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* Conservation Northwest * Defenders of Wildlife * Earthjustice *
EPIC- Environmental Protection and Information Center * Friends of Blackwater *
Gifford Pinchot Task Force * Greater Yellowstone Coalition *
Idaho Conservation League * Klamath Forest Alliance * KS Wild * Oregon Wild *
Pew Environment Group * Sequoia ForestKeeper * Sierra Club *
Sierra Forest Legacy * Sierra Nevada Alliance * Siskiyou Project * Southern
Appalachian Forest Coalition * Southern Environmental Law Center *
WildEarth Guardians *The Wilderness Society * Wild Virginia * Wilderness Workshop
* World Wildlife Fund * Wyoming Outdoor Council *
Yellowstone to Yukon Conservation Initiative**

February 16, 2010

Forest Service Planning NOI
C/O Bear West Company
172 E 500 S
Bountiful, UT, 84010

cc: Secretary Thomas J. Vilsack, Chief Tom Tidwell

Re: The New NFMA Planning Rules

Dear Mr. Secretary:

On behalf of the undersigned organizations, we submit these comments in response to the Forest Service's notice of intent ("NOI") to prepare an environmental impact statement to document environmental analysis for a new planning rule (Title 36, Code of Federal Regulations, Part 219) associated with the National Forest Management Act (16 U.S.C. § 1600; "NFMA"). This letter responds to key principles and questions posed within the NOI and highlights features that the undersigned organizations believe should form the basis of a new planning rule.

We agree that the Forest Service needs to revise its forest planning rules to help "protect, reconnect, and restore national forests and national grasslands" and appreciate the opportunity to participate in the rule development process you have announced.¹ There is a pressing need for these revisions as climate change accelerates, exacerbating old challenges and creating new ones. But urgency must not be allowed to short-circuit sound planning. Managing a shifting ecological, social, and economic landscape will not be easy, and the durability of the rule will be dependent on the

¹ See 74 Fed. Reg. 67,165 (Dec. 18, 2009).

legitimacy of the rulemaking process. As Chief Tidwell recently put it, “[h]istory will judge us” by how well we rise to the challenge.²

The Forest Service has set itself an ambitious December 2010 deadline to propose a draft planning rule. To meet this deadline, the Forest Service will need to take a focused approach, viewing its work as solving specific problems in the existing planning framework rather than entirely reinventing the system. We urge the Forest Service to innovate but to do so upon a strong foundation. This letter is intended to help the Forest Service identify these key challenges, as well as important aspects of older rules that the agency should retain.

I. Requisites of Sound Planning

The revised rule must be durable. The Forest Service has struggled over the last decade to put a lasting rule into place, withdrawing its 2000 rule and then seeing its 2005 and 2008 rules struck down by the courts.³ The national forests and grasslands, the agency, and all stakeholders associated with national forest and grassland policy, cannot afford another unsuccessful planning rule. The Forest Service should avoid that result by taking a fresh look at the basic challenges any sound rule must resolve and the core planning principles that the National Forest Management Act (“NFMA”) sets out.

NFMA’s central mandate is straightforward: Plans must make decisions. They set out, for instance, “standards and guidelines” for forest management, “identif[y] . . . the suitability of lands for resource management,” establish careful standards for timber harvests, including “forest management systems [and] harvesting levels,” protect “streams, streambanks, shorelines,” and other water resources, and “provide for diversity of plant and animal communities” in each “specific land area.” See 16 U.S.C. § 1604. The NFMA regulations must provide specific standards and guidelines for creating plans that make concrete choices regarding the management of forest resources, and then hold managers accountable for their decisions under the plans. Recent rulemaking efforts failed, in large part, because they sought to move away from this robust statutory mandate for prescriptive forest plans and to replace it with standardless “aspirational” documents. The new rule will succeed if it, instead, embraces the Service’s obligation to create rigorous plans that protect public resources.

Because NFMA-compliant plans have such a lasting impact, they must be “prepared in accordance with the National Environmental Policy Act”⁴ (“NEPA”) and be

² See WO Memo, *Responding to Climate Change: Developing Integrated Plans for Landscape Conservation* (Nov. 20, 2009).

³ See *Citizens for Better Forestry v. U.S. Dep’t of Agriculture* (“*Citizens I*”), 341 F.3d 961 (9th Cir. 2003); *Citizens for Better Forestry v. U.S. Dep’t of Agriculture* (“*Citizens II*”), 481 F. Supp.2d 1059 (N.D. Cal. 2007); *Citizens for Better Forestry v. U.S. Dep’t of Agriculture* (“*Citizens III*”), 632 F. Supp.2d 968 (N.D. Cal. 2009).

