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U.S. Fish and Wildlife Service
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August 5, 2014

Timothy M. Hill
Office of Environmental Services
Ohio Department of Transportation
1980 West Broad Street, **Mail Stop 4170**
Columbus, OH 43223

TAILS: 03E15000-2014-I-1535 (PID 95879)

Attn: Michael Pettegrew, Chris Staron

RE: **PIK-TR403-0.68 (Turkey Run) (PID 95879)**

Dear Mr. Hill:

This letter is in response to your July 21, 2014 request for site-specific review of the **PIK-TR403-0.68 (Turkey Run)** roadway realignment and bridge replacement project (PID 95879), pursuant to section 7 of the Endangered Species Act of 1973, as amended. The project, as proposed, consists of realignment of TR-403 (Turkey Run Road) and the construction of a new single span, non-composite, pre-stressed, concrete box beam bridge over Pee Pee Creek, which will replace the current low-water crossing (ford) located in Pebble Township, Pike County, Ohio.

We understand that no wetland impacts will occur as a result of the project; however, the project will impact 90 feet of Pee Pee Creek. In addition, four suitable Indiana bat maternity roost trees and one suitable Indiana bat roost tree will be removed for the project with total tree clearing totaling 0.903 acres.

FISH & WILDLIFE COORDINATION ACT COMMENTS:

We recommend that unavoidable impacts to streams, wetlands, and other important habitats be mitigated. In addition, staging areas should be kept well away from streams and wetlands, and all disturbed areas in the project vicinity should be mulched and revegetated with native plant species. The Service supports and recommends mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. We recommend seeding all disturbed areas during construction to encourage establishment of vegetative cover and to decrease erosion.

FEDERALLY LISTED SPECIES:

The project is located within the range of the **Indiana bat** (*Myotis sodalis*), **rayed bean mussel** (*Villosa fabalis*), **clubshell** (*Pleurobema clava*), and **northern riffleshell** (*Epioblasma torulosa rangiana*), all federally listed endangered species; **northern long-eared bat** (*Myotis septentrionalis*), a species that is

currently proposed for listing as federally endangered; **timber rattlesnake** (*Crotalus horridus*), a federal species of concern; and the **bald eagle** (*Haliaeetus leucocephalus*), a species protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) and the Migratory Bird Treaty Act (16 U.S.C. 703-712).

ODOT has determined that the project *may affect but is not likely to adversely affect* the northern long-eared bat. The Service is unable to concur with this determination, as the expected project impacts to roosting habitat may adversely affect the species in ways similar to the adverse impacts anticipated for the Indiana bat (see below). However, in consideration of ODOT's commitments to clear trees outside the summer roosting season and to offset impacts to the Indiana bat by protecting suitable habitat at ODOT's SCCC2 conservation area in perpetuity (see below), which will also benefit the northern long-eared bat, it is our opinion that the project, as proposed, is not likely to jeopardize the continued existence of the species.

ODOT has determined that the project *may affect but is not likely to adversely affect* the timber rattlesnake, a federal species of concern. We understand that potential foraging habitat for this species was found within the project area; however, no individuals of this species were discovered. Based on this information, the Service concurs with your determination that the project *may affect but is not likely to adversely affect* the timber rattlesnake. Due to the potential for the snakes to occur in this area, all workers should be instructed not to harm or kill the snakes and to use caution, as the timber rattlesnake is a venomous species.

ODOT has determined that this project will have *no effect* on the clubshell, northern riffleshell, rayed bean or the bald eagle; therefore, consultation under section 7(a)(2) of the ESA is not required. The remainder of this letter addresses impacts to the Indiana bat.

INDIANA BAT - TIER 2 BIOLOGICAL OPINION:

On January 26, 2007, the U.S. Fish and Wildlife Service (Service) issued a programmatic biological opinion (PBO) for the Ohio Department of Transportation's (ODOT) Statewide Transportation Program. 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 federally listed species. 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. Your current request for Service review of the **PIK-TR403-0.68 (Turkey Run)** roadway realignment and bridge replacement project (PID 95879) is a Tier 2 consultation under the January 26, 2007, PBO. We have reviewed the information contained in the letter and supporting materials 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 **PIK-TR403-0.68 (Turkey Run)** roadway realignment and bridge replacement project (PID 95879). 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

Pages 2-4 of your letter, along with the supporting materials you submitted, include the location and a thorough description of the proposed action. The action, as proposed, consists of realignment of TR-403 (Turkey Run Road) and the construction of a new single span, non-composite, pre-stressed, concrete box beam bridge over Pee Pee Creek, which will replace the current low-water crossing (ford) located in Pebble Township, Pike County, Ohio. In addition, four suitable Indiana bat maternity roost trees and one suitable Indiana bat roost tree will be removed for the project.

We understand that 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 30 and April 1 to avoid direct impacts (avoidance measure A-1).
- 2) 0.903 acres of impacted forest will be added to the SCCC2 Debit List to mitigate adverse impacts to the bat (towards mitigation measure M-1). *See attached document: ODOT Interim Debit List.* The final type and amount of acreage to be deducted from the SCCC2 Conservation Area to offset impacts from this project will be calculated in accordance with the habitat replacement strategy and ratio to be included in the final agreement between ODOT and the Service regarding the use of the SCCC2 site to offset take of Indiana bat habitat.

