



FIREWISE USA®
RESIDENTS REDUCING WILDFIRE RISKS



Residents Reducing Wildfire Risks: Findings from the NFPA® Firewise® Sites of Excellence Pilot, 2019–2020

Rebecca Miller, PhD
Postdoctoral Scholar, West on Fire Project
University of Southern California
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Executive Summary

The National Fire Protection Association (NFPA) oversees a grassroots, community-based wildfire preparedness program called Firewise USA®. Firewise USA is intended to help neighbors learn about their fire risks and take action to protect their communities. Residents interested in pursuing wildfire mitigation activities to reduce the likelihood of structure ignition and loss can apply for their community to become recognized as a Firewise site.

In 2019, NFPA began a 24-month pilot program to challenge seven Firewise sites across the country with increased resident participation and wildfire mitigation activities. These seven sites—known as Sites of Excellence—identified up to 100 homes within their communities to focus on during the pilot program. Participating sites aimed to (1) have 100 percent participation of property owners within the designated pilot area and (2) complete mitigation tasks within 30 feet of every participating home based on individual home risk assessments. The seven selected sites were in Arizona, Colorado, Texas, Utah, Virginia, Washington, and Wisconsin.

Across all seven sites, participation in the Sites of Excellence program resulted in significant uptake in community-wide participation and interest in wildfire protection and preparedness activities. The higher levels of engagement in the Firewise program throughout the community as a result of participating in the Sites of Excellence program reduced overall wildfire risk and improved community cohesion.

This report identifies the common challenges, successful strategies, and best practices for Firewise sites based on annual reports and conversations with residents and government employees involved in the seven Sites of Excellence. The common challenges include ensuring community buy-in, privacy or government oversight concerns, ineffective mitigation activities, and inadequate funding. The successful strategies include the use of homeowner's associations and community covenants, neighbor-to-neighbor communication, community cohesion, and coordination with local and state governments. The best practices for Firewise sites include having multiple leaders or “sparkplugs,” educating residents, encouraging attention through media coverage, and remaining persistent despite setbacks.

In addition, participants offered recommendations for state and local governments and NFPA to advance the Firewise USA program. First, they suggested that the state and local government agencies involved in Firewise USA build partnerships with and support Firewise sites. Respondents also encouraged NFPA to establish a multitiered program within Firewise USA, similar to the Sites of Excellence pilot, to establish multiple official levels of Firewise recognition. Finally, respondents recommended that NFPA create new opportunities to share best practices among Firewise sites in the same region or ecosystem type.

Those involved in the Sites of Excellence pilot program expressed unanimous enthusiasm for the program and believed that it contributed to higher levels of community participation and subsequent improvements in local wildfire preparedness and risk reduction efforts. Leaders from all seven Sites of Excellence planned to remain Firewise sites in the future in recognition of how their communities' commitment to wildfire risk reduction principles improved public safety.

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1. Introduction

1.1. Firewise USA® Recognition Program

The National Fire Protection Association (NFPA) oversees a grassroots, community-based wildfire preparedness program called Firewise USA. Firewise USA is co-sponsored by the United States Department of Agriculture Forest Service and the National Association of State Foresters. Firewise USA provides a framework to help neighbors learn about their fire risks and take action to protect their communities. Neighbors interested in pursuing wildfire mitigation activities to reduce the likelihood of structure ignition and loss can apply for their community to become recognized as a Firewise site. As of 2022, more than 1,800 communities across the United States serve as active Firewise sites (Figure 1).

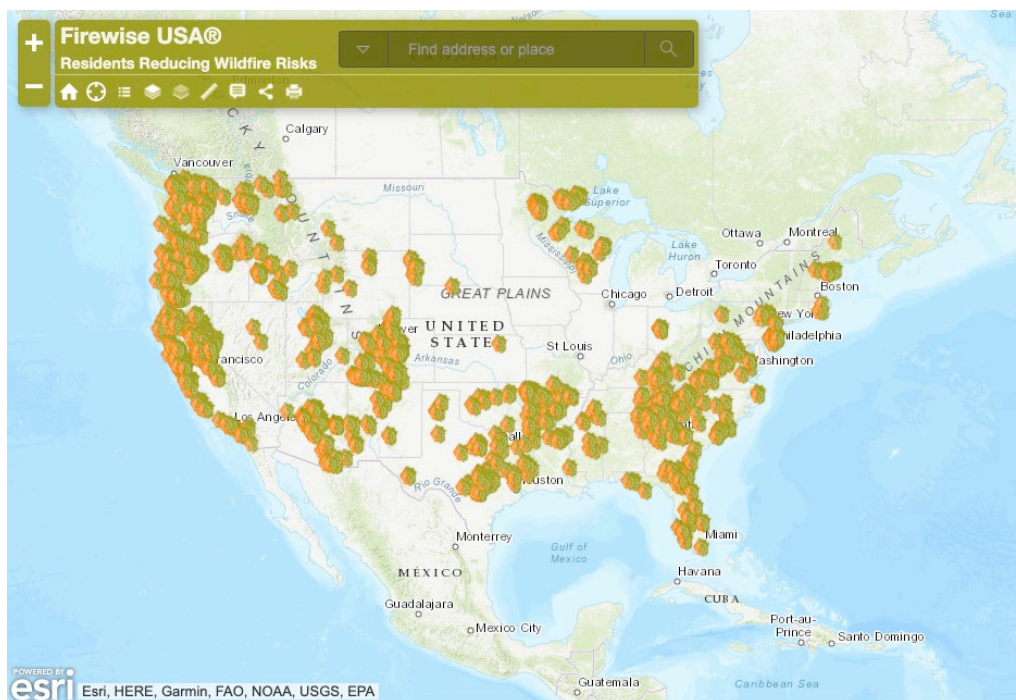


Figure 1: Map of Firewise USA sites. Source: NFPA.

To be recognized as a Firewise site, a community must complete five steps: (1) create a board or committee of residents and other wildfire stakeholders, like local emergency managers or fire marshals; (2) obtain a written wildfire risk assessment from the state forestry agency or fire department that identifies risky areas and recommendations for improvements; (3) create an action plan that identifies community education and mitigation activities and update it every three years; (4) host an outreach and education event to address items in the action plan; and (5) track the hours and financial investments in wildfire mitigation (Figure 2). Firewise sites can include between 8 and 2,500 single-family dwelling units.¹

¹ National Fire Protection Association, “How to become a Firewise USA site,” 2021. <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Become-a-Firewise-USA-site>.



Figure 2: Steps to form a Firewise USA site. Source: NFPA.

To remain an active Firewise site in good standing, the communities must host an outreach event and record the time and expenses spent on wildfire mitigation annually. Sites must invest the equivalent of one volunteer hour per dwelling unit (or the monetary equivalent of \$28.54) to remain active. Firewise sites must review and update their action plans every three years. In addition, Firewise sites must review and update their community risk assessments every five years.² Recognition as a Firewise site is considered part of an ongoing process for a community, “not the end-all-and-be-all of wildfire safety.”³ Participating sites can choose which mitigation activities to focus on based on the risks and needs of the community.

Structures can be ignited by a wildfire via direct flame contact, radiant heat, and flying embers. Embers—or firebrands—can be easily spread by heavy winds and are responsible for most home destruction caused by wildfires. To reduce the likelihood of structure ignition and destruction, homeowners can utilize home hardening and defensible space.⁴

Home hardening refers to replacing, installing, or maintaining wildfire-resistant construction materials. Roofs, vents, and eaves are among the most vulnerable to ember intrusion, though windows, walls, decks, and rain gutters can also ignite and lead to structure loss.⁵

Defensible space involves the creation and maintenance of up to 100 feet of buffer space in multiple zones around a structure. Zone 0 refers to the area within the first 5 feet of the home, which should be entirely clear of flammable materials like vegetation and mulch. Zone 1 extends from 5 to 30 feet from the building. Vegetation in Zone 1 should be trimmed and flammable materials should be separated to prevent fire from having direct pathways to the structure. Zones 0 and 1 are also known as the home

² National Fire Protection Association, “Annual renewal information,” 2022. <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Firewise-USA-Resources/Annual-renewal-information>.

³ Steinberg, Michele, “Recognizing a need for clarification: Firewise recognition vs. certification,” *Fire Break*, 2021. <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Firewise-USA-Resources/Annual-renewal-information>.

⁴ “Hardening Your Home,” Cal Fire, 2019. <https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/hardening-your-home/>.

⁵ “Preparing Your Home,” UC Cooperative Extension, 2021. <https://ucanr.edu/sites/fire/Prepare/Building/>.

ignition zone—or HIZ—recognized as the priority area for defensible space to improve structure protection. Finally, Zone 2 consists of the area between 30 and 100 feet from the structure (or the distance to the property line). Vegetation like trees and shrubs can be closer together in Zone 2 than in Zone 1.⁶

Structure protection is more effective when implemented at a community- or neighborhood-wide level rather than solely at the individual structure level.⁷ Homeowners are also more likely to pursue individual home mitigation when surrounded by neighbors engaged in wildfire mitigation activities.^{8,9} Suburban communities rarely have 100 feet between homes, increasing the importance of widespread structure protection.¹⁰ Proximity to other destroyed homes was a significant indicator of home loss during the 2018 Camp Fire.¹¹ The Firewise USA program emphasizes community-wide structure protection and risk reduction to improve public safety in recognition of the value of widespread wildfire mitigation.¹²

Homeowners are also more likely to pursue wildfire mitigation activities if they believe that they live in a high-risk area and mitigation will reduce their risk.^{13,14}

Other factors that can influence homeowners to take planned mitigation action include prior exposure to wildfires,^{15,16} high levels of attachment to their homes, and disposable income.^{17,18}

⁶ “Defensible Space,” State of California, 2022. <https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/>.

⁷ McCaffery, Sarah, “Community wildfire preparedness: A global state-of-the-knowledge summary of social science research,” *Current Forestry Reports* 1, p. 81–90, 2015.

⁸ Brenkert-Smith, Hannah, et al., “Insights Into Wildfire Mitigation Decisions Among Wildland-Urban Interface Residents,” *Society and Natural Resources*, p. 759–768, 2006.

⁹ Shafran, Aric P., “Risk externalities and the problem of wildfire risk,” *Journal of Urban Economics*, p. 488–495, 2008.

¹⁰ Cohen, Jack D., “Preventing disaster: Home ignitability in the wildland-urban interface,” *Journal of Forestry*, p. 15–21, 2000.

¹¹ Knapp, Eric, et al., “Factors associated with single-family home survival in the 2018 Camp Fire, California,” *Fire Ecology*, p. 1–19, 2021.

¹² “Firewise USA,” National Fire Protection Association, 2018.

¹³ Ghasemi, Benjamin, et al., “An examination of the social-psychological drivers of homeowner wildfire mitigation,” *Journal of Environmental Psychology*, 2020.

¹⁴ Absher, James D., et al., “Overcoming Barriers to Firewise Actions by Residents,” *Final Report to Joint Fire Science Program*, Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture and Colorado State University, Human Dimensions of Natural Resources, 2013.

¹⁵ Wolters, Erika Allen, et al., “Determinants of residential Firewise behaviors in Central Oregon,” *The Social Science Journal*, p. 168–178, 2017.

¹⁶ Brenkert-Smith, Hannah, et al., “Trying not to get burned: Understanding homeowners' wildfire risk-mitigation behaviors,” *International Journal of Wildland Fire*, p. 1139–1151, 2012.

¹⁷ Champ, Patricia A., et al., “Living in a tinderbox: wildfire risk perceptions and mitigating behaviors,” *International Journal of Wildland Fire*, p. 832–840, 2013.

¹⁸ Ghasemi, Benjamin, et al., “An examination of the social-psychological drivers of homeowner wildfire mitigation,” *Journal of Environmental Psychology*, 2020.

Older or retired, wealthier, and more educated residents^{19,20,21,22} are also more likely to pursue wildfire mitigation activities. Some jurisdictions have enacted regulations that require wildfire-resistant construction and defensible space, particularly in hazardous areas.²³ For example, the California Department of Forestry and Fire Protection conducts defensible space inspections every three years for homes under its protection.²⁴ By contrast, Firewise USA is an entirely voluntary, grassroots wildfire preparedness program that encourages widespread mitigation.²⁵

Successful Firewise sites often have highly motivated leaders and engaged residents who actively work to reduce their community wildfire risk. While most Firewise communities renew their applications and remain within the program, those Firewise sites that have elected not to remain involved often cite communication, leadership, funding, and bureaucratic challenges.²⁶

Many Firewise sites are organized through homeowners associations (HOAs), which provide structure, leadership, and financial resources.²⁷ Interviews with the leaders of Firewise sites in New Mexico revealed that the sites often receive valuable help from local organizations,²⁸ though absentee or vacant lots present a challenge to community-wide mitigation.²⁹ Firewise sites often form following nearby destructive wildfires, indicating a common reaction of organized mitigation post-wildfire as communities take steps to protect themselves.³⁰

¹⁹ Collins, Timothy W., “What influences hazard mitigation? Household decision making about wildfire risks in Arizona’s White Mountains,” *The Professional Geographer*, p. 508–526, 2008.