⁴ 16 U.S.C. § 1604(g)(1). See also, e.g., *Citizens I*, 341 F.3d at 966 (observing that forest “plans act like zoning ordinances, defining broadly the uses allowed in various forest regions [and] setting goals and

accompanied by thorough environmental impact statements. This requirement is central to bridging the democratic and technocratic challenges of public land use planning. The national forests and grasslands are “the people’s lands, emblems of the nation’s democratic traditions.”⁵ As such, their management – and difficult choices among management priorities and goals – must ultimately be guided by the public. At the same time, these choices must also be informed by accurate scientific assessment of what each choice will mean. A sound planning rule must ensure that scientific judgments will inform democratic choices; NEPA provides this “democratic decisionmaking structure.”⁶ As President Obama has recently stated, NEPA maintains “environmental quality through open, accountable, and responsible decisionmaking that involves the American public.”⁷ NEPA generates the empirical data forest planners and the public need to make sound decisions and must be extensively integrated into any revised planning rule.

For this democratic process to function properly, forest planning must be rooted in public participation, connecting with all of the many “publics” with an interest in the process.⁸ Forest resources are to be managed “so that they are utilized in the combination that will best meet the needs of the American people” over time, so that there is no “impairment of the productivity of the land” and resources are sustained.⁹ Thus, the Forest Service is responsible not just to the diverse groups presently using the forests but also to future publics, to whom it must pass on the forests unimpaired. The Service should seek ways to hear all of these voices, evaluating them in light of statutory mandates, rather than, for instance, putting undue weight on the immediate needs of extractive industries.

The 1982 planning rule, as amended in 1983, has been durable because – unlike more recent efforts – it reflects these core requirements and was developed in consultation with an independent committee of scientists. It specifies key planning decisions, from identifying measures to “maintain viable populations of existing native and desired non-native vertebrate species” to carefully evaluating roadless areas for wilderness designation, to designing appropriate timber harvests.¹⁰ While encouraging managers to innovate, it also set crucial “minimum specific management requirements” to meet baseline conservation goals.¹¹ To bring scientists and the public into the process, the

limits on various uses”); *Center for Biological Diversity v. U.S. Fish and Wildlife Service*, 623 F. Supp.2d 1044, 1051-52 (N.D. Cal. 2009) (explaining that a “top-tier plan [does] affect the environment through the effect it exert[s] on lower-level plans” and dismissing arguments to the contrary as unconvincing exercises in “the mysteries of the metaphysics of causation.”).

⁵ 36 C.F.R. § 219.1(b).

⁶ See *Oregon Natural Desert Association v. Bureau of Land Management*, 531 F.3d 1114, 1120 (9th Cir. 2008).

⁷ Presidential Proclamation – 40th Anniversary of the National Environmental Policy Act (Jan. 4, 2010).

⁸ See 16 U.S.C. § 1604(d).

⁹ See 16 U.S.C. § 1604(e)(1); see also 16 U.S.C. § 531 (defining “multiple use” and “sustained yield”).

¹⁰ See 36 C.F.R. §§219.11-219.27 (1983).

¹¹ See 36 C.F.R. § 219.27 (1983).

rule also coordinates the forest planning and environmental impact statement processes.¹² As the Forest Service works to update its planning regime in the face of climate change, it is essential to retain these foundational strengths. Indeed, the Service could efficiently structure its rulemaking effort by identifying specific aspects of the 1982 rule that need improvement, or must be updated to address pressing new issues like climate change, while retaining the core of that rule.

The 2000 planning rule, also developed in consultation with a committee of scientists, provides the Service with a useful set of possible updates. It provides helpful guidance on science-based planning and decision-making, offering tools including science-based assessments, analyses and monitoring programs, science consistency evaluations, and science advisory boards to ensure that plans and plan decisions are well grounded.¹³ We encourage the Forest Service to include in the revised rule similar explicit provisions that outline the role of science in planning and decision-making.

But the Forest Service also must move forward to address today's challenges for the national forests. In particular, two rulemakings are urgently needed. First, the Service has unwisely opted to reassert that, during the transition period, site-specific actions are to be governed only by the "best available science" rather than by the substantive provisions of either the 1982 or 2000 rules.¹⁴ Removing these important protections leaves land managers and the public without the tools they need to plan smart, data-driven actions. The Forest Service should instead make clear that strong substantive rules – either those of the 1982 or 2000 rules – continue to apply to site-specific actions, in addition to the best available science. Second, although both the 2000 and 1982 rules make clear that a plan must be accompanied by an EIS,¹⁵ a categorical exemption for forest planning remains in the Code of Federal Regulations at 36 C.F.R. § 220.6(e)(16). This exemption is now a dead letter but should be removed to prevent confusion.

II. The Climate Challenge

In autumn 2009, many of the signatories of this letter outlined core principles for addressing climate change in forest planning, advocating a science-based approach that focused on identifying and reducing ecosystem stresses, building climate corridors and refugia, and fostering carefully-designed, well-monitored direct ecosystem interventions.¹⁶ This approach would also serve climate mitigation purposes by protecting older and old growth forests, which store huge amounts of carbon. The

¹² See 36 C.F.R. § 219.10 (1983).

