

Appendix 1 - List of Public Comments

Each response identified during the environmental analysis scoping process was reviewed to identify specific comments, issues and concerns. This appendix contains a listing of those comments in the respondent's own words. Following each comment is a summary of how the comment was addressed. Comments are grouped by subject category.

Roost Trees

1. **“[O]n p. 3 [of the scoping letter] the penultimate paragraph discusses ways to ‘reserve potentially suitable bat roosting trees....(that are) ...greater than 4” dbh.’ I am puzzled about why small shagbark hickory etc. would not be ‘reserved’. Aren’t they the shaggy trees of the future? Don’t you need to protect the seed corn as well as the mature crop? Clarification would be appreciated.”**

Response: All shagbark hickory trees will be reserved, unless they pose direct threat to human health and welfare. Also, there is no issue about the number of potential roost sites on the Forest the Biological Opinion (BO) indicates that "There are an estimated 4.7 million potentially suitable roost trees that may be available to Indiana bats on the GMNF" and that "less than 0.1% of suitable roost trees will be removed annually when the bats may be present". The intent for protecting shagbark hickories (as well as known roost trees - see second measure on page 37 of BO) throughout the year is to reduce possibility on (i) incidental take, and (ii) the inadvertent removal of historic roost site while the bats are hibernating - and the subsequent search for a new home next spring...

It is recognized that "Indiana bats exhibit varying degrees of site fidelity to summer colony areas, roosts, and foraging habitat" (see page 13 of the BO). So, the brief answer is that the number of potentially suitable sites is not thought to be limiting - especially, compared to the consequences of incidental take. Therefore, as the BO stresses, the "Service believes the following reasonable and prudent measures are necessary and appropriate to further minimize impacts of incidental take of Indiana bats" (see page 36 of BO). Management of currently non-suitable, young trees in no way "minimizes impacts of incidental take."

2. **“Cutting in areas thought to contain roost trees should be restricted to a time of year when the Indiana bats are least likely to be present (September through May). Roost trees should be visibly marked, and a protective no-cut barrier should be maintained around the roost trees to avoid damage from falling trees. Also, loud activities around or near the maternity colonies should be regulated when the species is using the roost.”**

Response: These facets are discussed in the Environmental Assessment (EA). The proposed action includes direction for the protection of known roost trees; similarly the proposed action gives direction to protect potentially suitable roost trees from disturbance. Alternative 4 discusses the option of eliminating all summer timbering activities (in an effort to further reduce incidental take). Your concern about noise is noted. We are not aware of any literature discussing bat response to disturbing noise.

3. **“I suggest that you add the following wording to your proposal about the bat roosting trees as shown on page 3 item “c” of the proposal.**

CHANGE 4” DBH to 12”

ADD ...unless they (the dead snags or den trees) are commercially valuable to the landowner or timber owner in which case they may, at his or her discretion, be harvested.”

Response: The intent of this amendment passage is to qualify conditions for consideration when selecting den trees (as directed by the Forest Plan) during management activities. The amendment integrates new information about those conditions attractive to Indiana bats (dead trees, exhibiting exfoliating bark, of 4” minimal diameter). This standard and guideline is not intended for use as standard/guideline for lands of other ownership.

Hibernacula

4. **“In Attachment 1, under the heading ‘Terms and Conditions applicable during the non-hibernations season’ you have item 7 dealing with occupied hibernacula. Isn’t something wrong here? You even mention burns conducted from October to May, a period which certainly includes hibernation season.”**

Response: Yes, item(s) 7 (and 8) were improperly listed under “non-hibernation season”. These items overlap the non-hibernation season; the intent, as described by the Biological Opinion (BO) is as follows: “in order to minimize the potential effects of smoke on occupied Indiana bat hibernacula or roosting during fall swarming, the following is necessary”.

Legal - general

5. **“[W]e recommend that the USFS reconsider its conclusion that the proposed action is non-significant from a NEPA standpoint. We believe an EIS may be needed to modify the GMNF Plan in a way that ensures the NEPA, NFMA, and ESA requirements will be adequately met.”**

Response: See the “Relationship to Other Documents and Laws” section of this EA (chapter 1), which explains why the proposed amendment is believed to be non-significant.

