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# Ecological Succession of National Forest Planning Regulations

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**E**cological succession is the change in the structure of an ecosystem over time, sometimes leading to a self-sustaining climax community for a significant period absent disruptive external forces such as fire, disease, or climate change. Applying this analogy to the legal structure of the National Forest Management Act (NFMA) planning regulations, that structure has changed significantly over time due to political, societal, and ecological changes. Under these influences, the national forest planning regulations have shifted since 1982 toward an increased emphasis on restoring and maintaining the ecological integrity of national forest system lands for ecosystem services (such as endangered and threatened species refugia and watershed protection) and other amenity emphases. At the same time, the original congressional goal of moving forest management out of the courts has been attenuated—court battles over forest planning and management decisions continue, with the latest iteration of the NFMA planning regulations just beginning to be tested in litigation.

This article summarizes the legal and ecological evolution of the forest planning regulations since NFMA's 1976 passage. It highlights the current set of regulations adopted in 2012 and 2016, and the role those regulations play in the ongoing revision and amendment of the forest plans for each of the 174 units of national forests and grasslands comprising the 193 million acres of the United States national forest system. Additionally, the article considers some of the practical implications of the planning regulations for the ongoing plan amendment and revision processes, as well as for project and activity permitting under NFMA where the Forest Service's approval of those activities must be consistent with the applicable forest plan.

## *The National Forests and Their Management*

The U.S. national forest system contains a wealth of commodity and amenity resources. Sawtimber supplies, recreational opportunities, wilderness areas, wild and scenic rivers, grazing lands, important watersheds, fish and wildlife habitat, and minerals are all found within these federal land reserves. The national forests are managed under a milieu of statutory and regulatory authorities ranging from the Forest Reserve Act of 1891, the 1897 Organic Act, and the 1960 Multiple-Use Sustained Yield Act, to the 1976 National Forest Management Act. See *United States v. New Mexico*, 438 U.S. 696, 705–17

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(1978) (reviewing history of congressional creation and purposes of the national forests).

NFMA was enacted in large part in response to public concerns in the 1960s and 1970s over Forest Service land management practices, especially clearcut timber harvesting in Montana's Bitterroot National Forest and West Virginia's Monongahela National Forest. In *West Virginia Division of the Izaak Walton League of America, Inc. v. Butz*, 367 F. Supp. 422 (N.D.W. Va. 1973), *aff'd*, 522 F.2d 945 (4th Cir. 1975), the court held that the Forest Service could harvest only "dead, matured, or large growth trees" as specified in the Organic Act. 16 U.S.C. § 476 (repealed 1976). This decision prevented the use of clearcutting, thinning, and other vegetative management techniques on the national forests. These restrictions imposed a serious constraint on Forest Service timber management programs, especially as environmental plaintiffs moved to apply the precedent in other areas. See, e.g., *Zieske v. Butz*, 406 F. Supp. 258, 259–60 (D. Alaska 1975) (extending *Izaak Walton League* ruling to enjoin timber cutting on national forest land on Alaska's Prince of Wales Island). Faced with this timber management "crisis," Congress responded with NFMA. Rather than being mere remedial legislation, NFMA has been described as "a bitterly-contested referendum on Forest Service timber harvesting practices." Charles F. Wilkinson & H. Michael Anderson, *Land and Resource Planning in the National Forests*, 64 Or. L. Rev. 1, 40 (1985).

NFMA directs the Forest Service to develop land and resource management plans for each unit of the national forest system. These forest plans provide management direction and general planning guidelines for up to 15 years for all the national forests, and they are designed to provide for coordinated use and sustained yield of all national forest resources. The Forest Service has broad discretion in developing forest plans, subject to its overarching mandate to manage for multiple use and sustained yield. Once a forest plan has been developed for a national forest system unit, it can be changed through a comprehensive overhaul process known as a "revision," or be subject to targeted "amendments" for site-specific or resource-specific changes. A plan can be amended "in any manner whatsoever," although amendments resulting in a significant change are subject to more rigorous public involvement requirements. Revisions are required to occur at least every 15 years. The resulting plan, as revised and amended, is a key management tool because all activities authorized in that national forest unit—from timber sales to campground developments to pipeline rights-of-way—must be consistent with the governing plan. See 16 U.S.C. § 1604(a)–(i).

