



United States Department of the interior

FISH AND WILDLIFE SERVICE  
ENDANGERED SPECIES FIELD OFFICE  
PLATEAU BUILDING, ROOM A-5  
50 SOUTH FRENCH BROAD AVENUE  
ASHEVILLE, NORTH CAROLINA 28801

July 11, 1983

File

#63

Mr. Eddie L. Wood  
State Conservationist  
Soil Conservation Service  
333 Waller Avenue, Room 305  
Lexington, KY 40504

Re: 4-2-83-048

Dear Mr. Wood:

This is in response to your letter of June 10, 1983, received June 13, 1983, requesting consultation under Section 7 of the Endangered Species Act of 1973, as amended. Consultation was requested on the impacts of the Short Creek Watershed project on the endangered Indiana bat (*Myotis sodalis*). This presents the Biological Opinion of the U.S. Fish and Wildlife Service in accordance with Section 7 of the Endangered Species Act, as amended.

The only species considered in this consultation is the endangered Indiana bat. No Critical Habitat has been designated for this or any other federally listed endangered species within the impact area of the Short Creek Watershed project.

We have reviewed the biological information provided in your assessment for this project along with other pertinent documents in our files. Copies of pertinent documents and documentation of personal communications are contained in an administrative record maintained in this office.

After reviewing the proposed action and the available biological information, including the cumulative impacts of the proposal, it is my Biological Opinion that, although the project will adversely affect the Indiana bat, it is not likely to jeopardize the continued existence of this species.

Proposed Action and Impact Assessment

The Soil Conservation Service has designed and is in the process of implementing the Short Creek Watershed project in Grayson County, Kentucky. The purpose of the project is to reduce to acceptable levels the frequency of flooding of agricultural land within the watershed. The portion of the project under consideration in this consultation consists of the channelization of 6.8 miles of Short Creek and Spring Fork. The limits of the proposed channelization are the Highway 54 bridge and the confluence of Spring Fork and Rough River. Work proposed will include channel clearing and snagging, excavation, and realignment. In an effort to reduce the significance of project impacts, the Soil Conservation Service has required

the project's sponsors to acquire easements for five cut-off areas. The project is designed in a way to insure that low level flows will continue to pass through these cut-off natural stream channels after construction is completed. Additionally, clearing will be limited to one side of the channel whenever possible.

The Soil Conservation Service assessment for the project included an evaluation of the suitability of the affected habitat for use by Myotis sodalis. Of the 13.6 miles of stream bank impacted, 3.26 miles did not have trees, 8.30 miles had trees but due to their size or species were not deemed suitable for use as roost sites for Myotis sodalis, and 2.04 miles appeared to provide optimum summer habitat for Myotis sodalis. A total of 3.95 miles of stream bank vegetation will be lost during project construction and .88 mile of this total is in the category which appeared to provide optimum summer habitat.

The assessment states that Myotis sodalis use of project area is accepted. However, the Soil Conservation Service believes this is limited to summer use by males and transient use in spring, later summer and fall by males and females. The assessment further states that the Soil Conservation Service does not believe that the area supports Myotis sodalis maternity roosts.

We believe that there is insufficient information available to categorically exclude maternity roosts in this habitat. To the contrary, we believe that based upon the available data such use is probable.

In 1974 and 1975, less than ten years ago, Humphrey, et al. (1977), studied the first known maternity site for Myotis sodalis. Prior to this study, the location, characteristics, and requirements for these sites were unknown. In 1978, Cope, et al. (1978), studied two different maternity colonies as a part of the Corps of Engineers environmental analysis of the Big Blue Lake project area. All three of these sites are in Indiana. There are additional records from northern Missouri consisting of pregnant and lactating female captures which indicate that maternity colonies are also established in that state (LaVal and LaVal 1980). The actual location of the Missouri maternity roosts is not known.

In 1979, the first evidence that Myotis sodalis establishes maternity roosts in Kentucky was obtained for a site on Knob Creek in Bullitt County. This study was also conducted for the Corps of Engineers and was reported by Kessler, et al. (1981). Although the actual roost was not located during this study, the capture of two pregnant Myotis sodalis in late June clearly indicates that a roost existed in close proximity to the capture site. Humphrey, et al. (1977), found that by June 1 the females occupying the roost had arrived. Parturition took place about one month later. During this time period, foraging was limited to a small area (.82 km of stream) immediately adjacent to the roost. Cope, et al. (1978), indicate that Myotis sodalis will not fly over open water or along unvegetated portions of streams to reach their foraging sites. We believe that the evidence available clearly indicates that Kessler, et al. (1981), recorded the first known Myotis sodalis maternity site in Kentucky. This belief is supported by the evidence that:

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- (1) Pregnant females were captured in late June. Females are not transient at this time and have established their maternity roosts for the season.
  - (2) The females were captured at a time when they would be anticipated to be foraging within less than one km of the maternity roosts. The Knob Creek site is 2.6 km (air distance) from Indiana. Flight distance from Indiana would be considerably greater (at least 7.2 km).
  - (3) Indiana is separated by a large barrier of open water (the Ohio River) from the Knob Creek site.

