PLR135.

Planningrulenoi

From: Sarah Francisco [sfrancisco@selcva.org]
Sent: Monday, June 11, 2007 2:13 PM
To: Planningrulenoi
Cc: DJ Gerken; mtncat7@earthlink.net; Wayne Jenkins; lec@wildvirginia.org; Jim Bensman; Tracy Davids; Sherman Bamford; Bob Gale; dhannah@wildvirginia.org; Sarah Francisco
Subject: Planning Rule NOI Comments

Dear Sir or Madam:
Please find attached our comments (with 3 attachments) on the Notice of Intent (NOI) to prepare an Environmental Impact Statement for the revised National Forest System land management planning rule adopted in 2005. The NOI was published in the Federal Register at 72 Fed. Reg. 26775 (May 11, 2007).

Signatures from authorized representatives of all commenting groups are available upon request.

Please let me know if you have any questions or any difficulty with the attachments.

Thank you for your consideration.

Sincerely,

Sarah A. Francisco
Staff Attorney
Southern Environmental Law Center
201 West Main Street, Suite 14
Charlottesville, VA 22902
(434) 977-4090
(434) 977-1483 (fax)
SouthernEnvironment.org

PLR 135

Southern Environmental Law Center

201 West Main Street, Suite 14
Charlottesville, VA 22902-5065
434-977-4090
Fax 434-977-1483
SouthernEnvironment.org

April 7, 2003

USDA Forest Service Planning Rule
Content Analysis Team
P.O. Box 8359
Missoula, MT 59807
planning_rule@fs.fed.us

By Facsimile and Electronic Mail

Re: Comments on the Forest Service Proposed Rule on National Forest Planning: 67 Fed. Reg. 72770

Introduction

On December 6, 2002, the U.S. Forest Service proposed a major overhaul of federal regulations that guide land and resource management planning for the 192 million-acre National Forest System (67 Fed. Reg. 72770). The Southern Environmental Law Center (SELC) has conducted a review of the draft rule and submits the following comments to the Forest Service. **SELC participated in the Diversity Options Workshop held by the Forest Service February 19-20, 2003.**

SELC is a multi-faceted organization that is leading several broad-based, regional conservation initiatives to strengthen environmental protection laws and policies throughout the South and beyond. SELC has long followed with interest the development and implementation of the agency's land and resource management planning process. We have provided input on the revised land management plans in the Southern Appalachians.

The National Forest Management Act of 1976 (NFMA) requires the Forest Service to adopt land management plans for each of the 155 forests and 22 grasslands in the national forest system. These plans are blueprints that regulate the uses of the individual national forests including the amount of logging and other resource extraction permitted. Recreational uses, such as camping and off-road vehicle use, and wildlife management are

also specified in the forest plans. NFMA requires that these plans be revised every fifteen years. Regulations to implement NFMA were initially promulgated in 1979 and amended in 1982. These regulations managed forests based upon the best science of the time and were created with the active participation of independent scientists, through a Committee of Scientists.

In 2000, the Forest Service adopted new NFMA regulations to guide the revision of the forest plans. These regulations were based on two years of study and public meetings by an officially chartered and independent Committee of Scientists. The committee concluded that ecological sustainability should have the highest priority. These regulations, however, were suspended in May 2001. The Administration issued very different draft regulations on December 6, 2002, largely in response to timber industry concerns, and did not convene nor consult with a Committee of Scientists before issuing these draft regulations.

Our comments will address the following seven general concerns:

1. NEPA Exception: SELC has serious concerns about the elimination of necessary environmental analysis. The 2002 draft regulations exclude the forest planning process from the EIS requirements of the National Environmental Policy Act (NEPA). This exemption would allow the Forest Service to forgo analysis on other use options while reducing public input.

2. Species Viability Elimination: SELC opposes the draft regulations' elimination of the requirement to maintain viable populations of native species. Not only would the protection of at-risk species be reduced, but this change would undermine important regional conservation plans.

3. Opening Forests to Expanded Resource Extraction and Off-Road Vehicle Use: SELC also is concerned because the draft rules contain an automatic presumption that lands are suitable for a variety of uses except if a use is specifically prohibited. This presumption will escalate environmental damage in the form of increased resource extraction and increased motorized vehicle use.

4. Roadless Area Analysis and Protection Dropped: SELC is concerned because significant roadless area protection is eliminated in the draft rule. Areas that might be protected as a roadless area instead face only two options: (1) designation as a wilderness area or (2) be opened up for resource

extraction. The qualification and designation of a wilderness area is a difficult process. Therefore, under the draft regulations, more areas will lose protection.

5. Loosening Environmental Standards: SELC believes that development activities will face diminished environmental standards under the guise of adaptive management in the draft regulations. The discretion permitted under the new rules will lead to less accountability and increased environmental damage.

6. Timber Suitability Rules Increase Amount that can be Logged: SELC finds that the proposed rules pertaining to timber suitability fail to provide a meaningful standard, thus allowing increased logging. Under the proposed rules, economically viability considerations are not given enough weight, and even under this diminished standard, unsuitable timber can still be logged.

7. Public Involvement is Significantly Reduced: SELC is concerned that public involvement would be circumvented by a number of provisions including a provision that makes submitting objections much more difficult, a provision that allows a four-year amendment to a forest plan without any public notice or input, and a provision that eliminates the right to administratively appeal a forest plan while reducing the possibility of judicial review. These provisions allow a plan to escape review while disenfranchising the public's concerns.

Detailed Comments Discussion

1. NEPA EXCEPTION

The National Environmental Policy Act (NEPA) is considered the most important environmental law in the United States. This "look before you leap" rule requires that federal agencies assess their plans before they act, and consider possible alternatives that could result in a better or a less environmentally harmful outcome. Under the 1982 rule, the Forest Service was required to prepare an Environmental Impact Statement (EIS) under NEPA whenever it adopted, revised, or significantly amended a forest plan. (Fed. Reg. 44:181, September 17, 1979). Along with this EIS, a public comment period was included. The EIS and comments period were required because forest plans were treated as major federal actions.

The drafted regulations state that a new plan, plan amendment, or plan revision may be categorically excluded from documentation in an Environmental Assessment (EA) or Environmental Impact Statement as provided in agency NEPA procedures. 36 CFR § 219.6(b), 67 Fed. Reg. 72797. As the draft regulations acknowledge, this is a departure from the 2000 and 1982 regulations. This departure would allow a Responsible Official to use his discretion in exempting a plan revision. This exemption is rationalized in the draft regulations on the theory that plans do not consist of "irreversible or irretrievable commitment of resources that may have a significant effect on the environment."

Under the draft rule, we have the following concerns:

No Analysis of Environmental Effects of Proposed Plans: The draft regulations state that NEPA requirements would not apply to proposed plans. Instead, the draft regulations would only require analysis at the site-specific project level. However, an EIS is necessary for plan revisions because forest plans have substantial direct impacts across entire national forests covering close to or more than a million acres, and thus, do not fit in the categorical exclusion. In fact, the draft regulations list extenuating circumstances which would preclude categorical exclusion. The extenuating circumstances include the presence of endangered species, wetlands, and roadless areas. These are present in virtually all national forests and their presence further illustrates the need for NEPA analysis. Instead of the free-for-all that is proposed in the draft regulation, NEPA requirements should apply to the overall plan. This would allow larger issues to be identified, and then allow the big picture of the overall impact to be examined. Furthermore, this would better facilitate the use of scientific knowledge and public input in the process.

Cumulative Effects Ignored: Under the 2002 draft regulations, the environmental impact of each individual activity will be examined at the time the activity is occurring. This ignores the cumulative impact of these activities. Under the 1982 rule, the cumulative impacts of related activities were examined at the time a forest plan was being drafted. This examination included both direct and indirect effects of the related activities and included activities that are merely being contemplated. This is more efficient since it assesses the projects on the broader scale, and allows the forest-wide assessment to be done once. Under the 2002 draft regulations,

it is unclear how these cumulative effects will be examined. Since the examination of effects would be done at the individual activity level, researching effects of the current project as well as any related activity will be overwhelming. For example, would a cumulative effects assessment be conducted prior to or after off-road vehicles entered a forest? Also, it is likely that some activities and contemplated projects will not be taken into account. If these draft regulations are promulgated, decisions with cumulative effects such as logging and motorized recreation would escape environmental review until it is too late.

No Alternative Proposals: If an EIS is not required under the draft regulations, the Forest Service would not be required to look at alternative proposals. Introducing alternatives and evaluating the merits of the alternatives is the heart of NEPA. This elimination means that the public and the decision-maker have no choice on how to address complicated management issues and have no ability to weigh in on other options. This, for example, would have a significant impact on the designation of roadless and wilderness areas. Instead of the Forest Service evaluating several wilderness alternatives, ranging from designating none to designating all of the eligible areas, the Forest Service would designate their own decision without any weighing of other options. The same would be true in failing to consider a range of timber harvest levels.

An EIS Would Be Required to Reduce Environmental Degradation But Not to Continue Current Activity Levels: Under the draft regulations, an EIS would only be needed if the forest plan would substantially change the status quo. This would mean that an EIS would be required to reduce or eliminate uses that are degrading the environment, however, no EIS would be needed to continue activities that are causing the degradation. Thus, the status quo of existing off-road vehicle use and livestock grazing would always have a stronger position over any reduction of resource impacts.

Public Comment Elimination: Under the draft regulations, opportunities for public involvement in formulating the plan would be severely restricted. Under the 2002 rule, NEPA's role is reduced. This means that alternatives to an action would not be presented. This lack of choices limits the way a forest planner can consider the forest and its resources. Not only does presenting NEPA alternatives open the mind of the forest manager, it also allows the public to review and comment on

alternatives. The public consists not only of the local community but users from around the region and country, and regional and national groups who bring in considerable expertise to forest management. When the public weighs in on the plan and the alternatives, the forest manager is advised on other considerations that might not have arisen otherwise. This process of planning that literally involves brainstorming has been very helpful in the past but would not occur under the 2002 draft rules. Also, the 2002 rules only require public notification through publication in newspapers for many activities, but not in the Federal Register. The 2002 rules would allow limited public comment that might be available for site-specific activities, however, the public is often more interested in the forest's overall environmental standards and use than site-specific projects. Furthermore, the 2002 draft rule permits the regional forester to make 4-year interim plan amendments that would not require any public notice or administrative review. 36 CFR § 219.7(f), 67 Fed. Reg. 72797. This provision would allow the Forest Service to amend the forest plan itself as part of the site-specific project.

2. SPECIES VIABILITY ELIMINATION

In order to meet the statutory requirement to provide for plant and animal community diversity, the Forest Service needs to carry forward and implement a process that will maintain species viability. The NFMA regulations have always included a requirement to maintain viable populations of native vertebrate species (36 CFR § 219.19) and this requirement is widely thought to be the most important standard in the NFMA regulations. This is based on scientific recognition that habitat preservation is not enough to assure that the living communities are also preserved.

The draft rule eliminates the requirement to maintain viable populations of native wildlife species. Instead, the draft rule offers two options for public comment. The first option uses "should" (36 CFR § 219.13(b)(2)(ii), 67 Fed. Reg. 72800) instead of the "must" language of the 2000 regulation (36 CFR § 219.20(b)(2)), making compliance discretionary, not mandatory. The second option drops the viability concept entirely, in favor of a much more vague direction. It states that "[p]lan decisions, to the extent feasible, ***should*** foster the maintenance or restoration of biological diversity in the plan area…." Furthermore, the use of focal species is merely optional.

Under the draft rule, we have the following concerns:

Eliminates Maintenance of Viable Wildlife Populations: Neither option 1 nor option 2 under the 2002 draft regulations provides a tangible, enforceable requirement for managing, maintaining, or studying wildlife. These proposals leave the assessment of an individual species entirely to the discretion of the Responsible Official. Both options mention species assessments and still require an at-risk species to be identified, however, declining species would be provided little protection. This is because the discretion in the 2002 draft regulations allows competing needs such as fuels reduction, energy development, or timber production to trump these at-risk species.

The previous viability requirement protected these threshold species before they became endangered or threatened. Both the 1982 and 2000 regulations require the Forest Service to select management indicator species or focal species and assess the status of these representative species. Analysis at the individual species level for every species is not necessary, nor required by the 1982 and 2000 regulations. This reasonable requirement ensured that competing demands for resources could not trump species diversity. In fact, the previous viability rule was the reason logging was reduced in the Pacific Northwest and the Sierra Nevadas under the Northwest Forest Plan and the Sierra Nevada Framework. These situations demonstrate that the Forest Service has the required expertise and, thus, can comply with these provisions. Wildlife and other biodiversity are vital to our national forests, thus forest managers need scientific guidance and minimum requirements to maintain these populations. Instead of the amorphous 2002 draft regulations options, the draft regulations should follow either the 1982 regulations requirement for maintaining viable populations or incorporate the 2000 regulations requirement that forest plans and project decisions must provide a ***high likelihood*** of maintaining viability of all native species (36 CFR § 219.20(b)(8)). This would provide a strong, enforceable standard for protecting biological diversity. Also, the regulations should require planners to identify and analyze the viability of species at risk and focal species. (36 CFR § 219.20(a)(7-8). Should the agency choose to pursue a diversity provision which is substantially different from the 1982 regulations or the 2000 regulations, SELC urges that the Forest Service consider the option set forth by the Society for Conservation Biology. Don

Waller presented an overview of that option at the Diversity Workshop on Feb. 19, 2003.

Reduces Representative Species Analysis to Project level not Plan Level: The 2002 regulations assess the impact on species at the project level, not the plan level. The Forest Service and others have argued that any species concerns can be taken care of at the project level. However, project-by-project review does not allow the forest-wide review, including cumulative impacts assessment that is often necessary for species that are declining. A forest plan considers the direction for the next 10-15 years of a national forest. Therefore, it is imperative that the plan considers the impact of uses of the forest on species of concern. Many species of importance, such as the migratory songbirds and black bear, are wide-ranging, and thus, need to be assessed at the forest plan level. Plan level analysis is not necessarily more time intensive because the Forest Service can gather much of the required data by working with other organizations including the Fish and Wildlife Service, state agencies, the Nature Conservancy, and Natural Heritage Programs. In fact, the Forest Service is already working with these organizations currently. SELC urges that the regulations consider the plan level for representative species analysis.

Eliminates Essential Monitoring: Monitoring is essential for managers to respond to changing conditions in a national forest. However, no minimal standards have been included in the 2002 draft. Furthermore, any monitoring that is adopted can be changed without an amendment. The 1982 rule that required the agency to monitor population and habitat trends has been eliminated. This is particularly troublesome because during the drafting of the 2000 regulations, the Committee of Scientists discovered that the monitoring and assessment of the forests were far from comprehensive and were not connected to the management decision-making process. Moreover, the Committee of Scientists found that on the ground practitioners were requesting more guidance to assess the impact of management practices. Just as disconcerting, the 2000 rule provision that conditioned a project's approval on finding a "reasonable expectation" that funding would be available for necessary monitoring was not included in the 2002 draft. (36 CFR § 219.11(c)). Without sufficient monitoring, the forest manager cannot respond and maintain the forest effectively. Thus, minimal monitoring standards should be prescribed and projects

should be conditioned on adequate funding for monitoring so that forest managers can meet their stewardship responsibilities.

Eliminates Any Protection for Invertebrates and Non-Vascular Plants: The draft regulations restrict the need for consideration of species viability to vertebrates and vascular plants. This ignores some of the most important species in a forest, such as insects and lichens, and other invertebrates and non-vascular plants. Without these species, the forests will cease to be functioning, healthy ecosystems. This was an important position change in the 2000 regulations.

Science is Only Discretionary: Specific procedures in the 2000 regulations for including science and scientists in forest planning, such as establishing national and regional scientific advisory boards, have been replaced with a couple of paragraphs allowing forest managers to use science and scientific advisors only to the extent they see fit. This is also a step back from the 1982 regulations that used interdisciplinary teams to develop forest plans because the regulations recognized the important role of science in the planning process. The proposed regulations should be revised to include 2000 regulations requirements that plan decisions be consistent with the best available scientific information and analysis (36 CFR § 219.24(a)) and that scientists are included throughout the planning process, from the initiation phase (36 CFR § 219.9(b)(2)) to the monitoring and evaluation of plan decisions (36 CFR § 219.22(c)).

3. **LAND IS PRESUMED OPEN FOR DAMAGING USES**

The draft regulations rephrase the multi-use mandate of the Forest Service in a manner that opens up land to damaging uses. NFMA embraces the multiple use principles set forth in Multiple-Use Sustained-Yield Act (MUSYA) stating that all national forest management plans must provide for multiple use and sustained yield of national forest resources and "in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness." 36 CFR § 219.14(c). Furthermore, the 1982 rules stated that "[n]o timber harvesting shall occur on lands classified as not suited for timber production pursuant to Section 219.14 except for salvage sales, sales necessary to protect other multiple-use values or activities that meet other objectives on such lands ***if the forest plan establishes that such actions are appropriate.***" (36 CFR § 219.27(c)(1)).

The draft regulations interpret this multi-use mandate to state that land is presumptively open for resource extraction and other damaging uses unless specifically prohibited. It states that "[r]ather than determine the suitability of all lands for all uses, a plan should assume that all lands are potentially suitable for a variety of uses except when specific areas are identified and determined not to be suited for one or more uses." 36 CFR § 219.4(a)(4), 67 Fed. Reg. 72796.

Under the draft rule, we have the following concerns:

Reverses "Closed Unless Designated Open" Policy: Policies currently in place that restrict use might be reversed under the draft regulations. For example, a "**closed unless designated open**" policy regarding the use of off-road vehicles (ORV) applies in a number of forests. This means that ORVs are only allowed on specifically designated routes in order to prevent soil damage and wildlife harassment. Moreover, this provision could be used to open up other lands to resource extraction including logging, mining, and oil and gas drilling. Instead, this provision should be removed and replaced with a **closed unless specifically open** policy for resource extraction and off-road vehicles.

4. ROADLESS AREA ANALYSIS AND PROTECTION DROPPED

Roadless areas are defined as places where few if any roads have been built and thus, as a result, less logging or other development has occurred. The areas are safe havens for wildlife, and provide unparalleled recreation opportunities. The 2000 rule addressed roadless areas at three points in order to evaluate and protect the ecological values of roadless areas. First, in initiating plan revisions, the agency was required to "identify new proposals for special areas, including unroaded areas … and areas under consideration for wilderness designation" (36 CFR § 219.9(b)(3)). Second, "unroaded areas" and "roadless areas" were listed among the types of lands that could receive "special designations" in forest plans (36 CFR § 219.27). Third, the draft rule required that "all roadless, undeveloped areas … must be evaluated for wilderness designation during the … plan revision process" (36 CFR § 219.27(b)). These requirements were meant to ensure that roadless areas were carefully evaluated and protected whenever possible.

Despite assurances by the Administration and Forest Chief Bosworth that the NFMA planning process would consider and possibly improve roadless area protection, the draft NFMA rule eliminates requirements in the 2000 regulations to evaluate and protect the ecological values of roadless areas. Under the 2002 draft rule, roadless areas are left with only two management options: (1) nomination for wilderness designation; or (2) opening up the area for road construction and other uses, including resource extraction.

SELC is concerned that this elimination of the roadless provision in the NFMA regulations will lead to diminished protection for natural areas. Under the 2002 draft regulations, the only protection that a roadless area might receive is under the discretion of local forest planners. As the recent draft plans in the Southern Appalachians show, we cannot rely on forest supervisors to protect roadless areas. For example, the draft Jefferson Forest Plan fails to protect at least 26% of roadless areas consistent with Roadless Area Conservation Rule. DEIS 3-262

Forest planners will only have to consider whether to recommend roadless areas for wilderness designation and this recommendation has rarely been made in recent years. If the area is in fact recommended, then only Congress can actually designate the area as a wilderness. Because the qualification process for a roadless area is less stringent than a wilderness designation, the roadless provision allowed more land to be protected. The identification and subsequent protection of roadless areas is a reliable method to protect areas of high ecological integrity and recreation opportunity.

5. LOOSENING ENVIRONMENTAL STANDARDS

The draft regulations would loosen the environmental standards governing resource extraction activities. One reason forest plan standards are vital to a healthy ecosystem is because they limit environmental impacts of development activities. This includes standards to protect soil productivity, water quality, and wildlife habitat.

Under the draft 2002 regulations, the Forest Service proposes to increase its flexibility and reduce its accountability by making forest plan standards more discretionary. The draft regulations state "Standards generally should be adaptable and assess performance measures." § 219.4(a)(3), 67 Fed. Reg. 72796.

SELC is concerned with following:

Public Cannot Hold Forest Service Accountable: SELC is concerned that the discretion regarding the environmental standards means that forest plans would have few strict environmental standards. Therefore, the public would not able to hold the Forest Service accountable for how the forest is being managed. This discretion, on the part of the Forest Service, could lead to loopholes at the expense of the environment, given pressures to exploit the forest resources.

Adaptive Management is Misused: SELC is also concerned that the draft regulations use the scientific principle "adaptive management" in an improper manner to ignore both vital environmental safeguards and public accountability. Adaptive management is a process by which knowledge is gathered from continually monitoring the outcomes of practices. If the practices are not assisting recovery, then they are altered to optimize conservation. However, the 2002 draft regulations use adaptive management to give great flexibility to forest managers but it is missing the required monitoring that insures this discretion is being used correctly. Instead of using adaptive management to reduce environmental standards, the regulations should be amended to include proper monitoring of wildlife and plants combined with baseline environmental standards.

6. TIMBER SUITABILITY RULES INCREASE AMOUNT THAT CAN BE LOGGED

Proposed Section 36 C.F.R. Section 219.16 does not carry out the statute's direction to remove lands from the suitable base considering physical, economic, and other pertinent factors. Section 219.16(a)(2) fails to provide a meaningful standard for designating land unsuitable based on physical characteristics. The regulation provides that land will be designated unsuitable only where technology is not available for conducting timber harvest without irreversible damage to soil, slope, or other watershed conditions. There should be an economic limitation on the "technology available" standard. That is, if it would require helicopter or cable logging to log a particular area without damage to soil, slope, or watershed, then these methods of logging should be economically viable. If they are not economically viable for that particular land, it should be removed from the suitable base.

In addition, the requirement for irreversible damage should be tempered. If logging a particular steep slope would cause significant damage, even if not technically irreversible, then the land should be deemed unsuitable. In the Southern Appalachians, the Forest Service has generally failed to remove any lands from the timber base as physically unsuitable despite the fact that the area has some very steep slopes and fragile soils in certain areas. The regulation should require a meaningful review of the land's physical characteristics and require removal of lands from the suitable base when significant resource damage from logging is clearly possible.

Economic Suitability should be Given Sufficient Consideration: Lands should be deemed unsuitable for timber production if the cost to administer timber sales exceeds the revenue the agency would receive from timber sales in the area. Congress expressed serious concerns about below-cost timber sales and economically unsuitable land should not be classified for timber production. If some other multiple use requires some harvesting, that should be done independent of the timber production program.

Timber Harvest is Allowed on Unsuitable Timber Production Lands: The proposed regulations provide that harvesting for other multiple uses can be conducted on unsuitable lands. For example, the draft regulations provide that potential reasons to log on unsuitable lands include fuel reduction, wildlife openings, and the salvage of dead or dying trees. However, the exceptions for harvesting on unsuitable lands proposed in Section 219.16(c) are too broad. There is no limit on the size of temporary or permanent wildlife openings. There is also no limit on salvage of dead or dying trees. For this provision to have any meaning, there need to be reasonable limitations placed on the size of harvesting activities that can occur in unsuitable lands. We would recommend a two to five-acre maximum except in emergency cases. In addition, the regulations should specify that salvage is only appropriate when trees can be removed in a way that protects the integrity of the ecosystem. The Forest Service should require more stringent environmental standards for salvage logging than for other timber sales, due to the sensitivity of the post-disturbance environment.

7. PUBLIC INVOLVEMENT IS SIGNIFICANTLY REDUCED

SELC is concerned that the public's role is significantly reduced throughout the plan creation amendment, and revision

process. However, with the public's involvement, the Forest Service may be held accountable for its actions.

Early Public Involvement is Reduced: While the 2002 draft regulations mandate that the "Responsible Official must provide early and frequent opportunities for individuals and entities to participate openly and meaningfully in the planning process," only limited guidance on how this will be accomplished is offered. 36 CFR § 219.12(a), 67 Fed. Reg. 72799. Instead, the "Responsible Official is given flexibility to design public involvement strategies to best meet the local needs the most cost-effective way." 67 Fed. Reg. 72783. Furthermore, any objections to a plan, amendment, or revision are restricted by the draft regulations. For example, written objections are not allowed if the "amendment is made in conjunction with a site-specific project decision," when there is an interim amendment, or when the Secretary of Agriculture makes the decision. 36 CFR § 219.19(a), 67 Fed. Reg. 72803. Also, in the situations where objections are permitted, only "original substantive comments" would be accepted as objections, thus, public comments relying on pre-scripted or copied materials could be tossed out as invalid objections. 36 CFR § 219.19(d), 67 Fed. Reg. 72803. Moreover, the objections must contain a concise statement explaining the inconsistency between the plan, amendment or revision and any applicable laws. 36 CFR § 219.19(d)(iii), 67 Fed. Reg. 72804. Citizens should not have to articulate formal legal arguments in citing objections. Instead, SELC believes that public involvement should be facilitated by relaxing the standards on public objections while mandating specific opportunities for the public to be involved in the process.

"Interim" 4-Year Plan Amendments Exclude Public Input: The NFMA requires the Forest Service to involve the public whenever it amends a forest plan. 16 USC § 1604(f)(4). However, the draft regulations would circumvent public involvement by allowing plan amendments that could remain in place for up to four years before the agency would have to provide any public notice that the forest plan had been amended. 36 CFR § 219.7(f), 67 Fed. Reg. 72797. Also, if the amendment is renewed beyond the interim period of four years, the only public notification is accomplished by newspaper publication instead of being published in the Federal Register. Furthermore, the 2002 draft regulations state that if a proposed project or action "would not be consistent with the standards of the plan, the Responsible Official may amend the plan to modify one or more standards or to exempt application of one or more standards."

36 CFR § 219.10(d)(3), 67 Fed. Reg. 72798. SELC is concerned that the purpose of a forest plan is eliminated under this provision. This is because 4-year amendments and exceptions to the forest plan allow the Forest Service to amend the forest plan itself as part of the site-specific project. Thus, the project, not the plan would dictate policy. Also, the public is largely closed out of the amendment process. Public involvement must be allowed during formulation of a forest plan as well as during the amendment process of the forest plans.

No Administrative Appeals Process: The 1982 regulations permitted an appeal of a final forest plan. Citizens, environmental groups, and recreation groups commented on the plans, and were able to file administrative appeals, taking matters higher up the chain of command in the agency. This appeal could lead to a decision being stayed or even a reversal of the decision. The 2000 rule attempted to simplify this process with a perfunctory "pre-decisional objection" process combined with a large amount of public involvement throughout the planning process. 36 CFR § 219.19, 67 Fed. Reg. 72803-04. Under the draft 2002 rule, the administrative process is changed to eliminate the public's right to appeal the agency's final plan. SELC is concerned about the lack of appeals process. The fact that early public involvement is restricted because of the NEPA exemption and combined with the lack of an in-house appeal process means that there will likely be a greater number of lawsuits challenging forest plan revisions and amendments. Moreover, in the past, issues brought up by the public were commonly ignored during the planning process. An appeals process allows these objections to be reviewed at a higher level while giving forest planners an incentive to look at the other side of the situation and to incorporate qualified contributions. SELC recommends restoring the post-decisional appeals process.

Limited Judicial Review: The regulations explain in great lengths that forest plans are zoning or planning documents with no tangible or on-the-ground impacts on the land or resources in a forest. This is an attempt to reduce the public's ability to appeal a decision to a court. However, the forest plans do make decisions about what can happen on the ground, where new roads can be built, where ORVs can operate, and many other decisions. The Forest Service should be honest about the importance of the plans in guiding future activities. Compliance with the plan is not optional. Judicial review will be available for decisions

made in the plan that have effect on the ground. 36 CFR § 219.2 should be revised to reflect this reality.

CONCLUSION

The Administration has proposed new rules to manage 192 million acres of federal forest and grasslands to 'better harmonize the environmental, social and economic benefits" of the land. However, these benefits are undermined by the actual details of the 2002 draft rule. In these draft regulations, public involvement is reduced throughout the planning process. In fact, the public no longer plays a role in assessing NEPA alternatives in formulating and amending the plan. The rules also take away the opportunity to appeal the agency's final plan. Instead, the influence of resource development interests who are interested in logging, drilling, and mining are favored. Much is left to the discretion of the local forest manager to decide how and if to study wildlife populations and conduct activities necessary to protect at risk species. This will not protect our nation's forests. Instead, forest planning should consist of clear directives and strong regulations to encourage sustainable forest management. The proposed regulations seriously undermine a critical tool for protecting the environment and ensuring that public lands are managed in a sustainable manner across landscapes.

We thank you for your careful consideration of these comments.

Sincerely,

David W. Carr, Jr.
Senior Attorney
Public Lands Project Leader

PLR135

Southern Environmental Law Center

201 West Main Street, #14
Charlottesville, VA 22902-5065
(434) 977-4090
(434) 977-1483
selcva@selcva.org

March 7, 2005

Content Analysis Team
ATTN: Planning CE
USDA Forest Service
P.O. Box 22777
Salt Lake City, Utah 84122
planningce@fs.fed.us

BY E-MAIL

Re: Comments on National Environmental Policy Act Documentation Needed for Developing, Revising or Amending Land Management Plans; Categorical Exclusion, 70 Fed. Reg. 1062 (Jan. 5, 2005).

Dear Sir or Madam:

The Southern Environmental Law Center ("SELC") offers the following comments in response to the notice of proposed National Environmental Policy Act ("NEPA") implementing procedures and request for comment, dated January 5, 2005, 70 Fed. Reg. 1062: Comments on National Environmental Policy Act Documentation Needed for Developing, Revising or Amending Land Management Plans; Categorical Exclusion.

SELC is a non-profit environmental advocacy organization that has been extensively involved in public lands issues, including forest planning, in the Southeast since 1986. SELC has long followed the development and implementation of the forest planning process and provided input on the revised forest plans in the Southern Appalachians.

SELC strongly opposes this proposal to categorically exclude ("CE") Land and Resource Management Plans ("forest plans") from NEPA documentation. Forest plans are "major Federal actions significantly affecting the quality of the human environment" and, therefore, NEPA requires the preparation of an Environmental Impact Statement ("EIS"). 42 U.S.C. § 4332(2)(C).

I. NEPA Documentation At The Plan Level Is Essential To Inform Forest Planning And Provide Meaningful Public Involvement.

As a threshold matter, the Forest Service suggests that EISs for forest plans are worthless because NEPA documentation frequently is required at the project level. See 70 Fed. Reg. at 1063 (claiming it is "infeasible to do environmental analysis that is sufficient to allow projects to be carried out without further NEPA analysis."). To the contrary, a forest plan EIS is vitally important to analyze, disclose and consider major issues and impacts that must be addressed at the forest-wide level to be meaningful, for example, securing wildlife habitat.

A plan EIS also is needed to meet the Forest Service's obligations under the National Forest Management Act ("NFMA"). Agency procedures shall "insure plans are prepared in accordance" with NEPA, including "direction on when and for what plans an [EIS]. . .shall be prepared." 16 U.S.C. § 1604(g)(i). Avoiding NEPA documentation entirely for all plans is incompatible with this direction.

Moreover, the NFMA requires the agency to consider "the economic and environmental aspects of . . resource management" and to "provide for outdoor recreation (including wilderness, range, timber, watershed, wildlife and fish." § 1604(g)(3)(A). The NFMA also requires the Forest Service to "provide for diversity of plant and animal communities. . .." § 1604(g)(3)(B). These forest-wide resources cannot be meaningfully evaluated solely at the project level, nor can these obligations be met through a patchwork of projects.

Forest planning clearly is one of the Forest Service's "major decision points," 40 C.F.R. § 1505.1(b), or "meaningful stages" in agency decision-making, 70 Fed. Reg. at 1064, and should not proceed without NEPA documentation.

As discussed further below, the forest plan also is the appropriate point to consider and compare broad management alternatives, especially alternate means of balancing various uses and resources across the forest. The discussion of alternatives "is the heart of the environmental impact statement." 40 C.F.R. § 1502.14. An EIS is essential to "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." Id.

The forest plan also is the appropriate level to evaluate the cumulative impacts of all management activities on forest resources. The agency must consider the cumulative impacts of its activities eventually, and it is more meaningful and efficient to evaluate those impacts in a forest plan EIS. Attempting to evaluate cumulative impacts at the piecemeal, project level is likely to be both overwhelming and ultimately inadequate. See also SELC comments on the NFMA planning rule proposed Dec. 6, 2002, at 4-5 (April 7, 2003) (attached and incorporated by reference).[1]

[1] The final NFMA planning regulations also were published in the Federal Register on Jan. 5, 2005 and this proposal is part of those rules. SELC has grave concerns about the planning regulations as well.

Finally, this proposed CE runs contrary to the "twin aims" of NEPA: (1) "the obligation to consider every significant aspect of the environmental impact of a proposed action" and (2) "it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decision-making process." Baltimore Gas and Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983) (citations omitted). NEPA insures that "environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). "[P]ublic scrutiny" is "essential" to implementing NEPA. Id. Public comment informs decision-making, especially in this case where local, state, regional and national groups and citizens bring substantial expertise in various aspects of forest planning. Important forest planning decisions should not be made without first considering environmental impacts, especially cumulative impacts, comparing alternatives, and disclosing this information to the public.

II. Forest Plans Are Proposals for Major Federal Actions.

The claim that forest plans are not proposals for major federal action is absurd. See 70 Fed. Reg. at 1063-64. However the agency might try to muddy the waters, the CEQ regulations and the caselaw make clear that forest plans are indeed major federal actions. "Actions" include federal agency "programs" and "plans, policies and procedures. . .." 40 C.F.R. § 1508.18(a). "Actions" expressly include the "[a]doption of programs, such as a group of concerted agency actions to implement a specific policy or plan; systematic and connected agency decisions allocating agency resources to implement a specific statutory program. . .." § 1508.18(b)(2). Clearly a forest plan is an agency plan or program which implements the NFMA and other laws guiding national forest management.

Forest plans also are "proposals" that set goals and make decisions on alternate means of accomplishing those goals. § 1508.23. Contrary to the Forest Service's claims, forest plans have environmental effects which may be meaningfully evaluated. § 1508.23. SELC strongly disagrees with the Forest Service's assertion that the approval of a plan "will not have environmental effects that can be meaningfully evaluated at the time of the plan decision." 70 Fed. Reg. at 1063. SELC is concerned that this approach is motivated by the view that NEPA documentation at the plan level is "meaningful" or worthwhile only if the agency may then forgo further project-level analysis. See 70 Fed. Reg. at 1063. As explained above, the plan level is the appropriate level for considering the "big picture," forest-wide impacts and resources.

The Forest Service justifies its approach by arguing that plans "do not result in specific on-the-ground action" and do not "dictate on the ground decisions that have impacts," and, therefore, "do not individually or cumulatively result in significant effects on the human environment." 70 Fed. Reg. 1062. The Forest Service has misinterpreted NEPA's requirements.

