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Whatever Happened to Ecosystem Management and Federal Land Planning?

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To be honest, I did not know what to make of the invitation to write a chapter on ecosystem management (EM) and federal lands. My cynical side questioned the relevance of doing so, as a lot of thought has been given to the topic over the years. Yet here we are, roughly two decades after the term became popularized and the same problems remain largely unresolved. So do I write the chapter in the past tense, as a sort of obituary? More than a few colleagues of mine rolled their eyes when asked “whatever happened to ecosystem management on federal lands.” Now, the language du jour is adaptation, ecosystem services, resiliency, landscape-scale restoration, and other fashionable terms. And like EM, some of these terms are useful rhetorical devices that are malleable enough to become multiple things to multiple constituencies. Like ‘sustainability,’ some language becomes so politically appropriated that it loses its original meaning.

But this cynical narrative is too simple. Part of the problem in assessing EM lies in the difficulty of tracing and measuring political change and transformation. In this case, there is no single law, regulation, or policy statement about ecosystem management that has forced change in a neat and linear fashion from the top-down. The story is much messier but one with some hope. My argument, as explained in the following pages, is that the central components of EM have undoubtedly made their way onto the federal lands. This includes adaptive man-

agement, collaboration, and restoration. All were commonly associated with the EM paradigm, and now all figure more prominently in federal land politics and planning. All the talk about EM was not in vain. The problem, however, is that the same barriers to practicing a more ecosystem-based approach to planning are still in place. The legal and institutional challenges identified years ago as hindrances to EM now frustrate efforts in adaptive management, collaboration, landscape-scale restoration, and other related initiatives.

I. BACKGROUND

Where federal lands predominate, so too does a confusing jumble of different land ownerships. From the checkerboarded forests of the Pacific Northwest to the ‘blue rash’ of state trust lands scattered throughout the West, intermixed ownership presents multiple challenges to ecosystem management. Put simply, while federal, state, tribal, and private properties often come in squares, ecosystems do not. There is no lack of creative ways in which to describe the “cartographic chaos” found within the federal estate.¹ Some see the mess as a “crazy quilt” of land ownership,² while for others it signifies a “tragedy of fragmentation.”³ In previous writing, I suggested that alcohol may have been involved in the original design, as one is tempted to see the chaos as the result of a bad joke played on future generations by a group of drunken legislators.⁴

Numbers help place the amount of land ownership fragmentation in perspective. Consider, for example, that although 41 percent of the Rocky Mountain West consists of public lands, less than 25 percent of that land is more than 1.2 miles removed from private land.⁵ And these private lands are quickly becoming developed. From 1982 to 1997, 3.2 million acres of rangeland were converted to developed land,⁶ and some studies estimate that another 25 million acres of “strategic ranch lands” are at risk of residential development by 2020.⁷ Or take forest lands: between 1982 and 1997, more than 10 million acres were converted to something else, with another 26 million acres projected to be developed by 2030.⁸ This development, moreover, is taking place at the problematic interface of wild and urban lands. Estimates show that from 1990–2000, 60 percent of new housing units were built in the wildland-urban interface (WUI).⁹ These and other numbers show that the fragmentation problem has, if anything, become only more acute since the emergence of EM.

Stories are another way to emphasize the importance of boundaries and the challenges they pose to planning. Take the story of grizzly bears in the Greater Yellowstone Ecosystem (GYE), a term coined by bear biologists Frank and John

Craighead. Suffice it to say that the bear has habitat needs going well beyond the boundaries of Yellowstone National Park. Thus, we saw the political emergence of the roughly twenty million acre GYE, a place dominated by borders and inter-jurisdictional complexity. The ecosystem includes three states (Montana, Wyoming, and Idaho) and nearly 2,500 miles of administrative boundaries among more than twenty-five federal, state, and local agencies.¹⁰ Surrounding Yellowstone and Grand Teton National Parks are seven national forests, three national wildlife refuges, two Indian reservations, and various Bureau of Land Management (BLM), Bureau of Reclamation, and state and private holdings.

Now enter *Ursus arctos horribilis*. Though uncommon in so many ways, the grizzly bear is similar to other species and ecosystem processes that are trans-boundary in nature. Grizzlies—like fire, weeds, water, wildlife, and most conservation issues—require a boundary-spanning planning approach. This point is now obvious, at least to those reading their Leopold and EM literature. But the question of *how* to adequately plan at appropriate spatial scales is tougher than it sounds, as bears in Yellowstone demonstrate. Multiple planning processes are involved in the recovery of grizzly bears, such as the writing of an Endangered Species Act (ESA) recovery plan and conservation strategy by the U.S. Fish and Wildlife Service, three state bear management plans, and amending six national forest plans in the GYE, among others.¹¹ Planning at such a scale is no cheap trick. Complicating matters is how to analyze the cumulative effects on bear habitat in the area, as required by the National Environmental Policy Act (NEPA), and the general lack of planning (and resulting development) on adjacent private lands. Then there are questions of how to effectively coordinate, implement, adapt, and enforce these plans—assuming, that is, they survive the judiciary.¹²

Planning is ubiquitous in federal land management. Laws governing the national forests, rangelands, parks, and wildlife refuges include planning mandates. All generally require the writing of management plans for particular administrative units, such as a plan for a single national forest or park. Basic resource allocation decisions are made at this level of administration. A national forest plan, for example, typically includes the designation of various management areas or zones, along with their permitted and prohibited uses, at the individual forest level. Some federal land planning laws include provisions requiring opportunities to coordinate with state and local governments in the development of land use plans.¹³ And agencies can identify adjacent nonfederal parcels that might be acquired or exchanged in order to rationalize ownership patterns. But by-and-large, first-generation planning efforts were mostly inward-looking affairs.

This insularity was shaken by the spotted owl crisis in the Pacific Northwest. The ESA, and its enforcement by the courts, best explains the emergence of ecosystem management on federal lands. The purpose of the ESA—“to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved”—accounts for why agencies started talking and planning differently.¹⁴ *Seattle Audubon Society v. Lyons* (1994) was a major catalyst in this regard, as Judge Dwyer invoked the ESA, NEPA, National Forest Management Act (NFMA), and Federal Land Policy and Management Act (FLPMA) in endorsing ecosystem management and the large-scale Northwest Forest Plan. Like the habitat needs of the grizzly bear, the spotted owl required the Forest Service (USFS) and BLM to look beyond their respective units and plan more on an ecosystem basis.

