



United States
Department of
Agriculture

Forest
Service

Hoosier National Forest
Supervisor's Office

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RECEIVED

Date: July 18, 2007

Scott Pruitt
Bloomington Field Office - USFWS
620 South Walker Street
Bloomington, IN 47403-2121

JUL 23 2007

FISH & WILDLIFE SERVICES
BFO ECOLOGICAL SERVICES

Dear Scott,

The Hoosier National Forest proposes an ecosystem restoration project on the Tell City Ranger District. This project, **Oriole Restoration**, proposes to restore hardwood forest ecosystems by moving them toward desired conditions based on ecological classifications and *Hoosier National Forest Land and Resource Management Plan (Forest Plan)* direction. To achieve this objective, the Hoosier proposes to:

- Restore dry hardwood forest ecosystems that have been degraded by a lack of fire and limited oak-hickory regeneration,
- Restore woodland and barren communities that have been degraded by woody encroachment and a lack of fire,
- Restore mesic forestlands degraded by a lack of stand age class and structural diversity,
- Restore native mixed hardwood ecosystems by removing nonnative pine, and
- Reduce potential spread of, and control known populations of, nonnative invasive species (NNIS) in the action area.

To accomplish this, the Hoosier will implement 112 acres of noncommercial stand improvement and an estimated 2,180 acres of commercial harvest. The majority of harvest operations will occur during the summer months to prevent equipment operation from causing appreciable soil erosion or heavy ruts, which occur more frequently with wetter soil conditions such as those present during the winter and spring. Winter and spring harvest operations will be allowed only when there are dry periods or frozen ground.

The Forest will apply prescribed fire to approximately 3,500 acres to promote oak-hickory regeneration and reduce hazardous fuel build-up in the action area. Burns will likely top-kill trees up to 2 inches diameter breast high, favoring fire-adapted species that can resprout, such as oak and hickory, while eliminating thinner barked hardwoods such as maple. Burning may need to be repeated up to three times during the decade following harvest to successfully promote oak-hickory regeneration.

The project also includes integrated pest management treatments of nonnative invasive species (NNIS). Treatments will include a combination of mechanical, chemical, and hand methods on up to 1,110 acres. This project will fulfill *Forest Plan* direction associated with the goal of maintaining and restoring sustainable ecosystems. The action area falls in both Perry and Crawford Counties and includes approximately 9,075 acres. Of that, approximately 57 percent



(5,200 acres) is National Forest System lands, and the remaining 47 percent (approximately 3,875 acres) is under other ownerships.

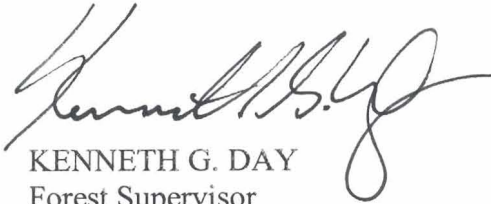
The entire action area falls within Management Area (MA) 2.8. The *Forest Plan* allows for timber harvest, prescribed burning, and NNIS control in this management area, and these activities are consistent with the objectives in the *Forest Plan*. This project will use standards and guidelines established by the *Forest Plan* and the best management practices guide for water quality in Indiana (IDNR 1998).

As determined during consultation on the *Forest Plan*, these management activities are not likely to adversely affect gray bat (*Myotis grisescens*), bald eagle (*Haliaeetus leucocephalus*), rough pigtoe mussel (*Pleurobema plenum*), and fanshell mussel (*Cyprogenia stegaria*). Based on the biological evaluation prepared for this project, the selected actions will have no additional effects to these species beyond those identified in the Forest's January 26, 2005 Programmatic Biological Assessment and the January 3, 2006 USDI Fish and Wildlife Service Biological Opinion.

As determined during the consultation on the *Forest Plan*, the extent and type of these management activities are not likely to jeopardize the continued existence of the Indiana bat (*Myotis sodalis*). Based on the biological evaluation prepared for this project, the proposed action will have no additional adverse effects to the Indiana bat beyond those previously identified in the Forest's January 26, 2005 Programmatic Biological Assessment and the January 3, 2006 USDI Fish and Wildlife Service Biological Opinion.

For more information regarding proposed treatments, please refer to the enclosed Oriole Restoration Project Biological Evaluation. This evaluation considers the effects of the proposed maximum alternative for the Oriole Restoration Project. The final project implemented on the ground will have less treatment than this proposal. Thank you for your assistance with this project. If you have any questions, please contact Judi Perez at (812) 277-3593.

