



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4132

(614) 469-6923/Fax: (614) 469-6919
April 10, 2008

FILE COPY

Timothy M. Hill
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, OH 43216-0899

Attn: Donald Rostofer
John Baird

RE: **LAW-217-9.300 (PID 13628)**

TAILS: 31420-2008-F-0526

Dear Mr. Hill:

This letter is in response to your February 27, 2008 request for site-specific review pursuant to section 7 of the Endangered Species Act of 1973, as amended regarding the project to replace a State Route 217 bridge with a culvert in Lawrence County, Ohio. This project is within range of the **timber rattlesnake** (*Crotalus horridus horridus*), a large shy rattlesnake that is declining throughout its national range. You have indicated that this project may affect but is not likely to adversely affect this species due to the lack of suitable denning habitat. The Service concurs with this determination. This project is also within range of the **Indiana bat** (*Myotis sodalis*). Six potential roost trees occur in the project area and at least one may be suitable for maternity habitat.

On January 26, 2007, the U.S. Fish and Wildlife Service (Service) issued a programmatic biological opinion (PBO) to the Federal Highway Administration (FHWA) for the implementation of the Ohio Department of Transportation's (ODOT) Statewide Transportation Program through January 2012. This PBO established a two-tiered consultation process for ODOT activities, with issuance of the programmatic opinion being Tier 1 and all subsequent site-specific project analyses constituting Tier 2 consultations. Under this tiered process, the Service will produce tiered biological opinions when it is determined that site-specific projects are likely to adversely affect the Indiana bat. When may affect, not likely to adversely affect determinations are made, the Service will review those projects and if justified, provide written concurrence and section 7(a)(2) consultation will be considered completed for those site-specific projects.

In issuing the PBO (Tier 1 biological opinion), we evaluated the effects of all ODOT actions outlined in your Biological Assessment on the federally-listed Indiana bat (*Myotis sodalis*). Your current request for Service review of the State Route 217 bridge project is a Tier 2 consultation under the January 26, 2007, PBO. We have reviewed the information contained in the information submitted by your office describing the effects of the proposed project on federally-listed species. We concur with your determination that the action is "likely to adversely affect" the Indiana bat. As such, this review focuses on determining whether: (1) this proposed site-specific project falls within the scope of the Tier 1 PBO, (2) the effects of this proposed action are

consistent with those anticipated in the Tier 1 PBO, and (3) the appropriate conservation and mitigation measures identified in the biological assessment are adhered to.

That is, this letter serves as the Tier 2 biological opinion for the proposed State Route 217 bridge project. As such, this letter also provides the level of incidental take that is anticipated and a cumulative tally of incidental take that has been authorized and exempted in the PBO.

Description of the Proposed Action

Your letter from the February 27, 2008 MOA project notifications provides the location and a thorough description of the proposed action. The action as proposed involves replacing the State Route 217 bridge over Dicks Creek with a culvert. Approximately six suitable roost trees will be removed including one tree with maternity roost characteristics.

This proposed action falls under the activities of a PC3 project. A typical PC3 project is one which may remove a large number of potential roost trees (more than 10 or 20 depending upon the Unit), remove one or more potential maternity roost trees, impact a known or potential hibernacula, impact Indiana bat fall swarming or spring staging areas, and/or will reduce a 100+ acre forested area by more than 10 % in the West Unit. ODOT will implement the following conservation measures to avoid, minimize, and/or mitigate adverse impacts to the Indiana bat: 1) any unavoidable tree removal will take place between September 15 and April 15 to avoid direct impacts (A-1), and 2) tree planting to create future suitable habitat, create future travel corridors, and restore connectivity of forested areas (M-4).

A planting plan will be prepared and added to the construction plans. The plan shall require a minimum of thirty-six 1-inch caliber trees of four different species (from the Indiana bat preferred species tree list). This mitigation measure will offer habitat for the species in the future. Native deciduous hardwood trees will be planted on-site to replace the roost trees removed for this project. This mitigation measure will offer habitat for the species in the future.