The ESA, and the enforcement of other environmental laws, continues to drive ecosystem-based approaches to federal land management and planning.¹⁵ But sometimes the story is more complicated than an owl necessitating the writing of a massively-scaled Northwest Forest Plan. Federal land agencies like the National Park Service are often still reluctant to directly confront external threats and plan accordingly. Instead, National Park policy generally favors cooperative approaches where “[s]uperintendents will encourage compatible adjacent land uses and seek to avoid and mitigate potential adverse impacts on park resources and values” by participating in other planning processes.¹⁶

But a de facto ecosystem management plan can take shape notwithstanding agency reticence to more explicitly plan at the landscape level (or dare use a word such as ‘buffer’ in their planning documents).¹⁷ Take, for example, the case of Glacier National Park and the slow but steady ‘regionalism’ that has emerged around it. Like the GYE, Glacier is now politically and strategically viewed as part of the much larger Crown of the Continent Ecosystem which is comprised of one state, two Canadian provinces, multiple national forests, tribal lands, state lands, private property and some boundary-challenged endangered species.

Despite this fragmentation, there has been some movement toward more regionally based management in the area. Serious threats in the region remain, but they are not as widespread and unrelenting as they once were. And the remaining threats now face a more unified and coordinated political backlash. That, according to law professors Joseph Sax and Robert Keiter, is not really due to some top-down policy statement about ecosystem management, but rather a more complicated constellation of changes forcing a larger ecosystem view.

One indispensable factor is “the law and its enforcement, which has played a pivotal role in promoting management across formal boundaries.”¹⁸ These laws have been aggressively used by environmental groups to protect species like the grizzly bear and bull trout and to stymie various road building, timber sales, and oil and gas projects that threaten the park and the Crown. Some form of regionalism is the result, even though it is not centrally-driven or memorialized in a single planning document.

One particularly noteworthy example of an ecosystem-based approach in the Crown region is the Blackfoot Challenge, a well-oiled and nationally-recognized grassroots collaborative group focused on the Norman Maclean-famous Blackfoot River in western Montana; “[e]ventually, all things merge into one, and a river runs through it.”¹⁹ Like Leopold before him, Maclean saw the big picture, and so does the Challenge. The U.S. Fish and Wildlife Service supplies important leadership along with other federal and state agencies, ranchers, environmental groups, and dozens of other partners. All of them are focused on a simple mission, “to coordinate efforts that conserve and enhance the natural resources and rural way of life throughout the watershed.”²⁰

Property boundaries dominate the 1.5 million acre watershed, and private property and corporate (Plum Creek) timber lands are some of the most ecologically significant in the valley. To protect them, the Challenge has used every conceivable policy tool and funding source, from Land and Water Conservation Act funds to the deep pockets of the Nature Conservancy and the Trust for Public Lands. The coordination among federal, state, and private partners in the watershed is remarkable; the organization grew into something that is greater than the sum of its parts. And most impressive of all is the quantifiable environmental achievements made by the Challenge. This is more than a feel-good collaboration story, but rather one with a bottom line: ranches have been protected through conservation easements, corporate timber lands at risk of development have been acquired with public and private funds, streams have been restored, water quality has been improved, wildlife conflicts reduced, and so on. Of course, not all is smiles and sunshine in the Blackfoot, but the Challenge demonstrates the type of conservation imagined decades before in the name of ecosystem management.

These examples offer a better way of explaining what happened to EM than to count the number of large-scale planning initiatives that have succeeded or crashed and burned under the banner of ecosystem management. Nor is it enough to focus solely on high profile planning endeavors such as the Northwest

Forest Plan, the Sierra Nevada Framework, the Everglades Restoration, or the Interior Columbia Basin Ecosystem Management Project. These are important, but so too are other initiatives advancing the ideas of EM without all the limelight.

Consider, for example, the first USFS designation of a wildlife corridor on the Bridger-Teton National Forest, on the southern end of the Greater Yellowstone Ecosystem in Wyoming.²¹ In 2008, Bridger-Teton amended its forest plan in order to help protect the migration of pronghorn through multiple land ownerships, including a 47,000 acre swath of national forest lands. Given the threats to one of the longest remaining wildlife migrations in North America, one might write off such piecemeal efforts as inconsequential. It is certainly not enough; nor is the resolution by the Western Governors' Association calling for the identification and protection of wildlife corridors.²² But examples like this demonstrate how the ideas of EM continue to influence federal land planning.

This example proves little in isolation. But research suggests that it might be part of a pattern showing that some haphazard progress towards EM has been made over the years. One study, for instance, shows that selected forest plans written before the emergence of EM are measurably different from those written afterwards.²³ Not only does the language differ but so do the types of decisions made, such as the amount of timber harvested by clear-cutting. Another study shows that USFS line officers believe that the agency has been relatively successful in attaining various EM objectives.²⁴ (But such optimism is not universal, as other work shows a general lack of progress and that stakeholders outside the agency are more critical).²⁵ Complicating matters is the fact that talking about EM is different from practicing it.²⁶ The phrase is no longer popular as it once was, but as shown below, the central principles of EM endure.

II. ECOSYSTEM MANAGEMENT AND ITS PROGENY

There are multiple definitions of EM, but most share some common principles. Some basic themes often identified in the literature include: (1) socially defined goals and objectives, (2) holistic, integrated science, (3) adaptable institutions, and (4) collaborative decision making.²⁷ One popular study emphasizes key traits, including a focus on biodiversity and ecological integrity, the importance of working across administrative-political boundaries in order to manage at appropriate ecological scales, the need for organizational change and inter-agency cooperation, ecological restoration, and the benefits of a more monitoring-intensive adaptive management.²⁸ More recent work on EM identifies similar core attributes, such as addressing problems at a landscape or regional

scale, collaborative planning, and a heavy reliance on flexible, adaptive implementation of planning goals.²⁹

Of course, there are major differences in what parts of EM get emphasized. So it is unsurprising to find some interests invoking EM as a way to better protect biodiversity and ecological processes, while the former chief of the USFS sees it as “enhanced multiple use planning.”³⁰ For some managers, EM is primarily about process, hence the focus on adaptive management and collaboration. Yet for others it is about objectives such as ecological restoration.

