All three alignments cross the Cumberland River below the Wolf Creek Dam and pass through the revised Creelsboro Historic District.

David Smith briefly summarized the history of the project as follows:

- 2001 – Scoping Study
- 2002 – Notice to Proceed, Phase I Design, Environmental Documentation
- 2003-2004 – Public Meeting, Revision/Expansion of Creelsboro Historic District

Mr. Smith explained via handouts the chronological revisions to the Creelsboro Historic District boundary:

- 1983 – Creelsboro commercial area on the National Register
- 1989 – Creelsboro commercial area plus Jackman Bottom, Swan Pond Bottom, Salt Lick Bottom, and Wells Bottom per the SHPO
- 2004 – 1989 SHPO boundary minus Salt Lick Bottom per H. Powell & Company, Inc.

The following items were then discussed:

1. Avoidance Alternatives

    a) Swing west of Creelsboro Historic District through Cumberland County and Rockhouse bottom

        - Long and costly, probably would not satisfy Purpose and Need
        - Most likely would impact other historic property(s)

    b) Bridge across Lake Cumberland

        - Costly
        - Loss of storage – Mitigation would be required by USACE
        - Recreational impacts on Lake
        - Must make USACE properties whole for land taken

    c) Improvement to existing road on Wolf Creek Dam

        - How far away from dam is blasting an issue?
        - 1980's and 1990's – USACE written request to get road off dam not funded
        - NEPA Document – Preliminary Draft from EA indicated seepage from dam could have cumulative impacts downstream, may have to close road for repairs
        - Wolf Creek Dam is potentially eligible for National Register of Historic Places

d) Alignment over Kendall Recreation Area below Wolf Creek Dam

- USACE highly opposed per letter from Craig S. Shoe – Resource Manager, Nashville dated June 6, 2003
- Tail water and electric generation operation concerns
- Likely Section 4(f) property

2. Ray Hedrick – USACE Environmental indicated the Corps desire to be placed on the KYTC mailing list for all future correspondence.

3. Joe Pendergradt - USACE Real Estate will provide documentation of the legal agreement (easement) on the road across the Wolf Creek Dam.

4. The USACE made the request to be recognized as a "Cooperating Agency".

5. David Smith stressed the significance of the USACE as a major stakeholder on the project and how their feedback is essential in building a strong legal case. The KYTC will provide the USACE an official document requesting information on the Section 4(f) avoidance alternatives. The USACE, in turn, will submit a letter addressing all 4(f) and environmental issues and concerns on the avoidance alternatives that will be presented to the FHWA.

END OF MINUTES

File ID: U:/01110/Docs/Mtg Minutes
File No.: 04 08 05 USACE Meeting.doc

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
Eastern Kentucky Area Office
Operations Manager
855 Boat Dock Road
Somerset, Kentucky 42501-6016

October 21, 2004

Mr. Joe A. Cox, P.E.
Project Manager, District 8
Kentucky Transportation Cabinet
P.O. Box 780
Somerset, KY 42502

Dear Mr. Cox:

Thank you for the coordination and opportunity to provide comments on the Section 4(f), Avoidance Alternatives, discussed at our meeting on August 5. It is our understanding these alternatives are being considered to avoid a designated historic district, at a possible relocation site downstream of the dam. As outlined below, these alternatives will impact the US Army Corps of Engineers' operations at Wolf Creek Dam and Kendall Recreation Area.

The Corps of Engineers gives careful consideration prior to approving construction and excavation activities in the vicinity of the dam and other major structures. In the past, a distance of 2,000 feet from a dam has consistently been assumed to be a reasonable buffer. The proposal for the realigned road and new bridge will constitute major construction, involving soil and rock excavation, subsurface disturbance, and the likely need for explosives. Unless no reasonable alternative exists, we request that construction activities be kept a minimum of 2,000 feet from the dam and powerhouse, which obviously would eliminate Alternatives II and III.

The Corps has carefully considered each alternatives and offers the following comments:

Alternative I- Relocation of Highway 127 to cross Lake Cumberland above Wolf Creek Dam:

Relocation of Highway 127 to cross Lake Cumberland above Wolf Creek Dam would likely involve placing a significant amount of fill below flood storage pool elevation, 760.0 msl, thus reducing the flood storage capacity of the lake. *The Nashville District Guidelines and Policy for the review of Cut and Fill Proposals Below Maximum Flood Pool Elevations on Corps of Engineers Lakes and Interests in Lands, dated 11 December 2002*, requires that, in order to maintain the authorized flood control capabilities of the lake, equal alternative storage volume must be provided in the same elevation range in which the fill is placed. The flood storage offset is likely to be expensive to provide and substantially increase the proposed relocation's adverse environmental impacts. Some of the material obtained by excavating this flood storage offset could likely be used as embankment material for a new bridge, potentially offsetting construction costs. However, such excavation would substantially increase the proposed relocation's environmental impacts thereby requiring additional mitigation under the Fish and Wildlife Coordination Act and the National Environmental Policy Act. Also, as navigable waters of the United States, any bridge crossing Lake Cumberland above the dam must have US Coast Guard approval and be constructed so as to allow sufficient clearance for vessels passing beneath. All current boat traffic is recreational, but there have been commercial barge shipments (primarily coal) on this impoundment that could resume, although highly unlikely, in the future (depending upon world market conditions).

Alternative II – Improving to Existing US 127 Across Wolf Creek Dam:

The Wolf Creek Dam and Powerhouse and associated facilities are considered eligible for listing on the National Register of Historic Places. Any proposed activities that may have an effect on this historic

property, will require consultation with and the concurrence of the Kentucky State Historic Preservation Officer in compliance with Section 106 of the National Historic Preservation Act.

State Highway 127 spans the entire length of Wolf Creek Dam and provides vital access over Lake Cumberland, connecting the residents of Jamestown and Albany, KY. Both commercial and private traffic is significant on the roadway, especially during morning and afternoon commute periods. A possible terrorist threat exists which suggests that major hydroelectric and dam infrastructure assets are high on terrorist target lists as likely and vulnerable targets. Bridges are also considered "High Value Targets" (HVT's) to most terrorist groups, particularly foreign-based groups. The roadway currently presents a formidable task for surveillance and monitoring at existing security levels. When security levels are enhanced to address intelligence or security advisories, surveillance and monitoring functions are crucial to providing enhanced security protection. During the highest security threat, United States Government will close the roadway to all traffic as necessary, immediately and without notice, to ensure that the security level is maintained. This could result in major and severe interruptions to a large number of people who depend on the roadway for access to work, school, and medical facilities without advance warning.

