APPENDIX O

COOPERATING AGENCY COORDINATION



DEPARTMENT OF THE ARMY

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS POST OFFICE BOX 867 LITTLE ROCK, ARKANSAS 72203-0867

AUG 1 2 1998

Engineering and Technical Services Division Regulatory Section

File No. 13685-1

Ms. Brenda Frice Environmental Division Arkansas State Highway and Transportation Department P.C. Box 2261 Little Rock, Arkansas 72203-2261

Dear Ms. Price:

This is in regard to your request on July 21, 1998, for the Little Rock District (LRD) to be a cooperating agency in preparation of an Environmental Impact Statement (EIS) for the construction of 17 miles of fully controlled access four-lane divided highway. The proposed highway would be on a new location, connecting U. S. Highway 412 west of Sonora to U. S. Highway 412 west of Tontitown, and will serve as a northern bypass of Springdale in Benton and Washington Counties, Arkansas (Job No. 040266).

The LRD would appreciate being made a cooperating agency in the preparation of the EIS. I will be your point of contact in regard to environmental documentation for a Department of the Army Section 404 permit.

If you have any questions, please contact me at (501) 324-5295 and refer to Field No. 13685-1.

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Larry J. Harrison Project Manager



DEPARTMENT OF THE ARMY

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS POST OFFICE BOX 867 LITTLE ROCK, ARKANSAS 72203-0867 AUG 3 () 2001

Planning, Environmental and Regulatory Division Regulatory Branch

FILE No. 13685-3

Mr. Marion Butler Division Head, Environmental Division Arkansas State Highway and Transportation Department P.O. Box 2261 Little Rock, Arkansas 72203-2261

Dear Mr. Butler:

Please reference the Draft Environmental Impact Statement (EIS) for the Springdale Northern Bypass, Docket No. FHWA-AR-EIS-01-01-d.

The Draft EIS outlines a study on four (4) different alternative alignments for the proposed highway project. The study indicates that no wetlands have been identified along any of the alignments. However, the study did indicate that each alignment would cross numerous streams that are considered to be other waters of the United States (waters).

The discharge of fill material associated with constructing a highway crossing of these waters requires authorization pursuant to Section 404 of the Clean Water Act. A preliminary inspection revealed that the discharges may be authorized by Department of the Army Nationwide Permits No. 14, provided that all its conditions are met. When a preferred alignment is selected and detailed plans are finalized for all its crossings, please submit a copy to our Regulatory Branch for a final permit determination.

We appreciate your cooperation in the Regulatory Program. The evaluation of your project will be given high priority and all procedures will be expedited to the fullest extent possible. If you have any questions, please contact the Project Manager for this action, Mr. Larry Harrison of the Regulatory Branch, at (501) 324-5296 and refer to Permit No. 13685-3.

Sincerely,

Atavia

ferry L. Harris, P.E. Chief, Regulatory Branch

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Dan Flowers Director Telephone (501) 569-2000



P.O. Box 2261 Little Rock, Arkansas 72203-2261 Telefax (501) 569-2400

April 22, 2004

Mr. Larry Harrison U. S. Army Corps of Engineers Little Rock District P.O. Box 0867 700 West Capitol Avenue, Room 6110 Little Rock, Arkansas 72203-0867

> Re: AHTD Job Number 001966 Springdale Northern Bypass (Hwy. 412) Benton and Washington Counties

Dear Mr. Harrison:

A draft copy of the Supplemental Draft Environmental Impact Statement for the referenced project is enclosed for your review and comment. This draft is currently undergoing Cooperating Agency and Interdisciplinary Staff review within the Department and is not yet released for public dissemination. We would appreciate it if you are able to expedite the review process and return your comments by May 7, 2004.

If you have any questions regarding this information, please contact Brenda Price at (501) 569-2284.

