



United States Department of the Interior



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October 5, 2012

Douglas Oliver, District Ranger
Poplar Bluff Ranger District
Mark Twain National Forest
1420 W. Maud Street
Poplar Bluff, Missouri 63901

COPY

Dear Mr. Oliver:

Please refer to your August 24, 2012, letter transmitting a Biological Evaluation by Megan York-Harris for the Northeast Lake Project in Wayne County, Missouri. On September 16, 2005, the U.S. Fish and Wildlife Service (Service) issued a Programmatic Biological Opinion (Programmatic BO) for the Mark Twain National Forest (MTNF) 2005 Forest Plan (Forest Plan). This Programmatic BO established a two-tiered consultation process for Forest Plan activities, with the issuance of the programmatic opinion being Tier 1 and all subsequent site-specific project analyses constituting Tier 2 consultations. When it is determined that a site-specific project is not likely to adversely affect federally listed species, the Service will produce a concurrence letter.

In issuance of the Programmatic BO (Tier 1 biological opinion), the Service evaluated the effects of all U.S. Forest Service actions outlined in the Forest Plan for the MTNF. The Programmatic BO evaluated the effects of Forest Service management program activities, including timber management and prescribed burning, on the bald eagle (*Haliaeetus leucocephalus*), Gray bat (*Myotis grisescens*), Hine's emerald dragonfly (*Somatochlora hineana*), Indiana bat (*Myotis sodalis*), Mead's milkweed (*Asclepias meadii*), Pink mucket pearlymussel (*Lampsilis abrupta*), Running buffalo clover (*Trifolium stoloniferum*), Scaleshell mussel (*Leptodea leptodon*), Topeka shiner (*Notropis topeka*), Tumbling Creek cavesnail (*Antrobia culveri*), and Virginia sneezeweed (*Helenium virginicum*). We concurred with your programmatic determinations of "no effect" for Virginia sneezeweed, running buffalo clover, and Topeka shiner. We concurred with your programmatic determinations of "may affect, not likely to adversely affect" for the Hine's emerald dragonfly, Tumbling Creek cavesnail, pink mucket, scaleshell, bald eagle, and gray bat. We also concurred with your programmatic determination of "may affect, likely to adversely affect" for Mead's milkweed and Indiana bat.

In June 2009, the Service provided MTNF with an amended Programmatic BO that addressed running buffalo clover and updated the status of the species for the Indiana bat. Your request for Service review of the proposed activities associated with the Northeast

Lake project is a Tier 2 consultation. We have reviewed the information contained in the Biological Evaluation (BE), submitted by your office on August 24, 2012, and agree that gray bat and Indiana bat are likely to occur in the project area.

Description of the Proposed Action

The Northeast Lake project area will undergo commercial harvest, timber stand improvement, and site preparation. Additional acres will be designated as old growth. Connected actions include maintenance of pond dams, invasive species control, road reconstruction and maintenance, decommissioning of illegal roads and trails, trash removal, and creation of temporary roads. Commercial harvest, including salvage, clearcut with reserves, group selection, and thinning will occur on 6,096 acres (42% of the project area). Actions in the preferred alternative are consistent with the direction of the 2005 Forest Plan. All applicable Forest Standards and Guidelines as described in the Forest Plan will be implemented with this project. Proposed actions are more fully described in the BA (pp. 2-6) and are hereby incorporated by reference.

Status of the Species within the Project Area

Gray bat (*Myotis grisescens*)—gray bats have been captured to the west and east within one and 2.5 miles of the project area, respectively. This species may forage and drink from 33 upland ponds on National Forest lands and perennial streams on USACE or private lands within the proposed project area. Although no gray bat caves are documented in the project area, it is likely suitable caves exist along the St. Francis River, and some of these caves are likely occupied by the gray bat. No adverse effects are anticipated for gray bats based on the incorporation of Standards and Guidelines as outlined on page 21 of the biological assessment. Additionally, no caves have been documented in the project area and the nearest record for a gray bat cave is approximately 29 miles from the project area. Upland ponds will be maintained to provide long-term foraging area, and no timber harvest will occur within at least 100 feet of upland ponds. The Service concurs with the determination of May Affect – Not Likely to Adversely Affect for the gray bat.