²⁰ Walpole, Hugh, et al., “Operationalising homeowner wildfire risk mitigation in fire-prone area,” *International Journal of Wildland Fire*, p. 161–169, 2021.

²¹ Sanchez, Jose J., et al., “Homeowners willingness to pay to reduce wildfire risk in wildland urban interface areas: Implications for targeting financial incentives,” *International Journal of Disaster Risk Reduction*, 2022.

²² Brenkert-Smith, Hannah, et al., “Trying not to get burned: Understanding homeowners’ wildfire risk-mitigation behaviors,” *International Journal of Wildland Fire*, p. 1139–1151, 2012.

²³ Intini, Paolo, et al., “Guidance on Design and Construction of the Built Environment Against Wildland Urban Interface Fire Hazard: A Review,” *Fire Technology*, p. 1853–1883, 2019.

²⁴ “Defensible Space,” State of California, 2022. <https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/>.

²⁵ Steinberg, Michele, and Meghan Housewright, “Addressing vacant property in the wildland urban interface,” *Idaho Law Review*, p. 59–84, 2019.

²⁶ Steinberg, Michele, “Firewise forever? Voluntary community participation and retention in Firewise programs,” U.S. Department of Agriculture, Forest Service, Northern Research Station, Proceedings of the second conference on the human dimensions of wildland fire, p. 79–87, 2011.

²⁷ Steffey, Eric, et al., “The Mitigated Neighborhood: Exploring Homeowner Associations’ Role in Resident Wildfire-Mitigation Actions,” *Journal of Forestry*, p. 613–624, 2020.

²⁸ Auerbach, Sarah, “One Spark Is All It Takes: A Qualitative Analysis of the Experiences of Firewise Community Representatives in New Mexico,” Northern Arizona University, 2015.

²⁹ Steinberg, Michele, and Meghan Housewright, “Addressing vacant property in the wildland urban interface,” *Idaho Law Review*, p. 59–84, 2019.

³⁰ Kramer, H. Anu, et al., “Where wildfires destroy buildings in the US relative to the wildland–urban interface and national fire outreach programs,” *International Journal of Wildland Fire*, p. 329–341, 2018.

1.2. Sites of Excellence Pilot Program

In 2019, Firewise USA began a 24-month pilot program that challenged seven active Firewise sites across the country to increase their resident participation and wildfire mitigation activities (Figure 3). The seven sites aimed to (1) have 100 percent participation of the homes within the designated pilot boundary of up to 100 self-identified, co-located, adjacent homes in the Sites of Excellence program and (2) complete identified mitigation tasks within 30 feet of every home based on individual home assessments. The seven selected sites were: Forest Highlands, Arizona; Red Rock Ranch, Colorado; 7-R Ranch, Texas; Summit Park, Utah; Coal Bank Ridge, Virginia; Flowery Trail, Washington; and Crystal Lake Club, Wisconsin. (Figure 4).³¹



Figure 3: Firewise USA Sites of Excellence sign. Source: NFPA.

³¹ Fitzgerald-McGowan, Megan, "Firewise USA launches new pilot program," *Fire Break*, p. 329–341, 2019.

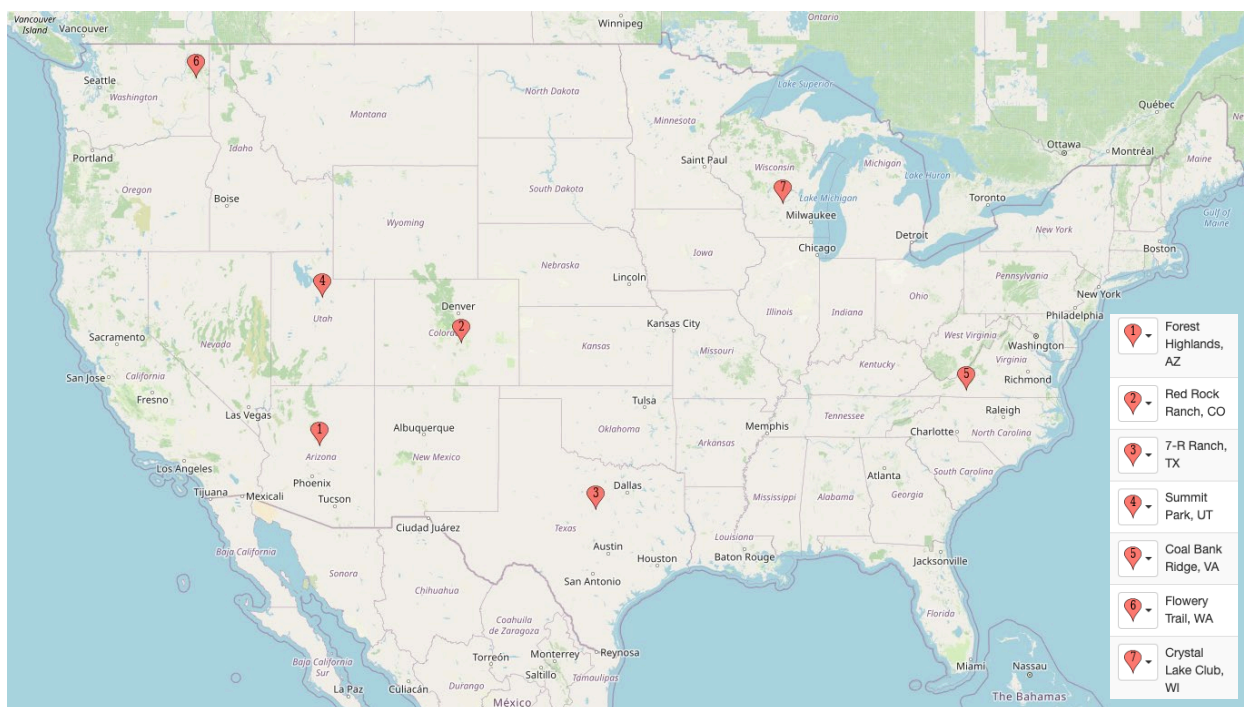


Figure 4: Map of Sites of Excellence. Source: Map Customizer.

All seven Firewise Sites of Excellence were highly engaged in Firewise USA for many years prior to joining the pilot program. Like many Firewise sites,³² all of the Sites of Excellence were organized around HOAs, though the participating HOAs had varying levels of institutional requirements for the wildfire mitigation activities. Although only seven sites were selected to join the Sites of Excellence pilot program, there are many exemplary Firewise sites—both with HOAs and without—located throughout the country dedicated to reducing wildfire risk and protecting their neighborhoods and communities.

The Sites of Excellence pilot program was intended to determine whether more ambitious wildfire mitigation goals could be applied to the more engaged Firewise sites across the country.³³ Recent catastrophic and destructive wildfires have revealed the dangers of inadequate protection in the HIZ—the structure and its immediate surroundings of up to 30 feet around the home.³⁴ Proper management of the HIZ reduces the likelihood of structure ignition from direct flame contact or embers. The goals for the Sites of Excellence refer directly to the home ignition zone, including clearing vegetation, replacing mulch with rocks, and replacing flammable structure materials with wildfire-resistant materials.³⁵

The participating sites submitted annual reports to NFPA detailing their progress toward and challenges in meeting the Sites of Excellence goals. All of the sites received \$2,000 from NFPA to spend on the wildfire mitigation activities of their choosing. The sites also received and posted an additional sign from

³² Steffey, Eric, et al., “The Mitigated Neighborhood: Exploring Homeowner Associations’ Role in Resident Wildfire-Mitigation Actions,” *Journal of Forestry*, p. 613–624, 2020.

³³ Verzoni, Angelo, “Striving for Excellence: New Firewise pilot program tests how far communities can go to protect themselves from wildfire,” *NFPA Journal*, 2019.

³⁴ “Preparing homes for wildfire,” National Fire Protection Association, 2022.

³⁵ Verzoni, Angelo, “Striving for Excellence: New Firewise pilot program tests how far communities can go to protect themselves from wildfire,” *NFPA Journal*, 2019.

NFPA at the entrance to the neighborhood recognizing their status as a Site of Excellence. In 2019, Firewise leaders from the Sites of Excellence met in San Antonio, TX, to share best practices and their experiences with other leaders. The COVID-19 pandemic prevented a second meeting planned for 2020 and limited participating sites' in-person activities throughout the year.

1.3. Methods and approach

This empirical report identifies the lessons learned and best practices from the seven Firewise sites involved in the two-year Sites of Excellence pilot program. The report is based on 27 conversations with 31 community leaders, state and local government employees, and NFPA staff, all of whom were actively involved in wildfire protection or were otherwise familiar with the Sites of Excellence. These individuals were first identified through their affiliations with the seven Sites of Excellence and snowball sampling was used to identify additional individuals.³⁶ These conversations occurred between November 2021 and January 2022, approximately one year after the conclusion of the pilot program. These included 13 conversations with community leaders, 7 conversations with state government employees, 6 conversations with local government employees (including fire department staff), and 1 conversation with NFPA staff. These individuals were actively involved in wildfire protection activities or were otherwise familiar with the Sites of Excellence. Conversations occurred with local Firewise leaders, local fire department staff, and state forestry agency staff from all the sites participated in the conversations, with the exception of the local fire department protecting Flowery Trail and the state forestry agency at the Summit Park site.

These conversations followed a semi-structured protocol guide,^{37,38} were recorded over Zoom or by phone with the individuals' consent, and lasted between 30 and 70 minutes. The participants answered questions about the Firewise site, the Firewise mitigation activities before and after becoming a Site of Excellence, the site's relationship with the state and local government, best practices, challenges, advice for other Firewise sites, and recommendations for the Firewise program in the future. All the conversations were transcribed and coded to identify broad themes based on the questions. This report draws on these conversations, the two reports submitted by the Sites of Excellence pilot sites, and records of the activities and hours invested by the participating Firewise sites each year.

2. Sites of Excellence

2.1. Forest Highlands, Arizona

The community of Forest Highlands is located in Flagstaff, AZ. This 1,100-acre private residential community/golf club and HOA consists of 814 residential lots with 744 homes and over 2,000 residents (Figure 5). Forest Highlands became a Firewise site in 2004. The covenant development standards set by the HOA include wildfire protection requirements; if members do not meet the minimum requirements, the HOA will do the work and then charge the household. Forest Highlands is primarily a second-home golf

³⁶ Biernacki, Patrick, and Dan Waldorf, "Snowball Sampling: Problems and Techniques of Chain Referral Sampling," *Sociological Methods & Research*, p. 141–163, 1981.

³⁷ Creswell, John W., and Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks, CA: SAGE Publishing, 2018.

³⁸ Rubin, Herbert J., and Irene S. Rubin. *Qualitative Interviewing: The Art of Hearing Data*. Thousand Oaks, CA: SAGE Publishing, 2012.

community, with only about 50 residents living in the community full-time. The older homes in the community are more densely packed together, typically on half-acre lots, whereas newer homes are often on lots averaging 1.5–2 acres. The residents are familiar with fire risk in the community due to prevailing winds and their proximity to the Coconino National Forest, which contains the world’s largest stand of ponderosa pines. However, the golf course provides a natural firebreak.



Figure 5: Golf course in Forest Highlands within the ponderosa pine forest. Source: Forest Highlands.

Prior to becoming a Site of Excellence, Forest Highlands divided its residential lots into five zones that were assessed on a rotating basis of one zone per year. Each zone contained approximately 160 to 170 homes. The Highlands Fire District originally conducted all the home risk assessments before Forest Highlands residents became certified to conduct them (Figure 6). Wildfire-related articles appear in every issue of the monthly newsletter, *Voice in the Pines*, and email blasts addressing wildfire risks are sent at the beginning of each year. Wildfire risk reduction activities and information on the Firewise program are also part of the new member orientation.

In addition, homes cannot clear escrow in Forest Highlands unless they meet Forest Highlands’ wildfire protection standards and the HOA’s development standards, which include approved plant lists and a design review committee.

