The West in Flames: The Intergovernmental Politics of Wildfire Suppression and Prevention

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This research examines changes in the intergovernmental policy arrangements governing the control of wildfires in the western United States. For much of the twentieth century, the policymaking structure resembled Deil S. Wright's inclusive authority *model whereby fire policy was dominated by the U.S. Forest Service with the states playing a supporting role. More recently, the states have become increasingly important in the decision-making process because of changes in residential patterns and land-use preferences that require greater intergovernmental coordination in presuppression and suppression activities within urban/wildland intermix areas, the rise in the number of large wildfires within national forests, and the willingness of Congress to approve institutional arrangements that give more weight to local community interests. Thus, the current approach increasingly resembles the* overlapping authority *model where multiple governmental jurisdictions share decision-making responsibility on wildfire control policies.*

The incidence of serious wildfires occurring in the national forests and rangelands of the American West has risen steadily over the past 20 years, culminating in an especially disastrous fire season in 2000. In May 2000, a prescribed fire set in a forested area within the Bandelier National Monument, New Mexico, exploded out of control because of ferocious winds. It quickly spread to the city of Las Alamos and onto the grounds of the Las Alamos National Laboratory, close to sites containing hazardous materials associated with the production of nuclear bombs. The fire consumed more than 47,000 acres of land and destroyed 235 structures, leaving more than 400 families homeless before it was eventually suppressed at a cost of approximately $19 million.[1] Between May and mid-October, firefighters from the federal, state, and local governments extinguished more than 80,000 fires that burned 6.8 million acres of public and private land across the western United States. The acreage lost was more than twice the national ten-year average,[2] and the ensuing controversy between western lawmakers and President Bill Clinton's administration sparked a debate in Congress over policies affecting the prevention and suppression of wildfires on or near federal lands.[3]

[1]Figures were obtained from Judd Slivka, "Scarred earth, suspect policies," *Fort Collins Coloradoan*, 29 October 2000, p. A1.

[2]U.S. Forest Service, *Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy*. http://www.fs.fed.us/fire/policy.shtml. Accessed on 11 November 2000.

[3]How differing political constituencies view fire, including beliefs about the underlying cause of the intense wildfire season of 2000, is strongly associated with their general views on the management of national forests for commodity production versus environmental amenities. See anon., "Even more fire emergency money expected, blame game begins," *Public Lands News* 25 (August 2000): 1-3.

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How and why did federal fire policy become controversial from an intergovernmental perspective? For most of the twentieth century, the dominant player in the development and implementation of public wildfire policies was the U.S. Forest Service, whose authority was augmented by a reputation for professionalism and expertise.[4] However, state agencies, particularly natural-resource or forestry departments, increasingly played an important role as well. The intergovernmental policy arrangement governing the control of wildfires has fit Deil S. Wright's conception of the *inclusive authority* model for much of the twentieth century (i.e., federal grant funding for state wildfire-suppression activities served to augment the firefighting capabilities of federal land-management agencies).[5]

State participation has become more pronounced for a variety of reasons, notably changes in problem definition, land-use patterns, and attitudes toward local influence over federal program-management decisions. Thus, the intergovernmental policy arrangement increasingly resembles Wright's *overlapping authority* model where multiple governmental jurisdictions share decision-making responsibility in a policy arena characterized by bargaining rather than central direction.[6]

But Wright does not discuss how a given policy moves or changes from one approach to another. To paraphrase Dale Krane, one way to explain how this occurs is to recognize the interplay between policy concepts and intergovernmental relations approaches.[7] For example, policy shifts in some issue areas have been attributed to efforts by a policy entrepreneur to alter the decisional venue or the image attached to these issue areas.[8] This can be observed in recent wildfire policy issues, such as the prevention of catastrophic fires and fire-suppression actions occurring within urban/wildland interface areas.[9]

I begin with an examination of wildfires as a policy problem. Why have problems associated with major conflagrations persisted despite increasing resources and intergovernmental cooperation? Efforts by federal and state policymakers to increase the institutional capacity of state agencies to address fire-related problems is discussed next. The concluding section examines the relationship between public-land policy issues, demographic trends, and growing state and local involvement in the resolution of management problems associated with the emergence of larger wildfires within public lands and urban/wildland intermix areas.

[4]Jeanne Clarke and Daniel McCool, *Staking Out the Terrain*, 2d ed. (Albany, NY: SUNY Press, 1996), especially chapter 2.