NFMA requires the Forest Service to promulgate regulations for (1) procedures for preparing land-use plans, and (2) guidelines ensuring that plans will provide for a "diversity of

plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” *Id.* § 1604(g). The statute additionally requires the regulations to ensure that timber harvests will occur only where soil, slope, and other watershed conditions will not be irreversibly damaged.

The original planning regulations were adopted in 1982 under the statutory provisions requiring development with the assistance of a committee of scientists. The 1982 rules set out a process primarily focused on maintaining timber production through appropriate silvicultural practices. The Forest Service also was generally directed to consider and account for other forest uses, including wilderness areas, fish and wildlife, grazing, recreation, minerals, soils, and water, but the regulations for the most part did not mandate that conditions be improved or that any particular standards be met. For instance, soils and waters were to be conserved so as not to allow “significant or permanent impairment.” 36 C.F.R. § 219.27(a) (1997). Hazards from flood, wind, wildfire, and erosion were to be minimized, but only as “consistent with the relative resource values involved.” Adequate fish and wildlife habitat were to be maintained to ensure viable populations, but only “to the degree consistent with multiple-use objectives established in the plan.” *Id.* Overall, to the extent objective standards for other than timber resources were included in the 1982 rules, they left the Forest Service with significant latitude to decide how resources should be managed to meet multiple-use goals.

Generally, the first-generation NFMA plans under the 1982 regulations emphasized resource outputs and maximizing present net values. This occurred despite that emphasis’s conflict with a more ecosystem services-oriented approach that already was incorporated at some level into the NFMA program, as acknowledged by Judge Dwyer in *Seattle Audubon Soc’y v. Lyons*, 871 F. Supp. 1291, 1310 (W.D. Wash. 1994) (reviewing challenges to President Clinton’s Northwest Forest Plan), *aff’d*, *Seattle Audubon Soc’y v. Moseley*, 80 F.3d 1401 (9th Cir. 1996). This tension was exacerbated by the agency’s reliance on a large and dauntingly complex linear programming model—FORPLAN—for the objective analysis required for the plans. FORPLAN was based on an early timber planning computer model, which served to incorporate the commodity emphasis into the original NFMA round of plans. Professor Teegarden noted that a “systematic analysis of timber issues” was “central to the [NFMA] planning process.” See Dennis E. Teegarden, *The Committee of Scientists Perspective on the Analytical Requirements for Forest Planning*, in FORPLAN: An Evaluation of a Forest Planning Tool 20 (USDA Forest Serv., Gen. Technical Rep. RM140, April 1987). However, as demonstrated by the declining habitat conditions observed under the NFMA plans, Professor Teegarden acknowledged that FORPLAN—because of its overemphasis on timber production—was incapable of meeting the regulatory requirements to determine viable population levels for wildlife species in the forests. Moreover, after approximately 10 years of implementation experience, the Forest Service realized that the economic efficiency analysis of FORPLAN had not turned out to be a compelling decision-making tool.

In 1989, the Forest Service conducted a comprehensive critique of the planning process under the 1982 rules, concluding that it was too complex, costly, lengthy, and cumbersome for the public to provide input. New rules designed to address

those concerns were proposed in 1995, and again, as amended, in 1999. The changes become final in 2000 with sustainability as the foundation for planning and management, and requirements for consideration of the best available science for planning decisions. 77 Fed. Reg. 21,162, 21,163 (Apr. 9, 2012). The 2000 rules, however, included a transition period for planning that allowed application of the 1982 rules to revisions and amendments, pending completion of additional rule updates.

In 2001, yet another agency review found that the 2000 rules suffered from the same inadequacies as the 1982 rules and would be costly, complex, and burdensome to administer. In response, the Forest Service undertook further rule revisions in 2005 and 2008, both of which were struck down on procedural grounds. See, e.g., *Citizens for Better Forestry v. U.S. Dep’t of Agric.*, 632 F. Supp. 2d 968 (N.D. Cal. 2009). Thus, the 2000 rules remained in place for over a decade. All the while, the Forest Service continued to engage in land-use planning under the original 1982 rules’ procedures and standards. Over the course of 30 years, 127 land-use plans were developed under the 1982 rules. Many of the forest plans developed under these original regulations are now approaching the time for revision or amendment.