¹³ See 36 C.F.R. §§ 219.22-219.25

¹⁴ See 36 C.F.R. Pt. 219, Subpt. A, App. A.

¹⁵ See, e.g., 36 C.F.R. § 219.9 (describing "draft environmental impact statement" for a plan revision); 36 C.F.R. §§ 219.6(b) & 219.10 (1983) (discussing "preparation of environmental impact statements for planning").

¹⁶ A full list of those principles is attached.

general principles that the Forest Service outlines in its notice could be consonant with this approach, depending on how they are implemented.

Initially, as the Forest Service begins to turn its principles into rules, we urge it to reconsider the course set by its flawed “Forest Service Strategic Framework For Responding to Climate Change.” That document, produced by the last administration, does not fulfill the Forest Service’s “protect, reconnect, and restore” mission. Conservation science makes clear that the best no-regrets strategy for creating resilient ecosystems is, again, to identify and reduce stresses impairing the structure, composition and function of ecological systems while maintaining ecosystem integrity by protecting core areas and corridors.¹⁷ The Framework gets this approach backwards, emphasizing “extensive application” of mechanical treatments as the primary approach to support ecosystem adaptation. By focusing unduly on these interventions, it also fails to seriously grapple with the Forest Service’s NFMA mandate to protect biodiversity in the face of climate change, and leaves out explicit species-diversity provisions entirely. It needs to be revised to reflect the more protective approach forest ecosystems need.

Moreover, interventions and active management with the purpose of facilitating ecosystem adaptation and enhancing ecosystem resiliency will consistently result in conflict and failure if they are not supported by measurable, science-based objectives evaluated with robust monitoring and adaptive management programs. The new planning rule can help avoid such conflict and enhance the legitimacy of adaptation, restoration and resiliency actions by linking those decisions to careful scientific assessments, strong diversity provisions and meaningful monitoring programs, discussed in greater detail below.

III. Developing a Strong Planning Rule

Changing course will be challenging. Here are some initial thoughts on how the Forest Service might move forward.

A. Include Tools to Reduce Stressors and Preserve Ecological Sustainability

¹⁷ See, e.g., U.S. Climate Change Science Program, *National Forests*, in *Synthesis and Assessment Product 4.4: Preliminary Review of Adaptation Options for Climate Sensitive Ecosystems and Resources* (2008); Andreas Fischlin et al., *Ecosystems, their properties good and services. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* at 241 (2007); Lara Hansen et al., World Wildlife Fund, *Buying Time: A User’s Manual for Building Resistance and Resilience to Climate Change in Natural Systems* (2003); Matthew D. Zinn, *Adapting to Climate Change: Environmental Law in a Warmer World*, 34 *Ecology L. Q.* 61 (2007); J.M.J. Travis, *Climate Change and Habitat Destruction: A Deadly Anthropogenic Cocktail*, 270 *Proceedings of the Royal Society of London* 467 (2003);).

The Forest Service must maintain the “renewable resources” of the forest system “in perpetuity,” “without impairment of the productivity of the land.”¹⁸ Accelerating climate impacts make this task difficult. As Secretary Vilsack recently put it, “[c]limate change puts [the forests] under increasing stress that exacerbates the threats of fire, disease, and insects.”¹⁹ The Forest Service cannot prevent climate change, but it can increase the resilience of forest ecosystems by removing other ecosystem stresses wherever possible, including over-grazing, unused or over-used roads and ORV trails, and counter-adaptive logging. Removing these threats is central to the Forest Service’s stated goal of plans “address[ing] the need for restoration and conservation.”²⁰

The 2000 planning rule provides some useful tools for implementing this principle. That rule rightly recognized that “[t]he first priority for planning . . . is to maintain or restore ecological sustainability . . . to provide for a wide variety of uses, values, products, and services.”²¹ To help maintain sustainability, the rule directed the Forest Service to carefully assess “the effect of human activities on ecosystem diversity,” paying particular attention to activities which “were not typical of disturbances under which native plant and animal species and ecosystems developed.”²² Human activities could then be modified to ensure that the system made progress towards “ecological conditions within the expected range of variability” that “would be expected to occur under natural disturbance regimes of the current climatic period.”²³

This basic approach has merit, as it identifies key human stressors on ecosystems and then works to reduce them. It will, however, have to be refined because the historic range of variability in the “current climatic period” is, increasingly, a poor predictor of the future. Climate shifts will rearrange ecosystems, dramatically altering historic disturbance patterns and rates. Although these shifts may be difficult to predict, they make removing human stressors more, not less, important.

