

Firewise How-To



THIS ISSUE

Firewise Community Example [P.2](#)

Questions and Answers [P.4](#)

Around the Firewise Home [P.6](#)

The Firewise Leader [P.13](#)

Upcoming Events

Firehouse World
February 19-23, 2012
San Diego, CA

...

IAFC/WUI Conference
March 25-29, 2012
Reno, NV

...

Assessing Wildfire Hazards in the HIZ
March 26-27, 2012
Reno, NV
(Offered at the IAFC/WUI Conference)

...

American Planning Association
April 14-17, 2012
Los Angeles, CA

...

International Association of Wildland Fire
April 17-19, 2012
Spokane, WA

The Firewise Community – When Fire Strikes Home

This year, fire season has struck hard in many regions of the U.S., making the realities of living in the wildland/urban interface (WUI) all-too-real for many individuals. In Texas, there were reports of 63 fires burning in just one day, aided by ongoing drought and changing winds.



PHOTO BY RYAN DEFEW, NFPA

While it's helpful to discuss the many facets of preparing your home, property and community for the threat of wildfire, as we often do, in this issue of How-To we instead look at what happens when fire does strike – offering perspectives on how Firewise practices may aid homeowners and firefighters when wildfire encroaches, as well as where we may need to improve.

We'll also look at communities from whose members, having experienced fire in their midst, are now seeking to employ Firewise practices to improve their safety and ability to fight wildfire should it return.

...

But Texas was not alone. Communities in states throughout the nation, including Oklahoma, Virginia and Georgia, also experienced serious fire conditions. This raised an important question that we thought worth posing: When fire strikes home, what lessons can we learn?



Shenandoah Farms Virginia

The Firewise community of Shenandoah Farms lies within two counties: Warren and Clarke, nestled in the Shenandoah Valley region of Virginia. The community is made up of 3,323 lots, on approximately 2,000 acres of mountain land, and is currently the site of 1,200 homes. Its community members maintain more than 40 miles of mostly gravel roads.

A FIREWISE® COMMUNITY:

Shenandoah Farms

When Firewise Practices Serve to Protect



The lone casualty.

Shenandoah Farms has been involved with Firewise since 2006. Since that time, supported by Virginia Department of Forestry Firewise Program funding, the community has carried out a number of projects, including reducing fuels to limit wildfire's spread, installing cul-de-sacs within the community, providing Firewise education on defensible space and dispensing Wildfire Emergency Evacuation booklets.

With the creation of defensible space in mind, in April 2010, Shenandoah Farms homeowners created brush piles of downed woody material, and removed bushes and undergrowth from around their homes for mechanical removal. More than 15 tons of wood debris was removed from the community during this fuel reduction project.



Eighteen acres of wooded land burned during the Shenandoah Farms fire.



On February 19, 2011 a home fire at a single property in Linden, VA, escalated into a wild-fire within Shenandoah Farms. Although local fire departments and the Virginia Department of Forestry responded, the home was totally consumed by the fire. Fortunately, though, no other structures were damaged.

Initially, residents used their garden hoses to wet down their yards and those of neighbors to help keep the fire from coming in contact with homes. However, even though all but one home were spared when the fire struck, an evacuation was called for since stray firebrands created a ground fire that burned 6 acres around several homes located along the road, as well as 18 acres of wooded land behind other homes in the neighborhood. The evacuation included the Linden Heights community, High Top Road, Lookout Point, Cliffside and McDonald's Farm (within Shenandoah Farms).

A homeowner on Lookout Point noted, "I've received the Firewise information and have used it to make my home more Firewise. During the year, we laid rock all around our property to create defensible space."

Of the evacuation booklets they'd received, another homeowner said, "I knew what to do when we received word to evacuate, taking my pets and following the route out of the community to where we were told to go for food and shelter."

"This fire has reinforced the need for defensible space around homes in the WUI," observed Gena Williams, of the Virginia Department of Forestry.

•••

How-To thanks Gena Williams and Fred Turck, of the Virginia Department of Forestry, for providing the information and photographs for this Community Example.