While the initial 1960s and 1970s struggles over national forest management were fought over the balance between economic and ecological considerations, the NFMA planning process ended up tilted in favor of economic factors. By the time of the 2000 rule changes, the shortcomings of the original NFMA process had become manifest. Forest supervisors and other agency managers realized that the national forests simply could not maintain the high level of commodity outputs called for in the plans while also maintaining the viability of the forest ecosystems. The Forest Service acknowledged that this situation existed, both through its own analytical studies and the comments of its top managers. As then-Forest Service Chief Dale Bosworth stated in a 2002 speech, “the Forest Service no longer focuses on the most efficient, cost-effective way to remove timber. Instead, we focus on long-term ecosystem health, measured in terms of healthy watersheds.” Dale Bosworth, *Striking the Right Balance: Coming to Terms with Change in National Forest Management* (Sept. 18, 2002), [www.fs.fed.us/speeches](http://www.fs.fed.us/speeches). Thus, the issues presented were how to recraft the NFMA planning regulations to respond to this situation and whether the revised regulations would provide any practical improvement for national forest management.

### **The 2012 Planning Rules**

The new 2012 rules represent an ecological shift in the planning framework. They moved from the 1982 rules’ focus on timber management activities to a broader consideration of forest management for overall ecosystem services contributions. 77 Fed. Reg. at 21,163. Where the 1982 rules left the Forest Service with discretion to prioritize the relative importance of soils, water, wildlife, and other uses based on its assessment of multiple-use goals, the 2012 rules require that forest plans maintain and restore these resources. Under the 2012 rules, the Forest Service must now include in each plan the standards or guidelines necessary to maintain or restore “the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area.” The Forest Service must take into account the “[i]nterdependence of terrestrial and aquatic

ecosystems,” “[c]onditions in the broader landscape that may influence the sustainability of resources and ecosystems,” “[s]ystem drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change,” and “[o]pportunities for landscape scale restoration.” 36 C.F.R. § 219.8(a) (2018).

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This holistic ecosystem approach to forest management, moving away from a nearly singular focus on timber management, is representative of a broader movement toward landscape-scale management of public land resources. The stated goal of imposing a standardized set of substantive issues to be covered in forest plans is largely to ensure that all forest plans would include tools to respond to ecological needs through adaptive management. As then-Agriculture Secretary Vilsack stated, “It is time for a change in the way we view and manage America’s forestlands with an eye towards the future” that integrates “forest restoration, climate resilience, watershed protections, wildlife conservation, opportunities to contribute to vibrant local economies, and the collaboration necessary to manage our national forests.” 77 Fed. Reg. at 21,163–164.

While the 2012 rules set sideboards around the parameters for resource management, they still do not detail the standards and guidelines each forest must include to reach the prescribed goals of maintaining and restoring forest resources. See Martin Nie & Emily Schembra, *The Important Role of Standards in National Forest Planning, Law, and Management*, 44 *Envtl. L. Rptr.* 10281 (Apr. 2014). The Forest Service maintains substantial discretion to employ an adaptive framework to set and change plans as needed due to fire, disease, and climate-related changes in forest ecosystems. See 36 C.F.R. §§ 219.8–219.11 (2018).

### Issues under the 2012 Rules

Key issues remain to be tested under the 2012 rules’ more substantive framework and planning procedures. First, challenges to project-specific consistency determinations still dominate the NFMA litigation landscape, and more litigation over the 2012 rules’ substantive requirements can be expected. Of the handful of reported NFMA cases since the 2012 rules’ adoption, most challenge the consistency of project-level decisions with the underlying forest plan and hold those projects to be consistent with the plan in question. See, e.g., *Native Ecosystems Council v. Marten*, 883 F.3d 783 (9th Cir. 2018) (logging project was consistent with forest plan’s habitat goals).

New challenges to forest plan revisions and amendments are likely as the Forest Service continues to work through the backlog of forest plans overdue for an update. Challengers may seek to hold the Forest Service to the 2012 rules’ promise of a more holistic ecosystem approach to planning, keying into the rules’ substantive requirements for maintaining or restoring forest resources. While there has yet to be a published decision in this vein under the 2012 rules, the recent Ninth Circuit decision in *In re Big Thorne Project*, 857 F.3d 968 (9th Cir. 2017), in which plaintiffs attempted to enforce the substantive species viability requirements under the 2000 rules, may suggest the outcome of similar litigation under the 2012 rules.