Sincerely,

Marion Butler Division Head Environmental Division

Enclosures

MB:BP:lt



DEPARTMENT OF THE ARMY LITTLE ROCK DISTRICT, CORPS OF ENGINEERS POST OFFICE BOX 867 LITTLE ROCK, ARKANSAS 72203-0867

Planning, Environmental and Regulatory Division Regulatory Branch

APR 2 9 2004

FILE NO. 13685-4

Mr. Marion Butler Division Head, Environmental Division Arkansas State Highway and Transportation Department P.O. Box 2261 Little Rock, Arkansas 72203-2261

Dear Mr. Butler:

Please reference the Supplemental Draft Environmental Impact Statement (EIS) for the Springdale Northern Bypass, Docket No. FHWA-AR-EIS-01-01-d.

The Supplemental Draft EIS outlines a study on four (4) different alternative alignments for the proposed highway project. The study indicates that no jurisdictional wetlands have been identified along any of the alignments. However, the study did indicate that each alignment would cross numerous streams that are considered to be waters of the United States (waters).

The discharge of fill material associated with constructing a highway crossing of these waters requires authorization pursuant to Section 404 of the Clean Water Act. A preliminary inspection revealed that the discharge for each crossing might be authorized by Department of the Army Nationwide Permit No. 14, provided that all its conditions are met. When a preferred alignment is selected and detailed plans are finalized for all its crossings, please submit a copy to our Regulatory Branch for a final permit determination.

We appreciate your cooperation in the Regulatory Program. The evaluation of your project will be given high priority and all procedures will be expedited to the fullest extent possible. If you have any questions, please contact the Transportation Program Manager, Mr. Larry Harrison of the Regulatory Branch, at (501) 324-5296 for this action, and refer to File No. **13685-4**.

Sincerely,

Agrees Jerry L. Harris, P.E.

Jerry L. Harris, P.E. Chief, Regulatory Branch

CERTIFIED MAIL - RETURN RECEIPT REQUESTED



DEPARTMENT OF THE ARMY LITTLE ROCK DISTRICT, CORPS OF ENGINEERS POST OFFICE BOX 867 LITTLE ROCK, ARKANSAS 72203-0867

Planning, Environmental and Regulatory Division Regulatory Branch

File No. 13685-4

Mr. Marion Butler Division Head Environmental Division Arkansas State Highway and Transportation Department PO Box 2261 Little Rock, Arkansas 72204-3

Dear Mr. Butler:

Please reference the Final Environmental Impact Statement (FEIS) for the Springdale Northern Bypass, Docket No. FHWA-AR-EIS-01-01-d.

The FEIS outlines the selection of a preferred alignment for the subject project that would require the discharge of fill material into 0.2 acres of wetlands and into less than 0.1 acres of other waters of the United States, per crossing, to construct 21 bridge/culvert crossings (Table 4-14). We have previously determined that the wetlands are isolated and therefore, not subject to regulation under Section 404 of the Clean Water Act. Also, the discharge associated with constructing each bridge/culvert crossing appears to be authorized under Nationwide Permit No. 14. When detailed plans are finalized for all the bridge/culvert crossings, please submit a copy to our Regulatory Branch for a final permit determination.

We appreciate your cooperation in the Regulatory Program. The evaluation of your project will be given high priority and all procedures will be expedited to the fullest extent possible. If you have any questions, please contact me at (501) 324-5296 and refer to Permit No. 13685-4:

Larry J. Harrison Transportation Program Manager Regulatory Branch



IN REPLY REFER 10:

United States Department of the Interior

FISH AND WILDLIFE SERVICE 1500 Museum Road, Suite 105 Conway, Arkansas 72032 Tel.: 501/513-4470 Fax: 501/513-4480

August 10, 2001

Mr. Marion Butler Arkansas State Highway and Transportation Department P.O. Box 2261 Little Rock, AR 72203-2261

Dear Mr. Butler:

The U.S. Fish and Wildlife Service (Service) has received your letter and Draft Environmental Impact Statement for the Springdale Northern Bypass (Hwy 412), AHTD Job Number 040266, located in Benton and Washington Counties in Arkansas. Therefore, we submit the following comments in accordance with your request and Section 7 of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.).

