

Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

December 20, 2002

Leon Blashock, District Ranger
Allegheny National Forest
Marienville Ranger District
HC 2, Box 130
Marienville, PA 16239

Dear Mr. Blashock:

This responds to your letter of January 28, 2002, requesting our review of the Windthrow Salvage Project Biological Assessment and Evaluation (BAE). The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

On June 1, 1999, the Fish and Wildlife Service (Service) issued a biological opinion (BO) regarding the impacts of forest management and other activities that would be implemented under the 1986 Land and Resource Management Plan (Forest Plan) for the Allegheny National Forest (ANF). The Service's programmatic BO evaluated the effects of Forest Service management program activities, including timber management, on the bald eagle (*Haliaeetus leucocephalus*), Indiana bat (*Myotis sodalis*), clubshell mussel (*Pleurobema clava*), and northern riffleshell mussel (*Epioblasma torulosa rangiana*).

In the programmatic BO, we determined that the implementation of projects predicated upon the Forest Plan is not likely to jeopardize the continued existence of the bald eagle, Indiana bat, or clubshell mussel. We also determined that implementation of the Forest Plan and most projects predicated upon it (with the exception of boating facility operation) is not likely to jeopardize the continued existence of the northern riffleshell. A jeopardy determination was made for the operation of boating facilities with respect to the northern riffleshell mussel, and reasonable and prudent alternatives were identified to avoid jeopardy to this species.

Although the Service has provided a programmatic BO to the Forest Service for the ANF Forest Plan, the Service will review, as they are developed, site-specific projects that the Forest Service determines "may affect" federally listed species. The Service will determine if any effects will occur as a result of a site-specific project in a manner, or to an extent, not evaluated or previously disclosed and discussed in the Service's programmatic BO. We consider this site-specific project analysis to be "Tier 2" of the consultation process, with the programmatic consultation (and resulting BO) constituting the "Tier 1" consultation. Our project-specific (Tier 2) consultations will focus on: 1) compliance with the reasonable and prudent measures and associated terms and conditions in the programmatic BO; 2) consistency with the scope and effects previously analyzed in the programmatic BO; 3) project-specific incidental take vs. take

estimated in the programmatic BO; and 4) project-specific reasonable and prudent measures and associated terms and conditions (i.e., for non-jeopardy determinations). In the event of a “may affect” but “not likely to adversely affect” determination for a specific project that is consistent with the programmatic BO, no further evaluation by the Service is necessary and section 7(a)(2) consultation will be considered complete for that project (e.g., via a concurrence letter documenting the conclusion of informal consultation).

We have reviewed the information contained in the Windthrow Salvage Project BAE, which describes the potential effects of the proposed project on federally listed species. The proposed project type (i.e., timber harvesting) and its effects were discussed and evaluated in the Forest Plan BA and programmatic BO. Therefore, this consultation qualifies as a “Tier 2” consultation under the Forest Plan BO.

Forest Service Effect Determinations

The Forest Service initially determined that the federally listed Indiana bat, bald eagle, and small whorled pogonia (*Isotria medeoloides*) could occur in the project area. This determination was correct.

Based on species surveys, and further assessment of the potential effects of this project on listed species, the Forest Service reached a “no effect” determination for the bald eagle and small whorled pogonia, and a “may affect, not likely to adversely affect” determination for the Indiana bat. You requested our concurrence with these effect determinations. Based on our review of the BAE and programmatic BO, our comments on your determinations follow.

Bald eagle

Based on existing information about known bald eagle nest sites, and the September 2001 survey of the project area, no bald eagle nest sites are located in or within 0.5 mile of the project area (BAE, p. 11). In addition, the BAE indicates that bald eagles are not known to use the project area for foraging. Based on this information, we concur with your determination that implementation of Alternative 1 will not affect the bald eagle.

Small whorled pogonia

Using a predictive GIS model, sites with high potential to support the small whorled pogonia were identified. These sites were then surveyed by Forest Service district biologists. No small whorled pogonias were found. Considering the results of these surveys, we concur with the Forest Service’s “no effect” determination, provided surveys were conducted during the appropriate survey window (May 15 to July 31) for this species.

Indiana bat

The Forest Service determined that implementation of this project “may affect, but is not likely to adversely affect” the Indiana bat. This determination was based on the apparently low density of Indiana bats on the ANF; the small number of standing, damaged trees (135) estimated to be removed; the seasonal restriction on removal of standing trees (to avoid direct take of bats); and the scattered distribution of the relatively small harvest units. Due to the rationale outlined in the “Effects of the Action” section (below), we do not concur with this determination.