Extensive coordination between the Corps and the Kentucky Transportation Cabinet would be required in the design and administration of any work modifying the existing roadway crossing Wolf Creek Dam. Crucial dam safety instrumentation including over 300 piezometers, 16 inclinometers, 26 surface movement monuments on the embankment, 87 alignment pins, and 8 seismic instruments could potentially be impacted and have to be modified or relocated. Any instrument modification or relocation would have to meet Corps of Engineers' standards and be closely coordinated with the Nashville District to ensure the continued integrity, performance monitoring, and safety of the dam both during and after road improvements. A thorough plan addressing how instruments would be modified or relocated and their impact on the current performance monitoring, would be necessary before a thorough evaluation of this alternative could be provided. However it is clear a substantial effort would be required to maintain the current level of performance monitoring.

A rehabilitation study to develop a seepage mitigation place for Wolf Creek Dam is currently underway. This project could involve some fairly extensive remedial actions on the embankment, working from the top of the dam. If the proposed road improvement is concurrent with proposed seepage rehab measures, there's a strong possibility of conflict between the seepage remedial construction work and the road improvement work.

Prior to any construction to the existing roadway across the dam, stability analyses of the embankment and the concrete portion of the dam would have to be conducted to assure the new sections comply with Corps' design criteria. The cost of these analyses and studies would be the responsibility of the Transportation Cabinet and again would require a close coordination effort.

Alternative III – New Alignment in the Vicinity of Kendall Recreation Area:

Construction of a highway in the vicinity of Kendall Campground would result in significant adverse impacts of the form of light, noise, and aesthetic degradation effects. Any alternative that impacts project lands would be subject to the district's mitigation policy. Remedial actions would be required to make the water resources project whole. Compensation for the loss of recreation facilities (launching ramp, parking area, campsites, recreation experience, etc.) would be by creation or addition of new facilities. Adverse impacts to aesthetic values or recreational experiences would be difficult, if not impossible, to mitigate. The Kendall Recreation Area is the largest and most heavily utilized recreation facility operated by the U.S. Army Corps of Engineers at the Lake Cumberland Project. The facility is the only camping facility that is operated year-round, in the Nashville District. One of the main factors in the popularity of the facility is the serene and natural setting of its location. Any alterations to the surrounding area would most certainly result in strong negative reaction from customers, local communities, and tourism officials.

The US Fish and Wildlife Agency operates a fish hatchery adjacent to the Kendall Recreation Area. This operation would also be subject to impact and would require coordination with the USFW.

Again, the Corps greatly appreciates the Kentucky Transportation Cabinet's coordination in this matter. If I can be of additional help or you have any questions about our concern, please feel free to contact me.

Sincerely,

Tom E. Hale

Thomas E. Hale
Operations Manager, EKY/A

U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
3761 Georgetown Rd.
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate Species in _____CLINTON_____ County, KY

Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	*Myotis grisescens*	gray bat	E	K	
	Myotis sodalis	Indiana bat	E	P	
Mussels	*Villosa trabilis*	Cumberland bean pearlymussel	E	K	
	Plethobasus cooperianus	orangefoot pimpleback	E	K	
	Pleurobema plenum	rough pigtoe	E	K	
	Epioblasma brevidens	Cumberlandian combshell	E	P	
	Epioblasma capsaeiformis	oyster mussel	E	P	
	Ptychobranchus subtentum	fluted kidneyshell	C	P	

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

**Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
3761 Georgetown Rd.
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate Species in ____RUSSEL_____ County, KY

Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	*Myotis sodalis*	Indiana bat	E	P	
Mussels	*Villosa trabilis*	Cumberland bean pearlymussel	E	K	
	Epioblasma brevidens	Cumberlandian combshell	E	K	
	Cyprogenia stegaria	fanshell	E	K	
	Ptychobranchus subtentum	fluted kidneyshell	C	K	
	Plethobasus cooperianus	orangefoot pimpleback	E	K	
	Epioblasma capsaeiformis	oyster mussel	E	K	
	Lampsilis abrupta	pink mucket	E	K	
	Obovaria retusa	ring pink	E	K	
	Pleurobema plenum	rough pigtoe	E	K	

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

**Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

Robert Oney

From: Ray, Joe (EPPC DEP DOW) [Joe.Ray@ky.gov]
Sent: Friday, June 22, 2007 12:08 PM
To: Robert Oney
Cc: Shuttleworth, John (EPPC DEP DOW); McKinney, Bruce (EPPC DEP DOW)
Subject: Info Request: Relocation of US 127, Clinton and Russell counties

Robert C. Oney
Biologist
Palmer Engineering
400 Shoppers Drive
PO Box 747
Winchester, Kentucky 40392-0747

Dear Mr. Oney,

The relocation of US 127 project in Clinton and Russell counties, traverses well developed karst terrane in the southern and northern extensions of the proposed route. The St. Louis Limestone and the Warsaw Limestone are exposed in these areas (Lewis, Sr., and Thaden, 1962: USGS GQ-177). Karst drainage, including sinkholes, caves, sinking streams, and large springs are to be expected in these limestone areas. In the southern area, several groundwater tracer tests have been conducted in the vicinity of the Cagle's-Keystone poultry processing plant in the headwaters of Indian Creek. These tests were conducted by Charles Oligee, of QORE Property Sciences during 1999-2002. We are providing a photocopy of the study area and dye-test results.

The red and purple alignments cross a dry section of Indian Creek. In this vicinity, sinking water from Indian Creek resurges at a large spring, ultimately entering *Lake Cumberland* at *Seventy Six Falls* about a mile to the northeast. This dry reach is likely to be a flood overflow route, even though no stream lines are shown on the topographic map.

Although no karst investigations are known from the northern area, a similar type of karst drainage with numerous springs will be

encountered. In the northern section, ten groundwater monitoring wells are recorded at Freedom and a domestic water well is recorded along US 127 about 1.8 miles to the northeast of Freedom. Other wells are likely. In all karst areas, domestic water-supply springs may exist and should be inventoried and monitored in the vicinity of the project. A highway project of this size may require a systematic karst feature inventory and dye-trace study where data are lacking.

As usual, a Groundwater Protection Plan (401 KAR 5:037) is required for highway construction projects. Please reply if you need additional information.

Joseph A. Ray, P.G.
Groundwater Branch
Division of Water
14 Reilly Road
Frankfort, KY 40601
(502) 564-3410 ext. 644
FAX (502) 564-9899
joe.ray@ky.gov

From: Olszowy, Diana (EPPC DNR DOF) [Diana.Olszowy@ky.gov]
Sent: Monday, June 25, 2007 3:37 PM
To: Robert Oney
Cc: Olszowy, Diana (EPPC DNR DOF)
Subject: US 127 highway project

Attachments: selecting and planting trees.pdf

This e-mail serves as an environmental assessment of the proposed US 127 highway project being initiated in Clinton and Russell counties. There are currently no state forests or champion trees located in the project area. However, special care should be taken around existing trees that will remain after the construction is complete. Heavy equipment should be kept away from the base of the tree to prevent wounding of the trunk or surface roots. Construction traffic should be routed away from the dripline of the tree to lessen the severity of soil compaction.