The proposed project consists of construction of a four-lane bypass around the existing U.S. Hwy 412 through Springdale, Arkansas. All alternative alignments begin at an interchange with existing U.S. Hwy 412 west of Tontitown where the highway presently changes from four to five lanes and will end with an interchange on existing U.S. Hwy 412 between the Springdale castern city limits and Beaver Lake. The length of the proposed project is between 14.6 and 18.9 miles (23.5 and 30.4 kilometers) depending on the selected alignment.

The Service recommends that the statement should discuss the potential impacts to migratory birds and commitments to minimizing harm to species protected by the Migratory Bird Treaty Act (16 U.S.C. 703-712). Numerous species of migratory birds protected under the Act are located within this area and may be nesting on bridges, in trees, and/or within structures. Special consideration should be given to the times and dates of construction, the surveying for nesting sites, and to consulting with the Service for guidance.

Thank-you for the opportunity to review the draft EIS and provide comments. If you have any questions or additional comments, please contact Lindsey Lewis in our office at (501) 513-4489.

Margant Harney

Margaret Harney

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Dan Flowers Director Telephone (501) 569-2000



P.O. Box 2261 Little Rock, Arkansas 72203-2261 Telefax (501) 569-2400

December 10, 2002

Mr. Allan Mueller U.S. Fish and Wildlife Service 1500 Museum Road Suite 105 Conway, Arkansas 72032

> Re: AHTD Job Number 040266 Springdale Northern Bypass (U.S. 412) Benton and Washington Counties

Dear Mr. Mueller:

The Federal Highway Administration and Arkansas State Highway and Transportation Department are planning to complete a Supplemental Draft Environmental Impact Statement (SDEIS) on the referenced project. Although the Draft Environmental Impact Statement (DEIS) was signed in January 2002, comments submitted by citizens at the Location Public Hearing have prompted us to investigate an additional alignment. The scope of the SDEIS is to be limited to Sections B-E of the project as shown on the enclosed map.

Please review and respond with your comments concerning the additional alignment. Enclosed are topographic maps and an aerial photograph illustrating the project. Thank you for your cooperation, and if you have any questions, please contact Brenda Price of my staff at (501) 569-2281.

Sincerely,

utt

Marion Butler Division Head Environmental Division

Enclosures

MB:BP:dfs



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE 1500 Museum Road, Suite 105 Conway, Arkansas 72032 Tel.: 501/513-4470 Fax: 501/513-4480 February 10, 2003

Mr. Marion Butler, Environmental Division Head Arkansas State Highway and Transportation Department P.O. Box 2261 Little Rock, Arkansas 72203-2261

Dear Mr. Butler,

The U.S. Fish and Wildlife Service (Service) received your letter dated December 10, 2003, concerning an additional alternative to the realignment of Arkansas highway 412 which was developed based on citizen comments submitted during a Location Public Hearing. The proposed realignment occurs within Washington and Benton counties, Arkansas. Our comments are submitted in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661-667e) and the Endangered Species Act (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.).

The proposed realignment alternative courses approximately 1/4 mile away from the delineated recharge area of Cave Springs Cave, a known site harboring the endangered grey bat (*Myotis grisescens*), and Ozark Cavefish (*Amblyopsis rosae*). The Illinois River watershed also contains two candidate species, the Neosho Mucket (*Lampsilis rafinesqueana*), and the Arkansas Darter (*Etheostoma cragini*) which occurs within spring runs throughout the watershed.

The geology in the Ozarks is comprised primarily of karst geology, where surface waters interact with the hydrogeologic processes of the underlying karst ecosystems. Karst ecosystems throughout the Ozarks are commonly inhabited by threatened and endangered species. In order to conserve and protect karst resources the Service recommends the following. In areas where karst surface features occur (ie; losing streams, springs, sinkholes, caves), establish a minimum of 100' vegetated buffer where herbicides, fertilizers, vehicle maintenance and storage, and petroleum products are not applied or stored. Excavation, trenching, blasting, drilling, and associated activities within or adjacent to karst features could have detrimental impacts on species within karst ecosystems. Surface reconnaissance should identify all visible karst surface features.

