

Collaborating for Success: Community Wildfire Protection Planning in the Arizona White Mountains

William E. Fleeger

ABSTRACT

In 2003, Congress passed the Healthy Forest Restoration Act encouraging communities to develop Community Wildfire Protection Plans (CWPP) to guide wildfire mitigation efforts on both federal and nonfederal lands. This article provides a case study of the development and implementation of a CWPP for the at-risk communities of the Sitgreaves National Forest in Arizona. This case study reveals a past history of collaboration to address the issue of wildfire along with high levels of cooperation among all levels of government and community stakeholders. The communities of the Sitgreaves National Forest successfully established an inclusive and multijurisdictional planning process and effective procedures for intergovernmental cooperation to mitigate the wildfire risk. The Sitgreaves CWPP provides an excellent example of an effective community-based planning effort to mitigate the wildfire threat.

Keywords: Community Wildfire Protection Plan, Healthy Forest Restoration Act, collaborative management, wildfire policy

During the record-setting 2000 fire season, fires burned 861 structures, forced the evacuation of thousands of residents, scorched more than 8.4 million ac, and suppression costs exceeded \$1.3 billion (National Interagency Fire Center [NIFC] 2006). Much of the increased threat and losses to wildfire is due to the dramatic growth of rural communities expanding the area known as the wildland-urban interface (WUI). Homes intermixed with the forest increase the risk of ignition

along with the cost and complexity of suppressing wildfires when they occur. After the 2000 fire season, national fire policy was re-oriented to accommodate the new and increasingly costly reality of fire in the WUI. Working in concert with the Western Governors' Association (WGA) in 2001, Congress appropriated funds for the National Fire Plan (NFP). This plan called for a strategy that, while strengthening capabilities for fire suppression, also included the multiple goals of wildfire fuels reduction, the restora-

tion of fire-adapted ecosystems, and increased assistance to at-risk communities (US Forest 2000, WGA 2002). This more collaborative community-based approach was seen as necessary to comprehensively address the underlying causes of the wildfire problem and at the same time build capacity at the local level to mitigate the threat to communities.

Prompted by continued disastrous fire seasons and wildfire events in 2002 and 2003, Congress passed the Healthy Forest Restoration Act (HFRA; 16 USC Sec. 6501 et seq) with strong bipartisan support (Vaughn and Cortner 2004). The HFRA furthered the WGA's strategies for collaborative community-based approaches by introducing a new policy tool in the form of a Community Wildfire Protection Plan (CWPP). CWPPs are a central component of community empowerment under the HFRA, and communities are encouraged to develop these plans to guide fuel reduction projects on both federal and nonfederal lands. As part of a CWPP, communities have the opportunity to delineate a WUI boundary based on local values and condi-

Received August 20, 2007; accepted February 11, 2008.

William E. Fleeger (wfleeger@umb.edu) is research associate, Department of Natural Resources, University of New Hampshire, James Hall, Durham, NH 03824.

Copyright © 2008 by the Society of American Foresters.

tions and to propose and prioritize management actions on lands within the WUI. CWPPs must be approved formally by “the applicable local government (i.e., counties or cities); the local fire department(s); and the state entity responsible for forest management” (SAF et al. 2004, p. 3). An approved CWPP allows a community to influence where federal agencies conduct fuel reduction projects and where federal funding is spent. Additionally, the HFRA exempts projects identified in a CWPP from the extensive environmental analysis required under the National Environmental Policy Act (NEPA). Thus, the interim HFRA field guide, jointly published by the US Forest Service and US Department of the Interior (USDI), encourages federal managers to be full partners in the development of CWPPs and to work cooperatively with communities in setting fuel treatment priorities (US Forest Service and Bureau of Land Management 2004).