The amorphous term also had its political virtues for some agencies, such as the USFS, which used the concept to strategically reinvent itself following the tumultuous timber wars. Viewed through this lens, “[e]cosystem management was an ambiguous, undefined concept that the agency could shape in the context of political events . . . In the volatile and politicized atmosphere of forest policy, the Forest Service attempted to change its image by adopting a new name for its practices, resorting to the common practice of meeting conflict and crisis with vague, sensationalist political imagery and drama.”³¹ Like the Rorschach test of multiple use, EM came to represent different things to different people. Or as the Congressional Research Service put it, “[t]here is not enough agreement on the meaning of the concept to hinder its popularity.”³²

These different definitions and applications of EM complicate things. But under most definitions, the central pillars of EM pose a challenge to federal land agencies and their disparate missions and planning requirements.³³ Several studies analyze the institutional obstacles to implementing EM on federal lands. Commonly identified impediments include such things as rigid budgetary systems, insufficient funding, deficiencies in leadership, and an assortment of organizational biases and legal challenges.³⁴ Rare is the study failing to emphasize the importance of law because it simultaneously promotes and hinders a more ecosystem-based approach to management.³⁵ While instability and disequilibrium characterize ecosystems, most property and natural resource laws emphasize boundaries, stability, and the pursuit of certainty.

The take home point is that implementing EM proved even more difficult than defining it. Little has changed in this regard. Some of the major barriers impeding EM now frustrate its progeny, including adaptive management, collaboration, and landscape-scale restoration. While the terminology differs, the challenges do not. And while progress has been made on various fronts, the following discussion shows how federal land agencies continue muddling through the same challenges presented to them decades ago under the rubric of ecosystem management.

A. Adaptive Management

In theory, EM is fundamentally different from the traditional resource management paradigm. One difference is how each model approaches science, with EM tackling problems in a more integrated fashion and at larger spatial scales. Doing so underscored the importance of uncertainty and adaptive management was put forth as “one way to address the staggering information requirements of ecosystem management while allowing management to move forward in the face of uncertainty.”³⁶ Adaptive management was thus a central principle in most conceptions of EM and it remains at the forefront.

Federal land planning is in the midst of a messy paradigm shift. The core challenge is how to practice adaptive management and planning in the modern regulatory state. The question is one of governance: how to plan adaptively while ensuring accountability, transparency, inclusiveness, and other democratic principles and processes? More adaptive planning models are being advanced as the problems and pathologies of rational comprehensive planning become more apparent.³⁷ This is the ‘synoptic’ ideal in which a decision maker collects all the information relevant to a decision, considers all reasonable alternatives and possible consequences of each, and then chooses the alternative with the highest probability of achieving the agreed-upon goals in the most efficient way possible.

The truth is that the theory of synoptic planning is trumped regularly by the practice of politics. The planning model is practiced in the messy world of countervailing political pressures, layered legislative mandates, muddled court decisions, and insecure agency budgets. And this happens against a backdrop rich in environmental, political, and stochastic uncertainty. As the American screenwriter Woody Allen famously said, “If you want to make God laugh, tell him about your plans.” Things like large-scale fires, drought, international commodity markets, and changes in political leadership regularly frustrate long-range rational planning endeavors.

Adaptive management and planning has therefore been supported by federal land agencies as a way to cope with such rampant uncertainty. In the context of federal lands, a popular definition, as adapted from the National Research Council, is as follows:

Adaptive management [is a decision process that] promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability

in contributing to ecological resilience and productivity. It is not a ‘trial and error’ process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals, increases scientific knowledge, and reduces tensions among stakeholders.³⁸

Most scientific and scholarly definitions include a similar set of components, all designed to deal with the inherent uncertainty of natural resources management. This question-driven approach is about learning by doing—approaching management as an experiment upon which to learn and reduce uncertainty. It is a systematic, iterative, incremental approach requiring the continuous monitoring, evaluation, and adjustment of management actions. Adaptive management can also be understood in the negative, as it is different from more typical front-ended approaches to planning whereby assumptions and predictions are made in the beginning of the process, but then not necessarily adjusted according to what actually happens as a result. A NEPA Task Force, for example, contrasts the status quo “predict-mitigate-implement” NEPA-based model with a “predict-mitigate-implement-monitor-adapt model.”³⁹

The innate administrative tendency to prioritize discretion helps explain how some agencies have implemented adaptive management and some of the backlash that has ensued. In some cases, agencies have interpreted adaptive management in a way that puts a premium on flexibility, discretion, and expedited decision making. They have embraced parts of the adaptive management model while eschewing others. Some interests are concerned that the perceived need for flexibility, discretion, and expedited decision making can be easily abused by agencies and make it harder to hold them accountable for their actions.

These fears are exacerbated by the lack of specificity given to adaptive management in law or regulation. Most administrative definitions are actually vaguer than those found in the academic literature. No statute defines the term and agency regulations doing so usually provide more platitudes than detail. As law professor J.B. Ruhl points out, “[o]ne has to be concerned when legal text becomes even more obscure than the theory on which it is based.”⁴⁰ The problem, as Ruhl sees it, is that “[m]ushy definitions of adaptive management are likely to make for mushy standards of implementation.”⁴¹

Lots of examples can be used to demonstrate this problem. To take one, consider how the USFS approached adaptive management in its 2005 and 2008 planning regulations.⁴² The agency emphasized the problems and challenges of

NEPA-based rational comprehensive planning and proposed in its stead a “paradigm shift in land management planning.”⁴³ The 2005/2008 regulations embraced the language and some of the core principles of adaptive management. But to be truly adaptive the agency believed it had to free itself from some NEPA obligations so to be able to respond to new science, information, and problems more quickly.⁴⁴ Forest plans would thus not be decision-making documents, but rather “strategic and aspirational” in nature, one tentative step in a more adaptive planning process.⁴⁵ Also gone from the regulations were some of the sharpest standards and legal hooks holding the agency accountable, such as the wildlife viability standard.⁴⁶ Put simply, the USFS believed that it needed more flexibility and discretion in order to practice adaptive management.