If a cave or fracture is breeched or surface water is rerouted into karst conduits, all activities should cease and the US Fish and Wildlife Service should be contacted to assess the situation and provide further consultation before proceeding. The Service should assess the cave for threatened and endangered species and provide further consultation before activities proceed. No blasting should be permitted in the vicinity of any known caves without previous consultation.

Below is a preliminary list of known karst features in the vicinity of the proposed highway realignment:

1) Three caves flooded by Beaver Lake:

a)Bat Cave-Township 17, Range 29, Section 1, NW1/4 NE1/4, 400' long b)White River Cave-Township 17, Range 29, Section 1, NE 1/4 SW 1/4, 30' long; out at low water

c)Head Cave- Township 17, Range 29, Section 12, SW 1/4 NE 1/4, 2000' long; upper part not flooded, should be mapped

2) One cave is a sump, under creek bed at road crossing; Township 17, Range 29, Section 2, SW 1/4 NW1/4

- 3) Filled sink at Township 17, Range 29, Section 10, NW 1/4 SW 1/4
- 4) 80' "dug" well with reported cave at bottom at Township 17, Range 29, Section 9
- 5) Hewitt Spring: locked spring house on Sonora Quad in Township 17, Range 29, Section 29
- 6) Cave at Township 18, Range 29, Section 34, SE 1/4 SE 1/4, 160 long, avg 6' x 3'
- 7) Spring marked on quad in Township 18, Range 31, Section 21

The Service appreciates the Arkansas Department of Transportation's interest in protecting threatened and endangered species and karst habitat. Application of Best Management Practices and mutual cooperation serve as guidance for the proper way to implement future highway projects in karst landscapes. The Service appreciates the opportunity to comment and locks forward to further cooperation and coordination in assisting with this project if necessary. If you have any questions or additional comments, please contact David Kampwerth at (501) 513-4477.

Sincerely, argant Harney

Margaret Harney Acting Field Supervisor

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Dan Flowers Director Telephone (501) 569-2000



P.O. Box 2261 Little Rock, Arkansas 72203-2261 Telefax (501) 569-2400

April 22, 2004

Mr. Alan Mueller U. S. Fish & Wildlife Service 1500 Museum Road, Suite 105 Conway, Arkansas 72032

> Re: AHTD Job Number 001966 Springdale Northern Bypass (Hwy. 412) Benton and Washington Counties

Dear Mr. Mueller:

A draft copy of the Supplemental Draft Environmental Impact Statement for the referenced project is enclosed for your review and comment. This draft is currently undergoing Cooperating Agency and Interdisciplinary Staff review within the Department and is not yet released for public dissemination. We would appreciate it if you are able to expedite the review process and return your comments by May 7, 2004.

If you have any questions regarding this information, please contact Brenda Price at (501) 569-2284.

Sincerely,

Marion Butler Division Head Environmental Division

Enclosures

MB:BP:lt



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE 1500 Museum Road, Suite 105 Conway, Arkansas 72032 Tel.: 501/513-4470 Fax: 501/513-4480

August 5, 2004

Mr. Randal Looney Federal Highway Administration Arkansas Division 700 West Capitol Avenue Room 3130 Little Rock, Arkansas 72201-3298

Subject: Springdale Northern Bypass, Alternative Alignment Five

Dear Mr. Looney:

This letter addresses Springdale Northern Bypass Supplemental Draft Environmental Impact Statement (SDEIS). Maintaining the ecological integrity of the recharge area for Cave Springs Cave is very important to the survival of the federally listed threatened Ozark cavefish (*Amblyopsis rosae*). As a result, we have been concerned about the acceptability of alignment five as presented in the SDEIS. A meeting on July 29, 2004 with the Arkansas Highway and Transportation Department (AHTD) and Federal Highway Administration (FHWA) environmental staff provided additional information that requires a reassessment of our comments on the proposed project.

