United States Department of the Interior

FISH AND WILDLIFE SERVICE

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April 23, 2009

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

TAILS: 31420-2009-F-0448 (PID 23064)

Attn: Donald Rostofer
Chris Staron
RE: **SUM-Highland Road (PID 23064)**

Dear Mr. Hill:

This letter is in response to your March 13, 2009 request for site-specific review pursuant to section 7 of the Endangered Species Act of 1973, as amended, received in our office on March 17, 2009 regarding reconstruction of approximately 2,000 feet of Highland Road in the City of Macedonia in Summit County, Ohio. The project as proposed will reconstruct approximately 2,000 feet of Highland Road from Empire Parkway to Roll and Hold Parkway between State Route 8 and Valley View Road. The project will provide a grade separation between East Highland Road and Norfolk Southern Railway tracks. Approximately 3.16 acres of second growth forest will be removed for this project, including 21 suitable roost trees. These trees are part of a larger woodlot that is greater than 100 acres in size, and a permanent water source is located within 0.5 mile of the project area. The project site is also within 5 miles of several Indiana bat capture records.

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 Highland Road grade separation project is a Tier 2 consultation under the January 26, 2007, PBO. We have reviewed the information contained in your March 13, 2009 letter, the Level 1 Ecological Survey Report Addendum (ESR), and subsequent email correspondence with your office describing the effects of the proposed project on federally listed species. We concur with your final

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 Highland Road grade separation project (SUM-Highland Road; PID 23064). 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.

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.

In addition, we recommend limiting the use of riprap for erosion control. Instead, we recommend using native vegetation to control erosion, or, at a minimum, using native vegetation in combination with rock.

Description of the Proposed Action

Your letter and accompanying documentation provide the location and a thorough description of the proposed action. The action, as proposed, involves reconstruction of approximately 2,000 feet of Highland Road to provide a grade separation between East Highland Road and Norfolk Southern Railway tracks. According to your letter and the ESR, approximately 3.16 acres of second growth forest, 68 m (225 feet) of stream, and 0.44 acres of wetland will be impacted by the project.

This proposed action falls under the activities of a PC3-c project. A typical PC3-c project is one which will remove more than 20 potential roost trees in the South, East, or Northeast Management Units, as delineated in the PBO. 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 to the Indiana bat (A-1), and 2) trees will be planted at a nearby location to create future suitable habitat and travel corridors for the bat and restore connectivity of forested areas (M-4).

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 September 15 and April 15. Please note that the Service encourages the use of revised guidelines of tree removal between September 30 and April 1, 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.

In an email dated April 14, 2009, Brian Peck (ODOT, District 4) identified two potential sites at Longwood Park where trees might be planted to mitigate the loss of forested habitat in the project area. Longwood Park is located approximately 1 mile northeast of the project site. The Service responded to this email on April 14, 2009, suggesting that the eastern location at the park be chosen as the site for tree planting. In addition, we recommended that planting be extended south of the original proposed area to provide connectivity to a water source in that area. This adjustment would allow the mitigated property to

provide more suitable future Indiana bat habitat. A map indicating the suggested planting location (in yellow) and a guide for tree planting mitigation are attached to this letter.

Status of the Species

Species description, distribution, life history, population dynamics, status and distributions 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 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).

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 25 of the PBO for activities in the Northeast 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 non-maternity roosting habitat for the Indiana bat exists within the action area. Thus, as explained in the PBO, it is reasonable to assume presence of a male and non-reproductive female Indiana bats in the action area.

Effects of the Action

Based on analysis of the information provided in your letter for the Highland Road grade separation 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 large number of 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 roost trees outside of the Indiana bats' active season can result in adverse effects to the bats upon returning to summer habitat areas following hibernation. When a primary roost tree becomes unsuitable or is felled, Indiana bats may initially roost in one of several previously used alternate roost trees (USFWS 2002; Kurta et al. 2002). It is likely that due to the ephemeral nature of roost trees, the Indiana bat has evolved

to be able to locate replacement roosts, if available, when their previously-used roost trees become unsuitable. Until the bats locate another desirable primary roost tree, it is possible that the bats 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; and (2) having to roost in alternate trees that are less effective in meeting thermoregulatory needs.