The USFS’s discretion-based approach to adaptive planning did not sit well with environmental groups and their lawyers. Some critics believed that these regulations simply used the rhetoric of adaptive management as a means to remove standards, undermine NEPA and NFMA, and maximize agency discretion.⁴⁷ At the time of this writing, the USFS continues to grapple with how to practice adaptive management while lawfully implementing its other substantive and procedural obligations.⁴⁸

The BLM is also trying to implement more adaptive approaches to planning and management.⁴⁹ One of the most closely watched experiments in this regard has been the agency’s approach to oil and gas development in Wyoming, most notably the Pinedale Anticline oil and gas exploration and development project.⁵⁰ In this case, the BLM adopted an adaptive approach because of the possible impacts of energy development to wildlife in the area, including sage grouse, mule deer, and pronghorn antelope.

But the BLM met some of the same legal challenges to adaptive management as did the USFS—legal challenges that have long been identified as hindering EM. Two such impediments include the Federal Advisory Committee Act (FACA) and NEPA. As discussed below, FACA can present problems because of its lengthy procedural obligations that can have the unintended consequence of limiting public participation in an adaptive/collaborative management process. This was the case on the Pinedale Anticline, where a collaborative group was formed to help implement the process. The problem was that it took two years for the group to obtain its FACA charter once the process was initiated, and this was four years into the project.⁵¹

NEPA also presented challenges in the Pinedale case, ones that are compounded by the complexity and multistaged nature of oil and gas planning and

development. One challenge, for example, is NEPA's requirement to prepare a supplemental environmental impact statement (EIS) upon the discovery of "significant new information."⁵² The challenge here is that agencies implementing adaptive management may continuously trigger the need for more (supplemental) NEPA analysis. Unlike the traditionally front-ended NEPA process, adaptive management is about the continuous collection of information and the making of corresponding adjustments throughout the life of a plan or project.

The USFS and BLM examples are not anomalies. Much of the policy and legal scholarship on adaptive management (and governance) goes so far as to suggest that modern environmental problems require a fundamental reorientation of environmental law and planning.⁵³ The examples above show why NEPA is an important part of this puzzle, as a key question is whether NEPA facilitates or obstructs this sort of adaptive learning.⁵⁴ Some people believe that NEPA must be changed or clarified in order to make it more adaptive management-ready.⁵⁵ On the other side we see those believing that NEPA can already accommodate more adaptive-based planning approaches. This is because NEPA requires a forward-looking approach—a requirement to assess possible environmental impacts *before* undertaking a major new action.⁵⁶ And once that general course is set, adaptive management becomes a means to an end. Put differently, once a program, plan, or project is established using NEPA, adaptive management can be used as a way to ensure the goals are being met. After all, adaptive management is not about experimenting for the sake of experimenting. It needs a purpose and hopefully NEPA will be used as a way to define it.

B. Collaboration

Collaboration plays a significant role in ecosystem management. Planning at such scales requires greater coordination among landowners and "the acquiescence, if not active support, of a broad cross section of society."⁵⁷ So entwined was collaboration with EM that some started calling it "cooperative ecosystem management" or "grassroots ecosystem management."⁵⁸ Some inherent tensions between the two were also apparent from the get-go, for how does an agency reconcile the scientific expertise needed for what some began to call 'ego-system management' with increased demands for more widespread participation in planning?

Contradiction or not, the language and ideas of collaboration are now firmly established in federal land planning and management. Growth and interest in the 'movement' is extraordinary, with dozens of advocates, scholars, think-tanks, clearinghouses, and government officials promoting its beneficial use.⁵⁹ It would

be an overstatement to say that EM catalyzed this development, partly because calls for more participatory planning were being made well before spotted owls changed the game. In fact, one of the dominant criticisms of the USFS before NFMA was enacted was the lack of meaningful public participation in agency decision making.⁶⁰ Nevertheless, EM certainly helped push things along.

Take the case of the BLM for example. Former Secretary of the Interior Bruce Babbitt strongly embraced EM for scientific and political purposes. Its blending of science with collaboration offered a new path for BLM politics, providing a way to broaden the scope of conflict, both spatially and in the number of new values and interests that would be brought into BLM planning. James Skillen explained in his history of the agency that,

For Babbitt, ecosystem management was promising despite its inherent ambiguity and tension. First, it changed the nature and politics of land use planning by shifting the scale and boundaries of planning debates. By tackling land use planning on a broader, ecosystem scale, Babbitt could increase competition among conflicting interest groups and political subsystems. Forcing interest groups and public lands users into a different political arena could break iron triangles that had developed over particular resources or particular geographic areas.⁶¹

Collaboration was also advanced during Babbitt's tenure by creating multi-stakeholder resource advisory councils (RACs) that provide advice to the BLM regarding the "preparation, amendment and implementation of land use plans and the development of standards and guidelines."⁶² In contrast to the old rancher-dominated advisory committees established under the Taylor Grazing Act, RACs were endorsed as a way to bring new voices into the fold and to 'institutionalize' more collaboration in rangeland planning.