Planners might address this problem in forest plans, and their accompanying environmental impact statements, in several ways. One three-tiered conceptual approach might work as follows:

First, planners would identify climate-linked threats to ecological sustainability within a planning region, along with the magnitude of each threat and the key ecosystem services and values which it imperils. For instance, a planner might identify increasing water temperature and reduced flows in high alpine streams as a threat to aquatic biodiversity, water quality, and water supply. The 2000 planning rule offers tools for this process, including broad scale ecological assessments to investigate and document

¹⁸ See 16 U.S.C. § 531.

¹⁹ Secretary Vilsack, “A National Vision for American Forests” (Aug. 14, 2009).

²⁰ 74 Fed. Reg. at 67,167. (notice of intent)

²¹ 36 C.F.R. § 219.2.

²² 36 C.F.R. § 219.20.

²³ See *id.*

the “principal factors contributing” to “future trends of ecological...conditions,”²⁴ along with evaluations to describe “risks to ecological sustainability”²⁵ including threats to key ecological processes likely to be affected by climate change.

Second, planners would assess which human-caused stressors amplified these risks by hastening the ecosystem’s departure from the historic range of variability. In the stream example, planners might identify over-grazing, which removes cooling stream-side vegetation and compacts wet meadows, as a risk amplifier.

Third, planners would work to determine, with a margin of safety, how to remove or ameliorate the anthropogenic risk. In our example, they might fence off certain meadows or reduce cattle stocking levels. The 2000 rule may again serve as a guide here, with its emphasis on the necessary linkages between risk identification, assessment and monitoring. In addition to requiring monitoring of the status and trend of ecosystem characteristics that may be vulnerable to climate change, including water resources, the 2000 rule enables managers to identify and monitor at-risk and focal populations based on risk and other factors. While planners would not – and could not – always maintain conditions as they were prior to climate change, they would prevent human activities from making matters worse.

This approach could and should be extended to regional and landscape level planning, which will be necessary to conserve ecosystems and species under climate change. Climate relevant forest planning and decision-making needs to occur at the appropriate ecological scale in conjunction with other land owners. For example, the broad scale assessments called for in the 2000 planning rule could be performed by a group of adjacent national forests and Forest Service research stations, like the Sierra Nevada forests, or even through a collaborative “all-lands” approach with other partners, like the Department of Interior’s Landscape Conservation Cooperatives, the USGS Climate Change and Wildlife Science Center, and managers of adjacent Bureau of Land Management, National Park Service, and Department of Defense lands. Downscaled climate change modeling coupled with ecological response models should play an important role in these assessments to provide planners with informed scenarios of impacts and ecological changes for the planning area.

There are, no doubt, other sound approaches – but the theme, of identifying and reducing human-caused risk factors, should remain the same. Too, the importance of basing stressor reduction projects, like any other ecosystem restoration effort, on careful scientific assessment is clear. The 2000 planning rule’s efforts to calibrate human interventions to the capacity of forest ecosystems to bear them is a useful guiding principle as the Forest Service moves forward. So too is the extensive body of work in this area prepared by the scientists of the Society for Ecological Restoration, and the

²⁴ 36 C.F.R. § 219.5.

²⁵ 36 C.F.R. § 219.20.

careful restoration principles worked out in “A Citizen’s Call for Ecological Forest Restoration,” a peer-reviewed article emphasizing the need to measure all restoration activities against their impacts on the ecological and human communities using our forests.²⁶

B. Maintain Species Viability Across the Landscape

The NOI rightly identifies diversity issues, both at the species and ecosystem levels, as primary planning issues. NFMA’s diversity requirements form an essential basis for the sustainable management of our national forests. The Forest Service’s notice points out, correctly, that implementing the “species viability requirements of the 1982 rule” will be difficult, as habitats and individuals move in response to changing conditions.²⁷ This difficulty, though, warrants a renewed, broader focus on species viability, rather than abandoning the concept.

Generally, we strongly caution against framing the impacts of climate change as cause for undue agency discretion and weakened accountability with regard to NFMA’s wildlife diversity mandate. The Forest Service should act as a “can do” rather than a “can’t do” agency with regard to maintaining and restoring ecological diversity in a time of change. We remind the Forest Service that the success of potentially controversial adaptation and resiliency actions will be dependent on public confidence that ecological diversity, including population viability, is maintained or restored via those actions.

Forest plans and associated project-scale decisions should be rooted in maintaining species population viability to the extent possible by reducing anthropogenic stresses and taking other mitigation measures. The 2000 rule usefully implements this concept by requiring planners to identify and evaluate threats to the viability of focal and at-risk populations, to monitor ecosystem characteristics as well as at-risk and focal populations, and to provide for “ecological conditions that . . . provide a high likelihood of supporting over time the viability of native and desired non-native species.”²⁸ The 2000 rule recognizes that viability is never guaranteed, but rather reflects an effort to manage a wide array of causal factors, some of which are outside of managers’ control. The 2000 rule maintains a high standard for planners, structuring management around biodiversity protection. This “high likelihood” standard – if understood, and defined by rule, to impose an obligation on the Service to insure that viability will be maintained within a planning area to the extent of the agency’s authority to affect the ecological

²⁶ See, e.g., Society for Ecological Restoration, *The SER International Primer on Ecological Restoration* (2004) (defining ecological restoration as “the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed” and giving useful examples); see also Dominick A. DellaSalla et al., *A Citizen’s Call for Ecological Forest Restoration: Forest Restoration Principles and Criteria*, 21 *Ecological Restoration* 1, 14 (2003).