Indiana bat (*Myotis sodalis*)—Male, female, and juvenile Indiana bats have been documented during the summer months within Poplar Bluff Ranger District Proclamation Boundary, and there is potentially suitable habitat in the form of roosting and foraging habitat within the proposed project area that is proposed for removal. Mist net and acoustic surveys have not resulted in the documentation of Indiana bats within the project area and there are no known hibernacula on the District. There is a documented maternity area approximately one mile west of the project area and another maternity area approximately 4.3 miles south of the project area. Some trees proposed for removal have characteristics suitable for Indiana bat roosting. Other trees will have ample time to develop these characteristics before harvesting is complete. There is a secondary roost tree within the project area on USACE land and a maternity tree outside the project area on USACE lands but within one mile of National Forest. It is assumed that National Forest lands within the project area may provide potentially suitable habitat and be

occupied by the species during the summer months. Based on the Service's Programmatic BO and the site-specific biological assessment, adverse effects are likely to occur to the Indiana bat from Alternative 2. The following Tiered Biological Opinion addresses those adverse effects to the Indiana bat.

Tiered Biological Opinion

The following tiered biological opinion is based on likely adverse effects to the Indiana bat from activities associated with salvage and hazard tree removal for roads and trails in the Northeast Lake Project. In conducting our evaluation of the potential impacts of the project on Indiana bats, our review focused on determining whether; (1) this proposed project falls within the scope of the Programmatic BO issued for the MTNF's Forest Plan, (2) the effects of this proposed action are consistent with those anticipated in the Tier 1 Programmatic BO and (3) the appropriate implementing terms and conditions, associated with the reasonable and prudent measures identified in the Tier 1 biological opinion, are adhered to. This Tier 2 biological opinion also identifies the incidental take anticipated with the Northeast Lake Project. It conforms to the Service's Programmatic BO (page 14) pertaining to individual projects the Service reviews, following the issuance of the Programmatic BO.

Effects of the Action

Based on our analysis of information provided in your BA for the Northeast Lake Project, we have determined that the potential effects of the proposed action are consistent with those addressed in the Programmatic BO and are hereby incorporated by reference.

The Indiana bat habitat components that would most likely be impacted are summer roosting habitat for females, juveniles, and males, and summer maternity habitat. Direct effects could occur to the Indiana bat as a result of removing an occupied roost tree during several activities, including salvage harvest, construction of temporary roads and skid trails, creation of log landings, or when hazard trees are cut for safety purposes.

Units that are treated during this project will be more suitable as foraging habitat for the Indiana bats, although the quantity of potentially available roosting habitat will be reduced through the removal of dying trees. Approximately 20% of the treated stands would become "poor" foraging habitat because they would be in very low residual basal areas post-harvest.

Dying trees proposed for harvest would provide roosting habitat in these areas if the Indiana bat either unknowingly occupies the area or decides to inhabit these areas in the future, when habitat conditions are more favorable for foraging. Those areas proposed for salvage, thinning, and shelterwood establishment harvests are likely to be most appealing to this species due to the creation of structural characteristics providing "openness" in terms of roosting and foraging habitat. Removing any dying trees within the project area presents a risk of incidental take to the Indiana bat because it is likely those trees have developed suitable roosting characteristics for this species and thus could

be occupied. An enhancement zone has been established within 2 miles of the St. Francis River where additional trees of appropriate size will be left to provide a long-term source of roosting habitat. This will lessen the likelihood of impacts to the Indiana bat.

If an occupied roost tree is cut or knocked down, Indiana bats would normally arouse and fly. Individuals could be injured or killed if a non-volant individual occupies the tree or if an individual does not arouse in time to fly away. In addition, if a tree is removed that was previously used as a roost; bats would use energy to find another suitable tree when they return. Indiana bats evolved using ephemeral roosts, and this species routinely uses more than one roost, presumably as a method of checking the future suitability of roosts. Site fidelity seems to be more important than roost tree fidelity. Therefore, the site needs to have suitable roost trees available upon arrival after hibernation. This is more important than a specific tree being available. An analysis of the likelihood of the proposed actions in the 2005 Forest Plan affecting an occupied roost tree can be found on pages 57 and 58 of the PBO discussing. It concluded that the chances of an occupied roost tree being cut on the MTNF under the 2005 Plan are low. Nevertheless, the chance still exists that an Indiana bat could be injured or killed with implementation of this project.

