
Annex 2

CBFiM in the United States of America: the High Knob community wildfire protection plan

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PREFACE

CBFiM is often regarded as an approach exclusively for developing countries or as one that involves only those communities that rely directly on their land and the resources it provides to sustain their livelihoods. However, communities in developed countries are also actively involved in the development or implementation of the fire management approaches that affect them. These communities may not always rely directly on local natural resources to sustain their living, but it is often still in their best interests to have a stake in how fire is being managed in and around their area of interest.

In the United States of America nearly a century of effective fire suppression has resulted in altered fire regimes and significant increases in hazardous fuels. There has been an increase in the number and size of catastrophic wildfires, and between 2001 and 2008 wildland fires in the United States of America burned close to 19.5 million hectares (48 million acres), with 85 percent of those fires being caused by humans and 15 percent by lightning (NIFC, 2008). An increasing number of wildland fires are occurring in areas where human developments interface with undeveloped wildland or vegetative fuels such as forests, shrublands and grasslands. These areas of interface are typically referred to as the wildland-urban interface (WUI); such development grows as populations increase and expand outward from major urban centres. This increase creates significant strains on fire-management resources, which can be overwhelmed by wildfires.

As a result, individual communities and homeowners must be willing to accept a high degree of responsibility for protecting their homes from wildfire. Initiatives such as the development and implementation of CWPPs have been successful in achieving this goal (United States Fire Administration/National Fire Data Center, 2002).

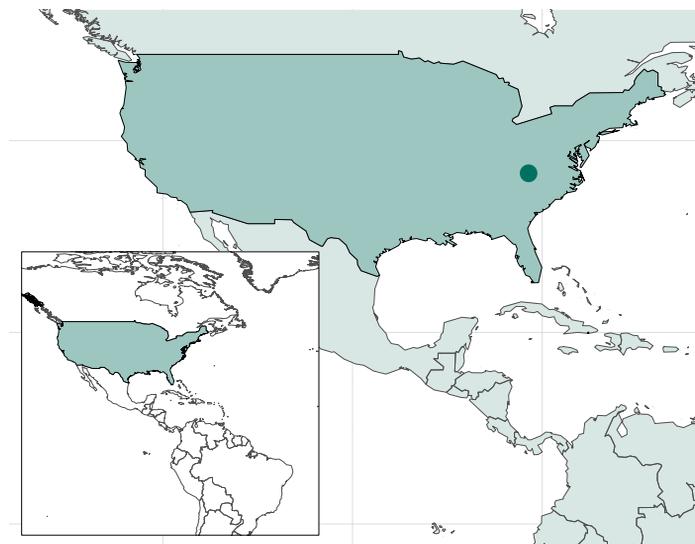
The CWPP enables a community to plan how it will reduce the risk of wildfire. Each CWPP meets the specific needs of the community developing it and is therefore unique to that community. Specifically, the plan identifies strategic sites and methods for hazardous fuel reduction projects designed to protect the community and to reduce the likelihood of structures burning. A CWPP can help a community to clarify and refine its priorities for safety, property and critical infrastructure within the WUI.

In 2006, the community of High Knob, located in the state of Virginia in the eastern United States of America, worked in collaboration with the state's Department of Forestry to develop a CWPP. The active participation by the local residents in the development and eventual implementation of the plan is a good example of CBFiM in a developed nation. High Knob is situated on the side slope of a mountain surrounded by an abundance of flammable vegetation. The CWPP developed by the community outlined strategies to reduce and remove hazardous fuels and to improve access in and out of the community.

INTRODUCTION

The community of High Knob is a gated subdivision consisting of approximately 400 homes on the outskirts of Front Royal in Warren County, Virginia, in the eastern United States of America. High Knob is a gateway community for the Shenandoah National Forest and is located approximately 65 miles west of Washington, DC. Because of its proximity to the capital, many of its seasonal and permanent residents commute to work in DC on a daily basis (JFSP, 2006). The community is located on a mountainside with surrounding vegetation consisting of dense hardwoods with scattered conifers.

FIGURE
Location of the High Knob community



In addition, there is a large amount of downed fuel and heavy undergrowth in some areas. High Knob represents an example of a community that exists where human development interfaces with undeveloped wildland and where the consequences of wildfire are potentially catastrophic.