²⁷ 74 Fed. Reg. at 67,168.

²⁸ See 36 C.F.R. § 219.20.

conditions needed by the species -- should work well for most species, encouraging and enabling the Forest Service to protect them in each unit of the National Forest System.

Nonetheless, as climate change increasingly reshapes landscapes, the Forest Service must also understand and address threats to population viability at the landscape level. Both to enhance viability in individual system units, and to ensure that wildlife populations persist at a regional level if they cannot be maintained in an individual forest, the Forest Service should use the “all lands approach” it proposes in order to coordinate planning processes with bordering landholders to provide habitat and permeability for fish and wildlife species that move across jurisdictional boundaries.²⁹ In some instances, protecting wide ranging or migrating species may be as simple as coordinating management across several different national forests, as in the Sierra Nevada where forestland covers much of the range. There, adopting a robust regional planning process – perhaps modeled on a strengthened version of the regional guides in the 1982 rule and employing the broad-scale assessments found in the 2000 rule – would be helpful.³⁰ Ecosystem-based landscape conservation strategies should be a regional level responsibility to ensure scientifically credible designs are applied across jurisdictions rather than forest by forest strategies. Elsewhere, planners should be encouraged to conduct forest planning in larger cooperative regional efforts whenever possible, as discussed earlier.

Under this regional approach, planners would first seek to maintain a “high likelihood” of species population viability within a given forest. As part of this effort, they would also work to maintain viability across a larger biogeographical region – such as the Sierra Nevada or the Southern Appalachians – by maintaining and restoring landscape connectivity and protecting core habitat.

Of course, there will be instances where planners may not be able to ensure a high likelihood of survival in a given unit, even after taking all possible measures in their control, including regional planning. The NOI appropriately raises these “extrinsic conditions” cases, and they can be accounted for in diversity provisions of the new rule. Nevertheless, we reiterate that the agency should not use the specter of climate changes as cause for removing accountability from plan and project decisions. First, extrinsic conditions should be identified as one factor in risk assessments that form the basis for diversity management and decision-making. Second, the Forest Service should borrow from America’s Wildlife Heritage Act (H.R. 2807), now pending in Congress, which requires planners to adhere to population viability objectives unless and until they have made a scientific determination, and allowed for public comment on such determination, that conditions beyond Forest Service authority make it impossible to maintain a population’s viability. In these rare cases, managers should still take all possible actions to achieve population viability, while taking no action that would

²⁹ See 74 Fed. Reg. at 61,179.

³⁰ See 36 C.F.R. §§ 219.8-219.9 (1983) and § 219.5 (2000).

increase the likelihood of that population's extirpation. In addition, such "extrinsic conditions" determinations should not allow planners to abandon viability goals for a larger ecological planning region, regardless of any determination for a particular unit within that area. To the extent the FS adopts provisions of America's Wildlife Heritage Act, the agency will also need to provide detailed prescriptions for carrying out these provisions in the planning rule.

To ensure that ecosystem and species diversity efforts are supported by sound monitoring data, the regulations should require forest plans to identify indicator or focal species which provide useful information about the condition of the larger ecosystems they are associated with, and to identify species of concern or species at risk for which there is a concern about loss of population viability within the planning area. The regulations should require monitoring of the status and trends in the conditions or characteristics of ecosystem diversity, including the conditions that support focal species and species of concern. The regulations also must require monitoring of the populations of focal species and species of concern. Again, the America's Wildlife Heritage Act provides an appropriate model for this approach. The Heritage Act makes clear that monitoring of habitat cannot stand alone, but must be validated with actual population data in order to ensure that the Forest Service is achieving its species diversity and viability goals. Identifying focal species and species of concern is necessary because ecosystem or habitat-based planning and monitoring provides a useful coarse filter, but may allow some important species to "slip through the cracks." Likewise, habitat-based monitoring cannot stand alone; it must be validated or augmented with actual population data, in order to learn whether and to what extent the Forest Service is, in fact, achieving its species diversity and viability goals, so that forest managers have all the relevant information needed for sound decisions, can adapt as necessary based on monitoring results, and can ensure that time and funds spent on management actions are being spent effectively.

In sum, because extinctions, and even certain lesser impacts on populations, threaten ecological stability and ecosystem services, planners cannot relax their efforts to preserve individual species as climate change intensifies. The revised planning rule should support landscape-level efforts to protect our biological heritage.

