# United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

June 16, 2006

Mr. Clyde N. Thompson
Forest Supervisor
Monongahela National Forest
200 Sycamore Street
Elkins, West Virginia 26241

Re: Cherry River Project Area, Gauley Ranger District

Dear Mr. Thompson:

This letter is in response to your request, dated April 14, 2006, received on April 18, 2006, for a site-specific review of the proposed projects in the Cherry River Area of the Gauley Ranger District of the Monongahela National Forest (MNF) in Nicholas County, West Virginia. The following comments are provided pursuant to the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

On March 26, 2002, the U.S. Fish and Wildlife Service (Service) issued a programmatic Biological Opinion (programmatic BO) for the continued implementation of the 1986 (as amended) Monongahela National Forest Land and Resource Management Plan (Forest Plan). This programmatic BO established a two-tiered consultation process for Forest Plan activities, whereby the Service reviews, as they are developed, site-specific projects that may affect federally listed species. The Service determines 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 for the Cherry River project area 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) consultation focuses 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 and disclosed in the programmatic BO and associated Biological Evaluation; 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).

## Description of the Proposed Action

The Cherry River project area lies completely within the Cherry River watershed in Nicholas County, and is located north of Richwood, West Virginia. The project area is bounded by the river and State Route 55 on the south and by State Route 15/5 on the north. The project area is almost completely surrounded by private land and encompasses approximately 9,374 acres (6,381 acres of national forest system land and 2,993 acres of private land). The area is characterized by northern hardwood forest and a dissected high plateau with sharp valleys, many high peaks, and erosive soils. Elevations range from about 1,900 feet at the mouth of the Cherry River to peaks at 4,600 feet and higher.

The proposed action (identified as Alternative C in the Biological Evaluation) involves a variety of timber harvest activities within the next 5 to 7 years on approximately 1,737 acres[1] using conventional and helicopter skidding; new road construction and reconstruction of 3 miles; and road maintenance of 3.2 miles. More specifically, planned timber harvest activities include:

- 1,410 acres of commercial thinning (967 acres by helicopter, 443 acres by conventional logging);
- 197 acres of clearcut/shelterwood harvest (94 acres helicopter, 103 acres conventional);
- 81 acres of uneven-aged management of sugar maple (31 acres helicopter, 50 acres conventional);
- 10 acres of savannah creation (i.e., wildlife openings for species such as deer, grouse, and squirrel);
- 21 acres of harvest associated with road construction, reconstruction, and maintenance; and
- 18 acres of harvest associated with landings.

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Harvest activities may directly and indirectly affect potential Indiana bat habitat within the entire Cherry River watershed. Therefore, for the purposes of this BO, the action area is the entire watershed, encompassing roughly 106,000 acres.

[1] The total harvest area in the Biological Evaluation is reported as 1,698 acres but does not include the harvest area for roads and landings.

## Species Not Likely To Be Adversely Affected

We have reviewed the information contained in the April 2006 Cherry River Project Area Biological Evaluation and the associated draft Environmental Assessment, which describe the potential effects of the proposed projects on federally listed species. After consulting with Forest Service staff, we concur with your determinations of no effect, or may affect/not likely to adversely affect, the bald eagle (*Haliaeetus leucocephalus*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), Cheat Mountain salamander (*Plethodon nettingi*), West Virginia northern flying squirrel (*Glaucomys sabrinus fuscus*), Shale Barren Rock Cress (*Arabis serotina*), Running Buffalo Clover (*Trifolium stoloniferum*), small-whorled pogonia (*Isotria medeoloide*), and Virginia spiraea (*Spiraea virginiana*). Our rational is documented in Appendix A.

