FIRE AND FEDERALISM

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"A forest fire is always an emergency."[1]

INTRODUCTION: WHY STUDY WILDLAND FIRE?

In October and November 2007, the nation watched as hundreds of thousands of southern California residents fled their homes in the face of advancing wildfires.[2] Sixteen separate fires burned over 400,000 acres, killed five people, and destroyed 1,500 homes, all within one week.[3] The California fires provided the most striking example of the devastating power of wildfire, but it was a bad year for fire all over. By the close of 2007, 9.3 million acres had burned nationwide, including nearly two million acres in Idaho, 890,000 acres in Nevada, 780,000 acres in Montana, and more than half a million acres in five other states.[4] Nor is wildland fire solely a western problem: though the western states account for over 80 percent of total acres affected by fire, 500,000-plus

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[1] HENRY S. GRAVES & CEDRIC H. GUISE, FOREST EDUCATION 147–48 (Yale Univ. Press 1932).

[2] For an account of just one series of evacuations, *see* Randal C. Archibold, *250,000 Urged to Flee in California as Fires Spread*, N.Y. TIMES, Oct. 23, 2007. "Wildland fire" is fire that occurs in unsettled land (whether forest, grassland, shrub, chaparral, etc.). "Prescribed natural fire" is a natural fire that is allowed to continue burning. A "management ignited prescribed fire" is a planned fire that is allowed to burn. "Wildfire" is a fire against which suppression action is taken. A fire may be declared a wildfire immediately upon ignition, while a prescribed fire (whether natural or management-ignited) may become a wildfire if it "escapes" the limits, conditions, or level of intensity determined by agency actors to be manageable. STEPHEN J. PYNE ET AL., INTRODUCTION TO WILDLAND FIRE 48 (2d ed. 1996).

[3] Gillian Flaccus, *1,500 Homes Lost; $1B Loss in San Diego Area*, SEATTLE TIMES, Oct. 24, 2007.

[4] National Interagency Fire Center [NIFC], Fire Information – Wildland Fire Statistics, http://www.nifc.gov/fire_info/ytd_state.htm (last visited June 9, 2008).

acres were burned in both Georgia and Florida in 2007.[5]

Wildland fire can seem an arcane subject, better suited for environmental policy analysts and foresters than for students of environmental law reform. However, wildland fire management is one of the oldest natural resources management problems, and as I shall discuss below, it is a problem the impact of which is only increasing as American cities and suburbs expand into formerly unsettled land. Fire management is also institutionally unique: wildfire takes no notice of jurisdictional boundaries, and as a result, institutions at all levels of government have developed considerable expertise in fire response, despite the dominant role played by the U.S. Forest Service (USFS or Forest Service).[6] Wildland fire response reflects a level of interagency cooperation nearly unheard-of in our national environmental regime.[7] Furthermore, despite its significant economic, environmental, and social impacts, "the law has surprisingly little to say about wildfire."[8] There is no "National Wildfire Policy Act." Rather, "an uncoordinated and fragmented welter of organic statutory provisions, environmental protection mandates, annual budget riders, site-specific legislation, judicial decisions, policy documents, management plans, and diverse state statutory provisions" shape fire policy and response.[9] The result of this "fragmented welter" is that land managers have a great deal of discretion in planning for fire prevention and response. Thus, fire policy tends to be less top-down than other federally dominated areas of environmental protection, and there is greater room for flexibility and experimentation.

Despite this decentralized, flexible structure, fire policy—particularly fire planning[10]—is plagued by some of the same

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[5] Author's own calculations, based on *id*. The western states comprise about 48 percent of the nation's total forest land. Author's own calculations, based on U.S.D.A. FOREST SERVICE, FOREST FACTS & HISTORICAL TRENDS 1, 4 (2000), *available at* http://www.fia.fs.fed.us/library/briefings-summaries-overviews/docs/ForestFacts.pdf.

[6] PYNE, *supra* note 2, at 340 (describing how USFS "hegemony" has shaped current wildfire control institutions).

[7] *Id.* ("Globally, this pattern of 'cooperative fire protection' is recognized as an American innovation.").

[8] Robert B. Keiter, *The Law of Fire: Reshaping Public Land Policy in an Era of Ecology and Litigation*, 36 ENVTL. L. 301, 303 (2006).

[9] *Id*. at 303–04.

[10] Fire *planning* is the process during which managers determine what prevention activities will be undertaken; under what circumstances prescribed

problems faced in other areas of environmental policy. First, fire is perhaps the paradigmatic example of the need for cross-cutting and interagency solutions. Planning for fire management implicates a wide range of issues, including land use, endangered species protection, and local air quality, which typically fall within the jurisdiction of different agencies. Fire risk, fire behavior, and the appropriate choice of management tools depend entirely upon the specific characteristics of the forest, including preferred uses, forest structure, predominant species, typical weather patterns, and the historical role of fire. However, the conflicting mandates of the various land management agencies hamper coordinated fire planning, despite the prevalence of interagency action in fire response.

Second, fire management involves hard choices with regard to use prioritization. Managing for maximum protection of homes and structures, for example, may sacrifice aesthetic values. Use of prescribed fire may improve forest health but destroy endangered species habitat. Unfortunately, there is a great tendency to assume that there is one right way to manage fire, rather than accepting that choosing the best method requires decisions about what uses to protect and which to sacrifice. The 2003 Healthy Forests Restoration Act, for example, supports mechanical thinning above other fuel reduction strategies, even though mechanical thinning is appropriate only for some forests.[11] Lack of cooperation means that neighboring land managers may be making very different and even conflicting choices about what fire regime to allow. Finally, the well-documented conflict between federal managers, driven by statutory mandates, and local interests has ramifications for fire as well.[12] The limited ability of local communities and land users to shape federal management decisions, coupled with efforts to

fire will be used or allowed; what tools, techniques, and strategies will be used in fire suppression; and how postfire recovery will be carried out. Fire planning may be distinguished from fire *response*, which encompasses the range of activities agencies undertake in suppressing or managing a fire.

[11] 16 U.S.C.A. § 2104 (2007). "Mechanical thinning" is the removal of smaller trees using heavy machinery and in many cases appears to the lay observer indistinguishable from normal commercial logging.

[12] Conflicts over public and commercial use of federal lands, particularly in the western states, are longstanding. For background on the "Sagebrush Rebels" of the 1980s and the "Wise Use Movement" of the 1980s and 1990s, see, for example, R. MCGREGGOR CAWLEY, FEDERAL LANDS, WESTERN ANGER: THE SAGEBRUSH REBELLION & ENVIRONMENTAL POLITICS (1996); Timothy Egan, *Look Who's Hugging Trees Now*, N.Y. TIMES MAGAZINE, Jul. 7, 1996.

further reduce citizen participation in planning (such as the proposed revision to the Forest Planning Rules), mean that local priorities may be more likely to be "traded off."

In the Forest Service context, these problems are magnified by funding structures that encourage managers to put off hard decisions. USFS wildfire prevention activities, such as thinning and prescribed burns, must be paid for out of a set annual budget. However, via an emergency-funding mechanism that allows USFS to spend first and seek reimbursement from Congress later, virtually unlimited funding is available for wildfire suppression. Meanwhile, fuel treatment programs often require drawn-out, expensive analysis under the National Environmental Policy Act (NEPA),[13] while fire suppression activities are exempt from analysis under NEPA's "emergency exception."[14] Creating a cooperative fire management plan that reflects local priorities and conditions requires advance planning and preemptive action, but land managers currently have strong incentives to focus not on fire prevention but on fire control.

In essence, despite great strengths in cooperative response, federal managers remain isolated in their agency silos during planning. Both other federal agencies and state and local actors tend to be excluded from individual federal units' fire planning processes. Furthermore, due to funding incentives, plans tend to skew towards suppression, despite widespread acknowledgement of the failures of the 100 percent suppression policy. This may contribute to further catastrophic fire in the future, a scenario that is particularly threatening due to the expansion of residential development into wilderness areas. Finally, agency managers fail to clearly articulate the costs of fire management strategies during the planning process, contributing to a public failure to understand the potential risks of suppression.

To remedy these problems, this paper proposes that the federal government mandate cooperative planning in highly fire-prone areas. This paper also argues that greater specificity with regard to the future effects and risks of each potential fire management strategy should be required during the fire planning process. Finally, funding structures for wildland fire management should be restructured to remove incentives to wait for the

[13] 42 U.S.C. § 4371 (2000).

[14] 40 C.F.R. § 1506.11 (2007).

conflagration. This paper focuses particularly, though not exclusively, on the Forest Service, which has a longtime leadership role in fire prevention, control, and response.

Section I gives background on wildland fire in the United States, the institutions that respond to it, and the statutory framework that governs it. Section II uses the Greater Yellowstone Area fires of 1988 as a lens to bring into focus the institutional challenges facing wildland fire control. The paper concludes by proposing institutional reforms to help bring the U.S. wildland fire regime closer to local needs and make it more responsive to site-specific concerns.

I. BACKGROUND

Wildland fire is one of the oldest and most important problems in American lands management. A 1932 survey of American forestry education, describing the appropriate subjects of instruction for young foresters, concluded that "[t]he control of fire has formed the dominant activity of foresters in this country, and the problem is yet far from solution. . . . Protection against fire influences practically every activity in handling forests."[15] From close to its inception, USFS and many state and private foresters, whose training was shaped by Forest Service needs,[16] saw fire as an unabashed evil.[17] Prescribed fire,[18] long used by Native Americans and frontier settlers, was seen by scientific foresters trained in Germany and the new forestry schools of the United States as a primitive and ignorant approach to forest management.[19] The "Forest Service's Valley Forge,"[20] a series of catastrophic western wildfires in 1910 that killed over a hundred firefighters and burned three million acres of National Forest land,[21] led to the adoption in that year of a policy of 100 percent

[15] GRAVES & GUISE, *supra* note 1, at 147. Henry S. Graves was a co-founder of the Yale School of Forestry, the nation's first, and later became Chief of the Forest Service.

[16] *Id*. at 16.

[17] *See generally* DAVID CARLE, BURNING QUESTIONS: AMERICA'S FIGHT WITH NATURE'S FIRE (2002) (describing the history of USFS' opposition to prescribed burning).

[18] *See* PYNE, *supra* note 2.

[19] CARLE, *supra* note 17, at 11–33.

[20] PYNE, *supra* note 2, at 252.