Alignment five is located approximately one quarter mile outside the recharge area at the closest point. The greatest concern of the Fish and Wildlife Service with alignment five is the potential for impacts to the Cave Springs Cave recharge area through secondary and cumulative effects as a result of development along the new highway alignment. For this reason, alignments two, three, and four were considered more favorable than alignment five. AHTD staff members explained that selection of alignments two or four would result in the relocation of Wagon Wheel Road and the I-540 local access interchange, providing local traffic an access point closer to the recharge area, whereas alignment five would not. Alignment five does not allow access at the point where it intersects Interstate 540 near the recharge area. This would prevent access to local traffic and therefore limit induced development. Drainage and storm water runoff were also of concern, but it was noted that due to topography of the surrounding lands, runoff from alignment five would not discharge into the Cave Springs Cave recharge area.

An elementary school has been constructed within alignment two, which also impacts the greatest number of minority communities in the area. Selection of alignment four would also increase impacts to Callahan Mountain, which would undergo extensive blasting for cuts and fills needed to level the right of way around the mountain.

Alignment three would have identical impacts to Callahan Mountain, but would not provide a direct arterial route through the Cave Springs Cave recharge area. Alignment three would also impact Spring Creek by creating a greater potential for induced development within the associated floodplain due to the resulting local interchange relocation.

If the following conditions are made an integral part of alignment five, the Fish and Wildlife Service has no objection to construction of this alignment. To minimize potential impacts that could result from the construction of alignment five, the FHWA and AHTD are requested not to build additional interchanges between Interstate 540 and Highway 112 and to limit frontage roads as follows:

1. The directional interchange of alignment five and I-540 would provide no local access.

2. No additional interchanges would be constructed between the I-540 and Arkansas State Highway 112.

3. No frontage roads would be built along the highway between the two interchanges mentioned in #2. This restriction includes local road construction under the control of FHWA or AHTD utilizing the resources of either agency (an emphasis being placed on those roads which would allow additional access to the Cave Springs Cave recharge area). Two short lengths of road have been approved by the Fish and Wildlife Service that would run parallel to the proposed right of way to provide connectivity for local roads severed by the alignment. These severed roads are Puppy Creek Road/Spring Creek Road and Wagon Wheel/South Zion Road. Puppy Creek Road would be rerouted to connect to Spring Creek Road, and South Zion Road could be reconnected to Wagon Wheel Road. The Service requests that a grade separation be placed on both Wagon Wheel Road and South Zion Road to resolve the connectivity issue in that area if design and budget criteria allow.

4. Drainage along this section of the new highway will not be allowed to enter the Cave Springs Cave recharge area as delineated in the DEIS.

Other outstanding issues involve at least one cave habitat, Split Cave, near Beaver Lake that has the potential to support the Ozark cavefish. This cave system could be affected by Segment E-F of each alignment. The flooded portion of this cave has recently been explored by expert cave divers, but visibility was too low to perform adequate surveys. The cave is scheduled to be explored again on August 22, 2004 when water levels in the lake should have subsided to appropriate levels. If cavefish are discovered in the cave, we will request a delineation of the recharge area and recommend further coordination to resolve the associated potential impacts

before completion of the final EIS. In addition to this cave, there is the potential for more cave resources to become known through upcoming public involvement meetings, which would require further coordination to avoid damages to these resources. We will work with the AHTD to ensure a timely and thorough investigation of any new resources that may be discovered.

Our comments to date also addressed wetland impacts and migratory bird issues. These comments should be reviewed and addressed in the final EIS. We thank the AHTD and FHWA for the opportunity to comment on this project and look forward to working with you in the future to conserve fish and wildlife resources. For future correspondence on this matter, please contact Mitch Wine of this office at 501-513-4488.

