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To: District Ranger Chadwick, Jason Herron, John Donahue and all whom this concerns
Re: proposed Robinson Hollow logging project

We were recently in this area and offer the following comments in response to the proposal letter dated February 13, 2005 from this District office for the proposed Robinson Hollow logging project.

The Forest Service is proposing to intensively log ("modified shelterwood") 238 acres at eleven sites and build 0.6 miles of "temporary roads". We have some deep concerns and objections about this proposed logging and roading. We ask that this proposal as written be dropped due to the significant harm it would cause to the Forest and to the use and enjoyment of the area by us and others.

Based upon conditions on-the-ground at the project area and the information in the scoping letter the "no action" alternative is appropriate for here. If planning for this project moves forward, we want the following issues and concerns to be fully addressed:

Site Conditions/Plan Consistency/Project Rationale & Need

The places proposed for cutting are dominated by small-diameter trees. The growth in many proposed units can rightly be called scrawny. The average diameter of the canopy trees in almost all the proposed cutting sites is only 12-20 inches. Unit 5 has particularly small trees, averaging around 15 inches. What sense does it make to cut these small trees now? This is neither proper forest management, nor a reasonable use of public funds and lands.

The scoping letter states that "the proposal is designed to . . . provide high value wood products . . ." The scoping letter also characterizes almost all these proposed cutting sites as "damaged sawtimber", "sparse sawtimber", "low quality sawtimber" and mature poletimber". The cutting of poletimber and low quality & damaged sawtimber does NOT provide high value wood products. These sites would provide low value "products" such as pulp. Your proposal does not meet the asserted "need" and does not comply with the Plan direction. To do such a thing is improper and an abuse of discretion.

And it is not at all clear how or which of or if the "forest's neighbors" would benefit from the proposed action.

Steep Slopes

Steep slopes occur at the proposed cutting sites, such as at "units 7, 8, & 10". The cutting of excessively steep slopes is a continuing pattern on this Forest. Such sites are important to species such as Worm-eating Warblers.

We are concerned about degradation to habitat and site growing conditions, as well as about loss and stress/degradation to soils. The long-term and cumulative impacts to sustained yield are a concern, particularly in conjunction with poor logging practices in the past and ongoing/future impacts from air pollution and acid precipitation.

This recurrent situation begs the question: just how steep must slopes be in these forest types for the Forest Service not to implement the various types of logging operations?

Recreation

This area is already degraded for dispersed non-motorized recreation and for visual enjoyment by lots of roads and past cutting. The detrimental cumulative impacts of additional cutting units and roads must not be glossed over. By harmful recreational impacts, we mean, *e.g.*, more noise, increased potential for illegal motorized entry and poaching, diminished naturalness, degraded camping sites, degraded visual quality, impeded hiking, altered wildlife habitat and opportunities for viewing species that are not common like deer, adverse impacts to desirable herbal plant gathering or photography due to more deer being attracted to or surviving in the area, loss of mature interior forest conditions which we enjoy and benefit from, damage and destruction of salamander habitat and populations and consequent harm to our viewing of them, harm to TESLR species whose existence is valuable to us, and harm to old growth. These can be significant effects (*e.g.*, cumulative). The impacts of the proposed logging to visual and dispersed recreational resources and opportunities in the area must receive the requisite "hard look". This full and fair consideration is essential for a well-informed and well-reasoned decision.

Habitat Conditions

The stands I viewed contained a complex of different habitat conditions desirable for wildlife. Thickets and soft mast already exist on site. They are not exceptionally crowded or "over-stocked". Natural processes will further thin them out. Canopy gaps and openings exist. There is a paucity of CWD, LWD, snags and hollow den trees at the sites. Logging operations will remove future sources of this material and damage the ecological integrity/health of the sites. Removal of large old trees will reduce denning or cavity nesting habitat as well as hard mast. These are relatively young "stands", but there are those said to be over 100 years old (#7). This site is a good candidate for the restoration of old growth on the Forest.

This project does not appear to be driven by actual site-specific habitat/wildlife needs, but instead by desires to supply subsidized timber.

"Suitable" land

What is the amount of acreage of "suitable" lands in the project area? When was this figure calculated?

This basic information is absent from the scoping letter. It is important for considering the proposed project and commenting on issues, concerns, and alternatives.

The Plan makes clear that the upper limit for potential "regeneration" cutting in this MA is 10% of the acreage "classified as suitable" (see LRMP 3 – 82).

Roads

We particularly object to the proposal to build roads here. Labeling them "temporary" does not negate their undesirable aspects. Temporary roads harm and degrade the forest's ecological integrity and my aesthetic, recreational, spiritual, and scientific use and enjoyment of this area. We are totally opposed to road construction in this project area. The area is already sullied with an abundance of roads that provide for legal and illegal motorized access, result in road-killed wildlife, and harm my use and enjoyment of the area. We are in favor of road decommissioning (including revegetation and

obliteration) on the Forest. The project area contains opportunities to accomplish this desirable condition.

A site-specific "Roads Analysis" needs to be accomplished for this area to determine needed and unneeded roads and priorities for road improvements and decommissioning.

This area is already excessively roaded. The scoping map shows around 5 miles of system roads (FDRs 1823, 1824, 1825, 1874) already existing in the 3,220 acre project area. In addition, other routes that exist here are shown on the map, plus there are still more that are not shown (such as the one going through the middle of proposed cutting unit #5). This tract of National Forest is a "wildlife management area" (MA 15) that has a road density Standard. The Forest Plan requires that the open road density at MA 15 tracts not exceed 1 mile/1000 acres. It appears that this area is already inconsistent with the Forest Plan's direction. What are you going to do about this? The decision must fully address this issue and achieve compliance with the Plan.

It is not reasonable to build more roads into an area that is already harmed by excessive roads. Another factor is that the Forest Service in general and the GWNF in particular already have a huge backlog of road maintenance that is not getting sufficiently funded. And now you are proposing to spend tax dollars building more roads that also will have additional future management costs.

The proposed road building ("temporary") involved in the single alternative described in the scoping letter would facilitate Illegal activities (*e.g.*, poaching, ATV use). The impacts of present and proposed roads must be fully examined and disclosed in any EA/EIS that results from this proposal.

Develop and examine in detail alternatives that do not involve road building of any kind.

<u>Road to #7/Rationale</u>

The road going back to proposed cutting site #7 is overgrown and functioning now as a non-motorized trail. It is slowly recovering from the intense disturbance from heavy machinery. To get this "road" into a condition for use by logging equipment would require a major amount of reconstruction. This is an unnecessary expense and a bad idea particularly as this section is one of the more remote parts of the project area.

<u>OHVs/Poaching</u>

The project area is allocated to Management Area 15 by the Forest Plan. The action alternative proposes to build new road into the project area; 0.6 miles of "temporary" roads. This roading will not only result in forest fragmentation with ecologically harmful edge effects and degraded visual and recreational quality, it will provide an access route for illegal motorized activity and other human disturbance. Even if "closed" or "temporary", these roads facilitate harmful and undesirable motorized access (such as from ATVs) into the area, with consequent harmful and undesirable disturbance and impacts to wildlife. Such illegal motorized access is already known to occur in this Ranger District; we have seen the evidence first hand. We and other members of the public have notified you of these problems. For just one example, on March 16, 2006 this writer again observed illegal trespass on this District (two motorcycles in the Maple Flats area).

The decision to build more road mileage into this area and facilitate more motorized access is not consistent with the Plan condition desired for this area of Forest.

The agency typically glosses over impacts from the clear potential that the project has for increasing illegal motorized use, such as from ATVs, and associated criminal activity such as poaching. The agency dismisses and misleads regarding such potentially significant harms with inaccurate and unsubstantiated claims regarding the ability to "control" such activity. This foreseeable illegal activity would further harm remoteness, habitat security,

and freedom from disturbance.

The cumulative impacts of all this may be significant. The analysis and disclosure must clearly analyze and disclose the cumulative impacts to habitat and disturbance-sensitive species in this MA 15.

The agency must fully analyze and disclose the impacts from the clear potential that the project has for increasing illegal motorized use, such as from ATVs and dirt bikes. This foreseeable illegal activity would further harm remoteness, wildlife and habitat security, and freedom from disturbance. Construction techniques (*e.g.*, dozers) that result in wide routes, will easily facilitate illegal ATV use and make it even more difficult for law enforcement officers to control. There is clearly a potential for significant harm to remote habitat and disturbance-sensitive wildlife.

The agency must fully and fairly consider the proposed project's potential to increase illegal motorized use (such as from ATVs).

There is clearly a potential for significant harm to remote habitat, disturbance-sensitive wildlife, roadless area values and character, feelings of solitude, serenity, and remoteness, and to wildlife security.

The project area fits the profile for such illegal use. It has the "hidden, out-of-the-way places" said to fit the profile, as well as "adjacent private land" (see 2005 GWNF Allegheny Highland Trail proposal EA-63).

The Forest Service over and over has made the specious claim that gating/blocking techniques and law enforcement can control illegal ATV use (see, *e.g.*, GWNF 2005 AHTS EA-64). This is refuted time-and-time again by observations on-the-ground in the GWNF. I have witnessed innumerable evidence of trespass on blocked and gated roads, such as at recently at Paddy Run, Sours Run, and Maple Flats special biological area. I have seen obvious illegal off-road ATV routes well into the interior of both Crawford Mountain roadless area and Dameron Mountain on the JRRD, as well as at Potts Pond SBA. And this is not an exhaustive list. Other members of the public have often and repeatedly notified the Forest service of similar trespass. Signs, blocks, and gates definitely do not stop OHV trespass and the agency knows this.

Further, the Law Enforcement Officers on the Forest have also notified the agency repeatedly that they cannot control illegal motorized use and trespass. In fact, the GWNF's head LEO, Mr. Woody Lipps, even stated that "the number 1 threat on the Forest is illegal ATV use." Wildlife poaching is a primary associate of this. See attached declaration of Steven Krichbaum (previously submitted to the Forest Service). In a letter to Virginia Forest Watch dated July 1, 2004, Officer Lipps stated, "so far this year, cross-country motor vehicle operation is the most reported violation occurring on the GW/Jeff." Foisting off the problem as a "law enforcement issue" (as done in previous EAs) is irresponsible and improper. The claim that 'law enforcement will handle the problems' that planners of this project help create and make worse is utterly without basis in fact.

The Forest Service must fully and fairly consider the direct, indirect, and cumulative impacts of the proposed action from facilitated OHV use.

<u>"Need" for Project/Rationale</u>

The "need" for this project is not reasonably established. According to the Forest Plan and its Environmental Impact Statement, Management Area 15 is a "wildlife management area" where wildlife populations are the priority and drive management actions. What <u>site-specific wildlife population monitoring data and inventories</u> have been gathered and what analyses performed? These are a fundamental prerequisite for establishing a site-specific "need" for fabricating artificial early successional habitat ("esh") by logging 238 acres here. There is no mention of these numbers or the status of site-specific populations in the scoping letter, nor is such site-specific information in the EIS.

It is not apparent that the agency has the most basic monitoring and population

inventory numbers for the wildlife species found here, even for your own management indicator species ("MIS") and focal species for here - Wild Turkey, Ovenbird, Gray Squirrel, Pileated Woodpecker, Raccoon, Great Horned Owl, and Brook Trout. This baseline information needs to be in-hand before a well-reasoned and well-informed decision can be made.

Before moving on with this proposal, the planners have to reasonably and accurately establish the "need" for this project at this specific site. The scoping letter does not establish this. The desire to provide subsidized wood for commercial interests appears to be driving this proposal.

But this proposal site is composed of lands allocated to MAs 15. MA 15 is a "wildlife management" area where wildlife are supposed to be the priority and drive management actions (see, *e.g.*, LRMP 3 – 79-80 and FEIS 2 - 91).