The executive branch pendulum swing from Clinton to Bush best explains what happened to EM and collaboration on public rangelands. "Sustaining Working Landscapes" eclipsed EM and became the new mantra for the BLM under Interior Secretary Gale Norton.⁶³ Collaboration became even more politically attractive and it was often contrasted to more regulatory and adversarial approaches to conservation. Irony notwithstanding, Executive Order 13,352 (Aug. 26, 2005) aimed to facilitate the bottom-up use of "cooperative conservation" and a White House-sponsored conference on the matter convened in 2006.⁶⁴ Secretary Norton also espoused a "Four Cs" agenda: "consultation, cooperation, and communication, all in the name of conservation."⁶⁵

But this emphasis on collaboration during the Bush administration did not translate into all realms of range management. In 2006, for example, the BLM

tried to amend its grazing regulations,⁶⁶ though they were eventually set aside by the courts.⁶⁷ One of the more controversial amendments included removing the requirement that the agency consult, cooperate, and coordinate with the ‘interested public’ regarding various management decisions. The regulations also proposed to no longer require the involvement of interested members of the public when issuing or renewing individual grazing permits. Instead, the BLM would only “consult, cooperate, and coordinate” with “affected permittees and lessees, and the state.”⁶⁸ This example demonstrates how collaboration, like EM before it, is subject to changing priorities in the White House.

Collaboration was also part of the EM package advanced on the national forests. As commonly done elsewhere, they were linked together by the Committee of Scientists in 1999, which recommended more ecosystem and collaborative-based approaches to forest planning.⁶⁹ The collaborative focus endures, with just about everyone asking for more or better collaboration with the USFS. Congress entered the fray in 1998 by requiring the USFS to use a “multiparty monitoring and evaluation process” when using stewardship contracts.⁷⁰ And in 2003, Congress required collaboratively-written community wildfire protection plans as part of the Healthy Forests Restoration Act.⁷¹ This law provides incentives for the writing of such plans while providing more participation and community engagement earlier in the planning process. As discussed below, Congress again endorsed more collaborative approaches to forest restoration in passing the Collaborative Forest Landscape Restoration Act in 2009.⁷²

Top Bush administration officials in the USFS also encouraged more collaborative approaches to planning, with some going so far as to suggest that collaboration was the future of conservation and national forest management.⁷³ Little wonder, then, that collaboration was emphasized by the agency in its rewriting of forest planning regulations. The Clinton, Bush, and Obama administrations have all taken on the Sisyphean task of rewriting the NFMA planning rule. A full accounting of this interminable process is (thankfully) impossible here. But a common thread running through each proposed rule is the importance of collaboration. Though dismissed by the courts, the 2005 and 2008 planning regulations called for a “collaborative and participatory approach to land management planning.”⁷⁴ The Obama planning rule took collaboration even further, starting with an unprecedented outreach effort and proposing a rule in which collaboration and science were the two basic “anchor points.”⁷⁵

Collaboration proceeds in the national forests despite the travails of the NFMA planning rule. Throughout the country, divergent interests are collabo-

rating about how they would like particular national forests to be managed. Some of these initiatives are seeking place-based legislation as a way to secure their agreements, outside of forest-planning processes, while others use an assortment of different approaches and memoranda of understanding with the USFS.⁷⁶ What is most remarkable about these collaborative is what they have in common. One of their most defining characteristics, for example, is the shared belief that the USFS should be planning at much larger spatial scales than currently practiced (as discussed below). There is also a widespread desire to be continuously engaged in forest management, not just during the limited time frames offered by rulemaking, NEPA, and the forest-planning process.

This quick review demonstrates a top-down and bottom-up embrace of collaboration by the USFS in the national forests. But embracing the idea of collaboration is different from practicing it. Some of the same institutional barriers to implementing EM are now commonly identified as impeding more collaborative planning in the national forests. First of all, there remain philosophical concerns about collaboration and more decentralized approaches to federal land management.⁷⁷ There is a persistent fear that collaboration can be politically exploited and used as cover to undermine the national interest and rule of law. Recall, for instance, how the Department of the Interior sang the praises of collaboration while simultaneously making it harder for the nonranching public to participate in range management and planning decisions. For some critics, then, ‘impediments’ to collaboration may in fact be necessary sideboards and safeguards.

There are also some familiar legal barriers to more collaborative planning. Some people for instance, complain that the Federal Advisory Committee Act (FACA) can have a chilling effect on collaborative planning.⁷⁸ FACA’s purpose is to open agency decision making to the public and to check the improper use of experts, industry, and advisory committees in agency decision making. The law applies to groups providing “advice or recommendations” to the federal government that are either “established” or “utilized” by the government.⁷⁹ A few prominent initiatives in EM violated FACA’s procedural requirements, including the Forest Ecosystem Management Assessment Team (FEMAT), the Sierra Nevada Ecosystem Project, and the Southern Everglades Restoration Alliance.⁸⁰ These and other cases led to a ‘FACA-phobia’ amongst some agencies who sometimes decided to simply forego collaboration instead of working through the complexities of this well-intentioned law.

NEPA is also often cited by collaborative groups as being an unnecessary hurdle to more collaborative planning by the USFS. This should not be the case,

as one of NEPA's most enduring legacies is the public participation and transparency demanded by the statute.⁸¹ Nevertheless, some practitioners believe that "many landscape-scale forest restoration efforts are hindered by agency and stakeholder assumptions that collaboration must be narrow and limited once project planning enters a formal NEPA process."⁸² Part of the problem here is the predictive-based structure of NEPA, as discussed above in the context of adaptive management. Instead of being solely engaged pre-decision—from scoping to commenting on draft EISs—there are increasing calls by some planning participants to be included throughout the entire NEPA process, from scoping through project implementation and postproject monitoring. Other groups are asking for a more pro-active role in helping shape projects from the most initial design stage of the NEPA process. In doing so, these groups hope that common zones of agreement can be found early on, saving the agency and various interests the costs and troubles of a postdecision legal challenge.⁸³

C. Landscape-Scale Restoration

The word restoration is usually found in most definitions of ecosystem management. A 1994 BLM definition is typical; "[t]he primary goal of ecosystem management is to conserve, restore, and maintain the ecological integrity, productivity, and biological diversity of public lands."⁸⁴ While the term 'ecosystem management' is not as prevalent as it once was, the restoration focus is now more widespread, with federal land agencies and others working on several 'landscape-scale' initiatives. 'Landscape-scale' or an 'all lands' approach to conservation is now the popular vernacular, replacing EM in various agency rules and policy statements.⁸⁵ But all are basically premised on the same thing when it comes to restoration: planning and management should occur at scales commensurate with natural disturbances, such as large wildfires, invasions of cheat grass, and so forth.