[21] In fact, eighty-five firefighters were killed in just two days. *See* Sherry Devlin, *Taming the Dragon*, THE MISSOULIAN (Missoula, Montana), 2000,

fire suppression or "fire exclusion".[22] The 100 percent suppression policy put a stop to the periodic natural fires that had characterized many forest ecosystems in the United States for thousands of years. A former USFS officer wrote enthusiastically:

> How terrible the forest fires were in this western country is well illustrated by what an old California settler once told me, and what I have heard repeatedly in many Western States. He said: 'In the years before the Forest Service took over the care and protection of the forests around here, the mountains within view of my ranch were not visible for many months at a time, being almost continually enveloped in smoke from the big forest fires that were raging. . . . Since the Service has taken charge the sky around here is as clear as crystal all summer. I never see any forest fires, not even smoke, because the Rangers seem to get to them before they get to be of any size.' Such testimony as this speaks volumes for the efficiency of the present system of protecting the Forests from fire.[23]

The forestry establishment of the early twentieth century saw no positive aspect to the "fire menace,"[24] and the Forest Service grew ever more aggressive in attacking it.[25] Fires, a 1935 forestry handbook declared, destroyed mature and growing timber, impaired tree reproduction, increased pest activity, threatened lives and structures, and destroyed wildlife.[26] Researchers who argued that fire had a place in a healthy forest faced uncertain professional prospects.[27]

The early forestry establishment, of course, was right—fire can be a tremendously destructive force. On average, 4.5 million acres have burned every year since 1960.[28] Nearly 1,000 wildland

special section *available at* http://www.missoulian.com/specials/1910/tame.html (collecting extensive coverage of the 1910 fires); *see also Forest Fire Loss Put at 200 Dead*, N.Y. Times, Aug. 25, 1910, at 3.

[22] STEPHEN F. ARNO & STEVEN ALLISON-BUNNELL, FLAMES IN OUR FOREST 19 (2002); *see also id.* at 18–22 (describing the aftermath of the 1910 fires).

[23] RICHARD H. DOUAI BOERKER, OUR NATIONAL FORESTS xxxvi–xxxvii (1926).

[24] GRAVES & GUISE, *supra* note 1, at 56.

[25] In 1935, USFS instituted the "10 A.M." policy, under which fires were to be under control by 10 A.M. the morning after they were first reported. ARNO & ALLISON-BUNNELL, *supra* note 22, at 20.

[26] NELSON COURTLANDT BROWN, A GENERAL INTRODUCTION TO FORESTRY IN THE UNITED STATES 68–69 (1935).

[27] For an excellent discussion of the efforts of forest scientists to convince the establishment of the value of fire, *see* CARLE, *supra* note 17, at Part I.

[28] Author's own calculation, based on NAT'L INTERAGENCY FIRE CTR.

firefighters have been killed in action since 1910,[29] and approximately 1,100 homes are destroyed by wildfire annually.[30] Fires can have devastating effects on communities,[31] destroy endangered species habitat,[32] and cause emissions that threaten air quality and can push an area into noncompliance with the Clean Air Act.[33] Fire is also expensive: federal appropriations for wildland firefighting came to some $3.1 billion in 2005.[34]

Furthermore, the impact of fire is expected to increase. The number of acres burned has topped the forty-year average in six of the last ten years.[35] As suburban and urban development pushes ever farther into formerly rural areas, the risk wildfire poses to homes and communities grows. In 2003, over 3,600 homes in Southern California were destroyed by wildfire—a loss of approximately $2 billion.[36] Threats to homes and communities will only increase as suburban expansion continues: between 1990 and 2000, 60 percent of new home construction nationwide was in the wildland-urban interface, and 38 percent of all homes are located in such areas.[37] Though wildland fire was once primarily

[NIFC], TOTAL WILDLAND FIRES AND ACRES (1960–2006), http://www.nifc.gov/fire_info/fires_acres.htm (last visited Nov. 20, 2007).

[29] NIFC, WILDFIRE ACCIDENTS BY YEAR 25 (2008), *available at* http://www.nifc.gov/safety/reports/year.pdf.

[30] GOVT. ACCOUNTABILITY OFFICE [GAO], WILDLAND FIRE MANAGEMENT: PROGRESS AND FUTURE CHALLENGES, PROTECTING STRUCTURES, AND IMPROVING COMMUNICATIONS 1 (2005).

[31] *See generally* Matthew S. Carroll et al., *Fire as a Galvanizing and Fragmenting Influence on Communities: The Case of the Rodeo-Chediski Fire*, 18 SOC'Y & NAT. RES. 301 (2005).

[32] PYNE, *supra* note 2, at 324.

[33] *Id*. at 554–55; George Busenberg, *Wildfire Management in the United States: the Evolution of a Policy Failure*, 21 REV. POL'Y RES. 145, 153 (2004).

[34] Adjusted for inflation, expenditures increased from an annual average of $1.3 billion in 1996–2000 to an annual average of $3.1 billion in 2001–2005. GAO, MANAGEMENT IMPROVEMENTS COULD ENHANCE FEDERAL AGENCIES' EFFORTS TO CONTAIN THE COSTS OF FIGHTING FIRES 1 (2007). Budget appropriations for Forest Service wildland fire management constituted 30 percent of the USFS budget in 2005. Author's own calculations, based on U.S.D.A. FOREST SERV., FISCAL YEAR 2006 PRESIDENT'S BUDGET OVERVIEW 1 (2005), *available at* http://www.fs.fed.us/publications/budget-2006/fy2006-forest-service-budget-overview.pdf.

[35] In six of the last ten years, at least five million acres were consumed. In 2006, 9.8 million acres burned—125 percent above the five-year average. *See* NIFC, *supra* note 28.

[36] GAO, *supra* note 30, at 1.

[37] GAO, WILDLAND FIRE MANAGEMENT: LACK OF A COHESIVE STRATEGY HINDERS AGENCIES' COST-CONTAINMENT EFFORTS 4 (2007). In the western

the concern of backcountry land managers and rural residents, today we live in the era of "intermix" fire.[38]

Paradoxically, however, it is early fire managers' lack of understanding of the key role of fire in natural ecosystems that is to blame for the deadly conflagrations of the late twentieth and early twenty-first century. The fire exclusion policy led to fuel buildup on federal lands, paving the way for explosive fires. Fire-adapted ecosystems have suffered as the periodic, low-intensity fires expected under natural conditions have been replaced by infrequent, high-intensity fires that wipe out mature trees and make recovery difficult.[39] In the late 1960s and early 1970s, federal land management agencies finally began to move away from fire exclusion in the face of persuasive evidence of its deadly results,[40] with USFS formally adopting a policy of fire management, rather than fire exclusion, in 1974.[41] In 1978, prescribed fire was declared to be part of the range of acceptable management tools on *all* federal public lands.[42] However, thirty years after the forestry world changed its mind on fire, the GAO estimates that at least 125 million acres of federal forest lands remain in a dangerous fuel condition[43]—nearly 50 percent of the total.[44] Furthermore, many observers believe that despite a policy shift to prescribed burning, in practice, managers continue to aggressively suppress wildland

states, 50 percent of all homes are located in the wildland-urban interface. Susan I. Stewart, et al., *Defining the Wildland-Urban Interface*, 105 J. OF FORESTRY 201, 205.

[38] PYNE, *supra* note 2, at 266. Intermix fire is fire that occurs in an area where housing and wildland vegetation intermingle. For detailed discussion of what constitutes an intermix area, *see* SILVIS LAB, WILDLAND-URBAN INTERFACE DEFINITIONS, http://silvis.forest.wisc.edu/library/WUIDefinitions2.asp (last visited Aug. 22, 2008).

[39] ARNO & ALISON-BUNNELL, *supra* note 22, at 176–78.

[40] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. 25,660, 25,62–63 (June 16, 1989). The National Park Service introduced prescribed fire in 1968 and expanded the program to twenty-six parks by the early 1980s. Tribal land managers, on the other hand, had used prescribed fire in tribal wilderness areas since the 1940s. *Id*. at 25663.

[41] CARLE, *supra* note 17, at 180.

[42] *Id*. at 181.

[43] As of 1999. GAO, REDUCING THE THREAT OF WILDLAND FIRES REQUIRES SUSTAINED AND COORDINATED EFFORT 1 (2002).

[44] According to the U.S.D.A. Economic Research Service, there are about 246,425,000 acres of federal forest lands in the United States. ECON. RESEARCH SERV., MAJOR USES OF LAND IN THE UNITED STATES, 2002 25 (2003), *available at* http://www.ers.usda.gov/publications/EIB14/eib14f.pdf.

fires.[45]

The problems that this fuel load represents, however, demonstrate why wildland fire remains such a difficult management problem. That fire is dangerous is deeply ingrained in the culture of USFS. At its inception, the Forest Service's dominant mission was timber production. The forest reserve system, which gave birth to the National Forests, was established to stave off a potential "timber famine."[46] "It is the purpose of forestry," wrote Graves and Guise, "to obtain from forest lands and their products the greatest economic, industrial, and human service. The success of forestry is measured in benefits to mankind and in its aid to the progress of civilization."[47] Even as the Forest Service moved to a policy of multiple uses in the 1960s, timber remained king. As Clary describes, even forest management plans that pledged allegiance to an ethic of multiple uses were often "couched in terms that measured all other uses against timber."[48]

However, patterns of use in the National Forests and other federal public lands have changed sharply in the last quarter of the twentieth century. The sale of timber from National Forests has declined dramatically in the past twenty years, from a high of 12.7 billion board feet in 1987 to 1.9 billion board feet in 2007.[49] Meanwhile, recreational use of the National Forests, including skiing, hunting, fishing, hiking, off-road vehicle use, and scenic tourism, has grown dramatically. Recreational visitor-days in the National Forests topped 100 million in 1961,[50] and approximately 205 million recreational visits to the National Forests are now made annually.[51] Housing density within ten miles of the National Forests is growing.[52] Furthermore, federal and state land mangers

[45] CARLE, *supra* note 17, at 248–50.

[46] DAVID A. CLARY, TIMBER AND THE FOREST SERVICE 3–5 (1986).

[47] GRAVES & GUISE, *supra* note 1, at 1.

[48] CLARY, *supra* note 46, at 172.

[49] U.S.D.A. FOREST SERV., FY 1905–2007 ANNUAL NATIONAL SOLD AND HARVEST SUMMARY, *available at* http://www.fs.fed.us/forestmanagement/reports/sold-harvest/documents/1905-2007_Natl_Sold_Harvest_Summary.pdf.