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. Since the issuance of the PBO in 2007, there has been no change in the status of the species.

Species descriptions, life histories, population dynamics, status and distributions are fully described on pages 23-30 for the Indiana bat in the PBO and are hereby incorporated by reference. The most recent population estimate indicates 424,708 Indiana bats occur range wide (King 2011). The current revised Indiana Bat Recovery Plan: First Revision (2007) delineates recovery units based on population discreteness, differences in population trends, and broad level differences in land-use and macrohabitats. 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 is known from the states of Alabama, Connecticut, Georgia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin, as well as the provinces of New Brunswick, Nova Scotia, Ontario, Prince Edward Island, and Quebec in Canada. The overall impact this syndrome will have on the species range-wide is uncertain, but surveys in eastern states with 2+ years of mortality from the disease have detected a decline in Indiana bat populations greater than a 70% (Turner et al. 2011).

Environmental Baseline

The environmental baseline for the species listed above was fully described on pages 21-26 of the PBO and is hereby incorporated by reference. Since the issuance of the PBO in 2007, there has been no change in the environmental baseline.

Status of the species within the action area

Since the issuance of the PBO in 2007, there have been no new Indiana bat capture records within the vicinity of this project. Your letter and supporting materials state that suitable habitat exists within the action area, thus we are assuming presence.

Effects of the Action

Based on analysis of the information provided in your letter and supporting materials, we have determined that the effects of the proposed action are consistent with those contemplated and fully described on pages 31-35 of the PBO. Adverse effects to the Indiana bat from this project could occur due to the removal of 0.903 acres of impacted forest habitat, including four suitable Indiana bat maternity roost tree and one suitable Indiana bat 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 2022; 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.

Adult male and non-reproductive female Indiana bats may be indirectly exposed to loss of roosting habitat. In general, effects on these individual bats would be less severe than the effects associated with individuals of maternity colonies. Adult male and non-reproductive female Indiana bats are not subject to the physiological demands of pregnancy and rearing young. Males and non-reproductive females typically roost alone or occasionally in small groups. When these individuals are displaced from roosts they must utilize alternative roosts or seek out new roosts. Because these individuals are not functioning as members of maternity colonies, they do not face the challenge of reforming as a colony. Roost tree requirements for non-reproductive Indiana bats are less specific whereas maternity colonies generally require larger roost trees to accommodate multiple members of a colony. Therefore, it is anticipated that adverse indirect effects to non-reproductive bats will be less than the effects to reproductively active females.

In addition, ODOT's placement of conservation-oriented restrictions on the SCCC2 site has the potential to provide suitable habitat for the Indiana bat on and near that property into perpetuity. The SCCC2 property was purchased by ODOT in December 2012 for the purpose of mitigating ODOT project impacts on waters of the U.S. and federally listed species. Prior to ODOT's purchase of the property, the SCCC2 site was available for development, which likely would have further reduced available habitat for the Indiana bat in eastern Ohio.

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 PIK-TR403-0.68 (Turkey Run) (PID 95879) 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) any cumulative effects, it is 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 anticipates that the proposed action will result in incidental take associated with projects in the South management unit. Incidental take for this project, based on the potential removal of approximately 0.903 acres, results in the cumulative incidental take of 958.62 acres for this management unit. This project, added to the cumulative total of incidental take for the implementation of ODOT's Statewide Transportation Program, is well within the level of incidental take anticipated in the 2007 PBO (see table below).

Management Unit	IT anticipated in PBO	IT for this project	Cumulative IT granted to date
West	1,565 acres	0 acres	223.64 acres
Central	2,280 acres	0 acres	137.57 acres
Northeast	4,679 acres	0 acres	378.77 acres
East	6,370 acres	0 acres	224.24 acres
South	7,224 acres	0.903 acres	958.62 acres
Statewide	22,118 acres	0.903 acres	1922.85 acres

We determined that this level of anticipated and exempted take of Indiana bats from the proposed project, in conjunction with the other actions taken by ODOT pursuant to the PBO to date, is *not likely to result in jeopardy* to the species.

We understand that ODOT is implementing all pertinent Indiana bat conservation measures, specifically A-1 and M-1 stipulated in the Biological Assessment on pages 29-31. In addition, ODOT is monitoring the extent of incidental take that occurs on a project-by-project basis. These measures will minimize the impact of the anticipated incidental take.

This fulfills your section 7(a)(2) requirements for this action. However, should the proposed project be modified or the level of take identified above be exceeded, ODOT should promptly reinstate consultation as outlined in 50 CFR §402.16. As provided in 50 CFR §402.16, reinstatement 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 reinstatement. Requests for reinstatement, or questions regarding reinstatement, should be directed to the U.S. Fish Wildlife Service's Columbus, Ohio Field Office.

In addition to the criteria, described immediately above, under which formal consultation must be reinitiated for the Indiana bat, the following reinitiation guidance also applies. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, if a proposed species becomes officially listed, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

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 Marci Lininger at extension 27 or Karen Hallberg at extension 23.

Sincerely,



Mary Knapp, Ph.D.
Field Supervisor

cc: J. Kessler, ODNR, Office of Real Estate, Columbus, OH (*email only*)
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