Description of the Proposed Action

The project information below is summarized from information provided in the project BAE. The purpose of this project is to “salvage trees that have been downed or damaged from wind and other natural events and reduce tree hazards along Forest system roads and trails” (BAE, p. 3). This project is located throughout the ANF, on the Bradford and Marienville Ranger Districts, in Elk, Forest, McKean and Warren Counties, Pennsylvania.

Salvageable trees occur on 1,275 acres in 105 units on the ANF, distributed as follows: 903 acres in 81 units on the Marienville District, and 470 acres in 24 units on the Bradford District. Within these units, an estimated 260 acres have downed or damaged trees, and it is this acreage that will be subject to salvage operations. An estimated 750 thousand to one million board feet of material is estimated to be down or damaged in these units. “Damaged tree” criteria are listed in the BAE (p. 4). “Hazard trees” are trees “located such that if the tree were to fall it would pose a hazard to a road or trail.”

Within the Marienville District, estimates of downed and damaged materials are as follows: downed trees (85%); standing, damaged, non-hazard trees (10%); and standing, damaged, hazard trees (5%). Within the Bradford District, estimates of downed and damaged materials are as follows: downed trees (70%); standing, damaged, non-hazard trees (25%); and standing, damaged, hazard trees (5%). The treatment areas are distributed as follows: 79% in Management Area (MA) 3.0, 15% in MA 6.1, 5% in MA 9.1, and 1% in MA 6.2.

Three alternatives were assessed in the BAE. Alternative 1 would remove downed and damaged trees in the units identified above. Alternative 2 is the “no action” alternative. Alternative 3 would remove only downed and hazard trees. No road construction or reconstruction is proposed or evaluated in the BAE to facilitate implementation of any of the alternatives. Because the Forest Service has selected Alternative 1 as the preliminary preferred alternative, this biological opinion focuses on the effects expected due to implementation of this alternative.

The Forest Service has proposed to implement the following project conservation measure, based on the presence of suitable Indiana bat habitat in the project area, and the assumption that the habitat is occupied by this species.

“To mitigate possible direct effects to Indiana Bats . . . conduct logging between October 1 and March 31 in units where any standing, leaning or broken-off trees are marked for removal. This is the time period when the Indiana bat is not roosting on the ANF”

(BAE, p. 4).

The Forest Service estimates that this winter logging restriction would apply to about 25 percent of the area proposed for salvage.

Status of the Species

Species description, life history, population dynamics, status and distribution of the Indiana bat are fully described on pages 21 to 36 of the programmatic BO, and are hereby incorporated by reference. New information on the status of the Indiana bat obtained since the Forest Plan and programmatic BO follow.

A biennial survey was conducted on Indiana bat Priority I hibernacula since the issuance of the Service's programmatic BO. Approximately 102,870 Indiana bats were counted during surveys conducted in 2000 and 2001. This compares to the 115,885 Indiana bats that were estimated in 1999 at the same locations (Richard Clawson, Missouri Department of Conservation, *in litt.* 2001 -- as presented at the Indiana Bat Symposium held in Lexington, Kentucky, March 29-31, 2001).

In Pennsylvania, an Indiana bat hibernaculum was located in January of 2000 in an abandoned limestone mine in Armstrong County, approximately 50 miles southwest of the ANF. During a survey of the mine, 67 Indiana bats were located; however, additional surveys of this extensive mine system are needed to determine the extent of this wintering Indiana bat population. Another Indiana bat hibernaculum was recently located in Lawrence County (southwest of the ANF). A survey of this abandoned limestone mine in 2001 revealed the presence of 21 Indiana bats. In February of 2001, the Pennsylvania Game Commission documented the presence of 604 Indiana bats at the Canoe Creek mine in Blair County, approximately 75 miles southeast of the ANF.

Terms and conditions from the programmatic BO (p. 73-75, item 5), describe monitoring procedures for the Forest Service to use to determine use of the ANF by Indiana bats. From 1998-2002, 186 sites were surveyed (i.e., mist-netted) for bats on the ANF (Brad Nelson, ANF, personal communication; November 19, 2002). Many of these sites were also sampled using Anabat detectors. The mist net survey protocol from the draft Indiana Bat Recovery Plan has been used, and in some cases, sampling efforts exceeded those outlined in the protocol. One male Indiana bat was captured in 1998, and another male Indiana bat was captured and radio-tagged in 2001.