Sincerely,

Muelle Allan J/Mueller

Field Supervisor

cc:

Marion Butler, AHTD Bill Richardson, AHTD John Harris, AHTD Brenda Price, AHTD Sherry LeBlanc, AHTD Robert Leonard, AGFC' Wanda Boyd, EPA Cindy Osborne, ANHC



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE 1500 Museum Road, Suite 105 Conway, Arkansas 72032 Tel.: 501/513-4470 Fax: 501/513-4480

March 3, 2005

Mr. Randal Looney Federal Highway Administration Arkansas Division 700 West Capitol Ave. Room 3130 Little Rock, AR 72201-3298

Subject: Cambarus aculabrum Recharge Delineation Request, Washington County, Arkansas

Dear Mr. Looney:

This letter addresses the discovery of a single specimen of the federally listed endangered cave crayfish (*Cambarus aculabrum*) near Lake Elmdale, just south of Elm Springs, Arkansas. The crayfish was discovered by a private landowner in July 2004 and positively identified as *C. aculabrum* in September 2004 through genetic testing by the Missouri Department of Conservation. U. S. Fish and Wildlife Service (Service) biologists believe that additional endangered cave crayfish exist in the underlying karst topography, which is fed by numerous springs in the area, and warrant protection under the Endangered Species Act of 1973, as amended (Act).

Cambarus aculabrum was described from two cave streams in Benton County, Arkansas by H.H. Hobbs, Jr. and A.V. Brown in 1987. It is a small, white, obligate cave dwelling (troglobitic) crayfish with an overall body length reaching about 48 millimeters (1.8 inches). This species is distinguished from related surface species by a total lack of pigment. The Service listed *Cambarus aculabrum* as endangered in 1993 as a result of its limited range and threats from groundwater pollution.

Three projects are currently planned on the landscape surrounding this new cave crayfish location which the Service believes have the potential to affect the species either directly or through cumulative impacts: construction of the Springdale northern bypass, construction of the Northwest Arkansas Regional Airport (NWARA) connector road, and the proposed expansion of the Tontitown landfill. This discovery represents new information and these comments are in addition to those issued previously under the Act. The Service does not have sufficient information to determine if any of the aforementioned projects are likely to affect the endangered cave crayfish at this time. Therefore, the Service requests that a formal recharge delineation

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study be undertaken to determine the surface groundwater system servicing the crayfish site in question. Upon completion of the recharge delineation, the Service will determine the potential for impacts from each project and decide if further consultation is warranted under section 7 (a)(2) of the Act.

The study must be completed by a Service approved biologist with expertise in recharge delineation within karst topography of the Ozark Highlands of Arkansas. It is also recommended that the study be undertaken during the spring of 2005 to avoid delaying planned projects to the greatest extent possible. The Ozark Underground Laboratory, located in Protem, Missouri, has performed numerous such delineations in the past and is available to conduct the study within the time constraints.

Funding of the recharge delineation should be the responsibility of all parties involved and should take into consideration the potential for impacts from each project. The Service believes that the greatest potential for impacts is posed by construction of the Springdale bypass and NWARA connector road due to cumulative impacts from induced development that will occur after the construction of those facilities. Therefore, the Service recommends that authorities undertaking those projects (the Arkansas Highway and Transportation Department with Federal Highway Administration funding and Waste Management landfill operators) divide the costs in manner acceptable to all parties. Preliminary conversations with involved parties have indicated that this is an acceptable proposition with an estimated total cost of approximately \$20,000 for the delineation study.

Copies of this letter will be provided to all involved parties and should be regarded as an official request to each entity for funding of the recharge delineation study. Please respond in writing as soon as possible regarding your participation in this request. Thank you for your time and consideration in this matter. For future correspondence on this matter, please contact Mitch Wine of this office at 501-513-4488.

Sincerely,

ally Much Allan J. Mueller **Field Supervisor**

cc:

John Harris, Arkansas Highway and Transportation Department Nicole Beckman-Montgomery, Barnard Dunkelberg and Company James Dunbar, Waste Management, Two Pines Landfill Cindy Osborne, Arkansas Natural Heritage Commission Wanda Boyd, Environmental Protection Agency Robert Leonard, Arkansas Game and Fish Commission Tim Snell, The Nature Conservancy



IN REPLY REFER TO

United States Department of the Interior

FISH AND WILDLIFE SERVICE 1500 Museum Road, Suite 105 Conway, Arkansas 72032 Tel: 501/513-4470 Fax: 501/513-4480

June 8, 2005

Mr. Marion Butler Division Head, Environmental Division Arkansas Highway and Transportation Department P.O. Box 2261 Little Rock, Arkansas 72203-2261