[5]Deil S. Wright, *Understanding Intergovernmental Relations*, 2d ed. (Monterey, CA: Brooks/Cole, 1982), pp. 32-38.

[6]Wright, *Understanding Intergovernmental Relations*, pp. 38-40.

[7]Dale Krane, "American Federalism, State Governments, and Public Policy: Weaving Together Loose Theoretical Threads," *PS: Political Science and Politics* 26 (June 1993): 186-190.

[8]Frank Baumgartner and Bryan D. Jones, *Agendas and Instability in American Politics* (Chicago: University of Chicago Press, 1992).

[9]Stephen J. Pyne, Patricia Andrews, and Richard Laven, *Introduction to Wildland Fire*, 2d ed. (New York: John Wiley & Sons, 1996).

WILDFIRE AS A POLICY PROBLEM

How we view wildfires and the most appropriate ways to deal with them has varied over time according to the institutional locus of decision-making as well as the acquisition and utilization of scientific information. Prior to the cooptation of wildland fire policy by the U.S. Forest Service, fire was not seen as an "unmitigated evil" by rural residents or extractive land-use industries but as a management tool. Indeed, the "light burning" of brush and undergrowth within forests and rangelands was a commonly used agricultural practice initiated by timber companies and livestock operators to ensure regeneration of more desirable trees or grasses as well as to reduce the spread of insect infestation.[10]

Focusing on the Suppression of Wildfires

Early in the twentieth century, the perception of fire among lawmakers was transformed from a relatively benign management tool to a problem requiring a public policy solution. Members of Congress were swayed by media accounts of large wildfires and by the loss of life that accompanied suppression efforts by the U.S. Forest Service; hence, catastrophic conflagrations created a focusing event for policy development efforts.[11] In the summer of 1910, a series of particularly devastating fires took the lives of 79 firefighters and burned more than five million acres of woodlands in the Rocky Mountains.[12]

The media image of wildfire as a natural disaster in the same mold as hurricanes or floods dovetailed nicely with the official stance taken by the Forest Service, namely, that fires pose a serious threat to human life, physical structure, and natural resources; hence, they should be extinguished as soon as possible.[13] Agency officials testified in favor of increased financial support for fire-suppression activities before Congress, suggesting that risks to property and natural resources from unfought fires were too serious to ignore.[14] A consequence was a policy shift requiring fire suppression as the tool of choice for federal-land management agencies.

Advocates of the this approach could point with pride to improvements in the efficiency of wildfire-suppression techniques. During the post-World War II era, federal and state agencies found that surplus military equipment, such as helicopters and chemical retardants, could be equally useful for fighting fires. Firefighters also became adept at using aerial strategies and

[10]Stephen J. Pyne, *World Fire* (New York: Henry Holt, 1995), pp. 186-187.

[11]The importance of focusing events as a catalyst for policy development is discussed in John H. Kingdon, *Agendas, Alternatives, and Public Policies*, 2d ed. (New York: HarperCollins, 1995), especially Chapter 5. The link between focusing events and natural disaster policies is explored in greater detail in Thomas Birkland, *After Disaster* (Washington, DC: Georgetown University Press, 1997).

[12]Christina Rossomando, *Wildlands Fire Management: Federal Policies and Their Implications for Local Fire Departments* (Emmitsburg, MD: Federal Emergency Management Agency, U.S. Fire Administration, 1998), p. 8.

[13]John W. Chambers, "The Evolution of Wildland Fire Management and Policy," *Fire Management Notes* 48 (1987): 5-8.

[14]Pyne, *World Fire*, p. 98.

tactics singly or in conjunction with the rapid deployment of smoke jumpers to suppress fires in more remote sites.[15] The Forest Service also made use of public relations campaigns such as *Keep Our Green* to highlight the importance of preventing wildfires. Virtually every American became familiar with the stern visage of Smoky the Bear admonishing the public to extinguish campfires and cigarettes with the phrase "only you can prevent forest fires."[16]

To what extent did these changes in policy, administrative procedures, and operational strategies actually affect the size and frequency of fire losses? The evidence is mixed. From the early 1900s through the mid-1950s, national forests typically incurred forest-fire damage on ten million or more acres of woodlands on an annual basis, but these figures declined significantly with the advent of new technology and improved firefighting methods. From 1956 through 1996, the annual amount of national forest acreage lost to wildfires ranged from two million to seven million acres.[17] Unfortunately, these numbers do not offer a complete portrait of the state of national forests because they imply that fire-control agencies were gaining the upper hand in quickly suppressing a high percentage of wildfires without revealing information about the size and intensity of these fires.