Compacted soil reduces the amount of water available to the tree, and this lack of water can cause added stress. Stressed trees are vulnerable to insect and disease infestation.

After completion of the project, consider planting additional trees in the landscape. Trees selected should be matched to the site. I've attached a publication entitled "Selection and Planting Trees," which will assist in determining the correct species for the correct site conditions. Please contact me for further assistance.

Diana Olszowy
Kentucky Division of Forestry
diana.olszowy@ky.gov
502-564-4496

Received
June 29, 2007
Palmer Engineering.

Ernie Fletcher
Governor

Teresa J. Hill
Secretary
Environmental and Public
Protection Cabinet

Commonwealth of Kentucky
Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, Kentucky 40601-1403
502-573-2886 Voice
502-573-2355 Fax

Donald S. Dott, Jr.
Director

June 27, 2007

Robert C. Oney
Palmer Engineering
400 Shoppers Drive
Winchester, KY 40517

Data Request **07-194**

Dear Mr. Oney:

This letter is in response to your data request of June 19, 2007 for the US 127 Relocation 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 near the project area on the Creelsboro, Jamestown, and Wolf Creek Dam USGS Quadrangles, as shown on the map provided. Please see the attached reports for more information, which reflect analysis of the project area with three buffers applied:

1-mile for all records – 56 records
5-mile for aquatic records – 49 records (all extirpated)
5-mile for federally listed species – 60 records (all extirpated)
10-mile for mammals and birds – 11 records

This project as planned goes through one or more large forest blocks. KSNPC is now monitoring large forest blocks, which are defined as 900 or more acres of contiguous forest in areas west of the Cumberland Plateau, and 4500 or more contiguous acres in areas east of the Cumberland Plateau. Large forest blocks were determined using the best available data at this time. Technical review is currently in progress. Forest fragmentation is one of the primary impacts to plants and animals that require large tracts of forest for all parts of their life cycles. Fragmenting or impacting large forest blocks should be avoided.

Although the mussels that were once known from the area are believed to be extirpated, other aquatic species and habitats in the area may be sensitive to increased turbidity, sediment, and other adverse influences on water quality. A written erosion control plan should be developed that includes stringent erosion control methods (i.e., straw bales, silt fences and

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

SLD/SGH

Enclosures: Data Report and Interpretation Key

ERNIE FLETCHER
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

TERESA J. HILL
SECRETARY

2 July 2007

Mr. Robert C. Oney
Palmer Engineering
400 Shoppers Drive
PO Box 747
Winchester, KY 40392-0747

Subject: Proposed US 127 Relocation, Clinton and Russell Counties, KY

Dear Mr. Oney,

The proposed US 127 relocation project in Clinton and Russell Counties, KY would not affect a Wild River, Outstanding State Resource Water or known Exceptional Water. However, the Cumberland River from below Wolf Creek Dam to the Kentucky/Tennessee state line is a Coldwater Aquatic Habitat (CAH). Due to the CAH designation, a no stormwater discharge drainage design should be considered for this bridge.

After review of our database, I was able to find macroinvertebrate data for the Cumberland River below Wolf Creek Dam (see enclosed reports), but was not able to find chemical, physical or biological data for Bethel Creek, Coe Creek, Blackfish Creek, West Fork, Middle Fork, Indian Creek or Turkeypen Creek. If there are any questions please feel free to call (502-564-3410) or email (john.brumley@ky.gov) me.

Sincerely,

John F. Brumley

John F. Brumley
Ecological Support Section
Water Quality Branch
Division of Water
14 Reilly Rd.
Frankfort, KY 40601
(502) 564-3410

Received July 5, 2007

Macroinvertebrates Sample Results Data

Station ID: EKU02001007 **Ecoregion:** INTERIOR PLATEAU
Basin: UPPER CUMBERLA **Stream Name:** CUMBERLAND RIVER
County: RUSSELL **Map Name:** WOLF CREEK DAM
Catchment Area: 4890 **River Mile:** 460.7 **Stream Order:** 7
Lat Dec: 36.8723 **Long Dec:** -85.14939
Location: 300 m below Wolf Creek Dam, North Bank (Site 1)

Collection Date: *5/17/1999*

RepNum: *1* ***Collection Method:*** *TRAVELING KICK & QUALITATIVE* ***Program:*** *EKU*
ID By: *B. BILLINGS* ***Collector:*** *B. BILLINGS, G. SCHUSTER*

Final ID	*Individuals*
Spongilla sp	0
Unid. Lumbriculid sp	0
Cricotopus bicinctus gp	0
Cricotopus/Orthocladius gp	0
Eukiefferiella sp	0
Microtendipes sp	1
Unid. Chironomid sp	0
Unid. Orthoclad sp	0
Simulium vittatum	1
Gammarus sp	9
Hyalella azteca	0
Lirceus fontinalis	22
Cambarus tenebrosus	0

Genus Richness: *13* ***Species Richness:*** *13*
Genus EPT Index: *0* ***Species EPT Index:***
Hilsenhoff Biotic Index (HBI): *7.843* ***Percent EPT:***
Modified Percent EPT: ***Family Richness:*** *8*
Percent Ephemeroptera: *0* ***Family EPT Richness:***
Percent Chironomidae: *3.03* ***Family HBI (FBI):*** *7.88*
Percent Oligochaetes: *0.00* ***Average Tolerance Value:*** *6.73*
Percent Clingers: *3.03* ***Percent Dominant Five:*** *100*
Total No of Individuals (TNI): *33* ***Percent Nutrient Tolerant:*** *69.70*

higher the number crappier it is.

Collection Date: *8/7/1999*

RepNum: *1* ***Collection Method:*** *TRAVELING KICK & QUALITATIVE* ***Program:*** *EKU*
ID By: *B. BILLINGS* ***Collector:*** *B. BILLINGS, G. SCHUSTER*

Final ID	*Individuals*
Spongilla sp	1
Unid. Planariid sp	3
Physella sp	1
Unid. Lumbriculid sp	2
Cricotopus/Orthocladius gp	106
Dicrotendipes sp	3
Unid. Chironomid sp	1
Unid. Orthoclad sp	1
Simulium vittatum	1
Gammarus sp	62
Hyalella azteca	2
Lirceus fontinalis	126
Cambarus tenebrosus	0

Genus Richness:	13	*Species Richness:*	13
Genus EPT Index:	0	*Species EPT Index:*	
Hilsenhoff Biotic Index (HBI):	7.529	*Percent EPT:*	
Modified Percent EPT:		*Family Richness:*	10
Percent Ephemeroptera:	0	*Family EPT Richness:*	
Percent Chironomidae:	35.92	*Family HBI (FBI):*	7.49
Percent Oligochaetes:	0.65	*Average Tolerance Value:*	7.08
Percent Clingers:	0.323	*Percent Dominant Five:*	97.08
Total No of Individuals (TNI):	309	*Percent Nutrient Tolerant:*	42.07