Species Viability

6. **“Forest Watch requests that the USFS include in the Environmental Assessment for the proposed plan amendment a description of the agency’s rationale and basis for concluding that the current plan direction is ‘adequate to maintain species viability.’ If the agency cannot provide an adequate basis for this conclusion, we ask that the agency consider and adopt an alternative that would postpone, until adequate information is available, any management actions that could threaten the population viability of any RFSS or GMNF TES species. We ask that the USFS consider and discuss relevant issues decided in the Sierra Club v. Martin⁴ case as part of its NEPA environmental analysis of the proposed GMNF Plan amendment.”**

Response: These concerns are addressed primarily in the Biological Evaluation (Appendix 2) as well as summarized in chapter 3 of this EA, under the “Threatened, Endangered, and Sensitive Species” section, “Regional Forester’s Sensitive Species” subsection.

Management Indicator Species

- 7. “Forest Watch concludes that the poor selection of Management Indicator Species (MIS) on the GMNF and lack of adequate monitoring during the past 13 years make it impossible for the agency to conclude that the land use allocation, proposed management activities, and standards and guidelines in the GMNF Plan are adequate to maintain population viability for TES and other species. The bottom line is that the Forest Service may not adopt or implement a plan that it knows or believes could through its actions extirpate a vertebrate species such as the Indiana bat.”**

Response: This is addressed as Issue #1 in the “Issues Considered but Dismissed” section of the EA (see Chapter 1).

- 8. “Unfortunately, the MIS selected by the Forest Service for the GMNF do not reasonably or reliably predict the impact of logging, road building and other management activities on the Indiana bat or other native and desired non-native vertebrate species in Vermont.”**

Response: This is addressed as Issue #1 in the “Issues Considered but Dismissed” section of the EA (see Chapter 1). In addition, depending upon the significance of information gathered through monitoring, additional consultation with U.S Fish and Wildlife Service may be appropriate.

- 9. “A 1991 report.... recommends eliminating three of the five MIS assessed in the report. A June 1994 report.... concludes ‘The goal of our MIS program is to identify impacts to native and desirable non-native vertebrate species associated with GMNF activities. The current program direction seemingly does not meet this goal for our vegetation management activities.’...the USFS has not adequately gathered or evaluated population or inventory data or current population trends data about the GMNF MIS.**

“Based on the factors summarized above, Forest Watch concludes the US Forest Service has no reasonable and justifiable basis for claiming that the determination of Allowable Sale Quantity, allocation of land uses (management prescriptions), and schedule of activities developed as part of the current GMNF Plan, or implementation of the management standards and guidelines found in the current plan GMNF Plan are ‘adequate to maintain species viability’ or to maintain the diversity of fish and wildlife on the GMNF. Forest Watch requests that you address and resolve these issues in your NEPA analysis for the proposed Plan amendment.”

Response: This is addressed as Issue #1 in the “Issues Considered but Dismissed” section of the EA (see Chapter 1).

- 10. “The Proposed Amendment is also in violation of regulations under the National Forest Management Act (NFMA) due to the USFS’s failure to perform a biological inventory of the Indiana bat and declare it as a Management Indicator Species (MIS)...Furthermore, NFMA regulations specifically requires the Forest Service to designate MIS’s when**

appropriate and to monitor the population of MIS's, stating: '...In the selection of management indicator species, the following categories shall be represented where appropriate: Endangered and threatened plant and animal species identified on State and Federal lists for the planning area; species with special habitat needs that may be influenced significantly by planned management programs...' 36 C.F.R. § 219.19. The Proposed Amendment fails to update and modify the LRMP provisions dealing with NFMA MIS requirements. The current MIS program on the GMNF is inadequate to monitor bat population levels. The MIS provisions of the LRMP must be amended and updated in order to comply with NFMA.'

Response: This is addressed as Issue #1 in the "Issues Considered but Dismissed" section of the EA (see Chapter 1).

In addition, the statement that the Forest Service has failed to perform biological inventory is not correct. Green Mountain National Forest (GMNF) staff have participated in a state-wide (including GMNF lands) inventory of bat hibernacula for the past decade. Data from these surveys was utilized in developing the Forest's Biological Assessment. Summer surveys have been conducted on the GMNF in 1999 and 2000; additionally, a fall swarming survey was conducted at Vermont's two largest bat hibernacula in 2000. None of these survey efforts have captured an Indiana bat. A species that is difficult to capture or detect, for any reason (rarity, elusiveness, etc.), is a poor surrogate of management response and not a good candidate for monitoring as a MIS.