As this MA is a "wildlife management area" (FEIS 2 – 91) where wildlife populations are the priority and drive management actions, to establish a valid "need" here one simple question must be answered: What site-specific wildlife population monitoring data & inventories have been gathered and analyses performed that establish a site-specific "need" for the fabrication by logging of artificial early successional habitat ("esh") ?

The scoping notice contains NO information on the status, trends, and numbers of the site-specific populations of wildlife found here in this MA 15 site, particularly for the focal species (see LRMP 3 – 79, FEIS 2 - 35) Without this, the site-specific "need" for this project has not been properly determined, nor can it be verified.

The planners have to obtain and disclose site-specific population monitoring data & inventories, and perform analyses of actual wildlife population data, that establish a "need" for the fabrication of artificial early successional habitat ("esh") for the wildlife at this specific "wildlife management" site.

There is no such population information and analysis in the scoping letter. As this information is absent, the "need" for this proposal is not apparent. Therefore, we cannot support the implementation of the proposed project.

Without even looking for them, this writer has observed numerous White-tailed Deer and Ruffed Grouse at the project area. There were also numerous Deer carcasses and pieces scattered around the entrance to the area at FDR 1823 off of Howardsville Turnpike. The numbers of Deer and Grouse observed, indicators of early successional habitat, are evidence that more such habitat does not need to be fabricated here.

The scoping letter states that "[t]he Proposed Action is needed to meet the direction set in the . . . Forest Plan." However, case law, including Supreme Court rulings, has clearly established that programmatic plans such as the GWNF LRMP do not generally force site-specific actions or establish their site-specific need. The Plan merely allows various actions, such as perhaps logging, to occur (within parameters). The Plan does not require or force logging at this specific site. "The Revised Plan does not contain a commitment to the selection of any specific project." (LRMP 4 - 1) A clear and substantiated site-specific "need" for a project must be established and disclosed to the public. The information in the scoping letter does not do this. The agency is required to clearly disclose its rationale to the public, but thus far it is not doing so here.

Merely claiming a consistency with the guidelines and standards set forth in the Plan does not establish a site-specific need for this project. Neither does having a programmatic desired future condition specified for all MA 15 lands establish a need for this site-specific cutting. The Plan's DFCs and Standards referred to in the scoping letter apply to ALL MA 15 lands, not just the lands of this project area. As this is a wildlife management area where wildlife are required to be the priority, actual site-specific wildlife population data must be used to establish and substantiate the "need" for this proposal at this particular site.

It is not apparent that planners have obtained site-specific population monitoring data & inventories, or performed analyses of actual wildlife population data for focal species (see LRMP 3 – 74, FEIS 2 - 34) such as Ovenbirds, Squirrels, Turkeys, Pileated Woodpeckers, Raccoons, and Great-horned Owls that establish a "need" for the fabrication of 238 acres of artificial early successional habitat ("esh") at this specific site.

How was it determined that there is a “need” to “regenerate” 238 acres and not 10 acres or 25 acres or 40 acres or some other amount? This needs to be disclosed to the public in an EA or EIS should this proposal move forward. The agency’s clear rationale is not apparent in the scoping notice.

Proportions of artificial habitat fabrications merely allowed by the Plan do not establish a "need" for this project in this specific project area. That the programmatic Plan allows some of the 0-10 year age class of the “suitable” land base to occur as even-age logging areas (LRMP 3 – 79-83) does not establish a site specific "need" to fabricate early successional habitat (“esh”) components here at this specific project area.

The scoping letter makes clear that the project area already meets the Plan guideline of “not exceed[ing] the maximum of 10 percent” of the “suitable land” cut in a time period (LRMP 3 – 82)

<u>Open Conditions/Herbaceous Growth</u>
Open park-like understories are said to be desired at this project area. Such conditions already exist here, such as at proposed cutting units # 7 and 8. These sites are also where the desired “moderate herbaceous undergrowth” can be expected. The proposed cutting would ruin these understory conditions. The proposed action would result in dense thickets of regeneration (what you call “vigorous sprouting of hardwood species” and “increased growth response from hardwood seedlings”). It does not make sense to destroy the very conditions you say are desired here. Especially considering that such open understory conditions are not prevalent at sites here; much of the area has brushy understory conditions.

<u>Wild Turkey Mast/Alternative</u>
It is clear from the scoping letter and the Forest Plan that Wild Turkey is considered a major species of focus for this project area. The Plan’s EIS states that the “ideal rotation age” for Turkey habitat is 135 years. But according to the scoping letter only around 3% of the project area is older than even 110 years. And yet now you are proposing to cut sites that are far under 130 years old. And these are relatively older sites (88-100 years of age) that would grow into the age said to be preferable for Turkeys. This proposed cutting doesn’t appear rationale, well-reasoned, or necessary.

Wild Turkey is clearly a species of focus here. The agency’s own Wildlife Population Data Working Paper (this paper by Goetz and McEilwane, used at the Deerfield RD, needs to be in the project file here) shows that the benefit to Turkeys from regeneration areas is negligible, being far outweighed by permanent grassy openings -- **500 times more** benefit to turkeys/acre. In other words, just <u>one acr</u>e of opening fabrication would benefit a focal MIS here more than all the acres proposed for cutting; and the benefits would be accomplished with almost none of the negative impacts associated with the proposed logging. Alternatives need to examine in detail the fabrication of a small amount of such sites without the logging of other acres.

<u>Hard Mast</u>
Older oak trees dominate the proposed cutting sites. Mast from these trees is important for

wildlife (including MIS and focal species here), and particularly so here since this is a "wildlife management area". The proposed cutting would drastically reduce mast production on these sites. And this reduction would be long-term, for at least 40 years. This aspect of the proposal is undesirable and particularly at odds with the direction for this management area. The scoping notice glosses over this and your rationale does not appear reasonable. What studies and site-specific data have you obtained that support your proposal to reduce hard mast in the area for decades?

Soft Mast/Grass-Forb Habitat

This scoping letter implies that soft mast and grass/forbs would decline without the proposed logging. What monitoring, survey, and inventory data support this position? There are plenty of such species and habitat already existing in the project area and at proposed cutting sites. It's the sites that have recently been logged that the scoping letter admits "provide minimal benefits in regards to herbaceous undergrowth and bugging areas for wildlife." And this 'biological desert' phase is known to last for decades. The tradeoffs you are proposing here do not make sense. It appears that subsidizing the timber industry is the focus here, not wildlife.

Soft mast production and grass/forb habitat would not necessarily decline under "no action". In fact, it may even increase as the project area ages and greater structural diversity accumulates. Acknowledgment and analysis of this significant factor is necessary for a well-informed decision. With the various scenarios of natural disturbances that can be expected to occur here, it is clear that soft mast and grass/forb habitat can reasonably be expected to increase at various "stands" and sites in the project area under "no action". Quantities of such soft mast and grass/forbs already exist here. With the ongoing canopy opening proceeding, more production of these can be expected.

In past EAs the Forest Service has claimed that soft mast and grass/forbs decline under "no action". What monitoring, survey, and inventory data support this assertion? I have never seen any scientific substantiation of this claimed decline in any EA or the FEIS or Monitoring Reports.

************ Please send me copies of the GWNF studies that support any claimed decline. ******** If I must make a FOIA request for such information, or can review the information at the District office, please let me know.**

Diversity/Balance/Sustained Yield

According to your scoping letter, a balanced age-class regime is desired here. There is already an extreme imbalance in the distribution of age-class forest acreage here. Only 0.6% of the project area is said to be over 130 years old. The older age classes are severely under-represented. There are generally very little or zero acres represented in the 131-140, 141-150, 151-160, 161-170, and on up to 271-280, 281-290, 291-300, 301-310, 311-320, 321-330, 331-340, 341-350 years-old age classes. Trees of the species found here, such as white, chestnut, and northern red oaks are known to attain such ages, and higher, when allowed.

These ages are important components of forest diversity. It is not reasonable to ignore all these age classes and lump them together (such as "150+") or to just stop at a certain age (*such as* 170) when discussing and analyzing age "distribution" or "balanced age class" and the "need" to cut to attain it.

Implementation of the proposal would result in significant long-term harm to achieving a balance of older "age classes". The older stands here, such as those proposed for cutting, should be allowed to move into the under-represented age classes. This project area is already seriously degraded as regards age classes. The sustained yield of older age-classes on the Forest has already been severely compromised and this proposal would make it worse.

Also, analyze and fully disclose the artificial nature of “balanced” “age classes”. A functioning natural forest ecosystem in the Appalachians does not have ”balanced” age classes. Natural functioning forest ecosystems here contain multi-aged or all-aged stands.

Balance/Alternative

The scoping letter only mentions 15 age classes, not the 35 discussed above. But even if only fifteen classes are used, then for “balance” about 6.66% of the acreage would be in each ten-year age class. However, this area has been way overcut in the recent past. Over 17% of the acreage (‘suitable” and non-suitable) is in the two age classes 11 to 30 years old. So the project area is already imbalanced, the “suitable” lands even more so. If you want to move toward achieving some artificial balance here, then do this (i.e., fabricate 6.6% of the acreage as 0-10 year age class) at the sites that are 11 to 30 years old.

Hundreds of acres have been cut in the recent past at this project area (556 acres, 17.2 % of the project area, within the past 30 years according to the scoping letter). If site-specific inventory and monitoring data and analyses show that wildlife populations here actually “need” more artificial openings or early successional habitat (0-10 year age class), then fabricate this habitat at the recently cut-over areas instead of logging mature forest sites. This is a feasible action that responds to public concerns and issues. Such an alternative needs to be fully developed and assessed.

Alternatives

Because of our concerns for and interests in recreational opportunities, remote habitat, desired wildlife conditions, disturbance sensitive species, and old growth, we request that you develop in detail (and implement) an alternative that drops road building and “units” 7 and 9 from cutting.

Withdrawal of these sites from cutting is a feasible alternative action. Not building the proposed 0.6 miles of roads is a feasible alternative action. Such alternatives are in compliance with the Standards in chapter 3 of the Plan. They respond to significant issues. They also lead to goals, objectives, and desired future conditions for this management area (see LRMP), as well as meet purposes and needs.

Zero acres or one acre or five acres or ten acres or 25 or 40 acres that are logged meet the Plan’s goals and desires of managing “suitable land” for “timber production”, providing wood “products”, “reducing expenses”, and “minimiz[ing] adverse effects on wildlife, soil, water, recreation, and visual values in a cost effective manner.” Such alternatives with significantly reduced logging need to be analyzed in detail.

Such alternatives are feasible, far less controversial and favored by members of the public who use the Forest, may result in impacts that are not significant, comply with Forest Standards and guidelines, address significant issues, and result in desirable conditions.

The Forest Service cannot reasonably use these rationales (*viz*., “commodity outputs” and “balanced age class”) to avoid considering-in-detail action alternatives raised by the public that address site-specific concerns dealing with significant issues.

To only develop and assess action alternatives that differ little in their scope and affect is improper and abusive of the NEPA process.

Alternatives also need to be fully developed, assessed, and implemented that do not involve any additional road construction of any kind. This is a feasible action that responds to public concerns and issues.

A range of action alternatives that positively address the public’s issues and concerns needs to be developed and considered in detail. These issues and concerns include: no road building of any kind, enhanced riparian/associated terrestrial protection, total protection of

special/vulnerable habitat areas, a low amount of cutting (1 acre to 1% of the project area), developing openings or esh at recently cutover sites instead of logging mature forest, designating and protecting old growth tracts and linkages, fully protecting sensitive, threatened, proposed, endangered, and locally rare species and their habitat. Such alternatives are in compliance with the Standards in the GW Forest Plan. They also lead to goals, objectives, and desired future conditions for this Management Area.