Brush cleared as part of a fuel reduction project.



Removing downed wood materials to reduce fuels that feed a wildfire.



QUESTIONS AND ANSWERS WITH: *Alexander Maranghides*

In this issue of How-To Newsletter, Alexander Maranghides, a Fire Protection Engineer working for the National Institute of Standards and Technology (NIST; U.S. Department of Commerce), discusses how his research helps to develop reliable and implementable hazard reduction solutions for fire in the Wildland/Urban Interface (WUI). Mr. Maranghides spends half of his time at NIST, in Gaithersburg, MD, and the other half with the U.S. Forest Service, Fire and Environmental Research Applications (FERA) team in Seattle, WA. With the highly unusual fire season in Texas, heightened by severe drought, the Q&A focuses on his ongoing work with members of the Texas Forest Service, in particular their research of the Willow Creek and Tanglewood Complex fires that struck near Amarillo, TX early in 2011.

How-To: *In October 2010, you trained members of the Texas Forest Service in the use of the data collection methodology you had developed for the National Institute of Standards and Technology. How did that knowledge come in handy in evaluating the Willow Creek and Tanglewood Complex fires that struck outside of Amarillo, Texas, the following February?*

Alex Maranghides:

In October 2010, we conducted a one-day workshop and a two-day training session in Bastrop, TX. The one-day workshop, a joint effort between NIST and the Texas Forest Service (TFS), was aimed at informing state and regional first responders of our new methodology for collecting WUI fire data. The two-day training session was specifically designed to bring data collectors up to speed on how to use this new two-tiered methodology.

This partnership was spearheaded by Karen Ridenour of TFS. In addition to the training, TFS committed selected data collectors for proficiency training during the fall and early winter. All this work was instrumental in enabling the rapid and successful joint data collection deployment in Amarillo. As a result, the field deployment and data collection methodology were successfully tested in Amarillo and we now have a very complete data set for the Tanglewood Complex Fire. The [Initial Reconnaissance Technical Note](#) that we issued in July 2011,

highlights these processes and has identified some preliminary findings.

How-To: *Did the assessment of susceptibility to a wildfire event lead to any advance prep work, using Firewise practices, by members of the community? If so, did your post-fire study find that those who took preventive measures were able to better protect their homes and property?*

Alex Maranghides:

In the fall of 2010, TFS had conducted a community education program at one of the communities affected by the Tanglewood Complex Fire. We will be analyzing the impact of the pre-fire hazard mitigation actions taken by the community/homeowners in our next Tanglewood Complex Fire Report.

How-To: *What else has the data from your studies revealed thus far about the fires you've been able to study?*

Alex Maranghides:

The main message is that it is very important to conduct a thorough data collection and analysis before making any claims about the reliability and impact of hazard mitigation techniques. Our data collection methodology differs in two fundamental ways from what has traditionally been done in the past. Firstly, we collect data from all the structures, not just those that got destroyed. Secondly, we take significant amounts of time to identify defensive actions taken in the community by

first responders and residents. Following are a couple examples to illustrate why both of these are critical.

Documenting only destroyed and damaged structures can result in erroneous data interpretation with respect to structural ignitions. At The Trails community in San Diego, CA, for example, the Witch/Guejito fires in 2007 destroyed 74 homes and damaged 16. Out of the 74 destroyed homes, 12 had wood shake roofs (of varying ages and treatments), while 37 had Spanish tile roofs (with and without bird stops), 24 had composite roofs, and there was one metal roof. The wood shake roofs were present in 16% of the destroyed structures, while the Spanish tile roofs were present in 50% of the destroyed structures. There were a total of 245 structures within the fire. Considering the performance of roofs within the fire line, 100% of the wood shake roofs exposed were destroyed while only 24% of Spanish tile roofs were destroyed. By documenting all structures within the fire line, the relatively high (all other factors being equal) vulnerability of wood shake roofs stands out. While quantifying structure survivability is a complex process that involves construction particulars and measures of fire and ember exposure, the above example illustrates how misleading partial information can be. Identifying the defensive actions also is critical. The initial information collected within The Trails community following the

2007 Witch/Guejito fires suggested that very limited defensive actions occurred within the community. Subsequently, a more comprehensive data collection and discussions with homeowners and first responders determined that one out of every three structures in that community had been defended. Without this information on defensive actions, a complete assessment of the relevant factors underlying the survivability of structures could not be assessed.