## Species Likely To Be Adversely Affected

As described in the Service's programmatic BO, adverse effects are likely to occur to the Indiana bat (*Myotis sodalis*) 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 concur with your determination that incidental take of Indiana bats is possible within the analysis area. However, based on the implementation of reasonable and prudent measures and associated terms and conditions from the programmatic BO, and the proposed site-specific avoidance and conservation measures that will minimize the impact of any incidental take, we have concluded that activities associated with the 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. This Tier 2 BO identifies the incidental take anticipated due to implementation of proposed activities in the Cherry River Project Area, and the cumulative total of incidental take which has been authorized during this calendar year (Table 1).

## Status of the Indiana Bat

The Indiana bat is a migratory species ranging throughout much of the eastern half of the United States. In 1967 the Indiana bat was listed as endangered by the Service pursuant to the Endangered Species Act (32 Federal Register 4001). Listing was warranted based primarily on large-scale habitat loss and degradation, especially at winter hibernation sites, and significant population declines that continue today. From the time that the species was listed, the range-wide population of the Indiana bat has declined approximately 48 to 54 percent, from roughly 883,300 Indiana bats during 1960/1970 to 406,824 - 457,374 bats during 2004/2005 (Clawson 2002; Andrew King, personal communication, 2006). However, this decline is not evenly distributed across its range. Biennial winter counts suggest that populations have been increasing in West Virginia since the early 1980's (WVDNR, 2004). The estimated hibernating population in West Virginia has almost doubled from 6,500 in 1990 to 12,677 Indiana bats in 2004 (WVDNR, 2004). Increases in numbers of bats at Hellhole have accounted for most of this growth.

Due to the colonial nature of Indiana bats, conducting censuses of hibernating bats is the most reliable method of tracking population/distribution trends range-wide, and provides a good representation of the overall population status and distribution. However, the relationship between wintering populations and summering populations is not clearly understood. It is known that individuals of a particular maternity colony come from one to many different hibernacula, therefore the summer location of most, if any, individuals of any particular hibernacula is often not known. Indiana bats have been documented to travel up to 300 miles from their hibernaculum to their maternity areas (Gardner and Cook 2002). Therefore, bats wintering or summering in West Virginia may come from a number of surrounding states, and the status of Indiana bats within each state's hibernacula may not reflect the status of that state's maternity population.

Additional information on the status of the species, including life history characteristics is provided in the programmatic BO, and is incorporated herein by reference.

## Reasons for Decline and Continued Threats

Because disturbance to hibernacula is a major threat to the Indiana bat, protection of hibernacula is a management priority. While many hibernacula have been protected, disturbance to hibernacula continues. For example, the largest hibernacula in Indiana (50,941 Indiana bats in 2003) is not gated, and based on data from electronic monitors in the cave, unauthorized visits to this cave occur during critical life stage periods. Also, at the only large hibernacula in Ohio (9,436 Indiana bats in 2004), there are still tours, as well as other commercial activities, taking place in the cave during the hibernation period.

Land use practices have also been identified as a suspected cause in the decline of the Indiana bat, particularly because habitat in the bats' maternity range has changed dramatically from pre-settlement conditions. Indiana bats exhibit site fidelity to their traditional summer maternity and foraging areas, and are known to return to the same general area to establish maternity colonies from year-to-year (Humphrey et al. 1977; Gardner et al. 1991a, b; Callahan et al. 1997; Indianapolis Airport Authority 2003, 2004; Kurta and Murray 2002; Butchkoski and Hassinger 2002; Gardner et al. 1991a, Gardner et al. 1996). Roosting/foraging area fidelity may serve to increase the probability of successful reproduction, and to maintain social interactions between members of the population. Bats using familiar foraging and roosting areas may have decreased susceptibility to predators, increased foraging efficiency, and an improved ability to switch roosts if impacts occur to the original roost (Gumbert et al. 2002). In turn, site fidelity may also inhibit the ability of Indiana bats to pioneer new areas (Sparks *in* Service 2004c). Due to the ephemeral nature of roosting sites, bats are probably not dependant on the continued suitability of an individual tree. However, landscape level alterations in traditional maternity habitats may adversely affect Indiana bat survival and reproductive success.