[50] U.S.D.A. FOREST SERV., VISITOR USE INFORMATION 1924–1996, *available at* http://www.fs.fed.us/recreation/programs/facts/use/rec_use_1924-96.pdf.

[51] U.S.D.A. FOREST SERV. RECREATION FACTS, http://www.fs.fed.us/recreation/programs/facts/facts_sheet.shtml (last visited Nov. 21, 2007).

[52] Press Release, U.S.D.A. Forest Serv., Housing Development On The Rise Near National Forests (Oct. 27, 2007), *available at* http://www.sciencedaily.com

also bear increasing responsibility for maintaining environmental quality, including the protection of threatened and endangered species. Thus, simply allowing natural fires to burn out accumulated fuels is not an acceptable choice in many National Forests.

A. *Fire Institutions*

Wildland fire management in the United States is beset by considerable institutional complexity. A patchwork of federal, state, and local agencies are responsible for fire planning and response. Even neighboring jurisdictions may have conflicting priorities and policies. However, the Forest Service remains "the dominant player in the development and implementation of public wildfire policies," a status attributed to its "reputation for professionalism and expertise."[53] The preeminent position of the federal agencies is reinforced by their access to virtually unlimited emergency funding for suppression. State agencies, for the most part, must fight fires out of a fixed budget, due to their inability to use deficit spending to pay for emergency activities.[54]

While the federal government plays the lead role in wildland fire control, it does not occupy the field as in other areas of natural resource regulation. As intermix fire has come to be the primary concern of the federal firefighting agencies, the role of state and local governments has grown more prominent. Charles Davis has described this development as a shift from the "inclusive authority" to the "overlapping authority" model of intergovernmental relations.[55] The role of state and local governments has been particularly important in fire prevention and response in the wildland-urban interface.[56] City and county governments may also maintain specialist units: the Los Angeles County Fire Department, for example, operates its own wildland fire program, complete with air support.[57] The benefit of this

/releases/2007/10/071025143304.htm.

[53] Charles Davis, *The West in Flames: The Intergovernmental Politics of Wildfire Suppression and Prevention*, 31 PUBLIUS 97, 98 (2001).

[54] PYNE, *supra* note 2, at 433–34.

[55] Davis, *supra* note 53, at 102, 109–10.

[56] *Id*. at 110.

[57] LOS ANGELES COUNTY FIRE DEP'T, AIR & WILDLAND, http://www.fire.lacounty.gov/AirWildland/AirWildland.asp (last visited Dec. 27, 2007).

overlapping authority regime is that it has led to a gradual strengthening of state and local firefighting resources via increased funding, investment in the dissemination of best practices and standards, and resource sharing. Via the National Interagency Fire Center (NIFC) system, firefighters may be deployed across the United States, strengthening interagency ties and building expertise. The Cooperative Forestry Assistance Act authorizes the federal government to provide grants to further develop state and local wildland firefighting.[58]

1. *Fire Planning*

Fire planning is the process by which land managers determine what role fire will play in the units for which they are responsible. Based upon the use priorities for a given area, managers decide whether prescribed fire will be allowed and how it will be used; the fire prevention techniques that will be used in each area; and what the agency's fire response strategy will be. Fire planning takes place in the context of the agency's larger management planning process.

Much of the fire work of USFS and other federal, state, and local agencies is highly cooperative and interagency in nature. The planning process, however, is not. In theory, nationwide fire policy is governed by the National Fire Plan, a document drafted by an interagency team in the wake of the unusually severe 2000 fire season. However, the principles of the NFP are general and have little on-the-ground impact.[59] The Wildland Fire Leadership Council (WFLC), another intergovernmental body, is charged with improving consistency in the implementation of federal wildland fire policy.[60] In practice, however, fire planning is an atomized process driven by the requirements of federal agency land-use planning mechanisms and divided along federal, state, and local jurisdictional lines.

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[58] 16 U.S.C. §§ 2101–2114 (2000).

[59] *See generally* U.S. DEP'T OF AGRIC. & U.S. DEP'T OF THE INTERIOR, MANAGING THE IMPACT OF WILDFIRES ON COMMUNITIES AND THE ENVIRONMENT (2000), *available at* http://www.forestsandrangelands.gov/reports/documents/2001/8-20-en.pdf.

[60] Participants in WFLC include USFS, NPS, FWS, BLM, BIA, and a number of states. WILDLAND FIRE LEADERSHIP COUNCIL, http://www.forestsandrangelands.gov/leadership/index.shtml (last visited Aug. 22, 2008).

For USFS, fire planning takes place in the forest planning context and is governed by the statutes and regulations that guide that process. NFMA establishes the Forest Service's responsibility to manage for multiple uses, including timber, wildlife protection, and recreation, and requires Forest Supervisors to create forest management plans (FMPs).[61] FMPs describe potential uses in the forest, note the areas appropriate for those uses, highlight areas of ecological significance, and describe desired future conditions. The fire planning requirements were established by the Forest Service regulations that also established the forest planning requirements.[62] Fire planning is further shaped by a series of Forest Service directives and manuals, as well as NEPA.

The Fire Plan reflects the use priorities established in the FMP, adjusting the management and suppression approach based upon the predominant use in a given management area. In the Shoshone National Forest, for example, all natural fires are allowed to burn freely in wilderness areas.[63] Giant Sequoia National Monument (a USFS-managed area) also allows prescribed natural fire.[64] The National Park Service (NPS)-managed Oregon Caves National Monument, on the other hand, does not allow prescribed natural fire due to its small size.[65] Site-specific legislation also shapes the range of options available to managers in land-use planning.[66]

2. *Fire Prevention*

Like fire planning, fire prevention remains a jurisdiction-specific activity. Federal managers are responsible for fuel treatment on their own units, as are states and municipalities. Fire prevention efforts take several forms. On dedicated forest lands, whether federal or state, the most common active fire prevention

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[61] 16 U.S.C. § 1600 (2000).

[62] 36 C.F.R. § 219 (2007).

[63] U.S.D.A. FOREST SERV., SHOSHONE NATIONAL FOREST FIRE PLAN 20, *available at* http://www.fs.fed.us/r2/shoshone/fire/fmp/2007_0328_fmp_part3.pdf.

[64] *See* U.S.D.A. FOREST SERV., GIANT SEQUOIA NATIONAL MONUMENT (2007), http://www.fs.fed.us/r5/sequoia/gsnm.html (last visited June 9, 2008) (describing a recent prescribed burn in the monument).

[65] U.S.D.A. FOREST SERV., SOUTHWEST OREGON FIRE MANAGEMENT PLAN 38 (2004), *available at* http://www.fs.fed.us/r6/rogue-siskiyou/fire/pdf/sw-or-fire-mgt-plan-04.pdf. Oregon Caves does allow the use of management-ignited prescribed fire.

[66] Keiter, *supra* note 8, at 330–32.

efforts are prescribed burns and mechanical or manual fuel treatment. Prescribed burns are generally perceived to be the cheapest and most effective option, with costs ranging from $30 to $400 per acre.[67] However, prescribed burns are subject to NEPA, meaning that there is a significant regulatory and financial burden associated with approval. Furthermore, prescribed burns are very frequently delayed due to unsuitable weather conditions. Manual fuel treatment, in which handcrews remove vegetation with hand tools and chainsaws, is also fairly inexpensive but highly time-consuming and not efficient on a large scale. Finally, mechanical fuel treatment or "thinning" is, to the casual observer, indistinguishable from selective logging. Mechanical thinning is much more expensive than prescribed burning, with costs ranging from $500 to $1500 per hectare.[68] In an effort to reduce these costs, the Healthy Forests Restoration Act expanded "Stewardship Contracting Authority," a program allowing private companies to carry out thinning projects in exchange for the right to sell the timber, despite criticism from environmental groups.[69]

Structural protection in suburban and wildland-urban interface lands is primarily the responsibility of states, counties, and municipalities. Preventing damage to homes and buildings requires treatment of areas around structures to remove dangerous brush and create fire-safe zones.[70] Some states and localities have passed laws, ordinances, or building codes requiring brush removal and the use of fire-safe materials in construction.[71] Many communities sponsor voluntary fire-safety programs to educate residents about home protection and to help them fireproof their homes. The federally funded Firewise Communities/USA program provides assistance to local communities for these efforts.[72] However, many areas have no programs and take no

[67] *Id.* at 316.

[68] *Id.* at 318.

[69] 16 U.S.C.A. § 2104 (2007). Stewardship contracting has been attacked by environmentalists who argue that contractors frequently exceed the limits to which they agree, removing more or larger trees than authorized. *See, e.g.*, HERITAGE FORESTS CAMPAIGN, THE "HEALTHY" FORESTS INITIATIVE, http://www.ourforests.org/fact/90_percent_hfi.html (last visited Dec. 27, 2007).

[70] *See generally* FIREWISE COMMUNITIES (2008), http://www.firewise.org/fw_youcanuse/preparing/index.htm (last visited June 9, 2008) (explaining a variety of techniques and best practices for fireproofing homes).

[71] *See infra* note 108 and accompanying text.

[72] FIREWISE COMMUNITIES, COMMUNITIES/USA (2008),

steps to reduce risks in intermix areas.

3. *Fire Response*

Wildfire management is built on a three-tiered structure.[73] When the decision to take suppression action is made, firefighters from the administrative unit affected—such as a National Forest District—and neighboring areas will be the first to respond. In California, for example, federal agencies and many local governments have signed cooperative agreements intended to allow the closest firefighting force to head up the initial attack, regardless of the jurisdiction where the fire occurs.[74] Once a fire has moved beyond the initial attack stage (usually conducted by the agency's own firefighters), the response may quickly take on an interagency character as firefighters from surrounding jurisdictions contribute resources to the threat or act to prepare their own land against advancing fire.

The National Interagency Coordination Center (NICC) has divided the United States into eleven regions for the purpose of fire response. Once a fire has exhausted local resources, it begins to draw from those available in its area, as determined by its regional Interagency Coordination Center and Multi-Agency Coordination Group.[75] The federal firefighting agencies and state departments of forestry or natural resources are typically members of these groups.

When regional resources prove insufficient, responsibility shifts to NICC, housed at the NIFC in Boise, Idaho. The National Multi-Agency Coordinating Group (NMAC, often called "Big MAC") is responsible for allocation of fire suppression resources throughout the United States in times of critical shortage, particularly those resources for which demand typically greatly exceeds supply, such as smokejumper teams, air tankers, and the "Type I" incident management teams required for large, complex

http://www.firewise.org/usa/about.htm (last visited Dec. 22, 2007).