How-To: *What are some of the lessons we can learn from the information garnered from your research of the fires?*

Alex Maranghides: The overarching technical finding is that, in order to develop reliable hazard mitigation solutions, we need to understand and quantify exposure. Quantifying the fire and ember exposure has not been done consistently in the past. Without being able to quantify exposure, you cannot truly evaluate the performance of hazard mitigation solutions. We need to be able to compare structures that experienced similar exposures. Only then can we truly evaluate the impact and effectiveness of different hazard mitigation technologies. Technically this is a big challenge, and we (NIST and the U.S. Forest Service) are working on a technical framework. The framework includes field data collection and analysis, as well as experiments and computer modeling.

How-To: *Can interested communities request training in the use of your data collection methodology for conducting studies in their area?*

Alex Maranghides:

The two-tiered data collection method is designed to address, research needs as well as the needs of the incident commanders and those of communities. Our data collection in Amarillo reinforced that training by itself is not sufficient and that without practice, it is very difficult to collect reliable data. We are working on a training/accreditation system that will be made available to the general public. Interested parties will then be able to use the training to conduct the necessary periodic practices necessary to maintain their proficiency.

We believe that communities are a big part of the WUI hazard reduction solution. Only by documenting what is there and what is burning will we be able to develop reliable and implementable hazard reduction solutions.

FIREWISE BY THE NUMBERS

As 2011 draws to a close, Firewise Communities/USA welcomes 33 communities into the Firewise fold since the Fall issue. More than 750 communities are now actively participating in this wildfire safety program.

While we await final numbers of renewals for 2011 (with the deadline at the end of December), more than 50 percent of last year's participants have already confirmed their active status. Nearly a third of the currently active Firewise Communities/USA sites have participated in the program for five or more years.

Whether your community is new or an "old-timer," being Firewise means greater awareness and safety for your home and community. The more Firewise Communities/USA sites there are, the more of you there are who will be preparing to prevent fire from reaching your homes and property.

Congratulations to all of our Firewise communities for making awareness of wildfire and the safety of your communities a top priority!

How-To Newsletter is pleased to welcome the following communities:

Arkansas – *Briggsville*

Arizona – *Munds Park*

Florida – *Pine Ridge*

Georgia – *Argyle, Georgia Bend, Leisure Woods, St. George, Wood Lake*

Idaho – *Garden Creek, MacKay Fire District, Osburn, Trays Ridge, Wallace*

Maine – *Cushing Island of Portland*

Massachusetts – *Hopps Farm Road*

Mississippi – *Noxapater*

Montana – *Whitefish*

North Carolina – *Fairfield Plantation, Fontana View, Summer Haven*

Oklahoma – *Mangum*

Oregon – *Lithia Creek Estates, Quailhaven, Rimrock West*

South Dakota – *Spearfish Canyon*

Tennessee – *Cobbly Nob, Shagbark*

Virginia – *Hogue Creek Estates, Jollett Hollow-Devil's Jump, Silling Spring*

Washington – *Bella Vista, Sand Dune, Snug Harbor*

AROUND THE FIREWISE HOME:



The back area of the Hornbuckle home, taken October 2010



Six hours before the fire came through, Bill and Lois returned to their home to turn the water on their back deck.



These two photos (above and right), as well as the photos on page 7 were taken after the fire. Notice how the paths worked as a firebreak.

Being Prepared Made All the Difference: One Resident's Perspective

This summer, the state of Texas took a "heating" – literally. Lengthy drought and dry fuels combined to create countless wildfires throughout the state. On one day alone, 63 fires burned throughout Texas, and one of the hard-hit communities was Bastrop, where Lois and Bill Hornbuckle had bought their retirement home. Of the 21 homes in their immediate neighborhood, only 7 remain and, in the overall Bastrop community – which is not among the state's Firewise communities – approximately 1,600 homes were destroyed.