Collection Date: 2/24/2000

RepNum: 1 *Collection Method:* TRAVELING KICK & QUALITATIVE *Program:* EKU

ID By: B. BILLINGS, G. SCHUSTE *Collector:* B. BILLINGS, G. SCHUSTER

Final ID	*Individuals*
Spongilla sp	0
Unid. Planariid sp	3
Unid. Lumbriculid sp - Oligochaeta	3
Hemerodromia sp - Diptera	1
Cricotopus/Orthocladius gp chir	44
Dicrotendipes sp - chir	4
Tvetenia sp - chir	7
Unid. Chironomid sp chir	6
Unid. Orthoclad sp chir	1
Gammarus sp	47
Hyalella azteca	0
Lirceus fontinalis	80
Cambarus tenebrosus	0

% Chironomidae + Oligochaeta

Genus Richness:	13	*Species Richness:*	13
Genus EPT Index:	0	*Species EPT Index:*	
Hilsenhoff Biotic Index (HBI):	7.253	*Percent EPT:*	
Modified Percent EPT:		*Family Richness:*	9
Percent Ephemeroptera:	0	*Family EPT Richness:*	
Percent Chironomidae:	31.63	*Family HBI (FBI):*	7.51
Percent Oligochaetes:	1.53	*Average Tolerance Value:*	6.63
Percent Clingers:		*Percent Dominant Five:*	93.87
Total No of Individuals (TNI):	196	*Percent Nutrient Tolerant:*	42.35

Site 1 ↑

Site 2 ↓

Station ID: EKU02001008 **Ecoregion:** INTERIOR PLATEAU

Basin: UPPER CUMBERLA **Stream Name:** CUMBERLAND RIVER

County: CLINTON **Map Name:** WOLF CREEK DAM

Catchment Area: 4900 **River Mile:** 448.9 **Stream Order:** 7

Lat Dec: 36.87279 **Long Dec:** -85.22277

Location: Wells Island Shoal, south bank (Site 2)

Collection Date: 5/14/1999

RepNum: 1 *Collection Method:* TRAVELING KICK & QUALITATIVE *Program:* EKU

ID By: B. BILLINGS, G. SCHUSTE *Collector:* B. BILLINGS, G. SCHUSTER

Final ID	*Individuals*
Lymnaea sp	0
Physella sp	0
Unid. Lumbriculid sp	4
Stenonema sp	0
Ephemerella sp	1
Pteronarcys sp	2
Brachycentrus sp	28
Cricotopus bicinctus gp	0
Cricotopus/Orthocladius gp	9

Dicrotendipes sp	1
Microtendipes sp	0
Tanytarsus sp	0
Tvetenia sp	0
Unid. Chironomid sp	1
Simulium vittatum	85
Hyalella azteca	0
Lirceus fontinalis	7

Genus Richness:	*17*	***Species Richness:***	*17*
Genus EPT Index:	*4*	***Species EPT Index:***	*4*
Hilsenhoff Biotic Index (HBI):	*5.823*	***Percent EPT:***	*22.46*
Modified Percent EPT:	*22.46*	***Family Richness:***	*11*
Percent Ephemeroptera:	*0.724*	***Family EPT Richness:***	*4*
Percent Chironomidae:	*7.971*	***Family HBI (FBI):***	*4.23*
Percent Oligochaetes:	*2.90*	***Average Tolerance Value:***	*6.11*
Percent Clingers:	*84.05*	***Percent Dominant Five:***	*96.37*
Total No of Individuals (TNI):	*138*	***Percent Nutrient Tolerant:***	*69.57*

Collection Date: *8/7/1999*

RepNum: *1* ***Collection Method:*** *TRAVELING KICK & QUALITATIVE* ***Program:*** *EKU*
ID By: *B. BILLINGS, G. SCHUSTE* ***Collector:*** *B. BILLINGS, G. SCHUSTER*

Final ID	***Individuals***
Spongilla sp	0
Lymnaea sp	0
Unid. Lumbriculid sp	13
Ephemerella sp	2
Timpanoga lita	0
Pteronarcys sp	11
Brachycentrus sp	2
Micrasema sp	0
Limnophora sp	0
Hemerodromia sp	0
Chironomus sp	0
Cricotopus bicinctus gp	1
Cricotopus trifascia	1
Cricotopus/Orthocladius gp	6
Dicrotendipes sp	0
Glyptotendipes sp	0
Microtendipes sp	0
Phaenopsectra/Tribelos sp	2
Rheocricotopus sp	0
Tvetenia sp	0
Unid. Chironomid sp	0
Unid. Orthoclad sp	0
Simulium vittatum	72
Gammarus sp	0
Hyalella azteca	2
Lirceus fontinalis	40

Genus Richness:	*25*	***Species Richness:***	*26*
Genus EPT Index:	*5*	***Species EPT Index:***	*5*
Hilsenhoff Biotic Index (HBI):	*6.856*	***Percent EPT:***	*9.868*
Modified Percent EPT:	*9.87*	***Family Richness:***	*13*
Percent Ephemeroptera:	*1.315*	***Family EPT Richness:***	*3*
Percent Chironomidae:	*6.578*	***Family HBI (FBI):***	*5.84*
Percent Oligochaetes:	*8.55*	***Average Tolerance Value:***	*5.99*
Percent Clingers:	*59.21*	***Percent Dominant Five:***	*93.42*
Total No of Individuals (TNI):	*152*	***Percent Nutrient Tolerant:***	*83.55*

Collection Date: *2/14/2000*

RepNum: *1* ***Collection Method:*** *TRAVELING KICK & QUALITATIVE* ***Program:*** *EKU*

ID By: *B. BILLINGS, G. SCHUSTE* ***Collector:*** *B. BILLINGS, G. SCHUSTER*

Final ID	***Individuals***
Spongilla sp	0
Lymnaea sp	0
Physella sp	1
Unid. Lumbriculid sp	3
Ephemerella sp	3
Pteronarcys sp	30
Taeniopteryx sp	3
Acroneuria sp	1
Nigronia sp	0
Brachycentrus sp	46
Antocha sp	1
Tipula sp	0
Cricotopus bicinctus gp	0
Cricotopus trifascia	1
Cricotopus/Orthocladius gp	24
Dicrotendipes sp	11
Microtendipes sp	1
Phaenopsectra/Tribelos sp	0
Rheotanytarsus sp	10
Tvetenia sp	76
Simulium vittatum	554
Gammarus sp	4
Hyalella azteca	26
Lirceus fontinalis	110
Cambarus tenebrosus	0