As discussed below, in some cases the restoration agenda has been pushed by Congress or the executive branch and in other cases pressure comes from the bottom up. But regardless of where it comes from, efforts in landscape-scale restoration face an array of familiar complications. For the purposes here I focus mostly on the national forests because the USFS is once again trying to fit a new and exciting management approach into an old and unexciting statutory, planning, and budgetary framework.

Like EM, restoration is subject to multiple and sometimes competing interpretations; that is part of its political allure. But this lack of clarity and a common definition can also be problematic, from a political and managerial

standpoint.⁸⁶ Engaging in such a dialogue quickly reveals how differently people define the restoration ‘problem’ and what, if anything, should be done about it. There is also no avoiding the political choices that must be made in restoration decisions, from determining a historic baseline and desired future conditions, to whether it is best to do something or nothing in various places.

Congress has supported restoration in different federal land laws since the emergence of EM.⁸⁷ In 1998, for example, Congress authorized the USFS and BLM to use stewardship contracting to achieve various land management goals such as restoring forest and rangeland health and water quality, improving fish and wildlife habitat, and reducing hazardous fuels.⁸⁸ To achieve these goals, stewardship contracting allows the exchange of goods for services.⁸⁹ In other words, the timber commodities produced through a contract are exchanged for requested restoration services, like decommissioning roads or replacing culverts. Stewardship contracting allows the USFS and BLM to retain the receipts generated by selling timber for use in future stewardship projects.⁹⁰

Congress then passed the Healthy Forests Restoration Act (HFRA) in 2003, which mostly aims to expedite hazardous fuel reduction projects on USFS and BLM lands.⁹¹ Some common EM themes are found in the law, including collaborative planning, multiparty monitoring, and some safeguards pertaining to biodiversity and old-growth trees. But the statute basically emphasizes hazardous fuels reduction and tries to ease the procedural burdens of getting it done quickly. To do so, HFRA created new administrative and judicial review procedures and modified NEPA compliance requirements. Under HFRA, agencies consider fewer EIS alternatives and their decisions are subject to a ‘predecisional administrative review process’ rather than traditional administrative appeals. The law also exempts community wildfire protection plans from FACA. Of course, HFRA hardly counts as restoration in the eyes of its critics, who believe that “HFRA’s more ecologically sensitive and prescriptive restoration provisions . . . are counterbalanced by a renewed congressional commitment to timber cutting and to minimizing the law’s role in this process.”⁹²

Congress endorsed a more experimental approach to restoration in 2009, creating the Collaborative Forest Landscape Restoration Program.⁹³ The program selects and funds landscape-level forest restoration projects that are screened by a committee. To be eligible, restoration projects must be at least 50,000 acres and be done in scales to improve wildfire management, reduce management costs, restore ecosystem functions, and to facilitate the use of biomass and small-diameter trees. Such projects must comply with existing environmental laws and be

developed and implemented through a collaborative process.⁹⁴ Up to ten proposals can be funded per year (with only two proposals in any one region of the national forest system), and each project is evaluated based on several criteria.⁹⁵ The program authorizes \$40,000,000 per year (FY 2009–2010) to be used to pay for up to 50 percent of selected restoration projects.⁹⁶

There are also increasing demands for landscape-scale restoration coming from the bottom up. A common complaint about the USFS is that the agency manages and implements restoration projects at too small a scale. This is probably due in part to the agency's fear of administrative appeals and litigation and perceptions of risk. These legal challenges are believed to be easier as the projects get larger in scope and scale, which explains why the agency has sometimes moved away from large, multifaceted projects to smaller and more isolated ones. Whatever the reasons, there is now widespread frustration with small-bore and disjointed approaches to restoration.⁹⁷ Many groups want restoration to be planned at much larger spatial scales, for both ecological and economic reasons.

Arizona's Four Forests Restoration Initiative (4FRI) provides a case-in-point. This collaboration between industry and environmental groups seeks to restore ponderosa pine forests in four national forests in Arizona. The partnership marks the 467,000 acre Rodeo-Chediski fire in 2002 as an important turning point, with several interests recognizing that fires and other events of such magnitude necessitate a larger scale approach to planning. The 4FRI partnership believes the USFS should be planning at scales twenty to thirty times larger than they currently do. In order to do landscape-scale restoration across roughly 2.4 million acres of ponderosa pine forests, the 4FRI anticipates that "the first large-scale planning area will cover ~750,000 acres, which will identify roughly ~300,000 acres for thinning over 10 years at a rate of up to 30,000 acres of treatment per year."⁹⁸

Increasing calls for restoration have not gone unheard by the USFS. The agency tried to once again reframe the forest management debate during the Bush administration, with Chief Bosworth and others claiming the 'forest wars' over once and for all. "Community-based Stewardship" and restoration were put forth as the new direction for the agency.⁹⁹ As proof, agency leaders pointed to facts like "roughly 75–80% of the timber from national forest land now comes from projects for other purposes, such as fuels reduction, habitat improvement, and ecological restoration."¹⁰⁰ The restoration focus is also easily squared with the open-ended statutory mandate given to the USFS, including the 1897 Organic Act, which specifies that the USFS "improve and protect the forest" and secure "favorable conditions of water flows."¹⁰¹

Restoration became even more paramount within the USFS under President Obama. The Secretary of Agriculture Tom Vilsack made waves at the beginning of his tenure by saying that restoration is the agency's vision of the future and that "[r]estoration means managing forest lands first and foremost to protect our water resources, while making our forests more resilient to climate change."¹⁰² Forest-planning regulations introduced by the Obama administration also emphasized other central principles of EM (including adaptability, collaboration, and an 'all-lands' approach to forest management). The 2012 planning rule aimed to facilitate the writing of forest plans that would "protect, reconnect, and restore" national forests and grasslands.¹⁰³