## Environmental Baseline

The environmental baseline for the MNF was established and described on pages 15 -16 in the programmatic BO. The baseline condition in regard to winter hibernacula in the action area remains largely unchanged. However, since issuance of the programmatic BO, the environmental baseline in regard to the summer presence of Indiana bats in West Virginia and the MNF has changed appreciably. At the time the programmatic BO was written, there were no documented cases of Indiana bat maternity activity in the state of West Virginia. However, since then three maternity colonies have been confirmed: two in Boone County and one in Tucker County. The colony in Tucker County is located adjacent to the MNF, within 2 miles of a known Indiana bat winter hibernaculum. A fourth maternity colony is suspected on the MNF in Pendleton County but has not been definitively confirmed.

Captures of both male and female bats statewide confirm that the Indiana bat uses forested habitats throughout West Virginia, including habitats within the MNF, for summer foraging and roosting. The increase in recent captures may not reflect an actual increase in densities of Indiana bats summering within the state or the MNF, rather these results may reflect the fact that survey efforts in relation to project review and monitoring have increased in recent years. As a result of coordination between the Service and the MNF, and in accordance with terms and conditions of the programmatic BO, the MNF has adapted Indiana bat monitoring efforts to focus on detecting the presence of the bat in likely habitat, rather then surveying locations prior to project clearance. These changes may have resulted in the increased detection of the bat on the MNF, and should allow for improved protection for the species and more accurate tracking and evaluation of potential take as a result of MNF projects.

## Status of the Species Within the Action Area

A juvenile male Indiana bat was captured near the Cherry River project area in 1999. However, Indiana bats have not been captured since then despite extensive additional survey efforts in this area in 2000 and 2002, using methods outlined in the Service's Indiana bat mist net guidelines. Site selection targeted preferred habitats (flight corridors and water sources such as ponds, road ruts, streams, and rivers) and was coordinated with the Service and West Virginia Division of Natural Resources. This approach is consistent with the terms and conditions outlined in the programmatic BO. As a result of these surveys, a total of 92 bats of several species were captured during 2000 and 2002. These surveys did not capture or otherwise identify any Indiana bats, and no evidence of an Indiana bat maternity site was detected within the project area. Lacking captures of Indiana bats from the Cherry River project sites, using established methods and focusing on preferred habitats, we conclude that no Indiana bat maternity activity is currently occurring within the western Cherry River project area. The 1999 capture may represent a transient or migratory individual.

Moreover, there are no known Indiana bat hibernacula in the Cherry River project area, and consequently no key areas within a 5-mile radius of the primary range around hibernacula. The nearest hibernacula are more than 15 miles from the project area

(Martha's cave system, Lobelia Saltpeter, and Snedegers Cave). The West Virginia Division of Natural Resources reported a total of 389 Indiana bats in these caves in 2004 (WVDNR, 2004). This is a 38 percent increase over the 2000 survey when only 282 Indiana bats were counted. Primary foraging, summer roosting, and fall swarming activity is believed to be concentrated within 5-mile radii around hibernacula, although individual bats can occur outside this area.

Given the absence of hibernacula and maternity colonies in the Cherry River project area, no captures of Indian bats since 1999 despite adequate surveys, and the fact that there is no primary foraging, summer roosting, or fall swarming habitat within 5 miles of the project area, we conclude that the area has a low likelihood of supporting Indiana bats.

Factors Affecting the Environment of the Species (on the MNF and in the Action Area)

Effects from past management (turn of the century clear-cutting, clear-cuts, thinning, wildlife opening, and roads) have produced the current condition, which provides considerable potential roosting habitat for the Indiana bat. At present, 6% (523 acres) of the project area is non-forested and the remaining 94% (8,851 acres) is forested. Much of this forested area is mixed hardwoods. Within the existing non-forested lands, other projects have produced upland water sources, such as wildlife ponds that benefit bats, and openings that are producing small amounts of edge exposed to solar radiation, which could benefit maternity roosts. Within the MNF system lands, approximately 87% of the forested stands are greater than 70 years of age, and provide extensive suitable habitat for Indiana bat at the landscape level. Since 1986, only a small portion (an estimated 540 acres or 0.5 %) of the 106,000-acre action area has been impacted by timber harvesting by the MNF.