Status of the Species

Species description, distribution, life history, population dynamics, and status are fully described on pages 13-26 for the Indiana bat in the PBO and are hereby incorporated by reference. The most recent population estimate indicates 501,260 Indiana bats occur rangewide (King 2007). The current revised Indiana Bat Recovery Plan: First Revision (USFWS 2007) delineates recovery units based on population discreteness, differences in population trends, and broad level differences in land-use and microhabitats. There are currently four recovery units for the Indiana bat: Ozark-Central, Midwest, Appalachian Mountains, and Northeast. All of Ohio falls within the Midwest Recovery Unit.

In 2007, white nose syndrome (WNS) was found to fatally affect several species of bats, including the Indiana bat in eastern hibernacula. To date, WNS has been identified in New York, Massachusetts, Vermont, and Connecticut (all within the Northeast Recovery Unit). Roughly 50,000 Indiana bats, approximately 10% of the total population, occur in the affected locations and are vulnerable to WNS at this time. The extent of the impact this syndrome may have on the species rangewide is uncertain however, based on our current limited understanding of WNS, we expect mortality of bats at affected sites to be high (pers. com, L. Pruitt, 2008).

In 2008, some unknown type of fungus was detected on a small number of little brown bats and eastern pipistrelles in two hibernacula in southwestern Pennsylvania in Blair and Fayette counties. To date, no mortality has been detected. Indiana bats hibernate in the Blair County site but not in the Fayette County cave. State authorities in Pennsylvania have labeled these sites as

suspicious but not as confirmed WNS sites. Both of these sites occur in the Indiana bat Appalachian Mountains Recovery Unit. The potential impact on Indiana bats from these two sites is unknown. Should they be determined to be WNS sites, impacts to Indiana bats in the Appalachian Mountains Recovery Unit may be similar to those in the Northeast Recovery Unit. There is no data to indicate that Indiana bats in the Midwest Recovery Unit are currently being impacted by WNS or have there been any reported cases of an unknown fungus in any hibernacula in the Midwest Recovery Unit.

Environmental Baseline

Status of the species within the action area

The status of Indiana bat was fully described on page 24 of the PBO for activities in the South Unit and is hereby incorporated by reference. Since the issuance of the PBO in 2007, there have been no Indiana bat capture records within the vicinity of this project and we are not aware of any surveys that have been performed. Your letter states that suitable habitat exists within the action area. Thus, as explained in the PBO, it is reasonable to assume presence of a maternity colony in the action area.

Indiana bats found in the action area likely hibernate in Ohio or south in Kentucky or Indiana (Garner & Cook 2002). At this time, we do not know of any incidences of WNS within the believed hibernation range of the bats that occupy the action area during the summer. Currently no cases of WNS have been detected in the Midwest Recovery Unit. Thus based on the scientific data, available, Indiana bats occupying the action area are not currently, nor are they anticipated to be over the life of the proposed project, affected with WNS.

Effects of the Action

Based on analysis of the information provided in your letter for the State Route 217 bridge project and our review of available habitat surrounding the project area, we have determined that the effects of the proposed action are consistent with those contemplated and fully described on pages 30-35 of the PBO. Adverse effects to the Indiana bat from this project could occur due to the removal of a potential maternity roost tree. However, implementation of seasonal cutting restrictions will avoid direct adverse effects to individual bats. Projects that require the removal of one or more potential primary maternity roost trees outside of the Indiana bats' maternity season can result in adverse effects to colony members upon their return to maternity areas following hibernation. When a primary roost tree becomes unsuitable, members of a colony may initially distribute themselves among several previously used alternate roost trees (USFWS 2002; Kurta et al. 2002). It is not known how long it takes for the colony to attain the same level of roosting cohesiveness that it experienced prior to the loss of an important primary roost tree. As explained in the PBO, colony cohesiveness is essential for successful birth and rearing of young. It is likely that due to the ephemeral nature of roost trees, the Indiana bat has evolved to be able to relocate replacement roosts, if available, when their previously-used roost trees become unsuitable. Until the bats from the colony locate another desirable primary roost tree and reunite, it is possible, however, that some individual members of a colony will be subject to increased stress resulting from: (1) having to search for a replacement primary roost tree, which increases energy expenditure and risk of predation; (2) having to roost in alternate trees that are less effective in meeting thermoregulatory needs; and (3) having to roost singly, rather than together, which decreases the likelihood in meeting thermoregulatory needs, thereby reducing the potential for reproductive success.