Conservation Measures

- 11. "Forest Watch requests that the USFS, as part of its NEPA analysis and Plan amendment alternatives, identify and evaluate actions that it could take to promote recovery of Indiana bats on the Green Mountain National Forest, as well as identify and evaluate actions that would reduce the risk of harm to the species."**

Response: This issue led to the development of Alternative 3: Proposed Action with Conservation Measures, Alternative 4: Proposed Action with No Summer Timber Harvesting, and Alternative 5: Proposed Action with Conservation Measures and No Summer Timber Harvesting. Please refer to those alternative descriptions, as well as the environmental effects section of this EA. This EA assesses alternative LRMP amendment language linked to the GMNF's conservation program for the recovery of Indiana bat. The conservation program, which complies with ESA Section 7(a)1, has been developed in close consultation with local FWS, State Fish & Wildlife, academia, and bat experts.

Endangered Species Act – § 7(a)(1)

- 12. "The USFS has not yet initiated formally or completed consultation with the USFW under § 7(a)(1) and we request it do so now, as part of the NEPA and Plan amendment process....Congress also demands that the US Forest Service look for opportunities to improve the status of species rather than simply avoid harming them. We request that the USFS rigorously look for and evaluate these opportunities now as part of the NEPA and Plan amendment process."**

Response: There is no formalized process for consultation with U.S. Fish and Wildlife Service (FWS) under § 7(a)(1). § 7(a)(1) consultation is on going; this Forest Plan amendment process (that assesses alternative conservation and recovery actions) is one facet of development and implementation of our conservation program. See also Appendix 4 of the EA, which displays a synopsis of GMNF measures for species protection, management, and recovery addressing § 7(a)(1) requirements of the ESA.

- 13. “The USFS has failed to create a program in the Green Mountain National Forest Plan (‘Forest Plan’) that adequately provides protection to the ecosystems that the endangered Indiana bat rely upon for summer habitat, in violation of § 7(a)(1) of the ESA. The Proposed Amendment lacks protective measures for the bat and fails to identify specific habitat requirements for the Indiana Bat. As a result, the Forest Service has failed to provide the specific measures necessary for the species’ survival as required by § 7(a)(1). Even with adoption of the Proposed Amendment, the Forest Plan and all actions and activities predicated on the plan, violate the ESA.”**

Response: The GMNF continues to seek the best information and direction for conservation and recovery programs; our efforts have brought together the insights of the people most involved with bat conservation (e.g., State, Federal, NGO, and academia). Our most recent effort to evaluate the range of alternatives in this EA was a follow-up (of our scoping effort) request to known bat experts and enthusiasts. It solicited their specific thoughts on the alternatives assessed by this EA, and additional actions that the GMNF may consider to promote Indiana bat conservation and recovery. Information provided from that outreach has been integrated into this amendment assessment. See project file for specific comments.

- 14. “The USFS has failed to take all necessary measures within its authority to bring the Indiana Bat back to the point where it no longer requires protection....the measures in the Biological Opinion are aimed at lowering the risk of harm to the Indiana Bat existing within the GMNF but do not actually promote an increase in the numbers of the species. The measures do not promote the species with the following respects:**

- a. “Insufficient measures have been implemented to prevent or reduce taking of the endangered Indiana Bat during autumn, winter or spring.”**

Response: This EA assesses options for both conservation and recovery; utilizing the best and most recent data available.

- b. “The USFS has plans to monitor the status of the bat to reduce adverse impacts upon this species. However, this does not promote the growth of the species, rather these- plans merely preserve the status quo of the Indiana Bat in the GMNF. Thus the USFS’s plans do not meet the agency’s affirmative obligation to conserve the species.”**

Response: Seemingly, a prudent response to nebulous relationship(s) is to first better understand (ergo; monitoring precedes action), and then respond accordingly. We believe our actions support our goal for conservation and recovery. Depending upon the

significance of information gathered through monitoring, additional consultation with U.S Fish and Wildlife Service may be appropriate.

- c. **“The USFS promise to monitor the timber sales and predicated activities to make sure that the Forest Plan's guidelines are being implemented does not promote the recovery of the species because the Forest Plan lacks specific requirements to preserve and maintain the Indiana Bat's habitat. It is unknown whether or not the limited -specifications for harvesting the Indiana Bat habitat, such as retaining no other trees except the shagbark hickory, and maintaining a five mile radius around the hibernaculum, is enough to create a hospitable environment for the Indiana Bat.”**

Response: This comment is noted. See previous response about the importance of monitoring and how any new information (e.g., from monitoring) may lead to additional consultation.

- d. **“Although the USFS has plans to implement a management strategy to minimize impacts on the Indiana bat in two years, this delay may be to late to keep the Indiana Bat, let alone advance the numbers of the species.”**

Response: This comment is noted. No evidence exists that suggests taking time to develop an appropriate and effective strategy, in conjunction with immediate implementation of the BO’s terms and conditions, will lead to loss of the Indiana bat.

