United States Department of the Interior

FISH AND WILDLIFE SERVICE

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May 15, 2013

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

TAILS: 03E15000-2013-F-0932 (PID 90991)

Attn: Michael Pettegrew, Chris Staron

RE: **HEN-109-18.02 (PID 90991)**

Dear Mr. Hill:

This letter is in response to your January 9, 2013 request for site-specific review of the HEN-109-18.02 Damascus Bridge replacement project (PID 90991), pursuant to section 7 of the Endangered Species Act of 1973, as amended. Your request was received in our office on January 9, 2013. The project, as proposed, will replace/relocate the existing, narrow bridge, carrying SR-109 over the Maumee River in Henry County, with a new bridge that meets current design standards. We understand that there are three project alternatives under consideration and that the project is expected to impact, at maximum, approximately 411 linear feet of the Maumee River (a Modified Warmwater Habitat stream), 0.019 acre and 0.643 acre of two Category 2 wetlands, and 1.954 acres of forest. In addition, up to six suitable Indiana bat roost trees may be removed for the project, including three trees that exhibit maternity roost characteristics.

FISH & WILDLIFE COORDINATION ACT COMMENTS:
The Service recommends that impacts to streams and wetlands be avoided, and buffers surrounding these systems be preserved. Streams and wetlands provide valuable habitat for fish and wildlife resources, and the filtering capacity of wetlands helps to improve water quality. Naturally vegetated buffers surrounding these systems are also important in preserving their wildlife-habitat and water quality-enhancement properties. We support and recommend 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. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species.

FEDERALLY LISTED SPECIES:
The project is located within the range of the **Indiana bat** (*Myotis sodalis*), a species federally listed as endangered; and the **bald eagle** (*Haliaeetus leucocephalus*), a federal species of concern.

As also noted in the project Ecological Survey Report (ESR) submitted by your office, our records indicate that a bald eagle nest is located approximately 0.8 mile from the project limits. Due to the distance between the nest and the project area, impacts to the bald eagle are not anticipated. However,

our database of nest locations may not be complete. Please note that in order to avoid take of bald eagles, we recommend that no tree clearing occur within 660 feet of a bald eagle nest or within any woodlot supporting a nest tree. Further we request that work within 660 feet of a nest or within the direct line-of-site of a nest be restricted from January 15 through July 31. This will prevent disturbance of the eagles from the egg-laying period until the young fledge, which encompasses their most vulnerable times.

Your letter and ESR addressed the potential for **rayed bean** (*Villosa fabalis*), a federally endangered freshwater mussel species, to occur in the project area. As of the date of your letter, this species was considered potentially present in Henry County. However, a recent review of available data by our office resulted in our removal of Henry County and the Maumee River from within the probable range of the species. Therefore, no impacts to this species are expected to result from the proposed project.

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, which remains in effect at this time. 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 HEN-109-18.02 bridge replacement project 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 HEN-109-18.02 bridge replacement 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
Pages 1-2 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, involves the replacement/relocation of the existing, narrow bridge, carrying SR-109 over the Maumee River in Henry County. The new structure will be constructed to meet current design standards. The purpose of this project is to replace the deteriorated bridge in order to maintain a safe route of travel. Six trees that exhibit suitable summer roost habitat characteristics for the Indiana bat will be removed for the project, including three trees that exhibit brood-rearing habitat for the species. 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), and

2) credit for the Indiana bat summer ecology study (Gehrt/Swanson, 2008-2010) will be applied to mitigate adverse impacts to the bat (mitigation measure M-6).

Please note that prior to removal of the existing bridge, the underside of the bridge should be carefully examined for the presence of bats, especially from April 1 to September 30. If any bats are found roosting on the underside of the bridge, please immediately contact this office to provide this information.

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 rangewide (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 Alabama, Connecticut, Georgia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Missouri, New Jersey, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, and West Virginia, as well as the provinces of New Brunswick, Nova Scotia, Ontario, Prince Edward Island, and Quebec in Canada. The extent of the impact this syndrome may have on the species rangewide is uncertain, but based on our current limited understanding of WNS, we expect mortality of bats at affected sites to be high (personal communication, L. Pruitt, 2008).

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 a potential maternity roost tree. However, implementation of seasonal cutting restrictions (avoidance measure A-1) 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.

Adult male and non-reproductive female Indiana bats may also 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. The Service anticipates that indirect effects to non-reproductive Indiana bats from the loss of roosting habitat will be insignificant.

In addition, scientific research on the Indiana bat, conducted between 2008 – 2010 and funded by ODOT (mitigation measure M-6), provided additional insights into Indiana bat maternity colony behavior in Ohio relative to roosting, foraging, and rearing of offspring. The study captured and radiotracked 51 Indiana bats along the Big Darby Creek in Pickaway County, Ohio. Through this effort, 56 roost trees were identified and described, and the animals' home ranges were calculated. These data have further enhanced our understanding of the habitat characteristics within the home range of Indiana bat maternity colonies and how the bats may move among and utilize those features of the landscape. In addition, recaptures of Indiana bats banded during earlier studies provided further insights into the species' site fidelity and its associated effects on reproduction and survival.

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 HEN-109-18.02 bridge replacement 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 West management unit. Incidental take for this project, based on the potential removal of approximately 1.95 acres, resulting in the cumulative incidental take of 192.5 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 PBO through 2012 (see table below).

Management Unit	IT anticipated in PBO	IT for this project	Cumulative IT granted to date
West	1,565 acres	1.95 acres	192.50 acres
Central	2,280 acres	0 acres	77.65 acres
Northeast	4,679 acres	0 acres	295.52 acres
East	6,370 acres	0 acres	145.66 acres
South	7,224 acres	0 acres	894.93 acres
Statewide	22,118 acres	1.95 acres	1606.27 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-6 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 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 Columbus, 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 Karen Hallberg at extension 23.

Sincerely,

Mary Knapp

Mary Knapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH (*email only*)
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