Effects of the Action

The proposed action (Alternative C in the Biological Evaluation) would disturb a total of approximately 1,737 acres of potentially suitable Indiana bat habitat, and would affect approximately 18% of the 9,374-acre project area and less than 2% of the 106,000-acre action area. No harvest will occur within a 5-mile radius of a known Indiana bat hibernaculum or maternity colony. Consequently, no impacts to hibernacula, maternity sites, or primary range will occur.

Based on survey results through 2002, it appears that the project area does not currently support the Indiana bats and has a low likelihood of being used during future harvest activities within the next 5 to 7 years. However, the project area provides potential suitable roosting and foraging habitat for the Indiana bat, and some harvest activities would occur outside of the Indiana bat hibernation period. Without completing additional bat surveys for as much as 7 years into the future, or complete avoidance of the hibernation period, it is not possible to rule out the possibility that Indiana bats would not occur in the area and potentially be taken by the proposed action.

Of the approximately 1,737 acres of timber harvest, tree felling activities would occur outside of the hibernating period on approximately 645 acres[2] (J. Martin, pers. comm., June 15, 2006). Tree removal during the non-hibernation period (April 1 – November 14) may result in mortality (take) of an individual roosting Indiana bat, if a tree that contains a roosting bat is removed intentionally or felled accidentally. If a bat using a roost tree that is removed is not killed during the removal, it may be forced to find an alternative roost tree, potentially expending a significant amount of energy that would result in harm or harassment of the individual.

The conditions created by thinning are not expected to decrease the long-term suitability of harvest areas as Indiana bat roosting habitat. Thinning will create openings in the forest canopy. Indiana bat primary roosts are usually not surrounded by closed canopy and are often warmed by solar radiation, which provides a favorable microclimate for growth and development of young during normal weather. Humphrey *et al.* (1977) hypothesized that roost trees were usually located in openings within the forest because they provided the necessary thermoregulatory characteristics. This is supported by the analysis conducted at several maternity sites by 3D/E (1995) who found that most roosts were located in areas that had a canopy closure of 60 to 80%. Thinning could reduce the existing canopy closure levels to more optimal levels for Indiana bat foraging and increase the solar exposure of the remaining trees within the harvest area, thus potentially making them more suitable for Indiana bat roosting habitat. While this beneficial effect is the primary intent of harvest units within swarming zones, the effect is short-term, because canopy closure occurs in approximately 5-10 years after thinning.

A more long-term effect of thinning is increased residual growth on the remaining trees, creating larger diameter and more suitable roost trees. Thinning would reduce vegetative competition and promote larger, older trees and allow remaining hardwood trees to grow larger. The exfoliating bark of hardwood trees often provides roost sites. The retention of snags and other den trees will further increase the potential that a substantial number of potential roost trees within the project area will be maintained. Damage to residual trees during felling can also improve roosting quality and quantity, as damaged areas that become cavities and crevices are more likely to develop due to resulting pathogen and insect attack at the injury point. In this instance, the opening up of canopy cover should improve foraging as well as roosting conditions.

Regeneration harvests (shelterwood and clearcut methods, and the creation of wildlife openings) have the potential to affect potential foraging, roosting and migratory habitat by reducing canopy closure below optimal levels (3D/E 1995). In addition, potential roost trees would be removed and future roost tree availability could be reduced by the removal of most of the large trees. The effect of potential roost tree loss would last several decades until trees in the regenerated areas reach roost tree size. Shelterwood harvests would remove more potential roost and maternity trees than thinning, and would result in the potential reduced suitability of these areas to support Indiana bats. Effects to roost tree loss would be minimized by retaining residual basal area in the shelterwood harvest units and by retaining cull trees, snags, and all shagbark hickories as required by

[2] The 606-acre figure in the Biological Evaluation omits impacts from road and landing activities.

the Forest Plan. After the initial short-term disturbance, overall habitat suitability may not be significantly reduced, and may be enhanced over the long-term. In contrast, the effects of clearcut harvesting are more severe and last for a greater duration than shelterwood harvesting.