Sincerely,



KENNETH G. DAY
Forest Supervisor

Enclosure



United States Department of the Interior

Fish and Wildlife Service



Bloomington Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

August 24, 2007

Kenneth Day
Forest Supervisor
Hoosier National Forest
811 Constitution Ave.
Bedford, IN 47421

RE: Oriole Restoration Project

Dear Mr. Day:

This letter is in response to your July 18, 2007 letter (received July 23, 2007) notifying the Bloomington Field Office of the United States Fish and Wildlife Service (BFO) of your intention to implement your Oriole Restoration Project (ORP) within the Hoosier National Forest (HNF). BFO issued a programmatic Biological Opinion (BO) and Incidental Take Statement (ITS) on January 3, 2006 for the implementation of the Hoosier National Forest's (HNF) Land and Resource Management Plan (LRMP). The BO analyzed anticipated effects from management activities on bald eagles (*Haliaeetus leucocephalus*), Indiana bats (*Myotis sodalis*), gray bats (*Myotis grisescens*), rough Pigtoe pearly mussels (*Pleurobema plenum*), and fanshell mussels (*Cyprogenia stegaria*). The HNF has determined, and requests that the BFO confirms, that the GRRP will: *not likely to adversely affect* the bald eagle (*Haliaeetus leucocephalus*); and *not likely to adversely affect* the gray bat (*Myotis grisescens*). The HNF also requested that if the BFO finds this project's effects to the Indiana bat (*Myotis sodalis*) to be consistent with those consulted on at the programmatic level (*not likely to jeopardize the continued existence of*), that the BFO appends this project to the Service's BO in order to fulfill the consultation requirements under section 7 of the Endangered Species Act (ESA), as amended.

The ORP area is located in Perry County and Crawford County, Indiana. The project area encompasses approximately 9,075-acres within the boundary of the HNF; National Forest System (NFS) comprise approximately 5,200-acres and private in-holdings comprise the remaining 3,875-acres. The ORP applies to only a portion of the NFS lands in the project area, and no activities are planned for privately-owned lands.

Proposed HNF Action ~ Oriole Restoration Project - The environmental restoration proposed in the ORP involves the replacement of non-native pines with native hardwoods, as well as the re-establishment of native barren communities, through the application of timber harvesting and prescribed burning. The use of fire will increase the presence of oaks and hickories, will mimic historic disturbance regimes, will reduce fuel loading, and will help to restore other fire-dependent species. Non-native pine communities targeted for replacement include plantations of white, Virginia, red and shortleaf pines. In doing so, the HNF intends to maintain oaks and hickories as components of the future forest, and to improve conditions for xeric species (barrens plant communities).

The HNF intends to allow some operations during the summer. The normal summer operating season typically begins around June 1; operators will be contractually obligated to suspend operations when soil conditions (such as after a substantial rain event) would result in excessive damage, such as severe road rutting.

The HNF proposes to implement the following actions under the ORP:

- Conduct clearcutting of pine stands on 416-acres. All clearcut activity will be limited to 10-acre plots within Management Area 2.8, according to the LRMP.
- Conduct shelterwood harvest within hardwood stands, during the summer, on 343-acres.
- Conduct single-tree removals of hardwoods on 302-acres, and group selection harvest of hardwoods on 506-acres. Group selection typically involves less than 1-acre of affected harvest area, but can include area up to 3-acres in size. Single-tree selection can remove up to one third of tree density within affected stands.
- Burn approximately 3500-acres under controlled conditions. Burns will be low-intensity flanking fires that will creep across and down slopes. Burning may have to be repeated up to three times over the next decade in order to successfully promote oak-hickory regeneration.
- Approximately 35-acres may be affected by road use and construction: road construction (6.6-acres); existing road reconstruction (14-acres); existing road maintenance (1.3-acres); temporary road construction (9-acres); temporary road reconstruction (2.9-acres); and road/trail obliteration (1-acre).
- Log landing construction will impact approximately 22.2-acres, with the typical log landing requiring .3-acres. After timber sales are completed, landings will be stabilized with water bars, seeded and mulched, and closed.
- Skid trails will be constructed during harvest operations. Approximately 1-acre will be cleared for skid trails. Skid trails will be rehabilitated after harvest operations to avoid erosion issues.
- Approximately 7-miles of roads/trails will be closed to public access, stabilized, and/or obliterated after timber sale closure.
- Following shelterwood harvest, some herbicide treatment will occur in four 10-acre areas.
- Non-native Invasive Species Control will occur on up to 1,100-acres. Techniques will include a combination of mechanical, chemical, and hand methods. Techniques will be determined by species density and phenology, size of infestation, type of surrounding vegetation and location.

