

FIRE ADAPTED COMMUNITIES: NATIONWIDE EFFORTS AND COMMUNITY~ BASED TOOLS FOR LIVING WITH WILDFIRE

Matt Frank

Dr. Jim Bowyer
Steve Bratkovich
Gloria Erickson
Kathryn Fernholz
Harry Groot
Dr. Jeff Howe
Dr. Ed Pepke

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Fire Adapted Communities: Nationwide Efforts and Community-Based Tools for Living with Wildfire

EXECUTIVE SUMMARY

Wildland fires have shaped North American landscapes for millenia and can provide many ecological benefits including a reduction in non-native plants and pests, removal of undergrowth that prevents regeneration of desired native species, and soil nutrient enrichment. However, today, for a number of reasons, in many places the ecological benefits of fire are outweighed by the potential environmental and economic costs, putting both communities and natural areas at risk.

A new initiative, Fire Adapted Communities, acts as an overarching framework that guides wildland-urban interface communities in addressing wildfire risks. Fire Adapted Communities' approaches include wildfire education, planning, community partnership-building and hands-on activities designed to provide wildland-urban interface citizens with the necessary knowledge, tools and motivation to prepare their communities for inevitable wildfires. Post-fire recovery is also an area of emphasis. The more steps a community takes toward wildfire preparedness, the more fire-adapted it becomes.

The Fire Adapted Communities initiative takes advantage of well-established foundational tools including Community Wildfire Protection Plans, the Firewise Communities Program and the Ready, Set, Go! program. Communities can take a number of proactive steps to become fire-adapted, including: undertaking an assessment of risks in the surrounding environment; implementing planning policies, standards and regulations; providing outreach and marketing for wildfire preparedness; and collaborating to provide encouragement and assistance for neighborhoods and residents.

INTRODUCTION

Urban sprawl and the continued development of rural landscapes have resulted in challenges for protecting natural resources, ecosystems, homes, businesses, infrastructure and people from wildfire. An increased rate of development and expansion into natural areas, including forests and rangelands, has created a land use often referred to as the wildland-urban interface (WUI). The WUI is not a specific place, but rather a descriptive term that applies to geographic locations where human development abuts or intermingles with fire prone (and/or fire-dependent) ecosystems. For a number of reasons, wildfire seasons in the U.S. are growing longer and becoming more destructive, threatening WUI communities. As a result, it is increasingly important to identify and mitigate wildfire risks on public and private properties within the WUI in order to protect homes, businesses and lives in the event of a wildfire. One way these issues can be addressed is by applying a suite of tools and concepts that collectively define the "Fire Adapted Communities" program.

This report addresses the urgency of wildfire risk within the WUI while also highlighting community-based tools that can help residents and local leaders manage associated risks.

THE WILDLAND-URBAN INTERFACE (WUI) AND WILDFIRE RISKS

The USDA Forest Service defines the WUI as "any area where humans and their development meet or intermix with wildland fuel." WUI is prevalent throughout the U.S., especially in areas with abundant natural amenities, and are most prominent along the east coast where a majority of the Nation's population lives. Over 220 million acres of land in the U.S. have been designated by state foresters as falling within the WUI and are at high risk for wildfires. ²

According to the International Association of Wildland Fire (IAWF), over the past 50 years more than 120 million people have populated fire-prone high-risk areas. Approximately 50 million houses and several hundred thousand businesses are currently located within the WUI. The atrisk population equates to 40 percent of total U.S. residents, highlighting the magnitude of the issue. Additionally, many residing in or visiting the WUI have no direct experience with wildfire, further exacerbating the problem. In addition to housing and businesses, other WUI assets are also at risk from wildfire-related damage, including infrastructure such as roads, bridges, and utility transmission lines. In some areas, due to past mis-management that has led to an overabundance of vegetation or "fuel," natural assets such as forests, parks and watersheds also face substantial risk. Wildfires can also negatively impact food supplies, human lives, and local economies. However, it's not possible or desirable to exclude all fire from the landscape. Hazardous fuels removal demonstrations, public awareness events and other forms of educational outreach are key tools for informing WUI citizens of potential wildfire risks and suggesting ways that they can proactively protect their assets and lives.