For this particular project, however, we anticipate that any exposed Indiana bats will only experience limited increased stress because the essential character of the habitat will be maintained. Hence, any Indiana bats within the project area 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 find suitable primary roost trees, 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 Highland Road grade separation 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 male and non-reproductive female Indiana bats, and hence to the overall Ohio Indiana bat population from the proposed action. As such, we also do not anticipate any reduction 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	46.44
Central	2,280 acres	0	8.62
South	4,679 acres	0	32.50
Northeast	6,370 acres	3.16	89.56
East	7,224 acres	0	48.67
Statewide	**22,118 acres**	3.16	225.79

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/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 Karen Hallberg at extension 23.

Sincerely,

Mary Knapp

Mary Knapp, Ph.D.
Field Supervisor

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

Possible mitigation area for SUM-Highland Road (PID 23064) Indiana bat impacts

United States Department of Agriculture
NRCS Natural Resources Conservation Service

CRP CP38C

Indiana - May 2008 (ver. 1.0)

State Acres for Wildlife Enhancement (SAFE) Tree Planting Program Job Sheet

PURPOSE

The purpose of this practice is to restore forested hardwood canopy areas that will enhance connectivity among existing tracts and provide high quality habitat for the Indiana Bat.

WHERE PRACTICE APPLIES

On fields that meet eligibility requirements for the State Acres for Wildlife Enhancement (SAFE) Initiative of the Conservation Reserve Program (CRP) as determined by the Farm Service Agency (FSA).

CRP POLICY

Fields must be located within the 47 counties identified in the Indiana Bat Priority Area (refer to Indiana guidance eligibility maps in 2-CRP).

PLANTING

Species criteria

Tree plantings will consist of a **minimum of 8 adapted hardwood tree species** that meet the following criteria for CRP CP38C.

- At least 30% of the planting will consist of native Oak species.
- At least 10% of the planting will include one or a combination of the following loose bark species: Shagbark Hickory (Carya ovata), Shellbark Hickory (Carya laciniosa), Bur Oak (Quercus macrocarpa), Eastern Cottonwood (Populus deltoides), Swamp White Oak (Quercus bicolor) and/or Silver Maple (Acer saccharinum).
- The remainder of the planting will be other adapted hardwood tree species selected from Table 1 or the NRCS Soil Data Mart (Forestland Productivity Report) at http://soildatamart.nrcs.usda.gov/

Site-specific requirements are listed on the attached SAFE CP38C Specifications Sheet. Any changes to these specifications should be approved by NRCS.

All acreage must be planted within 12 months of contract approval to remain in compliance. If circumstances beyond the landowner's control prohibit the planting within the first 12 months, the local FSA County Committee may approve an extension to the next planting season.

Controlling weeds before, during, and after planting will increase tree survival and improve tree growth and vigor. Site preparation before planting is necessary to control existing grass or weedy vegetation. Contact a professional forester, Purdue University Extension Service or a licensed pesticide applicator for specific herbicide recommendations. Always apply herbicides according to labeled directions.

Control all weeds within a 3 foot circle around each tree or a 2 foot band along each side of each row. Control weeds in the spring before or during tree planting. On sites with existing sod, apply herbicides both in the fall and again in the spring prior to or during tree planting.

Trees should be planted in firm ground; therefore avoid using spring tillage for site preparation prior to tree planting.

CRP cost share is authorized for one weed control application within 24 months after planting.

PLANTING DATES AND INFORMATION

The minimum density for all tree plantings will be 436 trees per acre (10 by 10 foot spacing or equivalent).