Having lived in suburban Houston until the

purchase of their home within the community of Tahitian Village, the Hornbuckles realized they were ignorant about wildfire and that it posed a threat to their house. They contacted P.J. Pearson, a personal friend who also is a retired state forestry professional, and asked if he would assess their property. Lois also spoke with as many firefighters as she could to learn how to prepare the Hornbuckle home in case of a fire.

P.J. told the Hornbuckles they were living on a powder keg. "He gave us some very good suggestions on cleaning up and creating a 'defendable space' around our home," recalled Lois. "We started with the immediate area around our house and slowly moved outward into the forest, with our goal to clear possible fuels while creating circular zones of protection."

Over two years' time, she and Bill employed a variety of Firewise practices, such as removing pine needles and vines from around the house; clearing dead bushes and trees from various sections of their acre of property, moving out from the house toward the adjacent forest to remove ladder fuels; replacing old, dried-out wood on top of their deck with new wood; and having a metal roof put on their home.

In addition, to combat erosion resulting from the slope of their land, they purchased crushed granite, brought in a truckload at a time, and disbursed it around their property.

"It was an ongoing procedure for us over the last two years," explained Lois. "We would get a truckload every few months.



Bill also used some retaining stones to create a terracing effect to help with the sloping. After the granite was in, I used medium-sized rocks from our property to line the edge of the granite, to keep it from spreading out." And, to keep the granite clean, periodically, the couple used a yard blower to remove pine needles.

Lois added, "Bill also placed park-like trails throughout our property by simply raking away the pine needles. These trail areas were close to the house, so I lined them with rocks."

Ironically, while this act of lining the paths with rocks was done for aesthetic reasons rather than because of fire safety advice from the experts they had spoken to, it had a positive effect; when the multiple fires that struck Bastrop came through, the rocks created a "fire break" that kept surface fire from spreading.

"We have a section of property in the back that was completely untouched by the fire," remarked Lois. "Nothing burned in this area. The right trail stopped the fire coming up on the right side of the property, the left trail stopped the fire coming from the left side of the property and the center area was untouched by the fire."

"Because of their efforts, particularly the removal of low-lying fuels, when the fires went to ground, they didn't [have a way to] go to canopy," observed P.J. "And then the walkways served as breaks."

Lois added, "When we were doing the work, I was concerned about the effect of the clearing on the wildlife, but I didn't see any change in their habits and, in some areas, we had more activity."

"We've also learned that this work is an ongoing process," continued Lois. "For example, within a few months of removing a thick layer of pine needles, more appeared. You still have pine needles, just not a thick layer that can smolder during a fire. While it's an ongoing task, it's a manageable one."

To further her knowledge, Lois took a class through the "FireCAP" program in Bastrop, presented by Texas Forest Service coordinator Michal Hubbard. "It was an excellent class and very informative," she noted. It was particularly reinforcing to find that she and Bill had already done most of the things recommended."

She has since recommended the class to many people. (You can find out more at www.firecap.org). "I'm hoping it may get

people interested in fireproofing their places. Especially now that I see how doing them helped to save our home."

Texas-Size Footnotes: P.J. Pearson reported that, in Young County, Texas, Wildcatter Ranch – a lone home with a guest ranch, convention center and steak house on its property, which is its own Firewise community – was the lone survivor of devastating fire that hit the area. "They have done everything that the Texas Forest Service recommended," noted P.J., "and no structures at the ranch were destroyed. All the other houses in the area were lost." Conversely, 90 miles west of Dallas/Fort Worth, in Possum Kingdom Lake, homeowners who only cut the footprints for their homes so that they could be among the trees lost 123 homes in the first of four fires that struck the community during the state's highly unusual fire season. "These examples demonstrate what we preach," said P.J. "Clean up, mow your lawns, make sure you have defensible space and make your home firewise."