Between 1998 and 2001, potential Indiana bat vocalizations were detected at 19 of 125 sampling sites. Positive detection of bats with this equipment could form the basis of a presumption of Indiana bat presence. Recent studies indicate that the echo-location calls of Indiana bats can be distinguished from other *Myotis* bats. While the system definitely shows promise, it still requires substantial development before it can reliably determine whether Indiana bat vocalizations were detected. At this time, the Service does not believe that this technique alone (i.e., without positive mist-net survey results) is sufficient to determine whether Indiana bats are present in a project's action area.

Other mist-netting efforts in and near the ANF included a survey conducted in 2001 in association with a proposed natural gas pipeline project. During that survey effort, mist-netting was conducted at 100 sites along the proposed pipeline right-of-way, which extends from the Pennsylvania-Ohio State line in Lawrence County (near the North Fork Little Beaver Creek) east to Clinton County, Pennsylvania (near the town of Tamarack). The pipeline goes through portions of Lawrence, Butler, Armstrong, Clarion, Jefferson, Elk, Forest, McKean, Cameron, Potter, and Clinton Counties, Pennsylvania. Portions of McKean, Forest, and Elk Counties occur within the ANF proclamation boundary. Out of the 100 sites surveyed, 12 survey sites were located within the ANF. No Indiana bats were captured at any of the survey sites.

Environmental Baseline

The environmental baseline for the ANF was established and described on pages 7-12 and 42-44 in the programmatic BO. Since issuance of the BO, the environmental baseline on the ANF has changed as follows.

Factors affecting the species' environment (on the ANF)

The percentage of trees in the 90 years and older age classes has increased, and includes a 6.8% increase in trees in the 90-109 year old age class and an increase of 9.6% in trees 110 years and older. Conversely, trees in the 60-89 year age class have decreased by 4.3%. Additionally, there has been a decrease of 9.9% in trees in the 20-59 year age class and a 2.1% decrease in understocked savannahs and openings. Stands in the 0-19 year age class have increased slightly (0.2%). Other changes relate to a decrease in timber harvest between 1998 and 2001. The average timber harvest on the ANF has decreased from an average annual harvest of 7,556 acres between 1986 and 1997, to 2,557 acres between 1998 and 2001. This represents a 66% reduction in timber harvest since 1997.

Although the amount of timber harvest has been reduced in the last four years, the mix of timber harvest practices has remained relatively unchanged. Of the 2,557 acres harvested annually on the ANF between 1998 and 2001, an annual average of 789 acres (31%) involves thinning and salvage treatments, 175 acres (7%) includes uneven-aged management (i.e., group and individual tree selection), and 902 acres (62%) were associated with even-aged regeneration harvest techniques (e.g., shelterwood seedtree harvest, removal cutting and clear-cutting). Although the amount of timber harvest has been reduced since 1997, reforestation treatments have not changed appreciably. Since 1998, the average annual amount of reforestation (herbicide application, site preparation, TSI, fencing, planting, fertilization, release) that has occurred on ANF has been 4,818 acres. The average annual amount was 4,469 acres between 1986 and 1997.

Activities that benefit wildlife such as prescribed fire, tree and shrub planting, opening construction, and shrub and tree release have decreased from an average annual amount of approximately 2,200 acres between 1986 and 1997, to an average annual amount of approximately 1,600 acres since 1998. This represents a 30% reduction in the total amount of wildlife and fish habitat improvement work that has been completed annually across the ANF since the programmatic BO was issued.

There has also been a reduction in the amount of road work completed on the ANF. New road construction has dropped from an average annual of 13.7 miles between 1986 and 1997, to an annual average of 0.1 mile of new road construction per year since 1998. Road reconstruction has had a similar reduction, and road betterment has dropped from an average annual amount of 10.1 miles per year from 1986 to 1997, to an annual amount of 0.1 mile per year between 1998 and 2000. Since 1998, the average annual amount of road restoration has been 36.9 miles per year, which represents a 22% reduction in annual road restoration over what was completed between 1986 and 1997 (46.8 miles per year).

Status of the Species Within the Action Area

No mist-net surveys have been completed in the project area. However, due to the presence of suitable Indiana bat roosting and foraging habitat in the project area, the Forest Service has assumed that Indiana bats are present.

Of the net area proposed to be salvaged, 85% was determined to be suitable or optimal maternity roosting habitat, and 86% was determined to be suitable or optimal foraging habitat. However, during the Forest Service's September 2000, field survey of the project area, "no dead standing trees were observed." The BAE (p. 9) indicates that the "lack of snags scattered throughout these conditions reduces the potential for maternity colonies. However, bark characteristics of the larger live hardwoods and trees with significant damage may provide suitable roost sites for Indiana bats."

Effects of the Action

Service analysis of the preliminary preferred alternative (Alternative 1) for the Windthrow Salvage project includes consideration of the assumed presence of Indiana bats and their habitat in the project area. Of the net area proposed to be salvaged, 85% was determined to be suitable or optimal maternity roosting habitat, and 86% was determined to be suitable or optimal foraging habitat.

The Service anticipates that the proposed actions associated with the Windthrow Salvage project will result in the incidental take of Indiana bats through harm or harassment. While the seasonal restriction on tree harvesting is likely to prevent the death or injury of Indiana bats, it may not prevent the harassment of bats that may be in areas harvested between April 1 and September 30. Also, although we do not anticipate that foraging habitat will be significantly affected by this project, several suitable or potentially suitable roost trees will be removed. Due to the limited presence of dead trees in the project area, the trees proposed for removal may be the most suitable roosting trees present now and in the future, because many of these damaged trees have, or are likely to develop, characteristics preferred by Indiana bats (BAE, p. 9). Therefore, it is possible that removal of these trees will result in harm or harassment, especially when this action is considered in context with the other actions occurring on the ANF pursuant to implementation of the Forest Plan (affecting approximately 13,300 acres of forested habitat between 1998 and 2002).

The types of timber harvest activities proposed were described on pages 7-8 of the programmatic BO. The potential direct and indirect effects to the Indiana bat from harvest or removal of trees are consistent with those identified and evaluated in the programmatic BO (pp. 46-48, 51, and 65-66), and are hereby incorporated by reference. Minimization of adverse effects will be addressed by implementation of the project-specific conservation measure, as described in the “Proposed Action” section of this opinion.

As described in the Service’s programmatic BO, we believe that adverse effects are likely to occur to the Indiana bat from harvesting or tree removal under the Forest Service’s management program activities. Therefore, given the nature of activities associated with the proposed project, we believe that incidental take of Indiana bats is possible within the analysis area. However, we have concluded that activities associated with the Windthrow Salvage project will not result in adverse effects to the Indiana bat beyond those that were previously disclosed and discussed in the Service’s programmatic BO.

Cumulative Effects

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. No such cumulative effects were identified in the BAE; therefore, none have been evaluated.

Conclusion

The actions and effects associated with the proposed Windthrow Salvage 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 overall status of the Indiana bat, the effects of the action, and the cumulative effects, it is the Service’s biological opinion that the proposed action is not likely to jeopardize the continued existence of the Indiana bat.

This project has not resulted in a jeopardy determination because: 1) the project’s impacts are consistent with those identified and discussed in the programmatic BO; and 2) the Forest Service has proposed to implement a seasonal restriction on the removal of potential roost trees, thereby reducing the likelihood that Indiana bats will be killed, injured, harmed, or harassed.

Incidental Take Statement

This biological opinion is based on likely adverse effects to the Indiana bat from the removal of suitable habitat during timber harvesting within the Windthrow Salvage project area. This Tier 2 BO identifies the incidental take anticipated due to implementation of the Windthrow Salvage project (preferred alternative), and the cumulative total of incidental take which has occurred (Table 1).

Consistent with the approach taken in the programmatic BO, incidental take for this species is measured indirectly as loss or alteration of forested habitat (in acres), as outlined in Table 1. Thus, implementation of Alternative 1 will result in the take of Indiana bats, as measured by the

loss/alteration of 260 acres of forested habitat between 2003 and 2008. This take is counted toward the cumulative annual incidental take as outlined in the programmatic BO (Table 6, p. 67).

The actual incidental take reported by the Forest Service (fiscal years 1998 through 2002), has consistently been far below the annual levels estimated (authorized) in the programmatic BO (see Table 1). Therefore, we do not anticipate that implementation of this project will cause the take levels in the programmatic BO to be exceeded.

Table 1. Actual vs. authorized incidental take (as measured indirectly by acreage) due to the removal or disturbance of potential Indiana bat habitat on the Allegheny National Forest, Pennsylvania.