15. **“With the new information about the presence of the endangered Indiana Bat in the GMNF, the USFS and the FWS are required to take specific action to create a conservation program for the species, including additional rigorous monitoring and evaluation of habitat. The Proposed Amendment is inadequate to meet these affirmative obligations of the ESA.”**

Response: Lacking specifics (about the “new information”), we believe the proposed amendment and alternatives are adequate. GMNF’s staff has undertaken a more rigorous monitoring and evaluation program for all woodland bats – having surveyed in summer habitats and during fall swarming for two consecutive years (this, in addition to previously established routine of survey in winter hibernacula).

16. **“Forest Watch has attached a list of actions...that would help to promote the conservation and recovery of Indiana bats on the Green Mountain National Forest, and we ask that you consider and evaluate them in the NEPA process you have initiated.**

- a. **“Not log within five miles of all known Indiana bat hibernacula-currently used and historic. Undisturbed forests near hibernacula are critical to bats for spring and fall swarming. Promoting the conservation and recovery of the species depends on providing these undisturbed areas near hibernacula that are currently used, as well as hibernacula that were known to have been used in the past. Undisturbed forests are also important ecological islands for other interior-dependent species.”**

Response: A term and condition of the BO directs the GMNF to develop a management plan for an area of influence around known Indiana bat hibernacula – an area of approximately 5 miles. We are required to complete this plan within 2 years of the BO’s issuance. This plan will discuss and determine appropriate management activities within the area of influence.

- b. **“Not log in broad (300 or more feet wide) corridors along streams or other riparian areas. Not logging riparian corridors would: protect important foraging and roosting habitat for bats, provide important habitat and travel corridors for other wildlife, and promote high water quality and fisheries habitat.”**

Response: No clear indication exists to indicate that “no management” better provides for optimal Indiana bat habitat; models indicate that well tailored management may best optimize habitat conditions. Seemingly, keeping options open at this time is prudent.

- c. **“Not log hardwoods during the warm-weather months. This completely avoids harassing and accidentally killing roosting bats, especially juveniles unable to fly until late summer or early fall. It would also reduce soil erosion and compaction, reduce the risk of stream sedimentation, and reduce impacts on other wildlife and recreationists. This measure would clearly help promote the recovery of this species.”**

Response: See alternatives 4 and 5

- d. **“Not use clearcutting or its variants (shelterwood and seed tree cutting) to log hardwoods. Individual tree selection would maintain on every acre logged a continuous supply of big, old roost trees for bats and other species. It would also be more compatible with the scenic views and recreation experiences people want from their national forests.”**

Response: No clear indication is available to indicate that evenage management and habitat needs of Indiana bat are incompatible. Concerns for roost tree availability are discussed in the Threatened, Endangered and Sensitive Species Section of this EA, under each alternative (Chapter 3). See also the “Alternatives Not Considered in Detail” in Chapter 2 of this EA, specifically the “No Evenaged Management” Alternative.”

- e. **“Increase the average ‘rotation’ age of hardwoods, where possible. When coupled with a shift to unevenaged management, this will ensure a continuous supply of big, old roost trees on every acre under hardwood timber production. Common tree species like sugar maple and yellow birch do not exhibit exfoliating bark until very old - often older than the rotation age now set in GMNF Management Area 3. 1. It will also promote the production of high quality sawtimber and recreation experiences-stated goals of the GMNF.”**

Response: Concerns for roost tree availability are discussed in the Threatened, Endangered and Sensitive Species Section in Chapter of 3 of this EA, under each

alternative. See also the “Alternatives Not Considered in Detail” in Chapter 2 of this EA, specifically the “Increase Rotation of Hardwoods” Alternative.

- f. **“Favor the retention of big, old hardwood trees as potential Indiana bat roost sites wherever they occur.** Such trees have enormous value for endangered bats and other wildlife, and the current practice of removing them to increase sunlight and nutrients for “crop” trees should be discontinued. For example, we have been told by USFS staff that big, old “wolf” trees are commonly girdled or removed when doing timber stand improvement, thinning or preparation of new regeneration cuts. Such practices should be discontinued.”

Response: This suggestion is noted.

- g. **“Maintain a continuous supply of suitable roost trees on every acre where timber is logged.** Snag and den tree retention standards and guidelines will not ensure a continuous supply of suitable roost trees. The trees retained are often too small to provide adequate roost habitat (one study has indicated that average primary roost trees are 16” in diameter at breast height) and are often not species that exhibit exfoliating bark. Moreover, snags and den trees often fall down within a few years following logging, leaving no suitable roost for 80 or 100 years after that in areas where even-aged regeneration cuts occurred.”