In *Big Thorne Project*, plaintiffs opposing a timber harvesting project on Alaska’s Prince of Wales Island argued both that logging was inconsistent with the forest plan’s requirement to maintain a sustainable wolf population and that, to the extent the plan’s sustainability goal was discretionary, it violated the 2000 rules’ requirement to ensure “viable” populations of native species. The court disagreed on both scores, holding first that the plan’s sustainability requirement was sufficiently flexible and that the court would not second-guess the agency’s management decision. As to the 2000 rules’ requirement to “maintain viable populations,” the Forest Service was “not required to identify [in the plan] a specific ‘mechanism’ for securing viability.” *Id.* at 974–75. Indeed, the court stated that it would defer to the agency on questions of scientific methodology, including how to protect viability. Thus, if the Ninth Circuit’s decision in *Big Thorne* is any indication, the courts, even when faced with the 2012 rules’ more substantive standards, may still allow the agency substantial deference in making land-use planning decisions designed to meet those standards.

Second, how the substantive provisions of the 2012 rules apply to project-specific or localized plan amendments remains in question. In 2016, the Forest Service undertook additional changes to the planning rules to clarify that in amending, as opposed to revising, a plan, the Forest Service is required to apply the 2012 substantive requirements only “within the scope and scale of the amendment” to standards and guidelines that are “directly related” to the amendment. 36 C.F.R. § 219.13(b)(5) (2018). Prior to 2016, some had argued that any change, no matter how minor, to a forest plan developed under the 1982 regulations would require updating *all* plan standards to the 2012 substantive requirements. This view, however, seems to be contradicted by the Forest Service’s statement in the 2016 rulemaking preamble that “an individual plan amendment [is not intended] to do the work of a revision to bring an underlying plan into compliance with all of the substantive requirements identified in [the 2012 rules].” 81 Fed. Reg. 90,723, 90,725 (Dec. 15, 2016).

Still, how to apply the 2012 substantive standards to more limited plan amendments, particularly project-specific amendments targeted at exempting a project temporarily or permanently from a plan standard, is uncertain. These situations may arise, for example, from mining projects, pipeline or transportation corridor rights-of-way, recreational developments, communications systems, or other single-purpose projects of limited extent and specific location on national forest lands. See Jonathan Haber, *Creating the Next Generation of National Forest Plans 22* (Bolle Center for People and Forests 2015), available at [www.cfc.umn.edu/bolle/](http://www.cfc.umn.edu/bolle/). The planning regulations continue to recognize the unique nature of and allow

for project-specific plan amendments, the purpose of which is not driven by the Forest Service's need to update one or more plan components. See 36 C.F.R. § 219.15(c)(4) (2018) (allowing for plan amendments to bring projects into compliance with plan standards). Yet even a short-lived, localized exception to plan standards for soils, water, or wildlife is arguably "directly related" to the 2012 substantive requirements for those resources.

Reconciling the requirement to update plan components to the 2012 standards while using a project-specific amendment process designed to exclude a project from those standards highlights one of the tensions in the current regulations. In *Sierra Club v. U.S. Forest Service*, petitioners challenged the project-specific plan amendment for a pipeline right-of-way crossing in a small portion of the Jefferson National Forest. Petitioners challenged the Forest Service's determination that the substantive requirements of the 2012 rules did not apply to the project-specific plan amendment because those requirements were not "directly related" to the plan amendment. The Fourth Circuit held that the regulation should be read "to require the agency to look at both the purpose and effect of the [plan] amendment, and if the substantive requirement at issue (i.e., soil, water) is based upon or associated with either one, it is *directly related*." 897 F.3d 582, 602 (4th Cir. 2018). The Forest Service, however, had considered only the effects of the plan amendment and not its purpose. Because the purpose of the plan amendment was to modify the project-specific requirements for soil and riparian area resource protection for the pipeline crossing, the court concluded that the substantive requirements of the 2012 planning rules applied and had to be met in the plan amendment. As the first court to address this issue, the Fourth Circuit's decision provides an early indication of the potential scope of the "directly related" standard and the approaches that the Forest Service and project applicants may take in considering both the purpose and effect of project-specific plan amendments for applying the 2012 rules' substantive standards.