This article focuses on the development and implementation of a CWPP for the at-risk communities of the Sitgreaves National Forest. This case study was first developed as part of a larger research project examining the CWPPs in multiple communities in Oregon and Arizona. In the initial study, communities were chosen based on their proximity to US Forest Service lands as well as to represent differing approaches to the wildfire planning and community collaboration. The data collected included documents relevant to the development of the CWPP in each community, site visits, and personal interviews conducted with key participants in the CWPP processes. Participants in this research were selected based on their roles and responsibilities in the development of the CWPP and to ensure representation of federal, state, and local government as well as participating stakeholder groups. Nine individuals were interviewed during a site visit to the Sitgreaves National Forest in June 2006. Interviewees were asked to describe their role; the role of other participants; and the goals, challenges, and outcomes of the CWPP process. All interviews were recorded with the permission of the subjects and then transcribed into electronic text files and returned to the participants for verification. The Sitgreaves CWPP emerged as a special case and is presented here as an example of the potential for collaborative community-based approaches to mitigate the wildfire threat. A brief background of the case is provided followed by an account of the plan-

ning and decisionmaking process used in the development of the plan. The outcomes achieved through implementation of the CWPP are then described along with a summary of the key factors contributing to the plans success.

Background

The Sitgreaves CWPP encompasses the communities of Vernon, McNary, Hon Dah, Pinetop-Lakeside, Show Low, Linden, Clay Springs-Pinedale, Aripine, Heber-Overgaard, and Forest Lakes. The communities of McNary and Hon Dah are located on the Fort Apache Indian Reservation with a year-round population of a little more than 350 residents and an influx of recreational visitors during the summer. The remaining communities support a year-round population of approximately 17,000 residents and more than 65,000 seasonal residents. The City of Show Low and Town of Pinetop-Lakeside are the only incorporated communities. The 307,583-ac WUI described in the plan includes approximately 71,523 acres of private, county, and state lands; 179,603 acres of federal lands; and 56,457 ac of lands administered by the White Mountain Apache Tribe on the Fort Apache Indian Reservation (Logan Simpson Design 2004a). Despite slow economic conditions, the numerous amenities of the White Mountain region continue to bring an influx of people, particularly around the communities of Show Low and Pinetop-Lakeside. The number of residential building permits issued in the City of Show Low nearly doubled between 1999 and 2003 (City of Show Low 2003). As these communities have grown, many homes have been built in areas directly adjacent to wildlands and numerous residential developments directly abut national forestland.

However, in 2002, a monumental wake-up call arrived in the form of the Rodeo-Chediski Fire. At more than 460,000 ac, the Rodeo-Chediski was the largest wildfire in Arizona’s recorded history and claimed approximately 400 homes and forced the evacuation of more than 30,000 residents from nine communities (Logan Simpson Design 2004a.). According to a US Forest Service employee the Rodeo-Chediski fire created “a lot of negative energy” and people “angry about feeling helpless and out of control.” Then, again in 2003, the smaller Kinishba Fire threatened to force evacuations of communities on the Fort Apache Indian reservation and the Town of

Pinetop-Lakeside. These back-to-back wildfire events galvanized community leaders into action. A US Forest Service employee stated that “Right after we closed out the Kinishba fire, the community leaders gathered together and said we can’t let this happen again. [W]e agreed that we would each do a role and asked the county supervisors to step up ahead and start getting the Community Wildfire Protection Plans done.” According to a member of a local conservation organization the fires also created a shared understanding of the problem and “changed a lot of our attitudes, at least about the WUI.” This shift in community attitudes provided a window of opportunity for local leaders to build collective action toward a solution to the wildfire problem.

CWPP Planning Process

The CWPP planning process was spearheaded by a semiformal collaborative effort called the Natural Resources Working Group (NRWG). Regular participants in this group included representatives from city and county government; Arizona Game and Fish Commission; University of Arizona Cooperative Extension; US Fish and Wildlife Services; the US Forest Service; The Nature Conservancy; and the White Mountain Conservation League and representatives tribal government, private industry, and local conservation organizations. Since 1994, the NRWG had been working to address wildfire issues and in 2001 had successfully initiated the Blue Ridge Demonstration Project testing differing approaches to landscape level wildfire fuel treatments using stewardship contracting on the Apache-Sitgreaves National Forest. After the passage of HFRA in December 2003, the NRWG formed a working group to develop a single plan to include all the at-risk communities of the Sitgreaves National Forest. With funding from Coconino, Navajo, and Apache Counties and the communities of Show Low and Pinetop-Lakeside, the NRWG obtained the services of Logan Simpson Design, Inc., an environmental consulting service based in the Southwest, to initiate a community-based planning process and develop the CWPP (Logan Simpson Design 2004a).