Local Firewise leadership has also tracked measures of merit across Forest Highlands households since 2004 (Figure 7). Measures of merit include alarm systems, private and common structures that meet Forest Highlands’ wildfire standards, and fire-resistant roofs on private and common structures. By 2021, the community had nearly 100 percent participation in all categories. Between 900 and 1,200 residents attend the community Firewise Day barbecue held annually on the 4th of July or the nearest weekend, which often features a local fire truck and an educational booth that distributes wildfire protection materials.



Figure 6: Educational events hosted with local fire department. Source: Forest Highlands.

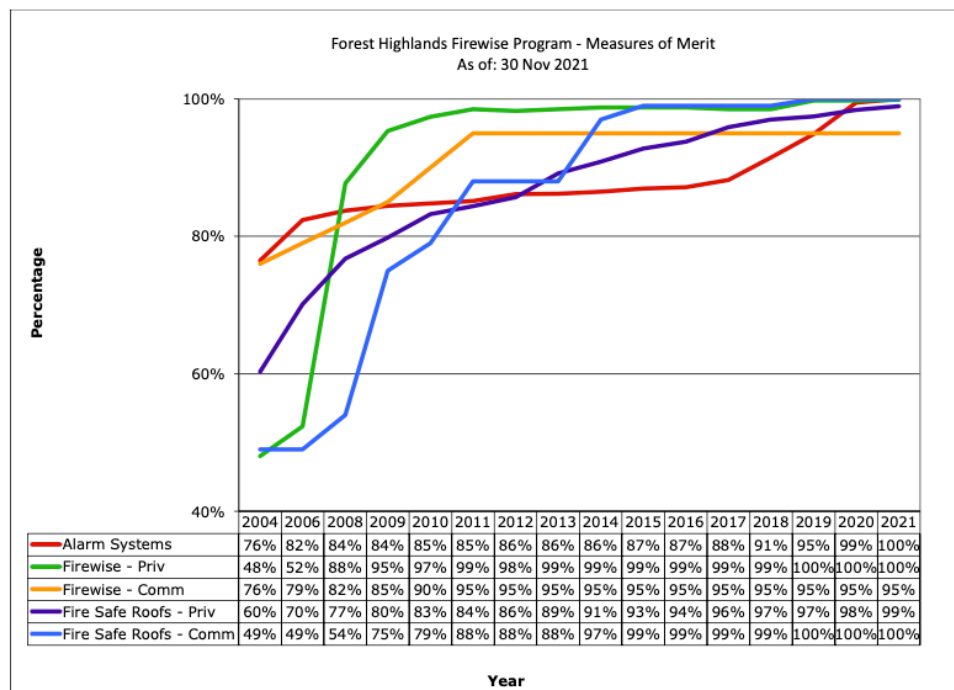


Figure 7: Measures of merit collected by Forest Highlands Firewise leadership, 2004–2021. Source: Forest Highlands.

Forest Highlands selected one of its five zones for the Sites of Excellence pilot project. The zone included 85 homes and 7 empty lots, and 81 of the homes participated. The zone was selected because it had the greatest wildfire risk in the community, the property to the southwest was previously thinned by the U.S. Forest Service and the Highlands Fire District, and the golf course provided a firebreak along the northeast. All of the homes involved signed up for and completed a risk assessment in 2019. Local Firewise leadership completed Fire Safety Checkups (previously referred to as assessments) in early July 2020.

Over the two-year period, the Forest Highlands HOA emphasized the need to reduce threats in the home ignition zone, as a wildfire could easily spread from house to house. The fire chief of the Highlands Fire District encouraged residents to measure their landscaping from the house rather than the street; if a resident could see landscaping from their house, that is, it was not under a window or next to siding, it was likely in the home ignition zone. Despite minimal emphasis on protecting the home ignition zone prior to participating in the Sites of Excellence pilot, nearly all the households in this community (70, 86.4 percent) completed mitigation activities within the first 30 feet of their homes, indicating very high levels of engagement and education during the pilot.

In addition, Forest Highlands decided to divide its common area into ten zones that would be assessed and managed in a ten-year cycle. Forest Highlands treated the 11 acres of common area within the Sites of Excellence pilot boundary as a demonstration of the community's buy-in and to set an example for the private homesites.

Following the Sites of Excellence pilot project, the community of Forest Highlands plans to continue focusing on the home ignition zone in future educational and outreach efforts and home risk assessments. The Highlands Fire District has also incorporated the home ignition zone into its broader wildfire awareness and education activities. Participating in the Sites of Excellence program has reinforced the message that wildfire mitigation efforts are never completed and more mitigation work can always be done. Forest Highlands plans to remain engaged in Firewise USA with the full support of the HOA board.

2.2. Red Rock Ranch, Colorado

The community of Red Rock Ranch is located in Monument, CO, near Colorado Springs and 4 miles north of the United States Air Force Academy. Red Rock Ranch became a Firewise site in 2017. Red Rock Ranch consists of 515 acres with 195 homes and nearly 600 residents, and lots in the community range from 1 to 1.5 acres. Red Rock Ranch is an HOA with voluntary dues, but residents must follow community rules. Most residents are of retirement age, primarily retired military given the proximity to the Air Force Academy.

Pike National Forest borders the western and southern edges of Red Rock Ranch, with Raspberry Mountain (8,600 feet in elevation) along the western boundary. The Colorado State Forest Service characterized the area near Raspberry Mountain and Pike National Forest as "high/highest risk" for wildfire. Approximately 70 percent of the lots are in a heavily forested, dense scrub oak environment. Much of Colorado, including Red Rock Ranch, is experiencing a multi-year severe drought, increasing local wildfire risk. Two major wildfires in 2012 and 2013 (the Waldo Canyon and Black Forest Fires, respectively) occurred within 30 miles of the community.

Before becoming a Firewise site, Red Rock Ranch organized community trash and slash days in 2014 and 2016, though only around a dozen households participated. Following two fire mitigation events with minimal participation, the HOA president determined that the community's efforts were ineffective and inaccessible for the aging community.

The president later attended a wildfire protection outreach seminar in 2016 hosted by the Tri-Lakes United Methodist Church. The church offered to conduct mitigation work for free for disabled individuals and those unable to pay. The HOA president identified a local widow whose home was encumbered with scrub oak. In 2017, the president arranged for the church to organize mitigation work and engage the community to help set up a mitigation demonstration yard on behalf of the widow. The project was so successful that Red Rock Ranch pursued Firewise recognition; those in the community who participated in the project were chosen to be the local Firewise leadership (Figure 8).

Prior to becoming a Site of Excellence, Red Rock Ranch emphasized both community activities, like slash and chipping days, and individual home activities, like home risk assessments. The local Firewise committee announced chipping days in the newsletter and at the annual picnic. Local Firewise committee members also spoke with each member of the community directly to discuss individual household mitigation needs and identify resources to support mitigation.

In addition, a local fire district representative spoke to residents on the importance of keeping the first 5 feet around their homes clear of landscaping. Red Rock Ranch also received a \$6,700 grant from the Coalition for the Upper South Platte, a local environmental education and protection organization.



Figure 8: Wildfire Community Preparedness Day. Source: Red Rock Ranch.

Twenty-three properties within Red Rock Ranch participated in the Sites of Excellence pilot project. These properties were identified by the Colorado State Forest Service as being in the highest risk area due to the dense forests, expansive understory, and steep mountainous terrain. Participants were recruited via an HOA president letter describing the pilot project and encouraging active homeowner participation and support. The HOA also sent out an email outlining the purpose and goals of the pilot project and representatives went door-to-door to introduce the project, answer questions, and encourage homeowner participation. Most residents were enthusiastic and supportive of the community's participation in the project and appreciated receiving wildfire awareness materials and handouts. Leadership encountered three homes occupied by long-term renters interested in wildfire mitigation, and two of the three successfully obtained absentee homeowner authorization to conduct property mitigation.

Of the 23 properties in the Sites of Excellence pilot, all but four households (19, 83 percent) participated, indicating high levels of engagement and widespread adoption of the pilot's goals. The four households that did not participate cited unwilling absentee owners, a divorce situation, and uncooperative homeowners. Among the 23 homes in the pilot project, local Firewise assessors or the Tri-Lakes Monument Fire Marshal assessed 13 of them (56 percent).

Across Red Rock Ranch, 90 homes (43 percent) engaged in mitigation activities in 2019 and 2020. In addition, Red Rock Ranch organized nine chipping days in 2019 and 2020, with an increased number of chipping crew participants and a decreased number of hours per chipping day from 2019 to 2020. Leaders used door hangers, signs, newsletters, emails, banners, brochures, and flyers to distribute information to

all the Red Rock Ranch residents. The HOA provided \$3,000 to support these wildfire protection activities and paid an additional \$310 for volunteer insurance to protect the HOA in the event of an injury during wildfire mitigation activities.

Beyond the Sites of Excellence pilot project, the community of Red Rock Ranch has also created its own evacuation plan. Although the sheriff's department is responsible for all evacuations, leaders in Red Rock Ranch distributed maps throughout the community identifying access and egress areas in case of an evacuation. Local leaders also created a brochure with a map of the area and its road networks that identified the major routes available in the event of an emergency, as the local sheriff's department had not created such a document. In September 2021, leaders in Red Rock Ranch coordinated with three nearby communities to conduct a practice evacuation to improve awareness of pathways and the evacuation process.

2.3. 7-R Ranch, Texas

The 7-R Ranch HOA is located in Gordon, TX, in Palo Pinto County, approximately 60 miles from Fort Worth in Central Texas. 7-R Ranch consists of 125 homes, some of which are under construction. A volunteer fire department protects both 7-R Ranch and the neighboring community of Lake Palo Pinto. Lake Palo Pinto and 7-R Ranch are two distinct Firewise sites that share a single committee.

7-R Ranch consists of high-end, modern, upscale houses in a gated community. Most of the homes have manicured lawns. 7-R Ranch is a mix of both seasonal and full-time residents, with approximately half of the lots occupied. No one is responsible for maintaining empty lots in 7-R Ranch, though the community has covenants with community expectations and requirements. Both communities have large tracks of high native grasses that are responsible for most of the region's fire risk.

By comparison, Lake Palo Pinto's homes range from fishing shacks to expensive homes. The Lake Palo Pinto community is primarily made up of weekend and summer or seasonal residents. Many of the homes have wooden or shingled roofs and minimal defensible space. The Lake Palo Pinto community has much lower participation in Firewise than 7-R Ranch in part because of the cultural emphasis on privacy and resistance to government intervention in Lake Palo Pinto. The community of Lake Palo Pinto surrounds the lake and is hillier and more mountainous than 7-R Ranch, making the terrain more difficult to defend from wildfires. Despite the differences between the two communities, they are protected by the same fire district and have the same Firewise committee, though only 7-R Ranch participated in the Sites of Excellence program.

Prior to becoming a Site of Excellence, the community emphasized education and communication to mitigate wildfire risk. The 7-R Ranch community utilized Facebook pages and a virtual newsletter to keep residents up to date. The community's developer also has a Facebook page and sends out newsletters that include information related to the Firewise USA program. Before the launch of the Sites of Excellence pilot program, residents of 7-R Ranch were already familiar with the Firewise program; the community often hosted a 4th of July fish fry event with up to 700 attendees that featured informational booths with Firewise and wildfire protection literature and even Smokey Bear. The site also won several \$500 awards from State Farm as part of the annual Wildfire Community Preparedness Day campaign. NFPA creates and administers the award application process using State Farm funding.³⁹

Nearly every home in 7-R Ranch actively participated in the pilot program (120 of 125 homes, 96 percent). The community outreach efforts included creating a flier that explained the program and the date

³⁹ "Wildfire Community Preparedness Day," National Fire Protection Association, 2022.
<https://www.nfpa.org/Events/Events/National-Wildfire-Community-Preparedness-Day>.

for home risk assessments in the development, distributing the flier to each home and discussing it with homeowners, posting the flier on the community's Facebook page, and emailing information to all the property owners. Leaders reported no negative reaction from the community.

To encourage initial construction to follow wildfire risk reduction principles, the local Firewise committee contacted the preferred builder for the 7-R development, explained the Firewise program, and shared copies of the Texas A&M Forest Service brochures on fire-resistant construction materials. A \$500 State Farm grant was used to create a wildfire-resistant demonstration garden using rock compost with appropriate succulent plants within 5 feet of a structure and organic compost beyond 5 feet with appropriate plants. Surrounding signs explained the concept.

Of the 120 participating homes, 102 (85 percent) received a home risk assessment conducted by the Texas A&M Forest Service in 2019 (Figure 9). The local Firewise committee recruited volunteers from the local volunteer fire department to join committee members and work alongside the Forest Service during the home risk assessments. Other homeowners provided lunches for volunteers. Such local engagement efforts helped create community buy-in and a positive attitude toward the Forest Service.