The agency admits that forest plans are "final decisions" that "express[]. . . goals and objectives." 70 Fed. Reg. at 1062-64. For example, plan decisions include:

- Setting the Allowable Sale Quantity for the next several decades of timber harvest.

- Designation of areas suitable and unsuitable for timber harvest.

- Determining riparian prescription areas and standards for activities within riparian areas.

- Oil and gas leasing decisions (designating areas available and unavailable for leasing and, in available areas, determining the degree of surface occupancy, see, e.g., FEIS for the Revised Jefferson National Forest LRMP at 3-365).[2]

- Designation of special areas (botanical areas, caves, etc., see 70 Fed. Reg. 1063).

- Inventory of roadless areas (there are management consequences for areas included and excluded from the inventory).

- Designation of areas for wilderness study (areas not designated for wilderness study remain open for other uses, for example, off-road vehicle use).

These decisions will "guide" and "provide for project and activity decisions." 70 Fed. Reg. at 1063. The ASQ and timber suitability decisions, in particular, determine the amount and likely location of future logging and therefore have significant environmental impacts. Simply because the agency also must go through a second phase of decision-making does not remove its obligation to prepare an EIS for the forest plan.

In an analogous case, Thomas v. Peterson, the court made clear that "[s]ubsequent phases of development must be covered in an environmental impact statement on the first phase. . .." 753 F.2d 754, 759 (9th Cir. 1985). The court explained:

> "The NEPA process [must] be integrated with agency planning 'at the earliest possible time,' 40 C.F.R. § 1501.2, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step has already been taken." Id. at 760.

Clearly, the forest plan is that "first step." See id.; Ohio Forestry Ass'n v. Sierra Club, 523 U.S. 726, 730 (1998) ("the Plan's promulgation nonetheless makes logging more likely in that it is a logging precondition; in its absence logging would not take place."). The Thomas decision also underscores the need for analysis of cumulative impacts at the plan level.

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[2] Attempts to avoid NEPA documentation for oil and gas leasing and to defer environmental review to the site-specific stage have failed. For example, in Connor v. Burford, 848 F.2d 1441 (9th Cir. 1988), and in Sierra Club v. Peterson, 717 F.2d 1409 (D.C. Cir. 1983), the courts required the preparation of an EIS for leases which allow surface-disturbing activity. The government cannot sanction activities "which have the potential for disturbing the environment without assessing the possible environmental consequences." 717 F.2d at 1415.

Contrary to its arguments in this proposal, 70 Fed. Reg. at 1062, the Forest Service "may not escape compliance with the regulations by proceeding with one action while characterizing the others as remote or speculative." Thomas, 753 F.2d at 760; see also Connor v. Burford, 848 F.2d 1441, 1450-51 (9th Cir. 1988) ("[the] suggestion that we approve now and ask questions later is precisely the type of environmentally blind decision-making NEPA was designed to avoid.").

Moreover, the Forest Service must "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternate use of available resources." 42 U.S.C. § 4332(2)(E). Forest plans clearly resolve conflicts regarding alternate uses (wilderness, recreation, timber, range, water, wildlife, fish, etc.). This requirement to consider alternatives "is both independent of, and broader than, the EIS requirement." Bob Marshall Alliance v. Hodel, 852 F.2d 1223 (9th Cir. 1988), cert denied sub nom. 489 U.S. 1066 (1989). Forest plans are analogous to oil and gas leasing which "opens the door to potentially harmful post-leasing activity. . . NEPA therefore requires that alternatives. . . be given full and meaningful consideration." Id. at 1229; see also Sierra Club v. Peterson, 717 F.2d 1409, 1414 (D.C. Cir. 1983) (The "appropriate time for preparing an EIS is *prior* to a decision, when the decision-maker retains a maximum range of options."). Without the evaluation of alternatives at the plan level, a full range of alternative management approaches will never be considered, because the plan decisions will constrain the alternatives considered at the project level.

III. Ohio Forestry and SUWA

It is crucial to recognize that neither Ohio Forestry Association v. Sierra Club, 523 U.S. 726 (1998), nor Norton v. Southern Utah Wilderness Alliance, 542 U.S. ___, 2004 U.S. LEXIS 4379, *31-32 (2004) ("SUWA"), directly support this proposal to exclude forest plans from NEPA documentation. Neither case addressed the appropriate level of NEPA documentation for the approval, revision or amendment of land management plans. The holding in Ohio Forestry was limited to the ripeness of the plaintiff's NFMA claims for judicial review, and the Court stated that the plaintiff could challenge the plan at a later time. 523 U.S. at 734. The Court also noted the distinction between the procedural requirements of NEPA and the substantive requirements of the NFMA. 523 U.S. at 737. The frequent citation to this case in this proposal shows the agency mistakenly applied this decision to the criteria triggering the NEPA EIS requirement.

The single NEPA issue in SUWA was whether it was necessary to supplement the plan EIS[3] to consider the increase in ORV use. Id. at * 32. The Court discussed the role of land management plans to "guide and control" future action only in the context of whether it could compel agency action under the APA, not in the NEPA context.

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[3] Under Bureau of Land Management regulations, "[a]pproval of a resource management plan is considered a major Federal action significantly affecting the quality of the human environment" and an EIS will be prepared. 43 C.F.R. 1601.0-6.

IV. Forest Plans Are Likely to Significantly Impact The Environment And Therefore Are Not Appropriate For Categorical Exclusion From NEPA Documentation.

Only categories of actions which "do not individually or cumulatively have a significant impact on the human environment" may be excluded from NEPA documentation. 40 C.F.R. § 1508.4.[4] An examination of the factors in determining significance and the existing Forest Service CEs reveals that forest plans do significantly impact the environment and cannot be excluded from NEPA documentation.

Each forest plan governs the management of thousands, and frequently millions, of acres of public land for 10-15 years. Forest plans thus have a scope in terms of space and time that is not appropriate for a categorical exclusion. For example, other Forest Service CEs are limited in both space and time:

- Special uses requiring less than five acres of land. F.S.H. 1909.15, ch.31.2(3).
- Short-term (one year or less) mineral, energy or geophysical investigation. F.S.H. 1909.15, ch.31.2(8).

Even the new, expanded CEs for timber harvest and fuel reduction[5] are limited in scope:

- Harvest of live trees limited to 70 acres & ½ mi. temporary road construction. 68 Fed. Reg. 44598, 44607 (July 29, 2003).
- Salvage and harvest to control insects or disease limited to 250 acres & ½ mi. temporary road construction. Id.
- Hazardous fuels reduction using prescribed fire limited to 4,500 acres; using other methods limited to 1,000 acres. 68 Fed. Reg. 33814, 33824 (June 5, 2003).

Other CEs demonstrate that this proposal is outrageous. For example, there simply can be no comparison between a forest plan that directs the management of perhaps a million or more acres of public land for over a decade, and the repair and maintenance of administrative sites (mowing lawns, replacing a roof or shed, or painting a building). F.S.H. 1909.15, ch.31.1b(3).

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[4] The Forest Service also must provide for extraordinary circumstances under which a normally excluded action may have a significant effect. 40 C.F.R. § 1508.4. This proposal presumes that extraordinary circumstances will not be present unless a plan also involves specific projects or activities, 70 Fed. Reg. at 1064, defeating the purpose of providing for more careful consideration when, for example, threatened and endangered species are involved. See F.S.H. 1909.15, ch.30.3, 67 Fed. Reg. 54622, 54627 (Aug. 23, 2002).

[5] SELC submitted comments opposing the timber sale CE and requesting that the fuel reduction CE be revised to limit the size of excluded activities, protect inventoried roadless areas, and place absolute priority on the wildland-urban interface.

All forest plans likely will meet all factors for significant impacts. National Forest management is significant in the global, national and regional context. 40 C.F.R. § 1508.27(a). For example, NFS lands support endemic species found nowhere else on Earth and provide nationally and regionally important recreation opportunities, wildlife habitat and drinking water, among many other important values too numerous to list here.

With respect to the "intensity" factors, the following resources are frequently found on National Forest lands: important historic, cultural and scientific resources; wetlands; wild and scenic rivers; ecologically critical areas (including riparian areas and wilderness and roadless areas); and threatened and endangered species. 40 C.F.R. § 1508.7(b)(3), (8), (9). National Forest management frequently is controversial. § 1508.7(b)(4). Forest planning sets a precedent for future projects. § 1508.27(b)(6). Finally, and perhaps most importantly, the adoption and implementation of a forest plan has cumulatively significant impacts that cannot be avoided by breaking the plan down and considering the separate impact of each site-specific project. § 1508.27(7).

V. This Proposal Jeopardizes Existing Categorical Exclusions.

Categorically excluding forest plans from NEPA documentation will jeopardize the existing categorical exclusions, especially the fuel reduction CE.[6] Sooner or later, the agency must analyze, consider and disclose the environmental impacts of its fuel reduction program. For example, the recently revised plan for the Cherokee National Forest directs the agency to reduce hazardous fuels on 19,000 to 60,000 acres per year. CNF LRMP at 52. The final EIS for the plan discloses that the Forest Service intends to prescribe burn 25,000 acres per year. FEIS at 394. In the past, the agency has conducted its prescribed burn program primarily through CEs and we assume this practice will continue. If the environmental impacts of this and other burning programs are not considered in a forest plan EIS, they must be considered at the project level. These activities cannot escape environmental review indefinitely.

VI. Conclusion

For these reasons, SELC requests that the Forest Service withdraw this misguided and illegal proposal to categorically exclude forest plans from NEPA documentation.

Sincerely,

David W. Carr

David W. Carr, Jr.
Senior Attorney
Public Lands Project Leader

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[6] While SELC opposed the timber harvest CE and disagreed with the scope of the fuel reduction CE, we simply point out that excluding forest plans from NEPA documentation will make it more difficult to defend these CEs.

Sarah A. Francisco
Associate Attorney

PLR135

Southern Environmental Law Center

201 West Main Street, Suite 14
Charlottesville, VA 22902-5065
434-977-4090
Fax 434-977-1483
SouthernEnvironment.org

June 21, 2005

USDA Forest Service Content Analysis Team
ATTN: Planning Directives
P.O. Box 22777
Salt Lake City, UT 84122
planningdirectives@contentanalysisgroup.com

BY E-MAIL

Re: Comment on Proposed National Forest System Land Management Planning Directives

Dear Sir or Madam:

The Southern Environmental Law Center ("SELC") offers the following comments on the proposed National Forest System Land Management Planning Directives. The notice of issuance of interim directives and request for comment was published in the Federal Register on March 23, 2005.

SELC is a non-profit environmental advocacy organization that has been extensively involved in public lands issues, including forest planning, in the Southeast since 1986. SELC has long followed the development and implementation of the forest planning process and provided input on the coordinated effort to revise the plans for five forests in the Southern Appalachians (the Jefferson (VA), Cherokee (TN), Chattahoochee-Oconee (GA), Sumter (SC) and the Alabama National Forests). We are very concerned about how the revised National Forest Management Act (NFMA) regulations and these directives will affect future plan revisions in our region, particularly the upcoming plan revisions for the Nantahala-Pisgah National Forests in North Carolina and the George Washington National Forest in Virginia.

SELC participated fully in the effort to revise the forest planning regulations. We commented on the revised NFMA regulations proposed in December 2002 and participated in the Diversity Options Workshop held by the Forest Service February 19-20, 2003. SELC also commented in opposition to the Categorical Exclusion for forest plans proposed in January 2005. Both comment letters are attached and incorporated herein by reference.

The revised regulations and directives run contrary to the NFMA and the intent of that Act, undermine the important role of forest-level planning, and remove vital protections for wildlife, fish and plants, among other problems.

Further, the regulations and directives seek to return to the autonomous forest management the NFMA sought to reform. The regulations and directives run contrary to the intent behind the NFMA by allowing for the adoption of forest plans without informed and meaningful public participation throughout the process, without full analysis and disclosure of environmental impacts and alternatives in an Environmental Impact Statement, and particularly without setting firm standards in those plans for which the agency will be held accountable. See Charles F. Wilkinson, The National Forest Management Act: The Twenty Years Behind, The Twenty Years Ahead, 68 U. Colo. L. Rev. 659, 669 (Summer 1997). The NFMA "reflected the nation's collective view of the national forests" in the mid-1970s: ". . . serious mistakes had been made and . . . it had become necessary to put sideboards on the agency's discretion. No longer would it be acceptable for the Forest Service to run the national forests as it saw fit . . .."). Id. at 666-67. Forest plans "were intended to be truly public documents, with wholesale public participation from the earliest scoping sessions." See id. Further, "Congress intended that NFMA planning would have exactly the same effect as local land-use planning - the plans would be binding on future agency actions and enforceable in court . . .." Id. at 675.

Additional concerns regarding the directives are discussed below.

I. The Directives Fail To Provide Resource Management Guidelines.

The revised NFMA regulations adopted in January 2005 violate the NFMA in numerous respects, and these proposed directives implement those violations. Primarily, the directives fail to provide the resource management guidelines required by the NFMA, 16 U.S.C. § 1604(g)(3). The revised NFMA regulations state that the directives will set forth the resource management guidelines. Not only are the directives a wholly inadequate substitute for the regulations required by the NFMA, but the directives themselves fail to provide firm guidelines.

II. Lack Of Binding Standards Seeks To Render Forest Planning Meaningless, Undermining The NFMA Provisions Regarding Forest Plans.

Forest plan "guidelines" apparently will control how projects are implemented on the ground. See 36 C.F.R. § 219.7(2)(iii); Forest Service Manual (FSM) 1921.14. As explained in the Forest Service Handbook (FSH), "Design Criteria," which include "guidelines," serve the following purposes: "bounds the strategy and subsequent projects . . . must be met to design an acceptable project or activity . . . are minimum requirements that are needed to protect resources . . . guide development of project-level operational controls." FSH 12.11(3). "Operation controls are the procedures and technical controls used to ensure that the projects . . . are consistently implemented in ways that reduce environmental impacts." Id.

Despite these worthy purposes, the directives actually go to great lengths to explain that these "minimum requirements" should not be mandatory. See FSM 1921.14; FSH 12.23b. Apparently. so long as projects follow the "purposes" of the guidelines,

officials may depart from the actual guidelines themselves. FSM 1921.14. This defeats the purpose of establishing a certain "minimum" level of natural resource protection below which the Forest Service will not fall. This also seeks to render forest plans meaningless and to undermine and circumvent the NFMA requirement to adopt forest plans and carry out projects consistent with those plans. 16 U.S.C. § 1604. Again, this runs contrary to the intent of the NFMA. See Wilkinson at 675.

This and other attempts to maximize leeway for the Forest Service do not make sense given the agency's historic lack of accountability. At the project level, the USDA Office of the Inspector General has documented failures to implement mitigation measures and other project-level commitments on the ground. U.S. Dept. of Agriculture, Office of Inspector General, "Forest Service Timber Sale Environmental Analysis Requirements," No. 08801-10-At, *available at* http://www.usda.gov/oig/webdocs/088011.pdf (January 1999) (incorporated herein by reference). Agency-wide, the group Taxpayers for Common Sense has documented that the Forest Service failed eight out of ten Inspector General audits in the last decade. Taxpayers for Common Sense, Lost in the Forest, at 11, *available at* http://www.taxpayer.net/forest/lostintheforest/lostintheforest.pdf (2002) (incorporated herein by reference). It is not logical to assume that an agency which cannot meet specific obligations and generally lacks accountability somehow will achieve better results only if afforded more discretion.

III. Diversity

The NFMA instructs the Forest Service to adopt regulations "specifying guidelines for land management plans. . . which. . . provide for the diversity of plant and animal communities. . .." 16 U.S.C. § 1604(g)(3)(B). The revised regulations supposedly do so by directing plans to provide "a framework to contribute to sustaining native ecological systems by providing ecological conditions to support diversity of native plant and animal species in the plan area." 36 C.F.R. § 219.10(b). The revised regulations promised that the directives would adopt further procedures for providing "a framework to provide the characteristics of ecosystem diversity" and "additional provisions" for certain at-risk species when needed. § 219.10(b)(1)-(2). This vague approach is wholly inadequate.

The directives themselves tacitly admit the major flaw in this approach: "Ecological conditions to support species diversity may or not [sic] be completely provided by the plan components for ecosystem diversity." FSH 43.21. It is not clear how species that fall through the cracks between these "components" will be managed. The agency apparently has accepted that some species will not remain viable on National Forest lands. 70 Fed. Reg. 1023, 1029 (2005) (supplementary information regarding the planning regulations).

While the directives seem to allow generally for "species-specific efforts," see FSH 43.21, the regulations and other sections of the FSH require greater protection only for a small number of the most imperiled species – federally-listed species and "species of

concern" for which management is necessary to prevent listing. See 36 C.F.R. § 219.10(b)(2); FSH 43.21-22. Many at-risk species likely will fall into the less protective "species of interest" category. Instead of requiring additional efforts to protect and conserve these species before they fall to the brink of extinction, the directives place "species of interest" at the mercy of the agency's discretion. See FSM 1921.77. These species should be afforded greater protection. Public lands are especially important to the conservation of declining species and frequently provide critical refuges, especially for those in need of undisturbed forest habitat.

IV. Roadless Inventory And Wilderness Evaluations

Alarmingly, the directives systematically scrub out all reference to "roadless areas." The change in terminology from "roadless areas" to "potential wilderness areas" improperly ignores the fact that these areas have their own status independent of their evaluation for wilderness designation during forest planning. This is inconsistent with the Forest Service's protection of roadless areas since the mid-1990s and even with the final May 2005 rule regarding roadless areas, which implicitly acknowledges that roadless areas are recognized areas with their own status, regardless of the degree of protection afforded the area.

We are concerned that the directives suggest a return to the damaging "release" policy of the 1980s when areas not recommended for wilderness designation were "released" and subject to any desired management. A number of roadless areas and portions of areas subsequently were lost to targeted road-building and logging. In fact, FSH 71.3 improperly deletes all reference to RARE II areas, many of which were lost or diminished by logging and road-building but which should still be recognized and relevant to current management.

Now, roadless areas are recognized as distinct areas whether or not they are recommended for wilderness designation. There is strong public support for the protection of roadless areas, as evidenced by the 2.5 million citizens who supported the 2001 Roadless Area Conservation Rule, including over 200,000 Southerners, and the 1.7 million who objected to the proposal to replace the Rule with a state-by-state petition process.

The shift supposedly is intended to prevent confusion with "inventoried roadless areas," which are defined as the areas identified in the November 2000 Final Environmental Impact Statement for the Roadless Area Conservation Rule. This, however, suggests that the inventory of roadless areas will not be updated during forest planning. The directives should provide that the inventory will be updated during forest planning to include any additional roadless areas that are identified.

Further, the revised directives often narrow the criteria for identification and evaluation of roadless areas, and perpetuate misinterpretations and misapplications of The Wilderness Act. In particular, we are seriously concerned about the overemphasis on the solitude, sights and sounds, and challenge criteria, and the narrowing of the recreation

criteria. In the recent inventory of roadless areas during the plan revisions for the five Southern Appalachian forests, numerous areas were excluded from the roadless inventory because of the improper emphasis on these criteria and because of a lack of appreciation for outstanding opportunities for recreation.

Specific concerns include:

- FSH 71 should track the definition of Wilderness in section 2(c) of the Wilderness Act of 1964, as in the previous directives.
- The words "or vegetation" should be added back to FSH 71.11(2)(a), as in the previous directive, so that it reads "Due to physical terrain or vegetation, natural conditions can be preserved."
- In FSH 71.1(2)(c), the words "or roadless areas" should be added to the list, as in the previous directive.
- In FSH 71.12, criteria for roadless areas in the East, the paragraph regarding location of areas was deleted (previous FSH 71.11b(4)). The location factor, however, is not captured by the preceding paragraph regarding ownership. A new paragraph should be added to FSH 71.12 which states: "The location of the area is conducive to the perpetuation of wilderness values." Considerations should include "the relationship of the area to other primitive or natural lands, regardless of ownership; the relationship of the area to protected lands, regardless of ownership; the proximity of the area to population centers where residents need opportunities to enjoy wilderness values."
- The new discussion of solitude in FSH 72.1(1) improperly emphasizes isolation from "sights and sounds." Congress has made clear that sights and sounds from outside an area do not render the area inappropriate for Wilderness designation. See Doug Scott, Solitude, "Sights & Sounds" and the Wilderness Act: What Can Qualify for Designation as Wilderness? at 11-12 (attached and incorporated herein by reference). These new provisions regarding solitude should be deleted.
- A paragraph has been deleted entirely from FSH 72.1(1). The deleted criteria included: geological, biological or ecological strata; scientific, educational or historical values; and social, economic and environmental factors. See previous FSH 7.21(1), para. 3. These criteria should be added back to the directives.
- FSH 72.1(3), regarding outdoor recreation, places undue emphasis on challenge and risk, which already are covered in the preceding section captioned "Challenge," FSH 72.1(2). The recreation criteria also should not include isolation. Isolation already is covered in the first sentence of the "Environment" section, FSH 72.1(1), regarding solitude. This also improperly conflates the separate "solitude or a primitive and unconfined type of recreation" criteria in the definition of wilderness. 16 U.S.C. § 1131(c).
- Several activities inexplicably were deleted from the list of "primitive-type" outdoor recreation activities in FSH 72.1(3), including mountain climbing, canoeing, boating, river rafting, photography, and "other outdoor activities." These activities and the words "and other outdoor activities" should be added to this directive.
- As in the previous FSH 7.21(4), the list of special features in FSH 72.1(4) should include "the capability to provide outdoor education and scientific study, both formal and

informal" and the provision that "abundant and varied wildlife may enhance an area's wilderness capability."

- FSH 72.41 requires the evaluation of Western roadless areas to comply with California v. Block, 690 F.2d 753 (9th Cir. 1982), and explains how to comply. Yet FSH 72.42 requires only a very limited evaluation for Eastern areas – either recommend the area as a Wilderness Study Area or manage it for multiple uses other than wilderness. The directives should be revised to require that all areas, including Eastern areas, be evaluated according to the criteria described in FSH 72.41, as did the previous directives (see previous FSH 7.25).

V. Environmental Analysis And Public Involvement

The regulations and the directives create a pale and illegal imitation of the full NEPA process for plan adoption and revision. Instead of creating this new "Comprehensive Evaluation Report," the Forest Service should adhere to the NEPA process, including preparing Environmental Impact Statement (EIS) for forest plans.

Additional problems with the CER and the public involvement procedures include:

- The CER fails to require the Forest Supervisor to consider alternatives and their impacts in detail. The CER provides only the discretion to consider "options" and the discretion to determine the detail in which the options and their effects will be considered.
- Without the disclosure of environmental impacts and alternatives, as well as the other NEPA procedures, the public's ability to meaningfully participate in the process is hampered.
- In addition to the Notice of Initiation and comment on the proposed plan, the directives should require collaboration with the public at key points along the way, instead of giving the Forest Supervisor the authority to proceed unilaterally. See 36 C.F.R. § 219.9(a) (requiring public involvement in the development of the CER, establishing plan components and designing the monitoring program). In practice, it is difficult for the public to effect significant change once a proposed plan, which took years to develop, is released.
- The directives should specify an ample, minimum timeframe for comment on the Notice of Initiation. About 120 days were provided for comment on the notice of intent to prepare EISs for the revised plans for several forests in the Southern Appalachians.
- It is important that the iterative or "rolling" strategy, see FSH 31.42b, truly continue to "roll" in response to public input. During the recent plan revisions for the Southern Appalachian forests, the "rolling alternative" got stuck.
- The public also should be guaranteed an opportunity to participate in the development of the Environmental Management System.
- The 30-day timeframe to file pre-decisional objections is insufficient. The regulations and the directives should allow at least 90 days, the time previously allowed to file administrative appeals of forest plans.

VI. Conclusion

In conclusion, SELC believes these directives carry forward serious violations of the NFMA found in the revised forest planning regulations and remains gravely concerned about the fate of our National Forests should the Forest Service persist on this course.

Sincerely,

David W. Carr, Jr.
Public Lands Project Leader
Senior Attorney

Sarah A. Francisco
Associate Attorney

PLR136.

Planningrulenoi

From: Bob Slocum [rwslocum@ncforestry.org]

Sent: Friday, June 08, 2007 5:55 AM

To: Planningrulenoi

Cc: Steve Henson; 'Charles Jones'; 'Chip Miller'; 'Dale Thrash'; Greg Decker; Jeff Edwards; Jim Durham; Mark Wiseman; Michael Walters; 'A.P. Mustian'; 'Albert Coffey'; 'Allen Plaster'; 'Art Cooper'; 'Barry New'; 'Bill Leuschner'; 'Bob Emory'; 'Bryan Hulka'; 'Butch Blanchard'; 'Coleman Doggett'; 'Debbie Hamrick'; 'Doug MacKinnon'; 'Drew Marczak'; 'Fred Hardin'; 'Gary Allred'; 'Hank Higgins'; 'Harold Brady'; 'Jim Gregory'; 'Joel Henry Davis'; 'Kermitt Taylor'; 'Kim Baymiller'; 'Larry Such'; 'Michael Shuman'; 'Mike Thompson'; 'Munroe Jones'; 'Neil Loyd'; 'Shane Kennedy'; 'Steve Tomlin'; 'Tim Tabak'; 'Tom Huffman'; 'Tommy Tew'; 'Wade Stewart'; 'William Snyder'

Subject: Comments on Planning Rule

On behalf of the North Carolina Forestry Association (NCFA) – the state's oldest and largest forest conservation organization representing over 4,000 landowners, wood suppliers and wood and paper product manufacturers - I urge the Forest Service to move as quickly as possible to complete the EIS on the 2005 National Forest System planning rule. We have been involved in the forest planning process since the late 1980's and have been continually frustrated with the long and cumbersome process to develop a forest plan for any national forest. We believe the 2005 rule would have expedited this process without compromising public input and allowed the Agency to attend to the extensive management needs of our public forests.

We know from experience that the 2000 planning rule was hopelessly unworkable and, rather than helping the process, made it much worse. This rule was so bad that the Agency was using the 1982 rule.

The 2005 rule would improve the planning process by:

Improving public involvement by allowing citizens to efficiently engage in the process over 2-3 years rather than the current 5-7 years;

Focusing environmental analysis at the appropriate level – the project level where specific environmental conditions are known. We believe the court erred in forcing the Agency to conduct NEPA on the 2005 rule, which doesn't propose specific, on the ground actions.

Better responding to the latest scientific knowledge and changing natural conditions. Forest planning will be base on state-of-the-art scientific information as the National Forest Management Act intended.

Saving the government millions of dollars annually and enabling the Agency to better manage our national forests. The Forest Service estimates it spends more than 40% of its budget and time on administrative and legal work rather than in the forest. The 2005 rule would save more than $27 million annually – savings that will allow land managers to get more accomplished on the ground.

Pursuant to the court order to conduct NEPA on the 2005 rule, we urge the agency to analyze only the proposed rule and the no action alternative. The agency must disclose to the public the impact of failing to reduce time and resources spent on planning, which would be the result of either dropping or significantly changing the 2005 rule.

Bob Slocum
Executive Vice President
NC Forestry Association
919/834-3943, ext. 21
800/231-7723
Visit our website at www.ncforestry.org
2007 Annual Meeting: Oct. 10-12, 2007
New Bern, NC

Planningrulenoi

From: rick@earthfriends.com
Sent: Monday, June 11, 2007 2:05 PM
To: Planningrulenoi
Subject: RE: Planning Rule NOI Comments

Forest Service
PO Box 162969
Sacramento, CA 95816-2969

Dear Forest Service,

THE AMERICAN PUBLIC WANTS OUR PUBLIC LANDS AND FORESTS TO BE PROPERLY PROTECTED AND WELL MANAGED TO PRESERVE THEIR UNSPOILED VALUES AND USE AS HABITAT. WE ARE SOLIDLY AGAINST COMERCIALIZATION, RAMPANT ENERGY DEVELOPMENT AND OVER HARVEST!
WE WANT YOUR RULES TO CONTINUE TO GIVE US A STRONG VOICE IN THE MANAGEMENT OF THESE LANDS!

Please accept these scoping comments for the preparation of the environmental impact statement to analyze and disclose potential environmental consequences associated with the National Forest System land management planning rule.

I recommend that the USFS adopt rules the same or similar to those of the September 18, 1982 Federal Register USFS planning rules. I support rules like these because they track closely the
1976 National Forest Management Act (NFMA) and what it requires the USFS to do. The 2005 planning rules do not track the NFMA well and often leave out significant requirements or make them optional. The USFS should list all the mandatory requirements of the NFMA and then ensure that rules are prepared and implemented which contain these requirements and that these rules are covered by the EIS. The NFMA has not changed and the requirements that the USFS must adhere to are still the same.

The public looks to the National Forest Management Act to ensure that the Forest Service will maintain viable wildlife populations and properly manage our national forests for future generations. A critical component of past forest planning regulations is the requirement of mandatory resource protection standards for all forest plans. The EIS needs to analyze the direct and indirect effects of eliminating resource protection standards from forest plans and the impacts of eliminating wildlife viability and monitoring requirements.

In the development of the forest planning EIS, I urge that the Forest Service reconsider the exemption of forest management plans, revisions or amendments from environmental review and meaningful public input under the National Environmental Policy Act (NEPA). Without the full NEPA process (an EIS), the public is not given adequate information to evaluate the environmental consequences of forest plans and disregards the best available science in favor of commercial interests. The planning rule EIS should fully analyze impacts of exempting forest plans from NEPA and consider alternatives that require full NEPA analysis and public participation.

The Forest Service should also take into account the breadth of new scientific and socio-economic information. The Forest Service should fully analyze other alternatives to the 2005 planning rule that include strong standards to protect forests, waters and wildlife, and evaluate the adoption of some or all of the 1982 and 2000 regulations. Alternatives should also include requirements for the agency to develop plans to address impacts of climate change in accordance with the Global Climate Change Prevention Act of 1990 (7 U.S.C. 701).

Since this is the first time the public has the opportunity to participate in an EIS process for the new forest planning regulations, the Forest Service needs to modify NEPA deadlines in order to allow time to thoughtfully consider public comments throughout the NEPA process.

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I HOPE THAT YOUR NEW RULES WILL ACKNOWLEDGE THE HUGELY BENEFICIAL ROLE OF THE PUBLIC IN DIRECTING THE MANAGEMENT OF OUR PUBLIC LANDS! DO NOT GIVE INTO POLITICAL PRESSURE TO DIMINISH THE PUBLIC INPUT PROCESS! tHANKS FOR ALL YOU DO FOR THE AMERICAN PEOPLE!

Thank you for the opportunity to comment, Rick Flory PO Box 11217 Jackson, WY 83002

PLR138.

Planningrulenoi

From: Friends of the Clearwater [foc@friendsoftheclearwater.org]
Sent: Monday, June 11, 2007 12:33 PM
To: Planningrulenoi
Subject: NOI Planning Rule Comments

June 11, 2007

NOI Comments
P.O. Box 162969
Sacramento, CA 95816-2969
Sent Via Email to: planningrulenoi@fscomments.org

Here are comments from Friends of the Clearwater on the notice of intent to prepare an EIS for the forest planning regulations. We have provided comments in the past and incorporate those comments into this letter. We were also a co-plaintiff in the successful court case.

Introduction

The illegal 2005 planning regulations (and to a lesser degree, the 2000 regulations) were a cynical attempt to bypass the public and remove accountability. Rather than acting as a public servant, the Forest Service has behaved as if the public has little knowledge of or legitimate interest in national forest planning. The worst problem has been the rejection of solid, measurable standards to which the agency must adhere.

The lawsuit decision should have drastically altered this ill-advised course of direction. Instead, the agency is proceeding down the path of disenfranchising the very citizens who own the national forests.

Perhaps the most blatant example of USDA's contempt for the citizens and our laws is the statement in the NOI that the agency disagrees with the law and the court ruling. As public servants, your job is to uphold the law.

Rushed Process

It is ridiculous to believe a draft environmental impact statement (EIS) could be ready for public comment in the end of June when the scoping process for this EIS doesnt end until June 11. It is clear from this timetable the Forest Service has no intention of incorporating any suggestions from this scoping process in the EIS. Rather, the timetable is a clear indication the EIS has already been written. This violates both the public trust and NEPA.

Need for an EIS for Individual Forest Plans

It is clear that an EIS is required for individual forest plans under any fair reading of NFMA and its legislative history. These plans set direction for national forest management. As such, a plan must deal with broad allocation issues, establish a system to monitor whether the assumptions made in the plan are legitimate, and set up standards for meeting NFMA and other environmental laws.

In particular, allocation issues such as recommendations for wilderness need an EIS. Promises made by USDA in the 1970s and supporting case law all make this clear. Such a radical change from this time-

PLR 138

honored path betrays the public interest.

Analysis in the EIS

The EIS should consider several options, including the 1982 regulations. These regulations, while far from perfect, address important issues. An alternative that keeps them (with some changes) ought to be addressed.

Similarly, the EIS ought to look at an alternative that keeps the provisions for preparing EISs on forest plans intact. Again, the 1982 regulations do this.

Nevertheless, the best option is for the agency to drop the illegal 2005 regulations altogether. An alternative that makes needed updates to the 1982 regulations without removing agency accountability would be an appropriate path.

EMS

The illegal 2005 regulations wasted a lot of time and money on a so-called monitoring process from the industry. This EMS process is not a good fit for public lands. Any benefits to the public this process may have can be incorporated into regular forest plan monitoring or other monitoring the agency chooses to do. Making it part of the forest plan revision process has needlessly complicated forest plans. That is ironic as the excuse used by the regime for the illegal 2005 regulations--the true purpose of which was to end agency accountability--was that they would streamline the process. For example, the Clearwater and Nez Perce National Forests would have already revised their forest plans had it not been for the requirement to implement these illegal 2005 regulations.

Summary

The rushed nature of this EIS almost ensures that it will be inadequate. The fact that the illegal 2005 regulations are not accountable (no standards, no real monitoring, no species viability, conflict with NFMA) puts the burden o n this EIS to adequately analyze the impact such a radical departure would have on national forest management. That is no easy task as current forest plan standards were designed to ensure species viability, water quality, and the like.

Furthermore, the excuse that analysis will take place on site-specific projects is belied by two facts. First, the cumulative impacts of the wholesale abandonment of enforceable standards and practices cant be analyzed in a site-specific project document. Second, the agency ahs engaged in a despicable shell-game by proposing and implementing regulations which bypass NEPA on site-specific projects by categorically excluding projects from analysis. This creates, by intent, a process where the agency states, in response to citizen concerns on forest plans, the planning process does not make decisions or look at a crucial issue. When citizens raise those concerns on project-specific levels, the response is this direction has already been decided in the forest plan.

Sincerely,

Gary Macfarlane
Ecosystem Defense Director
Friends of the Clearwater
PO Box 9241
Moscow, ID 83843

PLR138

Planningrulenoi

From: Kathryn Mazaika [kmazaika@comcast.net]

Sent: Monday, June 11, 2007 2:58 PM

To: Planningrulenoi

Subject: Scoping comments for NFMA Forest Planning Rule

Please accept these scoping comments for the preparation of the environmental impact statement to analyze and disclose potential environmental consequences associated with the National Forest System land management planning rule.

The EIS should analyze the impacts on the national forests of exempting forest plans from environmental review and meaningful public input under the National Environmental Policy Act.

The Forest Service should ensure that the public has access to adequate information to evaluate the environmental consequences of forest plans. Given the size and complexity of most forest plans, the Forest Service should also ensure that enough time is allowed for informed public comment.