• • •

How-To thanks Lois Hornbuckle and P.J. Pearson, for providing the information in this Around the Firewise Home item. And we thank Bill Hornbuckle for the photographs.

AROUND THE FIREWISE HOME: CONTINUED

Becoming Firewise: When Fire Is a Motivating Factor

Meers, Oklahoma, is located in rough country full of tough, resourceful Oklahomans who are accustomed to the harsh conditions that the region can dish out. The steep canyons, hill slopes and cliffs of the area are littered with boulders, small oaks and native grasses. In between, there are wide-open pastures subject to the high winds that whip through the area. These features alone make for a pretty significant wildfire danger. This year, however, was a little worse than most as a persistent drought amped up the wildfire risk.

One particularly large wildfire burned for days and was extinguished only after a dogged fight -- but not before major losses occurred. By local accounts, about 10 percent of the area's homes were destroyed.

Even before the fire, residents of Meers were aware that their remote location and obstacle-filled terrain would be problematic in the event of wildfires. As such, many years ago, they banded together to form their own volunteer fire department specialized in fighting the wildland fires in their environment. Equipment and vehicles were purchased and outfitted to allow local firefighters to deal with wildland fire conditions to the best of their ability. However, fighting wildfire in such a large area where the population is so widely dispersed is both complicated and difficult.

Recently, the residents of Meers came together in a proactive manner to improve their odds should another wildfire strike. They have decided to become a Firewise community. A Firewise board is being formed, with the first Firewise meeting already held. The community members also are working on a grant application to obtain support from the Oklahoma Firewise Program, operated by Oklahoma Forestry Services. Their goal is to assess and document their challenges and then seek additional mitigation funding from Oklahoma Forestry Services to address their needs. If all goes according to plan, this group of Oklahomans should be better prepared to face future wildfires that may threaten their small community.

...

How-To thanks Kelly Hurt, U.S. Forest Service in Oklahoma, for providing the information for this Firewise Around the Home feature.





Wood shake shingles can easily ignite when firebrands are caught in their crevices Photo by David Yegge

Shake Up Your Roofing By Replacing Combustible Wood Shingles

In Big Bear Lake, California, they haven't had fire in their valley in 110 years. Still, the residents want to be prepared in the event that their fireless streak should end. During the past four years, the community has removed approximately 300 wood shake shingle roofs from homes and replaced them with materials that meet California building code.

"We started with more than 500 homes with shake roofs and are now down to about 200," noted David Yegge, a member of the Big Bear Lake Fire Department.

For its efforts, the community received a grant for \$1.1 million to help 150 homeowners replace their roofs. They also have written three more grants in conjunction with FEMA and the California Emergency Management Agency to fund additional efforts.

"Wood shake shingles can easily ignite when firebrands are caught in their crevices," observed Yegge. "The 2007 Slide Fire in Running Springs demonstrated why it's important to replace shake roofs."

In October 2007, Running Springs, California experienced its most costly fire in its history when a wind-driven fire event blew through the community quicker than adequate resources could arrive. Although structures of all types were lost, the fire was most devastating to structures with wood shake roofs. Firebrands loosed by

the winds ignited the flammable roofing, even though some of the homes were several hundred yards from large flames. Conversely, those structures with "Class A" roofing in the same areas were spared.

"We advise residents that shake shingles need to be replaced with a non-combustible material, such as asphalt, tile, cement or metal," said Tony Grabow, chief of Running Springs Fire Department. "New building code standards will require that shake shingles be replaced with these acceptable materials, effective January 1, 2014."