Response: Concerns for roost tree availability are discussed in the Threatened, Endangered and Sensitive Species Section (Chapter 3) of this EA, under each alternative.

- h. **“On every acre where timber is logged, maintain canopy closure suitable for Indiana bat roosting and foraging.** This will mean a shift toward unevenaged regeneration and away from clearcutting and shelterwood cutting.”

Response: See discussion in Chapter 2, “Alternatives Not Considered in Detail” section of the EA. Specifically the “Maintain Canopy Closure” Alternative.

- i. **“Where timber is logged, retain and provide a continuous future supply of big, old yellow birch and sugar maple trees.** Such trees often do not display exfoliating bark, suitable for bat roosting, until they are older. These tree species are common on the GMNF and could provide a critical role in promoting the recovery of Indiana bats.”

Response: Suggestion noted and addressed through discussion of characteristics of potentially suitable roost trees.

- j. **Apply the terms and conditions suggested by the USFWS for the non-hibernation period to timber cutting at all times of the year.** These conditions include measures such as retaining protection clumps of trees around all suitable roost trees, and providing protected foraging areas along intermittent and perennial streams. Applying these measures year-round will help promote the species recovery in addition to minimizing the taking of Indiana bats.

Response: See alternatives 4 and 5.

Biological Opinion

17. “The list below provides a brief summary of flaws in methods and assumptions underlying the Biological Evaluation (BE) or Biological Opinion (BO) regarding protection of Indiana bats on the Green Mountain National Forest. Please consider and respond to these issues when conducting the NEPA analysis for the proposed Plan amendment and selecting the preferred alternative. The items in the list are not arranged in priority order.

- a. **“60 to 80 year old stands have relatively small trees. Most suitable roost trees will be found on 80-plus year old stands. (See statements and table on pp. 4 and 5 of the BO). Trees that are over 12 inches in diameter (see p. 13 of BO) will generally be over 80 years of age. The area of the GMNF that currently provides potential roost habitat for bats is the area that has timber stands over 80 years of age. The USFWS ignores size and age of trees when it calculates potential roost habitat acreage on the GMNF (pp. 32-33 of BO).”**

Response: Nowhere in literature has it been established that occurrence of roost trees is limiting Indiana bat presence on and use of the GMNF. Information displayed on page 17 of the Biological Assessment has averaged tree data across the forest. That averaging process “hides” minor factors in these stands. In this case, a 60 year-old stand is the average stand age; the number of older trees, that are potentially suitable as roost trees are not apparent, but certainly exist in normal northern hardwood stands of that age.

- b. **“The BO states incorrectly that upon completion of the shelterwood treatment the stand will have 30 to 40 percent relative density (stocking of trees) remaining. (p. 5). Shelterwoods are essentially 2-stage clearcuts. After the first stage (cut), the area treated will have 30 to 40 percent of full stocking of trees, but after the second treatment (7 - 10 years later) the area treated will look just like a clearcut-essentially no trees remaining. This is important because the majority of regeneration cuts on the GMNF are now shelterwoods and the USFWS indicates that it has the wrong understanding of the effects of shelterwoods.”**

Response: We do not believe the FWS has a “wrong understanding”, especially after both agencies visited the sites receiving the treatments in question.

- c. **“The standards and guidelines in the current GMNF plan for retention of snags and den trees (summarized on pp. 6-7 of the BO) require retention of far fewer and smaller trees than do the terms and conditions specified for protection of Indiana bats on other NFs (summarized pp. 29-32 of BO). With a few relatively inconsequential exceptions, the USFWS does not require comparable standards on the GMNF. We ask that the USFS consider and evaluate in its NEPA analysis the adoption of the stronger standards called for on other national forests.”**

Response: See alternatives 3, 4, and 5.

- d. **“The BO states that ‘the most important characteristic of trees is not the tree species but rather the bark structure that provides space for bats to roost between the bark and the hole of the tree.’ (p. 11). We agree. However, the USFWS requires that the**

GMNF retain all shagbark hickory trees (p. 37), but does not require them to retain all trees with suitable bark structure regardless of the species. This seems arbitrary and inconsistent with the earlier statement. Shagbark hickories have exfoliating bark throughout much of their life span, but they are uncommon on the GMNF and do not grow to a very large size here. On the other hand, sugar maples and yellow birches often have vigorously exfoliating bark when they reach older ages and these trees are very common on the GMNF. We ask that the USFS require that yellow birches, sugar maples and similar species exhibiting exfoliating bark at older ages be allowed to grow older wherever the agency is managing for timber production.”