Risk assessors used the Texas A&M Forest Service assessment app to conduct the home risk assessments. The app produced reports and a color-coded map of the results. Assessors engaged the homeowners whenever possible, which subsequently increased homeowners' understanding of the risk and their commitment to risk reduction. Homeowners received a copy of their home risk assessment report, including personalized mitigation action recommendations, and a map of all the assessed homes coded by fire risk level. According to a homeowner survey, participating households took an average of 7.5 mitigation actions by the end of 2019. These mitigation actions included replacing compost flower beds at the base of houses with rock, removing or replacing wood decks with fire-resistant materials, screening vents, removing leaves from gutters, and removing tree limbs near rooves.

In November 2020, the Texas A&M Forest Service conducted a second risk assessment of 112 homes (93.3 percent) in the 7-R Ranch community. Due to the ongoing COVID-19 pandemic, the second risk assessment was performed from the curb rather than at the structure, reducing visual access to the first 30 feet around the homes. Thirty-six homes reduced their risk scores between the 2019 and 2020 home risk assessments, while 12 homes received a higher risk rating in 2020 than in 2019. The average risk rating throughout 7-R Ranch decreased from 53.7 to 53, indicating a moderate level of risk.

In addition, the local committee organized two curbside brush collections in April and May 2020 using the \$2,000 from NFPA. The brush collections removed 1,600 cubic yards of vegetation from 42 households. The \$2,000 grant did not cover the entire cost, prompting several participants to make individual contributions to fund the remainder. Local participation in the Firewise program increased because of the pilot. In 2018, 30 homeowners participated in events organized by the local Firewise committee, which grew to 80 participants in 2020, representing over 70 percent of the population. Given continued support from the community developer and regular discussions of Firewise and wildfire protection at community meetings, the leadership of 7-R Ranch anticipates that they will remain involved in Firewise USA in the future.

Although only 7-R Ranch was a Site of Excellence, the Texas A&M Forest Service also ran a parallel pilot program for Lake Palo Pinto, including home risk assessments and reassessments in 2019 and 2020. However, engagement in risk reduction activities remained low in Lake Palo Pinto even after the individual home risk assessments and targeted recommendations due to lower overall community buy-in.

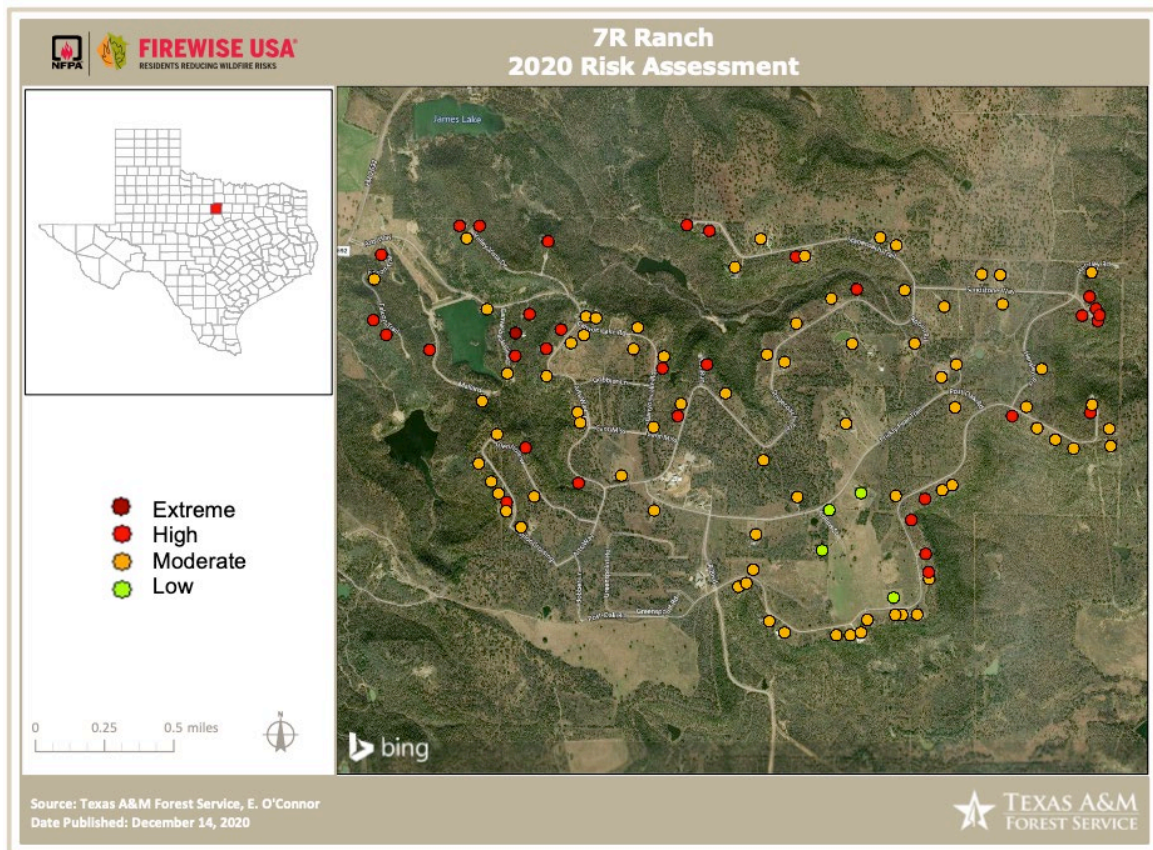


Figure 9: 2020 Home risk assessment map in 7-R Ranch. Source: 7-R Ranch.

2.4. Summit Park, Utah

The Summit Park HOA is located in Summit Park, UT, and it consists of approximately 800 lots, of which 600 are developed. The community is heavily forested, with mixed conifers located between 6,500 and 8,500 feet in elevation (Figure 10). The homes in Summit Park are located close together along narrow roads, which increases the fire risk in the area. Approximately 90 percent of the community is made up of year-round residents in single-family homes. The residents are generally familiar with wildfire risk, especially given the robust chipping program and wildfire protection information available on the HOA website.

The nearby Parleys Canyon Fire in August 2021 raised local awareness of wildfire risk, as it forced an estimated 10,000 people to evacuate for several days, including Summit Park residents. Summit Park has a large, shaded fuel break located around three-quarters of the community that is primarily managed by Basin Recreation, an agency that oversees trails and parks within Summit County.



Figure 10: Summit Park Firewise site. Source: Mike Quinones.

Prior to becoming a Site of Excellence, local Firewise leaders in Summit Park posted information related to beetle infestation, defensible space, emergency management, and evacuation planning on the HOA's website. Leaders also contacted the county emergency manager for assistance in developing an emergency exit strategy. For example, Summit Park had several egress points that flowed into other communities through locked gates. The HOA worked to ensure that those locked gates were replaced with breakaway gates in case of emergency. The Summit Park HOA also offered financial incentives for removing infested or dead trees (\$100 per tree for up to three trees in a single lot). In addition, a grant program offered up to \$500 reimbursement for any work done by a tree service contractor to remove trees and create defensible space.

The Park City Fire District had a chipping program that the local Firewise committee promoted every year. Residents brought their chipping material down to the road to be collected and chipped. In addition, the Summit Park HOA emphasized education on identifying beetle-infested trees and hosted a vendor to explain the benefits of fire foam in homes. The site also worked closely with local and state agencies to conduct fuel treatments along the community's boundary to create a shaded fuel break.

Summit Park identified 45 enthusiastic participating households for the Sites of Excellence pilot project. Many residents wanted to be more involved in the local Firewise site after Summit Park became a Site of Excellence, possibly because of the broader recognition and feeling of being part of something important. Local Firewise leadership conducted home risk assessments of the participating households and encouraged homeowners to begin mitigation work within the home ignition zone.

Recently, local leaders have organized slash pile burns to remove fuel with the support of the Utah Division of Forestry, Fire, and State Lands and the Park City Fire District. Over 100 slash piles were created in 2020 alone, drawing on standing dead trees, thinned understory, and reduced canopy density. In addition, during the Sites of Excellence pilot, the Summit Park Firewise site removed and chipped a record amount of material. Wildfire preparedness educational information was also added to the community's welcome packet.

Summit Park has also coordinated local emergency management across the county to work toward wildfire mitigation. For example, Summit County and the local fire department organized a blue-ribbon committee composed of community and HOA leadership to discuss code development or code modification and enforcement. In 2020, the Summit Park HOA issued \$14,000 in financial incentives for homeowner fuel reduction. In addition, Summit Park collaborated with local recreation and open lands district managers to extend the shaded fuel break, which included treating over 165 acres of forest land. Participating in the Sites of Excellence program improved community education and coordination with state and local agencies, ultimately contributing to better wildfire protection in the area.

2.5. Coal Bank Ridge, Virginia

The community of Coal Bank Ridge is located in Blacksburg, VA, also home to Virginia Tech University, and it became a Firewise site in 2007 (Figure 11). This upper-class professional community primarily consists of retired, former university employees and some newer residents from the Western United States. Coal Bank Ridge includes several cul-de-sacs with paved roads and well-groomed landscaping.

This wooded community borders the Jefferson National Forest and is flanked by a steep, 95-acre conservation easement owned by the community and protected from development. Coal Bank Ridge is an HOA that requires all residents to adhere to the community's covenants. The local fire risk is dependent on moisture and wind conditions. In addition, dry leaves from the deciduous trees throughout the community and in the National Forest during the spring and fall constitute significant fire threats.



Figure 11: Entrance to Coal Bank Ridge.

Source: Coal Bank Ridge.

Prior to becoming a Site of Excellence, Coal Bank Ridge emphasized the annual collection and removal of brush and debris from properties (Figure 12). Residents were responsible for cleaning up their own homes, though some community-wide cleanups resulted in five or six households participating. Residents gathered brush from their properties for a contractor to chip each October. The Virginia Department of Forestry provided numerous grants to supplement chipping costs. Coal Bank Ridge also received support for wildfire protection activities from the Greeks Giving Back community service event organized by the Virginia Tech Panhellenic Council.

Residents interested in wildfire protection often attended workshops on wildfire preparedness or mitigation held by neighboring communities. In addition, the community removed leaves, sticks, and

other debris to keep the emergency road clear, and it has received some grant money to clear dangerous trees along the main road. Residents also embraced newer wildfire safety recommendations, such as replacing mulch with stones and removing items stored under decks.



Figure 12: Coal Bank Ridge Firewise meeting. Source: Coal Bank Ridge.

Approximately two-thirds of the households in Coal Bank Ridge (37, 64.8 percent) participated in the Sites of Excellence pilot program, which also improved interest and awareness in wildfire protection activities. Participants were recruited at a kickoff meeting, through email, and via neighbor-to-neighbor invitations. Local Firewise leadership made a personal mitigation plan with each homeowner to begin home hardening and improve structure survivability based on a home risk assessment and participants provided quarterly updates on their progress. The individual plans reflected homeowner interest and willingness to act. In addition, Coal Bank Ridge planned to conduct an evacuation drill, but the drill was delayed due to the ongoing COVID-19 pandemic.

Participants who made personal mitigation plans primarily focused on the first 30 feet around the structure. Residents cleared debris; replenished or replaced mulch; removed overgrown shrubs, leaves, and small pine trees; and relocated flammable items, such as fire pits, in the home ignition zone. In the few cases where the mitigation plans were not completed—such as for two households with decks that needed complete enclosure, an expensive and extensive project—the homeowners indicated a strong intent to complete the projects and their mitigation plans in the future. The home risk assessments and subsequent mitigation activities reduced overall risk throughout Coal Bank Ridge, and the community plans to remain engaged in the Firewise USA program as long as possible.

2.6. Flowery Trail, Washington

The community of Flowery Trail is located in Chewelah, WA, just half a mile from the 49° North Mountain Resort, a major ski resort in the Colville National Forest in northeastern Washington. Flowery Trail has been a Firewise site since 2004.

At roughly 4,000 feet in elevation, Flowery Trail consists of 102 lease lots with 48 cabins or homes primarily owned by ski enthusiasts. Flowery Trail was built on state land through a 100-year land lease with the Washington State Department of Natural Resources (DNR). Residents maintain private water and sewer systems and must join the local HOA (Flowery Trail Community Association), which involves

paying annual dues and adhering to the community's covenants. Most residences are vacation homes, with only 25 percent of the homes occupied year-round.

Most wildfires in the state originate in eastern Washington; the Great Fire of 1910, the largest wildfire in American history, burned near what is now Flowery Trail. The combination of winds, fuels, and topography could easily enable a wildfire to burn through Flowery Trail. Due to the leasing structure of Flowery Trail, residents can maintain defensible space in the first 30 feet around their leased property (Zones 0 and 1, or the HIZ), but they needed permission from the DNR to manage the common lands that lie on a 20–30 percent steep slope. In addition, any money made from logging must be returned to the DNR.