Aquatic Populations/Riparian Areas

We are concerned about the direct, indirect, and cumulative impacts to Trout and other aquatic populations in the area. Robinson Hollow and Inch Branch are Trout streams. Cutting is proposed for close by these drainages (see proposed units # 6, 7, 8, and 9). Previous recent cutting and road building have also occurred close by or across these streams. In addition, there are small brooks in the proposed cutting sites that are not marked on the map (such as at proposed units # 4, 5, 10, and 11). There is also a large pond/wetland just down slope from unit #6. We are concerned about the proposed logging's affects on sedimentation into these waters and reducing the canopy shading them. We also want all riparian areas to be completely protected from logging operations and roading.

Direct, indirect, and cumulative impacts to on-site stream segments and populations as well as downstream sections and aquatic populations are significant concerns. The analysis must fully deal with site-specific localized impacts, and not just upon effects downstream or a greater watershed unit. MIS for gauging and monitoring impacts must be present. If they are not present in the on-site stream segments, then some other verifiable species and/or scientific methodology must be used in order to substantiate findings regarding effects of the project. As regards cumulative impacts, what aquatic species were monitored, and where & when, to gauge the impacts of the previous cutting here?

See Seth Wenger, 1999, "A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation", Institute of Ecology, University of Georgia, 59 pp. (incorporated by reference).

The past and current state of biotic populations and water quality of perennial streams, and intermittent and ephemeral tributaries, even if a "fishery" may be absent, must be disclosed. Total amounts of sediment estimated to enter these streams from the proposed cutting or roading must be meaningfully analyzed.

Precisely what monitoring information has been gathered here on the effects to intermittent stream populations and water quality from previous cutting? Exceeding the threshold levels for certain intermittent tributary "resources" may be at risk.

There are intermittent and perennial streams in the project area. Though perhaps without Trout, these streams support populations of flora and fauna. What is the FS using to monitor impacts from past and present management in the area on aquatic populations in the coldwater and cool water streams that do not have Trout? What will the FS use to monitor impacts from future cutting in the area on these aquatic populations? What will the FS use to gauge adverse effects to aquatic species from implementation of the proposed action?

What is the status of the Trout populations presently in these streams? What would be the direct and indirect impacts to them from project implementation/ Of additional concern are the cumulative impacts in conjunction with past management activities as well as impacts from situations not in the direct control of the agency.

What happened to the Trout in other streams in the project area? Did the effects of past logging contribute to extirpating populations in streams where they no longer occur at present?

A significant issue for us is the cumulative impacts on aquatic populations from actions in the recent past (*e.g.*, 567 acres of logging and road building). How have these impacts been monitored and analyzed in Trout and non-Trout streams? What were the findings and results?

TESLR species

Potential TESLR species in area (or affected) - Cerulean Warblers, Coal Skinks, Ginseng, Butternut, Coopers and Sharp-shinned Hawks, Allegheny Woodrats, Eastern Small-footed Bats, Northern Pine Snakes, Virginia Big-eared Bat, Southern Grizzled Skipper, Sword-leafed Phlox, and Indiana Bat must be thoroughly surveyed for and analyzed.

Fully analyze and disclose the effects of all Management activities in project area on PETSLR species — Comprehensive biological monitoring and inventory are prerequisites. How long will biologists from the Non-Game section of VDGIF and Division of Natural Heritage spend in here (or plan to) before a decision is made? Because of low population numbers and restricted distributions, impacts on individuals as well as populations need to be considered.

Implementation of this proposal may significantly impact the distribution or viability of various Endangered or Sensitive or Locally Rare species, including Indiana Bats, Cerulean Warblers, Coal Skinks, Ginseng, Fisher, Coopers and Sharp-shinned Hawks, Butternut, Allegheny Woodrats, Northern Pine Snake, Virginia Big-eared and Eastern Small-footed Bats. Thorough surveys, inventories, and viability analyses (by relevant specialists using proper protocols at the right time of day and season) must be accomplished for all TESLR species whose range includes this area and that would be affected by the proposed action (in particular the above listed species); necessary to accomplish LRMP Std. 240.

It is vital that the locations of TESLR species be identified at project areas, and these locations strictly protected. Because of their rarity TESLR species have limited distributions and cannot be assumed to occur at wherever there is suitable habitat. It is to be expected that a species such as Ginseng or the Coal Skink or Indiana Bat or Cerulean Warbler or Pine Snake or Sword-leafed Phlox may survive at only a few, or even a single, site(s) in a relatively large project area. So to maintain their present distribution and viability such sites need to be precisely identified and fully protected. Otherwise the population may be significantly harmed, both directly and indirectly, by the intense disturbance from logging operations.

Maintaining a species distribution is a requirement for ensuring their viability on the Forest (see GWNF FEIS J-6-7). The analysis must fully and fairly consider this issue. It is not clear, nor may it be properly assumed, that the removal or fragmentation of old forest conditions or mature forest conditions will not result in the loss of species (not just a reduction in "density") from this area that are dependant upon these conditions here or sensitive to the disturbance being proposed. Species such as Cerulean Warbler, Ovenbirds, salamanders, Coal Skinks, Ginseng, and Allegheny Woodrat may not be able to maintain their distribution in the project area and thus the Forest (i.e., the planning area). We are concerned that this project threatens to violate the NFMA's viability mandates. The EA does not establish with clear accurate scientific analysis that significant impacts would not occur.

The TESLR species mentioned above are for-the-most-part small and cryptic. They will not be apparent just by meandering through an area, but must be actively searched for. They also may not be able to run or fly away from harm, and so would be subject to direct mortality at the sites of disturbance.

“TES species inventory requirements are primarily focused on providing protection during planning and implementation of site-specific projects.” (GWNF Peterfish TS EA-36) This baseline population information was not obtained for the analysis in the EIS for the programmatic Forest Plan. It must be obtained at the site-specific project-level of Forest

planning and analysis. Failure to do this here means neither the Plan nor the project decisions are compliant with NFMA and NEPA. Sufficient surveys must be performed. In addition, we are concerned that species may be improperly eliminated from full and fair consideration.

Locally Rare Species

The BEs confine their analysis to “TES species and associated habitat.” They further state that only "Federally listed threatened and endangered species, species proposed for federal listing, and Southern Region sensitive species (TES) that may potentially be affected by this project” were reviewed (BE). The "current" Southern Region Sensitive Species list (“as of October 18, 2001”) omits dozens of Sensitive species listed in the 1993 GWNF Plan and FEIS. Most of these, if not all, are listed by the agency as “Locally Rare”.

Affects to Locally Rare species must be identified as a "significant issue" by the agency. There are well over a hundred Locally Rare species. Precisely disclose in the EA or BE which Locally Rare species you searched for and considered in detail for this specific project.

For example, the GWNF North River EA stated that “no LR plant or animal species records of occurrence were found for the project area”. But this is just a records search, not a search for the species themselves. And this does not even reveal the names of the species the agency is talking about. Disclosure of the most basic and fundamental information (*viz*., exactly what are the Locally Rare species that should be considered and analyzed for this specific project) must be accomplished. Clearly disclose the suitable habitat and potential presence here of Locally Rare species, and simply not observed or previously recorded.

The EA/BE must disclose meaningful documentation and consideration regarding site-specific consideration of specific "Locally Rare" species.

Locally Rare species are a significant element of the Forest’s diversity. As they are “Locally Rare”, there is an obvious concern for their viability on this Forest. Impacts to Locally Rare species, such as the Cerulean Warbler and the Coal Skink, are a relevant issue and concern for this proposal; their proper consideration is essential for a well-informed well-reasoned decision. A failure to fully and fairly analyze and disclose the proposal’s potential impacts to these species would be a violation of NEPA and the APA. A failure by the agency to fully and fairly consider impacts to these species does not ensure protection of the Forest’s diversity and does not ensure these species viability and distribution on the Forest, violations of the NFMA.

The Forest is supposed to “keep current, their forest inventory information regarding occurrences of these species.” (see “Interim Guidance For Locally Rare Species” from Regional Forester) This must be accomplished here. Fully survey for, inventory, and disclose this information regarding these species.

The site-specific BE is to ensure that FS actions do not contribute to the loss of viability of any native species (see FSM). This insurance must be accomplished here.

The EA must disclose adequate information for the public to make reasonable decisions about the proposal. See 40 CFR 1502.1 and 1508.25 and 36 CFR 219.19(a)(4). To not do so would result in not only a failure to respond to the public, but also a failure to provide the public enough information to participate intelligently in the Forest planning process. See 16 USC 1604 Sec.6(d), also 36 CFR 219.6 and 219.1(11 & 14). Should this proposal move forward, any EIS/EA/BE for this project must manifest full and fair consideration of relevant factors and collaboration with the public.

Thoroughly search the project area, particularly proposed cutting and roading sites, for all Locally Rare species that may occur here. Fully protect and buffer all locations of Locally Rare species so as to help maintain viability and the Forest’s diversity.

The Coal Skink or Pine Snake may occur at this project area, including proposed cutting and roading sites as they contain suitable habitat. (See "Reptiles of Virginia" by J. Mitchell) Implementation of the proposed action may significantly harm these site-sensitive species.

Cerulean Warbler

The Cerulean Warbler may live at this project area. See, Virginia Breeding Bird Atlas and BBS data (incorporated by reference). Particularly at proposed unit #7, with its large trees, open understory conditions, vertical structural diversity, and more mesic character.

An ESA listing petition for this species is currently being reviewed by the USFWS. Their populations have plummeted in recent years. Yet the Forest Service dies not appear to be concerned about this species.

Sites proposed for cutting here contain suitable habitat for Cerulean Warblers (*e.g.*, large, tall mature and old-growth deciduous trees and appropriate "forest types").

The MIS Worm-eating Warbler and Ovenbird are ground nesters while the Cerulean Warbler nests high in trees. They are birds of different habits, preferences, and sensitivities. It is not reasonable for the agency to use the Worm-eating Warbler or Ovenbird as a proxy for gauging affects to Ceruleans. The Forest Service is required to use sound factual scientific information and take a hard look in its analysis.

Amend Plan 1

The "Locally Rare" species concept and list came out after the Plan was last revised. The LRMP needs to be formally amended to incorporate guidance for "Locally Rare" species. The Forest Service has had many years to accomplish this, but has not done so. Until this is done, this project should be withdrawn. Protection of the Forest's diversity and viable populations as required by NFMA must be ensured.

Without amending the Plan to require protective measures and standards for Locally Rare species (significant components of the Forest's diversity and wildlife), the Plan and a decision to implement this proposed action may be illegal.

Biological Evaluation

Previous BEs have stated that "species were eliminated from further consideration when the "habitat present and the species was searched for, but was not found". It is not at all clear how these species differ from those that "were not seen during the survey(s), but possibly occur in the activity area based on habitat observed during the survey(s)". The agency's rationale is not clear and solid. Please clarify this.

Through the above expediency, various TES species are being improperly dropped from full and fair consideration, even though their habitat occurs here (and is within their range). Just because they were not seen during some limited field surveys does not mean they do not occur here. The project could significantly harm their populations, distribution, and/or viability

Indiana Bat

The Endangered Indiana Bat may use the project area. MIS Indiana Bats are a significant part of the Forest's "diversity" that the FS is charged with protecting and conserving. The proposed action "may affect" the Bats. The project may directly, indirectly or cumulatively bring them significant harm. The Bat's viability on the Forest may be harmed. Conservation and recovery of the Bat must receive the highest priority. Otherwise, a decision to implement the proposed action violates, or threatens to violate, the ESA, NFMA, NEPA, and the APA.

Meaningful site-specific population inventory information must be obtained for this project. As a TES species, surveys for the Bats are required here (see GWNF LRMP Std.

240). Proper surveys for them have to be performed, so as to not violate the Plan (Std. 240).