Timber removal and associated forest modification activities could manipulate travel corridors and migrations habitat used by Indiana bats when moving to or from foraging and drinking areas from roosting areas in the summer or when moving between winter caves in the fall and spring. Although timber removal that retains a somewhat higher basal area of standing trees will benefit the Indiana bat because it will allow individuals to move more easily in an "uncluttered" forest and still allow for some protections during flight, heavier harvests, such as clearcut, seedtree, shelterwood cuts, and some of the salvage harvests, may change the manner in which the species forages or may change the travel route this species is using to reach ponds as mature forest cover is removed. With the implementation of this project, optimal foraging and roosting habitat will be created where harvesting reduces high basal area stands to 50-8-

Although site preparation and tree removal for maintenance and construction will be focused between November 1 and April 1, it may occur anytime throughout the year, especially on the same acres where harvesting is proposed but also on other areas. The main objectives of site preparation are to reduce the competition of unwanted vegetation, increase the survival and growth rate of the desired trees remove slash and logging debris if the site has been harvested, and prepare or modify the soil or litter to achieve better tree growth. Ultimately, better light, nutrients, and moisture would be provided to make conditions favorable for germination, survival and growth of established seedlings. Harvest operations normally cease during periods of wet weather to avoid soil rutting and compaction and minimize erosion. Impacts to Indiana bats could occur as a result of the removal of smaller, subcanopy trees (nine inches or less in diameter), particularly if these trees are occupied by male or non-reproductive female Indiana bats. Opening up the understory will benefit the Indiana bat by allowing easier maneuverability through the woods while foraging.

Direct effects from hazard tree removal could occur if an occupied roost tree along a roadside was removed during the summer months or if an occupied roost tree was removed during reconstruction of system roads. Road maintenance will not affect the Indiana bat.

Conclusion

The actions and effects associated with the proposed Northeast Lake Project are consistent with those identified and discussed in the Service's Programmatic BO. After reviewing the size and scope of the project, the environmental baseline, the status of Indiana bat, and its potential occurrence within the project area, the effects of the action, including any cumulative effects, it is the Service's biological opinion that this action is not likely to jeopardize the continued existence of the Indiana bat.

Incidental Take Statement

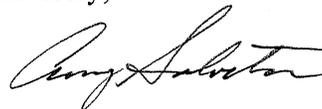
The Service anticipates that the proposed actions associated with the Northeast Lake Project will result in the incidental take of Indiana bat habitat as outlined in Table 1. The type and amount of anticipated incidental take is consistent with that described in the Programmatic BO and does not cause the total annual level of incidental take in the Programmatic BO (page 67-69) to be exceeded.

The Forest Service must implement all pertinent reasonable and prudent measures and implementing terms and conditions stipulated in the Programmatic BO to minimize the impact of the anticipated incidental take of Indiana bats and be exempt from the take prohibitions of section 9 of the Endangered Species Act (Act). We have determined that no new reasonable and prudent measures, beyond those specified in the Programmatic BO, are needed to minimize the impact of incidental take anticipated for the Northeast Lake Project.

This fulfills your consultation requirements under section 7(a)(2) of the Act for this action. Should the proposed project be modified or if the level of take identified above is exceeded, reinitiation of consultation as outlined in 50 CFR 402.16, is required.

We appreciate your continued efforts to ensure that this project is consistent with all provisions outlined in the Programmatic BO.

Sincerely,



Amy Salveter
Field Supervisor

cc: USFS, Mark Twain National Forest, Wildlife, Rolla, MO (Theresa Davidson)

Table 1. Anticipated incidental take associated with the Northeast Lake Project

Activity	Proposed in Northeast Lake					FY13 Anticipated Take on MTNF	Annual Take Limit 2005 MTNF BO
	FY13	FY14	FY15	FY16	FY17		
Salvage Harvest (acres)	1,000	1,000	1,000	1,000	166	2,926	15,000
Hazard Tree Removal (acres) Temporary Road & Skid Trails	8.3	8.3	8.3	8.3	8.3	82	4,400

*Hazard tree removal is for temporary road construction, system road reconstruction, trail maintenance, and fireline construction outside of the cutting units and reported in both acres and miles.