Genus Richness:	*24*	***Species Richness:***	*25*
Genus EPT Index:	*5*	***Species EPT Index:***	*5*
Hilsenhoff Biotic Index (HBI):	*5.692*	***Percent EPT:***	*9.171*
Modified Percent EPT:	*9.17*	***Family Richness:***	*17*
Percent Ephemeroptera:	*0.331*	***Family EPT Richness:***	*5*
Percent Chironomidae:	*13.59*	***Family HBI (FBI):***	*5.37*
Percent Oligochaetes:	*0.33*	***Average Tolerance Value:***	*5.73*
Percent Clingers:	*71.38*	***Percent Dominant Five:***	*90.16*
Total No of Individuals (TNI):	*905*	***Percent Nutrient Tolerant:***	*75.03*

KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES
COMMERCE CABINET

Ernie Fletcher
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

George Ward
Secretary

Dr. Jonathan W. Gassett
Commissioner

August 2, 2007

Robert C. Oney
Palmer Engineering
400 Shoppers Drive
P. O. Box 747
Winchester, KY 40392-0747

RE: US 127
Clinton and Russell Counties
Item No. 8-108.00 & 8-115.00

Dear Mr. Oney:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicate that the federally endangered gray bat, *Myotis grisescens* and Indiana bat, *Myotis sodalis* are known to occur or could occur within close proximity to the project area. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

- The Indiana bat utilizes a wide array of habitats, including riparian forests, upland forest, and fencerows for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in cavities of dead and live trees, and in snags (i.e., dead trees or dead portions of live trees). Trees in excess of 16 inches diameter at breast height (DBH) are considered optimal for maternity colony roosts, but trees in excess of 9 inches DBH appear to provide suitable maternity roosting habitat. Male Indiana bats have been observed roosting in trees as small as 3 inches DBH. Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting Indiana bats. However, if any Indiana bat hibernacula are identified on the project area or are known to occur within 10 miles of the project area, we recommend the applicant only remove trees between November 15 and March 31 in order to avoid impacting Indiana bat "swarming" behavior.
- In areas where bats are known to occur, cave entrances, mine portals, and/or rock shelters that exist within the project area should be surveyed for potential use by such species as gray bats and Indiana bats. KDFWR recommends avoiding those areas that provide adequate habitat for bats.
- To minimize impacts to the aquatic and subterranean resources strict erosion control measures should be developed and implemented prior to construction to minimize siltation into streams and karst systems located within the project area. Such erosion control measures may include, but are not limited to silt fences, staked straw bales, brush barriers, sediment basins, and diversion ditches. Erosion control measures will need to be installed prior to construction and should be inspected and repaired regularly as needed.

For more information on how to precede with the threatened/endangered species surveys please contact the US Fish and Wildlife Service Kentucky Field Office at (502) 695-0468.

It appears that the proposed project has the potential to impact wetland habitats. KDFWR recommends that you look at the appropriate US Department of Interior National Wetland Inventory Map (NWI) and the appropriate county soil surveys to determine where the proposed project may impact wetlands. Additionally, field verification may be needed to determine the extent and quality of wetland habitats within the project area. Any planning should include measures designed to eliminate and/or reduce impacts to wetland habitats. If impacts cannot be avoided, mitigation should be properly designed and proposed to offset the losses. KDFWR will recommend, at a minimum, a 2:1 mitigation ratio for any permanent loss or degradation of wetland habitats.

The proposed project crosses the Cumberland River below Wolf Creek Dam. This portion of the Cumberland River is an extremely important brown trout and rainbow trout fishery. According the KDFWR Trout Stream Classification System the Cumberland River below the Wolf Creek Dam is classified as high quality trout stream. We request that strict erosion controls be developed and implemented prior to construction of the proposed project. Consideration should also be given during the design phase to spanning the Cumberland River. To minimize the long term effects of the proposed new highway on the Cumberland River we ask that you follow the recommendation listed below.

KDFWR recommends that you contact the appropriate US Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetland habitats of Kentucky. Additionally, KDFWR recommends the following for the portions of the project that impact streams:

- Channel changes located within the project area should incorporate natural stream channel design.
- If culverts are used, the culvert should be designed to allow the passage of aquatic organisms.
- Culverts should be designed so that degradation upstream and downstream of the culvert does not occur.
- Development/excavation during low flow period to minimize disturbances.
- Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams.
- Replanting of disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of fish and wildlife populations. We recommend a 100 foot forested buffer along each stream bank.
- Return all disturbed instream habitat to a stable condition upon completion of construction in the area.
- Preservation of any tree canopy overhanging any streams within the project area.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (800) 852-0942 Extension 366.

Sincerely,

Doug Dawson

Doug Dawson
Wildlife Biologist III

Cc: Environmental Section File

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
801 C Tennessee Road
Albany, KY. 42602
606/387-5196

September 14, 2007

Robert C. Oney
Biologist
Palmer Engineering
400 Shoppers Drive
P.O. Box 747
Winchester, Ky 40392-0747

RE: US 127 Clinton and Russell Counties
Item No. 8-108.00 and 8-115.00

Mr. Oney,

Let me begin by apologizing for the delayed response to your request. Since I could provide you with information for Clinton County only, a report was being coordinated with Russell County. Due to a mis-communication, you have already received the Russell County report, but not Clinton County's.

A corridor of 300 feet was used to evaluate each of the three proposed routes for the presence of hydric, prime farmland, and statewide important farmland soils. Please refer to the Soil Inventory Report for each alternative to determine the presence of these soils. To aid in the determination, a list of Prime and Important Farmland Soils, Hydric Soils, and Map Unit Descriptions are enclosed.

If addition information is needed, please contact me. Also, soil maps and information are available on the web at http://soildatamart.nrcs.usda.gov.

