



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994



January 23, 2015

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

TAILS: 03E15000-2015-F-0394 (PID 95542)

Attn: Michael Pettegrew, Chris Staron

RE: **SAN-US 6-13.05 (PID 95542)**

Dear Mr. Hill:

This letter is in response to your December 8, 2014 request for U.S. Fish and Wildlife Service (Service/USFWS) site-specific review of the **SAN-US 6-13.05** new entry drive from US-6 to the campus of Terra State Community College as well as modifications to US-6 including the US-6 bridge structure over Muskellunge Creek located in Fremont, Ohio within Sandusky County.

FISH & WILDLIFE COORDINATION ACT COMMENTS:

The Service understands that the project, as proposed, will result in impacts to four streams totaling 584 linear feet. The project will also impact one Category I and one Modified Category II wetlands totaling 0.097 acres. We recommend that unavoidable impacts to these streams and wetlands be mitigated. In addition, staging areas should be kept well away from these aquatic features, and all disturbed areas in the project vicinity should be mulched and re-vegetated with native plant species. The Service supports and recommends mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization that will benefit native pollinators. 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*); **Kirtland's warbler** (*Setophaga kirtlandii*) and **piping plover** (*Charadrius melodus*); all species federally listed as endangered; **rufa red knot** (*Calidris canutus rufa*) and **eastern prairie fringed orchid** (*Platanthera leucophaea*), both federally threatened species; the **northern long-eared bat** (*Myotis septentrionalis*), a species that is currently proposed for federal listing as endangered; the **eastern massasauga** (*Sistrurus catenatus*), a small, docile rattlesnake that is currently a Federal candidate species; and the **bald eagle** (*Haliaeetus leucocephalus*), a federal species of concern 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. ODOT has committed 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. Additionally, the Service would recommend that the project be kept to the smallest footprint possible in order to efficiently complete the project with the least amount of impacts to both the Indiana and northern long-eared bat. Therefore, the Service concurs that the project, as proposed, *may affect but is not likely to adversely affect* the northern long-eared bat.

ODOT has determined that this project will have *no effect* on the Kirtland's warbler, piping plover, rufa red knot, eastern prairie fringed orchid, 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 SAN-US 6-13.05 project (PID 95542) 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 SAN-US 6-13.05 project (PID 95542). 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 Environmental Survey Report (ESR), along with the supporting materials you submitted, include the location and a thorough description of the proposed action. The action, as proposed, involves the construction of a new entry drive from US-6 to the campus of Terra State Community College as well as modifications to US-6 including the US-6 bridge structure over Muskehlunge Creek located in Fremont, Ohio within Sandusky County.

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 October 1 and March 31 to avoid direct impacts (avoidance measure A-1).

2) 0,785 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.

Range Wide 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, additional information on population status due to White Nose Syndrome (WNS) has become available. The most recent (2013) population estimate indicates that the range-wide population totals approximately 534,239 Indiana bats (Service 2013) (this estimate incorporates a new Indiana bat hibernaculum discovered in Missouri in 2012). Since the onset of WNS, the Northeast and Appalachian RUs have declined substantially. The Midwest Recovery Unit (RU) which includes Indiana, Kentucky, Ohio, Tennessee, Alabama, SW Virginia and Michigan, supported approximately 56.3% of the 2013 total population estimate, and as of 2013 was roughly stable.

The Midwest RU population estimates increased between 1983 and 2009. However, wide confidence intervals around the estimates preclude definitive statements about population increase during that time period (Thogmartin et al. 2012). The population estimate peaked in 2007, at 320,342 Indiana bats (Service 2013). WNS was first detected in multiple states within the Midwest RU in 2011. The most recent RU-wide estimates available are from 2013 and indicate a roughly stable population estimate compared to 2011 estimates (Service 2013). Significant declines have been observed at some individual hibernacula, while significant increases have been observed at others (Service unpublished 2014). Surveys conducted in 2014 at Ohio's largest hibernaculum, which supported approximately 9,000 Indiana bats in 2012, indicate that the Indiana bat population has declined by 48% since 2012 (Norris, 2014 pers. comm.). In addition, 2014 survey results from the Lawrence hibernaculum in Ohio did not detect any Indiana bats (Schultes 2014). Declines in all bat species are also being observed in hibernacula in Indiana. Surveys conducted during the winter of 2013-2014 at 11 hibernacula indicate that numbers of all-bat species combined; declined by 69% compared to numbers from two years ago (Johnson 2014 unpublished data). A new population estimate for the Midwest RU will be generated in 2015, and based on hibernacula survey data to date. We expect to see substantial population declines.

Environmental Baseline within Action Area

In March 2011, the first case of WNS was confirmed in an abandoned mine in Lawrence County, Ohio. Currently, 16 counties in Ohio have been confirmed as WNS positive including Lawrence County in 2011, 5 counties in 2012 (Geauga, Summit, Cuyahoga, Portage, and Preble), and 10 counties in 2013 (Medina, Jefferson, Union, Wayne, Ashland, Athens, Clinton, Madison, Warren, and Sandusky). Recent censusing at two hibernacula have documented a dramatic decline in Indiana bats. A survey of the Lawrence County hibernaculum revealed a decline of 100% of Indiana bats in two years (Schultes 2014). 2014 survey results for the Preble County hibernaculum indicate a 48% decline at this site as well (Norris, pers. comm.). In the next few years we anticipate large declines in the Indiana bat populations within each RU as WNS continues to spread and additional bats are infected.

Status of the species within the action area

Since the issuance of the PBO in 2007, WNS has been confirmed in Sandusky County. Additionally, 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 0.785 acres of impacted forest habitat including, 20 suitable potential 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 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 SAN-US 6-13.05 project (PID 95542) 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 0.785 acres, results in the cumulative incidental take of 231.86 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	0.785 acres	231.86 acres
Central	2,280 acres	0 acres	169.67 acres
Northeast	4,679 acres	0 acres	390.96 acres
East	6,370 acres	0 acres	234.93 acres
South	7,224 acres	0 acres	1247.08 acres
Statewide	22,118 acres	0.785 acres	2274.49 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 re-initiation. Requests for reinitiation, or questions regarding reinitiation, 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 re-initiation 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,



Megan Seymour
Acting Field Supervisor

cc: J. Kessler, ODNR, Office of Real Estate, Columbus, OH (*email only*)
P. Clingan, USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)
J. Lung, OEPA, Columbus, OH (*email only*)
B. Mitch, ODNR, Office of Real Estate, Columbus, OH (*email only*)
N. Reardon, ODNR, Division of Wildlife, Columbus, OH (*email only*)