Preventing Catastrophic Fires

The fire-suppression regime dominated the wildfire policy arena through the mid-1980s until the seeds of change were planted by a combination of new information and natural events. University researchers began to examine prevention strategies, such as the use of prescribed burning within forests and rangelands in the 1960s. They concluded that fires set under carefully controlled conditions could be ecologically beneficial because the main effects would include the removal of fuels in the form of dense underbrush and thick stands of small trees that had accumulated more rapidly over time.[18] In their view, the success of prior wildfire-suppression efforts was one of the aggravating factors that led to a fuels buildup, which, in turn, contributed to the spread of intense "crown fires" that destroyed larger trees and structures.[19]

To convert these research findings into policy was not easy because prescribed fire represented the antithesis of federal land-use doctrine for the previous century. An important catalyst for change was the issuance of the Leopold Report in 1963 which recommended greater use of

[15]Chambers, "The Evolution of Wildland Fire Management and Policy," pp. 5-6.

[16]Pyne, *World Fire*, pp. 198-199.

[17]Historical figures for U.S. forest fire damage are taken from the Council on Environmental Quality, *1996 Annual Report on Environmental Quality* (Washington, DC: U.S. General Printing Office, 1997): 322.

[18]Jan W. van Wagtendonk, "The Evolution of National Park Service Fire Policy," *Fire Management Notes* 4 (1991): 10-15.

[19]James K. Agee, "Fire Management for the 21st Century," *Creating a Forestry for the 21st Century*, eds. Kathryn Kohm and Jerry Franklin (Washington, DC: Island Press, 1997), p. 192.

management strategies that maintained biotic relationships within national parks, including occasional applications of prescribed burns.[20] After a series of successful trial runs in the mid-1970s, both the Forest Service and the National Park Service adopted prescribed fire as a management tool.

These developments were reinforced by other events, particularly the spread of large, destructive wildfires during the past two decades. Table 1 summarizes fire seasons within the western United States in terms of the amount of acreage burned and the number of large wildfires (more than 5,000 acres) between 1984 and 1997. The data indicate that the number and intensity of wildfires was more pronounced from the mid- to late 1980s, followed by a relative lull in the early 1990s and a rebound effect between 1994 and 1997. These figures are generally consistent with the findings reported in a recent study by the U.S. General Accounting Office, namely, that the amount of acreage lost to large wildfires (defined as greater than 1,000 acres) has increased over the past two decades.[21]

Table 1
Distribution of Wildfires in the Western United States, 1984-1997

State	Federal Land[1]	Average No. of Acres Burned[2]			Average No. of Large Wildfires(+5000 Acres)		
		1984-88	1989-93	1994-97	1984-88	1989-93	1994-97
Alaska	61%	562	821	756	13	19	16
Arizona	41	71	91	143	2	3	7
California	42	377	201	326	20	10	15
Colorado	35	47	28	48	1	1	2
Idaho	61	301	217	274	18	11	14
Montana	28	202	91	91	7	3	5
Nevada	80	268	63	63	14	6	12
New Mexico	29	79	211	202	3	10	9
Oregon	52	176	78	215	16	5	11
Utah	60	84	39	248	6	2	17
Washington	26	48	26	94	2	1	4
Wyoming	48	334	38	168	7	2	4

[1]Includes land managed by the U.S. Forest Service, the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, and the National Park Service. Figures were obtained from U.S. General Accounting Office, *Land Ownership: Information on the Acreage, Management, and Use of Federal and Other Lands.* Washington, DC: GAO (March, 1996), pp. 20-22.

[2]U.S. Forest Service, *Forest Fire Statistics.* Washington, DC: U.S. Department of Agriculture (assorted years).

This assessment of fire-related damage is troubling because it suggests that the money and effort placed in the suppression of wildfires has not ameliorated the problem. In addition, more high-profile fires have emerged over the last 15 years, including the well-publicized Yellowstone conflagration of 1988 that torched nearly 800,000 acres of the 2.2 million-acre park, the 1994 South Canyon Fire in Glenwood Springs, Colorado, that claimed the

[20]Wagtendonk, "The Evolution of National Park Service Fire Policy," pp. 12-13.