The project area and proposed cutting sites contain potential roost habitat and maternity sites. The proposed action may affect the Bats. Meaningful site-specific population inventory information is absent from the GWNF FEIS and Monitoring Reports. As a TES species, meaningful site-specific surveys for the Bats are required here (see GWNF LRMP Std. 240).

The Forest Service typically claims "[t]here is potential unoccupied habitat for the Indiana bat within the project area . . ." (see, *e.g.*, 2005 GWNF AHTS BE). However, meaningful and scientifically valid measures must be taken so as to ascertain with any reasonable probability if the habitat here is actually "occupied" by the Bats.

The FS is on record as assuming that Bats are present at project areas such as here (see previous EAs/BEs). So if they are here, exactly where are they? The GWNF Plan has Standards mandating distinct no-disturbance zones around roost trees and maternity roosts. However, the Forest Service has previously failed to ascertain with feasible methods exactly where the Bats are occupying such trees/habitat at proposed disturbance sites. In this way, it is not known or determined where the Plan strictures need to be applied here at the project area. So meaningful compliance with the Plan is subverted and thwarted. This is unreasonable and capricious. And "mitigation" that passively offers an unreliable "if" of unknown, dubious, and unverifiable effectiveness (see, *e.g.*, "if any . . .are located" at GWNF Cold Springs TS EA-12 at #10) is also improper and insufficient. Through this misfeasance the agency violates the Plan, the NFMA, and the ESA.

Daytime "walk-throughs" of the project area do not constitute a good-faith effort to determine whether the Indiana Bat is present in the project area. The Bats are hidden during the day and are active at night. Failure to make a good-faith effort to locate the Bat in the project area violates the NFMA and its regulations. In violation of the ESA, the failure to perform reasonable and effective surveys (night-time mist nets and Anabat detectors) does not place "top priority" on this Endangered species. The Forest Service must not fail to take these logical, reasonable and prudent actions that lead to the Bat's "recovery" as mandated by the ESA.

By not properly surveying and monitoring sites either before or after ground disturbing activities, the Forest Service does not reasonably ensure that the "authorized levels" of "take" (*viz.*, 10 Bats annually) are not being exceeded.

This action and others on the Forest result in jeopardy to the Bat. This action and others on the Forest are failing to "conserve" the Bat and/or not leading to its "recovery".

The Forest Service must not fail to take the logical, reasonable and prudent surveying/inventory actions that lead to the Bat's "recovery" as mandated by the ESA.

We do not want the FS to continue this illegal trend at this project area and during this project's analysis.

We believe the cumulative impacts to the Bats on the Forest, and throughout its range, are significant.

The performance of these Indiana Bat surveys must be done before further monies are spent on developing the proposed alternative further.

Timber program funds should bear the cost of the surveys.

The costs of these surveys should be accounted as a cost of the project when analyzing and disclosing the "economics" of the alternatives.

<u>MIS and MA 15 focal species</u>

What data does the agency have (surveys, monitoring, inventories) which indicate that the viability of any MIS or other wildlife is threatened in this project area? There are no data presented in the scoping letter on present population numbers as compared to predicted numbers based on current habitat carrying capacity calculations.

Are MIS/wildlife populations at present even taking advantage of the habitat that is already available here ? So how do we know that habitat needs to be altered or fabricated?

This basic information for project rationale and for decision-making must be obtained. Without such site-specific quantitative data, a reasonable decision is not possible - the “hard look” and “individualized consideration” required by NEPA are not manifest by the agency. The “sound factual basis” by which the agency is compelled to conduct habitat management is not manifest - a violation of NFMA 36 CFR 219.5(a)(7).

Disclose the monitoring and analysis information that show that the logging that has taken place in MA 15 has actually resulted in increased populations of the MA 15 focal species mentioned in the LRMP & FEIS. The planners have had twelve years to gather this information. Have you done so? What does the information show? How much have Ovenbird, Worm-eating Warbler, Pileated Woodpecker, Turkey, Bobcat, Raven, and Bear populations increased or decreased?

Without such clear and reviewable monitoring data it is not apparent that the proposed actions will actually result in the desired affect of meeting the habitat needs of species. The planners must make their rationale for this project clear and substantive.

Fully disclose, explain, and assess the HARMFUL affects the proposed logging would have on Black Bears, Ovenbirds, Worm-eating Warblers, Flickers, Grouse, Trout, Pileated Woodpeckers, Cave-dwelling Bats, and Old Growth. In the past, the FS has failed to fully and fairly disclose the negative impacts on wildlife. Biased disclosure does not meet the standards of integrity and accuracy demanded by the NEPA and APA.

Also fully disclose, explain, and assess the harmful affects the proposed logging would have as a result of its effects on Deer and Cowbirds.

Of the species mentioned in the Plan and FEIS that MA 15 emphasizes, three are MIS. Implementation of the proposed action would result in loss or degradation of habitat for and adversely impact MIS Pileated Woodpecker, MIS Turkey, MIS Bear, MIS Worm-eating Warbler, and MIS Ovenbird. These species benefit from the mature forest conditions that the Forest service is here proposing to destroy, degrade, and/or diminish. And the harm to these emphasis species goes beyond what is normally even admitted and disclosed in EAs.

To make a decision to harm and/or degrade conditions for the very species you are supposed to be providing for would be a clear abuse of discretion.

A failure to collect, disclose, and analyze actual population data for the MIS in this area does not comply with NFMA. The analysis for this site-specific project must be validated by such hard factual data.

<u>Negative impacts to Black Bears, songbirds, salamanders</u>

For information regarding salamander use of headwater stream habitat see <http://www.epa.state.oh.us/dsw/wqs/headwaters/TechRep_FishAmphibian_2002.pdf> (incorporated by reference). This information needs to be fully considered and incorporated into the analysis. Expanded no cutting or no disturbance zones around stream courses needs to be implemented here.

<u>Bears</u>

Disturbance to disturbance-sensitive wildlife and their remote habitat, from both legal visitation and illegal use, can be expected to significantly increase under the proposed action.

As a MIS, the treatment of Bears needs particular attention. Remote habitat is particularly important to them. In fact, monitoring of MIS Bear is partly accomplished by

monitoring the amount of SPM and SPNM habitat available to them (see G-15 of the 2004 GW-JNFs M & E Report, incorporated by reference). GWNF planners have previously declared that Bears may be displaced and incur greater pressure at sites proposed for disturbance, but that this is not significant because they can go somewhere else (see, *e.g.*, AHTS EA-53). However, this is unreasonable as Bears are already displaced TO places such as the lands found here on the Forest because of the degraded or more disturbed or less secure conditions elsewhere. The site-specific increased stress and pressure must be fully and adequately considered and explained.

In addition, the agency typically glosses over impacts from the clear potential that the project has for increasing illegal motorized use, such as from ATVs, and associated criminal activity such as poaching. The agency dismisses and misleads regarding such potentially significant harms with inaccurate and unsubstantiated claims regarding the ability to "control" such activity. This foreseeable illegal activity would further harm remoteness, habitat security, and freedom from disturbance.

The cumulative impacts of all this may be significant. The analysis and disclosure must clearly analyze and disclose the cumulative impacts to remote habitat and disturbance-sensitive species in MA 15.

Impacts to Salamanders

We are concerned about the harmful impacts the project would have to the distribution and viability of salamander populations. The proposed action would log tracts of old deciduous forest with the more mesic site conditions and ground floor material (rocks and CWD) preferred by amphibians. This is the case at "unit 7". Such areas are in short supply at this project area; the conditions found at the other proposed cutting sites make this clear. Conditions suitable for salamanders appear generally very limited at other proposed cutting sites, except for the small drainages and seeps found there.

Salamanders are important elements of the Forest's "diversity" that the agency is charged with protecting and monitoring. The Cow Knob Salamanders (*Plethodon punctatus*) are the MIS for other woodland salamanders (*e.g.*, of the *Plethodon* genus). They are the proxy used to analyze and gauge the impacts to other salamander species, and other site-sensitive genera.

The project area is out of this species' range. As they are not present, then how will impacts to salamanders and other species for which the CKS serves as a proxy be analyzed and monitored here? Impacts to salamanders and other site-sensitive taxa must be fully and fairly considered and disclosed.

Sites in the stands proposed for cutting contain mature deciduous forest with moist ground conditions and rocky groundfloor areas.

The Cow Knob Salamander, a terrestrial salamander MIS on the GWNF, is associated with mature deciduous forest and an abundance of surface rocks (see pg. 2 of Mitchell, J.C. 1994. Habitat Conservation Assessment for the Cow Knob Salamander (Plethodon punctatus) in the George Washington National Forest. U.S. Fish and Wildlife Service, Annapolis, MD. 16 pp.; incorporated by reference) "Over 89% of the captures [of this species] were found under rock cover." (see "Forestry Operations and Terrestrial Salamanders: Techniques in a Study of the Cow Knob Salamander, *Plethodon punctatus*", K.A. Buhlmann et al in USDA FS General Technical Report RM-166, Nov. 1988, pp. 38-44; incorporated by reference). Many other terrestrial salamanders whose ranges include this area are associated with rock cover, particularly in moist areas. See "Salamanders of the United States and Canada" by James Petranka, Smithsonian Institution Press, 1998; incorporated by reference.

Salamanders and other small, cryptic site-sensitive species are important and significant components of the Forest's diversity. They are as important as any large game species. The agency is required by the NFMA to maintain their distribution and viability just

as it is for other large mobile species. Yet there may be no MIS present here to use to meaningfully gauge the effect of proposed actions.

The agency must sufficiently examine and consider the potential impacts upon salamanders. This concern is particularly important given the intent to destroy, degrade, or fragment salamander habitat (such as the mature forest and rocky areas), these species low dispersal abilities, and the moister areas (such as in the forest type 53 areas with drainages or cooler aspects) targeted for intensive cutting. Populations could be centered, perhaps even be only found at, the particular places targeted for intense manipulation. They have very small home ranges with limited abilities of mobility. They are susceptible and vulnerable to site-specific harm from logging operations and subsequent habitat alteration.

This project analysis must fully and fairly consider widely-shared and relevant scientific information that shows that salamanders and their reproductive success may be significantly impacted by logging such as proposed for here. This involves the significant issue of salamander monitoring and viability and scientific information. This is a particularly salient concern for the moister areas, rocky sites, and tracts with LWD cover objects, proposed to be cut here.

Some Relevant Information to Consider:

Key Finding: Red-backed salamanders, sensitive to forest moisture and temperature levels, were more abundant in old-growth forest and 60-year-old second-growth than in clearcuts or selectively logged forest.

Key Finding: Salamanders are a critical part of the forest food chain: they are important food sources for birds and mammals, and as predators themselves, they cycle large amounts of energy through the forest ecosystem.

Source: Pough, F. H., E. M. Smith, D. H. Rhodes and A. Collazo. 1987. The abundance of salamanders in forest stands with different histories of disturbance. Forest Ecology and Management 20: 1-9.

Four pairs of study plots were established in New York State - four in old-growth forest and four in adjacent disturbed stands, the latter of which included a seven-year-old clearcut forest, a 25-year-old clearcut planted with conifers, a forest cut selectively for firewood, and a 60-year-old second-growth forest. Two 50 x 2 m transects were established in each plot. Understory vegetation cover, leaf litter depth, and soil properties were sampled. Salamanders were counted at night, with each pair of stands being surveyed a total of five times during the study.

The authors found two species of salamanders along their transects - red-backed salamanders (*Plethodon cinereus*) and the terrestrial eft stage of red-spotted newts (*Notophthalmus viridescens*). The largest source of variation in salamander numbers, other than night-to-night differences, was stand stage. Red-backed salamanders were most abundant in second-growth forest and its adjacent old-growth control plot, and least abundant in the recent clearcut. This species is believed to be particularly susceptible to changes in microhabitat as it spends all its life on land rather than partly in water and must have suitable forest habitat through all its life stages. Depth of leaf litter was the best predictor of the frequency of above-ground activity by these salamanders.