[73] NAT'L INTERAGENCY COORDINATION CTR. [NICC], http://www.nifc.gov/nicc/about/about.htm (last visited June 9, 2008).

[74] CAL. DEP'T OF FORESTRY & FIRE PROTECTION, COOPERATIVE EFFORTS: FEDERAL GOVERNMENT, http://www.fire.ca.gov/fire_er_cefedgov.php (last visited Nov. 25, 2007). "Initial attack" is the first response to a wildfire once the decision to take suppression action has been made. Initial attack is typically carried out by a hand crew or a smoke jumper crew.

[75] NICC, ABOUT US, http://www.nifc.gov/nicc/about/about.htm (last visited Aug. 4, 2008).

fires.[76] However, the Forest Service continues to play a dominant role even within these cooperative management structures.

B. *Impacts on the States*

As described above, the role of state and local governments in wildland fire control is significant. It is also concentrated: although nearly every state experienced some wildland fire in the past year, the western states historically have been the most likely to burn and therefore the beneficiaries of the bulk of federal spending.[77] Though the federal government spends heavily to protect national resources—National Parks, National Forests, and Bureau of Land Management (BLM) lands—the cooperative structure means that federal resources are also drawn into action when fire breaks out on state or private land.[78] Thus, the incentive for landowners, states, and municipalities, particularly those in the wildland-urban interface, to take steps to fireproof their communities are somewhat blunted. Though states and municipalities send resources to respond to fires on federal lands, the relative size of federal and state cooperative expenditures is such that the federal government is, to a significant extent, subsidizing the western states and subsidizing landowners who choose to live in highly fire-prone areas. Federal managers have complained that former urbanites who move to full-time or vacation homes in rural areas take few steps to maintain fire-safe homes, and seem to expect that "fire protection services will be provided by others," rather than assuming personal responsibility for the fire-safety of their homes.[79]

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[76] *Id.*

[77] USFS, for example, allocates $132.3 million—65 percent of its suppression funding—to the western states, while BLM spends 99.9 percent of its suppression funding (about $91.6 million) in the West. GAO, BETTER INFORMATION AND A SYSTEMATIC PROCESS COULD IMPROVE AGENCIES' APPROACH TO ALLOCATING FUEL REDUCTION FUNDS AND SELECTING PROJECTS 23, 35 (2007).

[78] For example, the California Department of Forestry and Fire Protection's index of recent wildland fire incidents shows that federal firefighters cooperated in nearly every major fire. CAL FIRE INCIDENT INFORMATION, http://www.fire.ca.gov/index_incidents_info.php (last visited Aug. 23, 2008). Federal resources are made available to states via NICC. NICC, *supra* note 75.

[79] JACK D. COHEN, REDUCING THE WILDLAND FIRE THREAT TO HOMES: WHERE AND HOW MUCH? 194 (1999), *available at* http://www.nps.gov/fire/download/pub_pub_reducingfirethreat.pdf.

II. THE 1988 YELLOWSTONE FIRES AND THE INSTITUTIONAL CHALLENGES FACING WILDLAND FIRE CONTROL

The Yellowstone fires, among the highest-profile and most extensively studied of the modern fire era, highlight the persistent problems in modern fire administration. First, despite widespread cooperation in fire response, fire planning continues, by and large, to take place within the agency silo and without the involvement of local agencies or communities. In the case of Yellowstone, the federal agencies involved had fundamentally different approaches to fire, arising out of the distinct land-management missions contained in their organic acts. As a result of these differing missions, they followed fundamentally different approaches to fire, leading to clashes over the best way to manage boundary-crossing blazes. The intensely hostile reaction of the "gateway" communities around Yellowstone National Park (YNP), which blamed the let-burn policy for threats to their homes, also brings into sharp focus the implications of limiting community involvement in the planning process.

Yellowstone also demonstrates the problems that result from a funding structure that creates incentives to focus on suppression rather than prevention. Funding suppression has created an assumption among intermix communities that they will be protected should fire break out, without establishing a corresponding obligation to take steps to reduce the threat to residential property. This reinforces public perception of wildland fire as a universal evil, and focuses agency attention on response, rather than planning and prevention.

Finally, agency managers have failed to openly address the costs and benefits associated with choosing a fire management approach. Critically, agencies have failed to clarify for the public and for legislators the costs of fire exclusion. Thus, many continue to perceive suppression as the safest alternative and do not understand that excluding fire raises the risk of larger, destructive blazes in the future. The response of the gateway communities to the Park Service's initial decision to allow fires to burn, and media and Congressional criticism of NPS's actions as destructive reflect a lack of understanding of the inherent risks of suppression and the role of fire in ecosystems.

This section uses the 1988 Greater Yellowstone Area (GYA)[80] fires to illustrate the effects that these institutional challenges have on agency and community responses to fire. The fires, the first of which was sparked in June, burned for two-and-a-half long months, consuming nearly 1.7 million acres, and spurred a bitter national debate over Yellowstone's use of prescribed natural fire.[81] The effort cost the federal government over $100 million.[82] Miraculously, not one firefighter of the over 20,000 who worked on the Yellowstone fires in the course of the summer was killed during active operations.[83] Despite changes in U.S. fire management in the two decades since, the problems highlighted by the Yellowstone fires remain challenges today. As this section argues, U.S. fire managers have learned from the Yellowstone fires, but they have not learned enough.

A. *Background*

In 1972, the management of Yellowstone National Park made a radical decision: going forward, the Park Service would suppress only human-caused fires, allowing lightning-caused blazes to burn as prescribed fires. As Dan Sholly, Chief Ranger of Yellowstone, wrote in his 1991 account of the fires, the "let-burn" policy was "simply another logical step in the ongoing attempts of the Park Service to return the park's ecology, as much as possible, to its original state."[84] The first sixteen years of the let-burn policy were a success—natural fires occurred at rates below the historical average and were generally small, with limited effect.[85]

However, the National Forests surrounding YNP—the Custer,

[80] The "Greater Yellowstone Area" has been defined to include Yellowstone and Grand Teton National Parks; the Caribou-Targee, Beaverhead-Deerlodge, Custer, Bridger-Teton, Shoshone, and Gallatin National Forests; and surrounding state, private, and tribal lands. GREATER YELLOWSTONE COALITION, http://www.greateryellowstone.org/ecosystem/lands/national-forests/index.php (last visited Dec. 22, 2007).

[81] U.S.D.A. FOREST SERVICE, FIRE GROWTH MAPS FOR THE 1988 GREATER YELLOWSTONE AREA FIRES 5 (1994), *available at* http://www.fs.fed.us/rm/pubs_int/int_gtr304.pdf. On the so-called "Black Saturday," August 20, 1988, over 152,000 acres burned. *Id.* at 5 tbl.1a.

[82] GAO, FEDERAL FIRE MANAGEMENT: EVALUATION OF CHANGES MADE AFTER YELLOWSTONE 5 (1990).

[83] DAN R. SHOLLY, GUARDIANS OF YELLOWSTONE 259 (1991). However, a firefighter was killed by non-fire causes.

[84] *Id.* at 215.

[85] *Id.*

Targhee, Bridger-Teton, Gallatin, Shoshone, and Beaverhead—had not adopted the let-burn policy. Though the era of 100 percent suppression had ended by 1988, the Forest Service continued to take a much more aggressive approach to fire suppression. USFS, furthermore, allowed the use of firefighting techniques and tools—such as bulldozers—that were barred in YNP, where they were seen as a "violat[ion] of the park's wilderness."[86]

Although fire was a common, annual occurrence in the GYA, 1988 quickly proved to be a remarkable year. Deep drought and highly unusual fire behavior proved a remarkable challenge to firefighters.[87] Before the summer was out, six of the GYA fires were under the control of Type I incident command teams, highly trained teams reserved for the most critical and complex wildfires.

Table 1: Greater Yellowstone Area Fires, 1988[88]

Fire	**Origin**	**Total Acres Burned**
Fan	Yellowstone NP	27,346
North Fork	Targhee NF	531,182
Huck	Grand Teton NP	120,387
Mink Creek	Bridger-Teton NF	144,698
Clover-Mist	Yellowstone NP	396,268
Hellroaring	Gallatin NF	101,996
Storm Creek	Absaroka-Beartooth Wilderness (USFS)	143,661
Wolf Lake	Yellowstone NP	see North Fork
Snake River Complex	Yellowstone NP	221,871

B. *Interagency Problems and Community Involvement*

1. *The Foundational Problem: Contrasting Agency Missions*

Fire Plans reflect the use priorities and missions of the

[86] *Id.* at 227. It is important to note that Sholly is using the term "wilderness" more generally, and is not referring to areas classified as wilderness under the Wilderness Act. However, USFS did bar the use of bulldozers in Wilderness Act-denominated wilderness areas. *Id.*

[87] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25664.

[88] USDA Forest Service, *supra* note 81, at 5.

agencies that draft them. Thus, all of the factors that influence the larger planning process—for USFS, the creation of Forest Management Plans; for NPS, the creation of Park Plans—are reflected in the Fire Plan. As a current interagency fire planning guide drafted for the GYA states:

> Since their inception, National Forests and National Parks have been managed differently, as specified in their original Congressional mandates. National Parks were founded upon the principles of preservation, public enjoyment, and non-interference with natural processes. National Forests were established on conservation principles; the wise multiple-use of natural resources.[89]

Under most circumstances, it makes sense that federal lands have different management priorities. After all, they have been established to serve different public purposes and needs. In the case of fire, however, federal planners are confronted by boundary-crossing problems that can only be solved by sublimating, to a certain extent, individual unit priorities to a common approach. However, federal managers lack both the authority and the incentives to step outside their statutory mandates in fire planning. This divide is at the heart of the lack of interagency and federal/state coordination and agency reluctance to openly discuss tradeoffs, and it magnifies the problems created by the fire funding system.

The let-burn policy is only one example of the impact of these clashing missions on agency attitudes toward fire. In addition to letting natural fires burn, YNP officials allowed only "light hand on the land" suppression techniques to be used, in order to minimize the ecological impact of firefighting.[90] USFS Supervisors in the surrounding forests, on the other hand, severely limited prescribed burning and permitted the use of high-impact suppression techniques, such as bulldozers.[91]

In essence, the agencies had different fire cultures, which

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[89] U.S.D.A. FOREST SERVICE/NAT'L PARK SERVICE, THE GREATER YELLOWSTONE AREA INTERAGENCY FIRE MANAGEMENT PLANNING AND COORDINATION GUIDE 1 (2000), *available at* http//www.fs.fed.us/r1/gallatin/fire/gya/gya_final_agreement.pdf; *see also* National Parks Organic Act, 16 U.S.C. § 1 (2000); National Forest Management Act, 16 U.S.C. § 1604(e)(1) (2000).