The EIS should analyze the both the direct and indirect effects of eliminating resource protection standards from forest plans and the impacts of eliminating wildlife viability and monitoring requirements.
The Forest Service should consider alternatives to the 2005 planning rule that include strong standards to protect forests, waters and wildlife, and evaluate the adoption of some or all of the 1982 and 2000 regulations. Alternatives should also include requirements for forest plans to address the impacts of climate change.

Exempting forest management plans will eliminate the study or disclosure of the cumulative impact of management activities across the national forest, something usually done at the planning stage. The EIS should fully analyze impacts of exempting forest plans from NEPA and consider alternatives that require full NEPA analysis and public participation.

The agency should not make it easier for timber, oil, gas, mining a nd motorized recreation companies to profit from the use of public forests while eliminating the need for forest managers to assess potentially harmful impacts on water, wildlife, recrea tional use, old growth and roadless areas.

Thank you for the opportunity to comment.

Kathryn Mazaika
Peters Avenue
San Francisco, CA 94110

PLR140.

Planningrulenoi

From: Henry W. Peters [hwpeters@provide.net]
Sent: Monday, June 11, 2007 1:12 PM
To: Planningrulenoi
Subject: forest_planning_rules

Citizen Public Lands
Rt. 1, Box 193 Ewen MI 49925

June 11, 2007

Re: Forest Planning Rules.

Dear Forest Service Planners,

Please accept these scoping comments for the preparation of the environmental impact statement to analyze and disclose potential environmental consequences associated with the National Forest System land management planning rule. **Kindly acknowledge your receipt of these comments. Thank you.**

I recommend that the USFS adopt rules the same or similar to those of the September 18, 1982 Federal Register USFS planning rules. I support rules like these is because they track closely the 1976 National Forest Management Act (NFMA) and what it requires the USFS to do. The 2005 planning rules do not track the NFMA well and often leave out significant requirements or make them optional. The USFS should list all the mandatory requirements of the NFMA and then ensure that rules are prepared and implemented which contain these requirements and that these rules are covered by the EIS. The NFMA has not changed and the requirements that the USFS must adhere to are still the same.

The public looks to the National Forest Management Act to ensure that the Forest Service will maintain viable wildlife populations and properly manage our national forests for future generations. *A critical component of past forest planning regulations is the requirement of* mandatory resource protection standards for all forest plans. The EIS needs to analyze the direct and indirect effects of eliminating resource protection standards from forest plans and the impacts of eliminating wildlife viability and monitoring requirements.

In the development of the forest planning EIS, I urge that the Forest Service reconsider the exemption of forest management plans, revisions or amendments from environmental review and meaningful public input under the National Environmental Policy Act (NEPA). *Without the full NEPA process (an EIS), the public is not given adequate information to evaluate the environmental consequences of forest plans and disregards the best available science in favor of commercial interests.* The planning rule EIS should fully analyze impacts of exempting forest plans from NEPA and give appropriate weight in considering alternatives that require full NEPA analysis and public participation. NEPA is, in fact, a mandate for full and appropriate public process to be carried out, especially in light of actions affecting (but not necessarily limited to) public lands.

The Forest Service should also take fully into account the breadth of current new (or not so

PLR 1410

new) relevant scientific and socio-economic information, paying special attentions to such broader scale matters as cumulative effects:

> NEPA
> **40 CFR PART 1500**
> Sec. 1508.7
> Cumulative impact. "Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The Forest Service should fully analyze other alternatives to the 2005 planning rule that include strong standards to protect forests, waters and wildlife, and evaluate the adoption of some or all of the 1982 and 2000 regulations. ***Alternatives should also include requirements for the agency to develop plans to address impacts of climate change in accordance with the Global Climate Change Prevention Act of 1990 (7 U.S.C. 701).***

Since this is the first time the public has the opportunity to participate in an EIS process for the new forest planning regulations, *the Forest Service needs to modify NEPA deadlines in order to allow time to thoughtfully consider public comments throughout the NEPA process.*

Sincerely,

Henry W. Peters, Director
Citizen Public Lands
Rt. 1, Box 193
Ewen MI 49925

p.s., With thanks to the "Forest Guardians"<lmccain@fguardians.org>

PLR141.

Planningrulenoi

From: Kathleen MacKay [bkmackay@hotmail.com]
Sent: Monday, June 11, 2007 12:17 PM
To: Planningrulenoi
Subject: forest plan comments

Dear USDA Forest Service,

As a former Forest Service wilderness technician, I feel very strongly about agency transparency and public review. Please accept these scoping comments for the preparation of the environmental impact statement to analyze and disclose potential environmental consequences associated with the National Forest System land management planning rule.

The EIS should analyze the impacts on the national forests of exempting forest plans from environmental review and meaningful public input under the National Environmental Policy Act.

The Forest Service should ensure that the public has access to adequate information for the evaluation of the environmental consequences of forest plans. Given the size and complexity of most forest plans, the Forest Service should ensure that enough time is allowed for informed public comment.

The EIS should analyze the effects of eliminating resource protection standards from forest plans and the impacts of eliminating wildlife viability and monitoring requirements.

The Forest Service should consider alternatives to the 2005 planning rule that include strong standards to protect forests, waters and wildlife, and evaluate the adoption of some or all of the 1982 and 2000 regulations. Alternatives should also include requirements for forest plans to address the impacts of climate change.

Exempting forest management plans will eliminate the study or disclosure of the cumulative impact of management activities across the national forest, something usually done at the planning stage.

The agency should not make it easier for timber, oil, gas, mining and motorized recreation companies to profit from the use of public forests while eliminating the need for forest managers to assess potentially harmful impacts on water, wildlife, recreational use, old growth and roadless areas.

Thank you for the opportunity to comment.

Kathy MacKay
1816 Honey Run Road
Chico, CA 95928

PLR142.

Planningrulenoi

From: Julia Altemus [julia@logging.org]
Sent: Monday, June 11, 2007 12:41 PM
To: Planningrulenoi
Subject: 2005 Planning Rule NOI Comment

Julia Altemus
Resource Specialist
Montana Logging Association
Missoula Field Office
(406) 251-1415 or (406) 253-4485
(406) 251-4674 fax
julia@logging.org
www.logging.org

PC 2142

June 11, 2007

Planning Rule NOI Comments
P.O. Box 162969
Sacramento, CA 95816-6724

RE: Planning Rule NOI Comments

We would like to take this opportunity to urge you to move as quickly as possible to complete the environmental analysis on the 2005 National Forest System Land Management Planning Rule.

As you are intimately aware Judge Phyllis Hamilton, of the northern California federal court, set aside the 2005 National Forest planning regulations. As a result of her decision, she enjoined use of those rules which implemented an environmental management system (EMS) approach to planning and ordered the Forest Service to determine whether the original 1982 rules are in effect or the 2000 revised planning rules, with their transition provisions.

Judge Hamilton examined compliance under the Administrative Procedures Act (APA) and ultimately concluded that the final rules were so different from the proposed rules that the Forest Service should have asked for additional public input.

She also determined that the Forest Service lacked a sufficient basis for invoking a categorical exclusion from the National Environmental Policy Act (NEPA) with regards to the 2005 planning rules. The court held that at least an environmental assessment (EA) is required. Then, similar to her NEPA analysis, she found the 2005 planning rules might have possible effects on species listed under the Endangered Species Act (ESA). She believed that the Forest Service violated Section 7 of the ESA by not engaging in any consideration of those impacts. The judge seemed to assume that the Ninth Circuit case law required some analysis of NEPA and ESA impact of programmatic actions, **ignoring the fact that the planning rules themselves do not mandate any direct or indirect environmental impacts!** A fact that we still maintain is correct. The planning documents are just that, planning documents. Actual proposed actions on the ground tripper either the use of a CE, or an EA or an EIS analysis.

Like all categorically excluded directions, actions must first be screened to assure that no adverse effects to extraordinary circumstances will occur. Considering the proposed concept that planning will be strategic in nature instead of prescriptive, it is more than logical that the 2005 planning rules should have been categorically excluded from environmental analysis.

The Forest Service has spent millions of dollars with over 40 forests – nationwide – undergoing plan revisions under the new 2005 planning rules. Specific to Region One, land management plan revisions on the Clearwater, Nez Perce, Idaho Panhandle, Kootenai, Flathead, Lolo and Bitterroot National Forests are now in limbo as the Forest Service develops the environmental analysis for the 2005 planning rule.

However, since the agency has decided to conduct NEPA pursuant to the court order, we urge you to develop an EA – as Judge Hamilton suggested – and only analyze the proposed rule and the no action alternative. Since we are heading down this path, it is equally important that the agency disclose to the public the impact of failing to reduce time and resources spent on planning and the consequences of moving currently active land management allocations to proposed passive or non-managed allocations.

Over the vast landscape of National Forest System lands, a range of ecosystems occur that will react differently to management practices. The new planning rules address this variability by allowing the Forest Service planning to provide flexibility in implementation based on changing conditions. This ultimately will enable line officers to focus their efforts and resources on specific projects that will have actual on-the-ground impacts.

Therefore, time is of the essence. Developing and incorporating the EMS is a pivotal resource management tool that will eventually utilize more monitoring, incorporate more adaptive management and offer more accountability to the folks that the Forest Service serves.

Thank you for this opportunity to comment. Please feel free to contact me if you have any questions or concerns at the Montana Logging Association Missoula field office at (406) 251-1415 or (406) 253-4485.

Sincerely,

Julia Altemus
Resource Specialist
MLA

Planningrulenoi

From: Imbergamo, Bill [Bill_Imbergamo@afandpa.org]
Sent: Monday, June 11, 2007 12:49 PM
To: Planningrulenoi
Cc: Imbergamo, Bill
Subject: 2005 National Forest System Land Management Planning Rule.

Please find attached comments submitted on behalf of the American Forest & Paper Association on the Notice of Intent to prepare an EIS regarding the 2005 National Forest System Land Management Planning Rule.

Bill Imbergamo
Staff Executive, Federal Timber Purchasers Committee
American Forest & Paper Association
1111 19th Street, NW
Suite 800
Washington, DC 20036
202-463-2479
bill_imbergamo@afandpa.org

PLR 143

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June 11, 2007

Planning Rule NOI Comments
P.O. Box 162969
Sacramento, CA 95816-2969

Re: Scoping Comments in Response to 72 Fed. Reg. 26775 (May 11, 2007)

Dear Forest Service:

At 72 Fed. Reg. 26775 (May 11, 2007), the Forest Service provided notice of its intent to prepare an environmental impact statement ("EIS") on the 2005-adopted forest planning rules codified in 36 C.F.R. Part 219 (2006), and the agency requested scoping comments under the National Environmental Policy Act ("NEPA"). As the Federal Register notice alludes to, District Judge Hamilton has enjoined the Forest Service from further use of the 2005 forest planning rules until procedural violations of NEPA, the Endangered Species Act ("ESA"), and the Administrative Procedure Act ("APA") are cured. *Citizens for Better Forestry v. U.S. Dep't of Agriculture*, __ F. Supp. 2d __, 2007 WL 966985 at *41 (N.D. Cal. March 30, 2007). "While the Agency is not in agreement with the Court's decision, it has decided, in the interest of moving forward with land management planning, to prepare an environmental impact statement to comply with the court order" and to publish a proposed "rule for comment in late June." 72 Fed. Reg. 26776.

The American Forest & Paper Association ("AF&PA") supports this pragmatic solution to the unfortunate uncertainty created by litigation. AF&PA is a defendant-intervenor on the Forest Service's side in the consolidated cases brought by Citizens for Better Forestry and Defenders of Wildlife against the 2005 planning rules. AF&PA is the national trade association of the forest, pulp, paper, paperboard, and wood products industry. We represent over 100 member companies that grow, harvest and process wood and wood fiber; manufacture pulp, paper and paperboard products from both virgin and recovered fiber; and produce solid wood products. The association is also the umbrella for more than 60 affiliate member associations that reach out to more than 10,000 companies.

AF&PA's comments can be summarized as follows. By preparing an EIS on the neutral forest planning rules, the Forest Service would be going far beyond the minimum required by NEPA. The EIS and other curative steps should be completed promptly, so that forest planning can resume under the 2005 planning rules.

With respect to NEPA, the Forest Service had found the 2005 planning rules fit within an established categorical exclusion ("CE") from NEPA for rules establishing procedures for revising forest plans. Judge Hamilton concluded: (1) the 2005 planning rules were outside the

legitimate scope of the CE; and (2) at least the agency must prepare an environmental assessment ("EA") to create a reviewable record on whether the 2005 forest planning rules have any environmentally significant impacts. 2007 WL 966985 at *19-30. AF&PA agrees with the Forest Service that the district court's conclusions are legally erroneous. We support Federal Defendants' currently pending motion to amend the judgment so that it does not find violations of NEPA and the ESA.

Still, the district court may not amend its judgment. Appellate review could take a year or longer, and the outcome of an appeal always carries some uncertainties. Following only a litigation option would carry the heavy price that the forest plan revision process, which had been proceeding under the 2005 rules until the injunction, could be shut down for a year or more.

The Forest Service seems to be taking the more pragmatic approach by administratively curing the procedural defects found by Judge Hamilton. That could end the injunction more expeditiously and allow the resumption of forest plan revisions under the 2005 rules. The administrative cures include: (1) preparing an EIS on the 2005 planning rules; (2) providing additional public notice and comment on the 2005 rules to cure the procedural APA defect found at 2007 WL 966985 at *9-15; and (3) conducting some form of ESA § 7 consultation with the Services to cure the procedural ESA § 7 defect found at 2007 WL 966985 at *31-38.

By Preparing An EIS On The Planning Rules, The Forest Service Would Be Going Beyond The Minimum Required By NEPA. For reasons described below, it is highly unlikely that the adoption of forest planning rules – rules which compel no on-the-ground actions or impacts – requires an EIS. We encourage the Forest Service to state that it is preparing an EIS voluntarily to eliminate litigation issues and allow continued use of the 2005 forest planning rules. This will allow the Forest Service to take advantage of the precedent that voluntary preparation of an EIS does not prove that document is legally necessary. *Douglas County v. Babbitt*, 48 F.3d 1485, 1506 n.13 (9th Cir. 1995). That is, the Forest Service could then defend in court the NEPA compliance on the 2005 planning rules on the multiple grounds that those rules are covered by a CE, at most an EA is required and this EIS exceeds what is needed for an adequate EA, and this EIS is sufficient if an EIS is required.

An EIS on the 2005 forest planning rules would exceed what is required by NEPA for the following reasons. First, if APA review principles are followed, the 2005 planning rules are within the scope of a categorical exclusion. One CE, approved by the Council on Environmental Quality, covers "[r]ules...to establish Service-wide...program policies" which "include but are not limited to...[e]stablishing procedures for amending or revising Forest Land and Resource Management Plans." Forest Service Handbook 1909.15, § 31.12, CE 2f. On its face, this CE covers the 2005 planning rules, as the rules establish Service-wide procedures and policies for revising and amending forest plans. Further, the agency's interpretation of its own CE (like an agency's interpretation of a rule it authored) "must be given controlling weight unless" the agency's construction "is plainly erroneous or inconsistent with the regulation." *Alaska Center for the Env't v. U.S. Forest Service*, 189 F.3d 851, 857 (9th Cir. 1999). Accordingly, the answer should be: no NEPA document is required because the planning rules are lawfully within the scope of a CE. And Judge Hamilton's view that an agency must prepare an EA to assess

whether the action is categorically excluded from NEPA documentation destroys the utility and efficiency of a CE, and lacks a sound basis in law.

Second, Judge Hamilton found that at least an EA was required to create a record on whether the planning rules do have significant, indirect environmental effects. She did not reach the issue of whether the law mandates an EIS, and postponed that issue until she reviews an EA. *See* 2007 WL 966985 at *29-30. By preparing an EIS, the Forest Service is also exceeding the minimum required by Judge Hamilton, an EA.[1]

Third, NEPA applies only to changes in the physical environment that have a "reasonably close causal relationship" with the challenged action. *Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 772, 774 (1983). The 2005 planning rules do not compel any changes in the physical environment. Those rules merely guide the process of revising and amending forest plans, but do not dictate the content of any future forest plan.[2] As even the later forest plan "does not itself authorize the cutting of trees" and as there are opportunities for judicial review if and when a timber sale or other ground-disturbing action is proposed, facial challenges to forest plans based on theories of environmental hardships are not ripe. *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726, 729-30, 733 (1998). Since adoption of a forest plan does not mandate a specific set of environmental impacts, we share the Forest Service's legal view that the adoption of rules guiding the preparation of forest plans – which are one step further removed from environmental impacts – do not have significant environmental effects requiring an EIS. *See Sierra Club v. Andrus*, 442 U.S. 347 (1979) (NEPA does not apply to budget requests, as there will be later opportunities for NEPA documents when ground-disturbing actions are actually proposed).

Closely related, under the NEPA rules, the type of NEPA document required (if any) is determined with reference to the "effects" or impacts the action "causes." 40 C.F.R. 1508.8; *see id.* at §§ 1502.4, 1508.27. The agency need only consider the "[d]irect effects, which are caused by the action and occur at the same time and place" and "[i]ndirect effects, which are caused by the action and are later in time...but are still reasonably foreseeable." 40 C.F.R. 1508.8. To be "caused by the action," the challenged action must be the "proximate cause" of the environmental impacts – "a 'but for' causal relationship is insufficient to make an agency responsible for a particular effect under NEPA and the relevant regulations." *Dep't of Transportation v. Public Citizen*, 541 U.S. 752, 767 (2004). The 2005 planning rules do not

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[1] The Forest Service is apparently proceeding directly to EIS preparation to shorten the timeframe for any NEPA injunction. The time period for completion of an EIS is likely shorter than Judge Hamilton's approach that the agency should prepare an EA for a judicial determination on whether an EIS is required, with a potential that an EIS would have to be prepared, and where the injunction could last until all reviewing courts ratify the agency's NEPA compliance.

[2] The 2005 rules are "not intended to, and will not determine the multiple uses" for a particular national forest. 70 Fed. Reg. 1034 (Jan. 5, 2005). Thus, the planning rules allow each forest supervisor to decide the mix of multiple-use benefits to feature in a forest plan.

proximately cause any indirect environmental impacts because those rules are neutral. Those rules do not dictate the content of any forest plan, nor do they dictate any specific set of environmental impacts. *See* note 2. Only the later adoption of a revised forest plan, following public input, will determine the anticipated mix of multiple uses allowed in a national forest for the next 10 to 15 years. And only a later project-specific decision, whose impacts would be addressed in a NEPA document, would have a knowable set of impacts on the human environment. Because those impacts are caused by decisions made well after the adoption of the 2005 forest planning rules, those rules do not "cause" direct or indirect environmental impacts. Hence, no EIS is required under 40 C.F.R. 1508.8 and *Public Citizen*.

Fourth, another pertinent aspect – and the practical issue the Forest Service now faces – is: do the 2005 forest planning rules have ascertainable impacts that are "reasonably foreseeable" and that can be productively analyzed in a NEPA document? NEPA duties are bounded by "practical considerations of feasibility" and those choices are "properly left to the informed discretion of the responsible federal agencies." *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976). AF&PA agrees with the Forest Service's legal position that the 2005 planning rules have no environmental impacts that are reasonably foreseeable and currently ascertainable. Since Judge Hamilton stated that this position is "not nonsensical" (2007 WL 966985 at *25), the conclusion that the Forest Service was not arbitrary in reasoning that a current EIS would be infeasible and speculative should have resulted in affirmance on NEPA compliance.

Nonetheless, Judge Hamilton thought that NEPA rules and Ninth Circuit cases may require NEPA documents on programmatic actions. 2007 WL 966985 at *25-26 (quoting 40 C.F.R. 1502.4(b), which merely states that such EISs "may be prepared"). The district judge seemed to reason that, as the 2005 planning rules "eliminated many of the...[environmental] standards" that had been in earlier planning rules, it is reasonably foreseeable that the "lower environmental safeguards at the national programmatic level will result in lower environmental standards at the site-specific level." 2007 WL 966985 at *29-30.[3]

Thus, to be most defensible in court, the EIS should likely describe the areas where the 2005 planning rules eliminate minimum management standards that were in the 2000 planning rules or 1982 planning rules. The EIS should provide at least a qualitative discussion of the

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[3] The Ninth Circuit applied this rationale to the more easily met causation or traceability test for standing (not the merits) in *Citizens for Better Forestry v. U.S. Dep't of Agriculture*, 341 F.3d 961, 975 (9th Cir. 2003) (challenge to the 2000 forest planning rules). Though the 2005 planning rules eliminate a national prescription that each forest plan must maintain viable populations of each native vertebrate species, the impacts of removing that constraint cannot be meaningfully assessed as the rules do not "foreclose later" adoption of such species-by-species protections in individual forest plans. *Northern Alaska Envtl. Center v. Lujan*, 961 F.2d 886, 891 (9th Cir. 1992).

reasonably foreseeable impacts of those changes on future forest plans and future ground-disturbing projects.[4]

Fifth, due to the factors described above, the furthest that most courts are likely to go is: perhaps the Forest Service should prepare an EA that qualitatively explains the potential consequences of the 2005 planning rules versus other alternatives. An EA also would be consistent with the Forest Service's practice of preparing an EA on the 1982 planning rules and on the 2000 planning rules. For this reason as well, the Forest Service would be exceeding arguable NEPA duties by preparing and seeking public comment on a full-blown EIS, rather than an EA.

In sum, by preparing an EIS, the Forest Service will be in a strong position to defend the adequacy of NEPA compliance on the 2005 planning rules. This increases the likelihood that the unfortunate (and, we believe, mistaken) injunction will end soon and that forest planning can resume under the 2005 planning rules.

The EIS Should Be Completed Expeditiously, So That The Now-Delayed Forest Planning Under The 2005 Rules Can Be Resumed. The Forest Service should analyze only the proposed 2005 Rules and accompanying directives and the no action alternative, which we would define as reverting to either the 2000 Rules or the 1982 Rules. It is critical that the range of alternatives be defined realistically to conserve resources and expedite the EIS process. The 2005 Rules and accompanying directives should be analyzed to ensure that they function together to simplify and streamline the planning process, not simply direct cumbersome, unnecessary process to the Forest Service manual rather than the regulations.

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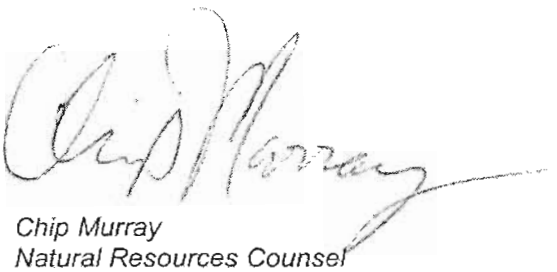
[4] One prime example concerns the changes from the 1982-adopted and 2000-deleted 36 C.F.R. 219.19. Section 219.19 had been interpreted by some courts to require: (1) as a first priority and a constraint on all other multiple use objectives, that each forest plan ensure sufficient habitat for viable, widely distributed populations of each vertebrate species native to a particular national forest; and (2) wildlife monitoring in the form of wildlife population surveys. The 2005 planning rules: (1) eliminate any national priority for viable populations of each individual wildlife species, shift more to providing broader ecosystem ability, but still require the protection of ESA-listed species and allow a forest plan to elect to protect habitat for other individual species; and (2) shift more to monitoring of habitat conditions rather than attempting to count secretive wildlife over broad areas. *See* 36 C.F.R. 219.10, 219.14(f). Arguably, these changes are likely to produce future forest conditions that focus more heavily on ecosystem diversity and less on managing for habitats of dozens of individual species that are not endangered or threatened species. The Forest Service may just be able to describe such impacts speculatively and qualitatively, as the actual impacts on wildlife depend on future decisions made in adopting forest plans and in project implementation.

One might also forecast that a general effect of the 2005 rules' streamlining of forest planning is that less of the Forest Service's budget will be spent on forest planning and wildlife counts, and more of that budget will be available for fuels reduction and other forest health projects. The EIS should describe these beneficial environmental effects.

The forest products industry is primarily concerned that the agency put in place a planning process that takes place in a timely manner, and focuses on the desired future conditions of the National Forest System units rather than speculative analyses of potential future projects which are neither funded nor approved by the Forest Plan. Environmental analyses should be focused in the future on projects, not plans, and certainly not on rules that govern planning processes.

Regards,



Chip Murray
Natural Resources Counsel
American Forest & Paper Association
(202)463-2782

Planningrulenoi

From: Elizabeth Forsburg [eforsburg@tnc.org]
Sent: Monday, June 11, 2007 2:41 PM
To: Planningrulenoi
Cc: Louise Milkman
Subject: National Forest System Land Management Planning: Notice of Intent Comments

Attached please find The Nature Conservancy's comments on the U.S. Forest Service National Forest System Land Management Planning: Notice of Intent. Thank you for the opportunity to provide these comments. If you have any questions or need further information from The Nature Conservancy, please contact Louise Milkman at (703) 247-3675.

Elizabeth Forsburg
Policy Associate

eforsburg@tnc.org
(703) 841-4244 (Phone)
(703) 841-7400 (Fax)

The Nature Conservancy
Worldwide Office
4245 N. Fairfax Drive
Suite 100
Arlington, VA 22203-1606

The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

nature.org

PLR 1141

The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

Worldwide Office
4245 North Fairfax Dr.
Suite 100
Arlington, Virginia 22203

tel (703) 841-5300
fax (703) 841-7400
nature.org

June 11, 2007

Planning Rule NOI comments
P.O. Box 162969,
Sacramento, CA 95816–2969

VIA EMAIL

RE: National Forest System Land Management Planning: Notice of Intent to Prepare an Environmental Impact Statement

Dear Planning Rule Team:

On behalf of The Nature Conservancy, I want to thank you for the opportunity to respond to the Notice of Intent to Prepare an EIS related to Forest Service Planning. The Nature Conservancy is an international, nonprofit organization dedicated to the conservation of biological diversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Our on-the-ground conservation work is carried out in all 50 states and in 27 foreign countries and is supported by approximately one million individual members.

A great portion of this country's high value forest biodiversity habitat lies on lands managed by the Forest Service. For that reason, The Nature Conservancy has collaborated with the USFS on plan revisions for many years, most often by integrating data and analysis from the Conservancy's ecoregional assessments into the agency's ecological analyses. We hope to continue to work closely with the USFS because of the importance of National Forests to biodiversity conservation.

We will closely review the Forest Service's draft EIS when it is issued. In the meantime, we offer the following points, which we hope the Forest Service will consider as it develops the EIS. These comments reflect our previous comments on the 2005 Planning Directives, as well as our experience working with the National Forests on land management planning.

Collaboration. As with the 2005 Planning rule, the new rule should continue to encourage broad, meaningful collaboration, early in the process. We have been encouraged by some of the National Forest collaborative processes that have begun in the last few months.

Ecological Sustainability. The new planning rule should incorporate the ecological sustainability provisions of the existing directives. These provisions, if carefully implemented, and accompanied by monitoring, can contribute substantially to the protection of biodiversity. As we

commented on the 2005 Planning Directives, these provisions should be required, rather than discretionary. Standards must be measurable in order to have meaning.

Spatially Explicit Management Areas. The rule should continue to encourage planning at a broad landscape scale; and desired conditions, land allocations and management activities should be spatially explicit in the plans. This approach would provide greater clarity to the public, as well as the ability to design activities linked to biodiversity values such as rare plants and functioning fire adapted natural communities. It will also provide an important basis for monitoring and measuring progress at a variety of scales (National Forest, regional and national).

Thank you again for the opportunity to comment. If you have any questions, please contact Elizabeth Forsburg at 703-841-4244.

Sincerely,
Louise F. Milkman
Director of Federal Programs

Planningrulenoi

From: Doug Heiken [dh.oregonwild@gmail.com] on behalf of Doug Heiken [dh@oregonwild.org]

Sent: Monday, June 11, 2007 2:55 PM

To: Planningrulenoi

Cc: Emily Platt; Alex Brown; scott greacen; Chuck Willer; Joseph Vaile; Dave Werntz; Francis Eatherington; Oregon Wild Conservation Staff

Subject: NFMA 2007 scoping comments

Please accept the attached scoping comments on the 2007 EIS for the NFMA forest planning rules.

These comments are bing submitted on behalf of the following organizations:

> Oregon Wild (formerly Oregon Natural Resources Council), Gifford Pinchot Task Force, Bark, Environmental Protection Information Center, Coast Range Association, Klamath Siskiyou Wildlands Center, Conservation Northwest, and Umpqua Watersheds, Inc.

I am also attaching a report about forests, carbon, and global warming. This report explains how climate change will likely affect forests and how forests can play a meaningful role storing carbon and mitigating climate change. This is a very important issue that the forest planning rules must address.

Doug

--

Doug Heiken
Conservation and Restoration Coordinator
Oregon Wild *formerly Oregon Natural Resources Council (ONRC)*
Protecting Oregon's wildlands, wildlife and waters since 1974.
PO Box 11648 | Eugene OR 97440
541-344-0675

PLR 145

OREGON WILD

Formerly Oregon Natural Resources Council (ONRC)

PO Box 11648 | Eugene OR 97440 | 541-344-0675 | fax 541-343-0996
dh@oregonwild.org | http://www.oregonwild.org/

11 June 2007

planningrulenoi@fscomments.org
Planning Rule NOI Comments
P.O. Box 162969
Sacramento, CA 95816-2969
FAX (916) 456-6724

Dear Forest Service,

Please accept the following comments on behalf of Oregon Wild (formerly Oregon Natural Resources Council), Gifford Pinchot Task Force, Bark, Environmental Protection Information Center, Coast Range Association, Klamath Siskiyou Wildlands Center, Conservation Northwest, and Umpqua Watersheds, Inc.

We urge the Forest Service to conduct a thorough review of the severe environmental consequences that will likely result if recently proposed changes to the NFMA planning rules are adopted. We urge the Forest Service to consider alternative rules that will better protect our mature and old growth forests, roadless areas, intact watersheds, clean water, habitat for fish & wildlife, low-impact recreation, and a livable climate.

We strongly oppose the proposed rules because they eliminate virtually all environmental safeguards, remove a key requirement to ensure wildlife viability, and the rules as drafted are virtually unenforceable. Our experience tells us that unenforceable protections are ineffective. If adopted, these rules will resulting less public involvement and more logging of big, old trees in our national forests and imperil fish & wildlife. The public will not tolerate another sweetheart deal for the timber industry and other extraction industries.

The Forest Service should review the complete administrative record supporting the adoption of prior planning rules to see what issues the public and scientists thought were important and relevant and incorporate those issues in this NEPA analysis. The Forest Service should ask what planning rules would be necessary and useful to provide for the highest likelihood that native species, ecosystems, and ecosystem processes will persist on our public landscape into the next century and beyond, given the array of very serious threats those species, systems, and processes now appear to face. The Forest Service

should let pass up the temptation to use the present Administration's enthusiasm for environmental rollbacks to seize the unfettered discretion which the agency so badly abused in the past.

Background

The National Forest Management Act (NFMA), approved by Congress in 1976, is one of the principal laws guiding management of our nation's forest legacy. The importance of this law cannot be underestimated because the NFMA governs more than 150 National Forests covering more than 190 million acres of public land. NFMA helps prevent erosion that could pollute drinking water for millions of Americans. The Act influences how 48 million acres of pristine roadless areas will be managed. NFMA helps ensure that fish & wildlife populations have enough high quality habitat to maintain healthy populations and avoid extinction. And maybe most importantly, the Act requires that the public has a voice in how our public forests are managed.

NFMA does all of these things because Congress passed the law to correct the Forest Service's half-century of abuses. The agency was overcome by a "conspiracy of optimism" in support of its overarching policy of industrial logging and road building. Logging is supported by the agency's internal financial structures which gave the forest managers incentives to produce timber, but not to conserve wildlife. Those perverse incentives still persist. Adopting the proposed changes to the NFMA planning rules would weld the floodgates open.

In late 2003 the Bush administration tried to sneak through amendments to the forest planning rules, hoping to reduce public oversight by burying the comment deadline in the middle of the busy holiday season. The Bush administration then approved an altered version of the rules in 2005, charting a completely new course that would eliminate virtually all environmental requirements, reduce public accountability, and give vast discretionary power to bureaucrats who are essentially rewarded for logging and punished for conservation. A federal court ruled earlier this year that these new rules were approved illegally without environmental review, without considering the impact on endangered species, and without adequately involving the public.

In developing the required Environmental Impact Statement (EIS) please consider the following recommendations:

1. **NEPA requires that the Forest Service consider environmental impacts *before* making it's decision.** The Forest Service cannot just prepare a quick EIS to support a pre-determined outcome. The Forest Service must remove all bias' in favor of their recent planning rules and openly consider a full range of alternatives. The Forest Service must also recognize that this rule-making EIS is just one level of the NEPA analysis necessary for rational and informed forest planning. This programmatic EIS cannot fulfill the need for regional, forest-level, and project level NEPA compliance. Cumulative impacts of this and other federal programs must be considered.

a. For instance, fuel reduction seems to be a high-priority of this administration. This EIS should address how the forest planning rules can constructively constrain and channel the fuel reduction program to ensure its effectiveness and avoid potential problems. Commercial logging tends to be counter-productive because it opens the canopy and makes forests hotter, dryer and windier, and logging often creates large amounts of hazardous fuel in the form of slash and dense young tree plantations.

2. **It is critical to ensure the scientific integrity of forest management decisions** at all scales (these rules, regional assessments, forest plans, and projects).
   a. The Forest Service should carefully review the recommendations of the most recently convened Committee of Scientists as recommended by Congress in the National Forest Management Act. They emphasized collaboration, ecosystem integrity and sustainability as the foundation for ecological services, the important role of biodiversity including non-vertebrates, the need for multi-scale ecosystem assessments, and many others.
   b. NEPA requires federal agencies to rely upon "high quality" information and "accurate scientific analysis." 40 C.F.R. § 1500.1(b). The scientific information upon which an agency relies must be of "high quality because accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998) (internal quotations omitted); see also *Portland Audubon Society v. Espy*, 998 F.2d 699, 703 (9th Cir. 1993) (overturning decision which "rests on stale scientific evidence, incomplete discussion of environmental effects . . . and false assumptions").
   c. The Forest Service has a habit of latching onto preliminary science information that supports its bias' toward commercial logging, and then hanging onto that science even after it has been discredited, corrected, refined and become outdated. In view of the institutionalized bias toward logging projects that produce revenue for the agency and advancement for its line officers, the Forest Service should counter these bias' by seeking out and incorporating the science that *least* supports logging. Where research suggests caution, the agency should not proceed without substantial evidence that its policy choice can be adequately defended based on all the public values at risk. In other words, where key resources are at risk, the Forest Service should adopt a version of the precautionary principle.
   d. For instance, decades of clearcutting was justified based on the idea that the agency was converting *decadent* old forests into *thrifty* young forests, but as evidence of adverse environmental consequences mounted, the agency failed to adapt, and hit the peak of logging in the late 1980's, long after the scientific consensus had already concluded that it was on the wrong path.
   e. Now a similar problem is developing with fuel reduction. There is far too much group-think surrounding the need for fuel treatments. This is convenient because the Forest Service has equated fuel reduction with logging. Unfortunately, the fuels that most need treatment are surface and ladder fuels. While the agency's preferred removal of canopy fuels just makes the forest

hotter, dryer, and windier, thereby increasing fire hazard, AND reducing wildlife habitat and increasing weeds.

f. The Forest Service needs a way to ensure that credible new science is brought into the agency action plans much sooner. Fire suppression, fuel reduction, salvage logging, carbon storage, road removal, and weed control are a few areas where science needs to be rigorously applied to stimulate needed management reforms.

g. There are a large number of models and modeling programs used by the Forest Service. Any model used in decision-making in the public realm should be transparent enough to determine key linkages in the model (as a simple example: whether changing individual variables leads to an increase or decrease in the predicted result, or whether a non-linear relationship may exist) and the veracity of model input. If these relationships and input aren't transparent and subject to independent verification (or can't be made so), there is genuine reason for concern given the significant potential for abuse.