Under the leadership of Logan Simpson Design, a core planning team was formed to undertake a short-duration, high-intensity planning process to develop the CWPP. To facilitate community participation, the core team established two community action

groups (CAG), one for the eastern end of the planning area and another one focusing on the west (Logan Simpson Design 2004a). The CAGs involved all significant stakeholders in the communities, including local government officials, US Forest Service personnel, fire district chiefs, and conservation organizations as well as businesses, private landowners, and homeowners' associations. According to a representative of Logan Simpson Design, "We made sure that the collaborative working group actually represented all of the interests that we knew of in the community. Peripherally there were no significant interests left off the table or that weren't actually actively sought after for input." The CAGs were charged by the core team with the responsibility of gathering information on existing wildfire risk conditions and recommending strategies for community wildfire protection and preparedness. The US Forest Service assigned a resource specialist and provided geographical information system assistance to each CAG. Much of the data used by the CAGs to describe wildfire fuel hazard and risk also were provided by the US Forest Service. According to a US Forest Service employee it was important that the US Forest Service "were partners in this process but we didn't lead it because it wasn't about the National Forest, it was about the communities."

The two local CAGs, along with the core planning team, committed to frequent meetings that were open to the public and all interested citizens were encouraged to attend (Logan Simpson Design 2004a). An employee with Logan Simpson Design remarked that in the initial meetings there was considerable discussion "about when is a tree a tree, when is it a commodity, when is it a resource, and what do we mean when we talk about fuel." However, the collaborative efforts of the NRWG in the Blue Ridge Demonstration Project had been successful in creating a general consensus of the types of treatments that were necessary in the WUI. According to a US Forest Service employee, "Having that [NRWG] group already in place and having the demonstration forest out there helped us get a lot farther ahead than some communities that hadn't talked about it much. It made ours go much faster because we had already done the ground work." With "consistent and persistent facilitation" provided by Logan Simpson Design, the CAGs went through a consensus-based decision process to develop the plan's recommendations. "There was a wide

range of opinion and deeply held personal beliefs . . . related to environmental concerns . . . or to private property rights and government intrusions on private lands . . . However, because of longstanding small-community working relationships, a high level of trust had developed among all interests . . ." (Logan Simpson Design et al. 2004b, p. 28).

The CAGs' recommendations included fuel reduction priorities, land treatments prescriptions in the WUI, and fire prevention and loss mitigation strategies that included public education, information, and support for local wood products industries (Logan Simpson Design 2004a). The plan explicitly addressed environmental concerns by including specific fuel treatment prescriptions for federal lands and clarifying language focusing on the removal of small-diameter material and maximizing the retention of large trees. An employee of Logan Simpson Design stated that the prescriptions in the plan were designed to "make it very clear to us what types of treatments we were willing to accept . . . within and adjacent to the community." The CAGs also attempted to ensure that the plan's recommendations were consistent with the provisions of HFRA as well as other applicable federal regulations to allow the treatments prescriptions to be used by the US Forest Service as the basis for developing action alternatives for analysis under NEPA (Logan Simpson Design 2004a). According to an employee from Logan Simpson Design, the community "wanted to make sure that when the Forest Service came out with their action alternative that you could very quickly connect the dots between the agency action alternative and the recommendations of the community."