Do not plant trees/shrubs when the soil is frozen or dry. Trees/shrubs will be planted in a vertical position with the root collars approximately at or slightly below the ground line

Bare rooted stock shall be planted in the spring after the ground thaws, but no later than June 1. It is important that tree species are randomly planted throughout the site and not planted with like species unless otherwise indicated in the planting plan.

OPERATION AND MAINTENANCE

Noxious weeds and other undesirable plants, insects, and pests shall be controlled, including such maintenance as necessary to avoid detrimental effects to the surrounding land.

After the Final Status Review or 3 years (whichever comes first), maintain the planting according to your CRP conservation plan. Maintenance activities are allowed only on a spot basis and only if necessary to maintain stand health, maintain stand diversity, or control pests that will damage the CRP cover or adjacent lands. MOWING and other maintenance activities are not authorized between April 1 to August 1 to protect ground-nesting wildlife (i.e. - the Primary Nesting and Brood-Rearing season). If maintenance activities are needed during these times, the FSA County Committee must approve the maintenance activity prior to the activity occurring.

The contract area cannot be used for field roads or other uses that will damage or destroy the cover.

Check survivability of planted species after 3 years to insure that the desired stocking rate for the site is present, usually 70% survival of the planted rate. Additional planting will be completed if it is determined that additional natural regeneration will not be sufficient to colonize the site within an acceptable time frame (usually 5 years) so that 300 acceptable woody plants per acre are established.

The 10% loose bark species will be maintained for the life of the CRP practice.

Mowing for generic weed control or for cosmetic purposes is prohibited.

Exclude all acres from haying and grazing year round. Fences may need to be constructed and maintained to exclude livestock throughout the entire year.

MID CONTRACT MANAGEMENT

The predominant cover will be trees so Mid-Contract Management is not required.

Table 1. Deciduous Hardwood Tree Species

Species	Soil Drainage[1]	Flood Tolerance
Black Cherry	MWD-WD	Intolerant
Black Gum	PD-WD	Somewhat
Black Walnut	MWD-WD	Intolerant
Eastern Cottonwood	SPD-WD	Somewhat
Hickory, Shagbark	MWD-WD	Intolerant
Hickory, Shellbark	VPD-WD	Somewhat
Kentucky Coffeetree	SPD-WD	Somewhat
Maple, Red	VPD-WD	Somewhat
Maple, Silver	VPD-WD	Tolerant
Oak, Black	MWD-ED	Intolerant
Oak, Bur	PD-ED	Somewhat
Oak, Cherrybark[3]	SPD-WD	Somewhat
Oak, Chinquapin	MWD-ED	Intolerant
Oak, Chestnut[3]	WD-ED	Intolerant
Oak, Overcup[3]	VPD-SPD	Tolerant
Oak, Pin	VPD-WD	Somewhat
Oak, Red	MWD-WD	Intolerant
Oak, Scarlet	MWD-ED	Intolerant
Oak, Shingle	SPD-WD	Somewhat
Oak, Shumard	SPD-WD	Somewhat
Oak Swamp Chestnut[3]	SPD-WD	Somewhat
Oak, Swamp White	VPD-WD	Somewhat
Oak, White	MWD-WD	Intolerant
Pecan[2]	SPD-WD	Tolerant
Persimmon	SMD-WD	Somewhat
River Birch	VPD-WD	Somewhat
Sycamore	PD-WD	Tolerant
Sweetgum	PD-WD	Tolerant
Tulip Tree	MWD-WD	Intolerant

[1] VPD=very poorly drained, PD=poorly drained, SPD=somewhat poorly drained, MWD=moderately well drained, WD=well drained, ED=excessively drained

[2] Recommended in Central and Southern Indiana as documented in eFOTG Sect. II

[3] Recommended in Southern Indiana as documented in eFOTG Sect. II

Flooding tolerance during the growing season for established trees:
Tolerant -can withstand inundation for more than 30 days,
Somewhat Tolerant -can survive saturated soils and inundation for up to 30 days.
Intolerant (I)-able to survive only 1 to 5 days of inundation