3. **Use public lands to provide public values, rather than serve private interests.** Given that non-federal lands fail to sustain public values like clean water, wildlife habitat, and carbon storage, those values must be provided by public lands, and commodity extraction is not appropriate use of our National Forests. We should not compromise public values by using public lands to provide private values like wood products that already flow profusely from non-federal lands, especially when public values are already compromised and public lands are in short supply.

4. **All forest goods and services flow from a foundation of ecosystem integrity and ecosystem sustainability, so that must be the basis of forest management.** The last time they were convened, the Committee of Scientists[1] was very clear about this. The ICBEMP ecosystem management framework further defines ecosystem integrity as

> "the degree to which all components and their interactions are represented and functioning... [A] living system would exhibit integrity if, when subjected to disturbance, it sustains an organizing, self-correcting capability to maintain resiliency. ... [A]n ecological system has maintained is integrity if it retains (1) the total diversity of the system and (2) the systematic organization that maintains diversity."

5. **We need to address root causes of degradation and avoid shifting costs to the future.** The forest planning process must recognize that practices such as regeneration harvest, dense replanting, road building, and fire suppression leave future managers with costly follow-up management activities such as pre-commercial thinning, fuel reduction, weed control, and road repair and removal. The Forest Service has found that there is an increasing need for timber stand improvement work but a declining trend in budgets and accomplishment, so there is a growing backlog of needed treatments especially in young, previously-managed stands.[2] There are similar

[1] http://www.fs.fed.us/emc/nfma/includes/cosreport/Committee%20of%20Scientists%20Report.htm

[2] Powell, David C.; Rockwell, Victoria A.; Townsley, John J.; Booser, Joanna; Bulkin, Stephen P.; Martin, Thomas H.; Obedzinski, Bob; Zensen, Fred. 2001. Forest density management: recent history and trends

backlogs in fuel management, road maintenance, weed treatments, and stream rehab. In other words, we are neglecting the problems created by past management, and we should not be compounding these problems with more business-as-usual forestry.

a. The Forest Service must understand that today's investments in forest restoration are an obligation that was committed to in past decades when the commodities were extracted. Funding is inadequate to achieve land management objectives on federal lands. Future management should strive to avoid placing further burdens on the future and reduce future costs of management by using and mimicking natural processes to make forests *self-regulating* as much as possible.
b. Self-regulation will require that we stop interfering with the natural processes that maintain forest ecosystems. Natural processes have been disrupted in the national forests. Natural fire cycles have been disrupted by fire suppression. Logging disrupts naturally long intervals of uninterrupted forest growth and the forest patch dynamics to which many species are adapted. Road building has disrupted the natural flow of water through watersheds. Salvage logging disrupts the natural processes that create complex young forests that develop into complex old forests.

6. **Please use a sound ecological framework to accurately disclose environmental consequences**. For instance, disclose whether alternative sets of forest planning rules are likely to:
   - Move ecosystems toward or away from the historic or natural range of variability. Will the rules encourage modification of over-represented habitat features to restore under-represented habitat features? Be sure to consider not just seral stages but also fine scale structures such as large snags that are vastly under-represented in our forest. Other features that have a natural range worth noting are roadlessness, soil quality, water quality, carbon storage, etc.
   - Mimic natural processes of all kinds at all scales (e.g., long intervals of growth in between disturbances that leave lots of dead wood behind);
   - Increase or decrease water pollution, soil disturbance, canopy cover, weed cover, biodiversity, carbon storage, aquatic integrity and complexity, large snags and down wood, large fire resistant trees, hazardous small fuels, and road density;
   - Increase or decrease species population viability, including the ability of wildlife to adapt to climate change by moving unimpeded toward the north or toward higher elevation.

7. **Please use a sound framework to describe the consequences of alternative sets of planning rules on the quality of the decision-making process.** Will alternative rules:
   - Increase or decrease public disclosure and public input?
   - Increase or decrease agency accountability?
   - Increase or decrease abuse of discretion?

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for the Pacific Northwest Region. Technical Publication R6-NR-TM-TP-05-01. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Region. 22 p. http://www.fs.fed.us/r6/FDMwhitepaper.pdf

- Increase or decrease in the evidentiary record to support decisions?
- Increase or decrease the appropriate use of science in adaptive management?
- Increase or decrease informed decision making (e.g., NEPA conformance – full range of alternatives, disclosure of consequences, consideration of cumulative impacts, response to all viewpoints, etc)?

8. **The planning rules should apply principles of intergenerational equity** which require that we hold the earth and its resources in trust for future generations. To do otherwise is morally unacceptable. We have both rights and responsibilities that flow from the fact that we hold the Earth in trust. At the same time, we are beneficiaries entitled to some use and benefit from the earth's resources, but those uses must be appropriate and limited.

   "Three principles form the basis of intergenerational equity. First, each generation should be required to conserve the diversity of the natural and cultural resource base, so that it does not unduly restrict the options available to future generations in solving their problems and satisfying their own values, and should also be entitled to diversity comparable to that enjoyed by previous generations. This principle is called "conservation of options." Second, each generation should be required to maintain the quality of the planet so that it is passed on in no worse condition than that in which it was received, and should also be entitled to planetary quality comparable to that enjoyed by previous generations. This is the principle of "conservation of quality." Third, each generation should provide its members with equitable rights of access to the legacy of past generations and should conserve this access for future generations. This is the principle of "conservation of access."[3]

9. **Consider a restoration alternative.** The best way to provide public values and options for future generations is to emphasize restoration as the core purpose of federal land management. After decades of unsustainable management that failed to conserve fish, wildlife, soil, and water quality, the primary role of the federal agencies for the next 50-100 years should be forest and watershed restoration to provide public values and future options. The Forest Service should consider a restoration alternative consistent with the following:

   Restoration *principles*:

   a. **Restoration is the prime directive, while commodities are a byproduct.** The Forest Service can best meet its legal obligations consistent with ecological principles by emphasizing restoration and viewing timber volume as a byproduct of careful restoration. The Forest Service's social and economic objectives can be derived through thinning and other restoration activities. There are also lots of jobs and agency success to be had in addressing the restoration needs of the federal forests, and significant

[3] Edith Brown Weiss, Intergenerational equity: a legal framework for global environmental change. Chapter 12 in Edith Brown Weiss, editor. 1992. Environmental change and international law: New challenges and dimensions. United Nations University Press. http://www.unu.edu/unupress/unupbooks/uu25ee/uu25ee0y.htm

commodity by-products can be expected from careful variable thinning of dense young plantations on the westside, and thinning small trees in fire suppressed stands in southern and eastern Oregon.

b. **Use the natural or historic range of conditions as a template for restoration.** Under the well-established assumption that species are most likely to persist under conditions they evolved under, we should assess the current condition of our ecosystems relative to the historic condition. Some habitat features (such as dense young tree plantations and roads) are over-represented relative to the historic condition, while other features are under-represented, such as large roadless areas, old-growth, and large snags. Our management must move both under-represented and over-represented types toward the middle of the range of natural variability. Because the historic range can vary widely, it is critically important to use the appropriate scales where meaningful guidance can be found.[4]

c. **Now it's time to "protect the best, and restore the rest"** which means we must carefully protect areas that already provide high quality habitat and watershed conditions, such as mature and old-growth forests and areas with low road density. Active restoration (other than hand treatments and prescribed fire) need not be a high priority in such areas. Existing complex forests should be retained so they can act as refugia and centers for dispersal

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[4] Swanson et al. (1994) contend that managing an ecosystem within its range of variability is appropriate to maintain diverse, resilient, productive, and healthy ecosystems for viable populations of native species. Using the historical range of variability, they believe, is the most scientifically defensible way to meet society's objective of sustaining habitat.
Patrick Daigle and Rick Dawson, Extension Note 07; Management Concepts for Landscape Ecology (Part 1 of 7). October 1996. http://www.for.gov.bc.ca/hfd/pubs/docs/en/en07.pdf; citing Swanson, F. J.; Jones, J. A.; Wallin, D. O.; Cissel, J. H. 1994. Natural variability--implications for ecosystem management. In: Jensen, M. E.; Bourgeron, P. S., tech. eds. Eastside Forest Ecosystem Health Assessment--Volume II: Ecosystem management: principles and applications. Gen. Tech. Rep. PNW-GTR-318. Portland, OR: U.S. Dept. of Agriculture, Forest Service, Pacific Northwest Research Station: pp 89-106.

The Committee of Scientists also explained why the historic range of variability is a necessary guide for national forest management. http://www.fs.fed.us/news/news_archived/science/cos-ch3.pdf Speakers at the January 2005 workshop at Oregon State on "Using Past Ecological Conditions" emphasized a few things about historic range of variability that the planning rules must consider:

a. always specify the temporal and geographic scales;
b. choose scales of analysis that elucidate meaningful system properties; (don't be devious by choosing scales that justify predetermined action)
c. specify whether climate variability is being accounted for;
d. consider the probability of various values within the range of variability; specify the expected frequency distribution for values within the historic range of variability; recognize that systems spend more time near the mid-point of the range of variability and much less time near the extremes of the range of variability;
e. restore both structures and the processes that ultimately create and sustain them;
f. state assumptions and limitations;
g. describe consequences of types and degree of deviation from the historic range of variability;
h. account for exotic species (e.g. brook trout, false brome) and exotic structures (e.g., roads and culverts).

of old-growth species. Active management is also contra-indicated in stands that are likely to develop complex conditions without intervention, such as naturally regenerated young forests that retain all the building blocks for developing late-successional old-growth habitat. In cases where fire exclusion is a concern, prescribed fire should be considered.

d. **Control sources of degradation before attempting to address the impacts of degradation.** The current degradation of our forests and watersheds is caused by a century of ecologically insensitive logging, road building, fire suppression, mining, and livestock grazing. These sources of degradation still need reform. While active management is needed in many areas, the Forest Service too often designs projects that take one step forward (with restoration) and two steps back (with more damaging commodity extraction). This often causes a vicious cycle of ecological degradation and restoration which serves the Forest Service's budgetary interests, but it does not serve the public interest.

e. **Prioritize active management in areas that are highly modified** by past practices such as timber harvest, road construction, and fire exclusion. Short-term efforts may include prescribed fire and selective removal of brush and small trees. These practices may also be appropriate near communities that are at-risk due to fire suppression and past logging. Active restoration will be a priority where highly simplified dense plantations require variable-density thinning to redirect these stands toward a more appropriate old-growth trajectory.

f. **Set restoration priorities to get "the biggest bang for the buck."** With limited resources and a huge backlog of restoration needs, the agency must plan carefully and set priorities that derive relatively large gains from relatively small investments. This priority setting process should be done within a NEPA context so that scientific standards are met and so the public can comment on the agency's methods and conclusions.[5]

g. **Favor practices with low impacts and high effectiveness.** Wherever possible, active restoration will favor low-impact practices such as prescribed fire and manual treatments rather than heavy equipment and commercial extraction.

h. **Recognize the importance of natural processes including uninterrupted growth as well as disturbance.** Past management placed far too much emphasis on regeneration harvest and then growing vigorous trees. Now it is clear that a healthy forest includes numerous trees that are unhealthy and even dead. Wind, ice, insects, disease, fire, flood ALL play critical roles in determining the diversity of a healthy forest. Restoration efforts must resist the temptation to "salvage" and "sanitize" which are almost universally detrimental to healthy forest conditions.

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[5] See Pacific Rivers Council. 1995. Handbook for Prioritizing Watershed Protection and Restoration To Aid Recovery of Native Salmon: Ad hoc Working Group Sponsored by Oregon State Senator Bill Bradbury, 49 pp. http://www.pacrivers.org/article_view.cfm?ArticleID=1064

i. **Build public trust.** The Forest Service must give up the idea that their "expertise" gives them the right to ignore public sentiments. Forestry school training in "tree farming" does not qualify the Forest Service to practice ecosystem management. The agency must find solutions that are publicly supported. There is public consensus around the need for forest restoration. Agency decision-making processes must be open and transparent, and they must be willing to be held accountable to their promises. This will require unambiguous decisions. Diameter limits are an example of an unambiguous means to improve both ecological health and public trust.

j. **Reducing maintenance costs** is another important aspect of intergenerational equity. We should not burden future generations with a huge backlog of expenditures required to maintain roads that have outlived their usefulness, fight uncharacteristically large and intense fires, remove invasive species, restore damaged soil, thin stands that were clearcut and planted too densely, and clean polluted water. Recognizing that recent management did not share this ethic, our responsibility today should be to unburden future generations, not further burden them.

High priority restoration *activities* will include:

a. **Rescaling the road system** so that it is much smaller, cheaper, and has much reduced impact on hydrology, water quality, fish & wildlife habitat and connectivity, soil, spread of invasive species, and undesirable human intrusions such as fire ignitions, poaching, theft, vandalism, and off-road vehicle use.

b. **Restoring connectivity and functionality to the stream network** will include: restoring instream flows; removing dams and road culverts that block passage of aquatic organisms as well as blocking delivery of beneficial sediment and large wood structure to streams; restoring stream-side vegetation structure; and restoring natural processes such as floods and structure-rich landslides.

c. **Preparing the landscape, the public, and infrastructure for wild and prescribed fire.** Fire is an essential and inevitable part of our forests. The agency needs to educate the public about fire and help communities "firewise" their facilities so that essential ecosystem processes like fire can be allowed to operate a little more freely with less concern for community infrastructure. Fire dependent ecosystems that are modified by fire suppression may require mechanical pre-treatment to prepare them for wild or prescribed fire. Preparation of fire management plans are long overdue and should also be a high priority.

d. **Re-establishing large wild areas** with very low road densities where natural processes including fire, native insect outbreaks, and other disturbances can operate freely to create, recreate, and maintain high quality habitat and watershed conditions. These areas should be built upon the existing complexes of inventoried and uninventoried roadless areas >1,000 acres. These areas will be large, self-sustaining and require very little capital

investment or human intervention. The range of natural variability will be provided primarily by natural disturbances rather than active management.

e. **Retain abundant legacies after disturbances.** Treatments after disturbances large and small will recognize both the value of disturbance and the natural regenerative capacity of the ecosystem. The agency must recognize the adverse impacts of compound disturbances such as fire followed by logging, fuel treatment, and the natural pattern of long periods of growth and recovery between disturbances. Any post-disturbance treatments will "do no harm" and be based strictly on enhancing natural ecological processes. Recognizing the role of structural legacies in bridging the ecosystems of the past and future, the Forest Service should emphasize structural retention and natural processes. If any material is removed after natural disturbances it will be limited to small material that has developed due to fire suppression.

f. **Livestock grazing must be phased out** in order to protect fish, wildlife, water quality, soils, vegetation, and to restore natural fire regimes. The plant communities that have adapted to the natural summer droughts of Oregon are just not appropriate for domestic livestock grazing, because, as the uplands cure and become unpalatable, livestock invariably concentrate in riparian areas and cause serious adverse effects on soil, water quality, and aquatic habitat. Livestock compete with a variety of wildlife for food, water, and living space. Livestock also alter fuel profiles and plant species composition in ways that conflict with the objectives of reintroducing low intensity fire. The presence of domestic livestock is also a major impediment to the restoration of native biota, e.g., the reintroduction of native predators such as wolves.

10. **Forest planning requires appropriate use of ecological frameworks.** In order for restoration efforts to have desired effects, the Forest Service must start with an operating theory about how the natural world works. This is challenging because we are still learning how complex forest ecosystems really function and we have much to learn about the effects of management.

Most ecological theories developed to date are probably correct but incomplete. For example, traditional succession models were based largely on observations of vegetation development in abandoned fields. The traditional models predict a linear progression through vegetation types, and accurately explain some aspects of vegetation development after natural disturbances, but succession of old fields may not represent the diversity of possibilities after natural disturbance of complex forest ecosystems.

It is now well-recognized that ecosystems do not always follow linear paths, but can take a variety of pathways which may lead to a variety of pseudo-stable "endpoints." Another example is the equilibrium models of ecosystems. It was long thought that ecosystems are dominated by inherent stabilizing influences (i.e., negative feedback) that would always bring ecosystems back to equilibrium after disturbance, and while it is true that ecosystems do have some stabilizing influences, it is now widely recognized that ecosystems are far from equilibrium systems that have both stabilizing and destabilizing influences (i.e., positive feedback) that can move the

system among multiple pseudo-stable states that provide different mixes of habitat and ecological services.

The EIS, planning rules, and forest plans must make their operating theories about forest ecology explicit so they can be scrutinized and evaluated.

11. **Reorganize the National Forests to focus on providing ecosystem services** such as clean water, fish & wildlife habitat, low impact recreation, quality of life, and carbon storage for a livable climate. Commodities such as wood products should be a by-product of restoration, rather than a goal unto themselves. "The broadest set [of ecosystem outputs] is appropriate to publicly owned lands because constituencies are likely broadest and most diverse, and because some types of outputs will only be available from public lands (Hyman 1973). ... All of this is part of a broader question of who benefits and who gains from management of FS- and BLM-administered lands. Understanding this provides the basis for assigning costs of land management."[6] Forested watersheds provide important ecological services related to water. Undisturbed forests provide the cleanest water and regulate the flow of water to help moderate seasonal high and low flows. Management activities such as logging, road building, and grazing impair these watershed functions. Restoration is difficult and expensive. It's best to avoid impairment rather than rely on later mitigation.

12. **The planning rules should strive to separate restoration and commercial exploitation**. Several problems arise when a forest activities involve both valid restoration activities, which the public may support, as well as some commodity exploitation, which we cannot support. First and foremost, commodity exploitation often directly conflicts with restoration because commodity extraction focuses on removing the most ecological valuable aspects of the ecosystem (commercially valuable medium and large trees which provide opportunities for nesting, roosting, foraging, cover, etc.), so it will push the landscape further from the natural range of variability, prevent or retard short- and long-term restoration, require future effort and expense to address unavoidable degradation of ecological systems, and often increase fire risk and fire hazard.

13. **Require that areas with low road density, including all roadless areas 1,000 acres and larger, be carefully evaluated and protected.** Roadless areas are the last, best places for wildlife, water, carbon, and scientific references points. Roadless areas may be the only place to fully realize some important ecological values such as large snag habitat.[7] Areas with low road density must be protected, not further destroyed

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[6] Haynes, Richard W.; Graham, Russell T.; Quigley, Thomas M., tech. eds. 1996. A framework for ecosystem management in the Interior Columbia Basin including portions of the Klamath and Great Basins. Gen. Tech. Rep. PNW-GTR-374. pp 18-22

[7] Jerome J. Korol, Miles A. Hemstrom, Wendel J. Hann, and Rebecca A. Gravenmier. 2002. Snags and Down Wood in the Interior Columbia Basin Ecosystem Management Project. PNW-GTR-181. http://www.fs.fed.us/psw/publications/documents/gtr-181/049_Korol.pdf This paper estimates that even if we apply enlightened forest management on federal lands for the next 100 years, we will still reach only 75% of the historic large snag abundance measured across the interior Columbia Basin, and most of the increase in large snags will occur in roadless and wilderness areas.

with more roads and logging. Retain the Roadless Rule that protects 58 million acres of National Forest land.

14. **Reinstate the requirement to maintain habitat for viable populations of native species.** Viable populations of all native species is essential to ensure long-term provision of all the ecological services provided by Life. The Forest Service must not ignore the valuable ecological services provided by non-vertebrate species, services such as pollination and nutrient cycling.[8]

> Invertebrates eclipse all other forms of life on Earth, not only in sheer numbers, diversity, and biomass, but also in their importance to functioning ecosystems. Invertebrates perform vital services such as pollination, seed dispersal, and nutrient recycling. Although invertebrates are vitally important, they are often overlooked in management decisions,..." The first step to invertebrate protection is to put invertebrates on the same footing as other species in management decisions. ... The conservation of invertebrates should be of paramount importance to all people as the ecological services they provide are vital to life as we know it on the planet. As Harvard biologist E. O. Wilson stated, "So important are insects and other land dwelling arthropods, that if all were to disappear, humanity probably could not last more than a few months.[9]

Conserving biodiversity will be challenged by climate change. It is critical to maintain biodiversity during the tumultuous ecological changes that will be brought by climate change, as ecosystems move north and toward higher elevations. Networks of inter-connected reserves should be established along likely routes of migration.

15. **The National Forest must play a significant role in the conservation of biodiversity in all its dimensions**: genetic, population, species, ecosystem, etc. Biodiversity is important for it's own sake but also because the information contained in genetic codes and other systems of biological organization represent an untapped source of information that could treat disease, provide new food sources, and help us adapt to climate change. The EIS supporting the National Forest "roadless rule" explained some of the principles of biodiversity conservation:

> As described by Noss and Cooperrider (1994), four fundamental principles consistent with biodiversity conservation are to:
>
> - Represent, in a system of protected areas, all native ecosystem types and seral stages across their natural range of variation.

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[8] Edward O. Wilson. The Little Things That Run the World (The Importance and Conservation of Invertebrates). Conservation Biology, Vol. 1, No. 4 (Dec., 1987), pp. 344-346. See also "ALL CREATURES GREAT AND SMALL" HELP MAKE OUR FORESTS DIVERSE AND BEAUTIFUL http://members.efn.org/~onrcdoug/creatures.htm which was submitted as during comments on prior NFMA rule-makings.

[9] Scott Hoffman Black, Matthew Shepherd, and Melody Mackey Allen. 2001. Endangered Invertebrates: the case for greater attention to
invertebrate conservation. Endangered Species UPDATE Vol. 18 No. 2 2001.
http://www.xerces.org/Endangered/endangered_paper.pdf

- Maintain viable populations of all native species in natural patterns of abundance and distribution.
- Maintain ecological and evolutionary processes such as disturbance regimes, hydrological processes, nutrient cycles, and biotic interactions.
- Manage landscapes and communities that are responsive to short-term and long-term environmental change and that maintain the evolutionary potential of the biota.

In addition to the above principles, five basic considerations emerge from conservation biology that resource managers can use to retain habitat at the landscape and regional scale (Shafer 1990, Thomas and others 1993, Wilcove and Murphy 1991, and Noss 1992). These principles are to:

- Minimize the fragmentation of habitats across the landscape;
- Conserve large blocks of habitat;
- Conserve blocks of habitat close together and in contiguous blocks.
- Maintain habitat corridors between blocks of habitat; and
- Maintain favorable habitat conditions for target species across their native range.

Representation of the full range of habitats in conservation reserves is a fundamental goal of nature conservation (Margules and Usher 1981). Because conservation of inventoried roadless areas could expand the area of conservation reserves, determining the potential contribution of these areas towards meeting goals of biodiversity conservation is important.[10]

16. **Consider the ecologic and economic benefits of avoiding actions that would contribute to the listing of more endangered species.** If the Forest Service intends to abandon the viable population requirement, the EIS must consider the economic and ecological costs of more and more new listings.

17. **Consider the value of National Forests as places to sequester carbon and help mitigate climate change**. Logging releases large amounts of carbon into the atmosphere which threatens our livable climate. Climate change (which is now inevitable due to lag effects and long residence time of CO_2 that is already in the atmosphere) will also disrupt our forests and alter the ecosystem services that flow from them. Management decisions will in part determine how well our forests adapt to climate change as well as whether federal forests will serve as net carbon sinks or carbon sources.[11]
    a. To fulfill NFMA's requirements to *inventory* renewable resources the planning rules should emphasize carbon sequestration by conserving mature and old-growth forests and retaining large amounts of live and dead

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[10] Jon R. Martin, Robert L. DeVelice, and Seona Brown. November 2000. Landscape Analysis and Biodiversity Specialist Report. USDA Forest Service. Roadless Area Conservation Final Environmental Impact Statement. http://roadless.fs.fed.us/documents/feis/specrep/xlandscape_spec_rpt.pdf

[11] Heiken, D., "*The Straight Facts on Forests, Carbon, and Global Warming*," version 1.4 Oregon Wild. 2007 http://tinyurl.com/2by9kt This report describes the role of forests in storing or releasing carbon and the probable impacts of climate change on forest ecosystems.

vegetation, and the rules should require the Forest Service to account for management related carbon fluxes from vegetation, water, and soil.

b. To fulfill NFMA's requirements to identify *special hazards* to forest resources, the planning rules must recognize climate driven threats to ecosystems and require provisions for ecological adaptation and migration such as, maintaining biodiversity as the complete record of successful adaptations to past climate; provide large reserves arrange along north-south gradients and elevational gradients to allow species migration, etc. Logging and road building release vast amounts of carbon from both vegetation and soil, while healthy mature forests are a good place to securely store carbon and keep it out of the atmosphere where it causes global warming. Given the very urgent nature of our global climate problem, there is no longer any legitimate excuse for logging mature & old-growth forest.

18. **Use a rational decision-making framework in all forest plan amendments** by considering alternatives, disclosing environmental consequences, and consulting experts as required by NFMA and the National Environmental Policy Act (NEPA). The Forest Service must actively involve the public and consider environmental concerns at all steps of the planning process.

19. **Address risk explicitly and rationally**. Assumptions about risk should openly disclosed and alternatives considered in this EIS, the planning rules, and forest plans. NEPA requires full disclosure of methods and assumptions. Decision analysis would be a useful tool to make uncertainty and assumptions explicit and assign realistic probabilities to the relevant assumed facts and decision criteria. Sensitivity analysis can be used to determine if the agency's preferred management options are highly sensitive to assumptions that may be improbable.[12] The natural world is not at equilibrium. The Forest Service must plan for and adapt to change.[13]

20. **Do not presume that management activities are benign.** The last version of the planning rules contained arbitrary and unsupported assumption that all uses were presumed to be suitable on every acre unless h[proven otherwise. Given the current degraded state of our forests, the burden must be on the agency to show that management activities have net restorative effects. The rules must require site-specific "suitability analysis" for each management activity. Seek the highest and best

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[12] See Randall M. Peterman and Calvin N. Peters; Decision Analysis: Taking Uncertainties Into Account In Forest Resource Management in V. Sit and B. Taylor, eds., Statistical methods for adaptive management studies. B.C. Ministry of Forests Research Branch, Victoria, B.C. 146 pp. The full publication is available for download at: http://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh42.htm NRC. 1996. Understanding Risk: Informing Decisions in a Democratic Society, a Report by the Committee on Risk Characterization of the National Academy of Sciences' National Research Council. http://www4.nationalacademies.org/news.nsf/isbn/030905396X?OpenDocument

[13] Albert S. van Jaarsveld, Guy F. Midgley, Robert J. Scholes, and Belinda Reyers . 2003. Conservation Management in a Changing World. AIACC Working Paper No. 1. December 2003. http://www.aiaccproject.org/working_papers/Working%20Papers/AIACC_WP_No001.pdf. Robert L. Pressey, Mar Cabeza, Matthew E. Watts, Richard M. Cowling, and Kerrie A. Wilson. 1997. Conservation planning in a changing world. VIII Conference on Mediterranean Type Ecosystems. San Diego, USA.

public use of our public lands, or as Gifford Pinchot says, "the greatest good for the greatest number." Do not presume that logging, mining, and grazing are suitable uses unless the weight of evidence shows them to be necessary and sustainable.

21. **Forest plans must provide real and meaningful guidance.** The Forest Service must stop viewing forest plans as merely strategic and aspirational because Congress clearly intended for forest plans to have concrete effect in guiding management activities on our National Forests. Environmental analysis and public involvement for these rules and forest plans must therefore be rigorous.

22. **Consider the significant risks posed by the excessive discretion and lack of accountability in these rules**. Forest management decision have long-term consequences. Giving too much discretion to unaccountable bureaucrats is a recipe for big mistakes with big consequences.

23. **Consider the adverse social consequences of diminished public involvement**. The Forest Service will face backlash if the public is excluded from decisions they are accustomed to participating in. The Forest Service must recognize that it exercises power only with the consent of the public. Excluding the public won't make the agency's life easier. It will make the public more distrustful, reduce public support, and effectively reduce the scope of the agency's power.

24. **Forest Planning must recognize that ecosystems are organized as nested hierarchies with cross-scale interactions that lead to complex effects and require multi-scaled analysis.**[14] The Committee of Scientists explained that informed decision-making will require careful analysis of ecosystem structure, function, and process at multiple scales. This EIS is the broadest scale at which the national scope of ecological problems and alternative solutions must be addressed. The planning rules should then require broad-scale ecological assessments as a basis for making informed decisions at the forest and stand scale.

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[14] "Ecosystem functioning results from interactions among and within different levels of the biota, which ecologists describe as a "nested" hierarchy. For example, green plant production on land is the end product of interactions of individual plants nested within populations; interactions among populations nested within a single species; interactions among a variety of species nested within a group of functionally similar species; and so on up to the level of interactions between different types of ecosystems nested within landscapes." Shahid Naeem, Chair, F.S. Chapin III, Robert Costanza, Paul R. Ehrlich, Frank B. Golley, David U. Hooper, J.H. Lawton, Robert V. O'Neill, Harold A. Mooney, Osvaldo E. Sala, Amy J. Symstad, and David Tilman Biodiversity and Ecosystem Functioning: Maintaining Natural Life Support Processes. Issues in Ecology Number 4 Fall 1999.
http://www.esa.org/science_resources/issues/FileEnglish/issue4.pdf
THOMAS J. WILBANKS, How Scale Matters: Some Concepts and Findings.
http://www.millenniumassessment.org/documents/bridging/bridging.02.pdf Chapter 2 *in* Bridging Scales and Knowledge Systems Concepts and Applications in Ecosystem Assessment, Edited by Walter V. Reid, Fikret Berkes, Thomas Wilbanks, Doris Capistrano.

See also, Garry D. Peterson. Scaling Ecological Dynamics: Self-Organization, Hierarchical Structure, And Ecological Resilience. In Press. Climatic Change. http://www.geog.mcgill.ca/faculty/peterson/PDF-myfiles/CChange-GDP.pdf

25. **Consider the economic impacts on non-federal lands if the management requirements on federal lands are relaxed.** The State of Oregon has previously warned that reduced conservation on federal lands has spill-over effects on non-federal lands. "...[U]se of broadscale assessments such as FEMAT, ICBEMP, and SNEP ... remain important to provide information to forest plan development. For example, the Northwest Forest Plan, both a regional scientific assessment and a broad amendment to all national forests in western Oregon, serves as the conservation anchor for the Oregon Plan for Salmon and Watersheds. The Northwest Forest Plan, in turn, took pressure off adjacent state and private lands to provide for recovery of spotted owls, murrelets, and salmonids listed under the ESA. Our fear is that "leaner" forest plans would no longer provide adjacent non-federal forest lands protection from added land use restrictions to comply with federal environmental laws."[15] A *de facto* resolution of the multiple goals on forest lands has been the default decision to allow private lands to emphasize private interests while public lands emphasize public values. We allow private forest lands to shift some of their costs to the public such as polluted water, depleted fish & wildlife, and CO2 pollution. Public forest lands are then expected to provide the majority of public values such as clean water, fish & wildlife habitat, recreation, and carbon storage for a livable climate. Since commercial logging for the sake of private profit conflicts with virtually every public value, to the extent that public lands do not have to provide timber volume and livestock grazing to enrich private interests, it will become easier to integrate all the multiple public goals on public lands.

26. **The Forest Service must not rely on administrative tools that are outside the public domain.** The prior planning rules adopted the use of ISO 14001 as an environmental management system, but this standard is a proprietary document that is not easily accessed by the public. The government should strive to put the ISO documents in the public domain before relying on them.

27. **Forest planning must address the real challenges of rural communities in a modern economy.** Rural communities are still adjusting to changing social and economic conditions and will likely continue to face challenges as the global economy never stands still. National Forest planning should reflect the fact that rural community vitality is NOT closely tied to the volume of federal timber sales. The Northwest Forest Plan 10-year monitoring effort reveals that a fundamental shift in thinking has occurred. "Assumptions were challenged regarding both socioeconomic and ecological relationships, with implications for both. One of the more important set of findings concerns the role of the federal lands. From a socioeconomic perspective, it was assumed that timber flow from federal lands was a key determinant of community well-being. This turns out to be true in some communities, but not in most."[16]
    a. The economic conditions in rural communities are the result of a myriad factors, and federal timber is only a very small factor. The Sonoran Institute

[15] Roy Woo, Acting State Forester (Oregon). Letter to USDA Forest Service re NFMA planning rules. April 7, 2003.
[16] Draft synthesis of the NWFP 10-year monitoring reports. 4-15-05. pp 13-14.

conducted a study of rural economies in the west and "It turns out there is an inverse relationship between resource dependence and economic growth; the more dependent a state's economy is on personal income earned from people who work in the resource extractive industries, the slower the growth rate of the economy as a whole."[17] In recent years Oregon's economy as a whole has grown while the timber industry has remained stagnant. It is unwise to tie economic development to a declining industry.

b. The Sonoran Institute's Report found that proximity to protected public lands is positively correlated with economic growth, as were access to education, transportation, airports, entertainment, and mountains. We should be trying to steer the economy away from commodities and toward a more diverse economic base.
c. "… [T]he premise that public resources such as forage, timber, minerals, and energy can stimulate local economic stability presumes that the local economy is indeed dependent on federally-owned resources. All too often the role public land managers play in community development is based on an antiquated, mythical view of the economy. … Three forces are at work in shaping the world economy. First, the industrial economy is becoming uncoupled from the primary products economy (i.e., raw materials). Many of the most valuable 'products' in today's economy, like computer software and medical technology, require few raw materials. Second, within the industrial economy itself, employment has become uncoupled from production. Manufacturing efficiency has decreased the demand for physical labor. Instead, human resources are increasingly applied in research, design, engineering, finance, marketing, and other 'knowledge-based' or 'value-added' applications. Third, capital has become 'footloose' - money follows good ideas, no matter where they occur on the globe."[18]
d. In the 1980s, federal timber harvest significantly increased, while both employment and wages declined. This was caused by new technology, global competition, and union-busting. These pressures will continue.
e. Local communities should be preparing for a future that is different than the past. Has there ever been a time when our region has not been in flux? The tools of past management, such as timber sales, may not meet the needs of the future when the Forest Service and BLM may be selling clean water and carbon instead of logs. "Communities in the West must shift their focus from what worked in the past, and ask instead what will work in the future. Economic wealth consists of much more than raw materials. There is also wealth in the quality of the environment for non-consumptive uses, …. For many rural communities, the economic benefit of living adjacent to public lands has historically been access to vast repositories of raw material. Because of this economic history there has been a tremendous bias on the part of public

[17] Ray Rasker. Prosperity in the 21st Century West. Sonoran Institute. 2004. http://www.sonoran.org/pdfs/Prosperity%20Report.pdf
[18] Raymond Rasker. A New Look at Old Vistas: The Economic Role of Environmental Quality in Western Public Lands. Colorado University Law Review. 1994. http://www.sonoran.org/programs/pubs/Rasker%20-%20CU%20Law%20Review%201994.pdf

agencies to equate quantitative expansion in commercial activities with social and economic well-being. Lacking is a perspective on economic development that measures the role of quality of life as provided to community residents living next to public lands: the mountains, scenery, wildlife, clean water, wilderness, and other non-commercial amenities. … [A] community stability strategy which emphasizes commodity extraction has been shown to be counter-productive, particularly when those activities threaten the amenity-based foundation of the new economy."[19]

f. Conservation of federal forests provides some degree of regulatory stability for non-federal landowners. This is a significant economic benefit of federal lands and is consistent with the different roles played by federal and non-federal lands. "The extensive habitat protection on federal land … has allowed the agencies that are responsible for enforcing the Endangered Species Act to permit more intensive economic utilization of nearby state and private lands than would otherwise have been possible. Before the Northwest Forest Plan, uncertainty prevailed in the region concerning the extent to which state and private landowners would be able to produce timber from their lands without violating the prohibitions of the Endangered Species Act concerning the 'take' of threatened or endangered species. This uncertainty, and fear than an agency might later declare land 'critical habitat' for a threatened species, made it difficult for some private landowners to make long-term plans about the economic utilization of their lands. … [A] major accomplishment is that the Northwest Forest Plan has provided regulatory and economic stability for owners of state and private lands …"[20]
g. Rural communities can participate in lots of important non-logging work that our forests need. E.g., fuel and fire management, pre-commercial thinning, weed control, road work, stream rehab, recreation management, etc. Restoration can be part of the economic diversification process, involving local workers in the repair and rehabilitation of damaged lands, streams, and roads. Restoration has become a major industry in Humboldt County, bringing in $65 million between 1995 and 2002 and employing 300 people.[21] The substantial back-log of unmet restoration needs indicates that this could be a fairly stable, long-term source of social and economic benefits.
h. Some might even say that the social contract has been rewritten. It is no longer socially acceptable to log mature and old-growth forests on federal lands. The public places much higher value on clean water, wildlife habitat, quality of life, and a livable climate today, than they did in earlier times, and the public is far less tolerant of environmental damage. We should not delude rural communities by leading them to expect to change this; they must adjust to a new reality.
i. Rural communities often like to think of themselves as self-reliant when in fact they often gain significant economic benefits from the government in the

[19] Id.
[20] James Pipkin. THE NORTHWEST FOREST PLAN REVISITED. September 1998. http://web.archive.org/web/20030803082439/www.doi.gov/nrl/PPA/NWForest/Full_rpt.htm
[21] http://www.sierrainstitute.us/Media/HoopaReport.pdf

form of government payroll and transfer payments such as social security and health benefits. In many rural communities, these government monies are often more important to the economy than commodity extraction.