Beyond focusing on the treatment of US Forest Service lands, the CWPP also included recommendations to assist the state and local governments in taking a more comprehensive and integrated approach to mitigating the wildfire risk. The plan recommended the development of an intergovernmental agreement between the communities to cooperate in addressing the wildfire problem. Key recommendations included encouraging the communities to develop uniform tree and land treatment policies and pool resources to purchase an industrial chipper for residential slash disposal. The plan also recommended that the communities work together to develop a prescribed fire management plan for the WUI; cooper-

ative training programs for firefighters; and joint educational, outreach, and workforce development programs. The Sitgreaves CWPP was finalized in May 2004 and signed by Apache, Coconino, and Navajo Counties; the city councils of Show Low and Pinetop-Lakeside; and the chiefs of all eight local fire departments. The supervisor of the Apache-Sitgreaves National Forest, the Arizona State Forester, and the superintendent of Fort Apache Indian Reservation provided signatures of concurrence (Logan Simpson Design 2004a).

CWPP Outcomes

US Forest Service implementation of the Sitgreaves CWPP is tied into the White Mountain Stewardship Project. The White Mountain Stewardship Project is the first large, 10-year stewardship contract in the nation and was awarded to Future Forests Partnership, LLC, in August 2004. The contract is expected to treat approximately 5,000–25,000 ac/year and is structured to promote the marketing and utilization of previously unmerchantable material for power generation, lumber, and the manufacture of wood pellets. Using the treatment prescriptions provided in the Sitgreaves CWPP and a similar CWPP developed for the adjacent Apache National Forest, the US Forest Service has completed NEPA analysis on more than 70,500 ac, with only one objection being filed as of January 2007 (US Forest Service 2007). Also, as of January 2007, task orders for thinning more than 27,000 ac have been issued, with 19,000 ac completed and 293,000 green tn of biomass treated. Linked to the increased availability of biomass made available through these treatments, a wood pellet mill in Show Low increased its capacity by 50%. A 3-MW (megawatt) bioenergy plant opened in Eagar in 2004 and there are plans to build a 20-MW plant in Snowflake that will use 170,000 green tn of biomass annually (US Forest Service 2007). The ability to market and use more of the byproduct material has had a substantial effect on the costs of conducting fuel reduction projects. Before the stewardship contract, forest restoration costs were estimated around \$1,000/ac compared with approximately \$500/ac today, depending on the treatment prescription (US Forest Service 2007).

Monitoring is also occurring under the stewardship authority. According to a US Forest Service employee, 3% of task order funding is set aside for monitoring and a

16-member multiparty monitoring board has developed ecological, social, and economic monitoring goals and priorities (personal communication, 2006). The 1st-year economic, social, and ecological assessments have been completed and results from the initial economic analysis indicate that the 13 businesses directly working on the stewardship contract provided 450 full-time jobs in Arizona, with 318 of those in the local area. Second-year findings should be available soon (US Forest Service 2007). There has been some criticism from members of the multiparty monitoring board, as well as from conservation organizations, regarding the impacts of some of the CWPP prescriptions and US Forest Service fuel treatments in the WUI on certain species of wildlife. According to an employee of Arizona Game and Fish some of the CWPP treatment recommendations “are not necessarily done in ways that are as beneficial for wildlife. So we try to . . . work with the Forest Service to get their treatments done and in a way that . . . [will] do more good for wildlife while still meeting those fuel reduction goals.”

Coconino and Navajo Counties and the cities of Show Low and Pinetop-Lakeside signed on to an intergovernmental agreement and hired a CWPP administrator through the University of Arizona Cooperative Extension in late-2005. The administrator is responsible for implementation, monitoring, and updating of the plan and for community outreach, education, and overseeing NFP grants and fuel reduction programs for private landowners. According to the CWPP administrator, in addition to performing the mitigation strategies developed in the CWPP, the cities and counties also are working to pool resources between fire districts to develop a fuels crew to conduct fuel reduction treatments and prescribed burning in the WUI (interview, 2006). As a result of the impressive efforts undertaken on both federal and nonfederal lands, the Sitgreaves CWPP received the 2006 NFP award for excellence in collaboration.