Response: Characterization of potentially suitable roost trees, and their availability are addressed throughout the EA.

- e. **“The USFWS states incorrectly that there is only one known hibernaculum for Indiana bats (p.25). Only one hibernaculum has had a confirmed Indiana bat siting [*sic*] in recent years, but many of them have been known to support wintering populations in the past. In order to promote the conservation and recovery of the species, we request that the USFS protect habitat around all hibernacula in which Indiana bats have been known to hibernate.”**

Response: One historic Indiana bat hibernaculum is near (within 5 miles of) the GMNF boundary. The GMNF owns 25% of the land within 5 miles of this hibernaculum. No apparent relationship can be identified suggesting that management of the GMNF acreage will attract Indiana bats back to that hibernaculum. If occupancy of that hibernaculum is re-established, this proposed Forest Plan amendment will direct that management within the area of influence (for that hibernaculum) be re-evaluated.

- f. **“I am not clear where the estimate of 18 potentially suitable roost trees per acre comes from (p. 26), but it sounds highly illogical and illogically high. Perhaps it comes from the BE. It may be based, in part, on the survey that the GMNF biologist did of “post harvest” maternity conditions (see p. 27 of BO). This so-called survey is not credible. The biologist sampled only 6 timber harvests (too small a sample) and selected the least damaging harvest treatments (biased sample). The harvests with the greatest potential harm to Indiana bat habitat (i.e., leaving the fewest suitable roost trees) are clearcuts and shelterwood “removal” cuts. Shelterwood removals always follow the shelterwood regeneration cut and shelterwoods are the most commonly used regeneration technique on the GMNF. The regeneration cut (1st cut) removes about 70 percent of the trees and the removal cut (second cut) removes almost all of the rest, leaving only the required snags and den trees. The net result as far as bat concerned is the same as a clear cut. Shelterwood removal cuts and clearcuts should have been included in the sample. Because they were not, the survey results were skewed.”**

Response: The assumption about source is incorrect – source is “Forest Statistics for Vermont” (Frieswyk, T. S. and A. M. Malley. 1985. Forest Statistics for Vermont - 1973 and 1983. Res. Bull. NE 87. U.S. Department of Agriculture, Forest Service, Broomall, PA.)

- g. **“The USFWS bases its conclusion, in part, on a conversation with GMNF biologist in which the biologist stated that the average annual harvest is 1200 acres, that this level will be maintained indefinitely and that only 300 acres per year are logged in the summer. There are a few problems with this: (1) According to the BO, average annual timber harvest area between 1987 and 1996 was 1900 acres (p.4). Moreover, the USFS can control the acreage of timber that is offered for sale and sold each year, but it does not have a mechanism for controlling the acreage that is cut each year. Timber sale contracts last for several years and there is simply not a good correlation between acres sold and acres cut in any given year.”**

Response: It is incorrect that the GMNF has no mechanism for controlling the acreage actually cut each year. It is true that poor correlation exists between acres sold and acres harvested in a given year, but it is not apparent how this relationship between sold and harvested would change the conclusion. The number of acres estimated as current summer harvest is used for basis of the BO; if monitoring reveals this estimate is inaccurate, then follow-up analysis is required

- h. **“The USFWS makes some recommendations on monitoring that should be done in the future. Forest Watch is happy to see these. Little or no monitoring has been done on Indiana bats or other species, as required by NFMA regulations. We ask that the USFS amend the monitoring section of the plan to include Indiana bats as a Management Indicator Species, and that it develop and adopt Indiana bat monitoring procedures as part of the plan.”**

Response: See the “Issues Considered but Dismissed” section of the EA, Chapter 1.

18. **“The Proposed Amendment is based on, and integrates, the BO. However, the BO failed to integrate the best scientific and commercial data available. As a result, the Proposed Amendment does not comply with the requirements of section 7(a)(2) [See the points made below].**

- a. **The FWS and the FS have failed to consider the size and age of trees when calculating potential roost habitat acreage. (BO, pp. 32-33.) Size and age of trees are integral to the bat's choice of summer roosting sites. The bat only roosts in large, older trees with peeling bark. The overestimation of potential roost habitat acreage increases the likelihood that the Forest Service will cut more potential roost trees than under the false presumption that they are only removing a small percentage of the bat's potential roost site.”**

Response: We do not agree with this assertion; Kurta *et al.* found Indiana bats roosting in small diameter trees (Kurta, A., D. King, J. Stribley, and K. Williams. 1993. Summer roosts of the endangered Indiana bat (*Myotis sodalis*) on the northern edge of its range. *Am. Midl. Nat.* 129:132-138).