28. **Forest management must be humble and strive for continual learning.** Given how much we still have to learn about our native ecosystems and the effects of human management, all land management should be conducted within a framework of *intentional learning*, with constant monitoring and feedback between management and the consequences of management.[22]

In conclusion, please accurately describe the 2005 planning rules as the ecological disaster they really are, and consider alternatives that will protect and restore our National Forests that have been degraded by a century of mismanagement. The public consensus is that the Forest Service should stop degrading our forests and start investing in forest restoration. There is plenty of important work to do, such as closing and fixing roads, managing prescribed fire, weed control, recreation management, stream rehabilitation, and thinning small trees in dense young stands to restore old growth characteristics. Let's get to it.

Sincerely,

Doug Heiken

Doug Heiken
For Oregon Wild, Gifford Pinchot Task Force, Bark, Environmental Protection Information Center, Coast Range Association, Klamath Siskiyou Wildlands Center, Conservation Northwest, Umpqua Watersheds, Inc.

[22] Consider the framework and methods described in V. Sit and B. Taylor, eds., Statistical methods for adaptive management studies. B.C. Ministry of Forests Research Branch, Victoria, B.C. http://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh42.htm

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OREGON WILD
Formerly Oregon Natural Resources Council (ONRC)
PO Box 11648 | Eugene OR 97440 | 541-344-0675 | fax 541-343-0996
dh@oregonwild.org | http://www.oregonwild.org/

Version 1.4 May 29, 2007

The straight facts on forests, carbon, and global warming.

A significant portion of the "extra" carbon in the atmosphere is due to deforestation and forest mismanagement.

This report is available electronically at: http://tinyurl.com/2by9kt

Executive Summary

The Intergovernmental Panel on Climate Change (IPCC), made up over 1,000 scientists from over 100 countries, is releasing in four installments this year its latest report on global warming. The IPCC summary for policy makers includes the strongest statement to date linking human activities to global warming. The IPCC finds that it is "very likely" (90 percent probability) that human activities are the main cause of global warming and highlights the need for action today to address this extremely serious global problem that will affect our climate, ecosystems, and the institutions that support humanity.

More than any other issue, humanity's response to climate change will define our times. To preserve options for future generations it is prudent to both mitigate impacts and begin preparing for anticipated changes. Significant reforms are necessary to address climate change in a comprehensive way, including changes in energy policy, transportation policy, land use, urban design, agriculture, etc. This report focuses on a subset of the problem, how climate change will affect forests and how sound forest conservation can play a role in mitigating climate change.

Predictions of specific climate changes at any given place and time are highly uncertain, yet scientists can confidently predict a few notable large-scale trends, such as general climate warming, altered patterns of precipitation, rising sea level, and significant disruptions of terrestrial and aquatic ecosystems.

Carbon stored in forests is carbon that is not in the atmosphere. In fact, forests are the most significant terrestrial stores of living carbon, and forest destruction and mismanagement over the last century has contributed significantly to the carbon dioxide (CO_2) pollution that threatens our climate. In the future, we need to manage forests to (a) manage forests to help mitigate climate change by allowing forests to fulfill their full potential for storing carbon in living systems, and (b) make forests more resilient to the anticipated changes brought by climate change.

To make forests more resilient to climate change we need to protect the full diversity of life in our forests. Every species and each biotic community is a record of successful adaptation to past changes. Even though the future may not mirror the past, the diversity of life that exists currently represents the full catalog of successful adaptations that are available for the profound restructuring of ecosystems to come. We should not be throwing tools out of the toolbox by allowing species to go extinct.

Since northern hemisphere ecosystems are expected to shift north and toward higher elevations in response to warming climate, we need to expand our existing system of

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protected areas to give forest ecosystems enough room to migrate via natural processes of disturbance, dispersal, and regeneration.

To help forests store more carbon we need to let our forests grow. Photosynthesis is the mechanism plants use to capture CO_2 and convert it to plant matter that feeds the base of the entire planetary food chain. Old-growth trees store massive amounts of carbon in their trunks as well as in the soil. Logging stops photosynthesis and initiates decay processes that transfer much of the carbon in the trees and soil back to the atmosphere. Forest conservation allows forests to grow large and complex, which not only helps mitigate climate change but also enhances water quality, wildlife habitat, recreation, and quality of life.

Background: What determines global temperature and climate?

Global temperature and climate are largely determined by the balance of incoming energy from the sun, minus outgoing radiation. Incoming light radiation from the sun has short-wavelengths and can readily pass through the atmosphere, but after being absorbed and re-radiated from Earth's surfaces the out-going infra-red radiation has longer wave-lengths and is less able to pass through the atmosphere. The so-called "greenhouse gases" absorb and re-radiate a portion of the outgoing long-wave radiation back toward earth, acting like a heat-trapping blanket. Even slight changes in the ratio of incoming and outgoing solar energy have significant influence on our global climate system. Even though greenhouse gasses make up less than 1% of Earth's atmosphere, our global climate is quite sensitive to changes in their concentration.

Ice-core data from Greenland and Antarctica tells us that atmospheric levels of carbon dioxide (CO_2) vary somewhat predictably with cycles of ice ages and warm inter-glacial periods. The ice cores also show that atmospheric CO_2 is increasing almost 100 times faster today than during past climate cycles, and that current concentrations of CO_2 are higher than at any time in at least the last 800,000 years. Given the difficulty of rapidly changing our resource-intensive lifestyles, we'll be lucky if global atmospheric CO_2 concentration merely doubles. More likely it will go much higher before we control our appetite for fossil fuels and land exploitation.

While CO_2 is of primary concern among greenhouse gasses, there are others such as methane (CH_4) that contribute to global warming.[1] CO_2 is unique in that is has a very long, approximately 100 year, "residence time" in the atmosphere.[2] Concentrations of

[1] Water vapor also has a significant influence on climate, but it has a very short residence time in the atmosphere so it is better thought of as a "feedback" than a "forcing." http://www.realclimate.org/index.php?p=142 Warming is expected to increase water vapor in the atmosphere but the effects on climate are very complex and remain unclear. Water vapor can act as both a greenhouse gas with a warming influence (positive feedback), and it can have a cooling influence via cloud formation and increased albedo (negative feedback). Scientists are keenly interested in this issue and continue to study the role of water vapor and clouds in future climate scenarios.

[2] Water vapor has a mean residence time in the atmosphere on the order of days; methane about 10-12 years. Estimating the residence time of carbon dioxide is complex because of the many different types of "sinks" but "it is now generally believed that a substantial fraction of the excess CO_2 in the atmosphere will

CO_2 in the atmosphere will likely remain far above "normal" for centuries, because the millions of tons of CO_2 released to the atmosphere during the agricultural revolution, the industrial revolution, and the automobile revolution will not reach a new equilibrium until biological and geophysical processes (in the oceans and on land) have a chance to capture and store most of the "extra" carbon.

We have a moral obligation to leave future generations with choices and opportunities for survival. We must avoid irreversible harm to the planet's life support systems including a livable climate and functional ecosystems that sustain life.

How does carbon move in and out of the atmosphere?

There is a fixed amount of carbon on planet earth which is distributed among several carbon reservoirs or pools in the atmosphere, biosphere, hydrosphere, and lithosphere. In the grand scheme, carbon is neither created nor destroyed but continually moves between these various pools owing to the operation of natural and human-induced processes. The root cause of global climate change is that human activity has shifted massive quantities of carbon to the atmosphere from forests, soil, and fossil deposits.

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remain in the atmosphere for decades to centuries, and about 15-30% will remain for thousands of years. … [I]f the sinks that now remove CO_2 from the atmosphere get saturated in the future, the residence time (of CO_2) will increase…" Tamara S. Ledley, Eric T. Sundquist, Stephen E. Schwartz, Dorothy K. Hall, Jack D. Fellows, and Timothy L. Killeen. EOS Electronic Supplement to AGU Vol. 80, No. 39, September 28, 1999, p. 453. Climate Change and Greenhouse Gases http://www.agu.org/eos_elec/99148e.html

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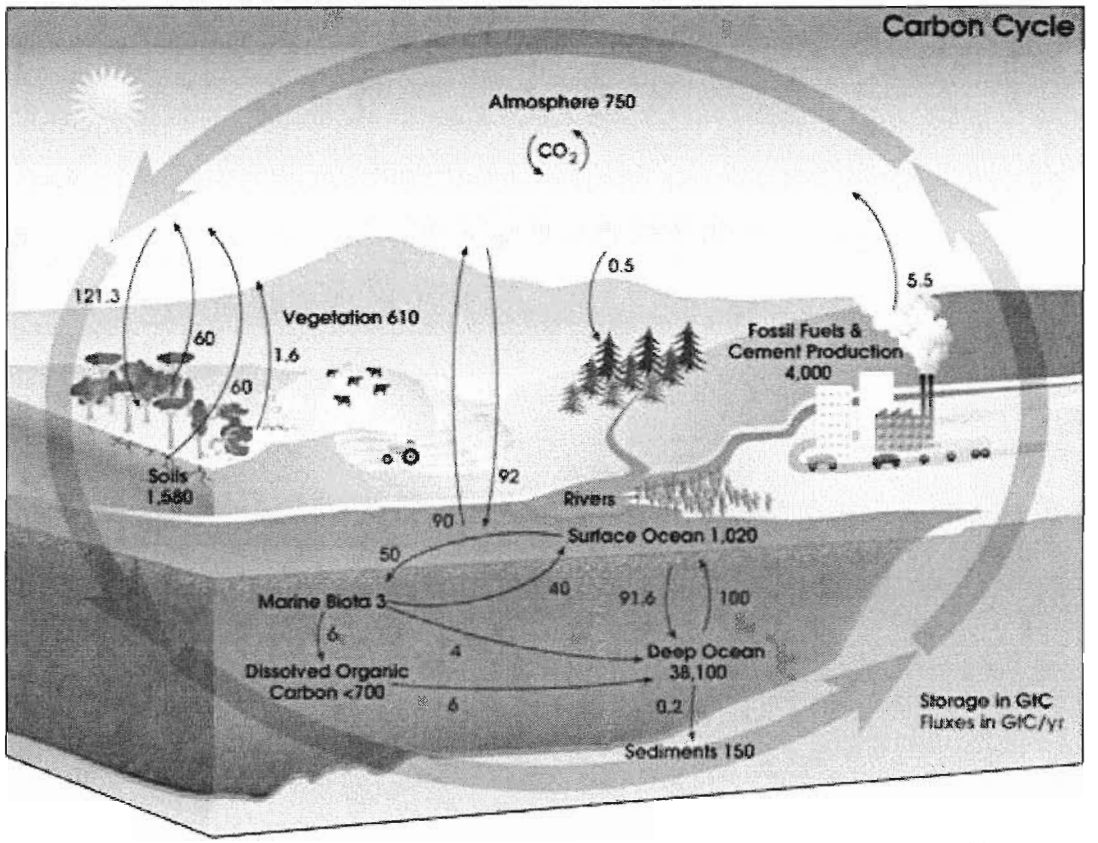

"Diagram of the carbon cycle. The black numbers indicate how much carbon is stored in various reservoirs, in billions of tons ("GtC" stands for GigaTons of Carbon). The blue numbers indicate how much carbon moves between reservoirs each year. The sediments, as defined in this diagram, do not include the ~70 million GtC of carbonate rock and kerogen."[3]

In the atmosphere carbon is stored as CO_2, methane (CH_4), and other organic compounds. Carbon moves *into* the atmosphere from decomposition of organic matter, respiration by living organisms, combustion, volcanic activity, burning fossil fuels, degassing of waterbodies, etc. Carbon moves *out of* the atmosphere via photosynthesis, rock weathering, dissolution in water, etc. All plants, including forests and many micro-organisms, use photosynthesis which takes CO_2 out of the air to build sugars that can be used by the cell to build cellulose or other complex carbon molecules that comprise plant biomass. This process is called "primary production" and it feeds the bottom of the global food chain. Virtually all life on earth, including humans, relies directly or indirectly on photosynthesis. Most terrestrial plants share a significant portion of their photosynthate with soil organisms, a cooperative relationship that builds a large and complex underground ecosystem that also stores carbon. Plants shed dead leaves and wood which also builds carbon stores in the soil.[4]

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[3] Carbon cycle, From Wikipedia, the free encyclopedia http://en.wikipedia.org/wiki/Carbon_cycle Kerogen is a mixture of organic chemical compounds that make up a portion of the organic matter in sedimentary rocks. Examples include bitumen, and oil shale.

[4] "[A]ging forests were long perceived to be in a state of decay that releases as much carbon dioxide as it captures. But it turns out that the soils in undisturbed tropical rain forests, Siberian woods and some German national parks contain enormous amounts of carbon derived from fallen leaves, twigs and buried

In the hydrosphere (e.g. the oceans) carbon is stored mostly as dissolved CO_2 and other dissolved organic compounds that originated in some photosynthetic life form. Carbon moves *into* the ocean from the atmosphere and biosphere via dissolving of gaseous CO_2 in cold seas, leaching from soil, and input of organic matter from river systems and the biosphere. Carbon moves *out of* the ocean primarily via photosynthesis (e.g. phytoplankton and cyanobacteria), degassing of warm seas, and deposition in marine sediments.[5]

In the biosphere carbon is stored as live or recently dead plants, animals, and micro-organisms both in the ocean and on land (e.g., forests and soils). Forests dominate the terrestrial carbon cycle, harboring 86% of the planet's above-ground carbon and 73% of the planet's soil carbon.[6] Carbon enters *into* the biomass pool via photosynthesis, then becomes entrained and cycled through the entire global food chain. Carbon moves *out of* the biomass pool through decomposition and respiration or through deposition in long-term storage in soil or geologic and fossil deposits.

In fossil deposits the carbon from long-dead plants and animals are stored as coal, oil, "natural gas," or kerogen. These can be thought of as both "ancient sunlight" and "ancient atmosphere." Carbon moves *into* the fossil pool via deposition and storage in low-oxygen conditions.[7] Carbon moves *out of* fossil pool mostly via industrial exploitation and combustion.

In the non-fossil lithosphere carbon is stored in carbonate rocks such as limestone and chalk. Carbon moves *into* these geologic structures mostly through ocean deposition. A portion of the oceanic carbon is taken up to make the shells of marine organisms that fall to the deep ocean floor where they may be subducted beneath the earth's crust and end up in long-term geologic storage, e.g., the Cliffs of Dover. Carbon moves *out of* the lithosphere mostly via volcanic activity and human industry, such as the manufacture of cement which heats limestone and releases significant quantities of CO_2.[8]

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roots that can bind to soil particles and remain there for 1,000 years or more. When such forests are cut, the trees' roots decay and soil is disrupted, releasing the carbon dioxide. Centuries would have to pass until newly planted trees built up such a reservoir underground." World Rainforest Movement. Climate Change Convention: Sinks that stink. New scientific findings: tree plantations may accelerate global warming. October 2000. http://www.wrm.org.uy/actors/CCC/sinks4.html

[5] There is an inverse relationship between temperature and the solubility of CO_2, so we observe that cold seas tend to absorb CO_2 while warm seas tend to release CO_2. As the polar oceans warm we expect their ability to capture and store CO_2 will decrease, and as the tropical oceans warm they will more readily release CO_2. Increased ocean stratification and expected changes in carbonate buffering will also likely reduce the ability of the oceans to absorb CO_2. Irina Marinov & Jorge L. Sarmiento. "The Role Of The Oceans In The Global Carbon Cycle: An Overview." Ocean Carbon Cycle and Climate, NATO ASI volume, 251-295, ed. M. Follows and T. Oguz, Kluwer Academic Publishers, 2004. http://ocean.mit.edu/~imarinov/08-Marinov.pdf

[6] Sedjo, Roger.1993. The Carbon Cycle and Global Forest Ecosystem. Water, Air, and Soil Pollution 70, 295-307.

[7] Surprisingly, there is still some debate about the actual origin of fossil fuels.

[8] The Relationship between Plate Tectonics and the Carbon Cycle. http://dilu.bol.ucla.edu/

The advent and diversity of life on earth has had a profound impact on the global carbon cycle and now plays a fundamental role in determining whether or not we have a livable climate. The abiotic carbon cycle that existed before the proliferation of life was less stable than the carbon cycle that developed after marine organisms started to make calcium carbonate shells and deposit carbon in deep storage which has helped buffer CO_2 extremes over long time scales.[9] Scientists have found a correlation between biodiversity and levels of atmospheric CO_2 over the last 370 million years.[10]

Human activity, mostly in just the recent era, has dramatically reallocated global carbon stores from the other carbon reservoirs into the atmosphere where it can influence our climate. For example, burning fossil fuels and heating limestone to make cement move carbon from long-term fossil and geologic storage into the atmosphere. Logging kills trees - stops carbon-uptake via photosynthesis, and moves carbon from living forests and soil into the atmosphere. Land uses such as agriculture, livestock grazing, and draining swamps move carbon from the soil to the atmosphere.

How will climate change affect the Pacific Northwest?

While predicting the local *weather* is an uncertain science, global c*limate* is actually more amenable to prediction because the focus is on large-scale trends rather than local details. We know that the planet as a whole is almost certain to become warmer on average, and scientists expect an acceleration of the hydrologic cycle as warmer temperatures lead to increased evaporation from the oceans and more transpiration from plants. However, the effects of climate change will not be uniform around the globe. Significant uncertainty remains about how global trends will express themselves regionally. Future climate in the Pacific Northwest is even more uncertain because of complex topography and uncertain changes in precipitation, but our close proximity to the moderating influence of the Pacific Ocean likely offers a slight buffer from climate extremes.

The Pacific Northwest should expect continued climate variability. Existing cycles of cool-wet winters and warm-dry summers will likely continue, though they will be superimposed on a warmer average climate. Both floods and droughts have been part of our past and will almost certainly be part of our future, and both will likely get worse, but we don't know if these climate extremes will be expressed with more frequency or more intensity, or both.

It is reasonable to expect more precipitation, mostly during our existing wet seasons. More of our winter precipitation will fall as rain instead of snow, so storage of water in

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[9] Andy Ridgwell, Richard E. Zeebe. The role of the global carbonate cycle in the regulation and evolution of the Earth system. http://tracer.env.uea.ac.uk/e114/publications/manuscript_ridgwell_and_zeebe.pdf

[10] Rothman, Daniel H. 2001. Global biodiversity and the ancient carbon cycle. Proceedings of the National Academy of Sciences. v. 98, no. 8, pp 4305-4310. April 10, 2001. http://www.pnas.org/cgi/content/full/98/8/4305 ("Surprising correlations exist between paleontological records of biodiversity and the carbon isotope fractionation evident in the sedimentary record for the last 370 million years. ... Consequently, CO2 levels decreased as biodiversity increased. These conclusions imply that fluctuations of CO2 levels have been driven primarily by changes within the biosphere and only secondarily by purely geologic and geophysical processes.")

snowpacks will likely decrease (on average). We should expect milder winters, earlier melting of snow packs, earlier spring run-off, longer periods of summer low stream flow, and more drought.[11]

Importantly, earth's biogeochemical systems are complex and not at equilibrium. There are many feedbacks[12] that lead to non-linear behavior, so we should NOT expect climate changes to be slow and predictable. Small changes in CO_2 and global temperature can lead to large and/or rapid changes in climate and ecosystems.[13] Accordingly, the rate of current and future global changes may be unprecedented, chaotic, and highly disruptive.

How will climate change affect ecosystems, forests, and trees?

Some biological effects of climate change can already be seen. There is evidence that some trees are leafing out earlier and forbs are flowering earlier. Also, some birds are migrating earlier, and seasonal peaks in some insect populations are occurring earlier.[14] "[C]limate change is not something that will happen in the future but is already in progress."[15]

We should expect shifting "isoclimes" (zones of similar climate). Forest communities will shift toward the poles and toward higher elevations, but the climate may change faster than species' natural capacity to migrate. Species are not expected to shift together as intact communities because of differing capacities for dispersal, migration, establishment, and tolerance of climate change. As a result, forest community composition will likely change. Climate change will disrupt co-evolved relationships between predators and their prey, plants and their pollinators, migration timing and flowering, etc. [16] During the tumultuous period of shifting biomes, opportunistic "weedy" species will readily replace native species that are displaced by climate change.[17]

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[11] Scientific Consensus Statement on the Likely Impacts of Climate Change on the Pacific Northwest http://jnr.oregonstate.edu/download/climate_change_consensus_statement_final.pdf

[12] Feedbacks are responses involving loops in the sequence of cause and effect within the system. The effects of an event become a cause for similar events. Positive feedback amplifies trends and destabilizes the system, while negative feedback dampens trends and stabilizes the system.

[13] José A. Rial, Rogera. Pielke Sr., Martin Beniston, Martin Claussen, Josep Canadell, Peter Cox, Hermann Held, Nathalie De Noblet-Ducoudré, Ronald Prinn, James F. Reynolds And José D. Salas. 2004. Nonlinearities, Feedbacks And Critical Thresholds Within The Earth's Climate System. Climatic Change 65: 11–38, 2004. http://blue.atmos.colostate.edu/publications/pdf/R-260.pdf

[14] Walther, G.R., Post, E., Convey, P., Menzel, A., Parmesan, C., Beebee, T.J.C., Fromentin, J.R., Hoegh-Guldberg, O., Bairlein, O., 2002. Ecological responses to recent climate change. Nature 416, 389–395.

[15] An Interview with Dr. Gian-Reto Walther. ESI Special Topics: October 2006. http://esi-topics.com/gwarm2006/interviews/Gian-RetoWalther.html

[16] Sherry, A., X. Zhou, S. Gu, J. A. Amone III, D. S. Schimel, P. S. Verburg, L. L. Wallace, and Y. Luo. 2007. Divergence of reproductive phenology under climate warming. PNAS, 104: 198-202. http://bomi.ou.edu/luo/pdf/Sherry%20et%20al.%202007%20PNAS.pdf

[17] Hansen, Neilson, Dale, Flather, Iverson, Currie, Shafer, Cook, and Bartlein. 2001. Global Change in Forests: Responses of Species, Communities, and Biomes. BioScience vol 51, no. 9, pp 765-779. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/bioone5.pdf

Expected decreases in streamflow and increases in stream temperatures will place additional stress on cold-water fish such as salmon and trout. Forests may consequently be deprived of large quantities of marine-derived nutrients that for millennia have been conveyed by salmon from the ocean to continental ecosystems.[18]

The following trends in forest ecosystems should be expected as a result of climate change. Forest disturbances such as fire and defoliating insects will likely increase, causing a reduction in the average age of trees (although old-growth forests will persist because of natural refugia, ecological inertia, and stochastic variation). Forests will likely become simplified due to the ascendancy of weedy species. The movement of existing forest types northward and toward higher elevations will likely cause extirpation of species where natural or human-induced habitat bottlenecks are encountered.[19]

There are significant feedbacks between climate and forests. Increasing temperatures can lead to longer growing seasons and more plant growth which can store more carbon or become fuel for fires. Longer fire seasons will likely occur due to earlier drying of fuels. Milder winters (more frost-free days) and warmer summers will allow insect populations to increase.[20] Warmer temperatures will also increase rates of respiration and decomposition which release CO_2 to the atmosphere, yet this effect might be partially countered by drying of soil surface layers which limits respiration.[21]

Changes in forest disturbance regimes will likely be tightly coupled with the changes described above and may overshadow the direct physiological effects of climate change

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[18] Naiman, R.J., R.E. Bilby, D.E. Schindler, and J.M. Helfield. 2002. Pacific salmon, nutrients, and the dynamics of freshwater and riparian ecosystems. Ecosystems. 5:399–417. http://www.fish.washington.edu/people/naiman/CV/reprints/naiman_ecosys_salmon_2002.pdf. Helfield, J.M., and R.J. Naiman. 2001. Effects of salmon-derived nitrogen on riparian forest growth and implications for stream productivity. Ecology 82(9) : 2403-2409. http://www.fish.washington.edu/people/naiman/CV/reprints/helfield_naiman_2001.pdf

[19] Nigel Dudley. 1998. Forests And Climate Change. Forest Innovations – a joint project of IUCN, GTZ and WWF. http://www.equilibriumconsultants.com/publications/docs/climatechangeandforests.pdf

[20] Insects' "short life cycles, mobility, reproductive potential, and physiological sensitivity to temperature" lead to a conclusion that small changes in climate can lead to large changes in the distribution and abundance of insects. Ayers & Lombardero. 2000. Assessing the Consequences for Global Change for Forest Disturbance from Herbivores and Pathogens. The Science of the Total Environment 262 (2000) 263-286. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/forests7.pdf

"Shortened winters, increasing summer temperatures, and fewer late-spring frosts correlate to increased insect feeding, faster growth rates, and rapid reproduction. … Drought creates many conditions that are favorable to increased insect reproduction. … Attempts at intervention [to control insects] are proving mostly negligible. " Dunn, David, Crutchfield, James. 2006. Insects, Trees, and Climate: The Bioacoustic Ecology of Deforestation and Entomogenic Climate Change. Santa Fe Institute Working Paper. Arxiv.org. However, reduced snow cover might lead to increased winter mortality for some insects that rely on a blanket of snow for winter cover.

[21] Hanson & Weltzin. 2000. Drought Disturbance from Climate Change: Response of United States Forests. The Science of the Total Environment 262 (2000) 205-220. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/forests2.pdf

on plants and trees.[22] It is reasonable to anticipate increased disturbances from wildfire, flooding, wind and storm damage, insect damage, and invasive species. Disturbance typically disrupts photosynthesis and favors respiration/decomposition processes thereby liberating CO_2.

Plants will likely face increased seasonal drought stress. Higher temperatures will increase evaporative losses from soils and increase transpiration from plants. "Forests at upper (cold) and lower (dry and/or hot) timberlines are most likely to show strong direct effects of climatic variation on tree growth, since they are closer to their physiological limits and, therefore, more prone to stress at these locations."[23] Interestingly, "[s]hade-tolerant trees show greater growth responses to CO_2 than do shade-intolerant species because of more efficient use of light, water, and nutrients."[24] This could account in part for the proliferation of shade tolerant ladder fuels in our forests.

Trees "breathe" both in and out. During the day plants engage in photosynthesis that captures CO_2 to build sugars and releases oxygen, but plants also engage in respiration (like animals), a process that uses some of the sugars produced during photosynthesis, consumes oxygen, and returns CO_2 to the atmosphere. Plant growth is a result of a net imbalance between photosynthesis and respiration. In trees the extra carbon is turned into wood. Experiments reveal significant variability in plants' response to elevated CO_2 concentrations, but studies show several consistent results including: increased rates of photosynthesis, increased concentration of non-structural carbohydrates, enhanced efficiency of water use and nitrogen use, and decreased plant nutrient concentration.[25] Elevated CO_2 may increase growth at the expense of other aspects of plant health and could degrade the quality of the resulting plant material as food and fiber.[26]

Plants grow better when night-time temperatures are about 5 degrees C cooler than day-time temperatures, because lower night time respiration reduces the use of carbohydrates and allows more carbohydrates to be stored or used for growth. If climate change reduces the temperature difference between day and night then plants may suffer because respiration will increase *relative to* photosynthesis.

Trees obtain CO_2 from the atmosphere by opening stomatal pores on their leaves, but they unavoidably lose water in the process. Some plant species may react to CO_2

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[22] Flannigan, Stocks & Wotton. 2000. Climate Change and Forest Fires. The Science of the Total Environment 262 (2000) 221-229.
http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/forests5.pdf

[23] Climate Impacts Group. Climate Impacts on Pacific Northwest Forests. University of Washington. http://www.cses.washington.edu/cig/pnwc/pnwforests.shtml.

[24] John Aber, Ronald P. Neilson, Steve Mcnulty, James M. Lenihan, Dominique Bachelet, And Raymond J. Drapek. 2001. Forest Processes and Global Environmental Change: Predicting the Effects of Individual and Multiple Stressors. BioScience vol 51, no. 9, pp735-751.
http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/bioone3.pdf

[25] Luo YQ, Reynolds J,Wang YP. 1999. A search for predictive understanding of plant responses to elevated [CO2]. Global Change Biol. 5:143–56 http://face.env.duke.edu/PDF/gcb5-99a.pdf.

[26] CSU Press Release, Global Warming Will Have Mixed Effects On Eastern Colorado's Grasslands. April 23, 2007. http://newsinfo.colostate.edu/index.asp?url=news_item_display&news_item_id=715292414

enrichment by actively constricting their stomata (and by reducing the density of stomata on new leaves) which will reduce water loss, thereby increasing water use efficiency and partly mitigating drought stress.[27] Constricted stomata may also reduce plants' exposure to damaging ozone pollution. These intriguing plant responses to warming and CO_2 enrichment are likely species-specific and more research is needed. These mitigating benefits of CO_2 appear to manifest themselves more during times of stress than during periods of peak plant growth.[28]

Furthermore, complex interactions among all the geophysical and biological responses to climate change will certainly lead to non-linear dynamics, threshold behavior, and rapid phase transitions that are difficult to model.[29] "Many disturbances are cascading. … [W]hen ecosystems experience more than one disturbance, the compounded effects can lead to new domains or surprises."[30] For instance, increased herbivory of above-ground vegetation by insects could shift the normally favorable below-ground relationship between fungi and tree roots. Mutualistic mycorrhizal fungi could be replaced by competitive or parasitic organisms, thereby harming trees and increasing liberation of CO_2.[31] Also, the migration of species toward the poles will likely be facilitated by disturbance because (relative to intact forests) disturbed sites will be more readily colonized by new arrivals from the south.[32]

It gets even more complex. Since forests are dark green, they tend to absorb rather than reflect sunlight, so the local albedo[33] effect of forests tends to counteract forests' carbon sequestration effects. Loss of forest cover tends to increase albedo thereby reflecting more of the sun's energy back into space (the effect can be temporary or long-term depending on how snowy the region is and how quickly forests regrow). On the other hand, new forests growing on formerly treeless landscapes will lower albedo, thereby absorbing more of the sun's energy. As the northern treeline moves north into the

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[27] Since less than 1 percent of the water taken up by plants is used in photosynthesis (the remainder being lost to transpiration), stomatal control could have an enhanced effect on soil moisture during times of water limitation. However, the reduced transpiration could also adversely affect cloud formation, potentially reducing the albedo effect of clouds and increasing warming.

[28] R.A. Houghton. 2007. Balancing the Global Carbon Budget. Annu. Rev. Earth Planet. Sci. 2007. 35:313–47.

[29] Burkett, V.R.; Wilcox, D.A.; Stottlemyer, R.; Barrow, W.; Fagre, D.; Baron, J.; Price, J.; Nielsen, J.L.; Allen, C.D.; Peterson, D.L.; Ruggerone, G.; Doyle, T. 2005. Nonlinear dynamics in ecosystem response to climatic change: case studies and policy implications. Ecological Complexity. 2: 357–394. http://www.fs.fed.us/psw/cirmount/wkgrps/ecosys_resp/postings/pdf/Burkett2005EcoCom357.pdf

[30] Virginia H. Dale, Linda A. Joyce, Steve Mcnulty, Ronald P. Neilson, Matthew P. Ayres, Michael D. Flannigan, Paul J. Hanson, Lloyd C. Irland, Ariel E. Lugo, Chris J. Peterson, Daniel Simberloff, Frederick J. Swanson, Brian J. Stocks, And B. Michael Wotton. 2001. Climate Change and Forest Disturbances. BioScience vol 51, no. 9, pp723-734. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/bioone2.pdf.

[31] Ayers & Lombardero (2000).

[32] Neilson, Ronald P.; Pitelka, Louis F.; Solomon, Allen M.; Nathan, Ran; Midgley, Guy F.; Fragoso, Jóse M.; Lischke, Heike; Thompson, Ken 2005. Forecasting regional to global plant migration in response to climate change. Bioscience, Vol. 55(9): 749-759. http://www.treesearch.fs.fed.us/pubs/24527

[33] "Albedo" is a measure of the reflectivity of surfaces. Light colored surfaces (e.g. snow and deserts) reflect more sunlight back to space, while dark surfaces (e.g. forests and oceans) tend to absorb more of the sun's energy and contribute to global warming. Large-scale changes in the extent of arctic ice and the composition of vegetation play a significant role in the climate models.

tundra the value of the carbon stored in the new forest may be more than off-set by the loss of albedo.[34] Another complexity — evapotranspiration from forests, combined with forests' natural release of organic aerosols that act as "cloud condensation nuclei" are credited with enhancing cloud formation, as well as the reflectance and longevity of clouds, potentially increasing albedo, and further highlighting forests' significant and varied influence on our global climate.[35]

Will the forests of the future become carbon sources or carbon sinks?

Just to put the terrestrial biosphere in perspective, there is about ten times more carbon contained in all land plants (plus the soil they grow on) than all the "extra" anthropogenic carbon currently in the atmosphere. Most of the terrestrial carbon is contained in forests which have been significantly depleted by mismanagement. The question is whether Northwest forests are more likely to store or release carbon under a changing climate.