All of this goes to show that the flow of forest politics is heading to restoration. But this current faces some all-too-familiar blockages to planning and implementing landscape-scale restoration. To begin, planning is difficult absent an agreed-upon purpose and there remain significant disagreements about what most needs restoring and conserving in the national forests. There are concerns, for example, that the USFS approaches restoration with an organizational timber bias. Some of these worries stem from the timber-centric approach to restoration as found in HFRA and President Bush's Healthy Forests Initiative. And some concern is due to the scale of the perceived problem; a vision made clear when Obama's Undersecretary of Agriculture stated that 110 million acres (out of 193 million acres in the National Forest System) are in need of restoration.¹⁰⁴ Some people also believe that the USFS conflates watershed restoration with forest restoration, and this means that initiatives by the agency tend to prioritize things like biomass while not doing enough road decommissioning and the like.¹⁰⁵

How to fund restoration projects at large scales is another recurring question. Several interests believe that stewardship-contracting authority is a promising yet underutilized approach by the USFS and BLM. One problem is that while the law authorizes agencies to retain receipts from stewardship contracts, administrative policy prohibits the use of this money for planning and monitoring purposes.¹⁰⁶ There are also concerns that the timber-goods for restoration-services structure of stewardship contracting will inevitably lead to increased pressure to cut more trees in order to restore more things. If so, this funding mechanism leads us back to some familiar political terrain.

Another recognizable challenge to restoration is the programmatically structured nature of the USFS budget. Generally speaking, money for programs in the national forests is based on a limited set of resource-specific line-items that get 'stovepiped' from national headquarters to the individual national

forests. The problem is that this approach does not align well with the integrated or ecosystem-based nature of forest management, because some prioritized activities, such as restoration, do not have their own line items. Budget lines that currently fund restoration in the national forests “are not coordinated with one another, have individual targets that drive work plans, and are allocated in ways that constrain agency flexibility, efficiency and adaptability.”¹⁰⁷ What often happens is that one aspect of a restoration project gets funded, such as hazardous fuels reduction, while companion efforts like road decommissioning do not. As the Western Governor’s Association sees it, “[w]hen activities are ‘stove-piped’ into separate programs with their own funding, targets and accomplishment reporting, the large-scale treatment objectives are not achieved.”¹⁰⁸

Landscape-scale restoration projects have also encountered some NEPA-related challenges. At one end of the spectrum are those simply unhappy with the time and resources it takes to comply with the law. For some, restoration requires expedited action and NEPA unnecessarily bogs things down—the “analysis paralysis” and “process predicament” complaint.¹⁰⁹ This is a standard NEPA critique and restoration provides yet another opportunity to make this case. But more moderate and even green interests have struggled to find the right application of NEPA for large-landscape restoration. One of the challenges is how to make proper assessments at such massive scales, such as the proposal to restore some 750,000 acres of ponderosa pine forests in Arizona. Would one broad-based programmatic EIS suffice? Or must the traditional approach of tiering project-level EISs to programmatic plans still apply? What is the most effective way to analyze cumulative effects? And how might NEPA work be more strategically timed to the awarding of stewardship contracts? Some of these questions, such as how to effectively tier plans, are standard fare in federal land management, but they can become more complicated when applied at the large-landscape level.

III. CONCLUSION

The question of whatever happened to ecosystem management is kind of like asking whatever happened to someone with a multiple personality disorder. There are multiple conceptions of EM, from the theoretically sound to the politically advantageous, so it is necessary to first be sure of whom we are speaking. Once certain, it is then possible to trace what happened to various ideas important to EM, such as how they were used politically, to how they manifested themselves in routine agency actions. The term EM is no longer used with the regular-

ity it once was, but its basic principles and view of management and planning persist. The language has changed, but the core ideas and challenges have not. Adaptive management, collaboration, and restoration: all were basic ingredients of EM and all are even more relevant today than they were twenty years ago.

In some cases, progress has been made on these fronts. Much of it is due to the enforcement of laws such as the ESA and the NFMA's wildlife viability standard. More than anything else, legal standards such as these have brought change to the federal lands. EM would be little more than a vacuous slogan without such laws backing it up. Congress has also facilitated change by providing new tools, such as stewardship contracting authority and the Collaborative Forest Landscape and Restoration Program, among others. There is also a lot of innovation happening at the grassroots level, with several collaborative groups advancing more adaptive, participatory, and landscape-level approaches to federal land management. A collaborative group making some headway in resolving conflicts and getting agencies to think about the big picture and all of its interconnections is becoming a common story.

Yet even more common are stories about initiatives in adaptive management, collaboration, and landscape-scale restoration meeting some familiar impediments. These include disparate agency missions and planning processes, shifting political priorities, problematic budgets, and an assortment of other challenges. Laws such as NEPA and FACA can also present dilemmas, though they also help ensure that environmental and democratic values are not subverted in the name of EM.

It is beyond the scope of this chapter to analyze what is next for EM and its descendants. Doing so would entail an analysis of federal lands governance writ large. Nonetheless, there are some general ideas worth consideration. First is the status quo option of muddling through; making incremental progress towards EM and its core principles baby step-by-step. Painful as it may be to watch, this evolutionary approach is relatively safe and politically feasible. It is possible to imagine, for example, that Congress might one day bring the USFS budgetary structure into the twenty-first century,¹¹⁰ or that an Executive Order might mandate an "interagency coordination statement" in all planning documents,¹¹¹ or that the Council on Environmental Quality might soon provide guidance or new regulations pertaining to NEPA's application to adaptive management, collaboration, and restoration.¹¹²

Instead of shooting for the stars, perhaps the best way to proceed is to focus on some relatively feasible proposals. The danger, though, is the fatigue and cyn-

icism that comes from repeatedly hitting the same walls. The proverbial definition of insanity comes to mind: doing the same things over and over again, expecting different results. How many times, for example, will the USFS try to rewrite NFMA planning regulations? Or how many times will legitimate efforts in collaborative restoration be stymied by underfunded agencies and inflexible budgets?