C. Prioritize Watershed Conservation and Restoration

Secretary Vilsack has made it clear that he expects the Forest Service to manage forest lands "first and foremost to protect our water resources..."³¹ The duty to make protecting water resources a priority reaches back to the beginning of the Forest Service. The Forest Service Organic Act of 1897 required the newly created agency "to improve and protect the forest within the reservation,... securing favorable conditions of water flows..." Similarly, NFMA requires that planning regulations both insure that

³¹ Secretary Vilsack, "A National Vision for American Forests" (Aug. 14, 2009).

timber harvest will not irreversibly damage “soil, slope, or other watershed conditions,”³² and protect “streams, streambanks, shorelines, lakes, wetlands and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment.”³³ The 1982 NFMA regulations included minimum management requirements for riparian areas³⁴ and soil and water.³⁵

However, throughout much of the National Forest System the legal mandate to protect streams and watersheds has been generally neglected and on occasion, such as in the 2008 planning regulations, has been affirmatively cast aside. The most notable exception has been in the Pacific Northwest where the decline in salmon and steelhead drove the Forest Service to adopt the Aquatic Conservation Strategy of the Northwest Forest Plan, as well as PACFISH and INFISH, rules that proscribed watershed activities and provided measurable standards and guidelines for aquatic ecosystems.

New planning regulations must fully safeguard watersheds and water resources on our national forests and grasslands. Safeguards are particularly important as the National Forest System faces the added pressure of climate change where variations in precipitation amount, type and frequency will be coupled with changes in water flow, temperature and recharge areas. In the face of climate change, protecting water resources on our national forests to benefit fish, wildlife and people is more of an ecological and economic imperative than ever before.

The planning rule should require system-wide minimum stream buffers. However, the rule must also provide for their expansion as a result of science-based evaluations of both the current threats to water resources in the management unit combined with the ongoing and anticipated impacts of climate change in the region. Furthermore, the planning process needs to identify and prioritize the protection of high-quality watersheds and the restoration of impaired watersheds. The planning rule must strictly limit road construction and require the Forest Service to take steps necessary to right-size the road system, since roads threaten water quality and watershed integrity throughout much of the National Forest System. Road construction should, for instance, be limited to allow only road systems that can be properly managed within a unit’s budget, and within all applicable standards and guidelines.

In addition, the planning rule should outline the use of ecological indicators in the evaluation of watershed health because it will broaden the agency’s focus to a range of ecological processes and patterns, including landscape condition, biotic condition, chemical/physical characteristics, hydrology/geomorphology, ecological processes, and natural disturbance. Methodology developed by the Environmental Protection Agency

³² See 16 U.S.C. § 1604(g)(3)(E)(i)

³³ See *id.* at § 1604(g)(3)(E)(iii)

³⁴ 36 C.F.R. § 219.27(e)

³⁵ 36 C.F.R. § 219.27(f)

in setting ecological indicator standards may prove useful as the Forest Service develops policy to address watershed condition, and could facilitate the adoption of a common set of processes and patterns across all land management units that are also useful at multiple scales.³⁶

D. Pair Flexibility with Accountability

As the NOI emphasizes, “[p]lans will need to anticipate climate change-related uncertainty and be adaptive to new science” and “[r]esponsible officials will need flexibility.”³⁷ But this flexibility must be exercised within bounds, or NFMA’s planning requirements lose their meaning. One of the major objectives for the revised planning rule will be providing managers with enough discretion to respond to unexpected developments while keeping the Forest Service accountable to the public. To do so, the rule must base adaptive decisions on sound monitoring and open evaluation.

To keep discretion within bounds, the Forest Service should recognize that uncertainty is not synonymous with ignorance. Nor is an “uncertain” effect the equivalent of “no effect.” As the 2000 planning rule explains “uncertainty of knowledge [must be] recognized, acknowledged, and adequately documented.”³⁸ Although climate change makes it more difficult to predict future conditions, trends and challenges over the decade or longer life of a plan are reasonably foreseeable. Just as the Intergovernmental Panel on Climate Change offers a range of plausible global scenarios, forest planners can assign at least rough probabilities to possible regional changes. This means that they could, in each plan, lay out strategic responses to, say, high, medium, and low climate disturbance scenarios, which can be examined under NEPA in the planning process. A planner might, for instance, propose fire management responses keyed to an identified range of likely forest conditions. To limit costs, such scenarios might be developed primarily for a suite of centrally important measurable resource values, such as ecosystem diversity or water quality and fish habitat, which could vary from forest to forest.

Such scenario-based planning has significant transparency and efficiency benefits. It ensures planners carefully describe uncertainty and the likely trajectory of resources under their control, assigning probabilities to outcomes and testing responses with the public before a crisis occurs. It also frees managers to change course rapidly once the plan has been adopted, as several different options will already have undergone the NEPA and NFMA process, and so can be readily used – saving some later analysis costs. The choice to shift between options, however, should not be made by fiat, or without

³⁶ See Science Advisory Board, U.S. Environmental Protection Agency, *A Framework for Assessing and Reporting on Ecological Condition* (2002).