The total treatment area for the proposed ORP action covered in this response is 5,102-acres. Additional project details were provided to the BFO in the form of a hard-copy map.

Note: only the initial prescribed fire (3500-acres) is addressed in this response; any additional prescribed fire will require a complete project proposal to be submitted to BFO for additional tracking purposes.

Proposed Conservation Measures & Project Mitigation Measures (HNF):

- Retention of all snags, unless they pose a safety hazard, or must be removed for access.
- Retention of hardwood species within the pine treatment areas, except when necessary for road construction, log landings, skid trails, or logger safety.
- Identify and protect potential Indiana bat roost trees during fire line construction (unless they pose a safety hazard). Fell snags *only* between September 15th and April 15th to avoid roosting bats.
- Retention of shagbark and shellbark hickory trees within harvest areas.
- Downed woody material not to be moved from the site, or piled.
- Trees exhibiting maternal roost tree characteristics will be retained.
- Occupied primary roost trees will be designated by a 300-foot radius zone. No land management activities, except for hand-application of herbicide treatments, will be allowed within the designated zone during the active period for Indiana bats (April 15 – September 15).
- Prohibit application of *any* herbicides within 20-feet of occupied roost trees; prohibit *any* herbicide applications within 200-feet of caves, sinkholes, swallow holes, or any streams flowing into a cave.
- Except when conducting even-aged management in pines stands (clearcutting), trees will be left along edges of shelterwood harvest, or in large clumps (1/10th-acre).
- Include all Indiana bat Standards and Guidelines (2006 LRMP) into all contract language regarding timber harvest.
- When possible, no trees with Indiana bat roosting potential will be removed during log landing creation.
- Incorporate all other applicable terms and conditions of the Service's January 2006 BO as contractual obligations within the GRRP timber sale contracts.
- Conduct pre-harvest environmental meeting with contractors and their employees on-site before any and all activities; include discussion of contractual obligations and mitigation measures for threatened and endangered species.
- Conduct inspections (timber sale inspectors and HNF biologists/technicians) to ensure contractor compliance.
- HNF wildlife biologists will assist timber markers, contractors, and other resource personnel with the implementation of the conservation measures, as needed.
- Prescribed burning to leave an appreciable amount of downed, large woody material.
- No skidders closer than 50-feet from any perennial or intermittent stream and no closer than 25-feet from any ephemeral streams.
- Skid trail outside of the zone, but near streams, must be at least 100-feet apart.

- No stream crossings without an appropriate crossing structure.
- No landings inside of riparian areas or filter strips of perennial, intermittent, or ephemeral streams.
- Restriction of activities to appropriate soil conditions; i.e. when not saturated.
- Designation of skid trails by a Forest Service representative.
- Designation of log-landing locations by a Forest Service representative.
- Seeding and mulching of landing areas after use.
- Skid trails seeded as soon as practical after use.
- Skidding generally to be done on existing slope contours.
- Closure of temporary roads after use.
- No harvest operations on gradients greater than 35 percent slope.
- No equipment in or around springs.
- Thorough cleaning of harvesting equipment before entering the project area.
- Skid trails located to avoid channeling runoff toward identified heritage sites.
- Avoidance of heritage sites to avoid disturbance.
- Notice of burn operations information to be provided to recreational users, and others.

Anticipated Project Chronology

Sale and harvest of project area hardwood would be initiated in spring 2009. Timber harvest acres would be sold in contract(s) that allow several years to remove timber. Hardwood timber operations would be completed during the spring, summer and early fall of 2011. Pine harvest is anticipated to occur from 2012-2014. Prescribed fire will be implemented, at the earliest, in spring 2014. The earliest time a second burn would be implemented would be spring 2017; a third burn could be applied in spring 2020. The herbicide treatment proposed would occur after hardwoods have been cut, likely in 2010. Non-commercial timber harvest within barren communities could occur as early as 2009 – these areas could be managed using prescribed fire following timber harvest.

The ORP and the Indiana bat (*Myotis sodalis*)

In general, dense populations of non-native pines have very little value to most bat species, including the Indiana bat. They appear to have minimal value as roosting habitat for maternity colonies as no reproductive adult female or juvenile Indiana bats have been recorded roosting in dead or live pine trees in Indiana (BFO records). In contrast, a few adult males have occasionally been found day roosting in pine snags in the HNF.