[90] SHOLLY, *supra* note 83 at 227.

[91] Except in wilderness areas. *See supra* note 86 and accompanying text.

contributed to the conflicts that arose between NPS officials and the Type I incident commanders assigned to Yellowstone by NMAC. Type I commanders may come from any agency, and in the case of the GYA fires, most were from the Forest Service.[92] Frustration and confusion developed as USFS commanders, with a more aggressive perspective on fire suppression, grappled with Yellowstone's preservation-oriented firefighting policy.[93] The conflict was exacerbated by resource shortages: by July, the Yellowstone fires had exhausted local and regional resources, and the firefighting agencies became dependent upon NMAC to send the handcrews, retardant tankers, and bulldozers that they needed. However, NMAC on several occasions refused to authorize additional resources for YNP, creating a siege mentality among NPS officials, who felt increasingly isolated.[94]

Many of the problems that arose during the GYA fires could have been avoided via interagency planning that openly addressed the costs of suppression and encouraged investment of time and money in prevention and preparation. However, the agencies were unable to overcome their divergent statutory mandates during the planning phase and struggled with the effects of that lack of coordination even during fire response.

2. *Interagency Coordination*

Because agencies' missions often lead to the adoption of different fire regimes, many attempts at unified agency planning (such as the GYA guide referenced above) focus solely on the cooperation in times of crisis, such as resource sharing and mutual aid, rather than attempting to set joint goals and develop a shared approach to fire in the ecosystem. Such documents are not true Fire Plans, as they do not reach the level of specificity required to guide on-the-ground prevention and response actions.[95]

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[92] MICAH MORRISON, FIRE IN PARADISE: THE YELLOWSTONE FIRES AND THE POLITICS OF ENVIRONMENTALISM 167 (1993).

[93] *Id*. at 68.

[94] *Id*. at 149–50, 168–70.

[95] There are a few examples of efforts toward greater integration in fire planning: the Southwest Oregon Fire Management Plan (SWOFMP) covers the USFS, NPS, BLM units, as well as state and privately managed lands. U.S.D.A. FOREST SERVICE, *supra* note 65 at 6. The SWOFMP discusses resource objectives in the covered jurisdictions, describes the fuel treatment options and prescribed fire use acceptable in each area, and identifies areas of similar type across jurisdictions that might be suitable for similar treatment. However,

At Yellowstone, it is clear that the lack of cooperation in agency planning led to conflict during fire response.[96] USFS perceived the risk of catastrophic fires in the GYA to be high, and had thus determined early in the summer to move to an interim policy of 100 percent suppression, while YNP stuck to the let-burn policy until mid-July.[97] Thus, when the Falls fire (later part of the Snake River Complex of fires) threatened to cross into the Caribou-Targhee National Forest, the Forest Supervisor refused to accept it, despite an agreement to receive fire from YNP.[98] Under existing agency fire policies, if a federal unit administrator refuses to accept a fire, it must be stopped at the unit boundary. Thus, despite the let-burn policy, YNP was forced to throw scarce resources at keeping the Falls fire from entering the National Forest.[99] Had NPS and USFS made a coordinated decision during planning on when to suspend prescribed burning, this conflict could have been avoided.

Another focus of conflict was the Park Service's refusal to allow bulldozers to be used inside Yellowstone out of a conviction that they would lead to lasting ecological damage.[100] On at least one occasion, a Yellowstone ranger threatened to ticket a dozer crew from the California Department of Forestry that wanted to take trucks across a meadow near a National Forest boundary in order to fight a fire in that jurisdiction.[101] Later in the summer, conflict erupted between Dan Sholly and a USFS crew fighting a fire inside YNP. Limited bulldozer use within the park had by this point been approved, and the crew wanted to take the bulldozers into an ecologically fragile valley that was considered by NPS to be important habitat for threatened grizzly bears. Sholly resisted,

participants in the SWOFMP continue to draft their own fire plans, establish their own use priorities, and determine suppression options, all based on individual agency mandates. For example, the Oregon Caves National Monument does not allow prescribed natural fire and requires 100 percent suppression. *Id.* at 37–38. Thus, the SWOFMP is more of a mechanism for cooperation and information-sharing than a true move towards integrated planning processes.

[96] MORRISON, *supra* note 92, at 45.

[97] *Id.* at 17, 46; SHOLLY, *supra* note 83, at 223.

[98] MORRISON, *supra* note 92, at 17, 45–46.

[99] *Id.* at 46.

[100] SHOLLY, *supra* note 83, at 260–62 (explaining NPS decisions on bulldozer use).

[101] MORRISON, *supra* note 92, at 150.

and fortunately for the park, the fire was extinguished by snow.[102]

Both of these crises arose during fire response, but they resulted from failures during the planning stage. The federal agencies responsible for land within the GYA created their own plans for fire management, which reflected their distinctive history, missions, and priorities. They started from diametrically opposed underlying approaches to fire, came to the opposite conclusion about the correct response to the unusual weather situation, and, once the fires had become an area-wide crisis, spent precious time and energy fighting over appropriate suppression techniques. Each of these decisions created conflict between the agencies at a time when cooperation was vital. Once incident commanders and crews from multiple agencies were involved in fighting the fires inside YNP, lack of understanding of what techniques were permissible led to conflict and confusion.[103] The Fire Management Policy Review Team (FMPRT), commissioned to review the Yellowstone fires, noted that "[v]ariations in planning and decision processes result[ed] in decisions that appear[ed] illogical, create[d] political and public concern for competence of the agencies, and render[ed] decisions to limit fire size ineffective."[104] Essentially, the effect of atomistic planning processes was that agency policies increased the difficulty of fighting the 1988 fires.

3. *Local Involvement in Setting Policy*

As discussed above, one of the critical issues in federal public lands policy in the last thirty years has been conflict between local landowners and federal managers over public participation in planning and access to lands.[105] Many of these clashes are rooted in the conflict between the fundamental missions of the federal agencies and the priorities of local users. Federal managers have national constituencies: USFS was founded to guarantee the *national* timber supply, not the local one, while the National Parks are preserved for the enjoyment of all Americans. No matter how sympathetic a federal manager is to local concerns, her discretion is bounded by her agency's statutory and regulatory priorities.

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[102] SHOLLY, *supra* note 83, at 260–61.

[103] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25665.

[104] *Id*. at 25664.

[105] *See supra* note 12 and accompanying text.

Furthermore, federal planning processes are open to participation on equal footing by citizens and groups throughout the United States, and local concerns receive no deference in decision-making.

These issues are particularly acute in the context of intermix fire. The GYA fire managers, though they confronted many challenges, were fortunate in at least one respect: the fires only implicated intermix issues to a limited extent.[106] Integrated fire planning is especially vital in the wildland-urban interface, where federally managed properties sit cheek-by-jowl with residential communities, for which state and local fire departments bear primary responsibility.[107] State and local governments can play a critical role in managing intermix fire, particularly by requiring the use of fire-safe materials in construction, the maintenance of "defensible space" around homes, and the removal of high-risk fuels.[108] However, because state and local governments are often excluded from federal land-use planning, their wildland fire safety efforts are not integrated into the agencies' fire prevention and preparation programs.

The result of this "nationalized" planning process is that the resulting Forest and Park Plans may not reflect local priorities or desires. When these plans are tested, that lack of public support may erupt into outright hostility. In Yellowstone, despite the fact that NPS served as a de facto municipal government for many of the gateway communities—providing public safety, firefighting, water, and sewer services—there was a fundamental lack of trust between federal managers and community residents. Gateway communities perceived NPS officials as aligned with

[106] However, the intermix issues—such as the protection of the gateway communities—were among the most contentious.

[107] It should be noted that the idea that governments should bear responsibility for protecting rural homes from fire is not universal: in New South Wales, Australia, for example, rural landowners bear primary responsibility for protecting their homes. *See* ARNO & ALLISON-BUNNELL, *supra* note 22, at 176; *see also* FIREWISE PROGRAM – NSW RURAL FIRE SERVICE, http://www.rfs.nsw.gov.au/dsp_content.cfm?CAT_ID=203 (describing how to prepare a home for an approaching fire and how to fight the fire) (last visited June 9, 2008).

[108] *See, e.g.*, The Oregon Forestland Urban Interface Fire Protection Act, O.R.S. §§ 477.025, 477.059 (2007); Mesa County, Colorado, Land Development Code § 7.6.3(A); CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION, THE CALIFORNIA WILDLAND HAZARD & BLDG. CODE, http://www.fire.ca.gov/wildland.php (last visited Sept. 10, 2008).

environmental interests that favored preservation and environmental quality at the expense of the tourist access and development upon which the gateway communities depended. This perception developed as a result of the close relationship of NPS with many conservation and environmental groups during litigation in the 1980s. The depth of this mistrust is reflected by the belief of many community residents that the Park Service and their environmental allies were actually allowing the fires to destroy tourist facilities in an attempt to wipe out commercial operations in and around the park.[109] Although these claims are unsubstantiated,[110] the origins of this mistrust are easy to understand: Earth First! cofounder Howie Wolke, for example, remarked that it was a "shame" that a tourist development inside Yellowstone was saved from the Shoshone fire.[111] Meanwhile, the FMPRT noted that YNP officials continued to emphasize the environmental positives of the fires long after it was no longer appropriate to do so.[112]

The particular focus of federal-community tension, however, was Yellowstone's let-burn policy. Many gateway residents felt that NPS had dismissed clear warnings of dangerous fuel and weather conditions[113] and vilified NPS officials for letting the fires destroy Yellowstone.[114] The FMPRT noted that many of those who commented during the review process felt that "fire management officials in the greater Yellowstone area demonstrated a complete disregard for the health, safety, and livelihood of those in the surrounding communities and that homes and businesses should have been protected."[115] Local reactions, however, do not necessarily reflect reality: in fact, the gateway

[109] The Fire Management Policy Review Team reported that some commenters alleged that "managers with philosophies advocating naturalness above all else" were letting fires burn out of control. Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,665–66.

[110] *Id.* at 25,665–66.

[111] MORRISON, *supra* note 92, at 85. Morrison also attributes this belief to "many Park Service employees", but provides no sources.

[112] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,665.