³⁷ 74 Fed. Reg. at 67,167.

³⁸ See 36 C.F.R. § 219.24 (establishing science consistency evaluations and science advisory boards to guide this task).

careful scientific and public review of the data driving the choice. The rules should include a streamlined review and public comment provision for such decision points.

Because there will still be surprises, these scenarios should not be straitjackets. If information derived from monitoring of key response variables, at appropriate spatial and biological scales, casts doubt on the choices in the plan – or suggests an entirely different course – managers should be able to readily amend their plans, though never without careful NEPA and NFMA analysis.

To better inform scenario-based planning, and to make clear when new scenarios are needed, the rule should support additional monitoring systems to better understand the changing forest system over time, including critically important species-level monitoring. A formal system for regularly evaluating monitoring and research data, and for triggering forest plan amendments based on major changes detected through monitoring, should be established. The monitoring results should be used to learn about ecosystem response to management, natural disturbance, or climate change (i.e. manage adaptively by using monitoring data to compare expected management outcomes to observed outcomes). Formal evaluations of ongoing data should be required at least every five years, with shorter, annual assessments in place to ensure major changes are detected soon.

III. Collaborative Processes and the Committee of Scientists

The Forest Service’s notice emphasizes the value of collaborative decisionmaking in the planning process. We agree that a vibrant public process is essential. The challenge is to structure the conversation to encourage diverse user groups to examine each others’ premises based upon careful data analysis and open minds. Ultimately, the Forest Service should work to design processes that use scientific data to critically examine management options. Such processes are important both for the rule development effort itself and, later on, during forest planning.

A. Writing the Planning Rule

A sound scientific grounding is critically important as the Forest Service prepares its revised rules. With many different voices and communities pressing various approaches, the Forest Service needs well-qualified, credible scientists from outside the agency, with expertise in the relevant fields (climate change, hydrology, forest and range ecology, terrestrial and aquatic biology, etc.) to help it evaluate, modify, and integrate these proposals. Congress recognized as much by authorizing the Forest Service to appoint “a committee of scientists who are not officers or employees of the Forest Service” to consult on planning rules.³⁹ The Forest Service should take advantage

³⁹ See 16 U.S.C. § 1604(h).

of this opportunity, both by appointing a new committee and by drawing from the work of the committees which helped develop the 1982 and 2000 rules.

The tight planning timeframe the Forest Service intends to follow likely means convening the committee while simultaneously drafting the proposed rule – and, perhaps, presenting the committee with a set of more narrowly-focused specific problems, rather than asking them for feedback on the rule as a whole. Working synchronously could be an important advantage. The 2000 rule ran into trouble in part because managers struggled with some of the concepts the committee proposed. Allowing managers and the committee to interact and work through problems together will help ensure that scientific principles are translated into functional operational policies.

It would, on the other hand, be a real mistake to attempt to develop the new rule solely through a collaborative process, without independent scientific oversight. Collaboration and consensus are useful tools – they help build engagement and defuse controversy – but they are not goals in and of themselves. Even if all the collaborating parties were to agree on a particular provision, it still might not be supported by the data. Further, while some scientists may participate in the collaborative process, that ad hoc process is not an adequate substitute for a committee of scientists representing the relevant fields to give structured advice. Independent scientific oversight not only provides a structured pathway for science to inform decision-making, it provides necessary legitimacy to the rulemaking process and is a powerful corrective to groupthink and political pressure.

B. Collaboration in the Planning Process

Similar concerns pertain to the planning process itself. Forest planners should invite the public into the process, welcoming broad participation and open discussion, but must ground their ultimate decisions in well-supported scientific judgments – which, in turn, should inform further public conversations.

In this regard, the rule should draw from the scientific involvement provisions of the 2000 rule, which emphasizes “independent, scientific peer reviews of the science in planning.”⁴⁰ As in the rule development process, these reviews will provide an important backstop to collaborative processes.

The public voices in these processes should be drawn from as many different communities as possible. Long-term consensus-based processes often have a bias towards local forest users, who can readily attend many meetings. While their views are important, they should not outweigh those of the many millions of Americans who use and love the forests, but live in further removed, often urban, locations. So, while

⁴⁰ See 36 C.F.R. §§ 219.22-219.25.

collaborative group meetings may help inform policy, they cannot be allowed to decide it. Nor need they, as modern communications tools make it ever easier for the Forest Service to communicate with people all over the country.

The upshot is that collaboration – and participation – must be viewed broadly, as tools that managers should employ to open the decisionmaking process to as many interested parties as possible. And, as planners listen, they should also communicate, sharing the results of independent peer reviews as they respond to comments and seek further critiques. In sum, the best available science must drive and constrain planning and site-specific decisions – and should also shape the collaborative conversation.