The coupled processes of photosynthesis and respiration/decomposition mirror each other at a global scale to help regulate CO_2 levels and our climate.[36] Photosynthesis captures water and CO_2 and liberates oxygen to create biomass, while respiration consumes biomass and oxygen to liberate CO_2 and water. Depending on temperature and moisture conditions, among other factors, photosynthesis sometimes dominates leading to net carbon uptake. At other times respiration/decomposition dominate leading to net carbon release.[37] Whether our forests ultimately become net carbon sources or net carbon sinks under the future climate of the Northwest depends on factors that remain uncertain, such as the amount of summer precipitation vs. drought stress, the effects of future climate on fuels and fire hazard, the effects of CO_2 enrichment and climate change on

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[34] Catherine Brahic. 2006. Location is key for trees to fight global warming. NewScientist.com. 15 December 2006. http://environment.newscientist.com/article/dn10811-location-is-key-for-trees-to-fight-global-warming.html. G. Bala, K. Caldeira, M. Wickett, T. J. Phillips, D. B. Lobell, C. Delire, & A. Mirin. Combined Climate and Carbon-Cycle Effects of Large-Scale Deforestation. [pre-publication draft]

[35] Gregory C. Roberts, and Meinrat O. Andreae, Jingchuan Zhou, Paulo Artaxo. 2001. Cloud condensation nuclei in the Amazon Basin: "Marine" conditions over a continent? Geophysical Research Letters, Vol. 28, No. 14, Pages 2807-2810, July 15, 2001.
http://www.mpch-mainz.mpg.de/~biogeo/Roberts-CCN-CLAIRE-2001.pdf

Tunved, P., Hansson, H.-C., Kerminen, V.-M., Strom, J., Dal Maso, M., Lihavainen, H., Viisanen, Y., Aalto, P.P., Komppula, M. and Kulmala, M. 2006. High natural aerosol loading over boreal forests. Science 312: 261-263. Summarized here:
http://www.co2science.org/scripts/CO2ScienceB2C/articles/V9/N25/C2.jsp

[36] Christopher B. Field. 2001. Plant Physiology of the "Missing" Carbon Sink. Plant Physiol, January 2001, Vol. 125, pp. 25-28. http://www.plantphysiol.org/cgi/content/full/125/1/25

[37] The seasonal uptake and release of CO_2 by plants in the northern hemisphere is evident at a global scale in the ground-breaking measurements of CO_2 taken at Mauna Loa in Hawaii starting in 1958. The planet essentially inhales CO_2 in the spring and summer and exhales in the fall and winter. See http://en.wikipedia.org/wiki/Mauna_Loa_Observatory and
http://www.cmdl.noaa.gov/ccgg/trends/co2_data_mlo.php

plant physiology, whether forests geographically expand or contract, and whether forests are exploited or protected.[38]

The good news is that slight to moderate warming may increase our forests' ability to store carbon through increased growth and geographic expansion. Pacific Northwest forests might become significant carbon sinks and help mitigate climate change if growing conditions remain favorable and disturbances like fire do not significantly increase. Under warm-wet conditions growing seasons will lengthen, and forest or woodland communities could expand into current rangelands, thus raising the possibility that northwest forests could absorb CO_2 and become a significant net carbon sink.[39]

The bad news is that there is likely a warming *threshold* above which our forests will likely decline due to drought stress and increased disturbances.[40] Drought stress limits the potential photosynthetic benefits of longer growing seasons and CO_2 enrichment. Increasing temperature also increases rates of respiration and decomposition, so under a future climate scenario like this, northwest forests could wither, recede geographically, and become a significant net carbon source. The IPCC tells us that some warming has already occurred and that existing levels of CO_2 already commit us to some additional warming. There is considerable uncertainty about when we may cross the sink to source threshold.[41]

El Niño/Southern Oscillation (ENSO) is a prominent source of multi-year variability in weather and climate around the world. The main signature of ENSO is a periodic (~every 3-8 years) reduction in winds moving westward across the Pacific ocean. This allows warm water to move eastward across the tropical Pacific Ocean. ENSO has strong impacts on ocean nutrient cycling and associated fish populations and birds. ENSO has repercussions far beyond the Pacific ocean, including periodic wide-scale drought in many regions of the world. Scientists have found a correlation between periodic phenomena like ENSO and years with anomalous global increases in CO_2 which appear to be linked to CO_2 releases from plants, soil, and fire.[42] While there remains debate about this, some have predicted that ENSO may become more frequent and sustained

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[38] A study conducted at the Wind River Canopy Crane revealed that "[s]easonal to interannual variability in precipitation and consequent water balance appears to influence the timing of this switch from photosynthesis-dominance to respiration-dominance, ultimately determining whether the forest will be a net carbon sink or source." Matthias Falk, K. T. Paw U, S. Wharton, and M. Schroeder. Interannual variability of water use efficiency in an old-growth forest under drought conditions. http://ams.confex.com/ams/pdfpapers/110964.pdf

[39] Geographic expansion of forests might be good news from carbon standpoint, but not from the standpoint of rangeland ecosystems and the species that depend upon them such as pronghorn and sage grouse.

[40] Marko Scholze, Wolfgang Knorr, Nigel W. Arnell, and I. Colin Prentice. A climate-change risk analysis for world ecosystems. Proceedings of the National Academy of Science. PNAS vol. 103 no. 35. published online Aug 21, 2006. http://www.pnas.org/cgi/reprint/0601816103v1.pdf

[41] Even if we may already have crossed the threshold from sink to source, forest conservation remains a valuable tool for climate mitigation, because failure to conserve forests will only make a bad situation worse.

[42] Knorr, W., N. Gobron, M. Scholze, T. Kaminski, R. Schnur, and B. Pinty (2007), Impact of terrestrial biosphere carbon exchanges on the anomalous CO2 increase in 2002–2003, Geophys. Res. Lett., 34. . http://www.fastopt.com/papers/knorral07.pdf

under global warming which could cause a positive feedback favoring respiration over photosynthesis on a global scale.[43]

The source/sink differences could also manifest themselves differently across geography and time periods. "In regions where drought stress is not important because of high levels of precipitation, or if increases in CO_2 concentration increase water use efficiency and thus reduce water stress, longer growing seasons could result in increased growth. Where drought stress is important, a longer growing season may mean only that plant respiration exceeds photosynthesis for a longer time, which would result in reduced growth."[44] So, it is conceivable that moist forests west of the Cascades might remain net carbon sinks, while the dryer forests east of the Cascades might become net sources.

Another study looked at the effects of CO_2 enrichment and climate change on vegetation in the mid- and high-latitudes of the northern hemisphere and found opposing effects in spring and summer. CO_2 uptake was apparently enhanced during warm wet spring season, but looking over the entire growing season, including the dryer summer, CO_2 uptake did not increase.[45] Another paper estimated that western forests might increase in spatial extent while decreasing in their carbon density, i.e., more forested acres, but fewer trees per acre.[46]

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[43] William J. Merryfield. 2006. Changes to ENSO under CO2 Doubling in a Multimodel Ensemble. Journal of Climate. Volume 19, pp 409-427. http://www.ocgy.ubc.ca/~yzq/books/paper5_IPCC_revised/Merryfield2006.pdf. Michael W. Wara, Ana Christina Ravelo, Margaret L. Delaney. Permanent El Niño-Like Conditions During the Pliocene Warm Period. Science 29 July 2005: Vol. 309. no. 5735, pp. 758 – 761. Gabriel A. Vecchi, Brian J. Soden. 2007. Global Warming and the Weakening of the Tropical Circulation. Journal of Climate. 2007. http://www.gfdl.noaa.gov/~gav/REPRINTS/VS_07_GWnCIRC.final.pdf

[44] John Aber, Ronald P. Neilson, Steve McNulty, James M. Lenihan, Dominique Bachelet, And Raymond J. Drapek. 2001. Forest Processes and Global Environmental Change: Predicting the Effects of Individual and Multiple Stressors. BioScience vol 51, no. 9, pp735-751. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/bioone3.pdf

[45] A. Angert, S. Biraud, C. Bonfils, C. C. Henning, W. Buermann, J. Pinzon, C. J. Tucker, and I. Fung. 2005. Drier summers cancel out the CO2 uptake enhancement induced by warmer springs. Proceedings of the National Academy of Sciences of the United States of America, 2005 (Vol. 102) (No. 31) 10823-10827. http://www.pnas.org/cgi/reprint/0501647102v1.pdf

[46] Dominique Bachelet, Ronald P. Neilson, James M. Lenihan, and Raymond J. Drapek. 2001. Climate Change Effects on Vegetation Distribution and Carbon Budget in the United States. Ecosystems (2001) 4: 164–185. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/Ecosystems2%20Bachelet.pdf. ("[S]imulation results suggest the possibility for an early green-up in response to a moderate warming, followed later by vegetation density declines due to temperature-induced droughts … [In the model] precipitation exhibits considerable interdecadal variability, which can override the simplified trajectory implied by the hypothesis.
… The fate of the western coniferous forests under warmer climates is less clear. MC1 [a dynamic climate model] simulates a large expansion of the coniferous forests across the western states under CGCM1 [a climate change scenario], even though it simulates a decrease in their [carbon] density over the area of their current distribution.") See also, National Forest Assessment Group. 2001. Forests: The Potential Consequences of Climate Variability and Change. USDA, DOE, NASA. http://www.usgcrp.gov/usgcrp/Library/nationalassessment/forests/forest.pdf, USDA Forest Service. 2002. Is Carbon Storage Enough? Can Plants Adapt? New Questions in Climate Change Research. Science Findings #44. May 2002. Sherri Richardson Dodge, ed. http://www.fs.fed.us/pnw/sciencef/scifi44.pdf and

The bottom line is that if we carefully conserve our forests, they can play a substantial role in mitigating our current carbon predicament. Even if forests shift from becoming a carbon sink to a carbon source, continued forest conservation will help mitigate the consequences. To manage forests for resilience, they must be allowed time to grow and accumulate carbon while natural disturbance processes are allowed to self-regulate, thus ensuring that live vegetation is maintained below the water-limited carrying capacity and fuels will be maintained below the threshold for uncharacteristic fire.

What can we do to protect forests from the perils of climate change?

Jerry Franklin points out that "forest management can either exacerbate or reduce the effects of climatic change on the productivity and biological diversity of northwest forestscapes."[47] To increase the chances that we will continue to enjoy the diverse benefits we receive from northwest forests, we must maintain and enhance their ability to respond to change. The key components of such a strategy are:

- Maintain biodiversity in all its dimensions. This will be critical, because genetic diversity is akin to a library of possibilities that have worked well during past climate variability, representing the sum of "tools" available for the future.[48]
- Protect intact native ecosystems where species relations have stood the test of time and remain robust;
- Provide refugia and allow species to migrate. Buffer and expand protected areas to provide connectivity along climatic gradients. Manage the entire landscape to be amenable to dispersal of native species.

Climate Impacts Group. Climate Impacts on Pacific Northwest Forests. University of Washington. http://www.cses.washington.edu/cig/pnwc/pnwforests.shtml

[47] Dudley, Nigel. 1998. Forests And Climate Change - A report for WWF International November 1998. http://www.equilibriumconsultants.com/publications/docs/climatechangeandforests.pdf *citing* Franklin, J.F., F.J. Swanson, M.E. Harmon, D.A. Perry, T.A. Spies, V.H. Dale, A. McKee, W.K. Ferrell, J.E. Means, S.V. Gregory, J.D. Lattin, T.D. Scholwalter and D. Larsen (1992) ; Effects of Global Warming on Forests in Northwestern America; The Northwest Environmental Journal; 7:233-254.

[48] Respected conservation biologist Reed Noss notes — "Among the land-use and management practices likely to maintain forest biodiversity and ecological functions during climate change are (1) representing forest types across environmental gradients in reserves; (2) protecting climatic refugia at multiple scales; (3) protecting primary forests; (4) avoiding fragmentation and providing connectivity, especially parallel to climatic gradients; (5) providing buffer zones for adjustment of reserve boundaries; (6) practicing low-intensity forestry and preventing conversion of natural forests to plantations; (7) maintaining natural fire regimes; (8) maintaining diverse gene pools; and (9) identifying and protecting functional groups and keystone species. Good forest management in a time of rapidly changing climate differs little from good forest management under more static conditions, but there is increased emphasis on protecting climatic refugia and providing connectivity." Reed F. Noss (2001) Beyond Kyoto: Forest Management in a Time of Rapid Climate Change. Conservation Biology 15 (3), 578–590. See also, Nigel Dudley. 1998. Forests And Climate Change. Forest Innovations – a joint project of IUCN, GTZ and WWF. http://www.equilibriumconsultants.com/publications/docs/climatechangeandforests.pdf Others urge that we recognize that historic landscapes may not be a good model and recommend that we prepare ecosystems for climate change by being adaptive, proactive, value genetic diversity, and attempt to build resilient systems. James A. Harris, Richard J. Hobbs, Eric Higgs, and James Aronson. 2006. Ecological Restoration and Global Climate Change. Restoration Ecology Vol. 14, No. 2, pp. 170–176 JUNE 2006.

- Protect streams. Cold water fish are particularly vulnerable to climate change because of increased winter flooding, reduced summer stream flow, and increased stream temperature. To mitigate expected effects on fish, we should provide generous riparian buffers to help shade streams and maintain lower stream temperatures. To render streams more resilient to hydrologic extremes, such as flooding, we should manage whole watersheds to improve their ability to absorb, store, and slowly release water. This can be accomplished in part by reducing disturbance of vegetation and soils, reducing road densities, and retaining abundant woody debris.

Logging releases significant amounts of carbon.

Not surprisingly, logging accelerates the transfer of carbon to the atmosphere by killing trees that would otherwise continue to capture and store carbon through photosynthesis and growth. Killing trees also stops them from pumping carbon into the soil where much of the carbon in forests is stored.[49] Logging actually accelerates the rate of decomposition of wood via several mechanisms. By removing the forest canopy and exposing the soil to more sunlight, logging raises soil temperature which increases the rate of decay. Logging also breaks up woody material in the forest thereby decreasing the average piece size and increasing the surface area exposed to microbial decomposition. Finally, logging debris is often burned on site or as part of an industrial process.

Traditional logging also increases the risk of disturbances. Logging increases wind damage by creating exposed edges and increasing wind speeds within forest stands. Logging often increases the wildfire hazard by making the stand hotter, dryer, and windier; by moving the most flammable small fuels from the forest canopy to the forest floor (i.e., logging slash) where they are more available for combustion; and by initiating the establishment of dense stands of young trees with interlocking branches (resinous fuels) close to the ground. Logging roads also increase the risk of human-caused fire ignitions and spread tree diseases like Port Orford cedar root disease that kill trees and release carbon.

Scientists estimate that a large fraction of all the carbon transferred to the atmosphere by humans has been released due to forest exploitation.[50] In recent decades CO_2 emissions resulting from human-induced changes to forests exceed CO_2 emissions from all motor vehicle sources combined, but forest releases are less than total emissions from all uses of fossil fuels.[51] After logging an old-growth forest, the site remains a net source of carbon for more than 20 years, and depending on the conditions, the site does not rebuild pre-logging carbon stores for a century or more. As a result of widespread

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[49] Forests store massive amounts of carbon in the soil in the form of live and dead roots, woody debris, charcoal, and the vast below-ground ecosystem supported by photosynthate received from trees. Logging cuts off the food supply for the below-ground ecosystem which rapidly dies and decomposes.

[50] G. M. Woodwell, J. E. Hobbie, R. A. Houghton, J. M. Melillo, B. Moore, B. J. Peterson, and G. R. Shaver. 1983. Global Deforestation: Contribution to Atmospheric Carbon Dioxide. Science 9 December 1983: Vol. 222. no. 4628, pp. 1081 – 1086. http://www.sciencemag.org/cgi/content/abstract/222/4628/1081

[51] The Scottish Forest Alliance. Factsheet: Human influences on forest carbon flows. July 2002. http://www.scottishforestalliance.org.uk/carbon/fs_human_influences.pdf

clearcutting and aggressive slash burning, the Pacific Northwest has contributed huge quantities of carbon to the atmosphere.[52]

What can we do to increase carbon storage in forests?

Here in the Pacific Northwest we live in the midst of a globally significant carbon pool that should be nurtured and conserved to help keep carbon out of the atmosphere.[53] Temperate old-growth forests of the Pacific Northwest contain some of the highest amounts of biomass per acre measured anywhere in the world. About half of the dry weight of forest biomass is comprised of carbon. The latest IPCC Mitigation Report notes that "Forest-related mitigation activities can considerably reduce emissions from sources and increase CO_2 removals by sinks at low costs..."[54] The IPCC also states that more than 1/3 of the potential mitigation available from forests is located outside the tropics and half of the forest mitigation will come from changes in forest practices, rather than simply preventing deforestation.

The objectives of forest management with respect to mitigating climate change should be a two-fold effort to *protect* and *restore* forests —

- Minimize the release of additional forest carbon into the atmosphere. The best way to *retain* carbon in existing forests is to protect mature and old-growth forests and roadless areas.
- Rebuild depleted carbon stores within forested landscapes. Probably the best way to *rebuild* forest carbon stores in forests is to allow forests that were previously logged or burned to regrow and become mature and old-growth forests.

There are significant complementary benefits of managing forests for carbon storage to ameliorate global climate change. If done carefully, forests managed to provide public services such as clean water, habitat for fish and wildlife, soil conservation, and an enhanced amenity-based economy will also store large amounts of carbon over time.[55]

Forests exhibit a quality known as "ecological inertia" which recognizes that established forests are generally long-lived, resilient to disturbance, and help create

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[52] "Mass balance calculations indicate that the conversion of 5×10^6 hectares of old growth forests to younger plantations in western Oregon and Washington in the last 100 years has added 1.5×10^9 to 1.8×10^9 megagrams of carbon to the atmosphere." Harmon, M., Ferrell, W., and J. Franklin. 1990. Effects on Carbon Storage of Conversion of Old-Growth to Young Forests. Science. 9 February 1990.

Warren B. Cohen, Mark E. Harmon, David 0. Wallin, and Maria Fiorella. 1996. Two Decades of Carbon Flux from Forests of the Pacific Northwest - Estimates from a new modeling strategy. BioScience 46(11):836-844. http://www.humboldt.edu/~storage/pdfmill/Batch%203/carbonflux.pdf

[53] Smithwick, E. A., M. E. Harmon, S. M. Remillard, S. A. Acker and J. F. Franklin. 2002. Potential upper bounds of carbon stores in forests of the Pacific Northwest. Ecological Applications 12:1303-1317.

[54] IPCC Working Group III. 2007. Climate Change 2007: Mitigation of Climate Change. Summary for Policymakers. IPCC Fourth Assessment Report. May 2007. http://www.ipcc.ch/SPM040507.pdf

[55] Krankina, O.N., & M.E. Harmon. 2007. Forest Management Strategies for Carbon Storage. In OFRI 2007. Forests, Carbon and Climate Change: A Synthesis of Science Findings. Pp 27-28. http://www.oregonforests.org/media/pdf/CarbonRptFinal.pdf

conditions suitable for their own survival.[56] This means that our northwest forests may be able to persist through some climate changes and continue to store carbon and provide other benefits, as long as they are not clearcut or severely disturbed. This implies that if we want continued carbon storage in forests that are at the edges of their suitable range, we should avoid stand-replacing logging methods (such as clearcutting) and, where ecologically appropriate, we may need to strategically reduce fuels to reduce the risk of stand-replacing fire. Such fuel reduction must be done carefully however, because excessive removal of vegetation not only compromises carbon storage in both plants and soil, but can also increase fuel loads and fire hazard. Recent fire/fuel models indicate that forest fire hazard can be managed reasonably well by treating about 20-30 percent of the landscape in strategic locations.[57] Treating fuel on every acre is neither needed or desired. Logging need not be the primary tool for accomplishing fuel reduction, because non-commercial techniques, such as low-intensity prescribed fire, are available and effective.

Forest Management Recommendations

Private forestlands: Short-rotation clearcutting typically practiced by private industrial forest land-owners is probably the worst possible way to manage forests for carbon storage, because: (a) the young forests never develop large carbon stores; (b) significant soil carbon is lost during and after clearcutting, slash disposal, and site preparation; and (c) the resulting wood products produced have limited longevity. Where logging is expected to continue, scientists recommend that carbon release can be mitigated if forest managers:[58]

- Allow trees to grow much longer before harvest (i.e., longer rotations);
- Retain more live trees on every acre during harvest (i.e., thin instead of clearcut);

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[56] Mazza, Patrick. 1998. Case Study — Global Warming and the Pacific Northwest: Perpetual El Niño. ("'Responses will be slow and muted especially for older forests, because they are relatively tolerant to change and adapt somewhat to new environments,' [Jerry] Franklin reports.")

[57] Alan Ager, Mark Finney, and Andrew McMahan. 2006. A Wildfire Risk Modeling System for Evaluating Landscape Fuel Treatment Strategies. USDA Forest Service Proceedings RMRS-P-41. 2006. http://www.fs.fed.us/rm/pubs/rmrs_p041/rmrs_p041_149_162.pdf Josh McDaniel. SPLATS, SPOTS, and the Future of Fuels Treatment. http://www.wildfirelessons.net/Additional.aspx?Page=57

[58] Final Workshop Summary and Scientific Conclusions *in* Climate Change, Carbon, and Forestry in Northwestern North America: Proceedings of a Workshop. November 14 - 15, 2001 Orcas Island, Washington. PNW-GTR-614. April 2004 http://www.fs.fed.us/pnw/pubs/pnw_gtr614.pdf (p 117).

Ross W. Gorte. 2007. Carbon Sequestration in Forests. CRS Report for Congress. Updated March 29, 2007. http://www.ncseonline.org/NLE/CRSreports/07Apr/RL31432.pdf

Spies, Adams, Harmon, Johnson, & Reeves. Project A5. Assess the Scientific Basis for Standards/Practices at the Stand, Management Unit, Landscape and Regional Level: Oregon Coast Range. Final Report To National Commission on Science for Sustainable Forestry. January 23, 2004. http://www.ncseonline.org/ewebeditpro/items/O62F3833.pdf

R. JANDL, K. RASMUSSEN , M. TOMÉ and D.W. JOHNSON. 2006. The Role of Forests in Carbon Cycles, Sequestration, and Storage. Issue 4. Forest Management and Carbon Sequestration. http://www.iufro.org/download/file/1629/3754/issue4_jan06.pdf

Johnson, Sherri. Applying knowledge of biological legacies to forest management. Powerpoint. http://intranet.lternet.edu/archives/documents/presentations/2004_lter_nsf_symposium/JohnsonLTERTalk2004/index.html

Colombo, Parker, Dang, & Luckai. Intensive Forest Management and Carbon Sequestration http://flash.lakeheadu.ca/~carbon/

- Retain more dead wood after harvest (e.g. protect snags, practice less intensive slash disposal and site preparation); and
- Take steps to reduce road systems and prevent soil erosion, which would help store more carbon in forest soils.

Public lands: Federal forests can help mitigate climate change if they are restored to their natural-sustainable level of biomass and biodiversity. Large stores of carbon exist within roadless areas and mature and old-growth forests on federal lands. These should be protected from harvest, while previously logged younger forests should be carefully restored to a mature and old-growth condition that has optimal biomass storage. This management approach luckily complements other highly sought-after forest values that are currently under-represented in our forests. Careful management of forests for carbon storage can help resolve ongoing controversies over forestry's impact on water quality, old-growth, roadless areas, fish & wildlife habitat, and scenic values.

Market Solutions: Given humanity's slow response to the growing evidence of human-induced climate change and its consequences, aggressive approaches such as market intervention are now needed. The debate continues on whether a carbon tax or cap-and-trade system is better, but either is better than nothing. A carbon tax system establishes the price of carbon and the market determines how much is sequestered and not emitted. In a cap-and-trade carbon market, government would determine how much total carbon can be emitted from all sources and the market would determine who is allowed to emit the carbon and at what price.

Under current international climate protocols it is possible that forest owners of the Pacific Northwest might seek compensation for storing "extra" carbon. This would reward forest managers for storing carbon that would otherwise be transferred to the atmosphere and help off-set some of the economic costs of managing forests for carbon storage. However, there are unresolved issues about how to account for the full carbon consequences of proposed forest management activities.[59] For instance, the Kyoto Protocol has some "perverse incentives" that could reward carbon-poor young forests at the expense of carbon-rich old forests, though this is not scientifically supported.

> In contrast to the sink management proposed in the Kyoto protocol, which favors young forest stands, we argue that preservation of natural old-growth forests may have a larger effect on the carbon cycle than promotion of regrowth. ... [I]ncreasing life-span of the stand, proportionally more carbon can be transferred into a permanent pool of soil carbon (passive soil organic matter or black carbon)... [R]eplacing unmanaged old-growth forest by young Kyoto stands ... will lead to massive carbon losses to the atmosphere mainly by replacing a large

[59] American Lands, and Center for International Environmental Law. Saving Forests and Cooling the Planet – Goals and Standards for Forest Sequestration. January 2000.

pool with a minute pool of regrowth and by reducing the flux into a permanent pool of soil organic matter.[60]

Carbon stored in wood products generally do not last as long as they would if left safe inside a mature tree, but we can improve the carbon storage equation by using less wood and by increasing the lifespan of wood products. It's not just American's big cars and SUVs that are a problem; it's also their increasingly large houses. We should consider policies to help reverse the national trend toward larger houses, and we should build houses that last for centuries instead of just decades.

What about forest fires?

We cannot avoid the fundamentally dynamic nature of forests. Fire is an unavoidable part of life in western forests and we must stop fighting a losing battle against the inevitable. Most western forests are in some ways *dependent* upon disturbances such as fire, and past fire suppression has exacerbated rather than solved the problem of fire. Our goal should not be to prevent all damage from fires, insects, etc. Fire should be allowed to operate within natural bounds, as long as it doesn't threaten public safety. Communities and property owners in forest settings must take responsibility for becoming fire resilient or fire permeable.[61]

We should maintain healthy forest habitat by allowing natural disturbance processes to operate and expect forest carbon stores to ebb and flow, while also allowing forests to grow for long periods (and store lots of carbon) in between these natural disturbances. We must take a long-term and landscape view, so that we *optimize* carbon storage at any given point in space and time in order to *maximize* carbon storage over large landscapes and long time frames.

Fuels could be reduced in forests that are significantly outside the natural range of variability, but this must be done in a strategic and limited way that protects all large fire resilient trees and spatially disconnects large expanses of excessive fuels, while retaining as much biomass as sustainably possible. Current enthusiasm for fuel reduction must be tempered with a realization that removing too much fuel makes forests hotter, dryer, and windier which increases fire hazard and increases decomposition rates, both of which counter carbon storage and other objectives. After fire, the goal should be to retain carbon on site and allow the recovering forest to grow into a mature and old-growth condition. Aggressive replanting as recommended by the timber industry[62] is unsupported because it establishes a dense fuel-laden condition that is susceptible to drought and is soon ripe for another fire. Natural regeneration of forests leads to more diverse and less dense forests,

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[60] Ernst-Detlef Schulze, Christian Wirth, Martin Heimann. CLIMATE CHANGE: Managing Forests After Kyoto. Science 22 September 2000: Vol. 289. no. 5487, pp. 2058 - 2059. http://academic.engr.arizona.edu/HWR/Brooks/GC572-2004/readings/schulze.pdf

[61] FUSEE. Frontline Home Safety Practices for protecting homes and property from wildfire. http://www.fusee.org/safety/frontline_content.html Darling, J. 2005. Safer in the Sticks. Medford Mail-Tribune. September 24, 2005. http://archive.mailtribune.com/archive/2005/0924/life/stories/01life.htm

[62] OFRI. 2007. Forests, Carbon, and Climate Change – Exploring the Role of Trees in Reducing Atmospheric Carbon. A Special Report of the Oregon Forest Resources Institute. http://www.oregonforests.org/media/pdf/CarbonRptFinal.pdf

which is preferable from a climate change perspective because the resulting habitat diversity and spatial discontinuity are more resilient to future hazards.

Conclusion

The best way to think of the carbon potential of forests is not as carbon sponges, but as carbon reservoirs; not to think of just the carbon in the trees but also the carbon in forest soils and the full diversity of forest life; and not to think of the carbon in forests at any single point in time, but strive to maintain a high average amount of carbon stored over long periods of time and across large forest landscapes. Old-growth forests are one of the most secure forms of carbon storage, while converting old-growth to plantations causes a significant net loss of carbon to the atmosphere.

A reality check: We are very likely past the "point of no return." Significant climate change is almost certainly unavoidable at this point because there is already so much CO_2 in the atmosphere, carbon has such a long residence time in the atmosphere, fossil fuel consumption and land use continue to release vast quantities of CO_2, and so far, we are not changing our habits fast enough to make a real difference. Forests can sequester *some* carbon but not nearly enough to allow us to maintain business as usual. Current levels of fossil fuel use are already overwhelming the biosphere's ability to absorb carbon, and climate change will likely further inhibit the biosphere's capacity to function as a carbon sink.[63] A comprehensive policy approach to climate change will require far-reaching changes in energy policy, land use, transportation, urban design, and protection of native ecosystems. Even then we will need to *adapt* to the unavoidable changes that are coming. Forest conservation can play a valuable role in a comprehensive climate change policy.

[63] A. Angert, S. Biraud, C. Bonfils, C. C. Henning, W. Buermann, J. Pinzon, C. J. Tucker, and I. Fung. 2005. Drier summers cancel out the CO2 uptake enhancement induced by warmer springs. Proceedings of the National Academy of Sciences of the United States of America, 2005 (Vol. 102) (No. 31) 10823-10827. http://www.pnas.org/cgi/reprint/0501647102v1.pdf

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Appendix: Myths & Facts about Forests and Global Warming

Myth: Fast-growing young forests are better carbon stores than slow-growing old forests.

Fact: An honest accounting reveals that logging and industrial forestry release vast amounts of carbon that is not captured and stored in wood products. Young forests continue to release carbon for decades after harvest due to the decomposition of rich carbon stores maintained by the previous stand.[64] Scientists discovered that old forests continue to absorb CO_2 even after tree growth appears to have slowed. This may be explained in part by the fact that old-growth trees are sending a lot of carbon into the soil to support the below-ground ecosystem that helps sustain them (e.g. symbiotic relation between old growth trees and mycorrhizal fungi).[65] Also, traditional tree farming models break down because they fail to view old forests as complete ecosystems, instead of just old trees. Old forest ecosystems continue to absorb and store carbon because they harbor a diversity of plants and because these well-developed ecosystems constantly recruit new

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[64] "[C]onversion of old-growth forest to younger forests … has added and will continue to add C to the atmosphere. This conclusion is likely to hold in most forests in which the age of harvest is less than that required to reach the old-growth stage of succession. The amount of C added by conversion will vary among forests, depending on their maximum storage capacity and the difference between the timber rotation age and the age of the old-growth state within the given ecosystem." Harmon, Mark E; Ferrell, William K; Franklin, Jerry F. 1990. Effects on Carbon Storage of Conversion of Old-Growth Forests to Young Forests. Science; Feb 9, 1990; pg. 699
http://academic.evergreen.edu/curricular/ftts/downloadsw/harmoneta11990.pdf

[65] "Long-held theory, according to Knohl et al. (2003), maintains that assimilation is 'balanced by respiration as a forest stand reaches an 'advanced' stage of development.' Quite to the contrary, however, a number of newer studies are finding this supposition to be as poor a representation of reality as were the early evolutionary theories of aging in animals.

"In a recent biomass inventory, for example, Cary et al. (2001) found much larger than expected net primary production in multi-species subalpine forest stands ranging in age from 67 to 458 years, while similar results have been obtained by Hollinger et al. (1994) for a 300-year-old Nothofagus site in New Zealand, by Law et al. (2001) for a 250-year-old ponderosa pine site in the northwestern United States, by Falk et al. (2002) for a 450-year-old Douglas fir/western hemlock site in the same general area, and by Knohl et al. (2003) for a 250-year-old deciduous forest in Germany." "It's Never Too Late" to "Live Long and Prosper" CO_2 Science, Volume 7, Number 23: 9 June 2004.
http://www.co2science.org/scripts/CO2ScienceB2C/articles/V7/N23/EDIT.jsp

http://www.co2science.org/scripts/CO2ScienceB2C/articles/V5/N6/COM.jsp

Stauth, Winner. Old-growth trees still soaking up CO2, study shows. OSU News. Dec 1997.
http://oregonstate.edu/dept/ncs/newsarch/1997/December97/old.htm

Paw U, K.T., Falk, M., Suchanek, T.H., Ustin, S.L., Chen, J., Park, Y.-S., Winner, W.E., Thomas, S.C., Hsiao, T.C., Shaw, R.H., King, T.S., Pyles, R.D., Schroeder, M. and Matista, A.A. 2004. Carbon dioxide exchange between an old-growth forest and the atmosphere. Ecosystems 7: 513-524.

Guoyi Zhou, Shuguang Liu, Zhian Li, Deqiang Zhang, Xuli Tang, Chuanyan Zhou, Junhua Yan, Jiangming Mo. 2006. Old-Growth Forests Can Accumulate Carbon in Soils. Science 1 December 2006:Vol. 314. no. 5804, p. 1417.

A. Knohl et al. Large carbon uptake by an unmanaged 250-year-old deciduous forest in Central Germany. Agricultural and Forest Meteorology 118 (2003) 151–167.

plants that help maintain, on an ecosystem basis, a productive ratio of leaf area (where photosynthesis occurs) to sapwood (where respiration occurs).[66]

Myth: Wood products store carbon. Some argue that logging is helpful because carbon is sequestered in wood products.

Fact: It turns out that well-conserved forests, on average, store carbon more securely than our *throw-away* culture does. First, only a small fraction of the carbon removed from logged forests end up as durable goods and buildings - most ends up as slash, sawdust, waste/trim, hog fuel, and non-durable goods like paper.[67] Second, wood products have short "life spans" compared to forests that are well-protected from logging. Most wood products are essentially *disposable.* Wood products which can reasonably be considered *durable* (e.g. buildings) may in fact be less durable than the wood retained safely inside an old-growth tree that could live to be hundreds of years old.

Myth: Forest fires release carbon stored in forests so forests are not good places to store carbon. Managing forests for carbon storage requires that we continue to practice aggressive fire suppression.

Fact: Forest fires do release CO_2 to the atmosphere, but only a small fraction of the total forest biomass is lost to the atmosphere. Due to the incomplete combustion of large wood, 70-80 percent of the carbon in tree stems remains after forest fires, and globally, 23 times more carbon is captured by photosynthesis than is emitted by fires.[68] Even after a forest fire, most of the carbon remains in the forest and contributes to carbon sequestration.[69] Salvage logging however would exacerbate the release of carbon from the fire. Taking a long-term view, forest fires represent a temporary localized dip in the landscape carbon pool that should eventually return to high levels with proper management. So called "salvage logging" would tend to exacerbate the carbon released by the fire because it would (a) disturb soils and release soil carbon, (b) convert the largest, longest-lasting logs into short-lived wood products, and (c) reduce the piece-size of the remaining material resulting in higher rates of decomposition.

Myth: Tropical forests are most important. Forests outside the tropics do not contribute significantly to global carbon storage.