- b. **“The BO further fails to mention that shelterwood cutting results in a clear-cut after the second cut is done. The FWS incorrectly states that shelterwood cuts retain 30-40% tree cover. That density is temporary. The Indiana Bat cannot roost in these**

areas in either stage of a shelterwood, because the oldest trees are removed in the first stage, and the trees that are left are not attractive to the Indiana Bat. The trees left also will be cut before they ever reach an age that would make them attractive to the Indiana Bat. The use of shelterwood cuts in any estimate of potential roost site acreage is therefore erroneous, and again increases the likelihood that the Forest Service will cut more trees than is warranted by the bat's true needs.”

Response: This comment is noted. See also the discussion in the “Alternatives Not Considered in Detail” section of the EA, Chapter 2.

- c. **“The FWS does not require the same standards of retention of snags and den trees for the Indiana bat as it has in other national forests. (BO p. 6-7, 29-32) There is no scientific explanation of the lower standards for the GMNF. This will allow cuts to go forward that do not take active measures to enhance the ecosystem for the bat, as the FS is required to do under Section 1356(a)(1) of the ESA.”**

Response: This comment is noted.

- d. **“The BO fails to recommend that *all* trees with a suitable bark structure for summer roosts be retained. (BO p.37). Instead, it recommends retention of shagbark hickory, an uncommon species in the GMNF, while failing to recommend the more common old sugar maples and birches, which do have a suitable bark structure. This increases the likelihood that cuts will remove more potential roost trees than is warranted by the best available science.”**

Response: The assertion here is speculative at best... as stated before, characteristics and availability of potentially suitable roost trees are thoroughly discussed in the Biological Assessment.

- e. **“The BO incorrectly states that there is only one hibernaculum (BO p.25). There are several hibernacula that support winter populations of the Indiana bat. This increases the likelihood that the FS will allow timber sales and cuts to go forward where there are bat hibernacula. This increases the risk that the bat will be harassed and increases the likelihood that a take will occur, contrary to the ‘no jeopardy’ determination.”**

Response: The BO discusses the “only known (Indiana bat) hibernaculum in Vermont”. Certainly, other Indiana bat hibernacula are known to exist; but only one, currently used, Indiana bat hibernacula is known to be near lands managed by the GMNF. This is discussed thoroughly in both the Biological Assessment and the Biological Opinion.

- f. **“The estimate of 18 suitable roost trees per acre is based on a suspect biological survey. That survey only sampled six timber harvests, none of them clear-cuts or shelterwoods, (BO, p.27). This inflated number increase the likelihood that the FS will cut more acres than is warranted by the bat's need for potential roost trees. Also, the lack of sufficient monitoring and study of the bat makes little scientific data available. This makes all of the decisions regarding the Indiana Bat suspect.”**

Response: This statement is supported by an incorrect assumption, and has been addressed previously under comment #17f. Also, please see our response to comment # 14; it is the GMNF's intent to gather and compile information about Indiana bat presence and use of the Forest. As this new information becomes available, additional analyses may be warranted.

- g. **“The FS has no control over the amount of acres cut every year. The annual average in the past has been 1900 acres. (BO, p. 4). But the FWS bases its conclusions on the opinion of a FS biologist who gave an estimate of 1200 acres per year indefinitely with only 300 acres cut in the summer. The lack of control over how much cutting is done in any year and the difference in the two figures makes any definite conclusion as to how much the bats will be disturbed or harmed during the cutting premature.”**

Response: Please see response to item # 17g, above.

- h. **“The BO fails to consider the cumulative effects of logging on the whole GNNF. FWS's formal responsibilities during formal consultation include evaluation of cumulative effects. 50 C.F.R. §402.14(g)(3).”**

Response: Your comment has been shared with FWS.

- i. **“Due to its reliance on the FWS's flawed BO, the Proposed Amendment fails to use the best science available per ESA § 1536(a)(2) and is arbitrary and capricious. 5 U.S.C. § 706.”**

Response: This EA assesses options additional to the terms and conditions of the BO (see Chapters 2 and 3).