[113] MORRISON, *supra* note 92, at 42–43.

[114] SHOLLY, *supra* note 83, at 15–18 (describing a contentious community meeting).

[115] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,673.

communities escaped virtually unscathed. Despite some damage to tourist facilities, the Old Faithful Inn and other historic structures within the park were also saved at tremendous personal risk to firefighting teams.[116] In fact, gateway communities were often protected even when unnecessary: perceived threats to West Yellowstone—which was actually never to face serious fire danger—drew media attention and diverted scarce resources from more critical fire situations within the park.[117]

Why, then, the hostile response from local communities, despite minimal damage? The best explanation is that, although no lives were lost, no homes were destroyed, and economic damage was mitigated by firefighter spending, the fires were, for the people of the gateway communities, a frightening demonstration of what federal managers' choices—choices made with limited community input and without incorporating community preferences—could mean for them. The position of many federal staffers is illustrated by one comment to the FMPRT that "structures that are built in forested wildland ecosystems are knowingly placed in harm's way. They are at their own risk and society does not owe them fire protection."[118] The FMPRT also noted that many commenters felt that the gateway communities, whose economies depended upon the parks, should accept the "negative aspects as well as the benefits of their location."[119] In light of this sentiment among agency officials, it is unsurprising that community members did not trust decisions made by federal actors via a process that largely excluded their concerns.

So long as the federal agencies have national constituencies and a responsibility to adhere to the mandates of their organic acts, local ability to control land-use and land-management choices in the National Parks and Forests will be limited. This is not to suggest that the community should control the choice of fire policy. Designing an effective fire policy requires a fairly high level of technical understanding of both forest dynamics and fire behavior. Local communities are very likely to prefer fire

[116] For an account of firefighters' struggle to protect the Old Faithful complex, see Jim Robbins, *Fire in Yellowstone Tourist Area Destroys Cabins But Passes Geyser*, N.Y. TIMES, Sep. 8, 1988.

[117] MORRISON, *supra* note 92, at 144.

[118] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,673.

[119] *Id.*

exclusions: the public is "part of the Smokey the Bear school of preventing fires," and there is "little precedent or political attraction" for prescribed burning programs.[120] That states are much less likely than federal actors to adopt prescribed burning is a reflection of this popular distaste for fire in the forests: the Oregon Department of Forestry, for example, bars use of prescribed natural fire, allowing only management prescribed burns.[121] Certainly, the gateway communities would have chosen fire exclusion, regardless of the risks, had YNP fire policy been in their hands.

Even if local communities do not drive the choice of fire policy, however, increasing public participation enables federal managers to educate local communities about these choices, to explain the risks and benefits of the chosen fire policy, and to respond to local concerns about protection of specific sites. Even if the final choice remains in the hands of the administrator, bringing the public into the equation is likely to make that choice more informed and to increase ex post public support for the policy. It will also reduce the feelings of disenfranchisement that characterize much western conflict between local communities and federal managers. It is no coincidence that many of the western legislators who most strongly criticized the let-burn policy were longtime Sagebrush Rebels.[122]

C. *Openness About Tradeoffs and Costs*

The GYA gateway communities' response to the let-burn policy reflects not only mistrust of federal decision-makers and a sense of disenfranchisement, but also a lack of understanding of the risks of 100 percent suppression. Opponents of prescribed burning, like the U.S. congressmen who called for the resignation

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[120] Brian Czech, *Challenges to Establishing and Implementing Sound Natural Fire Policy*, Renewable Resources Journal 14, 18, 16 (1996). It should be noted that the correct name for the popular fire-safety mascot is "Smokey Bear," not "Smokey the Bear." This is, apparently, a matter of some concern to Smokey's handlers. ONLY YOU CAN PREVENT WILDFIRES – SMOKEY'S VAULT – SMOKEY'S NAME, http://www.smokeybear.com/vault/name_main.asp (last visited Dec. 26, 2007).

[121] SOUTHWEST OREGON FIRE MANAGEMENT PLAN, *supra* note 65, at 37, *available at* http://www.fs.fed.us/r6/rogue-siskiyou/fire/pdf/fmp-sec3.pdf.

[122] HAL K. ROTHMAN, A TEST OF ADVERSITY & STRENGTH: WILDLAND FIRE IN THE NATIONAL PARK SYSTEM 194–95 (2007).

of the National Parks Director during the Yellowstone fires,[123] ignored powerful scientific evidence that suppression damages ecosystem health and leads to dangerous, catastrophic fires that threaten communities, timber values, and recreational facilities.[124] Certainly, decades of fire exclusion and the success of the Smokey Bear campaign have contributed to a public perception that all wildland fires are dangerous. However, the unwillingness of federal managers to openly address the costs and benefits of fire management alternatives during the decision-making process—particularly the cost of suppression—has lead to poor understanding of how land-use priorities and the choice of fire management tools interact.

Public dialogue around the GYA fires makes it clear that costs and tradeoffs were poorly understood and not openly discussed. The FMPRT explicitly noted that the tradeoffs involved in the natural fire policy had not been made clear to the community[125] and that many commenters felt there to be a need for "improving awareness of fire management as an ecological tool," improving public understanding of "fire policies for specific areas," and increasing participation in the NEPA process.[126] Choosing a fire regime requires choosing to optimize one value, often at the expense of others. In the case of YNP, Park administrators chose to optimize "naturalness," rather than local short-term air quality or the safety of the gateway communities. Politicians and the community members who demanded a return to fire exclusion clearly did not understand the benefits of prescribed fire or the costs of 100 percent suppression. This must largely be attributable to the failure of the federal agencies to communicate the risks and benefits of fire management alternatives to the public. Coupled with the exclusion of communities and state and local governments from the planning process, this failure contributed to hostility between NPS and USFS managers and the public once the fires broke out.

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[123] *See* Philip Shabecoff, "Park and Forest Service Chiefs Assailed on Fire Policy," N.Y. TIMES (Sept. 10, 1988).

[124] ARNO & ALISON-BUNNELL, *supra* note 22, at 174–79.

[125] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,665.

[126] *Id*. at 25,671.

D. *Funding Mechanisms*

Despite the end of the "Hundred Years' War on nature's fire", agencies continue to focus heavily on suppression, rather than prescribed burning, fuel treatment, and other wildfire prevention activities.[127] There are a number of reasons why suppression still dominates the wildland fire management landscape. For managers on the ground, there are powerful incentives to suppress a fire, including local political and community pressures and the opportunity to acquire much-needed equipment via emergency funding. Furthermore, the psychological stamp left by a century of fire exclusion is difficult to erase: many federal managers have spent most of their lives fighting to suppress every fire.[128] Higher-level administrators face pressure at the national level that affects their decision-making processes.[129] The mechanics of environmental review also tilt the balance toward suppression, as prescribed burns and fuel treatment are subject to the requirements of NEPA, while emergency suppression actions are not.[130] However, studies have shown that at least in the case of prescribed burns, regulatory delay is more of a theoretical than a practical concern: the vast majority of fuel treatment EISs are not appealed or litigated and 70 percent of delays in fuel treatment projects are due to either weather or funding problems, rather than litigation.[131]

However, the major force in maintaining the dominance of suppression and preventing the wholesale embrace of prevention and management is the wildland fire funding structure. Suppression is paid for out of emergency funding, while presuppression activities must be paid for out of appropriations. Agencies often use suppression to "pay for the basic infrastructure of fire management," as much-needed equipment, personnel, and

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[127] CARLE, *supra* note 17, at 248–51.

[128] Czech, *supra* note 120, at 16–18; CARLE, *supra* note 17, at 175–80 (describing managers' emotional response to allowing fire to burn).

[129] Czech, *supra* note 120, at 16–18.

[130] The Ninth Circuit recently enjoined USFS from using a categorical exclusion developed under the Healthy Forests Initiative and intended to avoid NEPA review of prescribed burns up to 4,500 acres and fuel treatment projects up to 1,000 acres. *See generally* Sierra Club v. Bosworth, 510 F.3d 1016 (9th Cir. 2007).

[131] GAO, INFORMATION ON DECISIONS INVOLVING FUELS REDUCTION 3 (2003); GAO, ADDITIONAL ACTIONS REQUIRED TO BETTER IDENTIFY AND PRIORITIZE LANDS NEEDING FUELS REDUCTION 4 (2003).

supplies can be acquired using emergency funds.[132] For managers, shifting costs to emergency funding is highly preferable from a funding standpoint. This creates a situation in which "programs with a large number of wildfires pay for themselves in ways that successful programs of fire prevention or prescribed burning do not."[133] Essentially, as Pyne notes, the resources available for wildland fire suppression are unlimited, and thus normal economic analysis is inapplicable.[134]

By 1988, NPS managers at Yellowstone had shifted focus from suppression to fire prevention and use. USFS and the public, however, continued to be strong advocates of suppression-oriented policies. YNP's managers had made an ideological commitment to returning fire to its natural role in the park, a commitment likely strengthened by Yellowstone's unique place in American culture. Yellowstone is, after all, the oldest and perhaps the most recognizable of the national parks—an international symbol of America's natural heritage. USFS, on the other hand, lacked motivation to run against the financial incentives created by the fire funding system. The national forests of the GYA, though frequently visited and of great natural beauty, did not play the flagship role that Yellowstone did for NPS.[135] The failure of USFS and the other federal agencies to move away from fire exclusion doubtless contributed to continuing public perceptions that the "safe" response to wildland fire was suppression. Funding suppression becomes a political winner for legislators,[136] and the cycle continues unbroken.

The dominance of fire suppression is particularly bad news for interagency planning and increased community involvement. So long as incentives for fuel treatment remain low, agency plans are unlikely to evolve beyond agreements to share resources in emergencies. Furthermore, the funding structure limits incentives for agencies to explore other fire management options, even at the planning stage, since money for fuel treatment and prescribed burning is finite. Agencies that know they are likely to focus on

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[132] PYNE, *supra* note 2, at 434.

[133] *Id.*

[134] *Id.*

[135] News coverage of the GYA fires invariably described fires—even those that primarily affected the national forests—in terms of the threat to Yellowstone National Park.

[136] *See supra* note 120 and accompanying text.

suppression regardless of the choice of other alternatives have little reason to engage the community in a planning process that openly discusses a wide range of management options.