Sincerely,

Willie J Russell

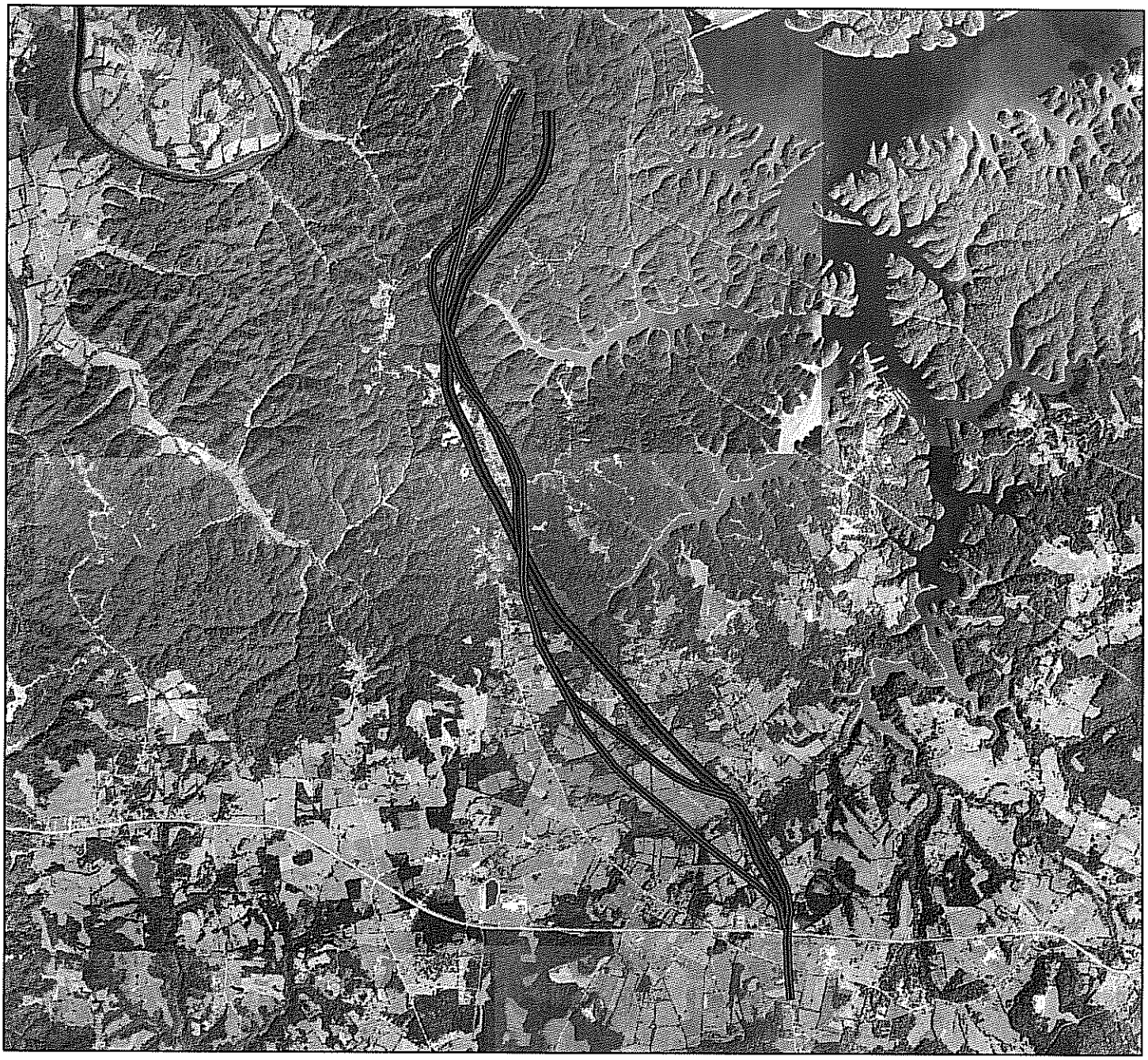
Willie Joe Russell
District Conservationist

US 127 ALTERNATE ROUTES - CLINTON COUNTY

District: ALBANY SOIL & WATER CONSERVATION DISTRICT

Field Office: ALBANY SERVICE CENTER

Agency: USDA-NRCS



Legend

- Alternative no. 1
- Alternative no. 2
- Alternative no. 3

SCALE: 1" = 7000'

4,000 0 4,000 8,000 12,000 16,000 Feet

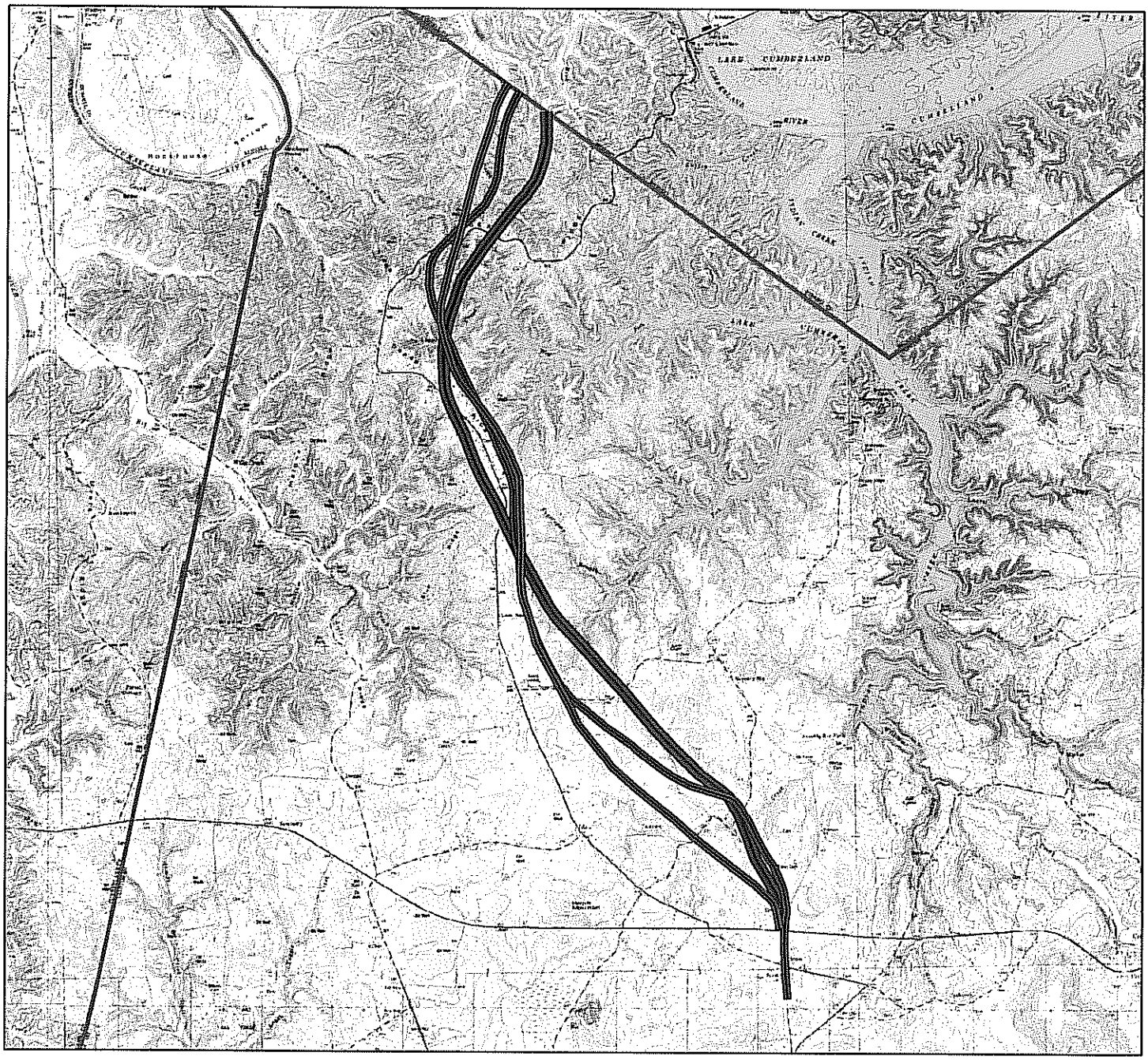
N

US 127 ALTERNATE ROUTES - CLINTON COUNTY

District: ALBANY SOIL & WATER CONSERVATION DISTRICT

Field Office: ALBANY SERVICE CENTER

Agency: USDA-NRCS



Legend

- Alternative no. 1
- Alternative no. 2
- Alternative no. 3
- cnty24k_a_ky053

SCALE: 1" = 7000'