A maternity colony was located in the proximity of the ORP during a survey in 2004. A solitary female was trapped approximately 3.75-miles southwest of the southern most extension of the ORP (hardwood sections 31-019 & 31-060). This female was tracked to a nearby maternity roost tree located near the intersection of Parks Road & Ultra Road. The roost tree fell due to natural processes, and the colony has likely re-located to a roost tree in the surrounding area. It is possible that the colony has relocated closer to the ORP action area.

For these reasons, the following Standards and Guidelines from the BO are paramount relative to

protecting Indiana bats within the HNF:

Standards:

- Establishment of quarter-mile radius zone around each known hibernacula within the Forest. The zone will be designed according to the specific area in order to take into account likely flight paths, foraging habitat and likely swarming areas. New construction is prohibited in this area.
- Maintenance and promotion (considering private land ownership) of at least 70 percent forest canopy cover within a radius of one mile of known Indiana bat hibernacula. Timber harvest should be conducted within this zone strictly during hibernation and will utilize *only* single-tree or group selection techniques.
- Implementation of prescribed fire within a five-mile zone around hibernacula will only occur when bats are not likely to be swarming or staging. Burns will be conducted only under conditions that will reduce or eliminate smoke dispersing into hibernacula.
- Develop management goals and directives (conservation plan) for each known hibernaculum at micro-topographical level, taking into consideration current conditions and future restraints and/or challenges.
- Maintenance of at least a 60 percent canopy cover (stand-by-stand basis) when conducting uneven-aged harvest or hardwood timber stand improvements. Design of boundaries will be irregular in shape so as to enhance foraging area for bats.

Guidelines:

- When possible, the removal of hazard trees will be delayed until between September 15th and April 15th, the likely hibernating period of the Indiana bat.
- All personnel tasked with the removal of hazard trees will attend training with a biologist to learn how to identify potential maternal roost trees.
- When even-aged management is conducted, leave trees will be left along the edges of clear-cuts or in large clumps (1/10th acre) to maximize their benefit to bats.
- Assessment of the availability of suitable primary maternal roosts during the planning phase of single tree or group selected timber harvest. If potential primary roosts are located, gaps will be created at the tree's borders through harvest design to improve their suitability as roost trees.
- When there are not at least three standing dead trees greater than 11 inches DBH per acre during single-tree or group selection harvest, consider girdling live trees.
- In the event that an occupied primary roost is located on Forest land, a zone will be designated extending in a radius of 300 feet from the known roost. Land management activities will be prohibited within this zone during the active period (April 15th – September 15th) of the Indiana bat.
- Restriction of prescribed burns within a one-mile radius of occupied roosts during active period.

In the event that this colony (maternity roost tree) is relocated during surveys conducted by HNF biologists, or other personnel, the BFO should be contacted immediately. The roost tree should

be GPS'd, and an exit count survey should be conducted.

Overall, we anticipate that the aggregate removal/harvest, shelterwood harvest, and prescribed burning, all with the implementation of the proposed conservation/mitigation measures, along with the standards and guidelines from the BO, will likely result in very minor, short-term adverse effects to Indiana bats and their prey base. The ORP as a whole, however, will have long-lasting, beneficial effects in regard to the overall abundance and quality of Indiana bat roosting and foraging habitat. Currently, the roosting and foraging habitat appear to be of limited quality and abundance (Andrew King, USFWS, BFO). Large-diameter suitable roost trees are scarce and the dense pine plantations appear to limit foraging opportunities by cluttering the forest's sub-canopy and hindering efficient flight paths. The more open stands following pine harvest should allow increased solar radiation of remaining snags, which in turn may increase the quality and abundance of roosting habitat beyond what previously existed in the pine plantations.

The multiple prescribed burns may each cause a temporary decline in insect abundance and/or availability during early spring, but the insects should quickly rebound and exceed previous prey levels as herbaceous and woody plants recover. No snags will be toppled in any of the project areas (unless they pose a safety hazard).

Service Response

For the reasons outlined in the Biological Evaluation (BE) for the ORP, the Service concurs that the proposed project is *not likely to adversely affect* bald eagles or gray bats. The Service also concurs that timber harvest and prescribed fire (from the proposed ORP) are *not likely to jeopardize the continued existence of* the Indiana bat and that the anticipated effects and resulting level of incidental take are consistent with those analyzed within the programmatic BO. Anticipated effects from timber harvest, prescribed fire, and timber stand improvement (TSI) were specifically considered and discussed on pages 34 to 41 of the BO. Specifically, timber harvest and prescribed fire activities will be deducted (in acres) from the Service's Incidental Take Statement included in the BO.