Clearcut harvesting and the creation of wildlife openings remove the majority of trees and result in a fully open canopy. Areas affected by this harvest type would become unsuitable to support Indiana bats.

Uneven-aged harvest methods include selecting single trees and groups of trees for harvest. Group selection would result in the removal of all trees within a small area. Uneven-aged management maintains several age classes and sizes of trees, and results in continuous canopy coverage, and recurring regeneration of trees through natural regeneration methods. The effects of uneven-aged management would be similar to those from thinning in the first cut. Whereas thinning would result in larger trees, uneven-aged management would result in developing regeneration in the understory, working toward a stand of shade tolerant species (primarily sugar maple) with many different sizes of trees. Selection harvests would begin the process of regenerating all aged stands of primarily maple, consistent with the existing species composition. Uneven-aged management may indirectly benefit Indiana bat by reducing canopy closure to a more optimal level for foraging and roosting, especially in sugar maple, a tree with exfoliating bark used by the Indiana bat. Because uneven-aged management methods generally result in much more localized habitat alterations and leave surrounding forested areas intact, they are not expected to substantially decrease overall habitat suitability for the Indiana bat.

Road management activities and construction of landings also require some tree felling. The effects would be similar to that of a clearcut. Because of the small acreages involved (39 acres total), localized effects, and the large amount of surrounding forest remaining, these types of activities would not substantially decrease overall habitat suitability for the Indiana bat.

Potential adverse effects of the proposed action are consistent with the effects described on page 17-18 of the programmatic BO. The implementation of the terms and conditions of the programmatic BO, and project-specific and forest wide avoidance and conservation measures as described above, will minimize any incidental take and ensure that this area will continue to provide potential habitat to support Indiana bats. All proposed activities fall within the scale and the scope addressed in the programmatic BO and within the level of take identified in the Incidental Take Statement. If future monitoring conducted on the MNF identifies additional evidence of Indiana bats utilizing the project areas, the MNF would consult with the Service and the West Virginia Division of Natural Resource to develop further protective measures in accordance with the MNF Forest Plan and the programmatic BO.

## Cumulative Effects

At present, 94% of the project area is forested. Timber harvesting and associated actions such as road construction, have taken place in the Cherry River watershed both before and after National Forest ownership. An estimated 14,000 acres of private land within the 106,000-acre action area (13%) have been impacted by timber harvesting since 1986 (J. Martin, pers. comm., June 15, 2006). These land uses are likely to continue in the future at about the same rate as has been occurring in the past decade (roughly 700 acres/year).

Housing construction has been concentrated within the Cherry River composite sub-watershed and near the town of Richwood. Both year-round and seasonal residences exist and are being built within the watershed. Although we cannot predict the changes likely in housing construction in the watershed, no large developments are known to be planned at this time.

After implementation of the proposed action, it is anticipated that approximately 88.4% of the project area, or 93.8% of the action area, including the majority of the area affected by MNF activities, will remain in a primarily forested condition. The Service has determined that a significant cumulative reduction in population numbers of the Indiana bat will not occur in the project area for the following reasons: 1) the actions that are reasonably certain to occur and their cumulative effects are consistent with those identified and discussed in the programmatic BO; and 2) suitable Indiana bat habitat will continue to occur on a large percentage of the project area and action area.

## Conclusion

The actions and effects associated with the proposed activities in the Cherry River Project Area 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, new information on the species, 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 because: 1) surveys indicate there is only a low likelihood of Indiana bats using the area; 2) a large portion of the action area will remain as suitable Indiana bat habitat; and 3) the likelihood of take of individual bats is low due to the conservation measures proposed by the Forest Service.