Additionally, if pregnant females are required to search for new roosting habitat in the spring, this effort may place additional stress on pregnant females at a critical time when fat reserves are low or depleted, and they are already stressed from the energy demands of migration and pregnancy,

and food availability is unpredictable. This could expose them to an increased risk of mortality and/or failed reproduction.

For this particular project, however, the exposed colony is anticipated to retain cohesiveness because the essential character of the habitat will be maintained. Hence, bats will likely be able to stay within their traditional home ranges. For this reason, we anticipate that any exposed bats will need to expend only a negligible level of energy to reform the colony, such that any adverse effects will be insignificant or discountable.

We are not aware of any non-federal actions in the action area that are reasonably certain to occur. Thus, we do not anticipate any cumulative effects associated with this project.

Conclusion

We believe the proposed State Route 217 bridge project is consistent with the PBO. After reviewing site specific information, including 1) the scope of the project, 2) the environmental baseline, 3) the status of the Indiana bat and its assumed presence within the project area, 4) the effects of the action, and 5) cumulative effects, we do not expect any perceivable impacts to the maternity colony, and hence to the overall Ohio Indiana bat population from the proposed action. As such, we also do not anticipate any reductions in the reproduction, numbers, or distribution of the species rangewide. It is, therefore, the Service’s biological opinion that this project is not likely to jeopardize the continued existence of the Indiana bat.

Incidental Take Statement

The Service does not anticipate the proposed action will incidentally take any Indiana bats. Although adverse affects to the Indiana bat may occur due to the loss of potential roost trees as described above, these impacts are not expected to rise to the level of injury, harm, or death. Hence, incidental take is not reasonably certain to occur. As such, no incidental take statement will be provided for this project. The following table is a summary of impacted acres to date for PC1, PC2, and PC3 projects completed under the PBO. The thresholds set in the PBO have not been exceeded.

| Management Unit | Acres of impact anticipated in PBO | Acres of impact for this project | Cumulative acres of impact to date |
|------------------|------------------------------------|----------------------------------|------------------------------------|
| West | 1,565 acres | 0 | 8.60 |
| Central | 2,280 acres | 0 | 1.65 |
| South | 4,679 acres | .30 | 27.70 |
| Northeast | 6,370 acres | 0 | 15.15 |
| East | 7,224 acres | 0 | 22.77 |
| Statewide | 22,118 acres | | 75.87 |

This fulfills your section 7(a)(2) requirements for this action; however, should the proposed project be modified or the level of habitat impacted above be exceeded, ODOT/FHWA should promptly reinitiate consultation as outlined in 50 CFR 402.16. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the continued implementation of ODOT’s Statewide Transportation Program and projects predicated upon it may affect listed species in a manner or to an extent not considered in this opinion; (3) the continued implementation of ODOT’s Statewide Transportation Program and projects predicated upon it are subsequently modified in a manner that cause an effect to federally listed species not

considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease, pending reinitiation. Requests for reinitiation, or questions regarding reinitiation, should be directed to the U.S. Fish Wildlife Service's Reynoldsburg, Ohio Field Office.

We appreciate your continued efforts to ensure that this project is consistent with all provisions outlined in the Biological Assessment and PBO. If you have any questions regarding our response or if you need additional information, please contact Jennifer Finfera at extension 13.

Sincerely,

A handwritten signature in cursive script that reads "Mary Knapp".

Mary Knapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH
USACE Ohio Transportation Office, Columbus, OH

LITERATURE CITED

- Gardener, J.E. and E.A. Cook. 2002. Seasonal and geographic distribution and quantification of potential summer habitat. Pp. 9-20 in A. Kurta and J.Kennedy (eds.), *The Indiana bat: biology and management of an endangered species*. Bat Conservation International, Austin TX.
- King, Andrew. 2007. Indiana Bat: 2007 Population Estimates. Available at: http://www.fws.gov/midwest/Endangered/mammals/inba/inba_2007pop.html (Accessed April 2, 2008).
- Kurta, A., S.W. Murray, and D.H. Miller. 2002. Roost selection and movements across the summer landscape. Pp. 118-129 in A. Kurta and J. Kennedy (eds.), *The Indiana bat: biology and management of an endangered species*. Bat Conservation International, Austin, TX.
- U.S. Fish and Wildlife Service. 2007. Indiana Bat (*Myotis sodalis*) Recovery Plan First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN.