



November 5, 2014

Dan Ashe
Director
U.S. Fish and Wildlife Service
1849 C Street, N.W.
Washington, D.C. 20240

Docket # FWS-R5-ES-2011-0024

Dear Director Ashe:

The Midwest Association of Fish and Wildlife Agencies (MAFWA), the Southeastern Association of Fish and Wildlife Agencies, the Southern Group of State Foresters and the Northeastern Area Association of State Foresters (hereinafter referred to as the Associations; see Appendix 1 for lists of states represented by the Associations) are writing in response to the U.S. Fish and Wildlife Service's (Service) proposal (78 Federal Register 61046-61080; Proposal) to list the northern long-eared bat (*Myotis septentrionalis*; NLEB) as an endangered species under the Endangered Species Act of 1973, as amended (Act). We appreciate the work that the Service has done to make a recommendation on this important species. We would also like to thank the Service for extending the final listing decision 6-months to allow the Associations to provide additional input on existing and new NLEB science.

On October 1-3, 2014, MAFWA hosted the States' NLEB Workshop (Workshop) in Minneapolis, MN. Representatives from 25 state resource management agencies met to discuss the Service's Proposal. Among the workshop's goals was the sharing of published and unpublished information about NLEB biology and ecology. Toward that end, on the first day of the Workshop, the states were joined by Service staff who presented useful background information on the Act, the Proposal, and the process being undertaken by the Service. The Service's participation involved information sharing only. On the first and second days of the Workshop, the states were also joined by staff of the U.S. Department of Agriculture, Forest Service, and the Department of Defense, who shared their experience related to the Proposal. Following the departure of the federal agencies on the final day of the Workshop, the states focused on the development of a final listing recommendation to submit to the Service.

Based upon conclusions reached at the NLEB Workshop and the reasoning and additional information presented below, the Associations conclude that the Service's proposed endangered listing is not supported by the best scientific and commercial data available. If the Service determines that a threatened determination is appropriate in its final rule, then the Associations suggest the Service accompany that determination with a 4(d) rule. The Associations recommend a 4(d) rule that exempts normal forest management activities and other land management activities for which best management practices have been developed because they are necessary and advisable for the conservation of the NLEB. The Associations also suggest that the Service engage with the states to develop this 4(d) rule.

Listing Determination

Section 3 of the Act defines an "endangered species" as "... any species which is in danger of extinction throughout all or a significant portion of its range ..." and a "threatened species" as "... any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." The Associations have reviewed the Proposal, many comment letters and scientific literature and agree with the Service that "...no other threat is as severe and immediate to the northern long-eared bat's persistence as the disease, white-nose syndrome" (Proposal, p. 61058). However, during our review of the best available science, and considering new findings, we have identified the following concerns about the Service's proposal that NLEB be designated an endangered species:

- 1) The Service has relied heavily on hibernacula surveys to evaluate NLEB population abundance and the effects of white-nose syndrome (WNS) on NLEB (Proposal, p. 61064).
- 2) The Service has determined that the NLEB range has been "significantly impacted" (Proposal, p. 61076).
- 3) The Service has determined that WNS "...continues to spread, and we have no reason not to expect that where it spreads, it will have the same impact" (Proposal, p. 61064).
- 4) The Service has not considered a "...comprehensive list, of conservation efforts..." that are currently being implemented and are of considerable conservation benefit to the NLEB" (Proposal, p. 61061).

Based on the listing criteria, the definitions of endangered and threatened species, and the best scientific and commercial data available, the Associations believe an endangered determination is not warranted at this time. The following sections address the preceding concerns, and provide extensive supporting information that informed the Associations' conclusion.

1) The Service relies heavily on hibernacula surveys to evaluate NLEB population abundance and the effects of WNS on NLEB (Proposal, p. 61064).

There is no doubt that NLEB numbers in the northeastern U.S. portion of the range have declined since WNS was discovered in New York in 2006, but those effects have only occurred in the northeastern U.S. The Service's conclusion that the NLEB warrants an endangered determination relies almost entirely upon information about NLEB population abundance and trends in only the northeastern U.S. and acknowledges that very little reliable information about the species' total population size exists. Available information on current NLEB population estimates indicates that they could be off by an order of magnitude (Tennessee Wildlife Resources Agency 2014). The Service has misinterpreted and relied upon incomplete and highly uncertain population size data.

The Associations contend that the current total NLEB population remains well above the "in danger of extinction" standard that the Act requires. In addition, the sources cited below indicate that the population abundance information upon which the Proposal is based is unreliable and cannot support an endangered listing.

- The Service uses hibernacula survey data as their primary source of information to determine population level affects to NLEB across its range. Throughout the Proposal, the Service acknowledges that NLEB are difficult to find in hibernacula. For example, "Northern long-eared bats are typically found roosting in small crevices or cracks in cave or mine walls or ceilings, often with only the nose and ears visible, thus are easily overlooked during surveys" (Proposal, p. 61054). This statement emphasizes the considerable uncertainty upon which any population estimate derived from hibernacula surveys is based.
- Hibernacula counts for NLEB are unreliable compared to other cave hibernating bat species. NLEBs "often move between hibernacula throughout the winter, which may further decrease population estimates (Griffin 1940, Whitaker and Rissler 1992, Caceres and Barclay 2000)" (Proposal, p. 61056). The roost locations and movement during winter lends considerable uncertainty to using hibernacula data for trend analysis. O'Shea and Bogan (2003) were unable to detect trends in NLEB numbers for 9 of 12 hibernacula for which sufficient data was obtained. Data collected was pre-2000 and from the northeastern United States. They concluded that bat hibernacula data often lack adequate repetition for analysis. Lastly, Ingersoll et al. (2013) suggest many faults with the hibernacula survey data on which the Service has relied in its Proposal.
- The Service has placed little emphasis on the possibility that NLEB might use other winter hibernacula in addition to caves and mines. A hypothesis proposed by Griffin (1945) indicated that NLEB may regularly hibernate in "unsuspected retreats" in areas where caves and mines are not present and has not been discounted. In addition, there is some evidence that suggests that NLEBs may be hibernating in locations that are alternative to caves and mines, given the frequency with which NLEBs are netted far from known hibernacula (Carter 2014, pers. comm.). This contention is supported by the observation that NLEBs occur in North Dakota despite a lack of caves and mines (Harsel 2014, pers. comm.).

- Recent survey data from Pennsylvania, a state among the hardest hit by WNS, indicates that hibernacula surveys may be overestimating the decline in NLEB numbers. A very large 2013 sample of summer mist netting shows that NLEB captures per unit effort (over 178,000 sq. meter mist net hours in 2001-2007; over 500,000 in 2013) remain at 24% of the level observed pre-WNS. In contrast, hibernacula surveys in Pennsylvania during the same time period show a 99% decline in NLEB observations. These results clearly demonstrate the significant disparity between the prevalence of NLEBs recorded in hibernacula surveys and in summer surveys (Turner 2014, pers. comm.).
- As an example of major disparities in population estimates, 2013-2014 Wisconsin hibernacula surveys have yielded an estimate of only 220 NLEBs, while 43 bats (or 20% of the known winter population) were observed at a single roost in 2014 (White 2014, pers. comm.).
- In Minnesota, a total of 195 NLEBs were caught during mist-netting at 77 locations during June- August 2014. Further, NLEBs were among the most commonly caught bat species during these surveys. (Minnesota DNR, unpubl. data; West Consulting, unpubl. data).
- In Wisconsin, 12 female NLEB were captured from June-July 2014. This small sample of NLEBs led researchers to tree roosts from which a total of 275 bats were observed emerging (White 2014, pers. comm.).
- Only a small proportion of known cave and mine hibernacula across the species range have been surveyed or monitored for NLEB. For example, “Tennessee has over 9,000 caves and <2% of those have been surveyed, which could mean that there are many more locations within the state that have significant numbers of MYSE” (Tennessee Wildlife Resources Agency 2014). This is particularly true for many areas of Canada (COSEWIC 2013) and the central and western states where surveys of bat hibernacula are very limited.
- Netting in flight corridors may be under sampling NLEB populations; experimental netting in a forest ecosystem yielded double the captures of NLEBs compared to captures in corridor netting locations (Carroll et al. 2002).
- Summer habitat is not limiting for NLEB. In 2013 there were 423,585,498 acres of forest across the 38 states within the range of NLEBs (Miles 2014).

2) The Service has determined that the NLEB range has been “significantly impacted” (Proposal, p. 61076).

The best available information does not indicate that the NLEB is in danger of extinction throughout a “significant portion of” the NLEB’s range, as that term is interpreted in the Service’s recent guidance (79 Federal Register 37578-37612). Under that guidance, there is no evidence that any portion of the NLEB’s range qualifies as “significant” because no portion’s contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or is likely to become so in the foreseeable future throughout all of its range.

- The Service states that “The US portion of the northern long-eared bat’s range can be described in four parts.... the eastern population, Midwestern population, the southern population, and the western population” (Proposal, p. 61052). There is

no evidence to support breaking the continental NLEB population into subgroups or subpopulations. the Associations believe that the Service should evaluate the NLEB as one population for the final listing determination.

- The Service goes on to state that “The overall range has been significantly impacted because a large portion of populations in the eastern part of the range have been extirpated due to WNS” (Proposal, p. 61076). There is no evidence that NLEB are extirpated in any portion of their range. Even in Pennsylvania where hibernacula surveys have indicated that NLEB populations been severely impacted by WNS, summer mist netting results remain at 24% of the level observed pre-WNS (Pennsylvania Game Commission 2013).
- To date, fourteen states within range of NLEB will remain uninfected by WNS. Populations in the western portion of the species’ range have not been infected by WNS (<https://www.whitenosesyndrome.org/>).

3) The Service had determined that WNS “...continues to spread, and we have no reason not to expect that where it spreads, it will have the same impact” (Proposal, p. 61064).

The Service states “We find that threatened species status is not appropriate ... because the threat of (WNS) ... is expected to spread range-wide in a short timeframe” (Proposal, p. 61076). But the best scientific and commercial data available do not support this conclusion.

Information presented by the Service in the Proposal, the many comments submitted in response to the Proposal (e.g., MarkWest Energy Partners, L.P. 2014), and new information presented at the Workshop casts doubt on the certainty with which the Service assesses the likelihood of WNS spreading throughout the range of the NLEB in the future. The Service assumes that rate of spread observed in the northeastern U.S. will remain constant as WNS spreads throughout the remaining range despite available evidence that environmental conditions differ across the range. Further, the response of the congener, little brown bat (*Myotis lucifugus*), to WNS suggests that remnant populations of other *Myotis* species may be stabilizing.

Inaccuracies in the Service’s interpretation of the rate of spread of WNS

- Speculation regarding the future rate of spread of WNS is based upon observations from known, mostly large hibernacula in the northeast. A hypothesis proposed by Griffin (1945) indicated that NLEB may regularly hibernate in “unsuspected retreats” in areas where caves and mines are not present and has not been discounted. In addition, there is some evidence that suggests that NLEBs may be hibernating in locations that are alternative to caves and mines, given the frequency with which NLEBs are netted far from known hibernacula (Carter 2014, pers. comm.).
- The opportunity for human or bat induced movement of WNS is likely limited or slowed by the distance of transmission. In the western portion of NLEB range, few caves serve as hibernacula and the distance between these caves and between patches of forested habitat are much greater than in the northeast.

- WNS has yet to be documented in the southern and western periphery of the NLEB range. Given that the spread of WNS into those regions is uncertain, it is important to recognize that peripheral populations are critical for refugia, resilience, and evolutionary potential of species. Uninfected peripheral populations will play a critical role in the maintenance and recovery of the continental NLEB population (Hooper 2004).
- Assumptions regarding the rate of spread of WNS have been questioned in a recent peer-reviewed publication (Alves et al. 2014).
- Recent research into strategies to slow the spread of WNS has documented that in a laboratory *Pseudogymnoascus destructans* (Pd) spores can be killed by *Rhodococcus rhodochrous* DAP96253 (RRDAP). Preliminary results from a subsequent study documented little brown bat survival when treated with volatile organic compounds derived from RRDAP. While this research is at an early stage in the development of an approach for effectively treating WNS by reducing Pd infection loads, preliminary lab studies offer encouragement (Amelon 2014, pers. comm.). This approach may increase bat survival within a hibernation season to allow NLEBs an opportunity to adapt to the presence of the pathogen, thereby slowing the historical rate of WNS spread and mortality.

Myotid species' response to WNS

- Recent surveys in Pennsylvania have used a novel UV light survey technique to detect WNS infection load on little brown bats entering hibernacula in Pennsylvania. Results from these surveys provide evidence that surviving little brown bats have a decreased infection load compared to those dying immediately following site contamination. These results indicate that individuals that have survived initial infection have a higher likelihood of long-term survival (Turner 2014, pers. comm.).
- There is evidence that little brown bats in Pennsylvania are showing an increasing trend in body mass at time of hibernation (Turner 2014, pers. comm.), and others have suggested that there is evidence that larger body mass increases survival from WNS infection (Jonasson and Willis 2011). These trends suggest that myotid species like NLEB are capable of adapting behavioral strategies for dealing with WNS infection.
- Capture data from West Virginia was examined to look at population trends. Because survey effort data were not available, the ratio of NLEB captures to those of eastern red bats and big brown bats (species that do not appear to be as impacted by WNS) were compared pre- and post-WNS. In the three regions of West Virginia bat surveys were conducted between 2011 and 2013, as well as pre-WNS, these data suggest NLEB populations exhibited a sharp decline post-WNS, after which it appears that the population is stabilizing. This trend was not observed for little brown bats or tri-colored bats. Data from future years will be examined to see if this trend continues. Unfortunately, the 2014 data will not be available before the listing decision is made (West Virginia Division of Natural Resources 2014).

The critical question to be answered by the Service is: Is the NLEB in danger of extinction through all or a significant portion of its range as of April 2nd 2015? The Associations conclude, based on the wide range of information outlined above, the highly uncertain rate of WNS spread, and the highly uncertain rate of mortality attributable to WNS, any speculation regarding the effect of those uncertain trends on the NLEB population should not be relied upon as the best available scientific and commercial data available for determining whether the NLEB is at risk of extinction.

4) The Service did not consider a “...comprehensive list, of conservation efforts...” that are currently being implemented and are considered a conservation benefit to the NLEB (Proposal, p. 61061).

By their own admission, the Service did not consider a “...comprehensive list, of conservation efforts...” that are currently being implemented and are considered of conservation benefit to the NLEB (Proposal, p. 61061). Across the NLEB’s range, many state and federal agency partners are implementing conservation actions to: 1) slow the spread of WNS; 2) implement normal forest management activities; and 3) protect NLEB via state regulation.

Actions to slow the spread of WNS

The following list of existing conservation actions have been implemented by many state and federal agencies to slow the spread of WNS and should be considered by the Service in their final determination:

- Utilization of the “National White-Nose Syndrome Decontamination Protocol – version 06.25.2012”, which provides guidance for decontamination of all human visitors entering and exiting caves that are used as, or are potential, bat hibernacula.
- Following guidance outlined in the Service’s March 26, 2009 moratorium on the use of publicly-owned caves for recreational caving.
- Development and implementation of state and national WNS plans and collaboration and sharing of WNS data and research information.
- Issuance of state permits that require compliance with standards and guidelines for proper handling of bats to reduce or eliminate human-caused spread of the fungus.
- As stated above, recent research into strategies to slow the spread of WNS have documented in a laboratory that *Pseudogymnoascus destructans* (Pd) spores can be killed by *Rhodococcus rhodochrous* DAP96253 (RRDAP). Preliminary results from a subsequent study documented little brown bat survival when treated with volatile organic compounds derived from RRDAP. While this research is at an early stage in the development of an approach for effectively treating WNS by reducing Pd infection loads, preliminary lab studies offer encouragement (Amelon 2014, pers. comm.). This approach may increase bat survival within a hibernation season to allow NLEBs an opportunity to adapt to the presence of the pathogen, thereby slowing the historical rate of WNS spread and mortality.

- Surveillance and monitoring of hibernacula using methods that minimize stress, collection of tissue, and environmental samples to aid in early WNS detection. WNS research cooperation and monitoring of bat populations so that evidence of WNS infection can be detected and responded to as rapidly as possible.
- Education and training efforts directed at managers of caves and mines open to the public so that the spread of WNS infection can be slowed, detected and responded to as rapidly as possible when it does occur.
- Use of bat-friendly hibernacula gates to minimize disturbance during critical periods and prevent access by people who are not in compliance with decontamination protocols.
- Restricting access and visitation to hibernacula to limit disturbance to hibernating bats.

Actions that benefit NLEB through normal forest management

The purpose of the Act is to “provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved...” (Act, Section 2(b)). The Service states in the Proposal that “studies to date have found that the northern long-eared bat shows a varied degree of sensitivity to timber harvest practices, and the amount of forest removal varies by State” (Proposal, p. 61061). Whatever future developments bring regarding WNS and the NLEB, there is little questioning that the species requires healthy, diverse forests across the various landscapes they occur throughout their range, both for their continued survival and subsequent recovery.

In addition to the preceding conservation actions that slow the spread of WNS, all states across the range of NLEB use normal forest management activities to manage their respective state forests. Normal forest management activities include many other practices than just timber harvest. They vary from state to state, but this set of activities are accepted and approved by each state’s forestry or natural resources agency. Normal forest management activities have been practiced at a large scale and for many years by states across NLEB’s range. The well-documented ubiquity of NLEBs across this range attests to the effectiveness of normal forest management activities in providing suitable foraging, roosting, and swarming habitat for the NLEB (Cryan et al. 2001, Jung et al. 2004, Menzel et al. 2002, Owen et al. 2003, Perry and Thill 2007).

Many state agencies also implement natural community management on other types of habitats, and focus on management objectives that result in a mosaic of forest, woodland, glades, savanna, grassland, and wetlands to improve and maintain the areas for the wide diversity of plants and animals, including bats, that would be expected to occur in the area. These management actions, in addition to normal forestry management activities, help produce a mosaic of habitats that also provide roosting, foraging, and swarming habitats.

Normal forest management activities provide population level benefits to NLEBs that far outweigh any potential harm or incidental take to individual NLEBs. Maintaining healthy forested ecosystems within the NLEB’s range provides suitable habitat that benefits the population across its entire range. The states’ forest management programs produce reliable outcomes, are governed by legal frameworks, and in many cases are subject to

third-party certification and audit. As such, the programs meet the standards of the Service's Policy for Evaluation of Conservation Efforts when Making Listing Decisions (68 Federal Register 15100-15115).

Normal forest management activities are necessary and advisable for the conservation of NLEB for the following reasons:

- According to the U.S.D.A. Forest Service's Forest Inventory and Analysis, the amount of forested land within the 38 states of NLEB's range has increased from 414,297,531 acres in 2004 and 2005 to 423,585,498 acres in 2013 (Miles 2014).
- Potential take associated with normal forest management activities across the NLEB range is discountable because many states in the NLEB range are known to harvest only a small portion of their timberland each year. For example, 23 states (totaling 265 million acres of forested land) collectively harvest less than 2% of the forest annually based on a survey conducted by the Workshop planning team. Moreover, roughly half of that 2% was reported to be managed when bats are in hibernacula. The potential for take is also minimized since a significant portion of these harvests (the majority for some states) utilize selective methods such as single-tree selection or shelterwood treatments where many trees are left.
 - The Pennsylvania Game Commission controls 1.25 million acres of forest, but manages only 7,000 acres (0.5%) per year, with only 1/3 of that managed during the April- September NLEB roosting season (Gustafson 2014, pers. comm.).
 - The Michigan Department of Natural Resources controls about 4 million acres of forest and manages about 55,000 (1.4%) acres annually, with about half that acreage (.07%) managed during April- September (O'Neill 2014, pers. comm.).
 - About 1.4% of Wisconsin's 17 million acres of forest land is harvested annually by volume. Less than half of this is harvested between April and October (Feldkirchner 2014, pers. comm.).
 - The Minnesota Department of Natural Resources controls about 4.2 million acres of forest, but manages only 0.3% of that land during April- September in any year (Boe 2014, pers. comm.).
 - The Ohio Department of Natural Resources owns about 500,000 acres of forest of which only 3000 acres (0.6%) are managed annually. Over half (70%) of the annually managed land is managed from April to September (Guess 2014, pers. comm.).
- Summer forest management techniques that better mimic natural disturbance than winter techniques are critical to regenerating native tree species. In the upper Midwest these species include oaks, pines, and paper birch. These tree species are critical to the ecological function of forests and adaptability to climate change. They may constitute preferred NLEB habitat in some plant communities and regions.
- Prescribed burning is a critical component of normal forest management in much of the range of NLEB, particularly in the southeastern U.S. Use of

prescribed fire in fire-maintained ecosystems benefits NLEBs and other native species (Perry 2012 and Johnson et al. 2009).