Activity	Acres Actually vs. (Authorized to be) Removed/Disturbed					
	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	Total ¹
Trail Construction						
• Pedestrian	.3 (0)	7.8 (8)	.3 (2)	.2 (2)	0 (2)	8.6 (16)
• Motorized - winter	.3 (4)	3.6 (0)	0 (4)	.6 (4)	0 (4)	4.5 (20)
• Motorized - summer	6 (0)	1.2 (0)	3.2 (4)	2.14 (4)	0 (4)	12.54 (16)
Timber management						
• Clearcut	191 (220)	222 (220)	0 (420)	59 (220)	6 (220)	478 (1520)
• Shelterwood seed/prep	1558 (1640)	521 (1640)	299 (4000)	395 (2000)	575 (2000)	3348 (13,280)
• Shelterwood removal	1203 (1864)	573 (1864)	488 (1864)	843 (1864)	381 (1864)	3488 (11,184)
• Thinning	1526 (3225)	732 (3225)	240 (7000)	659 (3225)	988 (3225)	4145 (23,125)
• Selection cut	458 (334)	184 (334)	17 (700)	40 (800)	63 (800)	762 (3768)
Wildlife Habitat Management	10 (10)	7 (10)	4 (10)	0 (10)	0 (10)	21 (60)
Prescribed burning	0 (40)	10 (40)	3 (40)	0 (40)	0 (40)	13 (240)
Roads						
• Construction	0 (1)	0 (0)	0 (73)	1.44 (55)	1.8 (55)	3.24 (239)
• Reconstruction/ betterment	0 (0)	0 (0)	0 (55)	4.44 (55)	2.28 (55)	6.72 (220)
• Restoration	2 (2)	3 (3)	4.14 (3)	1.99 (3)	1.01 (3)	12.14 (17)
Oil and Gas Development	149 (149)	206 (112)	258.75 (112)	236.25 (112)	194.25 (112)	1044.25 (709)
TOTALS	5103.6 (7489)	2470.6 (7456)	1317.39 (14,287)	2243.06 (8394)	2212.34 (8394)	13,346.99 (54,414)

¹ Total actual “take” (1998 through 2002) vs. authorized (total estimated in programmatic BO)

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of the Indiana bat.

1. Implement project-specific conservation measures.
2. Retain potentially suitable roost trees.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Forest Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above, and outline reporting and monitoring requirements. These terms and conditions are non-discretionary.

1. For this project, conduct logging between October 1 and March 31 in units where any standing, leaning or broken-off trees are marked for removal. This is the time period when the Indiana bat is not roosting on the ANF.
2. Retain *non-hazard*, damaged trees that are standing and that: a) are greater than or equal to 12 inches d.b.h., and b) are Class 1 or Class 2 trees (as identified by Romme *et al.* 1995) or other trees exhibiting or likely to develop characteristics (e.g., exfoliating bark) preferred by Indiana bats. This applies to damaged trees falling into categories 5d - 5i on page 4 (Chapter 1) of the project BAE.
3. Protect any new roosts identified during project implementation, in accordance with term and condition number 2 (related to Indiana bats) in the programmatic BO.
4. Consistent with term and condition number 3 (related to Indiana bats) in the programmatic BO, reinitiate consultation with the Fish and Wildlife Service if a maternity site is located in, or within 1.5 miles of, the project area.

Reinitiation Notice

We would like to remind you that, in accordance with our June 1, 1999, biological opinion, and the June 1, 2000, amendment to that opinion, incidental take that occurs as a result of this and other projects on the Forest cannot exceed the annual or cumulative incidental take levels established in the programmatic biological opinion. If implementation of any project or projects is anticipated to exceed these take levels, further consultation will be necessary. To ensure that incidental take is not exceeded, quarterly reports should continue to be provided to this office tabulating the amount of incidental take (as it occurs) on projects being implemented throughout the Forest, as indirectly measured by acres affected. In addition, you should be aware that this project may be subject to further consultation pending the outcome of future consultations on the Forest Plan or Forest Plan amendments.

Should new information reveal that the agency action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; or the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or a new species is listed or critical habitat is designated that may be affected by the action; or the amount or extent of take as identified in Table 1 is exceeded, reinitiation of formal consultation as outlined in 50 CFR 402.16 is required.

If you have any questions regarding our response, or if you need additional information, please contact Carole Copeyon of my staff at 814-234-4090.

Sincerely,

David Densmore
Supervisor

LITERATURE CITED

Romme, R.C., K. Tyrell and V. Brack, Jr. 1995. Literature summary and habitat suitability index model: components of summer habitat for the Indiana bat, *Myotis sodalis*. Report submitted to the Indiana Department of Natural Resources, Division of Wildlife, Bloomington, Indiana by 3D/Environmental, Cincinnati, Ohio. Federal Aid Project E-1-7, Study No. 8, 38 pp.

cc:

ANF - Kevin Elliott

RO - Glenn Smith

Project file (CKC)

Readers file

ES file: ANF - Mini-BO

ES:PAFO:CCopeyon:ckc:ll:12/20/02

Filename: Windthrow Salvage MBO_122002.doc