Prior to the development of the High Knob CWPP, a mitigation specialist from the Virginia Department of Forestry conducted a community-wide wildfire assessment. The assessment revealed that the community would be at significant risk in the event of a wildfire. This risk was the result, in part, of the community's location in the WUI and the local topography that results in the placement of homes on a steep gradient up the mountainside. The area around High Knob has a relatively low frequency of wildfire occurrence, but the assessment determined that the hazardous buildup of fuels on private property places the community at significant risk. The assessment also raised major concerns regarding access in and out of the subdivision for emergency response vehicles. The roads in the High Knob subdivision are winding and tend to be steep, with insufficient turnaround areas. The mitigation specialist from the Department of Forestry presented the findings from this initial assessment to an organization within the community known as the High Knob Home Owners Association (HOA). The establishment of homeowners associations by communities and their subsequent involvement in the development of CWPPs is a requirement of the Department of Forestry in Virginia. In the case of High Knob, the HOA, and its Board of Directors, functions as a governing body within the community. Based upon the findings of the wildfire assessment, the High Knob HOA board approved official engagement with the Virginia Department of Forestry to reduce wildfire risk; they began developing a CWPP specific to their community, using an existing template as guidance. The HOA business manager acted as the lead in the community's involvement and was the primary liaison between the community and the Department of Forestry's mitigation specialist.

OBJECTIVES

High Knob is an example of active community participation in the planning and implementation of a specific type of fire management plan known as a CWPP. The community's location in the WUI also provides an example of community-based fire prevention on private land in the form of several effective hazardous-fuel mitigation strategies.

The primary objectives of the CWPP for High Knob were the community-wide reduction and cleanup of hazardous fuels and improved access for emergency vehicles in and out of the community. These activities focused specifically on private land within the subdivision boundaries. Fire is not used by the community to achieve these objectives; rather, they use a variety of mechanical fuel removal techniques, such as the mechanical chipping of woody debris.

BACKGROUND

The Virginia Department of Forestry assumes the primary responsibility for wildland fire suppression and response in Virginia's 15.8 million acres of forestland, with the exception of federally-managed lands such as the Shenandoah National Park (Gramley, 2005). In federally-managed lands in the United States of America, fire management is the responsibility of whichever agency – either the Forest Service, the Bureau of Land Management, or the National Park Service – has jurisdiction. The Virginia Department of Forestry is organized into six administrative regions within the state which receive oversight and support from a central headquarters facility. Government-owned forests make up 14.2 percent of the forestland in Virginia with the remaining 6.8 and 79 percent being owned by forest industry and private non-industrial owners, respectively. In Virginia there is a significant amount of collaboration and partnership between the Department of Forestry and local fire departments. Volunteer fire departments provide a significant source of labor with respect to fire fighting in the state, and they can be the first responders to a wildfire.

The homeowners of the High Knob subdivision have attempted to mitigate the potentially adverse effects of wildfire to their community by developing and implementing a CWPP in collaboration with the Virginia Department of Forestry. According to objectives set out by the Healthy Forest Restoration Act (HFRA), the CWPP is designed to minimize the threat of wildfire to homes and critical infrastructure within the subdivision. This goal has been achieved in part by creating defensible space around structures and removing hazardous fuels in strategic locations throughout the subdivision. Improved road access in and out of the community and improved signage (with reflective numbers) on the homes are also focuses of the plan, to facilitate travel safety and efficiency within the community during a wildland fire event.

The High Knob CWPP was funded through a federal grant provided by the National Fire Plan. The US\$ 100 000 grant was administered at the state level by the Virginia Department of Forestry. A requirement of the grant was that communities be engaged in the CWPP process and match 20 percent of the grant amount 'in kind' through labor provided by community members.

CASE STUDY SUMMARY

The residents of High Knob are involved in managing fire risk through planning and mechanical fuel treatments, rather than through the use of prescribed fire or active suppression. The community provided significant input into the development of both the initial and final CWPPs via the HOA board and a steering committee. The plan developed by local residents outlines an approach for community-wide reduction and cleanup of hazardous fuels; this approach includes improved access into and out of the subdivision. Members of the community have been active in implementation by organizing and carrying out various activities related to hazardous fuel reduction and road improvement within the subdivision. As a result, the community is less vulnerable in the event of a wildfire, and emergency vehicles can move more efficiently and safely throughout the subdivision.

Community involvement in planning and implementation

A necessary element of CBFiM is the inclusion of community members in the development and implementation of some sort of fire management planning that has direct implications for the community. In the High Knob community a steering committee was formed following official agreement by the HOA to work with the Department of Forestry in the development of a CWPP. In addition to the Department of Forestry, the High Knob CWPP steering committee is composed of a few key homeowners including some of the HOA staff and its business manager. The steering committee's role was to develop the initial plan, write grants and prioritize steps in reducing fuels and improving access within the community.