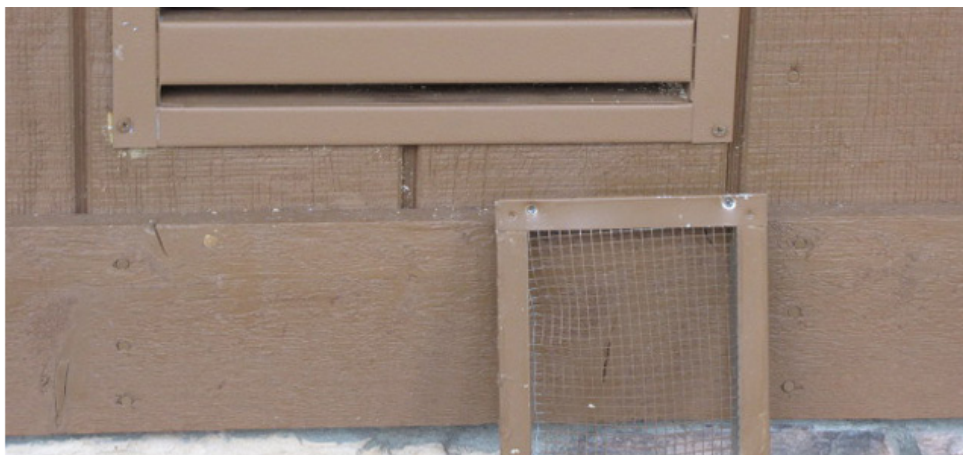
Other construction standards designed to better protect homes from wildfire include using tempered glass windows, creating

boxed eaves, and either installing siding that is non-combustible or creating a fire wall between siding and sheer pane building decks that will not sustain combustion. Additionally, all new homes require [interior] automatic sprinkler systems.

"We also recommend putting in non-ember intrusion vents when doing roof work," said Yegge. The tight mesh vents prevent embers from getting in and allowing the fire to ignite."

...

How-To thanks David Yegge, Fire Fuels Program Supervisor for the Big Bear Lake Fire Protection District, and Tony Grabow, Chief of Running Springs Fire Department, for providing the information for this Firewise Around the Home feature.



Non-ember intrusion vents can help prevent ignitions
Courtesy of the Living with Fire Program and the University of Nevada Cooperative Extension.

AROUND THE FIREWISE HOME: CONTINUED

Firewise Project Withstands Pickle Branch Wildfire: Three Shining Examples

Virginia homeowners who live in woodland homes may be at a high risk of wildfire if there are heavy fuel loads on the forest floor, steep slopes, south-facing aspects, or ladder fuels. Firewise landscaping is a way to reduce this risk to acceptable levels by reducing fuel loads to create firebreaks —“defensible space”— around woodland homes.

With the notion of defensible space in mind, the New River-Highlands Resource Conservation & Development (RC&D) Council, a nonprofit organization based in Wytheville, Virginia, and the Virginia Department of Forestry (VA-DOF) have been collaborating for nearly a decade to demonstrate the benefit of Firewise landscaping. Since wildland firefighting crews have only a limited amount of time and resources to protect homes that are threatened by wildfire, Firewise fuel reduction and landscaping can reduce woodland homeowners’ risk of wildfire and can help extend firefighting crews’ limited resources.

During 2010, using funds from the U.S. Forest Service Community Protection Grant Program, the New River-Highlands RC&D Council and VA-DOF completed fuel reduction for three woodland homes – those of Ken Harrison, R.C. Steele and Robert Cannaday – located along Miller Cove Road in Catawba, Virginia after each resident agreed to take part in the Protecting Woodland Homes project. Just six months before the Pickle Branch Fire, RC&D Council staff and contractors assessed each home’s risk of wildfire using an evaluation tool developed by the Virginia Department of Forestry. The assessments for the homes of Mr. Harrison and Mr. Cannaday indicated an extreme risk of wildfire, and a high risk of wildfire for Mr. Steele’s home. Next, project contractor Titan Wildfire Resources, Inc., chipped up and removed several tons of downed fuels from the immediate vicinity of each residence. These fuel reductions created defensible space around each of the residences to reduce the risk of wildfire.

During the night of February 19 and the early morning of February 20, 2011, these homes were directly threatened by the Pickle Branch Wildfire, which burned more than 650 acres in Craig County, Virginia. The Firewise fuel reduction project was put to the toughest test homeowners and wildland firefighters alike hope they never have to face—a live wildfire situation.



Before fuel reduction activities.



After fuel reduction activities.



After the fire.

