



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
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March 30, 2009

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

TAILS: 31420-2009-F-0325 (PID 24452)

Attn: Donald Rostofer  
Megan Michael  
RE: **COL-CR428-6.65 (PID 24452)**

Dear Mr. Hill:

This letter is in response to your January 29, 2009 request for site-specific review pursuant to section 7 of the Endangered Species Act of 1973, as amended, received in our office on February 3, 2009 regarding replacement of the Sprucevale Road bridge in St. Clair Township, Columbiana County, Ohio. The project, as proposed, will remove the existing 160-foot-long, single lane, two-span bridge over the Little Beaver Creek and replace it with a 330-foot-long, four-span, concrete I-beam bridge on a new alignment. The new alignment will place the bridge approximately 70 feet downstream of the existing structure. As stated in your letter, the project will result in impacts to fourteen potential Indiana bat roost trees and two potential maternity roost trees. The trees to be removed are part of a woodlot that is greater than 100 acres in size and located within 0.5 mile of a permanent water source.

**The Little Beaver Creek is designated as both a National and State Scenic River, being classified as "Scenic" on the basis of its primitive, undeveloped shorelines and natural character. Due to this designation, ODOT must obtain approval from the National Park Service (NPS) and Ohio Department of Natural Resources (ODNR) prior to commencement of work. The U.S. Fish and Wildlife Service (Service) is aware of comments provided by NPS and ODNR to ODOT requesting changes to the bridge design as it was submitted for this coordination. Therefore, it must be noted that the comments provided herein apply only to the project as described in your letter of January 29, 2009. We request that you notify us of any design alterations that will change the project's impacts on federally endangered or threatened species, or your effects determinations for same, as put forth in your January 29, 2009 letter.**

On January 26, 2007, the 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 CR 428 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 CR 428 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.

#### **FISH & WILDLIFE COORDINATION ACT COMMENTS:**

As stated above, the section of the Little Beaver Creek in which this project is located is designated as a National and State Scenic River and provides high-quality fish and wildlife habitat. The Service supports the comments provided by the NPS and ODNR to ODOT calling for avoidance and minimization of impacts to the Creek, including containment of deck drainage and avoidance of storm water discharge into the river. In addition, the Service strongly recommends that all in-stream work be avoided from April 15 to June 30 to reduce fish-spawning impacts.

We recommend limiting the use of riprap for erosion control and eliminating its use within the river channel. 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

Page 1 of your letter includes the location and a thorough description of the proposed action. The action as proposed involves the replacement of the Sprucevale Road bridge over the Little Beaver Creek in Saint Claire Township, Columbiana County, Ohio. The purpose of this project is to correct safety issues associated with a sharp curve in the roadway on the south end of the bridge. In addition, your letter states that the new bridge will allow for improved flow of the creek, as the new structure will be higher than the existing bridge and piers will not be placed in the middle of the creek. Approximately 1.5 acres of forested habitat will be impacted by the project, including 14 trees that exhibit characteristics that indicate potential summer roost habitat for the Indiana bat and 2 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 15 and April 15 to avoid direct impacts (A-1), and 2) tree planting to create future suitable habitat, create future travel corridors, 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 these projects, 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.

Columbiana County (the local project sponsor) will work with Beaver Creek State Park to plant 1.5 acres of native deciduous trees within the Park, to replace the roost trees and foraging habitat removed for this project. The Service strongly recommends that the County and Beaver Creek State Park follow the guidance provided in the attached NRCS Tree Planting Program Job Sheet when planning and implementing this mitigation measure. As this mitigation measure is intended to offer habitat for the Indiana bat in the future, the area in which the trees are planted should be protected (i.e., never to be cleared for timber, recreation, etc.).

#### 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 CR 428 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 CR 428 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 1.5 acres, resulting in the cumulative incidental take of 45.27 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).

<b>Management Unit</b>	<b>IT anticipated in PBO</b>	<b>IT for this project</b>	<b>Cumulative IT granted to date</b>
West	1,565 acres	0 acres	46.44 acres
Central	2,280 acres	0 acres	8.62 acres
Northeast	4,679 acres	0 acres	86.40 acres
East	6,370 acres	1.5 acres	45.27 acres
South	7,224 acres	0 acres	32.50 acres
<b>Statewide</b>	<b>22,118 acres</b>	<b>1.5 acres</b>	<b>219.23 acres</b>

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-4 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,



*for* Mary Knapp, Ph.D.  
Field Supervisor

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

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 laciniata*),

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 <sup>1</sup>	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 <sup>3</sup>	SPD-WD	Somewhat
Oak, Chinquapin	MWD-ED	Intolerant
Oak, Chestnut <sup>3</sup>	WD-ED	Intolerant
Oak, Overcup <sup>3</sup>	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 <sup>3</sup>	SPD-WD	Somewhat
Oak, Swamp White	VPD-WD	Somewhat
Oak, White	MWD-WD	Intolerant
Pecan <sup>2</sup>	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

<sup>1</sup> VPD=very poorly drained, PD=poorly drained, SPD=somewhat poorly drained, MWD=moderately well drained, WD=well drained, ED=excessively drained

<sup>2</sup> Recommended in Central and Southern Indiana as documented in eFOTG Sect. II

<sup>3</sup> 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