Key Factors to Success

There were five key factors important in helping the communities of the Sitgreaves National Forest successfully develop and move forward with implementation of their CWPP. First, there was strong commitment to the value of the collaborative process shared among all participants interviewed in this research. According to a US Forest Ser-

vice employee on the Apache Sitgreaves National Forest, collaborative efforts “take our time, but the payback is then when you do propose a project a lot of times it will go faster and smoother because you have a sounding board there that you can run the project by and they can get information out to other folks.” This commitment to collaboration, particularly by leaders in the US Forest Service, has engendered substantial goodwill among groups and individuals that previously held unfavorable opinions of the US Forest Service. A member of a local conservation organization remarked that the Supervisor of the Apache-Sitgreaves National Forest “has changed a lot of things just by force of her personality and by the way she works with people . . . I think she has been remarkable to work with.”

Second, the CWPP was able to build on the positive working relationships established through previous collaborative interaction in the NRWG and the experience in the Blue Ridge Demonstration Project. The fact that community leaders and stakeholder groups, together with the US Forest Service, had been working for several years to design and test landscape level fuel treatments using stewardship contracting helped develop trust among diverse community interests and a general consensus on types of fuel treatments necessary in the WUI. Therefore, when it came time to develop the CWPP, outreach to the community was facilitated by the well-established social networks developed through the NRWG and the high degree of trust among stakeholder groups allowed consensus recommendations on fuel treatment prescriptions and mitigation measures to be developed in a relatively short period of time.

Third, US Forest Service support and participation was critical to ensuring the success of the CWPP. The willingness of the US Forest Service to provide technical expertise and participate as a “team player” in solving the wildfire problem gave community members a high degree of confidence that the CWPP would be given serious consideration and be faithfully implemented. According to a local business leader, US Forest Service participation in the planning process established “a high level of trust that the Forest [Service] really would implement the prescriptions . . . but also the priorities that the communities established would become the priorities of the Forest.” The US Forest Service commitment to the stewardship contract also reinforced community percep-

tions of the US Forest Service as an innovator in addressing the wildfire problem and reliable long-term partner in the community. Additionally, the stewardship contract provided considerable incentive to the US Forest Service to work with the community to gain the advantages of the streamlined environmental analysis processes provided by HFRA. The expedited NEPA processes coupled with strong community support allowed the US Forest Service to meet the substantial annual acreage commitment agreed to in the stewardship contract.

Fourth, the Rodeo-Chediski and Kinishba fires were galvanizing events and changed community perceptions about the need to mitigate the wildfire risk in the WUI. These back-to-back wildfire events provided an important window of opportunity and the participating state and local governments recognized the need to step up to the plate with resources and mitigation measures to compliment the actions taken by the US Forest Service. This included not only a focus on improved fire suppression and fuel reduction but also planning, zoning, building code enforcement, education, homeowner assistance, prescribed burning in the interface, and economic and workforce development initiatives.

Last, participants in the Sitgreaves CWPP understood the importance of the forest to the community and vice versa. This was manifested by the strategy to develop the CWPP around the forest boundaries as well as in the consideration that protecting environmental values and maintaining a viable forest industry were important to the well-being of the community and critical to successful implementation of the plan. According to a US Forest Service employee, “People move to the White Mountains because they want to be part of the forest . . . So we are working really closely with the fire departments, the mayors, everybody in town because everything we do is a big part of their lives.” A representative from Logan Simpson Design remarked that the communities surrounding the Sitgreaves National Forest “make their living off the forest, whether it is folks coming to fish . . . or trees growing as commodities. They still saw that as what it is going to take to police the streets and educate their children. So . . . everyone bit the bullet and made it work.”