[21]U.S. General Accounting Office, *Western National Forests: Nearby Communities Are Increasingly Threatened by Catastrophic Wildfires* (Washington, DC: GAO, 1999), p. 3, GAO/T-RCED-99-79.

lives of 14 firefighters; and the summer 2000 wildfire season that resulted in fire damage to 6.5 million acres of land throughout the western United States.[22]

Although there has been general agreement that fuel-buildup problems played an instrumental role in the eruption of large and intense wildfires during the 2000 fire season, other factors were also at work. Wildfire analysts indicated that the unusually hot and dry weather coupled with wind and numerous lightning strikes contributed significantly to the severity of the problem.[23] In short, the wildfires of 2000 were perceived to be devastating not only because of the geographical scope of affected lands but also because of the the gradual realization by scientists and policymakers alike that there are limits to what can be accomplished by federal fire-control agencies.

BUILDING STATE CAPACITY TO SUPPRESS WILDFIRES

For most of the twentieth century, state agencies played a subordinate but supportive role in the management of wildfires on federal lands, an arrangement that resembled the inclusive authority approach.[24] Stephen Pyne, Patricia Andrews, and Richard Laven suggest that states are part of a national system of wildfire management in the United States, with the U.S. Forest Service clearly enshrined as the senior partner. Federal, state, and local agencies are drawn together by the requirement that firefighting activities be mobile. To do this means that all or most jurisdictions must possess a minimum infrastructure for fire suppression activities and a willingness to share resources as conditions dictate. However, federal, state, and local agencies do not have organizational missions that are fully compatible; hence, legal responsibilities may be at odds with resource sharing or allocation decisions.[25]

Federal Grants for State Firefighting Operations

The ability of state agencies, typically departments of natural resources or forestry, to manage wildfires effectively within their borders and elsewhere has been fostered by three federal program initiatives aimed at increasing intergovernmental cooperation. First, Congress acted to bolster the financial and administrative capabilities of state and local agencies entrusted with firefighting responsibilities (see Table 2). The Weeks Act of 1911 provided a small window of opportunity for federal-state collaboration. The value of

[22]Council on Environmental Quality, *Managing the Impact of Wildfires on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000,* 8 September 2000. http://www.whitehouse.gov/CEQ/firereport.html. Accessed on November 27, 2000.

[23]Council on Environmental Quality, *Managing the Impact of wildfires on Communities and the Environment,* p. 4. Some argue that no amount of money and effort can effectively halt an especially intense set of fires such as the 1988 Yellowstone wildfires which were eventually brought under control with the assistance of changing weather conditions. See Ross W. Gorte, *Forest Fires and Forest Health* (Washington, DC: Congressional Research Service, 1996), p. 2, CRS Report 95-11.

[24]Wright, *Understanding Intergovernmental Relations,* pp. 32-38.

[25]Pyne, Andrews, and Laven, *Introduction to Wildland Fire,* p. 340.

this legislation is tied to the creation of an important programmatic precedent. The act established a grant program allowing the expenditure of federal monies by state forestry agencies for fire patrol and suppression activities on private lands.[26] Cooperative decision-making arrangements and funding were expanded further by the Clark-McNary Act of 1924. This helped add to the administrative capabilities of state forestry departments that typically received little in the way of funding from state legislatures.[27]

Table 2.
Federal Wildfire Policies Affecting State and Local Firefighting Operations

Year	Policy	Action
1911	Weeks Act	Established a grant program to support fire suppression onprivate lands by state forestry agencies provided legal authorization for the states to form interstate compacts for fire protection objectives.
1924	Clark-McNary Act	Expanded grant program to states for fire protection.
1976	National Wildfire Coordinating Group	Brought together representatives from federal land management agencies plus the National Association of State Foresters to recommend uniform policies for wildfire training and management procedures.
1978	Cooperative Forestry Assistance Act	Expanded existing grant programs to include both administrative resources and surplus federal equiptment to rural fire departments.
1986	National Wildland/ Urban Interface Fire Protection Initiative	Brought together representatives from federal land management and fire protection agencies plus the National Association of State Foresters to address the problem of fire in mixed wildland and urban settings.
1995	Federal Wildland Fire Management Policy	Increased treatment of federal lands with a high fire risk with techniques like prescribed fire or mechanical removal of small trees and brush materials to reduce the probability of more intense catastrophic fires.

Sources: U.S. Departments of Interior and Agriculture, *Federal Wildland Fire Management Policy & Program Review.* Washington, DC: Government Printing Office (December 18, 1995).
Stephen J. Pyne, *World Fire* (New York: Henry Holt, 1995).