Additional information regarding the WUI and living with wildfire can be found in the USDA Forest Service's extensive technical report titled, "<u>Wildfire, Wildlands, and People: Understanding</u> <u>and Preparing for Wildfire in the Wildland-Urban Interface</u>."

FIRE ADAPTED COMMUNITIES

Today, residents, business owners, landowners, natural resource managers, and emergency professionals in many parts of the country are working together within the WUI to take steps toward making their communities and local infrastructure more wildfire resilient. "Fire



Adapted Communities" (FAC) is a new approach that is helping WUI communities prepare for and recover from inevitable wildfires. FAC provides a set of customizable tools for communities within wildfire prone areas and addresses wildfire education, planning, community partnership building and hands-on activities in order to empower WUI citizens with the necessary knowledge, tools and motivation to take preventative actions. FAC brings together interested wildfire-related stakeholders, including national organizations, federal agencies, and state and local interests to create collaborative community-based wildfire adaptation efforts.

¹ USDA Forest Service. Wildfire, Wildlands, and People: Understanding and Preparing for Wildfire in the Wildland-Urban Interface. January 2013. http://www.fs.fed.us/openspace/fote/reports/GTR-299.pdf

² IAWF. WUI Fact Sheet. August 1, 2013. http://www.iawfonline.org/pdf/WUI_Fact_Sheet_08012013.pdf

The development of FAC began in 2005 and was mentioned in that year's Quadrennial Fire and Fuel Review (QFFR) Report³ as a solution to escalating wildfire suppression costs and associated wildfire structure losses and fatalities. The 2005 QFFR Report represented the first joint effort of five federal natural resource management agencies⁴ and their state, local, and tribal partners to strategically articulate a unified wildfire management vision. A follow up 2009 Quadrennial Fire Review⁵ further defined the FAC concept and highlighted the need for community action and responsibility. Also in 2009, the Federal Land Assistance, Management, and Enhancement (FLAME) Act called for the development of the National Cohesive Wildland Fire Management Strategy ⁶, a strategy seeking to establish collaboration across all wildfire management stakeholders and landscapes throughout the country using best management practices and science to make meaningful progress toward three goals – Resilient Landscapes, Safe and Effective Wildfire Response, and Fire Adapted Communities.

WHAT IS A FIRE ADAPTED COMMUNITY?

A fire adapted community recognizes fire as part of the natural landscape. The community understands its fire risks, and takes action before a wildfire to minimize harm to residents, homes, businesses, parks, utilities, and other community assets. A key goal of FAC is that "neighborhoods located in wildfire prone areas can survive wildfire with little or no assistance from firefighters."7 To become more fire-adapted, communities take actions to address wildfire threats specific to their location and risk conditions. The more steps a community takes toward wildfire preparedness, the more fire-adapted it becomes. Figure 1 (below) depicts actions that can be taken to support becoming a fire-adapted community. These actions can be implemented using tools developed by a diverse range of FAC partners, including public and private organizations that serve as members of the Fire Adapted Communities (FAC) Coalition⁸ (Sidebar 1).

Actions that a fire-adapted community can take include an assessment of risks in the surrounding environment; implementation of planning policies, standards and regulations; outreach and marketing for wildfire preparedness; and collaboration to provide encouragement and assistance for neighborhoods and residents.