Flowery Trail was not originally under the protection of the local fire district. Years of coordination with the fire district, including the installation of a water tank and fire hydrants, combined with ongoing wildfire protection activities in the community resulted in the station ultimately annexing Flowery Trail.

In contrast to most other states, the DNR in Washington is responsible for approving all new Firewise sites. The DNR uses a statewide template that builds upon the NFPA's Firewise template application, which the DNR, the fire district, or the conservation district typically fills out. For example, the DNR wrote the community wildfire protection plan for Flowery Trail and provided preliminary information on their fire risk and potential community mitigation projects.

Prior to becoming a Site of Excellence, Flowery Trail focused its efforts on satisfying the fire district so that it would protect the community. These activities included removing fuel, installing new water lines and hydrants, changing the water main from 4 inches to 6 inches, adding an 80,000-gallon water tank, allowing the local fire district or DNR to perform annual home risk assessments, and organizing educational workshops.

In addition, local Firewise leadership organized community work party days specifically for wildfire mitigation with a typical turnout of 60 to 70 people for each work party day (Figure 13). Potlucks and ice chests of beer followed the work party days. For example, in 2018, 88 members attended the annual work weekend and put down over 400 yards of gravel in Zone 0 around home foundations. The project cost over \$12,000 for gravel and fire-resistant fabric. As a further incentive for participation, households that helped with community fuel reduction projects received a \$100 discount on their annual HOA assessments.

In addition, the Washington Fire Adapted Communities Learning Network (WAFAC) and DNR have provided critical grants and support to educate the Flowery Trail community and remove flammable vegetation.



Figure 13: Chipping day at Flowery Trail. Source: Flowery Trail.

All 48 homes in Flowery Trail were selected for the Sites of Excellence pilot project, with installing a water system being a major priority. Installing the water system involved hiring an excavator and tearing up and repaving the roads over several weeks of labor. However, Flowery Trail had already been performing home risk assessments and mitigation work for several years. As one of the leaders explained, “A lot of the stuff that NFPA was pushing was stuff that we’d already done ... After becoming a Site of Excellence, it was more a sign to hang at the end of the road than it was for us to do things other than doing what we’ve been doing for years.” However, the community viewed becoming a Site of Excellence as an honor, especially as so few Firewise sites were selected across the country.

Flowery Trail had also begun the process of purchasing the land from the DNR, which would allow residents to own their lot instead of leasing it. Flowery Trail aimed to purchase both the residential lots and some of the surrounding land to create a larger fire barrier around the community (Zone 3 of the HIZ).

Although portions of the DNR were huge proponents of wildfire protection and preparedness activities, such as logging and thinning, other branches of the agency resisted such activities. Tensions between the DNR’s dual priorities of wildfire protection and ecological conservation have historically frustrated Flowery Trail’s Firewise leadership due to divergent management objectives. For example, the community previously had to pay the DNR approximately \$8,000 for the right to cut down overgrown lodgepole pine trees located on empty lots.

Residents anticipate that purchasing the land will improve wildfire safety because the community will have more control over fuel removal and structure protection. For example, local Firewise leaders have developed new building codes for structural exteriors and defensible space based on risk reduction principles that they plan to incorporate into future HOA covenants.

2.7. Crystal Lake Club, Wisconsin

The community of Crystal Lake Club is located in Wautoma, WI. The residences in Crystal Lake Club are primarily lake and vacation homes; only approximately one-third of the 75 households are full-time residents. Many of the residents are families that have maintained ownership of the property for multiple generations, making it difficult for new homeowners to purchase homes in the area. Most of the residents are retired and very private, with many expressing concern that the Wisconsin Department of Natural Resources (DNR) will establish new vegetation management regulations. Residents are also owners-in-common of 1,000 acres surrounding the lake that contain a nine-hole golf course, tennis courts, about 30 miles of trails for hiking and cross-country skiing, and trap and skeet shooting.

The Wisconsin DNR has divided fire risk across 16 fire landscapes, with the greatest risk concentrated in northern Wisconsin. To become a Firewise site in Wisconsin, communities must coordinate with the DNR, as the DNR staff is responsible for determining whether a community should become a Firewise site to ensure adequate institutional capacity to support and educate the community. Only communities in northern Wisconsin with the greatest fire risk are eligible to become Firewise sites.

Wildfires in this area can occur in grasslands, marshes, and pine forests. Even relatively small fires of 100–200 acres can still result in structure loss. Over 90 percent of the wildfires in Wisconsin are caused by people, as people often want to build homes in wooded pine areas that can easily ignite. One of the primary challenges facing the DNR is educating the public about Wisconsin’s wildfire risk, as wildfires are rarely in the news or appear to be a major danger in the state. However, the 2003 Crystal Lake Fire burned within a mile of the northwest boundary of Crystal Lake Club.

Prior to becoming a Site of Excellence, Crystal Lake Club posted wildfire mitigation strategies, such as discing, creating firebreaks, removing ladder fuels, and creating a common brush pile to burn in the winter, in the community's common areas (Figure 14). During the 2016 spring workday, 41 residents volunteered for a total of 127 hours to reduce ladder fuels, maintain firebreaks, and improve clearance for emergency vehicles.

All of the households in Crystal Lake Club were included within the Sites of Excellence pilot project zone. Residents were recruited through a coordinated campaign by local Firewise leaders and staff from the Wisconsin DNR. Local Firewise leadership emailed residents monthly newsletters that included wildfire preparedness information and offered home ignition zone risk assessments/fire safety checkups to all members. The primary impact of the Sites of Excellence pilot project was the new focus on individual home mitigation to create community-wide protection.

Ultimately, 48 households (65 percent) agreed to fire safety checkups by DNR personnel and received detailed individual reports identifying recommended actions. Rather than focusing on convincing the remaining households to agree to checkups, local Firewise leadership instead prioritized helping individual homeowners complete the identified work from their individual reports. Eighteen households (38 percent) reported completing all the recommended work by the conclusion of the pilot. The remaining 30 households (62 percent) reported that some or most of the work was completed, with the goal of completing all the remaining projects in 2021. These high levels of engagement both during and beyond the Sites of Excellence pilot reveal widespread commitment to improving preparedness and protection throughout the community.

The mitigation activities in the community included driveway access widening for emergency vehicles; removing debris from roofs and gutters; tree limbing; removing shrubs, overhanging branches, dead trees, and flammable mulch; improving signage for emergency vehicles; and moving woodpiles away from structures.



Figure 14: Crystal Lake Club with its Firewise sign.
Source: Crystal Lake Club.

Leaders organized free brush chipping days in 2019 and 2020 drawing on funds from NFPA, with 32 (43 percent) and 42 (57 percent) households participating, respectively. Additional assistance from the Wisconsin DNR Wildfire Risk Reduction Grants included \$3,325 of in-kind funding for mitigation work for 18 participating households (38 percent). Participants were also reimbursed at a 50/50 contribution for tree trimming and removal, gutter guards, micro-mesh screening on vents, deck skirting, rock mulch around the base of homes, and fire curtains over woodsheds.

In addition, the annual community meeting and fall luncheon included presentations and information on the Sites of Excellence program, home risk assessments, and incentives for participation. The 2019 annual meeting featured presentations by NFPA and local government staff, including a history of the 2003 Crystal Lake Fire and a description of the importance of personal and communal responsibility in protecting communities from wildfire destruction. Crystal Lake Club members responded positively to the presentations, prompting many to contact local Firewise leadership for advice and recommendations. Local Firewise leaders in Crystal Lake Club plan to remain active in Firewise USA because of the benefits of the program in reducing overall wildfire risk.

3. Common challenges

3.1. Ensuring buy-in

Most respondents (17, 63 percent) identified ensuring community buy-in for Firewise as a major challenge (Figure 15). Several participants noted that many residents resisted vegetation and fuel management on their property or in common areas because they wanted to live among the trees. One participant from Crystal Lake Club said, “People don’t like change ... [The residents] have been up here basically since birth [and] don’t want anything to change. They love the fact it’s this little winding lane through tall pines and oaks and aspens.” Residents also cited wanting to save trees on their property to provide privacy, shade, and animal habitats or to maintain the status quo.

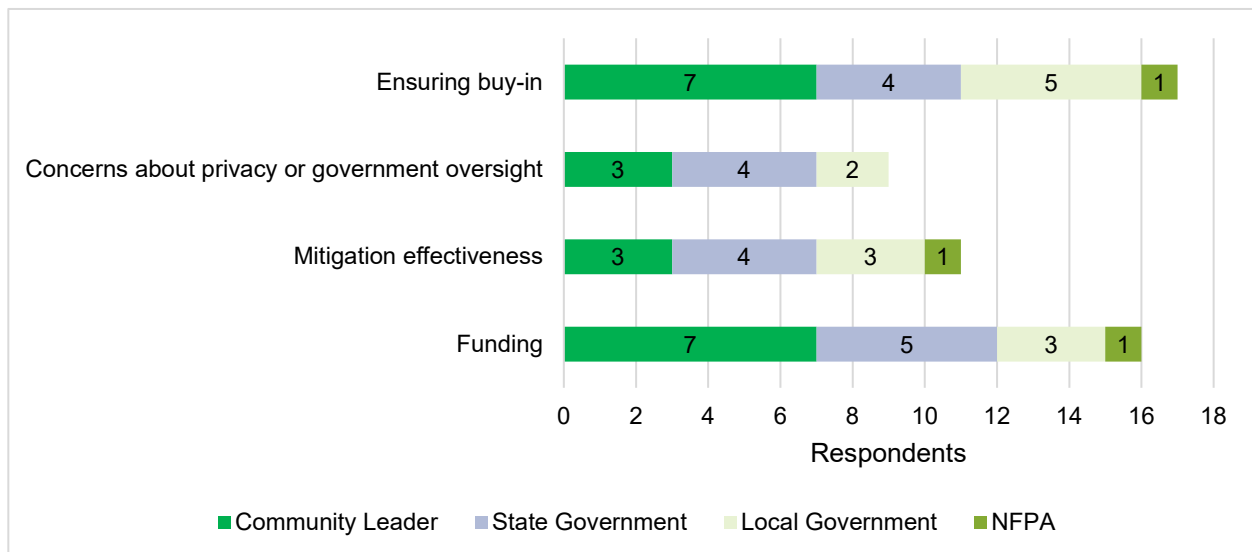


Figure 15: Common challenges for Firewise sites, sorted by respondent group.

One respondent from Red Rock Ranch described 50–60 percent of the residents as motivated to mitigate their fire risk while the remainder was “apathetic.” For example, a fire district employee explained, “There are a statistically significant number of people up there who just really don’t care. They have the

opinion that ‘I don’t need to worry about my house burning down. If there’s a fire, the fire district will save me. And if it doesn’t, I have insurance. So I don’t see why I should cut the trees down around my house and let my neighbors see what’s going on.’” Individuals’ desire for privacy can reduce interest in community-wide mitigation.

With the primary exception of 7-R Ranch, respondents reported that empty lots and vacation homes did not present major challenges to the Sites of Excellence in terms of overgrown or dangerous areas. However, in 7-R Ranch, no one was responsible for trimming the grass on undeveloped lots, creating a local fire hazard. In other areas, respondents reported working closely with absentee homeowners over many years to clear properties and reduce local risk.

Educating residents on their wildfire risk and working together to identify specific mitigation actions can help overcome this challenge (Figure 16). However, participants noted the difficulty of educating residents in places that are not traditionally considered to have high fire risk. A Coal Bank Ridge respondent explained, “We have to grab their attention during dry periods or after large wildfires like Gatlinburg. It’s easily forgotten about, but we have the fuels, we have the terrain, topography ... That’s a challenge, getting them to realize that they have an issue, that they are at risk.”

Gaining community buy-in within the first few years of becoming a recognized Firewise site can improve its long-term success. In addition, having a shared, actionable goal can improve dedication and commitment. For example, Coal Bank Ridge’s final report on the Sites of Excellence stated, “The Pilot program fostered a bond between homeowners and made us feel we were part of something special. The idea of taking personal accountability for home fire prevention was welcomed and appreciated by our residents.” The Coal Bank Ridge Firewise leader graded the community’s engagement in the Firewise program an A at the conclusion of the two-year pilot program. The seven Sites of Excellence had extremely high levels of participation and engagement that ultimately reduced collective risks, revealing the benefits of working together toward a shared goal.



Figure 16: Residents sign up to learn more about wildfire risk reduction. Source: NFPA.