Subsequent congressional statutes added both financial assistance and in-kind resources for state fire-related programs. The Cooperative Forestry Assistance Act (CFAA) of 1978 offers funding to the states in the form of matching grant programs for wildfire preparedness activities such as the

[26]Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1976), p. 130.
[27]Steen, *The U.S. Forest Service*, p. 131.

provision of both training and equipment to rural fire departments. A study by the U.S. General Accounting Office (GAO) indicated that the Forest Service allocated a total of $69 million in grant monies to the states through this program from fiscal years 1993 to 1997.[28] Federal funding for state suppression of wildfires on forests or grasslands is also available in the form of grants, equipment, or supplies under the authority of the Stafford Disaster Relief and Emergency Assistance Act.[29]

States and local agencies also benefit from the donation of surplus equipment from the federal government, which is authorized under section 10 of the CFAA. The U.S. General Services Administration maintains a list of excess property items available to be borrowed or purchased at a reduced rate. Types of equipment put to direct use by state and local fire-control agencies include aircraft, trucks, protective gear, generators, and trailers. According to the GAO, while much of the property obtained under this program is in relatively poor condition, state officials are often able to refurbish these items to handle fire-suppression tasks at considerably less expense than the alternative option of purchasing new supplies.[30]

INTERGOVERNMENTAL COORDINATION

The federal government has also made an effort to better coordinate the prevention and management of wildfires among federal, state, and local officials. This was precipitated by two factors: (1)the changing political context of public lands policy and (2)a number of particularly intense fire seasons in the early 1970s that became focusing events for administrative policy changes.

Federal land policy was transformed significantly in the 1960s and 1970s through the integration of environmental values into a policy arena previously dominated by industry interests and western legislators who were more focused on natural resource development than on conservation.[31] Wildfire management practices were directly affected because public land managers had to comply with new clean air and water policies that effectively increased the need for coordination with the U.S. Environmental Protection Agency(EPA) and state agencies with environmental quality responsibilities.

Other environmental policies provided a window of opportunity for increasing state and local input into the management of wildfires within national forests. When Congress enacted the Forest and Rangeland Renewable Resources Planning Act of 1974 and the National Forest

[28]U.S. General Accounting Office, *Federal Lands: Wildfire Preparedness and Suppression Expenditures for Fiscal Years 1993 Through 1997* (Washington, DC: GAO, 1998), p. 5, GAO/T-RCED-98-247.

[29]National Association of State Foresters, *Fire and Ice: The Role of State and Federal Forestry Agencies in Disaster Management Management and Response* (Washington, DC: National Association of State Foresters, no date), p. 11.

[30]GAO, *Wildfire Preparedness and Suppression Expenditures*, p. 7.

[31]See Samuel Dana and Sally Fairfax, *Forest and Range Policy*, 2d ed. (New York: McGraw-Hill, 1980); and more recently, Charles Davis, ed., *Western Public Lands and Environmental Politics*, 2d ed. (Boulder, CO: Westview Press, 2001).

Management Act of 1976, a process of preparing management plans for each national forest was put into place. A public comment period was required for each plan. Thus, representatives of state forestry departments and local fire agencies could voice their concerns about an array of land-use decisions such as the use of fuel breaks or prescribed fire as management tools. An additional incentive for Forest Service administrators to seek input and cooperation from other jurisdictions was linked to a newly established internal policy that required wildfire presuppression activities to be undertaken in a cost-effective manner.[32]

A number of particularly damaging fire seasons in the early 1970s led to the creation of a governmental task force dealing with the management of wildfires. The task force subsequently released a report titled *America Burning* that called for greater standardization of training and administrative procedures within firefighting organizations.[33] At the same time, the Forest Service faced escalating costs associated with its fire-control activities because of a change in the longstanding "10 a.m. policy," which placed greater emphasis on labor-intensive fire prevention activities by seeking, in principle, to suppress all fires by 10:00 a.m.

To deal with these concerns, an umbrella organization, the National Wildfire Coordinating Group (NWCG), was established in 1976.[34] Members include representatives from the federal land management agencies (i.e., the Forest Service within the U.S. Department of Agriculture, the National Park Service, the Bureau of Land Management, the Bureau of Indian Affairs, and the Fish and Wildlife Service within the U.S. Department of the Interior) and state forestry departments represented by the National Association of State Foresters.