Sidebar 1: Fire Adapted Communities (FAC) Coalition

- U.S. Forest Service
- U.S. Department of the Interior
- U.S. Fire Administration
- Insurance Institute for Business and Home Safety
- International Association of Fire Chiefs
- Ready, Set, Go!
- National Association of State Foresters
- National Fire Protection Association
- Firewise Communities
- The Nature Conservancy
- Fire Learning Network
- National Wildfire Coordination Working Group – Wildland-Urban Interface Mitigation Committee
- The Watershed Research and Training Center

³ http://www.forestsandrangelands.gov/strategy/documents/foundational/qffr_final_report_20050719.pdf

⁴ Natural resource agencies included the USDA Forest Service, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service and National Association of State Forests as well as the Bureau of Indian Affairs

⁵ https://www.nifc.gov/PUBLICATIONS/QFR/QFR2009Final.pdf

⁶ http://www.forestsandrangelands.gov/strategy/

⁷ http://www.livingwithfire.info/fire-adapted-communities

⁸ http://fireadapted.org/meet-the-coalition



As a starting point, fire-adapted communities can take advantage of the following well-established and foundational tools, which can contribute to FAC development.

A Community Wildfire Protection Plan (CWPP)

• A community framework that maps assets at risk of wildfire threats and lists risk reduction and mitigation actions that can be taken by community partners and stakeholders.

Firewise Communities Program (Firewise)

 A national wildfire risk reduction educational program that encourages homeowners to take responsibility for the safety of themselves and their properties in the event of wildfire threats.

Ready, Set, Go! Program (RSG!)

 A national wildfire situational awareness and action program that emphasizes fire department, firefighter and other emergency service agency education and community outreach.

Each of these tools is briefly described below.

Community Wildfire Protection Plan (CWPP)

A CWPP is a management plan that maps community assets at risk of wildfire threats and lists risk reduction actions that may be taken. While community-based wildfire protection planning is not a new phenomenon, it has become a more heavily incentivized practice in recent years as a result of President George W. Bush's enactment of the Healthy Forests Restoration Act (HFRA) of 2003. According to the United States Forest Service (USFS), the Act was created in response to the perceived need for the federal government to maintain appropriate environmental standards while collaborating with communities and interested publics to support healthy, resilient

ecosystems and healthy communities that live amongst them. See Sidebar 2 for HFRA purposes as stated in the Act.

The HFRA provides legal incentives for federal government agencies, including the USFS and Bureau of Land Management (BLM), to give WUI communities priority when developing and implementing hazardous fuels reduction and forest management projects on National Forest System and BLM lands. These fuels-reduction projects seek to address protection of communities, watersheds, forests and other at-risk lands from catastrophic wildfire while enhancing existing efforts to protect watersheds and address forest and rangeland health. The preparation of a CWPP is the first step WUI communities need to take in order to take full advantage of these incentives.

Creation of a CWPP is a collaborative process involving community partners and stakeholders such as local fire departments, residents, state and local forestry staff, land managers and community leaders. CWPPs can follow a variety of forms based on the specific needs of a community and the people and organizations involved in the plan's development. As described in the HFRA, the minimum requirements for a CWPP are as follows.³

Sidebar 2: Healthy Forests Restoration Act (HFRA) Purpose

- Wildfire risk reduction to communities, municipal water supplies, and other atrisk Federal land
- Authorization of grant programs to improve commercial values of forest biomass
- Enhancement of watershed protection efforts and assessment of threats to forests and rangeland health
- Systematic data collection to assess impacts of insects and diseases on forest and rangeland health
- Improvement of capacity to detect insect and disease impacts at an early stage
- Protection, restoration and enhancement of forest ecosystem components including recovery of threatened and endangered species, improved biological diversity and enhanced productivity and carbon sequestration
- *Collaboration:* A CWPP is defined as needing to be collaboratively developed by local and state government representatives in consultation with federal agencies and others.
- Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuels
 reduction and recommend methods of treatment that will protect at-risk communities and
 infrastructure.
- *Treatment of Structural Ignitability:* A CWPP must recommend measures that property owners can take to reduce ignitability of structures within their community.

The strategies included in a CWPP may range from simple and short-term to more complex and far reaching. Wildfire risk reduction issues addressed may include wildfire response, hazardous fuels mitigation, community preparedness action, and protection of physical structures as well as a combination of these issues. Other local interests and needs may also be considered. A CWPP serves as a community framework for preventative wildfire risk actions as well as wildfire mitigation.