3.2. Concerns about privacy or government oversight

Related to the challenge of ensuring buy-in, Firewise sites often struggled with residents' concerns about privacy or government oversight (9 respondents, 33 percent) (Figure 15). For example, one participant described typical pushback from residents against creating defensible space: "I like this area because it's shady and blocks off my neighbor and I can't see their house." Another said that the primary barrier to mitigating the home ignition zones is "getting people to spend money for different types of privacy." Investing in wildfire mitigation was interpreted as investing in reduced privacy.

In the case of Lake Palo Pinto, several participants explained that the residents often moved to the lake for their privacy and resisted attempts to encourage vegetation clearance. One person said, "A lot of people live out there because they don't want to deal with the government or the county ... I don't think it goes over necessarily super well to have someone in a government uniform come and tell you what to do in your community."

Similarly, some residents in Crystal Lake Club "don't want the DNR [Wisconsin Department of Natural Resources] coming on their property or any state agency. They feel that if they get an assessment [of their home's risk], then they're gonna be held accountable to get everything done, and it'll be reported to their insurance agency. It's just misinformation." In such cases, participants recommended bringing the government employee to the community in person to become the face of home risk assessments or other activities (Figure 17). Repeated positive interactions improve confidence and trust in government efforts. In addition, emphasizing neighbor-to-neighbor communication can help reduce concerns about government oversight.



Figure 17: Home risk assessments in 7-R Ranch conducted by the Texas A&M Forest Service. Source: 7-R Ranch.

3.3. Mitigation effectiveness

An ongoing challenge for Firewise communities, including the Sites of Excellence, is the potential for inadequate wildfire mitigation efforts or complacency (11 respondents, 41 percent) (Figure 15). The Firewise application has minimal requirements, making it relatively easy for a community to be recognized. However, Firewise recognition alone does not mean that communities are protected from wildfires. As one respondent said, “Having a Firewise sign in front of your neighborhood doesn’t mean you’re done. It means you admit you have a problem ... They don’t understand it means that we are a neighborhood that is working to become Firewise.”

The State of Washington requires interested communities to fill out a state-specific application that expands upon the original NFPA Firewise application with a more detailed narrative and community risk assessment. Washington’s approach to Firewise is intended to ensure that Firewise sites are fully participating and engaged in the program.

In addition, Firewise sites can choose where and how to target their mitigation efforts, which might not ultimately reduce their fire risk. As one fire district employee explained, “If they’re doing really good work and they’re making some really nice inroads, then it probably makes me a little more comfortable with their preparedness level ... [But] if it’s not being done in the right locations with the right amount ... it’s really not doing a lot but making them feel better ... Maybe that’s all we can hope for.”

Similarly, one participant noted that hardening a few homes will not be nearly as effective as hardening all the homes in a neighborhood; fire risk will only decline with widespread participation. One local fire district employee said, “To me as a fire professional, seeing that placard across the nation really does not mean anything to me. I have seen some of the worst communities that are Firewise communities because all you have to do is come up with a plan and say you’re working toward it.”

However, NFPA staff emphasized that many sites are actively reducing their wildfire risk: “There are some sites that are barely doing enough. And when they are tested by fire, that’ll probably play out. But we’ve had some feedback from sites that were impacted by wildfire where they were truly taking everything to heart and doing great work, and they had better outcomes.” Fully engaging in wildfire risk reduction activities is the best chance communities have to protect their homes.

Finally, residents at Firewise sites might choose not to pursue the recommended actions. For example, the Texas A&M Forest Service conducted an extensive risk assessment of homes in 7-R Ranch and Lake Palo Pinto. The home risk assessment identified the most vulnerable properties in the area and specific mitigation actions, but “people have chosen not to take the advice” in Lake Palo Pinto, according to one respondent. In most cases, the fire department cannot force people to act, potentially leaving communities at risk in the absence of funding, mitigation resources, or mandates.

However, coordinating with local fire departments and state forestry agencies to target risky areas can reduce overall community risk (Figure 18). Furthermore, high levels of engagement—as seen among the Sites of Excellence—can reduce wildfire risk. 7-R Ranch’s collective wildfire risk score fell between the first and second year of the pilot program as homeowners across the community focused on mitigation.



Figure 18: Residents feed chipper with local fire protection crews.
Source: NFPA.

3.4. Funding

Many respondents (16, 59 percent) identified access to funding as an ongoing challenge (Figure 15). For example, one community leader said, “My impression is that it’s hard to get a grant if you’re not a big enough outfit. It’s too much, it’s too complicated ... [A neighboring community] did get a grant ... I was amazed because there were so many hoops to jump through to prove how they were gonna use the money!” Many Firewise leaders noted their appreciation for local and state agencies that identified available grants and provided application guidance. A grant from a local organization combined with HOA fees helped the Red Rock Ranch Firewise site begin early wildfire mitigation and chipping work, though most sites do not receive preliminary funding.

The Sites of Excellence were successful in receiving grants and other funding sources, including HOA fees. Access to funding helped expand their mitigation activities by forcing leadership to focus on specific goals and their implementation. One government employee explained, “It’s amazing what you can get done from a community if you offer them \$2,000 to do something ... They all of a sudden have to think, ‘What do we really want to do with this money?’ It makes them think, prioritize, how to leverage the best within the community.”

Money was also a motivation to act. Some sites offered reduced HOA fees if households participated in wildfire-resistant activities, including those organized by local Firewise leadership. Receiving government funding or support can also improve community buy-in. One participant from 7-R Ranch explained, “People don’t want to spend several thousand dollars and lose trees... But if we had some way of making solid recommendations on landscaping, some way of funding some of the work that needs to be done, I think that would go a long way.” Residents wanted financial support for their community and home wildfire protection.

Several local government employees described how finding grant funding that could make mitigation free or much cheaper for residents resulted in dramatic increases in participation. In addition, sites that had good relationships with the state or local government could see surplus funding. For example, the Washington DNR often gave Flowery Trail excess money because the agency knew that the money would be well spent on wildfire mitigation. Close coordination with government agencies can improve access to funding and grant opportunities.

4. Common successful strategies

4.1. Homeowner Associations (HOAs) and Requirements

Most respondents (19, 70 percent) identified homeowner associations, or HOAs, as having the community structure necessary to effectively implement a local Firewise program (Figure 19). All the Sites of Excellence were HOAs with varying levels of ability to enforce wildfire risk reduction principles. For example, Red Rock Ranch is a voluntary HOA with optional fees, though all owners must sign paperwork stating that they will abide by the covenants. By contrast, Forest Highlands has strict development standards with approved plants lists and a design review committee to ensure home safety. Information about the local Firewise site is also part of new HOA member orientation and homes can be neither bought nor sold without approval by the Forest Highlands HOA. In addition, the Flowery Trail HOA intends to include requirements for wildfire-resistant construction standards and defensible space in their future covenants.

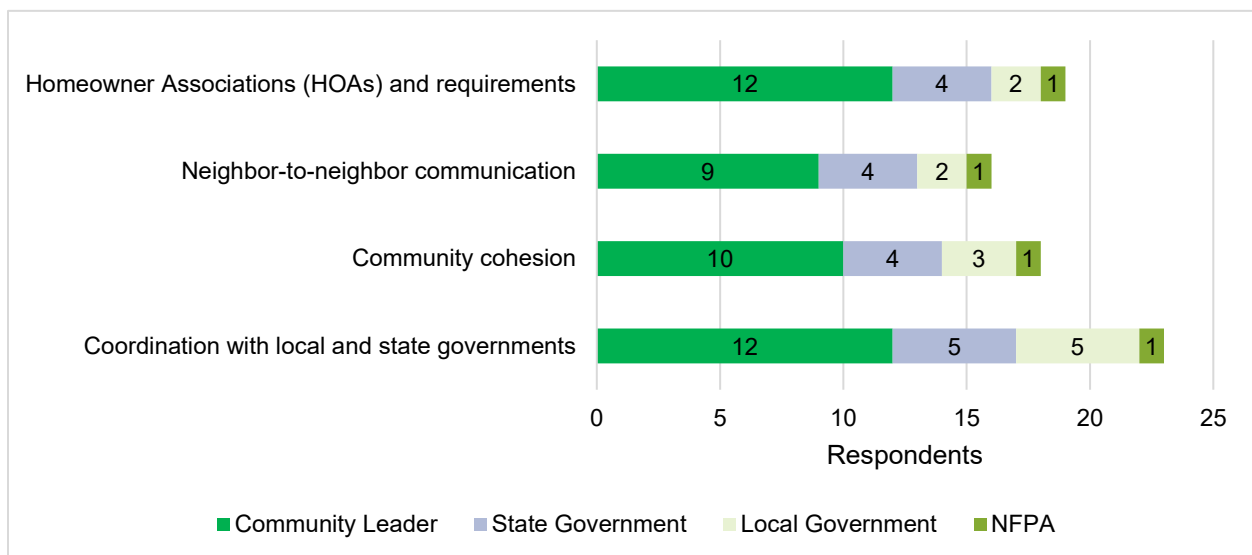


Figure 19: Common successful strategies for Firewise sites, sorted by respondent group.

The HOA enforcement power can also impact the community's ability to enforce action. One fire district employee said, "I think [the Site of Excellence] is in a very fortunate circumstance where they can mandate and say, 'It's going to happen. You're going to rake your yard. You're going to cut the trees.'" And not every place is in a position to do that." By contrast, an employee from a different fire district explained, "There's no ordinance that really gives us the authority to enforce any particular set of rules regarding home hardening and Firewise and defensible space ... We'll go to the HOA meetings. Sometimes they just flat out don't care." HOAs have different degrees of enforcement power, but more powerful HOAs can require greater commitment to wildfire risk reduction activities.

In addition, HOAs have regular meetings and means of communication to share information about the Firewise program and wildfire preparedness. For example, Flowery Trail organized regular work party days with potlucks to plan their wildfire mitigation efforts. Crystal Lake Club issued an official newsletter four times per year with wildfire protection information, in addition to posting updates on upcoming meetings, links to videos, and other educational resources monthly. Several Sites of Excellence provided materials related to the Firewise program and general wildfire protection at HOA-organized annual events, like 4th of July celebrations.

HOAs also have clear institutional structures that allow for consistent local Firewise leadership, grant applications, and mitigation programs. According to a state employee, “Most Firewise sites have stopped being a Firewise site because they have no leadership to take over... It’s been more successful when we have HOAs with leadership.”

HOAs can collect fees and apply for funding as a community. Non-HOA Firewise sites might face greater challenges getting funding and identifying future leadership without a pre-existing organized structure. Despite enforcement differences among the HOAs in the Sites of Excellence program, the seven sites had very high levels of participation. Strong engagement in sites like Red Rock Ranch revealed the value of community buy-in through positive reinforcement or incentives—the carrot—while sites like Forest Highlands proved strict enforcement capabilities can also work—the stick.

4.2. Neighbor-to-neighbor communication

Many respondents (16, 59 percent) highlighted the importance of neighbors teaching neighbors about wildfire mitigation strategies and the Firewise program (Figure 19). Several local Firewise leaders noted that educating other residents increased participation throughout the community (Figure 20). One leader described the experience of encouraging a neighbor to clear their property by sharing NFPA videos. The neighbor agreed to clear the property because the videos “converted” him. Several people commented that neighbors were better at discussing mitigation than government employees. As one fire district employee said, “That’s neighbor talking to neighbor, not me as the fire department talking to them... It’s finding the right person that can have that neighbor-to-neighbor conversation in a non-threatening way that both parties understand what needs to happen.” A state employee explained that outsiders, such as government employees, are often less effective at rousing a neighborhood to action than residents.



Figure 20: Residents teaching other residents how to reduce local wildfire risk. Source: NFPA.

Working together and communicating fire risk also enables neighbors to improve public safety. For example, Red Rock Ranch volunteers coordinated to clear an elderly widow’s heavily overgrown, two-acre lot, dramatically reducing her fire risk. One local Firewise leader explained, “Firewise means encouragement and that means getting to know [your neighbors] more because they have a physical

problem. Are they able to get out? Not just in an emergency, but if there were some health thing. It's just trying to be a better neighbor." Meeting and communicating with neighbors are the first steps to reducing risk and improving safety.

4.3. Community cohesion

Numerous respondents (18, 67 percent) identified a strong sense of community cohesion as integral to the success of the Firewise program (Figure 19). For example, one resident said, "[Firewise] really did help keep the community together... Everyone's pretty independent ... This has gotten everybody in the community out in the community." The feeling of community cohesion helped residents engage more with Firewise. A participant from 7-R Ranch explained, "It's very much grassroots, community-driven. And I think maybe that's one reason it has been very good. It's not being told by the big boss to do something." When residents embrace the grassroots nature of Firewise, there is a higher likelihood of community-wide protection.