Litigation over the appropriate uses of the national forests and the role of the Forest Service in managing those uses is not new. Since the creation of the national forests, there have been disputes over the extent of federal government regulation and conservation of non-commodity forest resources. See, e.g., *United States v. Grimaud*, 220 U.S. 506, 521–22 (1911) (upholding secretary of agriculture's authority to require permits for national forest grazing); *Light v. United States*, 220 U.S. 523, 536–37 (1911) (upholding federal government's authority to establish forest reserves). More recently, "[t]he significant and widespread changes in uses of national forests during the past 20 years, many of which were initiated or hastened by litigation, suggest[] that the legal environment continues to be an important factor in deciding how these forests are managed." Amanda Miner et al., *Twenty Years of Forest Service Land Management Litigation*, *J. Forestry*, Jan. 2014, at 32, 40.

In the 2012 planning rules, the Forest Service aimed to leverage its historically broad management discretion toward ecosystem protection values and away from an overarching and outmoded emphasis on commodity production values. Traditionally, forest managers were concerned with meeting commodity production targets while minimizing adverse environmental effects. See Doug MacCleery, *Re-inventing the United States Forest Service: Evolution from Custodial Management*,

*to Production Forestry, to Ecosystem Management*, Paper 2 in *Re-inventing Forestry Agencies, Experiences of Institutional Restructuring in Asia and the Pacific* (United Nations FAO, Asia-Pacific Forestry Commission, 2008), [www.fao.org/docrep/010/ai412e/AI412E06.htm](http://www.fao.org/docrep/010/ai412e/AI412E06.htm). The ecosystem services approach emphasizes protecting the functioning of healthy ecosystems, and then providing for resource commodity production to the extent consistent with this overriding constraint. Perhaps the most lasting and telling effect of the ecosystem services approach from the 2012 rules is the paradigm shift it marks in Forest Service and public resource management philosophy, which shift had been developing since at least the early 1990s.

This shift is occurring within the broad spectrum of agency management discretion that has been recognized by the courts and exploited by the agency to pursue various goals in the past. The potential scope of the agency's discretion, as well as the possible effects of the new ecosystem services emphasis, were highlighted in judicial decisions marking early phases of the shift. In *Seattle Audubon Society v. Lyons*, for instance, the court considered challenges to the Clinton administration's Northwest Forest Plan. The court evaluated the various obligations placed on the Forest Service by NFMA as well as the National Environmental Policy Act and the Endangered Species Act. Based on these overlapping planning, environmental consideration, and species protection mandates, together with the existing conditions of the forests, the court concluded that "there is no way the agenc[y] could comply with the environmental laws *without* planning on an ecosystem basis." 871 F. Supp. at 1311 (emphasis in original).

These issues also were presaged by Charles Wilkinson in his essay on *The Future of the National Forests: Public Use and a Reduced Cut*. Professor Wilkinson's description of a "public use," as opposed to a multiple-use, ethic for the national forests echoes the present ecosystem management emphasis. Wilkinson noted that "public use" would give management emphasis to three areas: watershed protection, recreation, and wildlife; while extractive uses (such as timber, mining, and grazing) could continue but would be subordinated to these dominant public uses. Charles F. Wilkinson, *The Eagle Bird* 72–73 (1992). Twenty-seven years later, that precisely summarizes the Forest Service's current direction in revising the national forest land and resource management plans under the present NFMA planning framework.

Like long-term ecological change itself, the evolutionary shifts in the national forest planning regulations can be harder to notice or appreciate in the short term, but over the longer term are more apparent. For the 40-year plus history of the NFMA planning regulations, a mix of societal, political, legal, and ecological forces led to the successional development of the new national forest planning framework embodied in the 2012 planning rules and 2016 update. Whether the new system is stable and self-sustaining and will lead to on-the-ground improvements in ecological conditions from the national forest plans is still uncertain. But the current national forest planning rules, especially as they are applied in the upcoming rounds of national forest plan revisions, will set the framework both for what issues will be addressed by the courts and the greater consideration of ecosystem services values that is contained in the underlying history, purpose, and direction of those regulations. 🌲