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[66] Carey, E.V., Sala, A., Keane, R. and Callaway, R.M. 2001. Are old forests underestimated as global carbon sinks? Global Change Biology 7: 339-344. http://www.firelab.org/media/gcb_carey_2001.pdf

[67] Of the 1,692 Tg of carbon harvested in Oregon and Washington from 1900 to 1992, only 23% is contained in forest products (including landfills), the other 77% has been released to the atmosphere, so, for every ton of carbon in our houses and landfills, there is another 3 tons in the atmosphere. Also, the carbon store in landfills is growing faster than that stored in buildings. Harmon, Harmon, Ferrell and Brooks. Modeling Carbon Stores in Oregon and Washington Forest Products 1900-1992. Climate Change 33:521-550 (1996). http://www.springerlink.com/content/u51867621j8307m7/

[68] Guido van der Werf. 2006. Quantifying Global Biomass Burning Emissions Using Satellite Data and Biogeochemical Modeling. *PhD Thesis*, Vrije Universiteit, Amsterdam. http://www.geo.vu.nl/users/gwerf/pubs/VanderWerf2006Thesis.pdf

[69] Wayburn, L.A., J.F. Franklin, J.C. Gordon, C.S. Binkley, D.J. Mladenoff, and N.L. Christensen, Jr. 2000. Forest Carbon in the United States: Opportunities & Options for Private Lands. Pacific Forest Trust, Santa Rosa, CA, USA. http://landscape.forest.wisc.edu/pdf/Wayburn_etal2000_PFT.pdf

Fact: Because of their high biomass and continuous growing season tropical forests are one of the most significant living terrestrial stores of carbon. However, tropical forests are being lost at an alarming rate while temperate forest are expanding.[70] In developing countries tropical forests are too often used for firewood which results in the immediate release of stored carbon. It is true that many temperate and boreal forests have shorter growing seasons, lower biomass per acre, and lower evapotranspiration. However, our northwest "seasonal rainforests" compare favorably to tropical forests. The northwest's low-elevation old-growth forests have long growing seasons due to the maritime influence of the Pacific Ocean, and they can store more carbon per acre than many tropical forests, so they too play a significant role in global carbon storage. Because they occupy such large geographic areas, other boreal and temperate forests cannot be dismissed (e.g., Canada, Russia, Scandinavia).

Myth: Forests tend to exacerbate global warming because they have low reflectance and absorb the sun's energy.

Fact: A recent modeling study looked at the combined effects of carbon and albedo on global climate under hypothetical scenarios of complete planetary deforestation or afforestation.[71] Not surprisingly, the model revealed that forests in relatively snow-free latitudes such as the tropics help cool the planet by storing carbon and the model showed that the absence of forests in the polar and boreal regions helps to cool the planet because it allows snow to reflect energy back into space. The implications are that expansion of forests toward the poles (which is expected to occur as the climate warms) may exacerbate climate change because the carbon storage benefit of the "new" forest is more than offset by the warming that will result from loss of albedo when highly reflective snow fields are converted to dark absorptive forests. Where snow is less prevalent and albedo is already low, such as forested areas of the tropics and mild temperate regions, carbon storage in forests is expected to contribute to cooling. Another recent study showed that the loss of carbon in boreal forests (expected due to increased fire occurrence) may not significantly contribute to warming because the loss of carbon is offset by the increase in albedo from snow.[72] Since maritime NW forests do not have long snowy winters and are already "dark" from an albedo standpoint, it is reasonable to assume that forests are a good place to mitigate climate change with carbon storage.

Myth: Timber industry representatives are experts on forests and provide reliable information on the effects of logging on climate change.

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[70] The UN Food and Agriculture Organization estimates that 79 million acres of forest are lost (deforested) in the tropics each year, while 35 million acres are gained (afforested) in the temperate regions. Salwasser, H. 2007. Introduction: Forests, Carbon, and Climate — Continual Change and Many Possibilities. OFRI Forest, Carbon, & Climate Synthesis *citing* UN FAO 2005. Global Forest Resource Assessment 2005: Progress Toward Sustainable Forest Management. ftp://ftp.fao.org/docrep/fao/008/A0400E/A0400E00.pdf

[71] G. Bala, K. Caldeira, M. Wickett, T. J. Phillips, D. B. Lobell, C. Delire, and A. Mirin. Combined climate and carbon-cycle effects of large-scale deforestation. PNAS | April 17, 2007 | vol. 104 | no. 16 | 6550-6555. http://www.pnas.org/cgi/content/abstract/104/16/6550.

[72] Randerson, J.T., Liu H, Flanner MG, et al. 2006. The Impact of Boreal Forest Fire on Climate Warming. SCIENCE. 314(5802):1130-2. Nov 17, 2006. http://www.sciencemag.org/cgi/content/abstract/314/5802/1130

Fact: The timber industry appears to be advancing a public relations campaign intended to convince policy-makers and the public that "business-as-usual" forestry is good for the climate.[73] For instance, the timber industry likes to say that fast young forests are better at sequestering carbon than old forests, when the exact opposite is true, and they leave out important factors such as the loss of soil carbon after logging and the carbon value of retaining old-growth forests. The timber industry needs a lesson in honest accounting. Industry emphasizes forests' role as a carbon sink, but the industry over-states the role of wood products in carbon storage, glosses over the fact that logging causes forests to become a net carbon source, and ignores old forests' potential as a long-term carbon store. Industry's analyses make assumptions that are favorable to wood products and biased against alternative building materials.

[73] For instance see "California Forests, Volume 10, No. 1. http://www.calforests.org/California_Forests-502-Winter_2006.htm. CORRIM, the Consortium for Research on Renewable Industrial Materials is a wood products promotion group, producing ostensibly scientific reports that are in fact biased in favor of short-rotation forestry.

PLR146.

Planningrulenoi

From: cprlwhitney [cprlwhitney@bellsouth.net]
Sent: Monday, June 11, 2007 1:14 PM
To: Planningrulenoi
Subject: RE: Planning Rule, Notice of Intent (NOI) Comments

Dear USDA Forest Service

I support the recommendation that the USFS adopt rules the same or similar to those of the September 18, 1982 Federal Register USFS planning rules.

Roads serving residential property within and adjacent to national forest are motorized public roads, open to all. These routes define an underlying network from which other management decisions necessarily must be built upon.

In the development of the forest planning EIS, I urge that the Forest Service reconsider the exemption of forest management plans, revisions or amendments from environmental review and meaningful public input under the National Environmental Policy Act (NEPA). Without the full NEPA process (an EIS), the public is not given adequate information to evaluate the environmental consequences of forest plans and disregards the best available science in favor of commercial interests. The planning rule EIS should fully analyze impacts of exempting forest plans from NEPA and consider alternatives that require full NEPA analysis and public participation.

Jack Whitney
PO Box 91762
Louisville, KY 40291
(502) 239-9830

SIERRA CLUB
FOUNDED 1892

Houston Regional Group
P. O. Box 3021
Houston, Texas 77253-3021
713-895-9309
http://texas.sierraclub.org/houston/

June 8, 2007

RECEIVED JUN 12 2007

Planning Rule NOI Comments
P.O.Box 162969
Sacramento, California 95816-2969

Dear U.S. Forest Service,

Enclosed are the scoping comments of the Houston Regional Group, Lone Star Chapter of the Sierra Club, and National Forest Protection and Restoration Committee of the Sierra Club (Sierra Club) regarding the U.S. Forest Service (FS) Notice of Intent to Prepare an Environmental Impact Statement (EIS) for the National Forest System land management planning rule.

Below are some of the significant scoping issues that should be considered and incorporated in the EIS.

1) The Sierra Club is very concerned that the FS is not taking this process seriously. After losing in court, instead of preparing an EIS under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's NEPA implementing regulations, which are mandatory for the FS to follow, the FS has decided to hurry the process up so that it will have no chance of success and will wind up back in court.

An EIS normally take 6 months to a year to prepare. Instead the FS has provided a comment period of one month for scoping, May 11, 2007 to June 11, 2007, and less than one month to actually prepare the draft EIS ("The DEIS is expected June, 2007"). For the past 30 years I have read, reviewed, commented on, and critiqued over 300 EISs, environmental assessments (EA), management plans, and similar documents. Never have I seen a federal agency claim it can prepare a draft EIS in less than one month.

The Sierra Club is concerned the FS is going to slap a draft EIS together that states that there are no significant environmental effects due to the creation of land and resource management plans (LRMP). Then the FS will be back in court defending what is not defendable. Do not do this! Stop and think what you are doing. The FS certainly is not serving the public as steward of the lands the public owns when it adopts such a cavalier attitude, wastes citizens' money, and does not take its job seriously (protection the natural resources of the public from environmental harm). Shame on you! The Sierra Club urges you to reconsider this self-defeating strategy.

LRMPs make irretrievable and irreversible decisions because the desired future conditions (DFC) require that the lands be managed in a certain way. Setting the timber base assures that certain actions will occur and certain impacts will result. LRMPs designate certain areas for certain actions, thus zoning the national forests. This has a direct impact on how national forests will be managed and what impacts will be acceptable. The standards and guidelines ensure that certain protective or impacting actions will occur.

LRMPs zone national forests for certain activities or limit or prohibit certain activities. For example, in the National Forests and Grasslands in Texas (NFGT) 1996 LRMP permanently maintained trails (PMT) were designated for use for riding off-road vehicles (ORV) in Sam Houston National Forest (SHNF). The LRMPs also decide in management areas what management will be allowed and what specific level of environmental impacts will be allowed. For instance, the NFGT designated in the 1996 LRMP that the Big Creek Scenic Area (BCSA) be expanded administratively with logging usually not allowed. The impacts are thus different in this area than Management Area 1, which allows routine logging in upland forests in the 1996 LRMP.

By defining DFCs the FS mandates how the forest will look in the future and what activities will be used to create those conditions. In site specific project proposals the FS in the NFGT has told the Sierra Club that the actions it is taking are set by the LRMP in the DFC. Therefore the impacts are determined by LRMP before the site specific projects are ever contemplated. DFCs cannot be undone in a site specific project level proposal. Site specific projects are bound by LRMP.

Other agencies prepare programmatic EISs that are similar in nature to LRMP. For instance the U.S. Fish and Wildlife Service prepared an EIS on management of the entire National Wildlife Refuge System. The Minerals Management Service prepares programmatic EIS for lease sales for Offshore Continental Shelf oil/gas activities. The National Park Service prepares General Management Plans (GMP) with EISs for specific units in the National Park System. For instance, Guadalupe Mountains National Park, Big Bend National Park, and Big Thicket National Preserve all have GMPs with EISs. What makes the FS different and special so that it does not have to do what the rest of the federal government does? By making the assertions that the FS does this sets a precedent that other federal agencies will want to follow so they too can discontinue preparing EISs for their programs.

LRMPs also determine what monitoring is required, when it will be conducted, and what resources will be monitored. The type of monitoring chosen sets the stage for determining what impacts are discovered and has a direct bearing on the level of impact that is discovered by the monitoring (precision and accuracy

of the monitoring system). This determines what level of impact is allowed by LRMPs.

LRMPs, due to the zoning, management decisions, and monitoring requirements, provide an up front effects disclosure that is real and tells, or should tell, which species will be winners or losers due to the DFC that are adopted by LRMPs. In some instances, like in SHNF, for instance, this leads to a complete change in forest ecosystems, species, structures, and functions (type conversion) since a variety of hardwood trees are reduced/eliminated in uplands and other topographic positions; hardwood trees that are left are wounded and less healthy; hardwood trees are smaller in size; and the loss of hardwood trees causes a loss in den trees, snags, downed wood, and multi-layered canopies than would occur without pine dominated management.

The 1996 NFGT LRMP allows for future old growth areas, protected riparian areas, research natural areas, and permits a certain number, density, size, and type of roads and oil/gas drilling activities. All of these activities have profound environmental impacts on the forests in the NFGT.

The NFGT does require on-the-ground action. It does this by incorporating, by reference, the Red-cockaded Woodpecker (RCW) Management Plan, the Vegetation Management Plan, and requirements for special areas for NFGT. For instance, in the NFGT LRMP, without its requirement for special area set asides and protection, like streamside management zones, research natural areas, protected river and stream corridors, natural heritage areas, special bottomland areas, cultural heritage areas, and archeological areas, these areas would be logged and degraded in ways that would destroy or heavily damage their values. The Sierra Club vigorously disagrees that such decisions designating special area set asides "are not final decisions approving projects and activities". The activity approved is to leave the area alone and not to log it.

2) The Sierra Club supports and urges the FS to adopt rules the same or similar to those of the September 18, 1982 Federal Register FS planning rules. The reason we support rules like these is because they track well the 1976 National Forest Management Act (NFMA) and what it requires the FS to do. The 2005 planning rules do not track the NFMA well and often leave out significant requirements or makes them optional. The FS should list all the mandatory requirements of the NFMA and then ensure that rules are prepared and implemented which contain these requirements and that these rules are covered by the EIS. That is why the 1982 rules are so appropriate. They already do this. After all, the NFMA has not changed and the requirements that the FS must adhere to are still the same.

Some of these planning requirements are:

1) **Section 6(c),** preparing standards and guidelines for forest plans.

2) **Section 6(d),** public participation in the development, review, and revision of LRMPs with public meetings or comparable processes at convenient locations that foster public participation.

3) **Section 6(e)(1),** provide multiple use and sustained yield of products and services including coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness.

4) **Section 6(e)(2),** determine forest management systems, harvesting levels, procedures in the light of all the uses, and availability of lands and suitability of these lands for resource management.

5) **Section 6(f)(1),** there will be one integrated plan for each unit of the National Forest System.

6) **Section 6(f)(2),** LRMP will have appropriate written material including maps and other descriptive documents, proposed and possible actions including planned timber sale program and probable methods of timber harvest.

7) **Section 6(f)(3),** the LRMP will be prepared by an interdisciplinary team and will be based on inventories of the applicable resources of the forest.

8) **Section 6(f)(4),** significant amendments will be handled with public involvement comparable to preparing the plan.

9) **Section 6(f)(5),** the LRMP will be revised every 10-15 years in the same manner as the LRMP was created with the same public involvement.

10) **Section 6(g)(1),** the FS develops procedures to ensure that the LRMP is in accordance with the NEPA.

11) **Section 6(g)(2)(A),** identification of suitability of lands for resource management.

12) **Section 6(g)(2)(B),** obtain inventory data on various renewable resources and soil and water, including maps, graphic material, and explanatory aids.

13) **Section 6(g)(2)(C),** provide methods to identify special conditions or situation involving hazards to various resources and their relationship to alternative activities.

14) **Section 6(g)(A),** consider economic and environmental aspects of various systems of renewable resource management including silviculture and protection of forest resources to provide for outdoor recreation, including wilderness, range timber, watershed, wildlife, and fish.

15) **Section 6(g)(B),** provide for diversity of plant and animal communities based on the suitability and capability of the specific land area and preserve the diversity of tree species similar to that existing in the region controlled by the LRMP.

16) **Section 6(g)(C),** Research and evaluation based on continuous monitoring and assessment in field of the effects of each management system so it will not produce substantial and permanent impairment of the productivity of the land.

17) **Section 6(g)(D),** increases in harvest based on intensified management practices such as reforestation, thinning, an tree improvement if the practices or in accordance with the Multiple-Use sustained Yield Act of 1960 and are decreased at the end of the planning period if they cannot be successfully implemented or funds are not received.

18) **Section 6(g)(E)(i),** timber will be harvested only where soil, slope, or other watershed conditions will not be irreversibly damaged.

19) **Section 6(g)(E)(ii),** the lands can be adequately restocked within 5 years after harvest.

20) **Section 6(g)(E)(iii),** protect streams, stream-banks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat.

21) **Section 6(g)(E)(iv),** the harvesting system used is not selected primarily because it gives the greatest dollar return or greatest unit output of timber.

22) **Section 6(g)(F)(i),** clearcutting, seed tree cutting, shelterwood cutting, and other cuts that are even-aged are used only where, for clearcutting it is the optimum method and for other cuts determined to be appropriate to meet the objectives and requirements of the LRMP.

23) **Section 6(g)(F(ii),** potential environmental, biological, esthetic, engineering, and economic impacts for each advertised sale area have been assessed and are consistent with the multiple use of the area.

24) **Section 6(g)(F(iii),** cut blocks, patches, or strips are shaped and blended with the natural terrain.

25) **Section 6(g)(F(iv),** are established according to geographic areas, forest types, or other suitable classifications the maximum size limits for areas to be cut in one harvest operations including provision to exceed the established limits

after appropriate public notice and review except that these limits do not apply to area where natural catastrophic conditions like fire, insect and disease attack, and windstorm.

26) **Section 6(g)(F(v),** cuts are carried out to protect soil, watershed, fish, wildlife, recreation, esthetic resources, and the regeneration of timber resource.

27) **Section 6(h)(1),** the FS may appoint a committee of scientists to provide scientific and technical advise and counsel on proposed guidelines and procedures to ensure that an effective interdisciplinary approach is proposed and adopted.

28) **Section 6(i),** resource plans and permits, contracts, and other instruments for the use and occupancy of the National Forest System lands will be consistent with LRMP.

29) **Section 6(k),** the LRMP will identify lands which are not suited for timber production, considering physical, economic, and other pertinent factors.

30) **Section 6(m)(1),** standards are established before harvest stands of trees will have reached culmination of mean annual increment of growth.

31) **Section 6(m)(2),** exception to these standards for the logging of a certain species of tree after consideration has been given to multiple uses of the forest including but not limited to recreation, wildlife habitat, and range, and a public participation process will be used.

3) The FS should convene a committee of scientists to assist it in updating the 1982, 2000, and 2005 rules to ensure they are scientifically correct, technically feasible, and are socially and politically appropriate. The 2005 rules are the only ones which have not undergone a committee of scientists' development and review in the history of LRMPs.

4) It should be policy not to harvest trees when it costs more than the benefits of leaving them in the ground.

5) At a minimum, viable populations of PETS and MIS must be managed for.

6) Mitigation for habitat fragmentation, which reduces fish and wildlife populations, should be included in this proposal.

7) Old growth allocations and protections (including future old growth) are needed to ensure the biological diversity that NFMA requires is maintained and enhanced.

8) Type conversion is often ignored as a problem in the NFGT because it deals with the role that hardwood trees play on the landscape. In Management Area 1 (MA-1), the restrictions that RCW management areas (MA-2) have, are not in place but the DFCs for MA-1 are almost identical to MA-2 and no recognition of upland hardwood trees and old growth are required. Therefore we have a type converting of a mixed pine-hardwood forest in the uplands to a virtually pine monoculture in the uplands. This should not be allowed in the LRMP rules.

9) The Sierra Club favors re-adoption or strengthening of the following 1982 planning rules:

1) 219.12(d), Inventory data and information collection
2) 219.12(e), Analysis of the management situation
3) 219.14, Timber resource land suitability
4) 219.15, Vegetation management practices
5) 219.17, Wilderness designation
6) 219.18, Wilderness management
7) 219.19, Fish & wildlife resource
8) 219.20, Grazing resource
9) 219.21, recreation resource
10) 219.22, mineral resource
11) 219.23, Water and soil resource
12) 219.24, Cultural and historic resources
13) 219.25, Research natural areas
14) 219.26, Diversity
15) 219.27, Management requirements (including riparian area protection)
16) 219.28, Research

10) LRMPs are "major federal actions significantly affecting the quality of the human environment" because they determine DFCs of National Forests, how and what to monitor, zone/designate forest uses, and determine which areas will be logged.

11) Specific implementation and resource protection monitoring (inventorying and monitoring) must be spelled out. The public has a right to review, comment on, and understand the monitoring that will be required. Monitoring decisions must not be made by behind the scenes administrative directives with no public input.

12) This proposal must present what the cumulative impacts will be on the landscape due to the actions envisioned on national forest, other public, and private lands. LRMPs must provide for the landscape scale past, present, and future foreseeable actions and their effects (cumulative impacts) on federal, other public, and private lands, with and without this proposal. The proposal must meet the NEPA requirements found in Sections 1502.4(b), 1502.16, 1508.7, 1508.8, 1508.18(a), 1508.18(b)(1), and 1508.27 of the CEQ NEPA implementing regulations in the draft EIS.

13) Monitoring habitat instead of species assumes that habitat equals species appearance. This is not true as has been shown in SHNF. Although recruitment stands have been created by the FS many are not occupied by RCW. The habitat is there but the birds are not.

14) The proposal must assure that the most recent science is used in LRMPs and site specific projects. There must be an increased emphasis on involving scientists in monitoring, inventorying, and planning. The requirements of the NFMA for inventorying and monitoring in Section 6(f)(3), 6(g)(2)(B), 6(g)(3)(B), 6(g)(2)(C), 6(g)(3)(F)(ii), and the 1982 planning regulations that used to implement NFMA in 30 Code of Federal Regulations (CFR) Chapter 219.4(a)(1), Chapter 219.5, Chapter 219.7(f), Chapter 219.9(a)(6), Chapter 219.11(d), Chapter 219.12(d), Chapter 219.19, Chapter 219.19(a)(2), Chapter 219(a)(6), and Chapter 219.26 must be the standards that the FS uses to determine the legal and administrative completeness of this proposal.

15) The proposal must not be made up of discretionary rules. This ensures that needed requirements are mandatory and not voluntary. We need mandatory rules with specific requirements or arbitrary and capricious decisions will continue in the public's national forests.

16) The proposal must mandate that funding for monitoring be available before a project can be authorized and implemented. This requires prevents the FS from logging with little or no monitoring and then claiming it has no money to check its actions. It is very simple what is required to protect the national forests. No monitoring, no projects!

17) The draft EIS must analyze "all reasonable alternatives". Some reasonable alternatives include the 1982 and 2000 LRMP planning rules.

18) The proposal must have identifiable wildlife management standards. The 1982 NFMA forest planning rules had such identifiable wildlife rules. Non-discretionary words like "shall", "will", and "must" must be used and not discretionary words like "may", "should", and "could". The rules do not need "weasel words" or they will not be mandatory.

19) The proposal must allow for the appeal of the LRMP. The public has a right to review, comment on, and understand the proposal and if needed appeal to a higher level of the FS.

The Sierra Club appreciates this opportunity to comment. Thank you.

Sincerely, Brandt Mannchen

Brandt Mannchen
National Forest Protection and Restoration Committee of the Sierra Club
Forest Management Issue Chair
Lone Star Chapter of the Sierra Club
Chair, Forestry Subcommittee
Houston Regional Group of the Sierra Club
5431 Carew
Houston, Texas 77096
713-664-5962
brandtshnfbt@juno.com

Providing a voice for the voiceless

June 7, 2007

Planning Rule NOI Comments
PO Box 162969
Sacramento, CA 95816-2969

RECEIVED JUN 12 2007

Dear Forest Service,

The Utah Environmental Congress (UEC) and Conservation Congress (CC) appreciate this opportunity to submit scoping comments in response to the May 11, 2007 Notice of Intent to prepare an EIS and analyze a new set of National Forest Management Act (NFMA) implementing regulations. These comments are being submitted equally and on behalf of both UEC and CC. UEC and CC are both interested parties. Please add and maintain both UEC and CC on all of the contact and other mailing lists related to this proposed NFMA regulation development process and associated EIS. Please mail a copy of the Draft Environmental Impact Statement to both of our offices when it is available for public review and comment.

The public looks to the National Forest Management Act to ensure that the Forest Service will maintain viable populations of fish and wildlife (and all native species more generally), and properly manage our National Forests for future generations. The 2005 forest planning regulations undermined wildlife, clean water, and other environmental protections. The regulations reduced requirements for environmental review, weakened and eliminated wildlife protections, and unreasonably limited public participation in the development of management plans for individual Forests. A critical component of past NFMA implementing regulations is the requirement of mandatory resource protection standards for all Forest Plans. The EIS needs to analyze the direct and indirect effects of eliminating resource protection standards from (1) NFMA implementing regulations and (2) Forest Plans, as well as the impacts of eliminating wildlife viability and monitoring requirements.

In the development of this regulatory EIS, we urge the Forest Service to reconsider the exemption of Land and Resource Management Plans, revisions or amendments from environmental review and meaningful public input under the National Environmental Policy Act (NEPA). Without the NEPA process, the public was not and is not given adequate information to evaluate the environmental consequences of Forest Plans, and disregards the best available science in favor of commercial interests. Eliminating the need for forest managers to assess potentially harmful impacts on water, wildlife and fish viability, recreational use, old growth and roadless areas, will make it easier for timber, oil, gas, mining and motorized recreation corporations to access National Forests. Such a proposal would create a system that benefits the few at the expense of Americans who own our National Forests and cherish them as a legacy for future generations. The EIS should fully analyze impacts of exempting forest plans from NEPA and consider alternatives that require full NEPA analysis and public participation.

1817 S. Main Street; Ste. 10 • Salt Lake City, UT 84115
Ph (801) 466-4055 • Fax (801) 466-4057
www.uec-utah.org

PLR 148

The Forest Service should also take into account the breadth of new scientific and socio-economic information. The Forest Service should fully analyze other alternatives to the 2005 planning rule that include strong standards to protect forests, waters and wildlife, The EIS will ultimately need to study the adoption of the 1982 and 2000 regulations as (action or no action) alternatives analyzed in detail. Alternatives will also need to include requirements for the agency to develop plans to address impacts of climate change.

Since this is the first time the public has the opportunity to participate in an EIS process for the new NFMA regulations, the Forest Service needs to modify NEPA deadlines in order to allow time to thoughtfully consider public comments throughout the NEPA process.

This scoping period closes on June 11th and the NOA estimates that the Draft Environmental Impact Statement will be available later in the same month (June). Allowing for just 19 days between the close of the scoping period and issuance of the DEIS demonstrates this is nothing more than an inadequate and begrudging attempt to comply with a court order requiring the Forest Service to follow the law. At best, this will result in pro forma compliance with NEPA, which would be inadequate. This is substantial evidence that the Forest Service has no intent to take NEPA's mandated hard look at the different effects that different NFMA regulations will have on the human environment. This is also substantial evidence that the Forest Service is not going to have time sufficient to proceed with actual alternative development in light of issues raised in this scoping period, as required by NEPA.

Utah Environmental Congress and Conservation Congress have read the Center for Biological Diversity's comments (June 6, 2007) signed by Mark Fink. Those comments address all of the additional issues that we have. We hereby incorporate them in their entirety into these comments. A copy has been attached for your convenience.

Thank you for responding to these comments in the alternative development process and in the development of the Draft EIS. Thank you for adding both the Utah Environmental Congress and the Conservation Congress to the interested party and mailing lists for this EIS. We will look forward to reviewing the DEIS when we receive it in the mail.

Sincerely,

Kevin Mueller,
Executive Director
Utah Environmental Congress
1817 South Main, Suite 10
Salt Lake City, Utah 84115

Denise Boggs,
Executive Director
Conservation Congress
P.O. Box 5
Lewistown, Montana 59457

PLR148

CENTER *for* BIOLOGICAL DIVERSITY *Because life is good.*

June 6, 2007

Planning Rule NOI Comments
P.O. Box 162969
Sacramento, CA 95816-2969

Re: Comments Concerning Scope of Analysis for National Forest System Land Management Planning Rule EIS

Dear Madam or Sir,

Please accept these comments on behalf of the Center for Biological Diversity ("the Center"), a non-profit organization with over 35,000 members. The Center is dedicated to protecting imperiled species and their habitats by combining scientific research, public organizing, and administrative and legal advocacy. The Center appreciates the opportunity to provide comments on the potential environmental impacts and consequences of the proposed National Forest System land management planning rule.

I. The Forest Must Sufficiently Analyze Potential Environmental Impacts *Prior* to Making Its Decision Regarding the National Forest System Land Management Planning Rule

"NEPA requires federal agencies to prepare an environmental impact statement (EIS) for any action that will significantly affect the environment." *California Coastal Commission*, 150 F. Supp. 2d. 1046, 1055 (N.D. Cal. 2001), *citing* §42 U.S.C. § 4332(C). The EIS must consider (i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action would it be implemented. 42 U.S.C. § 4332(C). Prior to preparing the EIS, the agency must consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to the any environmental impact involved. *Id.*

"Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." 40 C.F.R. § 1500.1(b). NEPA "ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger [public] audience that may also play a role in both the decisionmaking process and implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349, 109 S.Ct. 1835, 1845 (1989).

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"Proper timing is one of NEPA's central themes." *Save the Yaak Committee v. Block*, 840 F.2d 714, 718 (9th Cir. 1988). The very purpose of NEPA is for agencies to analyze and disclose the environmental consequences of their proposals "before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). For the NFMA planning rule, however, it appears that the Forest Service is merely going through the motions and has already made its final decision. Even though the Forest Service is accepting these scoping comments on its "proposed" action through June 11, 2007, the agency states that it expects the draft EIS to be completed in June, 2007. *See* 72 Fed. Reg. at 26776. Unless the final decision has already been made, there is no possible way for the agency to review, digest, and incorporate the requested scoping comments, and analyze the various issues and concerns raised in these comments for this nationwide EIS, within a matter of days.

Agencies must integrate the NEPA process with other planning "at the earliest possible time to insure that planning and decisions reflect environmental values." 40 C.F.R. § 1501.2. The EIS must serve "as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made." 40 C.F.R. § 1502.2(g). As again stated in the NEPA regulations, the EIS must be prepared early enough "so that it can serve practically as an important contribution to the decisionmaking process and will be not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5. Therefore, the NEPA process must guide and help define the decisionmaking process of the agency - it is not a meaningless paper exercise to be prepared independent of the actual decision being made. For the NFMA planning rule, however, the Forest Service again miraculously plans to have a rule ready to publish within a matter of days of receiving the requested scoping comments on the required EIS. 72 Fed. Reg. at 26776 ("The Agency expects to publish a rule for comment in late June."). This directly conflicts with the entire purpose and intent of NEPA.

II. The Forest Service Must Analyze a Full Range of Alternatives

The alternatives section is the "heart" of an EIS. 40 C.F.R. § 1502.14; *see also* 42 U.S.C. § 4332(2)(E). The Forest Service must "[r]igorously explore and objectively evaluate all reasonable alternatives. *Id.* at § 1502.14(a). The EIS must present the environmental impacts of the proposal and all of the reasonable alternatives "in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." *Id.* at § 1502.14. The Forest Service is also specifically directed to consider a "no action" alternative. *Id.* at § 1502.14(d). And, the Forest Service must use the NEPA process "to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment." *Id.* at § 1500.2(f).

The Forest Service must first properly identify the "no action" alternative for its proposed action. For the 2000 NFMA regulations, the Forest Service noted serious concerns with these regulations soon after being sued, *see Citizens for Better Forestry v. U.S. Dept. of Agriculture*, 341 F.3d 961, 968 (9th Cir. 2003); the Forest Service never utilized the 2000 regulations for any Forest Plan amendments or revisions; the Ninth Circuit held that the Forest Service violated NEPA in promulgating the regulations, *id.* at 970; and in January, 2005, the Forest Service formally withdrew and removed the regulations in their entirety, effective immediately. 70 Fed. Reg. 1022 (Jan. 5, 2005). The 1982 NFMA regulations, on the other hand, have been in use by

the Forest Service for well over twenty years, individual national forests continue to use the 1982 regulations in preparing Forest Plan revisions, and no court has found any legal deficiencies with the agency's development or promulgation of the regulations. It is therefore clear that the 1982 NFMA regulations should be considered the "no action" alternative that is fully assessed in the EIS for the proposed action.

Regardless of whether considered to be the "no action" alternative, the 1982 NFMA regulations must be fully assessed as a reasonable alternative to the proposed action. The 1982 regulations were in effect for two decades, resulted in the first round for forest plans for the entire National Forest System, were never found by a court to be improper or illegal, and provide a well-established and well-understood benchmark by which to assess all other alternatives. Consideration of the 1982 regulations should also include consideration of the recommendations of the original Committee of Scientists, which was convened in 1979 by appointment of the Secretary of Agriculture. As required by NFMA, the Committee provided "scientific and technical advice and counsel on proposed guidelines and procedures to assure that an effective interdisciplinary approach [was] proposed and adopted." 16 U.S.C. § 1604(h)(1). These recommendations included a commitment to the viability of all vertebrate species in accordance with the NFMA requirement to provide for a diversity of plant and animal communities. *See* Noon, B.; Parenteau, P.; Trombulak, "*Conservation Science, Biodiversity, and the 2005 U.S. Forest Service Regulations*," Conservation Biology, Volume 19, No. 5 (Oct., 2005).

The Forest Service must also consider the 2000 NFMA regulations as a reasonable alternative to the proposed rule that must be fully assessed in the EIS. These regulations, which were set forth at 65 Fed. Reg. 67513-67581 (Nov. 9, 2000), were the result of years of work by the agency, as well as another 13-member Committee of Scientists, which was convened by the Forest Service pursuant to NFMA to review the Forest Service planning process and offer recommendations. The Committee held public meetings across the county before issuing its final report in March, 1999, which led to the issuance of the 2000 regulations. The Committee's 1999 report had two overarching themes: (1) ecological sustainability is a prerequisite to social and economic sustainability and should be the first responsibility of the Forest Service and (2) the public needs to have early, broad, and continuous involvement in national forest planning and stewardship. *See* Noon, B.; Parenteau, P.; Trombulak, "*Conservation Science, Biodiversity, and the 2005 U.S. Forest Service Regulations*," Conservation Biology, Volume 19, No. 5 (Oct., 2005). While the Forest Service later identified problems with the implementation of these regulations, the regulations, or a variation thereof, should still be considered as another reasonable alternative to the proposed action that must be assessed in this EIS.

Due to the scientifically recognized changes in the global climate that have already begun as a result of the increased atmospheric concentration of greenhouse gases,[1] along with the expected, foreseeable, but uncertain impacts to forests and biodiversity, the Forest Service must also consider an alternative that provides a substantial increase in protection for the fish and wildlife species that depend on the National Forest System. NFMA specifically directs that the

[1] *See e.g.*, Intergovernmental Panel on Climate Change ("IPCC") February, 2007, Summary for Policymakers, "*Climate Change 2007: The Physical Science Basis*," available at http://ipcc-wg1.ucar.edu/wg1/wg1-report.html.

NFMA regulations provide for the diversity of plant and animal communities based on the suitability and capability of the land. 16 U.S.C. § 1604(g)(3)(B). Scientists, including Forest Service researchers, have recognized global warming as a key threat to biodiversity. *See e.g.*, Malcom, Jay R.; Liu, Canran; Neilson, Ronald P.; Hansen, Lara; Hannah, Lee, "*Global Warming and Extinctions of Endemic Species from Biodiversity Hotspots*," Conservation Biology, Vol. 20(2): 538-548 (2006).[2] Due to uncertainties over the extent and impacts of global climate changes on biodiversity and NFMA's mandate to provide for the diversity, the Forest Service must consider and fully analyze an alternative that errors on the side of caution by offering a safe harbor and refuge for these fish and wildlife species.

As stated by former Forest Service Chief Dale Bosworth, the greatest number of imperiled species in the United States are found on the National Forest System, including about half of federally listed species that are found on federal lands; and "the national forests and grasslands have always been the best refuges - the best places for endangered species to make a final stand." Bosworth, Dale, "*Managing the National Forest System: Great Issues and Great Diversions*," Speech to Commonwealth Club in San Francisco, CA (April 22, 2003). This protective "refuge" alternative must therefore recognize the critical importance of the national forests and grasslands in maintaining biodiversity during this time global warming and climate change.

In sum, to consider a full range of reasonable alternatives, the Forest Service must consider, at the very least: (1) a no action alternative (the 1982 NFMA regulations), (2) the 2000 NFMA regulations and associated 1999 Committee of Scientists Report, (3) the proposed action, and (4) a substantially more protective alternative that considers the magnitude of the current climate crisis and provides additional protection for the fish and wildlife species that depend on National Forest System lands.