The authors report red-spotted newts as having been previously shown to be more tolerant of heat and dry conditions than red-backed salamanders. This species spends its larval and later adult life in the water and is only on land during the eft stage. Efts were most abundant in the old-growth plot next to the conifer plantation and rarest in the plantation, but more abundant in the firewood stand than its adjacent old-growth. The authors suggest

that this may be because of the abundant piles of down wood present in the firewood forest stand.

The authors also review research on salamanders in various forests of the United States and report that these amphibians' high biomass makes them an important part of the forest food chain. In places such as the Hubbard Brook Experimental Forest in New Hampshire, the biomass of salamanders is twice that of birds and equal to that of small mammals. They are important food sources for birds and mammals and themselves exploit much of the small prey, thereby contributing greatly to the forest ecosystem energy flow.

Key Finding: The abundance of amphibians was significantly lower in clearcuts, plantations, and forest edges than in mature forest interior sites.

Key Finding: Lungless salamanders, such as the red-backed salamander, are particularly vulnerable to population declines due to clearcut logging.

Source: deMaynadier, P. G. and M. L. Hunter, Jr. 1998. Effects of silvicultural edges on the distribution and abundance of amphibians in Maine. Conservation Biology 12: 340-352.

Five sites in Maine were chosen to study the effects of logging and edges on amphibian populations. Three clearcut stands (ranging from 2 to 11 years old) and two conifer plantations (5 and 25 years old) were paired with adjacent mature forest stands as controls. Transects 140 m long were established perpendicular to the forest edge and 70 m into each stand type. Drift fences and pitfall traps were used to capture the amphibians. Habitat variables were also recorded, including ground cover, vegetation characteristics, litter depth, and ambient light levels.

A total of 2,394 amphibians of 14 species were captured. This included six salamander species and eight anuran (frog and toad) species. All statistical analyses were based on a catch-per-unit effort (number of animals per 100 trap nights) to standardize sampling efforts.

The overall amphibian capture rate was significantly lower in clearcuts and plantations than in the mature forest control sites. The abundance of all six salamander species and seven out of eight anurans increased significantly on plots closer to the forest interior than to the edge. Four species were identified as being particularly sensitive to forest management: red-backed salamanders (*Plethodon cinereus*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and wood frogs (*Rana sylvatica*). Red-backed salamanders were the most sensitive to clearcutting and forest edge effects. All four management-sensitive species occurred in higher numbers in forest interior habitat than at edges.

Both the distance that edge effects extended into the forest interior and edge contrast were analyzed. The four management-sensitive amphibian species were found to be negatively affected at distances up to 25 to 35 m from silvicultural edges. For salamanders as a group, high-contrast forest edges had a stronger negative impact on abundance than low-contrast edges.

The microhabitat variables that potentially limited populations were also identified. There was a strong positive association between species abundance and canopy cover levels, percent cover by snags, stumps, and root channels, and litter coverage and depth.

Key Finding: Clearcuts had a significantly lower abundance and fewer species of salamanders compared to mature, 50- to 70-year-old forest stands in the southern Appalachians.

Key Finding: Plethodon salamanders are unlikely to survive logging because individuals are closely tied to small home ranges and unlikely to relocate to intact forest from logged areas.

Source: Petranka, J. W., M. E. Eldridge and K. E. Haley. 1993. Effects of timber harvesting on southern Appalachian salamanders. Conservation Biology 7: 363-370.

The authors compared the species richness and abundance of salamanders in recent clearcuts and mature forest stands in Pisgah National Forest in the southern Appalachian Mountains of North Carolina.

Plots 50 m by 50 m in size were established on 47 sites, including six recent clearcuts (2-10 years old) and 34 mature, mixed deciduous forest stands (more than 50 years old). Plots in clearcuts were at least 20 m from adjacent uncut forest. A total of 12 species of salamanders were collected (828 individuals) during day searches, primarily in the genus *Plethodon* and *Desmognathus*. Statistical analysis was restricted to the five most abundant species.

Logging adversely affected almost all species. Clearcuts contained on average about half as many species of amphibians as mature forest sites. Catches of salamanders from plots in mature forest stands were about five times higher than catches in clearcuts.

The authors' discussion section reviews literature indicating that southern Appalachian salamander species, sensitive to moisture and temperature stress, are adversely affected by clearcutting, which degrades forest floor habitat by eliminating shading, reducing leaf litter, increasing soil surface temperature, and reducing soil surface moisture. In addition, due to having small home ranges and being closely tied to their home ranges, salamanders do not disperse away from logged areas. The authors believe that these factors make high mortality after clearcutting likely.

Key Finding: The relatively abundant land salamander *Plethodon jordani*, an important part of the food chain, disappeared from forest sites in the southern Blue Ridge Mountains after they were clearcut.

Source: Ash, A. N. 1988. Disappearance of salamanders from clearcut plots. The Journal of the Elisha Mitchell Scientific Society 104: 116-122.

The effects of clearcutting on the salamander species *Plethodon jordani* were studied for four summers after logging in the Nantahala National Forest in the southern Blue Ridge Mountains. This species was selected for study because, as an abundant predator in southern Appalachian forests, it plays an important role in ecosystem energetics.

Four 225 m2 plots were established: two in clearcuts and two in the adjacent oak-hickory forest. Plots were at least 40 m from the edge of the patch in which they were located. Salamanders were toe-clipped to permit individual identification. Searches were done at night, from June through August.

Throughout the study, between 19 and 49 salamanders were caught on forested plots. During the first summer after logging, salamander abundance in clearcuts was 40% of the

numbers on forested sites. During the following summers, no salamanders were found in clearcuts. Due to the limited numbers of plots, statistical analysis was not performed.

Key Finding: In the first two years after clearcutting, salamander numbers, including *Plethodon jordani*, declined to almost zero on all three forest sites studied.

Source: Ash, A. N. 1997. Disappearance and return of plethodontid salamanders to clearcut plots in the southern Blue Ridge Mountains. Conservation Biology 11: 983-989.

The impact of clearcutting on terrestrial salamanders was studied at three sites in the southern Blue Ridge mountains, North Carolina. Clearcuts ranged in size from 10 to 23 ha. Salamander abundance was compared on plots (225 m2 in size) in clearcuts and in adjacent forest. Salamander sampling was conducted before and after clearcutting, with searches done at night.

A total of 1,355 salamanders were captured during the study, mostly of the species *Plethodon jordani*. Salamander populations decreased dramatically at all three clearcut sites in the first two years after clearcutting. Salamander numbers on clearcuts were 30-50% of populations on adjacent forest sites. By the second year, salamanders were essentially absent from clearcuts. Data on salamander abundance was collected for up to eight years after cutting on one site and 15 years after cutting on a second site.

Impacts to site-sensitive creatures such as salamanders must be fully and fairly assessed and disclosed. These creatures are vitally significant components of forest ecosystems.

The proposed logging project may significantly impact (directly, indirectly, and cumulatively) salamander populations in the project area and Forest.

What salamander species are here and what is their distribution? Populations of certain species may be restricted and patchy. The proposed logging has the potential to significantly harm their viability and/or distribution.

Fully and fairly consider widely-shared and relevant scientific information that shows that salamanders and their reproductive success may be significantly impacted by logging and roading such as proposed for here. This significant issue of salamander monitoring and viability and scientific information must be reasonably considered by the agency. This is a particularly salient concern for the moister areas proposed to be cut here (*e.g.*, in the cutting units with coves or riparian areas, intermittent or ephemeral streams, springs and seeps, cooler aspects).

The present MIS, except for some TES species, are all large mobile vertebrates. The use of these species does not accurately gauge the impacts to small site-sensitive species of low mobility such as salamanders. Management plans must insure research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land. Present MIS (outside of the limited ranges of the Tiger and Cow Knob salamanders) do not allow for the accurate monitoring and assessment of management impacts to salamander populations. Then some other indicator of effects needs to be used; outside of the range of the Cow Knob and Tiger Salamanders, the project's and Plan's MIS are deficient. 16 U.S.C. fl1604(g)(3)(C).

<u>Amend Plan 2</u>

The GWNF Plan needs to be amended to rectify this situation (the lack of proper monitoring and MIS referred to in the immediately preceding paragraph), and this project withdrawn in the meantime. This is not outside the scope of analysis. The Forest Service is

required to continually monitor and evaluate their management activities. Cf. 16 USC fl 1604(g) & 36 CFR fl 219.11(d). If monitoring, evaluation, or public comments indicate a need to amend the Forest Plan, the Forest Plan can be amended. 36 CFR fl 219.10(f). "The Revised Plan can be amended at any time during its existence. . . . The Revised Plan may also be amended as part of a project-level decision . . ." (GWNF LRMP at pg. 4 - 9).

Plan amendment is also needed to address the assessment of impacts to and monitoring of aquatic populations for streams that do not have MIS Trout or Sunfish.

Until the Forest Plan is thus amended, this project decision should be on hold.

Habitat available/Ecosystem management

The purpose and need for this proposal are based on some habitat conditions (particularly artificial conditions such as the amount of recently logged acreage) that are present in “compartments 1101, 1102, and 1103”. “Compartments 1101, 1102, and 1103” are arbitrary delineations formulated by and for the convenience of humans, delineations that do not actually exist on the ground. The existence of habitat or need for “improving and maintaining wildlife habitat” is based on conditions in these delineated “compartments”.

But this ignores habitat conditions that are immediately adjacent to the arbitrary/imaginary boundary lines of the compartments; such as openings and recent cuts on private lands adjacent to compartments.

Wildlife do not confine their movements to compartment boundaries. At the very least the analysis and development of need for actions should explicitly consider and incorporate the home ranges of the wildlife species of focus here. What are the habitat components (on both public and private lands) presently available in home ranges centered on the project area? This basic work has apparently not been done in developing this proposal. This is unreasonable.

Further, the artificial spatial and condition analysis presently manifest in this proposal is not ecosystem management. The Forest Service stated over 10 years ago that it would be advancing to the use of ecosystem conditions in its management processes. Using arbitrary imaginary lines as the basis for developing a purpose and need for proposals and as spatial boundaries of analysis is unreasonable and the antithesis of ecosystem management.

Naturally Occurring Habitat Conditions/Project Need

The agency must fully and fairly consider and assess naturally occurring habitat. Natural disturbance processes operating in the forest (for example, drought, ice, wind, diseases, lightning, and insects) create/allow breeding & nesting habitat and brood habitat and oak regeneration. These areas, as well as the sites proposed for cutting, are future mast producing areas. These naturally produced habitat components presently exist in this project area. And can be expected to continue to arise. They need to be thoroughly inventoried and analyzed to establish if the proposal is actually needed. These site-specific natural habitat conditions must be fully and fairly assessed so as to make a well-informed decision based upon full and fair consideration of relevant environmental factors.

Apparently, from the statements in the scoping letter, the agency somehow believes that habitat is insufficient here. Fully disclose the analysis that demonstrates that the early successional or breeding & nesting or brood habitat supplied by natural processes at this specific project site are insufficient for sustaining the wildlife found here.

The amounts of early successional habitat in the project area due to natural forces must be thoroughly and explicitly inventoried and clearly assessed. This includes all the areas that are not the size of entire stands; wildlife, including grouse, use such smaller tracts of ESH. This naturally occurring habitat is a very relevant factor due to such habitat

being desirable in a so-called "wildlife management area". It is also very relevant for establishing a "need" for the logging, formulating alternatives, and for accurately gauging the effects of the proposals (*e.g.*, when added to naturally occurring amounts, how much would implementation of various alternatives result in exceeding the amount of ESH held to be desirable here).