Several sites organized community events, often facilitated through the HOA, to promote Firewise (Figure 21). For example, Summit Park previously organized events with balloons, Smokey Bear, booths with tree service companies, and fire department trucks. Red Rock Ranch hosted multiple chipping days with free lunch for the chippers that featured tacos, sloppy joes, cookies, coffee, and drinks. One person explained, "You build these relationships beyond just feeding a chipper and you find out that, 'Hey, these people are really neat.' You want to spend more time with them." Red Rock Ranch purchased long-sleeve colorful shirts for local Firewise volunteers that they wear during chipping days and other community Firewise events. Between 60 and 70 people typically attended work party days in Flowery Trail, which often ended with a communal potluck.



Figure 21: Residents working together to reduce community risk. Source: NFPA.

In addition, multiple people recognized the value of residents becoming involved in and conducting their own home risk assessments in the community. Forest Highlands has a trained team that conducts home risk assessments regularly. One local fire district employee explained that the district conducts defensible space inspections with the community but "they actually have staff or members of their community that

are trained now to do those inspections ... The training that they've gotten is national certifications. So, we don't do a lot in there now with inspections." Inspectors coming from the community reflects both resident buy-in and neighbor-to-neighbor communication helping to improve wildfire mitigation efforts.

4.4. Coordination with local and state governments

Most respondents (23, 85 percent) cited close relationships with local and state government agencies as integral to the success of their Firewise efforts (Figure 19). For example, residents described government employees as "outstanding," "dear close friends," and "amazing." One fire district employee received more than a dozen phone calls from a local Firewise leader per year and referred to the relationship as "beautiful with that community." One state employee said, "I worked with [the site] for years, got them in the Site of Excellence. I changed positions in the agency and giving up this community was one of the hardest things I ever had to do." Many successful Firewise sites have regular communication and excellent relationships with local or state government agencies.

Several residents praised government agencies for providing exceptional support beyond the minimum (Figure 22). For example, the Texas A&M Forest Service volunteered to conduct the risk assessments in 7-R Ranch. The Washington DNR conducted its firefighter training program at Flowery Trail. The Wisconsin DNR established ten ecological test plots along a shaded fuel break in Crystal Lake Club to identify plants growing in the region and conduct an experiment using different native seed mixes.



Figure 22: Firewise sites should coordinate closely with local and state government agencies. Source: NFPA.

Government agencies can often provide valuable guidance or recommendations for grant applications. One local Firewise leader said, "The state offers a lot of project oversight. They offer grant opportunities." Another said that a local government employee "would make the effort and let me know, 'Oh, this funding's gonna be coming up. You need to apply for this grant ...' To have that more expert person egging me on to apply for a particular grant was super helpful."

5. Best practices for Firewise sites

5.1. Sparkplugs and committees

Nearly all the respondents (20, 74 percent) identified sparkplugs and a committee of leaders as integral to ensuring the success of a Firewise site (Figure 23). NFPA defines a *sparkplug* as the local Firewise group's spokesperson and leader for community Firewise initiatives (Figure 24). One state employee described the sparkplug from a Site of Excellence as having "some past experience of having been through a fire in California, and he's just a go-getter, and he's very communicative about what they're doing and why." Sparkplugs connect residents across the Firewise site and keep the community focused on wildfire mitigation.

However, a single person is typically not enough to organize an entire Firewise site. Instead, a committee of multiple people can be formed to work together and lead the community. One person explained, "If that sparkplug gets dull, gets tired, then it's time to try and find another sparkplug and keep the ball rolling." Having a committee with people who are available to replace the original sparkplug can help ensure the longstanding success of a site.

Firewise sites with organized structures, like HOAs, often draw on institutional leadership to identify multiple sparkplugs and committee members. For example, a participant from Red Rock Ranch said, "It's great if you have one person initially, but they'll get burned out so quickly ... Red Rock Ranch people did come up with multiple people who had different skills. Some people wanted to go out with chainsaws and some people didn't want to go outside at all, but they wanted to help organize and do the emailing ... [or] hang all the information on the doors." Spreading the work across multiple people reduced individual labor and allowed people to play to their strengths and interests.

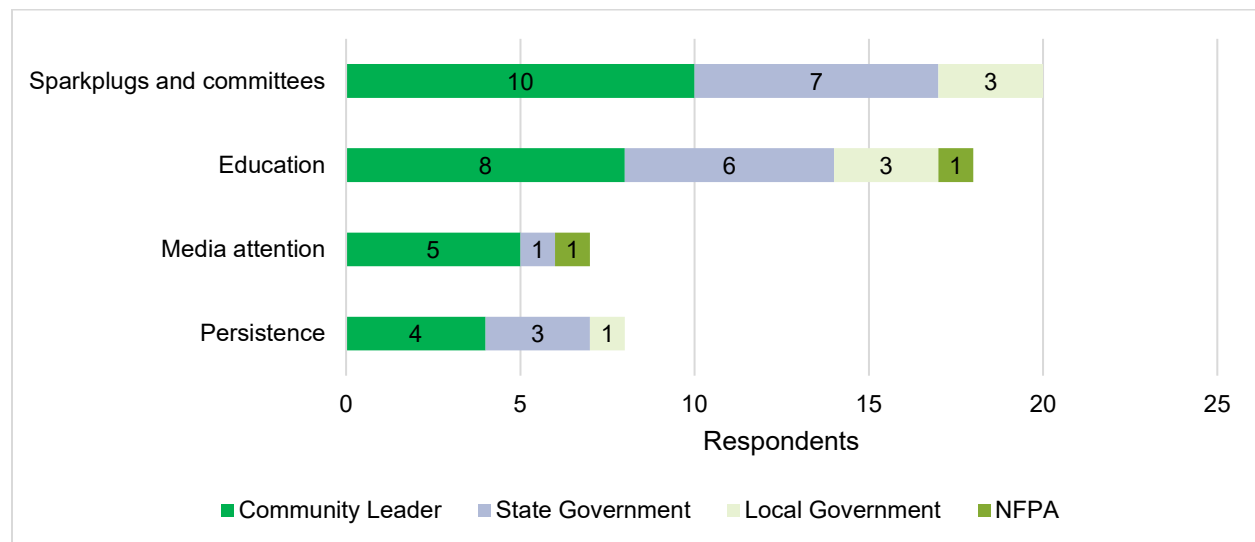


Figure 23: Best practices for Firewise sites, sorted by respondent group.



Figure 24: Firewise sites should have multiple leaders to share responsibility. Source: NFPA.



Figure 25: Firewise sites should emphasize education for residents. Source: NFPA.

Leaders at the Sites of Excellence often relied on newsletters, door hangers, or other communication tools to teach residents about wildfire mitigation. For example, leaders in 7-R Ranch focused almost exclusively on education during their first three years participating in the Firewise program. By the time 7-R Ranch became a Site of Excellence, all the residents were familiar with the Firewise program and activities. One 7-R Ranch leader expressed confidence in the education: “One of the things that I have consistently heard over the past few years is ‘I would’ve done things differently if I knew what the risks were.’” Greater familiarity with wildfire risk and home hardening improved fire protection, though

leaders often felt they needed to repeat the same information on an annual basis to remind the residents who were not as dedicated to wildfire mitigation efforts.

5.3. Media attention

Some respondents (7, 26 percent) recommended that Firewise sites and NFPA pursue public relations or media campaigns to share local Firewise success stories (Figure 23). Local media sources featured some of the Firewise Sites of Excellence, but often for short periods of time (Figure 26). One resident said, “Our little paper goes out to 20,000 people. I wish at the time they won [became a Site of Excellence] they did all they could to share the award and what it meant with the local publicity people.”

While most of the Sites of Excellence had regular newsletters that included community-specific Firewise information, residents hoped for coverage beyond the participating community to instill local pride and broader participation in Firewise. For example, one person hoped NFPA could bring more media attention: “If the NFPA, in their authoritative position, could reach out, I think that would incentivize local news agencies to reach out to the communities and do stories on them, which recognizes them, which gets the ball rolling.” Another expressed disappointment that the local news did not recognize the Site of Excellence despite state, county, and local government representatives attending a community Firewise meeting. Residents felt that they lacked the authority to retain media interest in Firewise without other stakeholders like NFPA intervening.

Red Rock Ranch 1 of 7 'Sites of Excellence' in national program

For The Tribune Mar 6, 2019 Updated Jun 26, 2020 View Comments



The Coalition for the Upper South Platte crew and its chipper supported the Red Rock Ranch community's mitigation efforts in September. Community efforts in 2018 included fuels reduction for 70 homes, wildfire assessments of nearly 40 homes, two community meetings and door-to-door distribution of information. Photo courtesy of Dave Betzler

Trending Now

Figure 26: Local newspaper reporting of Red Rock Ranch's participation in the Sites of Excellence pilot program. Source: The Tribune.

5.4. Persistence

Eight of the respondents (30 percent) recommended that Firewise sites remain persistent despite repeated pushback (Figure 23). For example, one leader said, “You’ve got to keep carrying the cause. You get a door shut in your face, that’s fine. Let’s go to the next door and see if we can get some support and keep moving forward ... Mitigation is a marathon, not a sprint.”

A state employee cautioned that Firewise participation is, at a minimum, “a two- to three-year process... Don’t expect overnight results.” A local government representative said, “Be patient. Pace yourselves. Always be looking forward. Expect downfalls and roadblocks.” Successful Firewise sites need longstanding commitment to wildfire mitigation despite any ongoing challenges.

6. Recommendations

6.1. National Fire Protection Association

Respondents recommended that NFPA pursue three main changes to the Firewise USA program: create region- or ecosystem-specific tools, establish a media or public relations campaign for Firewise, and identify opportunities for funding for Firewise sites. New local or regional partnerships could also offer opportunities for NFPA to expand beyond the current program.

Multiple people expressed interest in NFPA developing new tools for community and household wildfire protection based on regional or ecosystem-specific needs (Figure 27). For example, one government employee said, “Firewise is great if you’re in flatland. If you’re in the mountains, there’s things in there that talk about slope and how that’s going to affect a growing fire. But most of the documentation that’s out there and if you watch the videos, it’s, ‘Hey, here’s a house on a flat piece of property with its neighbors more than 100 feet away.’ It would be nice to have it be a little bit more realistic.”

A fire district employee explained that recommendations for communities that detail the differences between fuel types (such as ponderosa pine alone or mixed conifer, juniper, or sage understory) could provide more site-specific information and result in greater protection.



Figure 27: Community plant and landscape educational program to teach residents about local and regional landscaping choices. Source: NFPA.

In addition, several respondents recommended that NFPA expand its outreach to engage more communities. One local Firewise leader recommended that NFPA purchase advertisements on local television and media drawing on interviews with local fire experts and community members. “I think that’s the key: more local outreach ... If they could personally maybe contact or be in touch with homeowners’ associations, board members, and reach out to them, [make a] personal phone call, ask them what they need.” Others agreed and suggested that marketing the Firewise program to more rural communities could also improve interest.

One local Firewise leader encouraged NFPA to emphasize environmental protection in addition to wildfire protection, particularly in older communities. “A lot of older people, if you bring in grandchildren, they all seem to wake up and listen better. Saving the environment for future generations ... You have to appeal to people where their heart is. And most people’s hearts are where their family is.”

Finally, respondents noted a desire for the Firewise program to help identify sources of funding to support Firewise sites in the future, including through insurance discounts with companies like USAA. One state employee said, “I don’t know why they don’t provide some sort of funding mechanism where the Firewise sites could apply for even just a mini-grant instead of putting that on us as state liaisons to get money for our states or to have it within your state budget.”

Others praised NFPA for providing \$2,000 to all the Sites of Excellence for wildfire mitigation activities during the pilot program.

Several people noted a desire for homeowners’ insurance discounts beyond those currently available from USAA. One resident said, “That’s a big deal, having the rebate. You’re telling people there’s money that’s going back in their pockets. Who does not want that?” One leader asked, “Can you buy insurance for your homes right now? Cause you probably can’t if you’re not Firewise right now ... They [insurance companies] come up here now and look at each individual home that they want to insure before they insure it.”

6.2. State forestry agencies

State forestry agency employees involved in the Sites of Excellence recommended that other state employees establish supportive relationships with the community, respond appropriately to the level of engagement at the Firewise site, and determine how much institutional support the agency can provide (Figure 28).



Figure 28: Strong relationships with the state forestry agency can improve Firewise site risk reduction activities. Source: 7-R Ranch.