Precautionary Principle

19. **“When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.’...Key elements of the principle include taking precaution in the face of scientific uncertainty; exploring alternatives to possible harmful actions; placing the burden of proof on proponents of an activity rather than on victims or potential victims of that activity; and using democratic process to carry out and enforce the principle—including the public right to informed consent....In the face of serious and irreversible damage to biodiversity, and uncertainty regarding the habitat needs of the Indiana bat in Vermont, Forest Watch recommends that the US Forest Service acknowledge the precautionary principle in its NEPA analysis and base it alternatives and final decision that principle. The precautionary principle would have the agency avoid actions (e.g., road building, logging and other development) that could result in loss of biodiversity, or modify those actions substantially to ensure the recovery of the species is promoted, not the demise.”**

Response: For this proposal, we feel that “cause and effect relationships” are sufficiently established scientifically in the BA and BO to allow for an informed decision to be made. The FWS concluded in their BO that although the possibility of take exists, continued implementation

of the Forest Plan was not likely to jeopardize the continued existence of the Indiana bat. The FWS's mandatory Terms and Conditions proposed in the EA for inclusion in the Forest Plan reduce adverse effects to the Indiana bat. The additional Conservation Measures recommended by the FWS, which are also being analyzed in the alternatives, help to further conserve the species and aid in recovery.

Riparian Areas

20. **“Any riparian vegetation removed from a site because of development, for example, construction, stream diversion, should be replanted with the same/like species once the disturbance is completed. Avoidance of detrimental activities in potential summer habitat is probably the best management alternative and should always be considered at the beginning of any project.”**

Response: Generally during stream restoration activities, little riparian vegetation is disturbed, as most of this work seeks to restore a nature riverine system, including riparian vegetation. When vegetation disturbance does occur, the areas are replanted to native riparian species, particularly native willows. During review or major stream projects, avoidance of vegetation disturbance is considered as part of the analysis of the no action alternative.

Green Mountain National Forest Plan

21. **“At the time the current GMNF Plan was developed no consideration was given to protecting or conserving Indiana bats when determining the appropriate mix of logging methods, the overall land use allocation, the allowable sale quantity of timber, the management of riparian areas, and other management decisions affecting the Indiana bat. Forest Watch asks that the USFS consider and resolve those issues now by revisiting and revising all relevant aspects of the GMNF plan, not just the standards and guidelines. If unwilling or unable to do an integrated, systematic review and revision, then we recommend that the USFS postpone actions that could affect the Indiana bat until after those issues have been resolved as part of the upcoming Plan revision process.”**

Response: We feel this proposed action and the alternatives fully assess appropriate actions and adjustments needed for Indiana bat conservation and recovery, and that the Forest Plan would be amended accordingly in order to provide for this. See Chapter 3 of the EA, Threatened Endangered and Sensitive Species Section, and the Biological Evaluation, Appendix 2.

22. **“When the forestwide analysis or Forest Plan standards and guidelines are known to be inadequate regarding consistency with protection of specific resources (e.g., Indiana bat) from certain activities (e.g., logging, road building) then those activities should not be approved until appropriate forestwide analysis (e.g., Management Area allocation, Allowable Sale Quantity determination, etc.) can be completed and the Forest Plan standards and guidelines can be amended or revised. The analysis that went into developing the current GMNF Plan and the standards and guidelines contained in the current Plan do not adequately provide for protection of Indiana bats or other species on the RFSS list.”**

Response: Please see response to previous comment.

Sensitive Species

23. **“How does the forest aim to support the statement that the ‘general protection guidelines (in the Plan) are adequate to maintain species viability’ for the new sensitive species?”**

Response: Please refer to the response to comment #6 in this Appendix.

Vegetation Management

24. **“I would like to see active management of forest vegetation including harvesting close to the allowable annual harvest, to maintain diverse habitats for all species.”**

Response: This comment is noted.

25. **“I understand that group selections create openings where bats feed, perhaps this can be incorporated into any changes.”**

Response: This comment is noted.

26. **“Please maintain evenaged and two-aged harvesting, as they add to habitat diversity.”**

Response: This comment is noted, and is discussed in the “Alternatives Not Considered in Detail” section of this EA, see Chapter 2.

27. **“Also, please maintain summer/unfrozen harvesting to improve scarification and regeneration success on recent harvest units.”**

Response: Please refer to Alternatives 1, 2, and 3, as well as the “Forest Resource Management” effects section of this EA, Chapter 3.

Property Rights

28. **“Please give value and credence to property rights, as they, not Indiana bats are what made this country great and allowed such luxuries as the National Forest Service, (NOT THE OTHER WAY AROUND).”**

Response: This comment is noted.