The annual natural mortality rate for this Forest is said to be "0.4 to 2.0% of the land area" (GW-JNFs Indiana Bat EA-20). If for some reason this rate does not apply to this project area, then what rate does? This means that in any ten year period (this is the increment used by the agency to define age classes and wildlife habitat), up to 4-20% of the area may be in a state of regeneration or early succession due to gap phase dynamics from various natural agents (*e.g.*, insects, ice storms, droughts, pathogens, or blowdowns).

The project area includes at least 3220 acres within the RD (the scoping neglects to clearly say if this is exactly the project area or how much of this is “suitable”). This means that that from 129 to 644 acres can be expected to be disturbed and perhaps in the 0-10 age class as a result of natural processes (such as wind storms and disease). And this is on top of the 567 acres of younger forest (11-40 years) that already exists here from past cutting. The Plan states that the 1-10 year class can occur as regeneration cut areas, not that they must be logged-over areas (LRMP). With the naturally disturbed sites present in the project area, the need to artificially disturb the forest is not apparent.

It is through natural disturbances that forests have regenerated themselves for millennia. What analysis and hard data do you have that confirms that natural disturbances do not occur in this project area or that the amount of disturbance present in the ecosystem here is outside of natural parameters and is not supplying valuable "young forests" or "escape habitat" or “breeding habitat” or “nesting habitat” or “summer habitat” or "brood habitat"? What analyses and hard data do you have that show that the natural processes operating here are bad for "forest health"? It is simply unreasonable for the FS to conclude without hard analysis that disturbance within established natural parameters is unhealthy or not supplying desirable habitat or not sufficient for wildlife.

What evidence is there that demonstrates that natural processes will cease to supply these desirable habitat conditions at this project area?

Disclose quantified inventory information in the record on the amounts and distribution in the project area of habitat that is/has been created/allowed by natural disturbance processes operating in the tree canopies (*e.g.*, drought, ice, wind, pathogens, insects). Obtain and disclose inventory information on the stem density in these patches.

Logging is not “needed” to supply these habitat conditions. These habitat components presently exist in the project area. Dense understory thickets as well as natural openings are present. They need to be thoroughly inventoried and analyzed and disclosed to establish “need” and to make a well-informed decision based upon full and fair consideration of pertinent issues.

“No-action”

The No Action alternative provides natural & artificial openings, soft mast and hard mast production, water sources, and no more than 10% of the suitable land in regeneration. No Action provides a mosaic of stand ages, young forests, and grassy/herbaceous habitat. No Action provides open park-like understories and free flowing water. The “no-action” alternative is deceptively named as it provides for a great deal of action (*e.g.*, natural ecological processes as well as human-caused edge effects from roads), it just doesn’t involve the action of spending our tax dollars on a subsidized timber sale.

The need for the proposed project is not apparent or substantiated by scientific evidence. The only thing that the ‘no action’ alternative does not provide is sawed down

"wood products". The desire to provide these is improperly driving the agency's desire to implement a logging project in an area that is supposed to emphasize wildlife. The cutting of just 1 or 5 or 10 or 21 acres (for opening fabrication) would produce "wood products".

Scenic Quality

This project area is visible from the Blue Ridge Parkway. The Parkway is extremely popular to locals, visitors, and to the local economy. One of the most popular visitation sites, Humpback Rocks, is directly above the project area. Views from the Parkway, its pullovers, and its associated lands are highly valued and significant. The proposed cutting would significantly degrade the scenic quality both within the project area and from the Parkway.

The project is proposed for areas that are said to be allocated to what classification in the VQO system? The extent of the proposed road construction and cutting (0.6 miles and 238 acres) and its intensity (*e.g.*, to accommodate heavy equipment and "modified shelterwood") would be grossly obvious and greatly detract from the landscape. Such heavy-handed management is not consistent with the conditions to be found in areas with high scenic quality and concerns. Especially considering the cumulative effects of the overcutting of this project area.

Harm to scenic beauty and recreational benefits would result from implementation of this proposed project. From statements in previous EAs, the FS apparently believes that dead or dieing trees (snags and large woody debris significant to forest health) are visually intolerable. But dead standing or wind-thrown trees that may be visible do not harm the "viewshed" or "visual resources". These are natural elements that add to the visual diversity and quality and overall environment here. No-action also allows trees here to further mature which many people find esthetically attractive. The agency must fully analyze and consider these positive aspects of "no-action".

The agency must acknowledge and fully & fairly consider how visually ugly and degrading logging operations and their aftermath are to Forest visitors and viewers. Logging does not protect the visual resources in this area. Logging operations are not necessary to improve scenery or the views here. Stumps and slash and run-over soils & vegetation and logging roads and skid roads do not improve the scenic beauty here. They, in fact, harm our use and enjoyment of the area. The FS must fully and fairly consider this.

And there is much more to the "scenic resources" here than just the areas visible to what the agency calls a "casual observer". The other areas farther from the roads that would be impacted must be meaningfully addressed. This project area is used for dispersed recreation and is visible from private property. The negative impacts of your proposal on the "scenic resources" must be fully and fairly considered, and avoided or fully mitigated.

Old Growth

Old growth is a significant element of the Forest's diversity. Old growth on the GWNF is a significant issue for us and for many other taxpayers and Forest visitors. we want all old growth tracts on the GWNF strictly protected. Our concern here is about proposed unit #7, particularly the upper elevations. Here are numerous large trees, snags, canopy gaps, uneven age structure, horizontal and vertical structural diversity, hard and soft mast trees, grassy and herbaceous growth, accumulations of CWD and LWD, absence or paucity of human disturbance (*e.g.*, cut stumps or roads), gnarly tops and boles, and pits & mounds. Conditions like these are important for wildlife habitat and are in short supply in this project area. Old growth conditions need to be fully assessed. We want all patches of old growth, regardless of size, to be protected from logging and designated as part of a linked network of old growth on the Forest.

Expressly disclose how surveyed sites meet or do not meet the established criteria to be considered as old growth."

What criterion is not met?

How many of the "largest trees" (over 20" dbh) are there and how were they counted?

How many old trees (at least 130 years) are there and how were they counted?

We are concerned about the use of a "30 trees per acre" criterion. This does not appear to be a valid criterion. What is the scientific basis for this? ******** Please send me ASAP the research the FS used to generate this criterion. If this explanatory material is not immediately available then let me know now when you expect it to be. *********

Exactly what trees are you counting for this criterion? How are they identified?

We are concerned that this criterion will not be met at old growth sites on the Forest. The Forest Service itself realizes this, as the statements in the RG and the GWNF old growth compliance document (Project Level Old Growth Field Inventory Protocol September 18, 1997; incorporated by reference) clearly state. We brought this to the agency's attention previously for the Chestnut Oak Knob project.

The October 2005 letter from Supervisor Hyzer does not allay this concern. She refers to 63 trees per acre found at COK on 5/12/05. But this number includes trees 10" and 12" dbh (see tally sheet). The agency's rationale is convoluted, opaque, inconsistent, and unreasonable.

Many large old trees are hollow so their ages can not be determined from boring. This magnifies our concerns about the proper consideration of old growth here.

We have communicated our concerns to the Forest Service previously during the Sugar Tree, Chestnut Oak Knob, Parkers Gap, and McJennings logging projects, amongst others. Concerns were also expressed to Forest Supervisor Hyzer in the June 22, 2005 letter from WildLaw on behalf of Wild Virginia. Supervisor Hyzer responded with her letter of October 31, 2005. We incorporate these comments, appeals, and letters by reference; they are relevant and are already in the agency's possession. See also the report "And Still They Fall" that pertains to the disposition of old growth on the GWNF (available at www.wildvirginia.org; incorporated by reference).

Supervisor Hyzer explicitly states: "We do agree with you that every plot in a stand does not have to meet the old growth criteria for a stand to be considered old growth." (October 2005 letter) This is an important consideration here.

Monitoring of old growth on the GWNF is still accomplished by using the CISC. This "data set maintained by the Forest will be used to measure acres of each old growth forest type." (GWNF Monitoring Report at G-65). The FS uses this data to maintain that old growth is increasing, and to rationalize the cutting of old growth as being not significant. This was done recently in the October 2005 letter from Supervisor Hyzer. But invariably, when the agency site-specifically examines these acres, they turn out to not be old growth. For recent examples, this was done with "stands" said to be from 140 to 202 years old at the Sugar Tree and Maybe timber sale project areas. If the project-level inventory work is any indication, there is actually very little old growth on the Forest.

Supervisor Hyzer states that regarding old growth, "the GW Plan is what we must use to guide our management."

The FEIS is part of and supports the Plan. The FEIS refers to seven "attributes and characteristics" of that distinguish old growth (FEIS H – 1). These conditions are present at

proposed cutting sites.

These are relevant and must be part of the evaluation. The amounts, condition and extent of these “attributes and characteristics” at the proposed cutting sites need to be documented, disclosed, and assessed.

Supervisor Hyzer also states that “[o]ld growth is an ecological land condition encompassing the entire plant community of an area.” (October 2005 letter)

What are the “entire plant community” conditions here at these cutting sites? How precisely were these used to determine that none of the sites are “considered as old growth”?

******* Please send me ASAP the “entire plant community” surveys and analyses that were used in the old growth findings here. *******

See "Composition and Structure of an Old-Growth Versus a Second-Growth White Oak Forest in Southwestern Pennsylvania", by J. Downs and M. Abrams, pp. 207-223 in Proceedings of the 8th Central Hardwood Forest Conference, USDA FS General Technical Report NE-148 (incorporated by reference). An important finding of this research was that “over 90% of all trees in the old-growth stand were < 120 years old."

The Forest Service refers to “remnant” trees in stands surveyed for old growth. What exactly is a remnant? Remnants of what? Natural disturbance? Chestnut blight? Intensive logging? Being a “remnant” does not necessarily mean that intensive human disturbance occurred in the past, but that seems to be what is implied. Such an implication can lead to inaccurate consideration of old growth.

From a larger perspective a major concern is the agency’s seemingly backwards approach to considering old growth. The agency should be looking at sites that have old trees and do not have signs of past human disturbance, tallying these conditions, and then using this information to describe and determine the spectrum of what old growth looks like. Instead, the reality of on-the-ground conditions is being forced to conform to some arbitrary criteria that do not seem to be reasonable or scientifically substantiated and validated. This course is simply not reasonable or proper.

Although much of the Forest was cut in the past, not all of it was. We see relatively small disjunct areas where there is no indication that logging occurred. These may be rocky or steep sites, high in elevation or relatively remote. Sometimes, it appears that cutting operations came up drainages and then up-slope for certain distances. Or that areas were entered on ridgelines and cutting occurred down slope for various distances. The result is that patches and outliers of old growth exist throughout the Forest, and these are not confined to “unsuitable” acreage or to areas that are relatively large or relatively protected. The existence of these uncut sites makes the identification of small- and medium-sized patches critical, as per the Regional Guidance.

The Regional Guidance is concerned with conserving <u>and restoring</u> old growth. The best way to restore old growth is to protect, not cut, the oldest sites, those closest to having old growth conditions, such as at “unit 7”.

All recent and pertinent scientific information, such as the FEIS and the Regional Guidance, should be used in determining the existence of old growth. The Plan was issued years before the issuance of Regional policy & guidance. The Plan’s interim definitions should not be solely relied upon for inventorying and decision-making regarding old growth (see, LRMP 2 – 3 and FEIS A-6).

Small areas (1-99 acres) of old growth, that may be a portion of or sections of a delineated “stand”, should be identified, inventoried, designated, and strictly protected as part of project-level analyses and decision-making (see Regional Guidance).

This project-level planning should also fully consider representation of old-growth forest community types, distribution of old-growth patches, and linkages of old-growth patches at this site-specific project area and the adjacent National Forest tracts.

This old-growth network at this project area should be explicitly identified and mapped during project analysis. The network should be strictly protected from ground-disturbance in any decision that is issued.