- At a landscape scale, normal forest management activities promote healthy habitat conditions that are critical for NLEB recovery by providing structural complexity and diversity of forests. The Associations agree with the Service's interpretation of the science regarding NLEB and summer roosting behavior:
 - "Northern long-eared bats most likely are not dependent on a certain species of trees for roosts throughout their range; rather, certain tree species will form suitable cavities or retain bark and the bats will use them opportunistically (Foster and Kurta 1999, p.668)" (Proposal, p. 61055).
 - "Carter and Felhamer (2005, p. 265) speculated that structural complexity of habitat or available roosting resources are more important factors than the actual tree species" (Proposal, p. 61055).
 - "Canopy coverage at northern long-eared bat roosts has ranged from 56% in Missouri..... to greater than 84% in Kentucky" (Proposal, p. 61055).
- Bat Conservation International identified that "the Conservation Measures put forth in Appendix D (of the Interim Conference and Planning Guidance) are extremely conservative for a species as opportunistic as NLEB (Bat Conservation International 2014).
- Normal forest management activities also provide assurances that include environmental regulations at the individual state and federal level, site-level best management practices, forest certification systems, and forest planning requirements at the individual state level. Through these, the states commit to not only water and site protection, but also to wildlife habitat conservation actions that are effective in maintaining healthy and resilient forest ecosystems, which in turn provide foraging, roosting, and swarming habitat for NLEBs.
- Canopy gaps in a forested landscape may be beneficial for pup rearing (Perry and Thill 2007, Garroway and Broders 2008).
- Timber harvesting is the states' primary tool for maintaining healthy forests. The ability to conduct harvest is dependent on markets for the harvested wood. Summer harvest is essential to maintaining the viability of the forest products industry, and thus the states' ability to manage their forests for the benefit of the NLEB and full range of other forest-dependent species.
- NLEB roost sites are selected for characteristics of tree and stand structure rather than individual tree species (Henderson and Broders 2008, Foster and Kurta 1999). Forest management is the most efficient method of creating the diverse habitat structure required for NLEBs and is therefore critical to maintenance of NLEB habitat (Perry et al. 2008, Perry et al. 2007, Schultes and Elliott 2002).

The Service stated that the "highest rates of development in the conterminous United States are occurring within the range of the eastern small-footed and northern long-eared bats (Brown et al. 2005, p.1856) and contribute to loss of forest habitat" (Proposal, p. 61059). The Associations do not agree with this statement. Forests in the range of the

NLEB continue to recover from unsustainable practices that were employed in the late nineteenth century. The recovery of eastern forests is, in fact, one of the great conservation successes of the twentieth and early twenty-first century, and the sustainable management of forests in range of the NLEB is a model for the world. Thus, while NLEB are threatened by WNS (Factor C), the trend and conservation trajectory of forested NLEB habitat (Factor A) is positive (Miles 2014). It is imperative that the conservation program for this species supports rather than discourage the recovery of forests, which are managed to provide both wildlife habitat and sustainable timber products for society.

Actions that benefit NLEB through state regulation

There are two regulatory mechanisms currently being implemented that the Service did not consider in the Proposal: state protection and a wind industry HCP.

- At least 11 states have laws that protect NLEB based on a survey conducted by the Workshop planning team.
- The Midwestern states, in partnership with the Service and representatives of the wind industry, are crafting a programmatic Multi-Species Habitat Conservation Plan (MSHCP) for Wind Energy Development. The intent of the MSHCP is to reduce mortality to NLEB and other cave-hibernating bats from current and future wind energy facilities and to mitigate for unavoidable take to such an extent that there will be a net conservation benefit from implementation of this plan. Thus, the threats to NLEB from take by wind energy facilities are expected to be offset over the term of the MSHCP, which is expected to be completed in 2016 or 2017 and will have a 40-year duration.

Listing Determination Conclusion

Given the uncertainty in local NLEB population estimates, the lack of a total NLEB population estimate, the speculative nature of assumptions regarding the future rate of spread of WNS and its population impacts, and the proactive nature and benefits of existing conservation actions currently implemented by the states related to both the protection of the cave and forested habitats upon which the NLEB depend upon for their survival, the Associations conclude that the NLEB is not in danger of extinction throughout all or a significant portion of its range.