The state forestry agency respondents recognized the value of strong relationships with the residents when attempting to encourage Firewise activity. One state employee said, “Building that relationship, gaining their trust ... Is there something in their community that I don’t understand because I don’t live there and I don’t know these people very well, that I need to understand better to help them decide what is acceptable risk?” Another described the position prior to the pandemic as “eat[ing] cookies and drink[ing] coffee, but you learn a lot.” Engaging with the residents beyond the required meeting time can help improve communication, education, and, ultimately, mitigation.

Second, state employees encouraged others in their position to recognize and remain supportive of the varying levels of engagement and activity at Firewise sites. One employee said, “You really have to take time to understand your communities that reside within your program because every one of them is very different ... Having reasonable goals that are measurable for yourself and for your community leaders is huge.”

Another state official noted that while communities might not do everything that the forestry department thinks is needed, the government representative should compromise and work with the communities to ensure ongoing activity. Meeting communities where they are and supporting the actions that communities are willing to take can result in more successful outcomes and reduced wildfire risks. Support from the state government despite ongoing obstacles within the community (including internal pushback from other residents) can ensure that local Firewise leaders remain engaged.

Finally, respondents cautioned against spreading agency support for Firewise sites too thin. In both Washington and Wisconsin, the states’ DNRs approve community applications for Firewise based on what the state agencies can reasonably support. The Washington DNR created a template based on NFPA’s forms under the assumption that professional input would be most effective when creating a robust community risk assessment. In Wisconsin, the DNR determined that Firewise sites were more successful with support from the DNR, which can assist with a risk assessment and action plan. State agencies might decide to limit the number of Firewise sites in their state to provide more support for sites located in the riskiest areas.

6.3. Local fire departments or districts

Local fire district employees involved in the Sites of Excellence recommended that other fire district employees build partnerships with the community and remain committed despite obstacles (Figure 29). All the local government employees agreed that having a good relationship with the local community helped improve the Firewise program. For example, one employee said, “Stay involved and make sure you’re having those meetings with the community, not just a couple of people wanting to have the site ... Keep holding public meetings for folks to come talk to you.” Building partnerships helped local fire districts earn the trust of the community and better educate the residents.



Figure 29: Firewise sites are more successful when they work closely with local fire department personnel. Source: NFPA.

Second, fire district employees recommended consistent efforts when pursuing wildfire mitigation, citing the common challenges associated with ensuring buy-in and community support for Firewise. One employee cautioned: “Expect roadblocks and fumbling. Be patient. Pace yourself. Really think outside of the box on avenues of funding and resources to accomplish the missions.” Another described the importance of working with and educating residents who do not want to trim trees or pursue other forms of defensible space. Local fire districts need to recognize residents’ perspectives and work alongside them to reduce risk.

7. Beyond Sites of Excellence

7.1. Multi-tiered Firewise USA program

Several respondents (9, 33 percent) supported the idea of integrating the criteria of the Sites of Excellence program into the existing Firewise program and creating an additional level or tier of recognition (Figure 30). Participants particularly praised the additional funding of \$2,000 that came with the Sites of Excellence designation, which allowed residents to accomplish more mitigation objectives.

Others liked that the Sites of Excellence program provided specific goals for communities. One state employee said, “Joining Sites of Excellence and having that two-year timeframe and certain objectives and goals that were more specific than [what] the Firewise program does, I think that just sped up the progress to where they are now. They would’ve gotten there eventually, but this just helped that along.” Targeted, quantifiable goals helped Firewise sites focus their efforts and reduce risk.

Some participants viewed the Sites of Excellence pilot program as an opportunity to gather success stories. One local Firewise leader said, “Maybe [NFPA] should try to do this [Sites of Excellence] every three years. Get more information from different lifestyles and different communities that can maybe give you different datasets about stuff.” However, several people wanted additional support and engagement from NFPA, and, particularly, some sort of wrap-up event after participating in the program, though several recognized that the ongoing COVID-19 pandemic prevented a second meeting at all the sites in 2020.

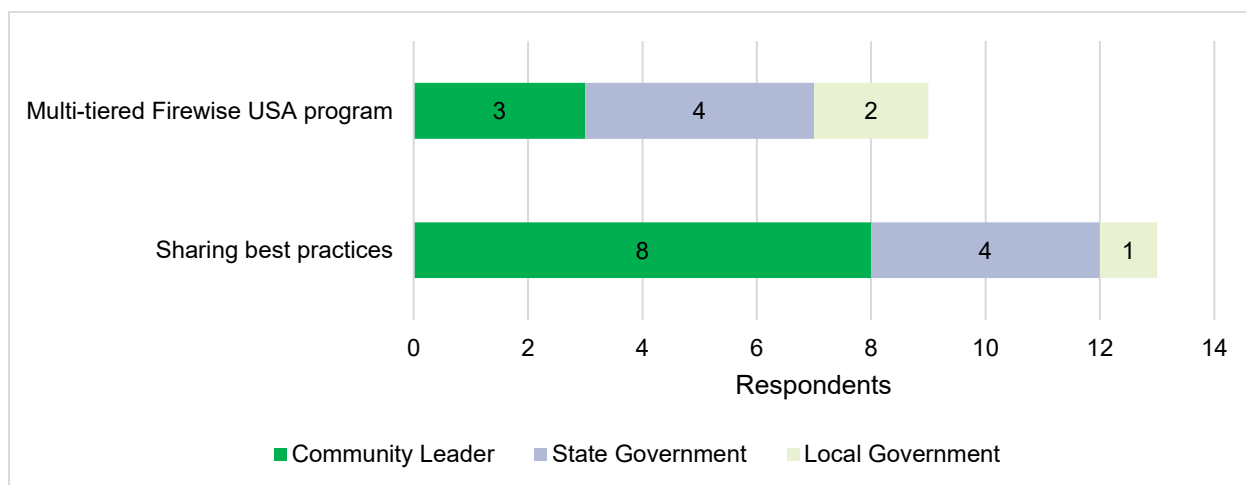


Figure 30: Recommendations for Firewise USA, sorted by respondent group.

Several participants expressed concerns that the Firewise label alone was interpreted as sufficient wildfire protection. One said, “When you hand things out like [designation as a Firewise site], there’s zero reliability on it being adequate ... There needs to be a standard.” Another noted that Firewise sites in Oregon have a four-star rating program based on the percentage of defensible properties within a community. The four-star program is intended to remind residents that Firewise progress is a continuum and ongoing activity rather than a one-and-done approach to wildfire mitigation.

Respondents agreed that not every Firewise site should be classified as a Site of Excellence. One state employee explained, “Some sites cannot meet the criteria, or every year it’s a struggle to get them to renew ... I don’t know that this [Sites of Excellence] is necessarily the answer but having some of those objectives to meet each year ... that might be nice to incorporate into the program.” A multi-tiered program that offers more advanced, specific goals for certain Firewise sites could help focus mitigation activities.

7.2. Sharing best practices

Thirteen respondents (48 percent) noted the importance of new Firewise sites connecting with local organizations and other Firewise sites that can provide valuable resources and information (Figure 30). Respondents agreed that best practices and lessons learned from successful Firewise sites should be shared broadly across the program (Figure 31).

Learning about best practices that are relevant to a specific location was considered most helpful. One local Firewise leader visited a neighboring Firewise site to see their yards and defensible space maintenance, which gave him new ideas on how to improve vegetation management at home. Another leader described visiting three or four other communities to offer advice and share tips.

Several participants appreciated learning about other Sites of Excellence during the 2019 meeting, but they acknowledged that there was less value in hearing about other states or other ecosystems compared to attending an event to discuss best practices in their own regions. For example, one leader said, “There was a Site of Excellence that was basically in deciduous trees, and their biggest problem was piles of leaves that would get lit and blown around. That’s a whole other problem. It’s something we don’t deal with.” More region-specific education could help improve mitigation activities.



Figure 31: Community meeting in Marin County to teach residents about the Firewise USA program. Source: FireSAFE Marin.

New Firewise sites have the most to learn from established, successful sites. One state employee said, “A goal of mine is to share these success stories with other programs, especially fledgling ones that we’re still trying to get on board and to really pick up the pace ... I wish there was a better way to share their work so that other people can (1) come on board, (2) ask relevant questions, and (3) just improve the whole quality of the Firewise program here.” Another leader said, “My advice to any group that’s thinking of becoming a Firewise site is to reach out to the neighboring Firewise sites and ask them to share. Having a neighbor explain things is a lot more credible than a national organization coming in.” Establishing a program to connect new Firewise sites with more established sites could improve the new sites’ mitigation efforts and overall engagement in the program.

Several people noted the value of having an NFPA blog or newsletter distributed regularly. For example, one participant said, “Firewise has a blog, and I used to get it. I don’t know why I don’t get it anymore. Having those best practices would be great.” A state employee recalled a conference called Backyards and Beyond during which Firewise site leaders met and discussed best practices: “There was this national comradery, like you’re a part of this, and it’s all kind of fizzled.” Respondents believed that an organized newsletter or conference (in-person or virtual) would be well-received and appreciated by local Firewise leaders.

In addition, respondents believed that Firewise sites should connect with local institutions and government agencies for advice. A local Firewise leader encouraged new Firewise sites to ask, “Do you have access to resources through the fire department, through the sheriff’s department, through the National Forest or state forest if they’re local to you? See what they say. If they’re starting from ground zero, it’s a big task to do!” Another leader said, “If you have experts out there, like someone from the Forest Service, the state or county fire, whatever, [residents] will listen to them. But you have Grandma next door, and they’re not going to listen to Grandma. She doesn’t know what she’s talking about.” This advice contrasted with other recommendations to emphasize neighbor-to-neighbor communication rather than government meetings. Communities should focus on the communication approaches that will be best received by their residents.

8. Conclusion

These Sites of Excellence were challenged to increase resident participation in wildfire risk reduction and to focus on work in the home ignition zone around properties and across adjacent parcels. Despite setbacks associated with the COVID-19 pandemic that complicated home risk assessments and community meetings, all the participating sites expressed gratitude and enthusiasm for the pilot program. Targeted goals motivated the Firewise sites to consider new approaches to wildfire mitigation, particularly individual structure protection, as evidenced by the nearly unanimously high participation levels across all the sites.

Several sites that had previously emphasized cleaning communal areas and yardwork through annual chipping days planned to continue the new focus on identifying specific actions for each homeowner to improve both individual and collective safety. Many participants believed that participating in the pilot brought the community closer together and improved understanding of risk.

Several sites reported that participating in the Sites of Excellence pilot program resulted in higher levels of engagement and interest in the Firewise program and wildfire mitigation efforts; in many cases, more than 80 percent of the households in the communities participated in the pilot. Wildfire mitigation is most effective when it is implemented at a community-wide level across multiple adjacent parcels.

Conversations with local Firewise leaders revealed tremendous enthusiasm across the communities for the Sites of Excellence program and its emphasis on the home ignition zone. Achieving widespread parcel-level mitigation that reduces wildfire risk is possible in dedicated communities. The pilot program established clear, actionable goals that emphasized personal actions and the responsibilities of multiple individual homeowners for a collective benefit. The overarching success of the pilot—higher levels of engagement in the Firewise program, a new focus on the home ignition zone, and reduced wildfire risk—indicates that other highly-engaged communities can be challenged to take personal and collective action to protect themselves and each other.

The seven participating sites were already very engaged in Firewise activities before becoming Sites of Excellence. While not all Firewise sites should be recognized as Sites of Excellence, other high-achieving Firewise sites could be challenged with the pilot's goals of greater resident participation and emphasis on the home ignition zone. The Firewise USA program is designed to serve as a long-term framework for communities to engage in wildfire mitigation. Many participants in the pilot recommended that NFPA create multiple tiers within the program with different sets of goals for communities prepared to invest more in wildfire risk reduction.

Despite differences across ecosystems, regions, and communities, the Sites of Excellence shared many challenges and best practices. These similarities likely reflect the experiences of other Firewise sites around the country, both those new to the program and those involved over many years. With nearly 2,000 Firewise sites across the country, other communities can learn from the collective experiences and wisdom of their peers and neighbors to overcome obstacles and improve community preparedness. More publicity for best practices and success stories could inspire new communities to join Firewise USA and encourage existing communities to continue their efforts.

Wildfire mitigation is a constant process of education, action, and maintenance. The Firewise USA program provides guidance to interested communities to begin and continue that process. While local Firewise leaders might face challenges engaging residents and accessing resources, widespread, long-term commitment to wildfire risk reduction principles can effectively protect communities. Above all, communication and coordination with other residents and government agencies are key to widespread participation and effective risk reduction.



Figure 32: Firewise community workday in Arkansas. Source: NFPA.

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To learn more about wildfire risk reduction in homes and communities, visit firewise.org.

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