## Incidental Take Statement

The Service anticipates that the proposed actions associated with the Cherry River Project Area will result in the incidental take of Indiana bat as outlined in Table 1. The type and amount of anticipated incidental take is consistent with that described in the programmatic BO and does not cause the total annual level of incidental take (via harm to forested acres) in the programmatic BO to be exceeded. The actual incidental take reported by the Forest Service has consistently been below the annual levels estimated (exempted) in the programmatic BO, therefore, we do not anticipate that implementation of this project will result in the take levels in the programmatic BO to be exceeded.

Table 1: Authorized and actual incidental take (as measured indirectly by acreage) due to the removal or disturbance of potential Indiana bat habitat on the Monongahela National Forest during calendar year 2006.

| **Activity** | **Cherry River Project Area** | **Other Projects Authorized during 2006** | **Actual Take to date during 2006** | **Total (2006)** | **Annual Incidental Take Authorized** |
|---|---|---|---|---|---|
| Timber Harvest | 624* | 70 | 140[3] | **834** | 6,000 |
| Road Construction/Maintenance | 21 | 0 | 0 | **21** | 47 |

*As per the programmatic BO, activities conducted during the Indiana bat hibernation period do not count against the authorized level of incidental take.

## Reasonable and Prudent Measures

The Forest Service must implement all pertinent reasonable and prudent measures and terms and conditions stipulated in the programmatic BO to minimize the impact of the anticipated incidental take of Indiana bats, and to be exempt from the take prohibitions of section 9 of the ESA. The Service has determined that the implementing the reasonable and prudent measures specified in the programmatic BO, in conjunction with the project specific avoidance and conservation measures as described in the April 2006 Cherry River Project Area Biological Evaluation will appropriately minimize the impact of incidental take anticipated for the proposed activities in this project area. Therefore, the following site-specific RPM will apply:

- The MNF will implement site-specific avoidance and conservation measures as proposed in the April 2006 Cherry River Project Area Biological Evaluation. Timber harvest and road construction/maintenance activities will be implemented consistent with Alternative C as described in the Biological Evaluation.

## Reinitiation Notice

Incidental take that occurs as a result of this and other projects on the MNF cannot exceed the annual or cumulative incidental take levels established in the programmatic BO. 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 be provided to this office tabulating the amount of incidental take on projects being implemented and authorized throughout the MNF, as indirectly measured by acres affected.

[3] The MNF has implemented projects resulting in 140 acres of harvest during 2006. These projects were authorized under consultations completed in previous years(s).

This fulfills your consultation requirements for this action. Should new information reveal effects of the agency action that 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 this letter, please contact Ms. Laura Hill of my staff at (304) 636-6586 ext. 18, or at the letterhead address.

Sincerely,

Thomas R. Chapman
Field Supervisor

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Appendix A
Species Not Likely To Be Adversely Affected

The Fish and Wildlife Service has reviewed the information contained in the Forest Service's April 2006 Cherry River Project Area Biological Evaluation (including Appendix A, the "Likelihood of Occurrence" table), and the associated draft Environmental Assessment, which describe the potential effects of the proposed projects on federally listed species. As detailed below, we concur with the Forest Service's determinations for the following species.

Bald Eagle (*Haliaeetus leucocephalus*): The Cherry River provides potential roosting, foraging, migration, and breeding habitat for the bald eagle; however, there are no known bald eagle nests along the river. The closest nest is approximately 28 miles away. Due to presence of suitable habitat but lack of documented bald eagle use in the project area, the Service concurs that the proposed action may affect, but is not likely to adversely affect the bald eagle.