Recommended 4(d) Rule

Under Section 4 of the Act, the Service has the authority to promulgate a special rule that specifies actions that are necessary and advisable for the conservation of a species designated as threatened under the Act. Because modification, destruction or curtailment of spring, summer or fall habitats has not been the immediate or proximate cause of the decline of NLEB, the Associations recommend that, if the Service determines that the NLEB should be designated as a threatened species, that determination should be accompanied by a 4(d) rule that identifies the role of normal forest management and other land management activities for which best management practices have been developed as necessary and advisable for conserving northern long-eared bat.

Precedent exists for exempting normal forest management activities under a 4(d) rule. The Service promulgated a 4(d) rule for the Louisiana black bear across its entire range that “shall not prohibit effects incidental to normal forest management activities within the historic range of the Louisiana black bear ...” (50 CFR 17.40 (i)(2)). A 4(d) rule exempting take resulting from normal forest management activities and other land management activities for which best management practices have been developed would allow the states the flexibility to develop and implement adaptive management strategies that would benefit the NLEB.

Normal forest management activities have been practiced at a large scale and for many years by states across NLEB’s range. The well-documented ubiquity of NLEBs across this range attests to the effectiveness of normal forest management activities in providing suitable foraging, roosting, and swarming habitat for the NLEB (Cryan et al. 2001, Jung et al. 2004, Menzel et al. 2002, Owen et al. 2003, Perry and Thill 2007). Many states participate in programs that assure the implementation of normal forest management activities on lands managed by those states. These assurances include environmental regulations at the individual state and federal level, site-level best management practices, forest certification systems, and forest planning requirements at the individual state level. Through these, states commit to not only water and site protection, but also to wildlife habitat conservation actions that are effective in maintaining healthy and resilient forest ecosystems, which in turn provide foraging, roosting, and swarming habitat for NLEBs.

While WNS is undisputedly the principal threat to NLEBs, normal forest management activities provide conservation benefits to NLEBs that far outweigh any potential harm done to the species due to its opportunistic summer roosting behavior (Carter and Feldhamer 2005, Timpone et al. 2010). Maintaining healthy forests within the NLEB’s range provides suitable habitat for the benefit of the overall population. Normal forest management activities is a necessary and advisable conservation measure for the NLEB for the reasons reviewed on pages 8-10 of this letter in the section titled “Actions that benefit NLEB through normal forest management”.

4(d) rule Conclusion

The Associations recommend that if a threatened determination is made, the Service issue a special rule under Section 4(d) of the Act, concurrent with that determination, that exempts normal forest management activities that could result in negligible take of the NLEB from the take prohibitions under Section 9 of the Act. A 4(d) rule for forest management activities could be built upon existing forest management programs and would provide conservation measures that are necessary and advisable for the conservation of NLEB. The Associations also encourage the Service to engage with the states to develop this 4(d) rule to involve the states in developing the implementation of that rule.

Summary

In conclusion, the Associations contend that:

1. WNS is the primary threat to the NLEB.
2. The future rate of WNS spread and resulting mortality is uncertain, and the best available information does not demonstrate that WNS has put the species in danger of extinction throughout all or a significant portion of its range.
3. The population size of the NLEB is uncertain, and may be severely underestimated. Therefore, the best available information does not demonstrate that the species is in danger of extinction throughout all or a significant portion of its range.
4. Existing conservation actions are being implemented to slow the spread and impact of WNS.
5. Given the uncertainty of the rate of effect of the threat and its impact, an endangered determination is not warranted.
6. If the Service reaches a threatened determination, implementation of a 4(d) rule will provide the most effective means for providing necessary and advisable actions for the conservation of the bat.
7. The 4(d) rule should exempt take resulting from normal forest management and other land management activities for which best management practices have been developed.

The Associations appreciate this opportunity to comment on the Proposal, and look forward to opportunities to work in partnership with the Service to conserve the NLEB.

Sincerely,



Ed Boggess
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Peter Church
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George Geissler
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Ben Tuggle

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Appendix 1. Lists of States Represented by the Associations

Midwest Association of Fish and Wildlife Agencies

Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

Southeastern Association of Fish and Wildlife Agencies

Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Southern Group of State Foresters

Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia

Northeastern Area Association of State Foresters

Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, Wisconsin