⁹ The Healthy Forests Initiative and Healthy Forests Restoration Act Interim Field Guide, http://www.fs.fed.us/projects/hfi/field-guide/web/page03.php

¹⁰ The Healthy Forests Restoration Act of 2003, <a href="http://www.gpo.gov/fdsys/pkg/BILLS-108hr1904enr/pdf/BIL

For more information about CWPPs, including handbooks and guides for their development, visit: http://www.forestsandrangelands.gov/communities/cwpp.shtml.

Firewise Communities Program

The Firewise Communities Program (hereafter referred to as Firewise) is a voluntary wildfire risk reduction program created by the National Fire Protection Association (NFPA) in 1986 that "encourages local solutions for safety by involving homeowners in taking individual responsibility for preparing their homes from the risk of wildfire." Firewise is a key component of Fire Adapted Communities and provides a collaborative



approach to wildfire risk management that connects professionals involved in wildfire education, planning and action with comprehensive resources. Firewise is co-sponsored by the US Forest Service, the Department of the Interior (DOI), and the National Association of State Foresters (NASF). Whereas CWPPs serve as community-wide management planning tools, Firewise acts as an educational program focused on providing homeowners with educational resources, specific actions to take in order to reduce wildfire threats to their properties and the surrounding neighborhood, and connections with local area wildfire professionals.



Figure 2: Active Firewise Communities as of 3.18.15

Source: Firewise Communities Map, http://firewise.org/usa-recognition-program/firewise-map¹²

In 2002, NFPA established the national Firewise Communities/USA Recognition Program. The program provides training to state forestry agencies and assigns Firewise Liaisons to communities seeking Firewise recognition status.¹³ As of March 18, 2015, a total of 1,028 recognized Firewise Communities exist across 40 states and include over 1.2 million residents (Figure 2).

¹¹ Firewise Communities. 'About Firewise', http://firewise.org/about

¹² To view a full list of recognized Firewise Communities throughout the U.S., visit: http://firewise.org/usa-recognition-program/firewise-communities-list.aspx

¹³ To view a list of Firewise State Liaisons throughout the U.S., visit: http://firewise.org/usa-recognition-program/state-liaison-list.aspx

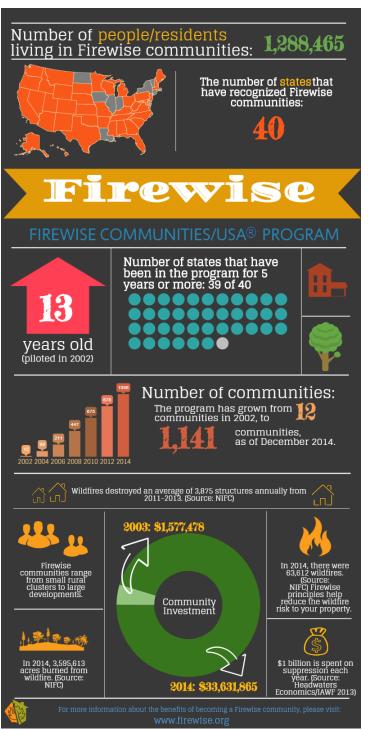
Five steps must be taken in order for communities to become a recognized Firewise Community:

- 1. Obtaining a written wildfire risk assessment document from a respective state forestry agency or local fire department.
- 2. Forming a Firewise Board or Committee and creating a local action plan based on the initial wildfire risk assessment.
- 3. Conducting an annual Firewise Day event.
- 4. Investing a minimum of \$2 per capita in local Firewise actions annually to prove that the community takes wildfire safety seriously.
- 5. Submitting a Firewise application to respective state Firewise Liaisons.

In order to maintain Firewise status over time, a community must continue to conduct annual Firewise Day events and document local investments. Benefits of becoming a recognized Firewise Community include development of a locally-specific wildfire risk action framework; education about wildfire risks and proactive steps to take to reduce building them: community between neighbors, emergency personal and wildfire professionals; and access to funding and assistance for future wildfire safety and hazardous fuels mitigation work.