Virginia Big-eared Bat (*Corynorhinus townsendii virginianus*): We concur that the proposed action would not affect the Virginia big-eared bat. There are no known hibernacula or maternity colonies within or near the project area. The potential for timber harvesting to alter foraging habitat is extremely low due to the lack of caves and lack of known occupancy of Virginia big-eared bats in the area. The closest caves are 70 to 75 miles away, are not known to be occupied by Virginia big-eared bats, and are outside of the normal commuting distance of this species.

Cheat Mountain salamander (*Plethodon nettingii*): The Service concurs that the proposed action would have no effect on the Cheat Mountain salamander because harvest activities are not planned in potential habitat within the Cherry River project area and no individuals have been found in the project area. Habitat assessments and surveys of the project area were conducted by Dr. Thomas Pauley and summarized in a map in 2001. There are no areas of potential habitat identified on the west side of the watershed, and the species has not been found during surveys of four potential sites on the east side of the watershed. The nearest occupied habitat is roughly 25 miles from the project area, outside the small homerange of this species (approximately 50 square feet).

West Virginia northern flying squirrel (*Glaucomys sabrinus fuscus*): The Service concurs that there are no adverse effects anticipated to the West Virginia northern flying squirrel. An updated programmatic suitable habitat map for this species was completed and approved by the Service in November 2004. The results of that effort are shown on page 13 of the Biological Evaluation. This effort compared project area maps to available stand data, aerial photography, maps and models of potential suitable West Virginia northern flying squirrel habitat, including the MNF forest-wide suitable map prepared for the Forest Plan Amendment (2004) and the results of the habitat modeling conducted by Menzel (2003). Habitat suitability determinations were verified by the agencies during joint field reviews. After the revised map was completed, the proposed projects were modified to avoid impacts to all areas identified as suitable squirrel habitat.

As a result of this collaborative early consultation, there are no timber harvest activities planned within or near suitable squirrel habitat.

Shale Barren Rock Cress (*Arabis serotina*): Plant surveys in the proposed harvest areas of the Cherry River project area were conducted by Forest Service staff during 2001, 2003, 2004, and 2005. Shale barren rock cress was not found. The Service concludes that the proposed action will not affect the shale barren rock cress due to the lack of suitable habitat within the project area (limestone soils) and the negative survey results. In its cover letter transmitting the Cherry River Project Area Biological Evaluation to the Service, dated April 14, 2006, the Forest Service inadvertently summarized its "no effect conclusion" for this species as "may affect/not likely to adversely affect" (Jay Martin, pers. comm., June 15, 2006).

Running Buffalo Clover (*Trifolium stoloniferum*): Plant surveys in proposed harvest units conducted by Forest Service staff in 2001, 2003, 2004, and 2005 confirmed the lack of suitable habitat (limestone soils) for this species and its absence from proposed harvest units. Therefore, the Service concludes that the proposed project will not affect running buffalo clover. In its April 14, 2006 letter transmitting the Cherry River Project Area Biological Evaluation to the Service, the Forest Service inadvertently summarized its "no effect conclusion" for this species as "may affect/not likely to adversely affect" (Jay Martin, pers. comm., June 15, 2006).

Small-whorled Pogonia (*Isotria medeoloides*): The Service concurs that the proposed action may affect, but is not likely to adversely affect, the small-whorled pogonia. Potential habitat may occur within or near the project area (dry, deciduous woodlands with acidic soils); however, the project area is not near known populations and the species was not found during surveys in proposed harvest units by Forest Service staff during 2001, 2003, 2004, and 2005.

Virginia Spiraea (*Spiraea virginiana*): Potential habitat for this species occurs within the project area (rocky, flood scoured banks of high energy streams and rivers); however, this species was not found during surveys of the proposed cutting units that were conducted in 2001, 2003, 2004, and 2005 by Forest Service staff. Potential impacts to potential habitat, and therefore to the species, will be avoided through implementation of the MNF's riparian guidelines as described in the draft Environmental Assessment. If these avoidance measures are implemented, the Service concurs that the proposed project will have no affect on Virginia spiraea.

Cc:
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