E. *Conclusion*

From the perspective of the Park Service's mission and use priorities, the 1988 fires are a success story: they reduced fire risk in Yellowstone, improved habitat quality for many animals, and enriched soil.[137] Despite media descriptions of Yellowstone as "dead" during the fight against the fires, it was apparent within a few months that natural renewal was underway.[138] The FMPRT's report supported the natural fire policy, despite making many recommendations for "refine[ment]."[139] In the end, NPS's let-burn policy was vindicated, public opinion turned in support of the agency, and political pressure came to naught.

However, the 1988 fires came very close to being a disaster for Yellowstone, and although unusual weather conditions contributed to severity, institutional flaws bore much of the blame. In fact, GYA federal land managers got lucky. The gateway communities were spared the brunt of the blazes, and so NPS and USFS did not have to deal with the spectacle of burnt-out houses and families left homeless.[140] Snow put an end to the fires, so the agencies did not have to go on fighting the flames into the fall. Finally, and most significantly, no one died during active operations. It would have been difficult for NPS and supporters of the let-burn policy to celebrate their vindication in the shadow of firefighter fatalities, particularly had there been large-scale loss of life. Because the fires did not result in tragedy, NPS was in a stronger position to defend its choices after the fact. It is easy to imagine that the agency would have taken a hard political blow if

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[137] *See* SHOLLY, *supra* note 83, at 276–80 (discussing the park's regeneration); Peter Matthiessen, *Our National Parks: the Case for Burning*, N.Y. TIMES MAGAZINE (Dec. 11, 1988).

[138] Matthiessen, *supra* note 136.

[139] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,660.

[140] Firefighter effort was instrumental in saving Cooke City and Silver Gate. West Yellowstone was simply lucky. Mammoth Hot Springs, the home of most NPS employees and their families, meanwhile, came closest to destruction: the North Fork fire had actually started burning its way through the outskirts of Mammoth when rain dampened the leading edge and spared the town. SHOLLY, *supra* note 83, at 251–55 (recounting Mammoth's near miss).

many firefighters had died or one of the gateway communities been destroyed. Doubtless, the penalty paid for failure to discuss the tradeoffs involved in the let-burn policy, the lack of coordination with other agencies and the Park's poor community relations, would have been considerably greater.

Though much has changed in the two decades since the Yellowstone fires, the major problems that contributed to the blaze remain. Though an interagency planning guide for the GYA has been created, it operates more to facilitate communication and mutual aid than to guide a truly integrated planning process. The fire plans for the National Forests surrounding YNP continue to minimize the role of prescribed fire,[141] while YNP continues to emphasize the importance of fire use in the park.[142] The Yellowstone gateway communities still play a minor role in the federal planning process, and relationships between federal managers and local private landholders remain acrimonious. And, while the nation as a whole may have learned something about the ecological importance of fire as a result of the 1988 fires, that lesson was not sufficient to change the structure of funding in favor of prevention and prescribed fire use.

Furthermore, it is unlikely that most future managers will be as lucky as Dan Sholly and Robert Barbee turned out to be in 1988. Sholly and Barbee faced considerable political complexity due to the park's high profile, but the wildland-urban interface issues were, at least, minimal. As the frequency of intermix fire grows, risks to homes, communities, and civilian life will increase. Intermix fires call for immediate and intense firefighter involvement—letting fire pursue its natural course in a wooded residential area is not a feasible option. Thus, the risk of tragedy is greater, and the likelihood of unwise public action in the wake of disaster increased.

III. THE FUTURE OF FIRE CONTROL

In many respects the national wildland fire control regime is

[141] In the Caribou-Targhee National Forest, for example, over half of total acreage is off-limits to fire and 100 percent suppression is practiced, though the plan cites to the National Fire Plan's emphasis on the use of prescribed fire in land management. CARIBOU-TARGHEE NATIONAL FOREST – FIRE & AVIATION, http://www.fs.fed.us/r4/caribou-targhee/fire/fire_use/index.shtml (last visited Jan. 27, 2008).

[142] U.S.D.A. FOREST SERVICE/NAT'L PARK SERVICE, *supra* note 89.

an excellent example of decentralized, cooperative action and decision-making. However, there are limits to the extent of cooperation and decentralization possible in the current regime. This section discusses possible ways of lowering these barriers and improving decision-making and planning. Specifically, this section argues that interagency cooperation in planning be required in high-risk areas, that alternatives be discussed clearly and thoroughly in the fire planning process, and that fire funding be restructured. By instituting these reforms, the federal government can maintain the flexibility that is the great strength of the current wildland fire regime, while increasing open discussion of tradeoffs, improving community participation in planning, and removing incentives to put off hard decisions until fire breaks out.

A. *Cooperative Planning*

Under the current statutory structure, fully integrated fire planning is impossible. Federal agencies are bound to the missions and uses established by federal law, and the ability of the public to participate in shaping those missions and uses is limited. Currently, the federal government encourages but does not mandate that its firefighting agencies plan in cooperation with each other and with local and state authorities.[143] However, promising examples of cooperative fire planning are popping up across the United States. Some of these plans—like the Greater Yellowstone Area plan—focus solely on issues of interagency cooperation.[144] Others retain critical decision-making authority in the individual agencies but seek to frame all fire planning in terms of cooperation and shared interests.[145] However, so long as flexibility in planning is strictly bounded by the mandates of the agencies' organic acts, true interagency planning cannot take place.

In the federal land-use planning context, Congress has sanctioned one experiment in loosening the bonds of the organic acts. The Herger-Feinstein Quincy Library Group Forest

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[143] *See, e.g.*, NAT'L WILDLAND FIRE COORDINATING GROUP, MASTER COOPERATIVE WILDLAND FIRE MANAGEMENT AND STAFFORD ACT RESPONSE AGREEMENT TEMPLATE, *available at* http://www.nwcg.gov/teams/ibpwt/documents/cooprelations/master_coop_agreement_template.pdf. The Template is designed for agencies to use in creating an interagency response plan for fires that become Presidentially declared emergencies.

[144] U.S.D.A. FOREST SERVICE/NAT'L PARK SERVICE, *supra* note 89.

[145] *See* U.S.D.A. FOREST SERV., *supra* note 65 at 4.

Recovery Act may show the way forward in terms of truly integrated land-use and fire planning.[146] In the late 1980s and early 1990s, conflict over timber extraction and environmental protection brought the forest planning process in northeastern California to a standstill. In an attempt to resolve the contentious situation, a group of state and federal managers, environmentalists, and industry representatives began meeting at a local library. In 1998, Congress explicitly authorized the non-federal actors to take part in creating management plans for the "Quincy Library Group area," comprised of the Lassen and Plumas National Forests, and a part of the Tahoe National Forest.[147] The success of the Quincy experiment remains debatable and the federal government has not sanctioned similar experiments elsewhere.[148] However, Quincy represents a remarkable departure from the normal forest or park planning model, in which agencies plan in isolation, public participation is limited, and local and commercial interests are accorded no special status.

Evaluating the advantages and disadvantages of wholly dismantling the current federal land-management structure is beyond the scope of this paper. However, it is possible to force cooperation across agency and state-federal-local lines without entirely doing away with distinct agency missions and planning processes. The Quincy Library Group process was a place-based approach founded on the shared interests of stakeholders in a particular area. Congress should require the integration of fire planning processes along similar geographic lines. For example, an area where a national park, national forest unit, and state forest lands meet would be framed as a cooperative fire planning unit. Importantly, any unit of state or local government that receives federal money for wildland firefighting or to which federal firefighters would be dispatched in the case of an emergency should be required to participate in this cooperative planning process.

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[146] Herger-Feinstein Quincy Library Group Forest Recovery Act, 16 U.S.C. § 2104 (2000).

[147] PAT & GEORGE TERHUNE, QUINCY LIBRARY GROUP CASE STUDY: CASE STUDY PREPARED FOR THE WORKSHOP ENGAGING, EMPOWERING, AND NEGOTIATING COMMUNITY: STRATEGIES FOR CONSERVATION AND DEVELOPMENT (1998), *available at* http://www.qlg.org/pub/miscdoc/terhunecasestudy.htm.

[148] *See* WILLIAM VARETTONI, SUCCESS OVERDUE AT THE QUINCY LIBRARY (PERC 2004), *available at* http://www.perc.org/perc.php?id=549.

Within such units, Congress should require that agencies coordinate their fire policies as far as possible in light of their statutory mandates. Agency managers should be required, so far as is possible, to make a joint decision about the role of fire in a given area, including whether and under what conditions to allow prescribed burning, what types of prevention projects to undertake, and what techniques should be used in suppression. For example, where a residential community abuts a national forest unit, local and USFS managers might determine that all fires must be suppressed. Local government, therefore, might fund projects to remove fuels and create defensible space around homes, while federal managers could undertake manual and mechanical thinning projects rather than using prescribed burning.

In some cases, however, agency mandates may prevent the integration of fire management planning. A federal wilderness area in which all natural fires are permitted to burn may abut state forest lands, where 100 percent suppression is required. In such cases, Congress should require that the relevant agencies create joint emergency plans that address how management regimes will interact in the case of a boundary-crossing fire, what the emergency response command structure will be, and how resources will be used in support of differing agency objectives. Another particularly important step will be to establish joint decision-making processes for emergencies. The situation that occurred in the GYA in 1988—when USFS suspended prescribed burning in the face of changing weather, while NPS held fast to the let-burn policy—should be the prime example of what to avoid.[149] Where critical emergency decisions must be made that will affect fire in all management areas, they should be made jointly. This will be virtually impossible absent the ex ante creation of decision-making structures, but is vital when a major fire erupts.

NPS and USFS are most likely to be affected by such a Congressional mandate. Many national parks are at least partially surrounded by national forests, meaning that considerable interagency cooperation issues exist. National forests, meanwhile, very often abut state forest lands, and are frequently located near urban or suburban areas. BLM and FWS, on the other hand, managed many more isolated lands and experience fewer interagency issues.

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[149] *Supra* note 95 and accompanying text.

Even if statutory barriers to integrated planning remain, the cooperative planning process may have positive effects in terms of encouraging cross-cutting solutions. The cooperative planning process makes all agencies fully aware of other agencies' priorities, available resources, and particular concerns. Clarifying what procedures and techniques each agency uses will help to avoid the confusion like that over the definition of "light hand on the land" that troubled the suppression effort in Yellowstone. Cooperative planning also enables parties to agree to lower barriers to rapid response across jurisdictional boundaries and agree on resource-sharing arrangements. Finally, cooperative planning that includes state, municipal, and county governments helps to put local concerns on the radar for federal decision-makers. Thus, there are strong benefits to creating cooperative processes even without requiring all jurisdictions to arrive at one fire management policy.