In 1980, four adult female Myotis sodalis were captured between July 25 and August 14 along Martin Creek, Daviess County, Kentucky (Harvey and Kennedy, 1980). The following year (1981), further study of this site resulted in the capture of a pregnant female on June 10, and a lactating female on July 6 (Harvey and Kennedy, 1981). This site is 7.2 km (air distance) or 12.5 km (approximate flight distance) from Indiana. For the reasons outlined above, we believe this information established the second record of a Myotis sodalis maternity colony within Kentucky.

It is obvious that Myotis sodalis maternity roosts are located much further south than was previously believed. How far south they occur from the previously accepted southern limit can only be determined through continued investigation.

Because of the presence of suitable habitat in the Short Creek project area and the short distance from the previously documented Kentucky maternity sites, we believe that it is likely that Myotis sodalis maternity roosts occur in the project impact area. The project as proposed may adversely affect the endangered Indiana bat by reducing the extent and quality of its summer habitat. However, in light of the quantity of suitable habitat presently available throughout the species' summer range and the limited amount of habitat to be destroyed, we believe that the project is not likely to jeopardize the continued existence of the endangered Indiana bat.

As a conservation enhancement measure, we strongly recommend that removal of trees during project construction be scheduled outside of the time period the Indiana bat would be expected to be in the area (no cutting between May 1 and September 1).

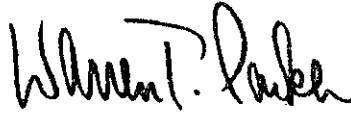
The Soil Conservation Service is reminded of its continuing responsibility to review its actions in light of Section 7 and to reinstate this consultation if new information becomes available which indicates that this project may affect listed species in a manner not considered in this consultation, Critical Habitat is designated that may be affected by the action, or additional species are listed which may be affected by this action.

In meeting the provision for "incidental take" in Section 7(b)(4) of the Endangered Species Act, we have reviewed the biological information and other available information relative to this action. Based upon our review,

incidental take is not authorized for the Indiana bat during implementation of your action.

If you have any questions concerning this letter, please contact Mr. Robert Currie of Mr. Gary Henry, FTS 672-0321, commercial (704) 258-2850, ext 321.

Sincerely yours,

A handwritten signature in black ink that reads "Warren T. Parker". The signature is written in a cursive style with a large, prominent "W" and "P".

Warren T. Parker  
Field Supervisor

cc:

District Engineer, Louisville District  
Director, FWS, Washington, DC (OES)  
Regional Director, FWS, Atlanta, GA (SE)  
Field Supervisor, FWS, Ecological Service, Cookeville, TN

## LITERATURE CITED

1. Cope, James B., A.R. Richter and D.A. Seerley. 1978. A Survey of the Bats in the Big Blue Lake Project Area in Indiana: Final Report. Unpublished report to the Louisville District, Corps of Engineers. 51 pages.
2. Harvey, Michael J. and M.L. Kennedy. 1980. Occurrence of the Endangered Indiana Bat (*Myotis sodalis*) in the Impact Area of Solvent Refined Coal Demonstration Plant (SRC-1), Newman, Kentucky. Unpublished report to International Coal Refining Company and United States Department of Energy. 12 pages, plus 1 table and 15 figures.
3. Harvey, Michael J. and M.L. Kennedy. 1981. 1981 Field Survey for the Endangered Indiana Bat (*Myotis sodalis*) in the Impact Area of the Solvent Refined Coal Demonstration Plant (SRC-1), Newman, Kentucky. Unpublished report to International Coal Refining Company. 20 pages.
4. Humphrey, Stephen R., A.R. Richter and J.B. Cope. 1977. "Summer Habitat and Ecology of the Endangered Indiana bat (*Myotis sodalis*)" Journal of Mammalogy 58(3): 334-346.
5. Kessler, John S., W.M. Turner and L. Morgan. 1981. "A Survey for the Indiana bat (*Myotis sodalis*) on Knob Creek, Bullitt County, Kentucky" Transactions of the Kentucky Academy of Science 42(1&2): 38-40.
6. LaVal, R.K. and M.L. LaVal. 1980. Ecological Studies and Management of Missouri Bats, With Emphasis on Cave-Dwelling Species. Terrestrial Series #8, Missouri Department of Conservation. 53 pages.