The impact of Firewise has been significant as indicated in Figure 3. The online resources available through Firewise highlight project ideas, success stories, and community opportunities from across the country. For example, Cumberland Cove in Tennessee conducts a fire drill each year to test responses and equipment and provides every homeowner with a wildfire hazard risk assessment. SummerCamp, Florida has emphasized the use fire-resistant installation construction materials.

Figure 3: The Impact of Firewise
Source: Firewise Communities/USA Recognition Program Infographic
http://firewise.org/usa-recognition-program/infographic.aspx



pressurized fire hydrants, and thinning operations to aggressively manage vegetation and wildland fuels. In Cordillera, Colorado trees infested with mountain pine beetle are being removed and lodgepole pine forests are being thinned to reduce wildfire risks.¹⁴

Ready, Set, Go! Program

The Ready, Set, Go! (RSG!) Program is a national situational awareness and action program created in 2011 and managed by the International Association of Fire Chiefs (IAFC). It seeks to "develop and improve the dialogue between fire departments and the residents they serve." ¹⁵ Whereas Firewise focuses on homeowner education, action, and access to resources, RSG! emphasizes fire department, firefighter and other emergency service agency education and action.



RSG! is meant to work in conjunction with Firewise and other wildfire education programs. Both RSG! and Firewise programs seek to create stronger connections between WUI residents and wildfire and emergency service professionals.

Fire departments are encouraged to apply to become recognized as an RSG! Fire Department. Once a recognized member, they receive free access to various implementation guides, briefing documents, best practices, tools, public service announcement resources and more. By becoming a member, local fire departments are encouraged to partner with residents to build relationships and provide education about how to take personal responsibility for protecting their lives, homes and other assets in the event of a wildfire threat. RSG! members are also encouraged to develop relationships with civic groups and other emergency response or management agencies in order to have a larger impact.

RSG! communicates the importance of fire departments teaching WUI residents about creating 'defensible space' around their properties through hazardous fuels reduction and tree trimming, the 'ember zone' or the relatively large distance that embers can travel from wildfires to nearby homes within the WUI, and 'hardening of homes' or taking measures to protect their homes from wildfire through the use of construction materials such as metal roofs that are less susceptible to burning. These topics are used to inform residents and give them the best chance to take preventative action.

FIRE ADAPTED COMMUNITIES LEARNING NETWORK

The <u>Fire Adapted Communities</u> (FAC) <u>Learning Network</u> was launched in 2013 in order to accelerate the adoption of FAC concepts throughout the U.S. using a tested learning network approach. The Nature Conservancy and the Watershed Research and Training Center in collaboration with the USFS and DOI oversee the network. The FAC Learning Network was modeled after, and integrates with,



the Fire Learning Network (FLN), a group of wildfire practitioners that has been focused on creating fire-adapted landscapes since 2002. The FAC Learning Network currently consists of

¹⁴ These and other state Firewise success stories are available at: http://firewise.org/wildfire-preparedness/be-firewise/success-stories.aspx

¹⁵ http://www.wildlandfirersg.org/About/Learn-About-Ready-Set-Go

seventeen pilot communities throughout the U.S. who are actively building capacity on the ground, establishing partnerships, and raising awareness of wildfire preparedness, mitigation and recovery in wildfire prone communities (Figure 4). According to the FAC Learning Network, it "connects people and projects to avoid 'reinventing the wheel,' and encourages the development and sharing of innovations."