IV. Conclusion

We are encouraged by the Forest Service’s efforts to build a durable, science-based planning system that will help steward the forests through this challenging time. We look forward to working with the Forest Service as the new rule takes shape.

Sincerely,

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Appendix: Principles for Integrating Climate Change Into Forest Planning⁴¹

- **Reduce Stressors First.** Managing for climate adaptation should begin by reducing the impacts of human stressors on the affected ecosystems. The ecological integrity and resiliency of many forests and watersheds are seriously impaired by ongoing road building, logging, overgrazing, ORV use, and similar activities. Planners should always first consider ways to reduce stressors that are impairing resilience.
- **Identify and Protect Climate Refugia.** Planners should identify areas which either are already buffered from climate change stresses or deserve protection in a network of adaptation-oriented preserves, and take action to reduce pressure on these climate refugia. To identify appropriate refugia, planners should look for areas likely to shelter a broadly representative and sustainable collection of species and communities under future climate projections. Planners should establish more limited protection outside of protected core areas and consider opportunities for strategic land acquisitions or public-private partnerships.
- **Open Regional Corridors and Connections.** Species and ecological communities will move in response to climate change. Planners should facilitate these movements by working to connect discontinuous areas of related terrestrial and aquatic habitat and by establishing protections for likely movement corridors, such as river valleys and ridgelines. Planners should establish corridors on both latitudinal and altitudinal gradients, while taking care to avoid the possibility of facilitating unwanted invasive species movement.
- **Put Sideboards on Direct Ecosystem Interventions.** In some cases, the agency may find it necessary to achieve ecological sustainability or to protect and enhance ecosystem services by intervening directly to help ecosystems adapt in response to climate change. Because ecological responses to such interventions are difficult to predict, particularly under changing climate conditions, the agency should design projects to achieve these ecological goals using the best available science and with policy sideboards that achieve such goals and the species diversity and watershed protection requirements of the National Forest Management Act. Planning for adaptive management should include measurable objectives to achieve ecological sustainability and protect and enhance ecosystem services; use appropriate assessment, monitoring, and evaluation methods to ascertain whether the project is achieving these measurable objectives; and where that is not occurring, discontinue or modify the project to achieve those objectives. The monitoring, assessment, and evaluation methods should consider the direct, indirect, and cumulative impacts on the targeted resources as well as non-targeted resources and ecosystem services.

⁴¹ Submitted to the Forest Service on October 7, 2009, by Defenders of Wildlife, Earthjustice, Natural Resources Defense Council, Sierra Club, and The Wilderness Society.

The agency should pay special attention to active intervention involving mechanical treatments. Many western forests – especially older, dry ponderosa pine forests – are at heightened risk of increased mortality from drought, insects and disease, and stand-replacing fire due to the cumulative effects of past management activities and climate change. The agency should prioritize and pursue forest restoration treatments in areas where there is strong scientific evidence of the need for action and the likelihood that the treatments will have the desired results. However, caution is called for to ensure that use of mechanical treatments effectively advances ecological restoration and adaptation goals rather than being driven by excessive demand for woody biomass utilization. Additionally, the agency should give priority to areas where it is also addressing other disruptive, counter-adaptive human activity.

- **Protect Aquatic Systems.** With climate-induced droughts, longer summers, and shifts in water flows, enforcement of existing statutory mandates to manage public lands to protect water flows and watersheds has become all the more critical. The Forest Service should adopt conservation strategies throughout the National Forest System to better protect fish and other aquatic populations, and other values and functions of healthy aquatic systems. In addition to preserving water flows and water quality for fish in streams and rivers, the Forest Service should improve retention, temperature, and quality of water in natural ecosystems. The Forest Service should couple prohibitions on degrading activities with restoration strategies to, for example, remove blockages and persistent sediment sources.
- **Protect Ecosystem Services.** Just as the Forest Service should manage forests to protect aquatic systems, the Forest Service should also work to safeguard other important ecosystem services in the face of climate change.
- **Develop New Monitoring, Evaluation, and Reporting Strategies.** Monitoring is central to effective adaptive management and climate change resiliency. In addition to monitoring and evaluating a wide array of representative indicator species, the agency should develop tools to monitor and report on other important elements of ecosystem structure and function – such as landscape heterogeneity and nutrient cycling in streams – that may respond to climate change. The agency should conduct monitoring at both the landscape level and at the site-specific project level. It should also carefully consider how best to account for climate-linked species migration, which may introduce new species that the agency should monitor and evaluate. The agency should ensure that the results of monitoring are used to design, modify, or discontinue projects and activities where the monitoring shows that ecosystem structure and function goals or the species diversity or watershed protection requirements of the National Forest Management Act are not being met.