Supervisor Hyzer’s October 2005 letter states that the Regional Guidance is used. Yet the Supervisor “questions the need to designate small and medium old growth patches . . .” (October 2005 letter) This is not consistent with the Guidance. This capriciously foregoes opportunities for conserving old growth and improperly fails to protect and restore the Forest’s diversity. The cumulative impacts are significant.

The Regional Guidance makes clear that a linked complex of small, medium, and large old growth areas is to be identified. This must be done at the project-level analysis as it was not done here during the programmatic analysis. The determination of stands as “suitable” or unsuitable” for commercial timber production is not a scientifically valid or reasonable substitute for the determination of a site as old growth based on ecological conditions.

The Forest Service uses the presence of unsuitable lands as a rationale and expedient for not identifying, examining and designating a network of small, medium, and large old growth areas. The 1993 Plan did not make large-, medium-, and small-sized old growth allocations at this project area or across the Forest based on the criteria, guidelines, and goals of the Regional Guidance. The criteria used for screening out "unsuitable" Forest lands years ago in the Plan revision process were not explicitly based upon old growth characteristics and considerations. Suitability determinations were "based upon their capacity to grow commercial timber." (see JNF Enterprise timber sale EA-5; incorporated by reference) Reliance on a process that did not incorporate explicit old growth guidance, definitions, or criteria is neither reasonable nor fair. The GWNF planners are not consistent with the Regional Guidance.

CISC representative stand age must not be relied upon for determining the age class of the oldest trees (see Regional Guidance at pg. 23).

If any stands proposed for cutting or roading are determined to not be old growth, clearly disclose in the EA/EIS precisely how each stand does not meet the definition for old growth.

How old are the oldest trees in the stands?

How were the ages for stands determined? When? By whom?

The Regional Guidance makes clear that some stumps are allowed in old growth since some “thinning” is permissible.

Some of the present here at this project area are small tracts within the so-called “stands”. They appear to be old growth and should not be cut. This old growth is significant element of diversity given its apparent rarity not only in the Forest but the state and entire Ridge and Valley and Appalachian regions.

When examining this area the agency needs to determine the age class of the oldest trees (by coring the larger). Trees in “units” certainly appear to be over 130 years old.

All old growth areas regardless of size and all “old-age” stands regardless of forest

type should be withdrawn from cutting. We request that the project decision reflect this and that the Forest Plan be amended to achieve this.

What about old growth that does not cover an entire stand? “Stands” are an artificial delineation; the lines used as boundaries for the most part do not exist on the ground. Various portions of “stands” here contain conditions that meet the definition of existing old growth. The scoping notice makes no mention of these. These “small areas” down to one acre in size can and should be identified and protected. It is feasible and reasonable to do so. To not do so is not compliant with the Regional Guidance.

The Forest Service has a great deal of trouble identifying old growth that does not take-up an entire stand (such as at GWNF’s Hoover Creek). Part of this is apparently due to the adamant reliance upon “stand” boundaries for performing and maintaining inventories. However, the agency also does not have a problem with changing “stand” boundaries or ages when it is expedient to do so.

Examine altering the “stand” boundaries and delineations here so as to make tracts of old growth “stands” onto themselves. This may make your inventory bookkeeping easier.

******* Please send me ASAP any and all site-specific documentation dealing with old growth here in this project area (including the old growth field tally sheets). ********

Amend Plan 3

The Plan was issued years before the issuance of Regional policy & guidance and its interim definitions are not to be solely relied upon for inventorying and decision-making regarding old growth (see, LRMP 2 – 3 and FEIS A-6).

The Guidance was issued eight years ago. It is long overdue for the GWNF managers to formally incorporate it.

The Plan should be amended now to fully incorporate the Regional Guidance on old growth and so as to not forego opportunities for old growth. Until the Plan is thus formally amended, the decision on this proposal should not occur and would not be legal. Decisions that do not achieve the regional goals and implement regional old growth policy are an abuse of discretion.

Hollow Trees

Large hollow trees are of great importance to wildlife, be it Bears, bats, owls, or other species. All these are potential roost and den sites and it is neither proper nor desirable that they be cut down.

Red Maple

The logging that occurred in the most recent past in this project area has resulted in a profusion of Red Maple in the cutover sites. The profusion of Red Maple at cutover sites is a common occurrence in this District.

This facilitation of Red Maple regeneration is not consistent with the desired conditions here. The agency attempts to rationalize this proposal with references to hard mast species such as oak and hickory (scoping letter).

On the one hand the Forest Service considers Red Maple to be of low relative value (see past EAs), while on the other proposes and implements actions which facilitate its increase. And Red Maple, with its wind-blown samaras, benefits from the forest fragmenting actions (road building and cutting of interior forest) here proposed.

Based on past experiences, how much will it cost (dollars) in the future on timber stand improvement, crop tree release, pre-commercial thinning and other activities to reduce Red Maple numbers in cutover sites here? These are connected factors important for

considering the desirability of this proposal and for our comments to/involvement with the decision-making process.

Creating situations that force significant expenditures of tax-dollars in the future is not consistent with “increase[ing] the cost efficiency of the timber sale . . . and reducing expenses” (scoping letter at pg. 3).

The costs of all the future actions that the agency takes to deal with the “undesirable” species that show up in logged units (*e.g.*, timber stand improvement, crop tree release, pre-commercial thinning) need to be explicitly and fully disclosed and accounted in the “economics” section of any EA produced for this proposal. This part of full and fair disclosure of the foreseeable affects of the project.

Forest fragmentation, interior forest

This project area contains tracts of interior forest that are relatively undisturbed. This is particularly true of the area containing proposed “units 7 and 9”. This condition is at significant risk from the proposed cutting and roading.

The MIS ovenbird may not be really area-sensitive. The GWNF FEIS states that the minimum tract size to maintain the presence of these birds is a mere "15 acres" (pg. 3 - 169). If this is the case, then this species is an insufficient, even misleading, proxy for gauging the affects to site-sensitive, area-sensitive, or interior forest species.

Forest fragmentation resulting from project implementation and associated impacts to neotropical migratory birds and other site-sensitive, area-sensitive, and interior forest species must be identified as significant issues for this proposed logging project. The FS typically implies that projects such as the proposed logging would not have any significant affect on any neotropical migratory birds. This does not make sense as the proposal would alter and remove compositional and structural elements used by the birds. Trees are to be cut and some removed. The EA must fully and fairly explain and consider how fragmenting, altering, and removing their habitat harms the Cerulean Warblers and other neotropical migrants.

The discussion in EAs usually confines the analysis of fragmentation and affects to Ovenbirds nesting habitat just to "the number of acres cut.” But this is not sufficient as current scientific knowledge recognizes a potential 600 meter edge effect for bird populations (see Leimgruber *et al. op cit*. and Wilcove, D.S. *et al*, 1986, “Habitat fragmentation in the temperate zone”, pp. 237-256 in Soule (ed.) Conservation Biology, Sinauer Press, Sunderland MA; incorporated by reference). This edge effect would extend into the forest from the roads and cutting sites. The foreseeable increased predation would not be occurring only at the sites of direct disturbance, but would be elsewhere as well. So the affects are obviously not confined just to the number of acres cut. In addition, as the Ovenbirds and other species would no longer be expected to be nesting at the cutover sites, the predation would also then be occurring elsewhere.

Roads are a major cause of forest fragmentation because they divide large landscape patches into smaller patches and convert forest interior habitat into edge habitat. Regeneration cuts do the same.

It is pertinent to an accurate affects analysis that edge and fragmentation effects are not considered as being confined to the percentage of an area or the number of acres in an area that are actually logged units; but this is the tact often taken by the planners on this Forest.

How and to what extent is the potential of all management proposals to further fragment the forest and ecosystem and watershed within which the project area exists?

What is the impact on (potential) wildlife dispersal corridors? A full disclosure of the detrimental environmental impacts of roads that must be constructed and/or maintained for proposed actions.

Explanations, discussion, and evidence for how and to what extent the proposed intensive site disturbance from even-age industrial logging would disrupt and fragment populations and mature habitat and thus impede interactions of individuals (especially for species of low mobility or limited dispersal capability) in this planning area must be divulged in the EA. 36 CFR 219.19.

Disclose and specifically analyze amounts and distribution of mature interior forest that will be and have been destroyed, or lost, or harmed due to logging, roads, and edge effects here. This is a significant concern for this project. The absence of clear analysis and full and fair consideration of this factor would be a serious flaw in the analysis.

"Interior" forest is not necessarily equivalent to "mature" forest (see, *e.g.*, "about 80 years" at GWNF Hoover Creek TS EA-59). Such a misrepresentation would be a serious flaw in the analysis (and pg. 14, nor other pages, of the Southern Appalachian Assessment Terrestrial Technical Report absolutely does not state that the terms are "synonymous"). This is not reasonable and is not the high quality science demanded by NEPA.

The site-specific analysis must offer meaningful site-specific spatial analysis and disclosure regarding fragmentation. For instance, it is pertinent to an accurate affects analysis that edge and fragmentation effects are not confined to the percentage of an area or the number of acres in an area that are actually logged units; but this is the tact often taken by the planners on this Forest. The affects are a consequence of the distribution of disruption and of remaining habitat. As the B. Flamm doctoral thesis (cited in the GWNF FEIS at Reference - 4; incorporated by reference) makes mathematically clear, depending on where it takes place, a tiny percentage of cutting can fragment a large area. And edge effects extend far beyond the boundaries of cutting sites or road construction.

Implementation of the action alternative listed in the SN would significantly fragment the project area and Forest.

We incorporate by reference the paper “Roadside Surveys: Changes in Forest Composition and Avian Communities with Distance from Roads” by Leimgruber *et al* contained at the James River RD office in the Hoover Creek timber sale file. We request that this relevant paper be in the project file for this proposal.

A full and fair site-specific analysis of the issue of fragmentation at this project area is needed. The disclosure of direct, indirect, and cumulative effects within the FEIS for the Forest plan is limited to a discussion of effects on a generic Forest-wide basis. Nor does a regional "position statement" address affects here. This disregards the multi-stage reality of NFMA Forest planning and analysis. Confining focus of the issue to the landscape level (*i.e.*, "Forest-wide") is insufficient for this project-level analysis. The NEPA requires a hard look at the project-level to support a site-specific decision.

There is widely-shared and relevant scientific information that shows that logging and road building may indeed significantly fragment the forest here, so the issue is not moot (see Noss and Cooperrider, Saving Nature's Legacy, 1994; a standard reference on protecting and restoring natural diversity; also Harris, Larry D., and Gilberto Silva-Lopez, 1992, “Forest Fragmentation and the Conservation of Biological Diversity” pp. 197-237 in P. Fiedler and S. Jain, editors, Conservation Biology: The Theory and Practice of Nature Conservation, Preservation and Management. New York: Chapman & Hall; incorporated by reference and previously submitted to the Forest Service). The FS admits that "[f]ragmentation of late successional habitats [such as are found here at this project area] is usually caused by openings in the forest canopy. Edge effects occur when distinct habitat

boundaries are created by timber harvest ... Species composition and community structure may change..." (see JNF Broad Run TS EA-24).

Fragmentation is properly dealt with at programmatic Plan AND site-specific planning levels (see Supreme Court Wayne NF decision). Habitat diversity, dispersion, distribution, and fragmentation are significant issues in this MA 15 site.

Fragmentation that may or may not exist elsewhere does not make additional fragmentation resulting from proposed actions here a "moot issue". Cumulative, direct, and indirect impacts still occur. And forest openings resulting from natural processes are not the same as the fragmentation resulting from cutting and roading. It is clear that full and fair consideration of this significant issue must be accomplished.

The proposed action would remove, modify, and disturb mature forest habitat for neotropical migratory birds. See Southern Research Station General Technical Report SE-96; (relevant scientific information incorporated by reference).