*It should be noted that the bald eagle (*Haliaeetus leucocephalus*) was de-listed, and subsequently removed, from the Endangered Species List in August 2007. Although still under the protection of several federal laws, most notably the Bald and Golden Eagle Protection Act, the eagle will no longer be consulted on within the scope of the Endangered Species Act. However, *any* activities that have the potential to "take" bald eagles will need a specific permit granted by the USFWS (BFO). This permitting process is still under development, however, and the HNF will be notified at a later date when the specifics are finalized.

Tracking Incidental Take

In the event that direct take of one or more bats should occur, we do not expect that dead or moribund bats would be detected. Therefore, the amount of anticipated incidental take of Indiana bats in the programmatic BO is expressed in the form of harm through habitat loss/alteration. The anticipated amount of incidental take from this project is 416-acres of pine

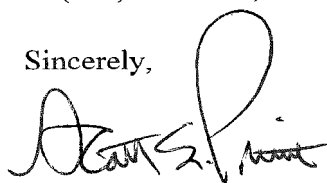
removal harvest (i.e. pine clearcuts), 343-acres of hardwood shelterwood cuts, and 3,500-acres of prescribed fire treatment. This project brings the cumulative total of pine clearcuts to 771-acres out of the 1,000-acres originally anticipated for this management activity in the 2006 programmatic BO. Likewise, this project brings the cumulative total of hardwood shelterwood cuts to 343-acres out of 760-acres, and the cumulative total of prescribed fire treatment to 5,670-acres out of 20,000-acres. As required in the programmatic BO, the Forest Service provided an updated spreadsheet reflecting the anticipated acreage for this project, cumulative totals, and the remaining/available balances for each of the HNF management activities covered under the 2006 programmatic BO. The Service concurs that the attached spreadsheet is complete and accurately reflects anticipated impacts of the proposed project without exceeding anticipated levels of incidental take.

To be in compliance with the ITS of the programmatic BO and to obtain exemption from the section 9 prohibitions of the Endangered Species Act (ESA) of 1973, the Forest Service must adhere to the Reasonable and Prudent Measures (RPMs) and Terms and Conditions (T&Cs) identified in the January 3, 2006 programmatic BO.

To ensure that the impacts of take associated with this project are appropriately minimized and that the exemption of incidental take is appropriately documented, the Forest Service and Fish and Wildlife Service are using an 'appended' programmatic consultation approach. After assessing the anticipated effects of the proposed project, we concur they are within the scope of the programmatic BO and we agree to append the Forest Service's December 14, 2006 letter and spreadsheet along with this response letter to the programmatic BO and label them as "Appendix 3".

This precludes the need for further consultation on this individual project as required under section 7 of the ESA, as amended. If, however, new information on endangered species within the proposed project area becomes available, or, if significant changes are made to the proposed project, then please contact Michael Tosick at (812)334-4261, ext. 218 for further consultation.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott E. Pruitt". The signature is stylized with a large, looping initial "S" and a long, sweeping underline.

Scott E. Pruitt
Field Supervisor

Cumulative Units of Management Actions (in acres or trees)
Hoosier National Forest - 2006 Biological Opinion

Habitat Manipulation Items	Pine Clearcuts	Pine Clearcuts	Pine Shelterwood cuts	Pine Shelterwood cuts	Hardwood Clearcuts	Hardwood Clearcuts	Hardwood Shelterwood cuts	Hardwood Shelterwood cuts	Hazard-tree Removal	Hazard-tree Removal	Hardwood Salvage cuts	Hardwood Salvage cuts	Pine Salvage cuts	Pine Salvage cuts	Prescribed Fire	Prescribed Fire	Fire Suppression	Fire Suppression	Timber Operation Accidents	Timber Operation Accidents	Sanitation Harvest*	Sanitation Harvest*
	planned	done	planned	done	planned	done	planned	done	planned	done	planned	done	planned	done	planned	done	planned	done	planned	done	planned	done
Unit of Measure	acres	acres	acres	acres	acres	acres	acres	acres	trees	trees	acres	acres	acres	acres	acres	acres	acres	acres	trees	trees	as needed	as needed
Anticipated Level of Take Over 10 years	1000		80		1020		760		600		5000		1200		20000		500		1000		as needed	
Proposed Project																						
1. German Ridge Restoration (12/18/06-2/1/07)	355	355	77	77											2170	2170						
2. Oriole Restoration Project	416						343								3500							
Sum of Acres/Trees of Projects to Date	771	355	77	77			343								5670	2170						
Net Left (Acres/Trees)		645			1020		760		600		5000		1200		17830		500		1000			

* This management activity will be subtracted from another category