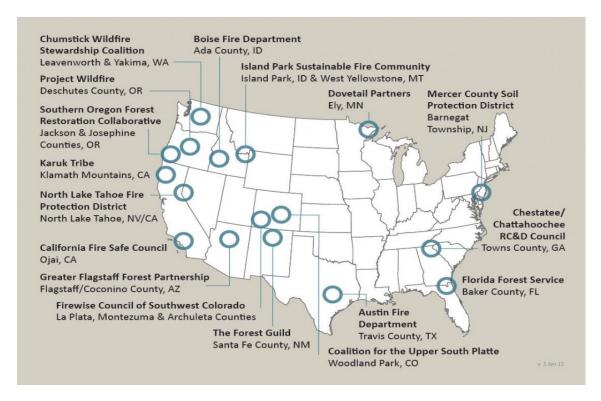


Figure 4: FAC Learning Network Hub Organizations

Source: FAC Network Participants, http://facnetwork.org/participants/

In the past two years, the FAC Learning Network has established a group of practitioners that work collaboratively and share information, feedback and resources. The Network includes nonprofits, fire departments and firefighters, natural resource professionals, Fire Safe Councils, Resource Conservation and Development Councils, Firewise Communities boards, and collaborative community efforts. The FAC Learning Network also reaches out to a broader audience though a website, blog and social media platforms where resources and success stories are shared regarding FAC issues and best practices.

Dovetail Partners serves as the Upper Midwest FAC Hub Organization and oversees a pilot community. Dovetail's involvement in the FAC Learning Network includes assisting with community-driven, on the ground wildfire risk reduction efforts in Ely, Minnesota. Dovetail is involved with data compilation, analysis of existing programs and partnerships, and working with FAC Learning Network and community partners to develop future strategies for program

¹⁶ Dovetail serves as the Upper Midwest FAC Hub Organization and oversees a pilot community in Ely, Minnesota. Additional information can be viewed here: www.dovetailinc.org/programs/land_use/fac_learning_network

¹⁷ Fire Adapted Communities Learning Network Field Guide: http://facnetwork.org/wp-content/uploads/2015/01/2015-FACFieldGuide1_reduced.pdf

implementation and partnership growth. This has included hosting on-going widlfire educational events, demonstration events, and Chipper Days in which homeowners are encouraged to implement wildfire prevention strategies in order to reduce wildfire-associated risks; hosting a 'living with wildfire' educational booth at the Ely Farmers Market; developing and distributing public awareness materials; and developing partnerships with local homeowners, business owners, foresters, government officials, and fire departments and chiefs. Upcoming projects include an emergency preparedness GIS mapping project in partnership with Vermilion Community College and an all-ages art contest that asks Ely residents to visually depict how they have positively adapted to living with the risk of wildfire threats.

THE BOTTOM LINE

Wildfires have become an increasing threat for communities living within the WUI. Since it is not possible or desirable to prevent or put out all wildfires, it is important for WUI residents, communities and landowners to be aware of the risks that wildfires pose and become educated and engaged in wildfire resiliency tactics. One the best things communities can do is be proactive by employing FAC tools and concepts. FAC offers specific resources to better live with wildfire and serves as a framework for raising wildfire risk awareness, building capacity and partnerships, educating individuals, and creating on-the-ground actions.

FAC CASE STUDIES

Fire Adapted Communities case studies can be viewed at the following National Cohesive Wildland Fire Management Strategy links. These serve as supplemental resources depicting on-the-ground FAC work from across the country.

Fire Adapted Communities Success Stories

http://www.forestsandrangelands.gov/success/category.php?category=Fire-Adapted+Communities

Northeast Regional Strategy Committee: Success Stories

http://www.forestsandrangelands.gov/strategy/Regional_Strategy_Committees/Northeast/stories.shtml

Southern Regional Strategy Committee: Success Stories

http://www.forestsandrangelands.gov/strategy/Regional_Strategy_Committees/Southeast/stories.shtml

Southern Regional Strategy Committee: Models for Action http://www.southernwildfire.net/models-for-action/

Western Regional Strategy Committee: Monthly Top Ten http://www.wildfireinthewest.blogspot.com/p/top-ten.html

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INFO@DOVETAILINC.ORG WWW.DOVETAILINC.ORG 612-333-0430

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DOVETAIL PARTNERS, INC.

528 Hennepin Ave, Suite 703 Minneapolis, MN 55403 Phone: 612-333-0430 Fax: 612-333-0432

www.dovetailinc.org