The NWCG operates through interagency working teams consisting of 8-10 people who work together to solve problems. One notable achievement was the development of interagency fire-training programs to ensure that state and federal fire employees possess similar qualifications and training. Another was the adoption of the National Interagency Incident Management System (NIIMS), which is designed to facilitate common ways of responding to a fire as well as to determine which agency official takes charge as incident commander in any given situation.[35] Such changes contributed to the concept of "total mobility" which assumes not only that fire suppression organizations are interchangeable parts of a larger system but also that organizational participants are willing to work together as professional equals.[36]

[32]Ibid, p. 11.

[33]Jack Wilson and Jerry Monesmith, "The National Wildfire Coordinating Group - Then and Now," *Fire Management Notes* 48 (1987): 5.

[34]Chambers, "The Evolution of Wildland Fire Management," p. 6.

[35]Wilson and Monesmith, "The National Wildfire Coordinating Group," pp. 6-7.

[36]Pyne, Andrews, and Laven, *Introduction to Wildland Fire*, p. 340.

ADDRESSING RECENT WILDFIRE POLICY CHALLENGES

Fire-control officials from all spheres of government have had to wrestle with a pair of costly and complex issues: (1)the growing number of large, catastrophic wildfires in the national parks and forests of western states and (2)the increasing threats to lives and property posed by the spread of fire within the wildland/urban interface arising from suburbanization and rural residential development. Each is associated with a larger circle of stakeholders and policy actors who have become more visible through the media as a result. However, the relative importance of state involvement in the decision-making process varies because of between-issue differences in risk perception, the geographical proximity of firefighters, and political and demographic developments.

Catastrophic Wildfires

A mid-1990's reassessment of the fire-suppression approach by high-level officials in the U.S. Departments of Agriculture and the Interior led to the development of a new policy, the *Federal Wildland Fire Management Policy & Program Review* in 1995. The new program emphasizes the amelioration of conditions such as the buildup of fuels that contributed to the size and intensity of the wildfires.[37] This has led to increases in money and personnel allocated to treatment activities, such as prescribed or controlled fires, the physical removal of debris and small trees, and the control of invasive plants.

Between 1994 and 2000, the land area treated on an annual basis by the Forest Service and the Bureau of Land Management increased from somewhat less than half a million acres to more than 2.4 million acres.[38] However, because the acreage treated was quite small in relation to the amount of land requiring some form of thinning, federal lands remained quite vulnerable to the possibility of conflagrations that eventually swept the western United States in 2000 and again in 2001.

An important consequence of the 2000 wildfire season was an effort by various political blocs to use the fires to promote larger public-land management priorities. In part, the competition had a decidedly intergovernmental slant, pitting the largely pro-environmental policy agenda of Democratic President Bill Clinton against a sizeable bloc of western Republican governors and members of Congress who pushed for a stronger emphasis on local control over land-use decisions.

This played out in predictable ways. For western Republicans, wildfire policy became a vehicle for expressing discontent about the lack of state

[37]U.S. Departments of Interior and Agriculture, *Federal Wildland Fire Management Policy & Program Review* (Washington, DC: U.S. Government Printing Office, 1995).

[38]Council on Environmental Quality, *Managing the Impact of wildfires on Communities and the Environment* (8 September 2000). http://www.whitehouse.gov/CEQ/firereport.html. Accessed on 27 November 2000.

influence in public land decisions as well as an opportunity to change forest policy to allow an acceleration of logging. This perspective was voiced by Congresswoman Helen Chenowith-Hage (R-ID) who suggested that an increase in timber sales would aid in the process of reducing fuel loads in the national forests. Environmentalists countered with an argument that was generally compatible with the Clinton administration's emphasis on ecosystems management; namely, that a sound fuel treatment program would focus more on the removal of dense underbrush and debris than on the harvesting of larger trees that have commercial value but pose less of a fire risk.[39]

Late in the fire season (which also coincided with a presidential election), western governors and the U.S. secretaries of agriculture and the interior met in Salt Lake City in an effort to update the 1995 policy. Much of the programmatic update reflected a continuation of the status quo from an operational perspective, but there was universal agreement that federal-land management-agencies needed a major increase in budgetary and staff resources to do more of the same.[40] However, the meeting did provide a forum for negotiations over the appropriate level of state involvement in federal-land use decisions.