Yet the FS EAs usually claim or imply that past and future cutting and roading in conjunction with the present proposal will have no significant effect on fragmentation or songbird requirements.

If such a finding is made here, cite to the site-specific surveys, inventories, monitoring, population censuses, working papers, viability analyses used to support such a conclusion.

The EA disclosure must incorporate the recent bird study done on the GWNF in a nearby ranger district. See "Roadside Surveys: Changes in Forest Composition and Avian Communities with Distance from Roads" by P. Leimgruber, W.J. McShea, and G.D. Schnell; incorporated by reference. They should be consulted. See also "Comparison of Birds Detected From Roadside and Off-road Point Counts in the Shenandoah National Park" by C. Keller and M. Fuller, USDA FS Technical Report PSW-GTR-149; incorporated by reference.

Site-specific discussion of the Cerulean Warbler and other area sensitive birds (including NTMBs, deep woods raptors and owls) is necessary, not just reliance on assertions that unsuitable lands and congressionally designated lands off-limits to logging elsewhere will provide adequate habitat for these birds. Agency documents admit that project implementation such as here has the result of "Forest interior birds would be replaced by birds requiring an earlier successional stage." (GWNF Hoover Creek TS EA-61)

Scientific studies determined that cutover sites and roads affected 2.5 to 3.5 times more of the landscape than the surface area occupied by the actual cuts and roads themselves. See, Reed, R. A., J. Johnson-Barnard and W. L. Baker. 1996. Contribution of roads to forest fragmentation in the Rocky Mountains. Conservation Biology 10: 1098-1106 (incorporated by reference).

Fragmentation due to roads was quantified in a 30,123-ha area of the Medicine Bow-Routt National Forest in southeastern Wyoming. A geographic information system was used to analyze landscape structure. Forest patch and edge-related landscape changes were measured using several indices: the number of patches, mean patch area, mean interior area, mean area of edge influence, mean patch perimeter, total perimeter, and mean patch shape.

Roads contributed to forest fragmentation more than clearcuts in the study area since they dissected large forest patches into smaller fragments. They also converted more forest interior habitat into edge habitat. The edge habitat due to roads was 1.54 to 1.98 times the edge habitat created by clearcuts. Taking these factors into account, the authors

calculated that together, cuts and roads affected 2.5 to 3.5 times more of the landscape than the area occupied by the actual cuts and roads themselves.

Negative Impacts from Deer

What effect this sale will have on the existing Deer herd is an issue here. The expected effect is well known and obvious. Deer respond positively to actions that fragment forests and fabricate edge. Deer habitat would increase here from the proposed action, with foreseeable concomitant affects on Deer population numbers.

The effect on the herd here (not their habitat) must be disclosed. More deer can be expected to be attracted to the area due to the increase in favorable conditions. With increased habitat and food, ultimately more Deer can be expected.

Further, the analysis must disclose the effect on the other flora & fauna FROM the deer herd and from the fabrication of conditions favorable to increasing their numbers or density here. "[W]hitetailed deer have reached and sustained densities across much of the eastern, northern, and southern United States sufficient to cause manifold and substantial ecological impacts." (see "The white-tailed deer: a keystone herbivore",1997, D.M. Waller and W.S. Alverson, Wildlife Society Bulletin 25(2):217-226; incorporated by reference).

It is obvious that previous logging affects species composition and distribution : "a 288 acre regeneration cut in 1968 ... is no longer providing the herbaceous vegetation ..."(see 1998 GWNF Mulligan TS EA-2). The planners must disclose length and effects of this 'biological desert' phase (long term effects are significant). The direct, indirect, and cumulative impacts of Deer browsing and/or logging upon habitat degradation, species loss, population distribution, and future old growth must be fully analyzed; this involves the public disclosure and hard look at relevant factors demanded by NEPA. The NFMA mandated protection of diversity, productivity, and viability must be assured.

Viability

Another significant issue is impacts to small site-sensitive creatures such as salamanders, snails, millipedes and turtles that are essential components of the Forest's biodiversity. Logging and road building severely destroy or degrade habitat for these small creatures with limited mobility, as well as result in direct mortality. Their viability and/or distribution may be significantly affected should the proposal be implemented. The MIS that may presently exist in this project area cannot properly monitor and gauge impacts to these species.

Special habitat components

Protection of sensitive and /or special habitat components is a significant issue here. These include very steep slopes (such as at site #7), rocky outcrops, rocky ground floors, ponds, and moist areas (*e.g.*, seeps and drainage channels). Rocky outcrops and rocky areas are scattered about the project area (such as at the upper part of "unit #7"). There are springs/seeps in the project area stands. Small drainages with water exist at multiple sites (such as at units # 4, 5, 10, 11). All these areas are themselves important components of biodiversity and also are important habitats and refugia for various biota such as salamanders and mammals. They need to be strictly protected and buffered through alternative development and mitigation measures.

"Harvesting" activities must be avoided in the rocky areas. These sites are important for various flora and fauna. But merely not performing actions within the outcrops and slopes themselves does not avoid impacts to these unique areas. Without proper buffer zones (such as extending out at least a tree height or approximately 150') the habitat

conditions and populations within the outcrops would not be protected. The mitigation and alternatives must meaningfully and explicitly avoid impacts to these areas and protect the Forest's diversity.

Seeps are a component of landscape diversity and are very important for maintaining the population viability and distribution of salamanders, frogs, crayfish, box turtles, turkeys, and other species (see JNF Hagan Hall TS EA-43, 44, 46; incorporated by reference). Removal of their canopy cover impedes and disrupts the natural ecological succession of these areas. Implementation of the proposed alternative/mitigation is not compliant with the DFC for these microhabitats. These areas should be absolutely off-limits to cutting and removal and vehicles; and the no-disturbance zone should be more than just the "immediate" wet area due to hydrological, shade, and drying concerns.

From the letter dated June 28, 1998 of Dr. Joseph Mitchell to Glenwood District Ranger Egan (previously submitted to the Forest Service and incorporated by reference): "I am also concerned about removal of trees around, not just within, seepage areas, which as you know are important habitats for salamanders. The integrity of this habitat type comes into question." See also Mitchell, J.C. et al. 1997. Factors influencing amphibian and small mammal assemblages in central Appalachian forests. Forest Ecology and Management 96: 65-76 - "Elimination of terrestrial vegetation around aquatic breeding sites causes amphibian populations to decline [citations omitted]. Thus, maintenance of amphibian biodiversity depends on the protection and management of both aquatic breeding sites and the surrounding terrestrial habitat." (incorporated by reference and previously delivered to FS with Grindstone appeal attachments)

The springs and seeps need a protective no-disturbance buffer around them. This buffer should be at least a tree-height in extent so as to protect their integrity (*e.g.*, protect them from increased temperatures).

Soils/Sustained Yield

We are very concerned about the impacts from this proposed logging to soils and the sustained yield of the Forest. We are particularly concerned about the cumulative effects to long-term soil productivity. The proper scope of analysis is the entire project area; making determinations by confining assessment to only some “activity area” (where actual logging and road work are proposed to occur) is misleading and unreasonable.

As the FS well knows, many years are needed for soil to recover its original productivity when surface layers are removed. Soil formation typically occurs at a rate of one inch per 200-1000 years. Recognition of such long time periods is important for reasonably considering cumulative impacts.

Generally, the FS calculates that there are long-term effects on about 1.5% of an activity area (in this case at least 238 acres). The project area is 3220 acres. The area was extensively logged in the last 150 years; in fact, less than 2% of the forest in this area is even considered to be over 110 years old (see pg. 4 of scoping letter). This time period is far less than even the most favorable period (200 years) for soil recovery. So the soils have not fully recovered from the logging and burning that extensively occurred here in the relatively recent past. And the logging practices used in the past were more intensive and destructive than those used today, so it can be reasonably expected that impacts to soils in the past were even worse than estimated to occur under contemporary practices. Further, actions in the recent past have affected soil productivity in the project area (for instance, logging operations have taken place in the last thirty years under Forest Service management). Is one of the reasons these sites, said to be 88-100 years old, have such

small trees now because their soil productivity was reduced by past logging? The proposed tree cutting and removal of their pieces would further degrade site productivity.

The 238 acres proposed for intensive logging (plus more for roads) represent around 1/14 of the project area. So, even using a most conservative estimate, this project in conjunction with past ground disturbing activities would result in cumulative long-term soil impacts on around 20% of the area (14 X 1.5 percent). So apparently a large proportion of the area may not have retained its potential long-term soil productivity.

Our concern is that the threshold for long-term impacts has been or will be exceeded in this project area. These cumulative impacts to soils, their productivity, and the Forest's sustained yield are significant. An EIS is necessary to analyze and disclose the effects of this project.

Private Lands

There are private lands adjacent to the project area and adjacent to proposed cutting sites (# 4, 6, and 9). What are the private land usages around the GWNF? What are their cumulative effects? How will alternatives mitigate or exacerbate these activities? How will habitat be provided on public lands that privately held lands do not provide? How much will any proposed timber harvest devalue the property of nearby woodlot owners? What effect would the proposed logging have on water quality and aquatic populations found on private lands and other downstream sites?

The Forest Service often claims that there are no future actions currently known or planned in the watershed on either public or private land, or that things are "assumed to remain as currently is occurring" on nearby private lands. But how is this determined? Who did/will you contact about this project? When? Information must be gotten from private and public entities that reveal what is planned in the future on the private lands around here. And information must be obtained from nearby residents on what their concerns are. Thorough information about actions and effects on/from private lands upon wildlife and habitat and timber/pulp supply also is necessary for a sound decision.

Habitat conditions that are immediately adjacent to the arbitrary/imaginary boundary lines of the Forest compartments must be fully considered; such as openings and recent cuts on private lands adjacent to compartments. Wildlife do not confine their movements to compartment boundaries.

Suitability

How much of the project area acreage is considered to be "suitable" for timber? The scoping letter does not disclose this relevant detail. The Plan makes clear that the 10% ceiling for "0 to 10 age class" applies to "suitable" lands, not a proportion of the whole project area. And the project area already complies with the Plan's directive of having "no more than 10% in the 0 to 10 age class".

Uneven-age management

There is no Plan MA 15 Standard that says uneven-aged management ("UEAM") cannot be used here.

"Single Tree Selection" will reproduce a new stand in which oak will be perpetuated. The Forest Plan Appendix H simply states that this method will not regenerate oaks "in the same proportion" (see H-5,8). Simply not being in the "same proportion" is NOT equivalent to oak being not "perpetuated".

And if any such UEAM logging did result in less oak component, it is not clear how this is considered undesirable, since the result of the proposed management would be a shift from oaks, a reduction from the present proportions (see, *e.g.*, GWNF Peterfish EA 29-31). It is entirely capricious to not analyze a feasible alternative that may result in the affect you intend to produce.

Research makes clear that "[c]anopy openings with a minimum diameter of 170 feet (0.5 acre) provide suitable light conditions for virtually all desirable species to develop and grow to maturity" (Miller, G.W. and J.N. Kochenderfer, 1998, "Maintaining species diversity in the Central Appalachians", Journal of Forestry (July 1998): 28-33; incorporated by reference).

Uneven-age alternatives, including single-tree selection, should be examined in detail by the planners.

The claim is often made that use of UEAM would not be consistent with the Forest Plan. However, in fact the Plan does NOT make site-specific decisions.

Previously, at various sites the FS has altered the "suitability" determinations made by the Plan. Sites that were delineated on the Plan map have been considered to be suitable upon project-level examination. And previous findings regarding the ages of stands are altered upon project-level examination. In addition, stand boundary lines are altered and rearranged. Obviously, in light of these precedents, the agency can make project-level determinations regarding uneven-age management and is not bound by previous broad Forest-level findings.

Thank you for your consideration. If you have questions or want clarification about any of these comments please contact me at the below Staunton address.

Sincerely,

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