A related approach to consider is the possibility of more legislative or regulatory ‘nudges’ by Congress and the executive branch. These laws and regulations would not systematically overhaul the system, but rather continue prodding agencies to plan in a more adaptive, collaborative, and landscape-scale fashion. Post spotted-owl laws such as the Community Forest Landscape Restoration Act and stewardship-contracting show that Congress is capable of passing new federal land laws. Controversy arises, however, when Congress passes a new law that changes the application of older ones, such as NEPA. The Healthy Forests Restoration Act is worth thinking about in this context because it is a rare case in which Congress confronted legal barriers and actually modified the preexisting statutory framework, from exempting FACA to streamlining NEPA. The substance of the law is controversial, and it is certainly no paragon of EM or restoration, but the law’s design demonstrates how Congress might act again in the future—this time in order to facilitate other EM principles.

A harder nudge would be for Congress to pass a new ecosystem management or restoration law that would supplement existing federal land statutes. Professor Keiter observed long ago that “until Congress speaks, ecosystem management can only claim a tenuous legitimacy, which also leaves the concept undefined for legal purposes.”¹¹³ In subsequent work, Keiter recommends a law that would establish clear priorities among multiple uses, acknowledge the need for coordinated landscape-level planning, and include at least two statutory standards: a nonimpairment standard establishing a threshold for evaluating management proposals, and a biodiversity conservation standard imposing “an affirmative obligation on the agencies to protect and restore species diversity.”¹¹⁴ “Framed as management standards rather than hard-and-fast rules,” says Keiter, “the proposal seeks to protect ecological components and processes without placing land managers in a straitjacket, rendering them unable to respond to unique local conditions or exceptional circumstances.”¹¹⁵ As Keiter sees it, “[t]he statutory proposal does not envision a radical restructuring of agencies or boundaries; the proposed legal standards are not new, nor do the procedural or enforcement mechanisms depart from existing law. By linking the nonimpairment standard with an ecosystem restoration obligation, the proposal should

help promote truly sustainable resource management policies, thus enhancing community stability and perhaps restoring some peace on the public domain.”¹¹⁶

The third broad option to consider is a more comprehensive review of federal land planning and management. Reconvening another Public Lands Law Review Commission, or something like it, could provide an opportunity to bring federal land planning into the twenty-first century.¹¹⁷ With appropriate sideboards and a clearly defined charter, a comprehensive review has the potential of providing more enduring solutions to problems reviewed in this chapter. Bear in mind that more than thirty years have passed since NFMA and FLPMA were enacted. Gone are the halcyon days of rational comprehensive planning—or illusions thereof. The world is a different place; perhaps the crux of the matter is that these planning statutes are simply not designed to deal with today’s problems. Say what you will about the NFMA, for example, but the statute is clearly timber-focused. It was born from the clear-cutting and ‘get out the cut’ controversies of the 1960s and 70s—and the law reads as such, with most of its provisions related to logging and its constraints. But today’s planning challenges go well beyond timber. Restoration, ecosystem services, fire management, motorized recreation, biomass and renewable energy, climate change, and wildlife viability; these and similar issues are the problems confronting planners and advocates alike. Given the enduring nature of EM and its offspring, perhaps it is time to finally codify EM principles in a more coherent and contemporary set of laws.

NOTES

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11. For an overview of these planning processes *see* 72 Fed. Reg. 14, 866 (March 29, 2007).
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94. *Id.* §4003(b) [74].
95. *Id.* [74].
96. *Id.* 4003§ (f) [74].
97. Martin Nie, *supra* note 75.
98. The 4 Forest Restoration Initiative: Promoting Ecological Restoration, Wildfire Risk Reduction, and Sustainable Wood Products Industries: A Proposal for Funding Under the Collaborative Forest Landscape Restoration Program, at 3, *available at* http://www.fs.fed.us/restoration/CFLR/documents/2010Proposals/Region3/R3_4FRI/R3_4FRI_CFLRP_Proposal_05142010.pdf. For more on the proposed action see 76 *Fed. Reg.* 4279 (Jan. 25, 2011).
99. See Bosworth & Brown, *supra* note 72; Dale Bosworth & Hutch Brown, *Investing in the Future: Ecological Restoration and the USDA Forest Service*, 105 *J. Forestry* 208 (June 2007).
100. Bosworth & Brown, *Investing in the Future*, *supra* note 97, at 210.

101. 16 U.S.C. §475 (2006).
102. U.S. Dep't of Agric., Secretary of Agriculture, Tom Vilsack, Seattle, WA, August 14, 2009 (transcript on file with author).
103. 76 Fed. Reg. 8480, 8482 (Feb. 14, 2011).
104. Comments made by Undersecretary of Agriculture Harris Sherman, at the U.S. Forest Service Science Forum, Washington, D.C., Mar. 29, 2010.
105. See Bethanie Walder, *The Forest Service's Fatal Flaw*, available at <http://ncfp.wordpress.com/2010/07/01/the-forest-services-fatal-flaw> (last visited May 20, 2011).
106. Western Governors' Association Forest Health Advisory Committee, *supra* note 81, at 7.
107. *Id.* at 10.
108. *Id.*
109. U.S. Forest Service, Dep't of Agric., *The Process Predicament: How Statutory, Regulatory, and Administrative Factors Affect National Forest Management*(2002).
110. This possibility emerged in 2011 with the USFS proposing a new integrated resource restoration program and budget. See *Forest Service Budget: Senate Hearing Before the Comm. On Energy and Natural Resources, 111th Cong. 4-5* (statement of Tim Tidwell, Chief of USFS), See also U.S. Forest Service, *Fiscal Year 2011 President's Budget in Brief* (2010).
111. See Robert B. Keiter, *Testimony Before House Committee on Natural Resources, The Role of National Parks in Combating Climate Change* (Apr. 7, 2009) (on file with author).
112. For analysis of these matters see NEPA Task Force, *Modernizing NEPA Implementation: The NEPA Task Force Report to the Council on Environmental Quality* (2003).
113. Robert Keiter, *Toward Legitimizing Ecosystem Management on the Public Domain*, 6 *Ecological App.* 727 (1996).
114. Robert B. Keiter, *Keeping Faith With Nature* 309 (2003).
115. *Id.* at 309.
116. *Id.* at 310.
117. For a discussion see Nie, *supra* note 4; and Jim Burchfield & Martin Nie, University of Montana, College of Forestry and Conservation, *National Forests Policy Assessment: Report to Senator Jon Tester* (2008).