A subsequent agreement was reached that potentially increases the role played by governors and state forestry officials in federal land decisions affecting wildfire. It essentially ratified a number of earlier recommendations put forward by the Western Governors' Association, notably the inclusion of state officials in the establishment of management priorities and in the development of a ten-year state-federal plan addressing fuel reduction and forest restoration in areas of high risk for catastrophic fire.[41]

Wildfires in Wildland/Urban Interface Areas

Another key concern is the threat of fire emerging within the rapidly growing wildland/urban interface areas throughout the West. Eight of the ten fastest growing states in the United States are located in the interior West.[42] States such as Idaho, Colorado, Arizona, and Nevada had annual growth rates that exceeded 6 percent compared to the U.S. average of 1 percent, and much of this growth occurred on the outer fringe of cities such as Phoenix, Salt Lake City, Boise, Portland, and Denver. There is a corresponding increase in the spread of subdivisions and second homes in

[39]Anon.,"Even more emergency fire money expected, blame game begins," *Public Lands News* 25 (August 2000): 2-3.

[40]An already sizeable budget for wildfire management received a substantial increase for FY 2000 and a similar level of funding exceeding $1.4 billion dollars was committed for FY 2001. Council on Environmental Quality, *Managing the Impact of Wildfires on Communities and the Environment*, p. 30.

[41]Western Governors' Association, *Western Fires and Forest Policy Initiative* 14 (November 2000); World Wide Web: Internet Citation: http//www.westgove.org/wga/initiatives/fire/default. html. Accessed on December 11, 2000.

[42]William E. Riebsame, ed., *Atlas of the New West* (New York: W.W. Norton, 1997), p. 96.

fire-prone areas along wildland boundaries.[43] Not surprisingly, a rise in the number of conflagrations can be observed being fueled by "poorly defended" homes, many of which have a wood exterior with shake shingles.

The problem of large-scale fire in the urban/wildland areas was illustrated in rather dramatic fashion by a destructive blaze that arose in the Oakland Hills area of California in 1991 that destroyed more than 2,500 residences within a 12-hour period.[44] From an intergovernmental standpoint, this is a challenging assignment because it requires that federal, state, and local officials, insurance companies, and property owners find ways to reduce the risk of wildfire damages through the allocation of jurisdictional responsibilities as well as resources. However, as Pyne, Andrews, and Laven indicate, the states rather than the Forest Service or BLM play the lead role in fire prevention and suppression efforts in these areas.[45]

An early effort to address this problem was made in 1986 by the Forest Service in conjunction with the National Fire Protection Association, BLM, and the National Association of State Foresters. A key objective of this initiative has been to promote awareness of and commitment to the idea of taking preventive steps to effectively fireproof property and structures at risk for fire-related damage in exposed communities. Toward this end, the various institutional actors have assumed responsibility for different parts of the operational fire plan. Federal agencies take charge of suppressing wildfires originating in nearby national forests or parks with support from state and local fire-control departments. State and local governments as well as insurance companies offer a combination of incentives and regulations to encourage responsible "fireproofing" behavior by property owners.[46]

A good example of proactive policymaking by states is offered by California, which enacted a law requiring homeowners residing in these areas to create 30 feet of defensible space between structures and nearby woodlands, including such activities as brush removal and the installation of screens over chimney openings.[47] Some local governments, such as Los Angeles, have adopted brush-clearance regulations that required homeowner compliance by October 2001, a month that signaled the start of the high-risk season for wildfires in southern California.[48]

[43]Council on Environmental Quality, *Managing the Impact of Wildfires on Communities and the Environment*, p. 8.

[44]Mary Jo Lavin, "Managing Fire Risk to People, Structures, and the Environment," *Fire Management Notes* 57(1997): 5.

[45]Pyne, Andrews, and Laven, *Introduction to Wildland Fire*, pp. 346-348.

[46]Several writers have offered useful suggestions for the development of policy within the urban wildland interface. See C. Phillip Weatherspoon and Carl N. Skinner, "Landscape-Level Strategies for Forest Fuel Management," *Sierra Nevada Ecosystem Project, Volume II* (Davis, CA: University of California, Centers for Water and Wildland Resources, 1996), pp. 1484-1485; and Steve Plevel, "Fire Policy at the Wildland-Urban Interface," *Journal of Forestry* 95 (October 1997): 12-17.

[47]Rossomando, *Wildlands Fire Management*, pp. 30-31.

[48]Ibid, p. 31.