After the initial CWPP was developed by the steering committee, the majority of participants involved in implementing High Knob's CWPP were the homeowners themselves. Over the course of several months, the steering committee held discussions and meetings with community members and other stakeholders, modifying the initial CWPP to create the final signed version. The community required the administrative support of the HOA in this process; however, the HOA did not have an integral role in planning or decision-making.

In the case of High Knob, CWPP planning and implementation were essentially simultaneous. Local residents were engaged in most activities to varying degrees. Coordinating these efforts on behalf of the community was a local resident and business manager for the HOA. The HOA business manager was instrumental in catalysing the community and liaising with state and federal partners throughout the process. Another resident serving on the steering committee provided much-needed expertise in grant writing. Several successful grant proposals were written that helped to fund the development and implementation of the plan. As a result of the CWPP, the High Knob community was divided into sections to facilitate the efficient removal of hazardous fuels across the entire subdivision by teams of homeowners.

The plan included the identification of roads within the community that needed widening or that required that vegetation be trimmed back to allow access for emergency vehicles, such as fire trucks and ambulances. Each road identified for treatment was then assigned to a resident road captain. The road captain's specific role was to visit homes on his or her road, communicate the objectives of the project, and develop the interest of community members in private property fuels management. Another local resident with critical local landscape knowledge acted as the field services manager, supervising the implementation of various projects and hiring contractors to assist in the completion of those projects.

Community involvement in this process has resulted in many beneficial outcomes that are not all related to fire management. Possibly the most significant outcome of the CWPP process was a marked improvement in communication between homeowners. Effective communication between local residents was recognized as being vital to the overall success of community-based effort. The primary forms of communication employed by local residents during the development and implementation of the CWPP included email, telephone and

word of mouth, as well as the creation of a community newsletter, flyers and bulletin boards. Community events and celebrations were also important for communication and sharing. The successful removal of hazardous fuels and the resulting improvement in the protection and safety of the community was and will continue to be an important outcome generated by this process. In addition, there has been a marked improvement in the local community's awareness regarding wildfire and what individual homeowners can do to mitigate the risk to their own property. This increased understanding of fire and fire management has led to an improved relationship between the community and the local volunteer fire department.

Keys to implementation

Some of the biggest challenges with regard to the implementation effort were how to increase community involvement, how to maintain that participation and how to track overall progress. To overcome some of these challenges, a community member was identified early on who possessed effective leadership skills and who had the time to manage the process on an almost full-time basis. Being respectful of people's time and schedules was also essential to the process. For example, to maximize and sustain community participation, meetings and events were planned around individual schedules in order to accommodate as many residents as possible. Increasing community awareness was also seen as an important element in sustaining and increasing involvement. To address this need, a fire management education component was developed that also included examples of similar CWPP efforts in other communities. Lastly, the plan has to be 'owned' by the community and therefore developed by the community at a pace and in a way that is comfortable for them. To achieve necessary levels of community involvement, the process cannot be enforced by outside parties.

Continued funding is essential to sustaining this effort and therefore government grants are being sought as an important element in the future success of the programme and in sustained community involvement. Members of the community indicated that the CWPP process has resulted in a more cohesive community. Thus, the likelihood of future collaboration, including an increase in the overall number of community organizations and in participation in fire-management activities, has significantly increased. Community-building was seen by many as a key outcome of the CWPP.

CONCLUSIONS

Development of effective CWPPs is a dynamic process and one that is unique to each community. Ultimately, success depends upon the level of involvement and commitment from key community members. These individuals tend to act as 'sparkplugs', motivating community members and producing tangible results. On a small scale such as High Knob, the ability to organize and mobilize community members may be more important than their initial knowledge of fire and fire management.

Scale is an important consideration when developing and implementing a community-based approach such as a CWPP. In High Knob, initiating the plan on a small scale resulted in more rapid implementation of fuel-reduction efforts. A CBFiM approach such as the CWPP can create community integration and cooperation that are beneficial to other community efforts that are not necessarily fire-related.

The benefit that many communities in industrialized nations can derive from adopting a CBFiM approach such as the development and implementation of CWPPs, is an increase in collaboration within the community and with partners outside of the community. This collaboration can include the sharing of resources ranging from scientific and traditional knowledge to contemporary fire management strategies and conflict resolution. Increased collaboration and the increased understanding that it brings can also lead to the development of approaches (such as policy) that make sense and are relevant to a particular community. Thus, a comprehensive approach to fire management that includes a strong, community-based component is a critical element in establishing effective fire management programmes in the United States of America and other industrialized nations.

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