Subject: Review of Preliminary Final Environmental Impact Statement (FEIS) for the Springdale Northern Bypass, U.S. Highway 412, Washington and Benton Counties, Arkansas

Dear Mr. Butler:

This letter responds to your May 27, 2005 letter requesting comments on the above referenced project. The FEIS is well organized and generally well written. United States Fish and Wildlife Service (Service) staff has been working closely with Federal Highway Administration (FHWA) and Arkansas Highway and Transportation Department (AHTD) personnel to avoid impacts to fish and wildlife resources in the project area. Prior comments on the proposed project included a letter dated August 5, 2004 (Appendix O-10) which outlines several commitments agreed upon by Service staff and FHWA/AHTD personnel. The letter is included in the appendix and addressed in the "comments and response" section on pages 7-82 through 7-85, but is not referenced in the "commitments" section of the document. We believe that this letter should be referenced in the "commitments" section of the FEIS where appropriate (under section 5.5 or section 5.13 for example). We also request that the letter be referenced in the "general description of the preferred line" on page 2-34 of the FEIS to assure that these commitments are evident to readers of the document.

Another resource of concern mentioned in the August 5, 2004 letter was Split Cave near Beaver Lake which could be impacted by segment E-F of each alignment. A team of cave divers explored Split Cave on 6-12-04 and again on 9-05-04 and found no threatened or endangered species in the cave. The team did note many large catfish in the cave which likely excludes the possibility of sensitive species occurring in the cave. Despite these findings, Split Cave provides important habitat for fish and wildlife, and provides a natural conduit to Beaver Lake (a local drinking water supply). Therefore, every effort should be made to protect this cave during construction of the proposed bypass.

Section 5.13 on page 5-8 of the preliminary FEIS references an ongoing recharge delineation for a karst spring system located near Lake Elmdale along Highway 112 which is known to support the endangered cave crayfish (*Cambarus aculabrum*). Results from the delineation will determine if the preferred line lies within the recharge zone for the spring system. If the preferred line lies within the recharge zone, a biological assessment will be necessary to determine potential impacts to the endangered cave crayfish and the need for further consultation pursuant to section 7 of the Endangered Species Act.

In addition to known karst resources, there is potential for discovery of other important karst habitat along the preferred line prior to or during construction. The true extent of the subterranean environment is difficult to clearly delineate. Undiscovered karst features, such as a cave openings, sink holes, and underground passages, may occur on or near the preferred line, even in previously developed areas. Therefore, the following precautionary measures are recommended to avoid impacts to federally listed and sensitive species that may inhabit caves which have not been previously surveyed:

- 1. Survey new right-of-way for karst features such as cave openings and sinkholes.
- Establish a buffer area of about 300 feet around any caves or sinkholes found during the survey (or during any aspect of project implementation). The Service should be contacted for further evaluation to determine if the cave is used by federally listed or sensitive cave species.
- 3. If a cave is used by federally listed or sensitive species, we will likely require the cave to be mapped when bats are not present to determine if any additional openings or passages may be affected by the project. In addition, we may recommend slight modifications of the proposed project to allow additional buffer areas to be established. Incorporation of additional buffer areas may be necessary to avoid impacts to federally listed species.
- 4. In the event that holes or other openings are encountered during construction activities, the Service requests that work efforts cease in the immediate vicinity of the opening. The opening should be adequately marked and protected from work activities. Construction efforts should be directed around the opening and the Service should be contacted immediately. No fill materials should be placed into the opening until Service or Service approved personnel have the opportunity to investigate the site thoroughly.

The Service appreciates the opportunity to comment on this project. If you have any questions, please contact Mitch Wine of this office at 501-513-4488.

Mayart Harney Margaret Harney

Mårgaret Harney Team Leader

ce:

Randal Looney, FHWA John Harris, AHTD John Fleming, AHTD Brenda Price, AHTD Sherry LeBlanc, AHTD Cindy Osborne, ANHC Robert Leonard, AGFC Wanda Boyd, EPA