B. *Alternatives Analysis*

As discussed previously, there is a considerable gap between public and practitioner understanding of fire behavior, fire ecology, and fire control. This is coupled with a distrust and resentment toward federal officials that develops in many communities that experience devastating wildland fire. Presently, Forest Service Fire Plans describe prevailing uses and the chosen form of fire protection without necessarily explaining why that method was chosen. As the FMPRT pointed out, managers often use technical terminology impenetrable to community members.[150] This does little to help communities understand USFS reasoning or the tradeoffs inherent in the choice of fire management tools.

To remedy this situation, the agencies should require by regulation in-depth analysis of fire management alternatives during the planning process. When agencies propose a major federal action, the environmental impact statement (EIS) requirement of the National Environmental Policy Act (NEPA) is triggered. The "heart" of the EIS requirement is its analysis of alternatives: a range of potential actions is described, the potential environmental impacts of each are analyzed, and the rational behind the choice of

[150] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25,667.

the preferred alternative is explained.[151]

In the fire context, the alternatives should be used to illustrate the ramifications of choosing a given management regime. The range of potential fire management strategies for a given management area should be described, along with the desired future condition as set by the FMP or Park Plan. The agency should then describe the likely future condition under each of these fire management options and compare that to desired future condition. The risk of catastrophic fire under each condition, the impact on local air quality, potential economic effect, resulting threats to structures or communities, and other ramifications of the decision should be presented in such a way as to enable the community to understand the tradeoffs inherent in each choice. The agency should then be required to explain why the preferred alternative was chosen. It is particularly important that the risks associated with the preferred alternative, as well as the benefits, be made clear. In order to ensure that community concerns are considered in the analysis of alternatives, the agencies should require by regulation that community representatives have an opportunity to comment as the alternatives are being formulated. Presently, the only participation required under the NEPA regulations comes after the draft EIS has been completed.[152]

If cooperative or integrated planning mechanisms have been established, the draft plan should explain how the fire policies of the participating units are linked and how the preferred regime fits into this larger plan. If agencies are not cooperating in planning, however, the plan should explain the potential "cumulative effects" of the fire plan. Cumulative effects, in the NEPA context, are those environmental impacts "which result[] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."[153] In this case, the agency should explain how the future condition predicted for the preferred alternative is affected by the fire policies of neighboring jurisdictions. The plan should also describe what the potential ramifications of the preferred alternative will be for other jurisdictions, such as increased risk to structures. Finally, the plan should explain what the effect on the community of the preferred

[151] 40 C.F.R. § 1502.14 (2007).
[152] *Id.* § 1503.1(a).
[153] *Id.* § 1508.7.

alternative, taken in combination with the current or expected fire regimes of other management areas, will be.

Cumulative impacts analysis and alternatives analysis are both already required under NEPA. However, by creating agency-specific guidance that requires a high level of detail and increase community input, agencies can improve public understanding of how fire is used and what role it plays in the federal public lands, as well as create a sense of empowerment on the part of community residents. While the preferred alternative may still not be the one local residents would choose, increasing opportunities for participation and improving communications will better inform federal decision-making and reduce the pervasive sense of disenfranchisement among many communities located near federal public lands.

NEPA has been the target of widespread criticism due to the substantial regulatory burden that it imposes.[154] Many argue that NEPA analysis comes too late, after the agency has already chosen a course of action.[155] Others decry the substantial opportunities it creates for environmental groups to mire projects in years of litigation.[156] Finally, many members of the public never participate in the NEPA process due to the substantial investment of time and energy involved in reviewing documents, submitting comments, and participating in hearings.

Avoiding further regulatory delay is an important concern. This recommendation, however, does not create further opportunities for delay due to litigation, because it adds no new regulatory requirements open to APA challenge: the basic NEPA structure remains intact. Though this proposal increases the level of detail required, it does so via agency guidance rather than by rulemaking. The advantage of this approach is that creating

[154] *See, e.g.* Bradley C. Karkkainen, *Whither NEPA?*, 12 N.Y.U. ENVTL. L.J. 333, 340–43 (2004) (reviewing criticism of NEPA).

[155] *See, e.g.*, COUNCIL ON ENVT'L QUALITY, THE NATIONAL ENVIRONMENTAL POLICY ACT: A STUDY OF ITS EFFECTIVENESS AFTER 25 YEARS 11 (1997); *but see* Bradley C. Karkkainen, *Information-Forcing Environmental Regulation*, 33 FLA. ST. U. L. REV. 861, 879–83 (2005) (arguing that NEPA shapes behavior as agencies seek to design projects to fall beneath the threshold that triggers review).

[156] *See, e.g.*, STAFF OF H. COMM. ON RES., 109TH CONG., RECOMMENDATIONS TO IMPROVE AND UPDATE THE NATIONAL ENVIRONMENTAL POLICY ACT, 9 (2006) (dismissing NEPA's defenders as "blind to the overall negative effects" of litigation on federal decision-making).

guidance is a less arduous process for an agency, and once created, guidance can be more easily revised as circumstances change. Furthermore, agency units to which these concerns are not easily applicable (such as those with extraordinarily low fire risk, or which must exclude fire as a matter of law) would not be bound by guidance as they would be by regulation.

With regard to the impact of NEPA on agency decisions, many of the criticisms that apply to the process as a whole apply in the case of fire planning. However, this proposal focuses particularly on NEPA's information-disseminating function, not on its action-forcing aspects.[157] If state and local actors become involved in a cooperative or integrated planning process, they will have first-hand knowledge of the content of federal fire plans before NEPA documents are released. This is likely to increase the salience of the NEPA process for local community members, as local participants in the process will flag issues of concern early on. Furthermore, wildland fire is already a high-priority issue for many communities in the wildland-urban interface; requiring clearer and more thorough discussion of fire planning should only encourage attention to and participation in the NEPA process.

C. *Restructuring Funding*

Despite a philosophical and technical shift from fire exclusion to fire use, suppression continues to receive the lion's share of federal funding, time, and attention. Some might argue that the solution to this problem is to limit funding for fire suppression. However, that is not a feasible solution for a number of reasons. First and most importantly, there will be fire seasons in which the scope or severity of blazes is far beyond that foreseen by agencies, fire behavior experts, or policymakers. For example, the FMPRT determined that the determining factor in the severity of the Yellowstone fires was not the choice of management techniques, but rather unprecedented weather conditions.[158] Funding must be available for agencies to fight these fires. Secondly, an effect of the emergency funding mechanism has been to minimize the role

[157] This proposal relies primarily on the cooperative planning process to encourage the incorporation of state, local, and community concerns in fire plans.

[158] Final Report and Recommendations of the Fire Management Policy Review Team and Summary of Public Comments, 54 Fed. Reg. at 25664.

of politics in fire suppression.[159] Political battles over fire may be fought in the context of fire planning, but when fire has broken out and suppression is underway, agencies do not have to worry that they will lose funding midstream due to a politically unpopular choice. Emergency funding, therefore, has had a desirable institutional effect.

Rather than doing away with emergency funding, Congress should allow the agencies to draw on the fund for fuel treatment projects in high-risk areas. Given the known link between dangerous fuel conditions and catastrophic fire, it is logical to extend use of the fund to those areas where fuel treatment could be instrumental in preventing disaster. However, only projects identified as high-priority in a qualifying interagency plan should be eligible for emergency funding. Qualifying plans should be those that include not only federal agencies, but also state and local land managers. Qualifying plans should also be limited to those that have complied with beefed-up requirements for community participation in the formation of alternatives and alternatives analysis. Furthermore, high-priority areas identified in such plans that fall outside of federal jurisdictions should also be eligible for emergency funding.

Creating an emergency funding mechanism for fuel treatment projects raises the profile of presuppression activities in the fire management world.[160] However, it also has political and institutional attractions. By limiting emergency funding use to areas identified in interagency plans, this funding structure would create incentives for participation in cooperative planning processes. It also helps to improve targeting of funds by requiring that a group of land managers make the decision, rather than leaving it open to the managers of a single National Forest or Park to identify critical projects. Given financial needs and the budget-maximizing behavior of agency actors, it is likely that most managers would find their jurisdictions to be full of "high-priority" areas. Furthermore, this structure encourages participants to think of the management area as a whole, encouraging a transition towards integrated, rather than cooperative planning. Allowing

[159] PYNE, *supra* note 2, at 434.

[160] *See id.* ("If prescribed fire had an analogous funding mechanism [to that available for suppression], it could achieve parity in the field as well as in philosophy.").

emergency funding use on state and local lands creates incentives for these actors to participate in interagency planning, which is particularly critical in the intermix area, and forces federal managers to weigh local concerns and priorities in identifying areas for emergency funding. In short, allowing the use of emergency funding is desirable from both a technical and a political perspective.

CONCLUSION

A 1950 poster shows Smokey Bear leading two forlorn bear cubs, who carry knapsacks, away from the gray ruins of a burned forest. In enormous letters, the poster proclaims the well-known slogan: "Remember—Only you can PREVENT FOREST FIRES!"[161] It is a message that remained unchanging over decades, transforming Smokey into one of the most recognizable characters in American advertising and reinforcing to an increasingly urbanized public the message that wildfires were an unmitigated evil. Smokey's slogan has been adjusted over the years—he now proclaims that "only you can prevent wildfires"—and advertising materials now distinguish between "good" and "bad" fires.[162] However, the public has taken Smokey's message to heart: wildland fire is still seen as a threat, especially as the threat to homes and communities grows.

In many respects the U.S. wildland fire regime has escaped the problems of overregulation and centralization that plague many other areas of environmental regulation. However, this structure is flexible only to a point: agencies are still bound by their individual missions, cooperative planning is still rare, and too many policymakers try to force one-size-fits-all solutions on an incredibly varied problem. Fire planning remains an isolated, centralized activity that often excludes local government. This is due, in large part, to the isolated and centralized nature of federal public lands planning. While wholesale reform of this structure is possible in the future, in the short term, fire management is the ideal area for pushing the limits of the current system to encourage and facilitate cooperation at federal, state, and local levels in

[161] SMOKEY'S VAULT – THE MUSEUM, http://www.smokeybear.com/vault/museum_posters_1950.asp (last visited Nov. 25, 2007).

[162] ONLY YOU, GOOD FIRES / BAD FIRES, http://www.smokeybear.com/good-bad.asp (last visited Nov. 25, 2007).

planning. Cooperation and flexibility are already hallmarks of fire response. With these reforms, they can become hallmarks of fire planning.