Unfortunately, the implementation of comprehensive programs for fire control in the urban/wildland interface is difficult to achieve. From both tactical and management perspectives, fighting wildfires with an emphasis on protecting structures is not the same as suppressing wildfires in more remote national-forest wilderness areas. Yet another constraint is based on the relative weight that the Forest Service or BLM assigns to the protection of private property compared to the conservation of public resources. Some observers object to any policy requiring the deployment of federal fire-control employees to protect structures near inhabited areas at the cost of fulfilling natural-resource management objectives elsewhere.[49]

Although it makes sense for local governments to consider adopting emergency management activities or land-use restrictions associated with fire-risk reduction, there are few political incentives to do so. A more likely outcome is policy that shifts the financial burden of recovery from wildfires to state or even national taxpayers in the form of distributive structural mitigation or postdisaster relief measures.[50]

CONCLUSION

U.S. policies dealing with the control and management of wildfires began with a predominant emphasis on suppression over prevention that remained in place for much of the twentieth century. Wildfire-suppression policies were periodically strengthened, often in response to focusing events, such as major fires associated with lost lives and fire damage across a large expanse of national forests or rangelands.

Prevailing intergovernmental arrangements at this time can be depicted as cooperative and consistent with the inclusive authority approach. The federal government has sought to maintain control over fire policy but has also attempted to stretch fire-fighting resources by strengthening the capacity of state and local organizations. Congress enacted legislation that provides money, equipment, and training opportunities. In addition, federal environmental laws contain provisions for public comment and participation which, in turn, enhance state participation in the development and implementation of wildfire management plans. Federal-land management-agencies have also worked with the National Association of State Foresters to standardize a number of wildfire training and administrative practices aimed at facilitating the mobility of firefighting organizations within a larger system of wildfire management and control. Federal agencies clearly have "senior partner" status in this relationship because of their experience with fire-suppression programs and comparatively large resource bases.

From the 1970s to the present, the intergovernmental arrangement that best describes the state role within the wildfire policy arena is the overlapping

[49]Robert H. Nelson, *A Burning Issue: A Case for Abolishing the U.S. Forest Service* (New York: Rowman & Littlefield, 2000), pp. 174-175.

[50]Plevel, "Fire Policy at the Wildland-Urban Interface," p. 14.

authority approach. This can be partly attributed to change in residential patterns and land-use preferences as well as to other trends within the larger context of public lands policy. Problems associated with the management of wildfires located close to the wildland/urban corridors are more amenable to a prevention-style policy that is implemented by an array of state, local, and federal organizations.

Wildfire policy based on prevention is exemplified by California, which has enacted a law requiring communities and property owners to provide a minimal distance of defensible space between structures and wooded areas. State land-use legislation of this sort eases the task of providing protection from fire damage at the community level. Local public officials often find it to be politically risky to enact restrictive land-use ordinances because such regulations tend to incur the wrath of realtors and property-rights advocates. State policy requires that every county consider fire risk before approving new residential developments, and the California Department of Forestry is charged with the responsibility of reviewing this section with an eye toward criteria, such as available water supplies and fuel loadings. Local governments are increasingly adopting zoning and related land-use ordinances to reduce fire risk as well; hence, there is an intergovernmental marriage of sorts that combines wildland fuel management with urban building codes.[51]

Another institutional arrangement within the realm of federal natural-resource policymaking is a collaborative resource-management process that involves a diverse array of public and private sector stakeholders to resolve public-land-use policy disputes, an approach that gives relatively greater weight to the views of community leaders directly affected by these decisions.[52] A prominent example is the Herger-Feinstein Quincy Library Group Forest Recovery Act of 1998, a federal law that allowed the Quincy Library Group, a grassroots coalition of community leaders, timber-industry officials, and environmentalists, to make land-use recommendations to the supervisors of three national forests in the Sierra Nevada Mountains of northern California.

The top agenda item of the Quincy Library Group was a recommendation that large fuel breaks be built within the forests to reduce the spread of potentially disastrous crown fires. In short, a larger role for nonfederal policy actors in making wildfire policy decisions can be linked to larger changes in federal-natural resource or public-land policy as well as to residential land-use trends that have spawned an increasing number of wildfires in the urban/wildland areas.

[51]Pyne, Andrews, and Laven, *Introduction to Wildland Fire*, p. 346.

[52]Edward Weber, "A New Vanguard for the Environment: Grass-roots Ecosystem Management as a New Environmental Movement," *Society & Natural Resources* 13 (2000): 237-259.