4,000 0 4,000 8,000 12,000 16,000 Feet

N

Soils Inventory Report

ALTERNATIVE No. 1

Map Unit Symbol	Map Unit Name	Acres	Percent
CdD	Caneyville-Dewey complex, rocky, 6 to 20 percent slopes	51.9	17%
CgD	Caneyville-Garmon association, steep	20.6	7%
DeC2	Dewey loam, 6 to 15 percent slopes, eroded	79.5	25%
DeD2	Dewey loam, 15 to 25 percent slopes, eroded	46.1	15%
FaE2	Faywood silty clay loam, 12 to 30 percent slopes, eroded	16.8	5%
GcF	Garmon-Caneyville association, very steep	54.7	17%
GpC	Gilpin loam, 6 to 12 percent slopes	1.6	1%
MoB	Mountview silt loam, 2 to 6 percent slopes	15.8	5%
No	Nolin silt loam, frequently flooded	26	8%
	Total:	313	

Soils Inventory Report

ALTERNATIVE No. 2

Map Unit Symbol	Map Unit Name	Acres	Percent
CdD	Caneyville-Dewey complex, rocky, 6 to 20 percent slopes	49.4	14%
CgD	Caneyville-Garmon association, steep	20.2	6%
DeC2	Dewey loam, 6 to 15 percent slopes, eroded	111.7	32%
DeD2	Dewey loam, 15 to 25 percent slopes, eroded	39.7	12%
FaE2	Faywood silty clay loam, 12 to 30 percent slopes, eroded	6.8	2%
GcF	Garmon-Caneyville association, very steep	81	24%
GpC	Gilpin loam, 6 to 12 percent slopes	2.1	1%
MoB	Mountview silt loam, 2 to 6 percent slopes	29.9	9%
No	Nolin silt loam, frequently flooded	3.2	1%
	Total:	344	

Soils Inventory Report

ALTERNATIVE No. 3

Map Unit Symbol	Map Unit Name	Acres	Percent
CdD	Caneyville-Dewey complex, rocky, 6 to 20 percent slopes	71.6	23%
CgD	Caneyville-Garmon association, steep	26.6	9%
DeC2	Dewey loam, 6 to 15 percent slopes, eroded	53.4	17%
DeD2	Dewey loam, 15 to 25 percent slopes, eroded	48.1	16%
GcF	Garmon-Caneyville association, very steep	92.6	30%
GpC	Gilpin loam, 6 to 12 percent slopes	3.1	1%
MoB	Mountview silt loam, 2 to 6 percent slopes	11.5	4%
	Total:	306.9	

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Wolf Creek National Fish Hatchery
50 Kendall Road
Jamestown, Kentucky 42629

December 20, 2007

Dear Mr. Beattie

I would like to provide some statements and comments on the proposed US127 reconstruction project. I hope your agency will consider the following information during this project. All of these are concerns we have about access to the dam/hatchery area after the new road is constructed.

The Wolf Creek National Fish Hatchery currently attracts over 100,000 visitors each year and is one of only a few tourist attractions in the area. Many of these arrive via school buses, RV's, and other larger vehicles. We also receive fish food and other supplies on a regular basis via larger eighteen wheel trucks.

Our new $3.0 million Visitor/Environmental Education Center here at the hatchery is heavily utilized and promoted on a broad scale, thus increasing the number of school children and visitors to this area. The Center has an exhibit hall full of interactive displays, aquariums, theater, classroom, and gift shop.

Along with several other agencies and organizations, we are in the planning/design phase of expanding the trout stream and campground facilities below Wolf Creek Dam. This project will be a multimillion dollar project. The project will add approximately 1.5 miles of trout stream and 100 or more camping sites. Again this will increase the traffic flow to this area.

One of my major concerns is how the transportation cabinet plans to provide access to the dam area. Hopefully the plans will not call for several miles of access roads off of the new road. As I interpret the three proposed routs, it appears to me that there will be several miles of access roads on the North and South ends to get to the hatchery. Currently access to the dam area is very visitor friendly. I am really concerned this will kill the tourism/visitation to our facility.

I appreciate the opportunity to make these comments and hope they will be considered during the planning of the new US127.

Sincerely

James H. Gray, Project Leader
Wolf Creek National Fish Hatchery

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
801 C Tennessee Road
Albany, KY. 42602
606/387-5196

January 14, 2008

Kirk Reinke
Environmental Technician
QK4
815 West Market Street
Suite 300
Louisville, Ky 40202

RE: Farmland Conversion Impact, AD-1006
US 127 Realignment, Clinton and Russell Counties
KYTC Item Nos. 8-108.00, 8-115.01

Mr. Reinke,

Attached you will find the completed AD-1006. This is a combined rating using information from both Russell and Clinton County Land Evaluation Systems.

To make the rating as accurate as possible, total length and acreage of each route was used to determine the average right-of-way width. The average right-of-way width for each individual route was then used to determine the presence and amount of prime farmland and statewide important farmland.

If you have questions, or need additional information, please call us at (606) 387-5196, extension 3, or (270) 343-3343, extension 3.

Sincerely,

Willie Joe Russell
Natural Resources Conservation Service
Clinton County

Jason Miller
Natural Resources Conservation Service
Russell County

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request 12/6/07	
Name Of Project US 127 Widening		Federal Agency Involved FHWA	
Proposed Land Use Transportation/Right-of-Way		County And State Clinton and Russell Counties, Kentucky	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS	
Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes [X] No [ ]	Acres Irrigated N/A	Average Farm Size 110
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 163,702 59 %	Amount Of Farmland As Defined in FPPA Acres: 121,969 44 %	
Name Of Land Evaluation System Used Russell/Clinton LESA	Name Of Local Site Assessment System N/A	Date Land Evaluation Returned By NRCS 1-14-2008	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	344.4	339.8	331.1	
B. Total Acres To Be Converted Indirectly	0.0	0.0	0.0	
C. Total Acres In Site	344.4	339.8	331.1	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	25.0	47.6	32.5	
B. Total Acres Statewide And Local Important Farmland	82.6	76.4	88.5	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.06%	0.075%	0.074%	
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	44%	44%	44%	
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	0 78	0 78	0 77	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	0	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side)

Form AD-1006 (10-83)

This form was electronically produced by National Production Services Staff

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 12/6/07
Name Of Project US 127 Widening	Federal Agency Involved FHWA
Proposed Land Use Transportation/Right-of-Way	County And State Clinton and Russell Counties, Kentucky
PART II *(To be completed by NRCS)*	Date Request Received By NRCS