III. The Forest Service Must Describe the Affected Environment

The EIS for the proposed rule must "describe the environment of the area(s) to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15. For the National Forest System, this should include, at a minimum: (1) the present status and distribution of sensitive, threatened, and endangered species that depend on national forests and grasslands; (2) the current condition of rivers and streams on national forests and grasslands; (3) the amount and distribution of remaining old growth habitat on the National Forest System; (4) the extent and impacts of invasive species; (5) a description and assessment of the existing network of roads and trails; (6) an assessment of the current extent of livestock grazing across the National Forest System; (7) the current status of oil, gas, and mineral development on national forests; and (8) the extent of past timber harvest and clearcutting.

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[2] *See also* Matthews, Stephen N.; O'Connor, Raymond J.; Iverson, Louis R.; Prasad, Anantha M., "*Atlas of Climate Change Effects on 150 Bird Species of the Eastern United States*," Forest Service Northeastern Research Station Gen. Tech. Report NE-318 (2004) (projecting that as many as 78 of 150 common bird species may decrease by at least 25 percent due to global climate change); *and* the IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," available at http://www.ipcc-wg2.org/index.html.

The most recent scientific reports from the IPCC make clear that the atmospheric concentrations of greenhouse gases have significantly increased, which is unequivocally warming and changing global climate systems, and resulting in substantial environmental impacts across the globe.[3] In assessing and describing the affected environment, the Forest Service must therefore also consider and disclose the extent to which global climate change has already affected the National Forest System. As recently recognized by Forest Service and other agency scientists, the past century has already been a period of "dynamic change for many western mountain ecosystems." Stephenson, N.; Peterson, D.; Fagre, D.; Allen, C.; McKenzie, D.; Baron, J.; O'Brian, K., "*Response of Western Mountain Ecosystems to Climate Variability and Change: The Western Mountain Initiative,*" (2006). "By documenting the past response of natural resources to climate variability at annual, decadal, and centennial scales," the Forest Service will be able to establish "an important context for inferring the effects of a warmer climate." *Id.*

Changes that have already occurred include increased droughts, increased extent and severity of wildfires, forest dieback, vegetation type conversion, decreased snowpack, and changes in soils. *Id.*[4] Only by properly recognizing, considering and disclosing current conditions can the Forest Service accurately and meaningfully predict the reasonably foreseeable, future management impacts on forest resources.

IV. The Forest Service Must Consider the Environmental Consequences of the Proposed Revision of the NFMA Regulations

The "environmental consequences" section of the EIS "forms the scientific and analytic basis" for the comparison of alternatives. 40 C.F.R. § 1502.16. This discussion must include "the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented." *Id.* This section must include discussions of both direct and indirect effects and their significance, along with the environmental effects of the alternatives. *Id.*

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[3] *See* IPCC's February, 2007, Summary for Policymakers, "*Climate Change 2007: The Physical Science Basis*," available at http://ipcc-wg1.ucar.edu/wg1/wg1-report.html; *and* IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," available at http://www.ipcc-wg2.org/index.html.

[4] *See also* IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," p. 2 (increased run-off and earlier spring peak discharge in many glacier- and snow-fed rivers; warming of lakes and rivers in many regions, with effects on thermal structure and water quality; earlier timing of spring events, such as leaf-unfolding, bird migration and egg-laying; poleward and upward shifts in ranges in plant and animal species); *id.*, p. 3 (alterations of disturbance regimes of forests in Northern Hemisphere due to fire and pests).

The Ninth Circuit has recognized that because the NFMA regulations control the development of both Forest Plans and site-specific projects, the substantial revision of the NFMA regulations, as proposed by the Forest Service, will result in an actual, physical effect on the environment in national forests and grasslands. *Citizens for Better Forestry v. U.S. Dept. of Agriculture*, 341 F.3d 961, 973 (9th Cir. 2003). The Ninth Circuit further recognized that lowering environmental standards at the national programmatic level, as with the proposed rule, will result in lower environmental standards at the site-specific level. *Id.* at 975. Pursuant to NEPA, the Forest Service must therefore analyze, consider, and disclose the direct, indirect, and cumulative environmental effects of the proposed action in the EIS.

Significantly, in analyzing the potential environmental impacts of its proposed action and alternatives, the Forest Service must recognize that it is not drafting new regulations on a blank slate. Rather, the agency must acknowledge and analyze any proposed changes in relation to the previous and existing regulations. This is because by proposing new regulations, the Forest Service is thereby also proposing to eliminate the previous regulations that had been in place.

A. The Forest Service Must Consider Potential Impacts to Fish and Wildlife Species

The 1982 NFMA regulations provided mandatory and meaningful protection for fish and wildlife species. The Forest Service was required to manage fish and wildlife habitat to maintain viable populations of existing fish and wildlife species. 36 C.F.R. § 219.19 (1982). In order to ensure viable populations, the agency was required to provide at least a minimum number of reproductive individuals and the habitat was required to be well distributed so that the individuals could interact with others in the planning area. *Id.* Moreover, in order to estimate the potential effects on fish and wildlife populations, the Forest Service was required to identify "management indicator species," and monitor their population trends. *Id.* And additional protection was provided to threatened and endangered species and their habitat. *Id.*

The mandatory requirements of the 1982 regulations resulted in Land and Resource Management Plans ("Forest Plans") that included mandatory and quantifiable protection for fish, wildlife, and their habitat. In turn, numerous timber sales and other proposed projects were stopped or modified by citizen administrative appeals and litigation due to the mandatory protection offered by the applicable Forest Plans and the regulations themselves. By contrast, the proposed 2005 regulations "completely eliminate the requirement that forest plans maintain viable populations of vertebrate species, along with the requirement that management indicator species be designated and monitored." Noon, B.; Parenteau, P.; Trombulak, "*Conservation Science, Biodiversity, and the 2005 U.S. Forest Service Regulations*," Conservation Biology, Volume 19, No. 5 (Oct., 2005). There is no question that the elimination of the 1982 viability requirements will lead to fewer if any mandatory standards and guidelines in Forest Plans, as the very purpose of the proposed rule is to provide individual Forests with more discretion and flexibility. *See* 70 Fed. Reg. at 1024 (acknowledging that Forest Plans under the proposed 2005 rule would be "less prescriptive in nature than under the 1982 planning rule.").

In assessing the potential impacts of the proposed rule, the Forest Service must include an analysis of the potential impacts to fish and wildlife species from the elimination of the 1982

viability requirement. Even with the protection offered by the 1982 regulations, and the Forest Plans prepared under the 1982 regulations, numerous fish and wildlife species were placed on the agency's list of sensitive species or designated as threatened or endangered under the Endangered Species Act during the 1980s and 1990s.[5] It is also now known that these species face additional threats from global climate change, continued habitat fragmentation, and other factors.[6] Increased threats coupled with less protective standards and decreased opportunities for meaningful public oversight will undoubtedly decrease the overall protection offered to the fish and wildlife species that depend on the National Forest System. The Forest Service must therefore fully analyze and disclose the potential impacts of its proposed rule, including the elimination of the previous regulatory framework, on fish and wildlife species.

The 1982 regulations also required the Forest Service to prepare "regional guides" for each Forest Service region to "provide standards and guidelines for addressing major issues and management concerns which need to be considered at the regional level to facilitate forest planning." 36 C.F.R. § 219.8(a) (1982). The Forest Service must also assess the proposed rule's elimination of these previously required regional guides and the potential consequences to wide ranging and migratory species that need to be considered and addressed at the regional level.

B. The Forest Service Must Consider the Potential Impacts to the Remaining Old Growth Forests

Past timber harvest has decimated old growth forests throughout the National Forest System, and the many wildlife species that depend on these old growth forests are struggling for survival. The mandatory viability requirement of the 1982 regulations led to mandatory, numeric protection for old growth forests within Forest Plans, including the Northwest Forest Plan in the pacific northwest, the Northern goshawk and Mexican spotted owl plan amendments in the southwest, and the 10% old growth standard included within numerous Forest Plans in the northern rockies. Many national forests are not meeting these numeric old growth requirements, and are thereby continuing to place old growth species at risk. Since the proposed rule would eliminate the 1982 viability requirement, and emphasizes agency discretion and flexibility over mandatory, numeric standards for individual Forest Plans, the proposed rule may result in attempts to eliminate the mandatory, numeric protection for old growth forests. The EIS must fully assess and disclose the potential impacts of the elimination of this protection for old growth forests and dependent species, and address how the Forest Service would still be able to meet NFMA's diversity requirement.

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[5] As just one example, even with the mandatory viability requirement in the 1982 regulations, lynx was still designated as a threatened species in 2000 due to the lack of sufficient protection for lynx in Forest Plans. 65 Fed. Reg. 16052 (March 24, 2000). Decreasing and eliminating standards at the national level will only further decrease protection at the regional and local level, further worsening conditions for wildlife species dependant on national forests.

[6] *See* IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability,*" pp. 5-6 (recognizing increased risks to ecosystems and imperiled plant and animal species as result of rising temperatures and climate change).

C. The Forest Service Must Consider the Potential Impacts of Eliminating Enforceable, Numeric Standards for Additional Forest Resources

In addition to the fish and wildlife viability requirement, the 1982 NFMA regulations included a number of mandatory, quantifiable standards referred to as "management requirements," including numeric limits on the size of clearcuts and stream side buffers. 36 C.F.R. § 219.27; *see* 16 U.S.C. § 1604(g)(3) (setting forth the provisions and protection that must be included in the NFMA regulations). The EIS must assess the likely and potential environmental consequences resulting from the proposed elimination of these enforceable, numeric standards.

D. The Forest Service Must Consider the Potential Impacts of Authorizing and Increasing the Extent of Commercial Logging, Livestock Grazing, Oil and Gas Development, and Other Activities on Global Climate Change

The IPCC, made up of over 1,000 scientists from over 100 countries, recently concluded that it is "very likely" (90 percent probability) that human activities are the main cause of global warming. The potential environmental consequences that may be caused by global climate change are both enormous and alarming. In this nation-wide EIS concerning the management, standards and guidelines for the 190 million acre National Forest System, the Forest Service must assess and disclose the potential contribution of projects and activities that are authorized on national forests and grasslands to the ongoing. human-caused changes to the national and global climate.

Forests are the most significant terrestrial stores of living carbon, and in fact slow global warming by storing and sequestering carbon. *See* Union of Concerned Scientists, "*Recognizing Forests' Role in Climate Change*," available at www.ucsusa.org.[7] "Forest plants and soils drive the global carbon cycle by sequestering carbon dioxide through photosynthesis and releasing it through respiration." *Id.* Through photosynthesis, plants capture carbon dioxide and convert it to plant matter that then feeds the base of the entire planetary food chain. *See* Heiken, D., "*The Straight Facts on Forests, Carbon, and Global Warming*," available at http://tinyurl.com/2by9kt. Old-growth forests are able to store massive amounts of carbon in their trunks as well as in the soil. *Id.*

When forests are degraded or logged, their stored carbon is released back into the atmosphere during harvest and through respiration, thus becoming net contributors of carbon to the atmosphere. Union of Concerned Scientists, "Recognizing Forests' Role in Climate Change." Tropical deforestation, for instance, is responsible for approximately 20% of total human-caused carbon dioxide emissions each year. *Id.*

Forests are able to help mitigate for global warming in at least three ways: conserving existing forests to avoid emissions associated with forest degradation or clearing; sequestration by increasing forest carbon absorption capacity - occurring primarily by planting trees or

[7] *See also* Heiken, D., "*The Straight Facts on Forests, Carbon, and Global Warming*," available at http://tinyurl.com/2by9kt

facilitating the natural regeneration of forests, and the substitution of sustainability produced biological products. *Id.* In other words, to help our forest store more carbon, and thereby alleviate the leading cause of global warming, we need to let our forests grow. *Id.*

Because the proposed rule would decrease and eliminate existing limits on logging practices, the rule will likely result in an increase of the amount of logging occurring in the National Forest System. The Forest Service must consider and disclose the potential consequences of increased timber harvest on global warming.

The Forest Service must also consider the proposed rule's continuation of existing livestock grazing and its contribution to climate change. A recent report from the Food and Agriculture Organization of the United Nations found that livestock are responsible for eighteen percent of greenhouse gas emissions, representing a larger share than that of transport. *See* Steinfeld, H.; Gerber, P.; Wassenaar, T.; Castel, V.; Rosales, M.; Haan, C., "*Livestock's Long Shadow, Environmental Issues and Options*," (2006). Livestock grazing is widespread across the National Forest System in the western United States, and the proposed rule is unlikely to lead to any significant decrease in the extent of grazing, but rather may further increase such use. The contribution of this widespread livestock grazing on climate change must be assessed and disclosed.

Relaxed mandatory standards and protection at the national level, coinciding with increases in demand, would also likely result in increased oil and gas development on national forests. The ultimate burning of these fossil fuels would further increase global warming pollution, which needs to be considered and disclosed in this EIS.

V. The Forest Service Must Consider and Disclose the Threats Posed by Global Climate Change to the National Forest System in its Environmental Analysis

Global warming and climate change is one of the foremost problems the nation faces today, and implicates all aspects of the management of our national forests. Global warming is also undeniably one of the greatest threats to our nation's biodiversity. Global warming is already adversely affecting numerous fish and wildlife species in the United States, and these impacts are expected to accelerate and continue. *See e.g.*, IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," pp. 5-16 (discussing "current knowledge about future impacts" resulting from climate change, including fresh water resources, ecosystems, forest products, and more specific information on North America).

NEPA is recognized as "our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). NEPA "is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." *Id.* at 1500.1(c). Information in an EIS must be of "high quality," and accurate scientific analysis is recognized as "essential to implementing NEPA." *Id.* at § 1500.1(b). The Forest Service must use the NEPA process to identify reasonable alternatives that will avoid or minimize the adverse effects of its actions on the environment, and to use all practicable means to restore and enhance the quality of the human environment. *Id.* at 1500.2(e-

f). In light of these explicit purposes and policies, it would be inconceivable for the Forest Service not to address and disclose the real threats to the national forests and grasslands resulting from the scientifically recognized changes in climate and the potential implications for the National Forest System within this nationwide EIS. *See also* 42 U.S.C. § 4331(b) (federal agencies have a continuing responsibility to use all practicable means to "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.").

A. Potential Impacts of Climate Change on Forests

Federal agency scientists recognize that global climate change will result in significant impacts and changes to forests in the western United States. Stephenson, N.; Peterson, D.; Fagre, D.; Allen, C.; McKenzie, D.; Baron, J.; O'Brian, K., "*Response of Western Mountain Ecosystems to Climate Variability and Change: The Western Mountain Initiative*" (2006). The Western Mountain Initiative is an agency research program focusing on understanding and predicting responses of western mountain ecosystems to climatic variability and change. *Id.* Scientists predict that the anticipated increase in temperature may shift the ideal range for many forest species by about 200 miles to the north. Insect and pathogen outbreaks may also increase in severity. *See* IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," p. 10 (disturbances from pests and diseases projected to have increasing impacts on forests). The EIS must consider and disclose the findings of relevant scientific research regarding the expected impacts of climate change on forests as it analyzes the affected environmental and the proposed rule's potential environmental consequences.

B. Potential Impacts of Climate Change on Biodiversity

Global warming is recognized as a key threat to biodiversity. *See* Malcom, Jay R.; Liu, Canran; Neilson, Ronald P.; Hansen, Lara; Hannah, Lee, "*Global Warming and Extinctions of Endemic Species from Biodiversity Hotspots*," Conservation Biology, Vol. 20(2): 538-548 (2006). One-third of U.S. species are already at risk and of conservation concern, with more than 500 species likely already extinct. *See* Precious Heritage: The Status of Biodiversity in the United States," (March, 2000); *see also* Matthews, Stephen N.; O'Connor, Raymond J.; Iverson, Louis R.; Prasad, Anantha M., "*Atlas of Climate Change Effects on 150 Bird Species of the Eastern United States*," Forest Service Northeastern Research Station Gen. Tech. Report NE-318 (2004) (projecting that as many as 78 of 150 common bird species may decrease by at least 25 percent due to global climate change).

Moreover, twenty-six percent of imperiled species are found in the National Forest System, including about half all the populations of federally listed species that are found on federal lands. *See* former Forest Service Chief Dale Bosworth speech to Commonwealth Club of San Francisco, CA (April 22, 2003). For species that are already on the brink of extinction, such as the Selkirk and Cabinet-Yaak populations of grizzly bears and the few remaining woodland caribou, the expected changes in climate could be the final blow to these species' survival unless the Forest Service takes action to significantly increase their protected habitat. The Forest Service must therefore assess and disclose the potential consequences of global climate change

on the fish and wildlife species that depend on national forests for their survival, including the already sensitive, threatened, and endangered species.[8]

C. Potential Impacts of Climate Change on Wildfire

The increased atmospheric concentrations of greenhouse gases also means that the risk of large wildfires will remain high and will continue to increase in many forests. Westerling, A.L., "*Climate Change Impacts on Wildfire*," Chapter 12 in Climate Change Science and Policy (2007); IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," p. 10 (disturbances from fire are projected to have increasing impacts on forests in North America, "with an extended period of high fire risk and large increases in area burned."). As recognized in a recent memo to Interior Secretary Dirk Kempthorne, forests are increasingly overgrown, the climate is getting warmer and drier, and the government is running short of money to employ firefighters. *See* November 21, 2006, Oregonian newstory by Michael Milstein, "*Fires Likely to Exceed Agencies' Resources*." A record 9.4 million acres burned in 2006, surpassing the previous record of 8.7 million acres that burned in 2005. *Id.* Climate studies predict that the West will grow warmer and drier, making forests more flammable and blazes more dangerous and unpredictable. *Id.* The EIS must therefore consider and disclose the implications of global climate change on the threat and intensity of future wildfires within the National Forest System.

D. Potential Impacts of Climate Change on Recreation

As stated, the proposed action would only exacerbate global climate change by likely increasing timber harvest, maintaining or increasing livestock grazing and allowing the Forest Service to proceed with its increased emphasis on oil and gas development. The EIS must explore and disclose the already occurring and expected impacts of climate change on the millions of recreational users of the National Forest System. This must include consideration of the adverse impacts to ski resorts located on national forests, snowmobile use, cold-water fishing, and other affected recreational uses.

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[8] *See also* IPCC's April, 2007, Summary for Policymakers, "*Climate Change 2007: Impacts, Adaptation and Vulnerability*," p. 5 ("The resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change, associated disturbances (e.g., flooding, drought, wildfire, insects, ocean acidification), and other global change drivers (e.g., land use change, pollution, over-exploitation of resources."); *id.*, p. 6 ("Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperature exceed 1.5-2.5° C."); *id.* ("For increases in global average temperature exceeding 1.5-2.5° C and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographic ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and services e.g., water and food supply.").

PLR144

Conclusion

Thank you for the opportunity to provide comments. We look forward to seeing how our concerns are incorporated into the Draft EIS and proposed action, and for the opportunity to provide additional comments upon review of the Draft EIS, as required by NEPA.

Sincerely,

Marc D. Fink, Attorney
Center for Biological Diversity
4515 Robinson Street
Duluth, Minnesota 55804
Tel: 218-525-3884
mfink@biologicaldiversity.org

Planningrulenoi

From: Jamey Fidel [jfidel@vnrc.org]
Sent: Monday, June 11, 2007 10:45 AM
To: Planningrulenoi
Subject: NOI Comments from VNRC
Attachments: NOI Comments VNRC.pdf

Please accept the attached comments from Vermont Natural Resources Council (VNRC) on the Notice of Intent to Prepare an Environmental Impact Statement.

Thank you.

Jamey Fidel

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Jamey Fidel
Forest and Biodiversity Program Director, Legal Counsel
Vermont Natural Resources Council
9 Bailey Avenue
Montpelier, VT 05602
(802) 223-2328 ext 117

PLR 50

VNRC Vermont Natural Resources Council

COMMON SENSE SOLUTIONS
FOR A CHANGING VERMONT

June 11, 2007

Planning Rule NOI Comments
P.O. Box 163969
Sacramento, CA 95816-2969

Dear Forest Service Planning Rule Content Analysis Team:

Please accept the following scoping comments from Vermont Natural Resources Council (VNRC) concerning the Forest Service's intent to prepare an environmental impact statement (EIS) to analyze and disclose potential environmental consequences associated with the 2005 planning rule.

VNRC and its 5,000 plus members are vitally interested in the management and protection of our national forests, including the Green Mountain National Forest (GMNF) in Vermont. VNRC was one of the original Plaintiffs in the lawsuit that resulted in the March 30, 2007 court order enjoining the Forest Service from implementing the 2005 planning rule. We provided extensive comments during the promulgation of the 2005 planning rule, and we hereby request that you refer to those comments and incorporate them into your review as suggested in the May 14, 2007 NOI. We remain concerned about the implementation of the 2005 planning rule and offer the following comments in response to the Notice of Intent to Prepare an Environmental Impact Statement.

The Forest Service estimates that the draft environmental impact statement is expected in June 2007. Scoping comments from the public are due on June 11, 2007. It appears that the Forest Service is rushing to produce the draft environmental impact statement without allowing enough time to process and adapt to comments from the public.

We strongly encourage the Forest Service to produce a thoughtful and comprehensive draft environmental impact statement with sufficient alternatives. It would be a mistake to rush the environmental review process with just a proposed action and no action alternative.

When determining whether the Forest Service has considered the proper range of alternatives in the EIS and thus satisfied the primary mandate of NEPA, "the touchstone of [the] inquiry is whether an EIS's selection and discussion of alternatives fosters informed decision-making and informed public participation." Headwaters, Inc. v. Bureau of Land Management, 914 F. 2d 1174, 1180 (9th Cir. 1990), *quoting* State of California v. Block, 690 F. 2d at 767 (9th Cir. 1982). The Forest Service should include the 1982 and the 2000 planning rules as alternatives in the draft environmental impact

9 Bailey Avenue • Montpelier, Vermont 05602
PHONE 802/223 2328 • FAX 802/223 0287 • WEB www.vnrc.org • EMAIL info@vnrc.org

statement so the public can understand the impacts and consequences associated with the policy changes in the proposed planning rules.

For example, the public should understand that the 2005 planning rule eliminates the requirement to manage for viable populations of native fish and wildlife species on the national forests. The draft environmental impact statement should quantify the environmental impact of eliminating this standard versus keeping it intact. Furthermore, the draft environmental impact statement should quantify the environmental impact of eliminating the requirement to collect population data for management indicator species versus keeping the requirement to collect population data collection intact. Along this line, the Forest Service should also quantify the environmental impacts of allowing units with plans developed, amended, or revised using the provisions of the planning rule in effect prior to November 9, 2000 to consider habitat analysis versus population data for complying with the obligations relating to management indicator species (see 36 CFR 219.14(f)).

The 2005 planning rule removed the requirement to perform environmental impact statements or environmental assessments for plan amendments, revisions, and the approval of plans. The rule provides that forest plans may be categorically excluded from NEPA documentation. The Forest Service should explain and quantify the environmental consequences of eliminating the longstanding requirement to perform environmental impact statements and to consider the impacts of various proposed actions on the national forests. Furthermore, the Forest Service should explain the environmental consequences of eliminating NEPA's requirement to study and disclose the cumulative environmental effects of management activities across the national forests.

Instead of requiring the performance of an environmental assessment or impact statement, the 2005 planning regulations require the Responsible Official to establish an environmental management system (EMS) for each unit of the National Forest System. The Forest Service should explain and quantify the environmental consequences of moving to such an unfamiliar process for forest planning. The Forest Service should also compare the environmental consequences of establishing an EMS system, versus conducting an environmental assessment or impact statement. This is the only way the public will truly understand the environmental impacts of removing the traditional NEPA planning process for forest plan revisions and amendments.

The EIS should also analyze the direct and indirect impacts of eliminating the enforceable standards required by 16 U.S.C. 1604(g)(3). The 2005 planning rule instructs that the Chief of the Forest Service must include in the Forest Service Directive System procedures to ensure that plans include the resource management "guidelines" required by 16 U.S.C. 1604(g)(3). It appears that the Forest Service is treating certain NFMA requirement as unenforceable guidelines, rather enforceable standards. The EIS should disclose the environmental consequences of treating NFMA requirements as guidelines rather than standards, including the requirement for estimating the quantity of timber that can be removed annually in perpetuity on a sustained-yield basis in accordance with 16 U.S.C. 1611.

Furthermore, the 2005 planning rule states that the NFMA requirement to identify lands that are not suitable for timber production within the plan area is not a final determination of suitability for timber production. The 2005 planning rule clarifies that a final determination of suitability for timber production is made through project and activity decisionmaking. The Forest Service must explain the environmental consequences, and the direct and indirect impacts of shifting the final determination of suitability for timber production to the project and activity level of decisionmaking.

In general, VNRC is concerned with the apparent weakening of enforceable standards in 2005 planning rule. We also are concerned with the amount of discretion that is afforded local decision makers in the planning process. While adaptive management may have its benefits, NFMA instructs that certain management requirements are mandatory. If there is going to be built in flexibility in following NFMA's requirements, the environmental consequences of such a shift in policy should be disclosed.

In closing, VNRC strongly encourages the Forest Service to take a comprehensive approach to understanding the environmental ramifications of implementing the 2005 planning rule. The best way to do this is to study the 1982, 2000, and 2005 planning rules as possible alternatives in the EIS. This will allow the public to compare the different approaches to forest planning, and make informed comments when the draft environmental impact statement is issued. Finally, we encourage the Forest Service to gather the best available science regarding the status of issues such as climate change to inform and hopefully improve the final planning rule.

Thank you for this opportunity to provide scoping comments on the Forest Service's intent to prepare an EIS to analyze and disclose potential environmental consequences associated with the 2005 planning rule. We look forward to reviewing the draft EIS. Please keep us informed as this process develops.

Sincerely,

Jamey Fidel
Forest Program Director, Legal Counsel
Vermont Natural Resources Council

Planningrulenoi

From: John M. Sully [sullyjm@jeffnet.org]
Sent: Saturday, June 02, 2007 8:47 AM
To: Planningrulenoi
Subject: Planning Rule Comments

Dear Forest Service,
I am writing to urge a thorough review of the environmental disaster that will result if the 2005 NFMA rules are adopted, and to urge the Forest Service to consider alternative rules that will better protect our public forests, roadless areas, clean water, habitat for fish & wildlife, low-impact recreation, and a livable climate.

I strongly oppose the proposed rules because they eliminate virtually all environmental safeguards and remove a key requirement to ensure wildlife viability. These rules will mean less public involvement and more logging of big, old trees in our national forests. I don't like the idea of another sweetheart deal for the timber industry. THE TIMBER INDUSTRY REPRESENTS A VERY SMALL FRACTION OF THE USERS OF OUR NATIONAL FORESTS!!!!!!

Please consider the following recommendations:

1. Require that areas with low road density, including all roadless areas 1,000 acres and larger, be carefully evaluated and protected. Roadless areas are the last, best places for wildlife, water, and scientific reference points. Roadless areas may be the only place to fully realize some important ecological values such as large snag habitat. Areas with low road density must be protected, not further destroyed with more roads and logging. Retain the Roadless Rule that protects 58 million acres of National Forest land.

2. Consider the value of National Forests as places to sequester carbon and help mitigate climate change. To fulfill NFMA's requirements to inventory renewable resources and identify hazards to forest resources, the planning rules must require that carbon fluxes involving forests and soil be accounted for in planning and future management. Logging and road building release vast amounts of carbon from both vegetation and soil, while healthy mature forests are a good place to securely store carbon and keep it out of the atmosphere where it causes global warming. Given the very urgent nature of our global climate problem, there is no longer any legitimate excuse for logging mature & old-growth forest.

3. Use a rational decision-making framework in all forest plan amendments by considering alternatives, disclosing environmental consequences, and consulting experts as required by NFMA and the National Environmental Policy Act (NEPA). The Forest Service must actively involve the public and consider environmental concerns at all steps of the planning process.

4. Do not presume that management activities are benign. The rules must require site-specific "suitability analysis" for each management activity. Seek the highest and best public use of our public lands, or as Gifford Pinchot says, "the greatest good for the greatest number." The greatest number includesboth sports and commercial fishermen that are dependent on clean water for fish spawning habitat. Do not presume that logging, mining, and grazing are suitable uses unless the weight of evidence shows them to be necessary and sustainable and the highest and best use of the forests.

In conclusion, please accurately describe the 2005 rules as the ecological disaster they really are, and consider alternatives that will protect and restore our National Forests that have been degraded by a century of mismanagement. The public consensus is that the Forest Service should stop degrading our forests and start investing in forest restoration. There is plenty of important work to do, such as closing and fixing roads, managing prescribed fire, weed control, recreation management, stream rehabilitation, and thinning small trees in dense young stands to restore old growth characteristics. Let's get to it.

John M. Sully
P. O. Box 3600
365 Granite Street

Ashland, OR 97520

Planningrulenoi

From: Shannon.M.Hebert@aphis.usda.gov
Sent: Wednesday, June 13, 2007 4:26 PM
To: Planningrulenoi
Subject: Fw: Federal Register / Vol. 72, No. 91 / Friday, May 11, 2007

This is in response to the subject Federal Register notice of availability to prepare an EIS for the NFS land management planning rule. We have no comments at this time, however, please send notification of the availability of the draft EIS.

Thank you,

Shannon Hebert
Environmental Coordinator
U.S. Department of Agriculture
Animal and Plant Health Insepction Service Wildlife Services
6135 NE 80th Ave., Ste. A-8
Portland, OR 97218

Planningrulenoi

From: Jerry Wagner [JETTOE@PACBELL.NET]
Sent: Sunday, June 10, 2007 9:31 PM
To: Planningrulenoi
Subject: Saving our National Forests

To: USDA Forest Service:

Please accept these scoping comments for the preparation of the environmental impact statement to analyze and disclose potential environmental consequences associated with the National Forest System land management planning rule.

The EIS should analyze the impacts on the national forests of exempting forest plans from environmental review and meaningful public input under the National Environmental Policy Act.

The Forest Service should ensure that the public has access to adequate information for the evaluation of the environmental consequences of forest plans. Given the size and complexity of most forest plans, the Forest Service should ensure that enough time is allowed for informed public comment.

The EIS should analyze the effects of eliminating resource protection standards from forest plans and the impacts of eliminating wildlife viability and monitoring requirements.

The Forest Service should consider alternatives to the 2005 planning rule that include strong standards to protect forests, waters and wildlife, and evaluate the adoption of some or all of the 1982 and 2000 regulations. Alternatives should also include requirements for forest plans to address the impacts of climate change.

Exempting forest management plans will eliminate the study or disclosure of the cumulative impact of management activities across the national forest, something usually done at the planning stage.

The agency should not make it easier for timber, oil, gas, mining and motorized recreation companies to profit from the use of public forests while eliminating the need for forest managers to assess potentially harmful impacts on water, wildlife, recreational use, old growth and roadless areas.
"Public" means belonging to all US citizens, not just private big business.

Thank you for the opportunity to comment.

Jerry Wagner, 267 Sierra Vista Ave., Mountain View, CA 94043

FOREST WATCH
www.forestwatch.org

P.O. Box 188
Richmond
Vermont
05477

PHONE:
(802) 434-2388
FAX:
(802) 329-2075

June 11, 2007

Planning Rule NO1 Comments
P.O. Box 163969
Sacramento, CA 95816-2969

RECEIVED JUN 15 2007

Forest Service Planning Rule Content Analysis Team:

On behalf of the Board and members of Forest Watch, I am writing to comment on the scope of the U.S. Forest Service's National Environmental Policy Act (NEPA) analyses of implementing the proposed 2005 planning rule.

Forest Watch is a regional not-for-profit conservation organization with offices in Richmond, Vermont. Forest Watch has 6,500 members from across the nation though most of them reside in Vermont and other New England states. Forest Watch's mission is to save and recreate wild forests, protect imperiled species, promote ecological forestry and reform public land management policies and practices.

Forest Watch has a particular interest in public lands, where many of our members regularly go to hunt, fish, hike, camp, ski, do nature photography, watch wildlife, study natural history, and pursue other recreational, aesthetic and scientific activities. We comment regularly on proposed policies and activities on the Green Mountain, White Mountain, and Finger Lakes National Forests. Implementation of the proposed planning rule will affect the use and enjoyment of these and other national forests by our members.

We request that you prepare a comprehensive Draft Environmental Impact Statement (DEIS) with sufficient alternatives. When there are so many reasonable public policy options to consider, it would be unwise and unlawful for the Forest Service to analyze only the proposed action and no action alternatives. Such an overly constrained range of alternatives would not foster "informed decision making and informed public participation," as called for by the courts.

The DEIS should, at the very least, include the 1982 and the 2000 planning rules as alternatives to the 2005 rule. This would provide policymakers and the public an opportunity to understand the environmental impacts associated with the proposed changes in the 2005 planning rule.

As one part of the alternatives analyses, we ask that the DEIS quantify the direct and indirect environmental impacts of the 2005 planning rule's elimination of the requirement to collect population data for management indicator species and compare those impacts with the current rule's requirement to collect such data.

Please also describe and quantify the environmental impacts of allowing national forests

with plans developed, amended, or revised using the provisions of the planning rule in effect prior to November 9, 2000 to consider habitat analysis versus population data for complying with the obligations relating to management indicator species (see 36 CFR 219.14(f)).

The 2005 planning rule removed the requirement to perform environmental impact statements or environmental assessments for plan amendments, revisions, and the approval of plans by allowing forest plans to be "categorically excluded" from NEPA documentation. Forest Watch believes this is a huge mistake and contrary to the plain meaning and intent of NEPA. Please abandon this unlawful action, or at the very least explain in detail and quantify the environmental consequences of advancing it.

Moreover, instead of continuing to require environmental analyses of the cumulative effects of management activities on national forests, the 2005 planning regulations merely requires Responsible Officials to establish environmental management systems (EMS) for each unit of the National Forest System. We believe this is unlawful. Please explain and disclose in the DEIS the effects of this profound change in public policy and abdication of the requirements of NEPA.

The 2005 planning rule instructs the Chief of the Forest Service to include in the Forest Service Directive System procedures to ensure that plans include the resource management "guidelines" required by 16 U.S.C. 1604(g)(3). This means that if the 2005 planning rule is adopted, the standards now required by 16 U.S.C. 1604(g)(3) would become guidelines, no longer enforceable. The DEIS should explain this profound shift in law and policy, and disclose its environmental impacts.

Forest Watch believes that abandoning current NFMA requirements, especially those that fundamentally guide and constrain management activities (e.g., the requirement for estimating the quantity of timber that can be removed annually in perpetuity on a sustained-yield basis in accordance with 16 U.S.C. 161 1), is unlawful and will lead to significant environmental harm. Please disclose in detail the environmental and public policy consequences of doing so.

In summary, Forest Watch is deeply troubled by the 2005 planning rule's proposed weakening of enforceable standards. We are also concerned with the amount of discretion that is afforded local decision makers in the planning and plan implementation processes. Please study the 1982, 2000, and 2005 planning rules and other public policy options, especially those developed in response to climate change—a profound, far-reaching, emerging issue—as alternatives in the DEIS. This will allow policymakers and citizens an opportunity to compare the different approaches to forest planning, and make informed comments when the DEIS is issued.

Please keep Forest Watch informed and involved on this issue. Thank you very much

Sincerely,

James M. Northup
Forest Watch Executive Director