Conclusions

The communities of the Sitgreaves National Forest were successful in creating an

inclusive and multijurisdictional planning process that established effective procedures for building intergovernmental cooperation and community consensus to mitigate the wildfire risk. The Sitgreaves CWPP was able to build off of the previous collaborative interactions and positive working relations established through the NRWG and Blue Ridge Demonstration Project. The experience of the Rodeo-Chediski and Kinishba fires combined with effective leadership provided by community members, the US Forest Service, and Logan Simpson Design allowed a comprehensive and credible plan to be produced in a relatively short time frame. US Forest Service support for the community-led planning effort and commitment to a long-term stewardship contract was important in ensuring successful development and implementation of the plan. The communities participating in the CWPP also made substantial commitments to undertake complementary mitigation strategies within their own jurisdictions. Through the White Mountain Stewardship contract, development of an intergovernmental agreement and hiring of a CWPP administrator, the Sitgreaves CWPP also established adequate accountability methods to ensure implementation, monitoring, and adaptation of the plan over time. A final important factor was a commitment to enhancing environmental values while promoting the de-

velopment of a viable forest industry critical to successful implementation of the plan.

The annual threat of wildfire will remain a fact of life for communities in the West for the foreseeable future. The Sitgreaves CWPP shows how all levels of government along with community stakeholders can work together to develop effective responses to mitigate the wildfire threat. Much of the promise of community-based approaches in addressing the risk of wildfire remains to be realized. However, the Sitgreaves CWPP serves as a timely example for other communities to follow in developing solutions to address the wildfire problem at the local level.

Literature Cited

- CITY OF SHOW LOW. 2003. *Show Low News* (Vol. 3, No. 1). City of Show Low, Arizona 2003. Available online at ci.show-low.az.us/public_info/newsletters/Summer03.pdf; last accessed Nov. 14, 2006.
- LOGAN SIMPSON DESIGN. 2004a. *Community Wildfire Protection Plan for at-risk communities of the Sitgreaves National Forest with Apache, Coconino, and Navajo Counties*. Logan Simpson Design, Tempe, AZ. 62 p.
- LOGAN SIMPSON DESIGN, NAVAJO COUNTY, USDA FOREST SERVICE SOUTHWEST REGION, AND WHITE MOUNTAINS WORKING GROUP. 2004b. *A handbook for developing community wildfire protection plans in accordance with Title I of the Healthy Forest Restoration Act of 2003*. Logan Simpson Design, Tempe, AZ. 63 p.
- NATIONAL INTERAGENCY FIRE CENTER (NIFC). 2006. *National Interagency Fire Center, wildland fire statistics 2006* (cited Jan. 12, 2006). Available online at www.nifc.gov/stats/wildlandfirestats.html; last accessed Jan. 12, 2006.
- SOCIETY OF AMERICAN FORESTERS (SAF), NATIONAL ASSOCIATION OF STATE FORESTERS, NATIONAL ASSOCIATION OF COUNTIES, WESTERN GOVERNORS' ASSOCIATION, AND COMMUNITIES COMMITTEE OF THE SEVENTH AMERICAN FOREST CONGRESS. 2004. *Preparing a community wildfire protection plan: A handbook for wildland-urban interface communities*. Washington, DC.: Society of American Foresters.
- US FOREST SERVICE. 2000. *Protecting people and sustaining resources in fire-adapted ecosystems: A cohesive strategy*. US For. Serv., Washington, DC. 85 p.
- US FOREST SERVICE AND BUREAU OF LAND MANAGEMENT. 2004. *The healthy forest initiative and the Healthy Forest Restoration Act: Interim field guide*. US Forest Service and Bureau of Land Management, Washington, DC.
- US FOREST SERVICE, APACHE-SITGREAVES NATIONAL FOREST. 2007. *White Mountain Stewardship Project 2007* (cited Apr. 2, 2007). Available online at www.fs.fed.us/r3/asnf/stewardship/; last accessed Apr. 2, 2007.
- VAUGHN, J. AND H.J. CORTNER. 2004. Using parallel strategies to promote change: Forest policymaking under George W. Bush. *Rev. Policy Res.* 21(6):767-782.
- WESTERN GOVERNORS' ASSOCIATION (WGA). 2002. *Western Governors' Association; A collaborative approach to reducing wildland fire risks to communities and the environment: 10-Year comprehensive strategy implementation plan*. 27 p.