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes ☑ No ☐		Acres Irrigated N / A	Average Farm Size 110 Acres
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 163,702 % 59	Amount Of Farmland As Defined in FPPA Acres: 121,969 % 44	
Name Of Land Evaluation System Used Russell / Clinton LESA	Name Of Local Site Assessment System N / A	Date Land Evaluation Returned By NRCS 1/14/08	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	344.4	339.8	331.1	335.5
B. Total Acres To Be Converted Indirectly	0.0	0.0	0.0	0.0
C. Total Acres In Site	344.4	339.8	331.1	335.5
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	25.0	47.6	32.5	40.1
B. Total Acres Statewide And Local Important Farmland	82.6	76.4	88.5	82.5
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.1	0.1	0.1	0.1
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	44.0	44.0	44.0	44.0
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	78	78	77	78

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use	15	15	15	15	15
2. Perimeter In Nonurban Use	10	10	10	10	10
3. Percent Of Site Being Farmed	20	2	2	2	2
4. Protection Provided By State And Local Government	20	0	0	0	0
5. Distance From Urban Builtup Area		0	0	0	0
6. Distance To Urban Support Services		0	0	0	0
7. Size Of Present Farm Unit Compared To Average	10	9	9	9	9
8. Creation Of Nonfarmable Farmland	25	1	1	1	1
9. Availability Of Farm Support Services	5	5	5	5	5
10. On-Farm Investments	20	8	8	8	8
11. Effects Of Conversion On Farm Support Services	25	0	0	0	0
12. Compatibility With Existing Agricultural Use	10	1	1	1	1
TOTAL SITE ASSESSMENT POINTS	160	51	51	51	51
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	78	78	77	78
Total Site Assessment *(From Part VI above or a local site assessment)*	160	51	51	51	51
TOTAL POINTS *(Total of above 2 lines)*	260	129	129	128	129

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection: Selection of Preferred Alignment has not been made as of 9-22-08.

NOTE, 2-17-09--Following evaluation of alternatives, Alternative D was developed that incorporates major segments of Alternatives B and C and a short segment of Alternative A. To evaluated Alternative D for farmland impact, data for Alternatives B and C (which comprise most of the alignment and which, in the interest of impartial disclosure and thoroughness, provide the "worst case scenario") were averaged.

Robert Oney

From: McKinney, Bruce (EPPC DEP DOW) [Bruce.McKinney@ky.gov]
Sent: Thursday, January 17, 2008 3:38 PM
To: Robert Oney
Subject: FW: Indian Creek

Bruce McKinney
Wellhead Protection Program

From: Ray, Joe (EPPC DEP DOW)
Sent: Thursday, January 17, 2008 3:10 PM
To: McKinney, Bruce (EPPC DEP DOW); Goodmann, Peter (EPPC DEP DOW)
Cc: Webb, Jim (EPPC DEP DOW)
Subject: RE: Indian Creek

This spring description resembles a gravity spring/seep of 3-5 gpm (9000-2534) that I inventoried about 3000 ft to the west-southwest (10/2/01). The odor and appearance made me think it was a failed septic system, although there were no suspect septic systems in proximity. I originally named it "Sewage Seep" until one of the Cagles consultants with which we were working informed me that it was a natural sulphur seep. I cannot remember why he believed it was a natural mineral spring- perhaps there are numerous such features in the area.

There is no discharge estimated for Oney's spring, but I would bet it is a minor seep to trickle spring (the Cagles spring inventory did not locate it, although karst springs were mapped upstream and down).

Alternatively, an old oil well that is leaking mineralized water to the surface might be responsible. Distinguishing between a natural sulphur seep and a leaking well may be difficult since the mineralized water source could be similar.

Joe

From: McKinney, Bruce (EPPC DEP DOW)
Sent: Thursday, January 17, 2008 1:59 PM
To: Goodmann, Peter (EPPC DEP DOW)
Cc: Ray, Joe (EPPC DEP DOW)
Subject: RE: Indian Creek

Pete, I talked to Robert Oney originally and thought he probably needed to talk to Tom since it was a surface water issue right off the bat. The white part doesn't seem to be an oil or gas issue but maybe something else.

I don't know if Joe Ray has been to this area or not.

I can run down and check it out if needed

Let me know what you want me to do.
Bruce McKinney
Wellhead Protection Program

From: Goodmann, Peter (EPPC DEP DOW)
Sent: Thursday, January 17, 2008 1:13 PM
To: McKinney, Bruce (EPPC DEP DOW)
Subject: FW: Indian Creek

Peter T. Goodmann, Manager
Watersheds Management Branch and Groundwater Branch
Division of Water
14 Reilly Road
Frankfort KY 40601
(502) 564-3410 ext. 458
(502) 545-8758 (cell)
(502) 564-9636 (fax)

From: VanArsdall, Tom (EPPC DEP DOW)
Sent: Thursday, January 17, 2008 11:34 AM
To: Barclay, Sally (EPPC DEP DOW); Goodmann, Peter (EPPC DEP DOW)
Subject: FW: Indian Creek

I got a call from Robert Oney with Palmer Engineering in Winchester. They are working on US 127 routing in Clinton Co, and they came upon a discharge from what appears to be an uncapped oil/gas well that is forming a wetland that drains into Indian Creek. He says the water is milky in coloration. He called Bruce McKinney, who sent him to me. Do we need to send a field office inspector to look at and take samples, contact Div Oil & Gas, do something from a gw perspective (or all of above)? I would be interested in knowing if it is affecting the quality of Indian Cr.

From: Robert Oney [mailto:roney@palmernet.com]
Sent: Thursday, January 17, 2008 9:52 AM
To: VanArsdall, Tom (EPPC DEP DOW)
Subject: FW: Indian Creek

Sorry Tom I had your e-mail address wrong the first time.

From: Robert Oney
Sent: Tuesday, January 08, 2008 1:27 PM
To: 'tom.vanarsdale@ky.gov'
Subject: Indian Creek

Tom,
I am currently working on a transportation project US 127 in Clinton and Russell Counties near Lake Cumberland. The area is very karst and there are numerous old oil wells throughout the proposed projects alignments. While performing a stream assessment one day we encountered a small wetland in in the floodplain of a perennial stream named Indian Creek on USGS topos in Clinton County. Within the wetland there was a centrally located spring where water rose from the ground. The water was cloudy to milky white in color and smelled like rotten-eggs (possibly hydrogen sulfide). What I am trying to

determine as part of the ecological report for the project is what is causing the water to have a white coloration and odor. Is this white color some type of sulfur precipitant? I have attached some photos of the area showing the precipitant color, GPS coordinates for the site (36° 46' 01.6" N, -85° 09' 03.1" W) and a topographic map. I am fairly sure this is some type of groundwater contamination but could this be caused from an oil well which was not capped properly? Thank you for your time and attention to this matter. If you need any additional information please feel free to contact me.

Robert C. Oney

Environmental Biologist

Palmer Engineering

(859) 744-1218