



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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July 27, 2009

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

TAILS: 31420-2009-F-0757 (PID 84220)

Attn: Donald Rostofer
Chris Staron

RE: **HAS-22-9.23 (PID 84220)**

Dear Mr. Hill:

This letter is in response to your request, received in our office on June 8, 2009, for site-specific review pursuant to section 7 of the Endangered Species Act of 1973, as amended, regarding replacement of a bridge along US-22 in Moorefield Township, Harrison County, Ohio. The project proposes to improve 158.4 feet (0.03 miles) of US-22, approximately 0.63 miles west of SR-519, by removing the existing bridge, filling in the area with earth, and constructing new pavement in place of the structure and approach slabs. The project will also involve the construction of an access road north of the existing bridge to allow access for an adjacent property owner. We understand that no in-stream work will occur for this project; but approximately 1.33 acres of trees will be cleared, including 5 potential Indiana bat roost trees, 2 of which offer suitable maternity roost habitat. The trees to be removed are part of a woodlot that is greater than 100 acres in size and are located within 0.5 mile of a permanent water source.

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 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 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 (*Myotis sodalis*). Your current request for Service review of the HAS-22-9.23 bridge replacement project is a Tier 2 consultation under the January 26, 2007, PBO. We have reviewed 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 HAS-22-9.23 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.

WILDLIFE PASSAGE AND ADDITIONAL COMMENTS:

The Service recommends that the Ohio Department of Transportation consider wildlife passage in project design. It is likely that terrestrial species use the abandoned coal haul road as a travel corridor, allowing safe passage under US-22. We suggest that ODOT consider improvements to the existing structure that would maintain this open corridor, if practicable, and be mindful of maintaining such corridors in future project designs. If the existing structure cannot be rehabilitated, we suggest incorporating a 12' by 12' box culvert with a natural bottom (or a 17' bottomless arch culvert) into the current project design to maintain the existing travel corridor. For more information on retaining habitat connectivity in transportation planning and reducing wildlife-vehicle collisions, visit the FHWA website: <http://www.fhwa.dot.gov/environment/wildlifecrossings/intro.htm>.

The gap resulting from this project's bridge removal will be filled with earth, and new pavement will replace the old structure. The project description provided does not include information regarding the source of the fill material to be used. Please send relevant information to our office for review if the acquisition of source material will result in impacts to any federally-listed species or their habitat

Description of the Proposed Action

Page 1 of your letter, as well as the supporting documentation, includes the location and a thorough description of the proposed action. The action as proposed involves the removal of an existing bridge along US-22 in Harrison County, Ohio, filling in the area with earth, and constructing new pavement in place of the existing structure and approach slabs. The purpose of this project is to replace a deteriorated and structurally deficient bridge in order to maintain a safe route of travel. Approximately 1.33 acres of forested habitat will be impacted by the project, including 5 trees that exhibit characteristics that indicate potential summer roost habitat for the Indiana bat, 2 of which 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 15 and April 15 to avoid direct impacts (A-1), and 2) protection of land/habitat through conservation easements or deed restriction to offset loss of suitable habitat (M-1).

The Service appreciates ODOT's commitment to follow **conservation measure A-1** of the Programmatic Consultation for this project, under which trees within the project area will be cleared only between 15 September and 15 April. **Please note that the Service encourages the use of revised guidelines of tree removal between 30 September and 1 April**, as Indiana bats have been observed arriving at their traditional summer areas earlier in the spring and staying longer in the fall than previously documented.

As stated in your letter, ODOT will be subtracting this project's impacts to forested habitat from their Atwood Mitigation Site on Conotton Creek in Holmes County, Ohio. We understand that **1.33 acres of riparian tree corridor** will be subtracted from the remaining amount of treed area at this Perpetual Environmental Resource Easement property and that this acreage will then be unavailable to mitigate future project impacts. Upon subtraction of the 1.33 acres for this project, 2.78 acres of wooded riparian habitat will remain at the Atwood Mitigation Site for future mitigation.

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 468,184 Indiana bats occur rangewide (King 2008). 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 New York, Massachusetts, Vermont, West Virginia, Pennsylvania, New Jersey, New Hampshire, and Connecticut (all within the Northeast Recovery Unit). Roughly 70,000 Indiana bats, approximately 15% of the total population, occur in the affected states and are vulnerable to WNS at this time. 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 documentation states 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 documentation for the HAS-22-9.23 bridge replacement 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 31-35 of the PBO. Adverse effects to the Indiana bat from this project could occur due to the removal of potential maternity roost trees. 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, we anticipate that it is unlikely that the response of individual females will rise to the level of failed reproduction or death. The colony is anticipated to retain cohesiveness because the essential character of the area will not be negatively affected, and hence, bats will likely be able to stay within their traditional homeranges. That is, they are able to use other suitable trees within the colony's homerange. Rather, we anticipate that effects to individuals will range from undetectable to a brief delay in giving birth.

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.

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 HAS-22-9.23 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 East management unit. Incidental take for this project is 1.33 acres, resulting in the cumulative incidental take of 54.11 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	0 acres	56.64 acres
Central	2,280 acres	0 acres	11.32 acres
Northeast	4,679 acres	0 acres	110.35 acres
East	6,370 acres	1.33 acres	54.11 acres
South	7,224 acres	0 acres	41.00 acres
Statewide	22,118 acres	1.33 acres	282.42 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 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 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,



fa Mary Knapp, Ph.D.
Field Supervisor

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