Ken Harrison’s Woodland Home

During the summer months, Ken Harrison is a woodland homeowner, residing in Catawba, Virginia. As the wildfire approached his home, wildland firefighters set up a Type 1 Engine with a crew of five to protect the structure. The fuel reduction efforts completed six months prior gave the structure protection crew some advantage, allowing them to quickly construct a fire line and burn out leaf litter between the structure and the advancing wildfire. Although the steep terrain behind the Harrison house made protecting it difficult, the structure protection crews managed to extinguish all of the embers and firebrands that rolled down the slope.



The wildfire was thwarted by fuel reduction activities and the efforts of the wildland firefighters as shown in the photos above and below.



Robert Cannaday's Woodland Home

Robert Cannaday is a woodland homeowner, residing in Catawba Virginia. On the night of February 19, and into the early hours of February 20, a crew of wildland firefighters used a leaf blower to remove some leaf litter and put in a small trench line to catch embers and firebrands that rolled down the steep slope towards his house. The Cannaday residence required little effort to protect, thanks to the fuel reduction efforts and "defensible" space.



Before fuel reduction activities.



After fuel reduction activities.



The fire that burned in the immediate vicinity of the Steele residence was of low intensity, as indicated by the patchy burn patterns.

RC Steele's Woodland Home

RC Steele is a woodland homeowner, residing in Catawba, Virginia. On the night of February 19 and into the early hours of February 20, Mr. Steele and his family watched from their living room as a wild-fire burned around the ridge and crossed the drainage behind the house. As the Steeles looked on, a crew of wildland firefighters used a leaf blower to remove some leaf litter and put in a small trench line, as they did at Robert Cannaday's home, to catch embers and firebrands that rolled down the steep slope towards their house. The Steele's residence required little effort to protect, thanks to the fuel reduction efforts, and the creation of "defensible" space.

AROUND THE FIREWISE HOME: CONTINUED



PHOTO BY: JEN KOILB

Taking Steps to Defend Your Home from Wildfire

Wildfire is no stranger in Georgia. In 2007, the state suffered the largest wildfire in its history. More than 500,000 acres were scorched, causing destruction on private property and public lands in and around the Okefenokee National Wildlife Refuge. Then and now, the region has experienced a moderate to severe drought, and water levels in the swamp are even lower than when the wildfires began in 2007.

Because of the ever-present threat of wildfire, the Georgia Fire Prevention & Education Team conducts outreach with area residents to help them prepare their homes and property, with a goal of improving each home's chances of surviving wildfire.

Following are tips the team provides to residents that could serve you well, too:

- Clear brush from alongside your driveway
- Grade/repair roads to allow for large engine access
- Consider metal roofing with your next replacement
- Clear debris from roof and overhanging limbs
- Clear vegetation so that it is more than 30 feet from structures
- Move unnecessary vehicles away from your home
- Enclose under decks to ground level
- Clearly identify your property's address

•••

How-To thanks Eric Mosley, of Georgia's Fire Prevention & Education Team, for providing the information in this Around the Firewise Home item.

Thin Is In: Creating and Maintaining Healthy Forests

Thin isn't just for waistlines. In the WUI, thinning trees makes for good defensible space on your property as well as for a healthy forest.

According to Big Bear Valley Fire Protection's website "Thin Is In" (www.thinisin.org), a healthy forest in the San Bernadino Mountains would typically have between 90 and 150 trees per acre. However, much of the forest has 600 to 800 trees per acre. The excess fuel that this glut of trees offers a fire is what makes fires in the area difficult to control. Fires with such fuel at their disposal often burn so hot that larger trees are killed, soil is scorched, and wildlife habitats are destroyed.

The site also explains that trees growing in such close proximity must compete for the same limited amount of water, nutrition and sunlight. Under the drought conditions familiar to the region, trees become stressed, making them susceptible to insect infestations, such as those by bark beetles.

Thinning provides remaining trees more room to grow in a less stressful environment and increases space between crowns of trees – which can slow or prevent the spread of a fire that has crowned (is spreading aboveground). Following are some tips, culled from the Thin Is In site that can help you get started with thinning trees on your own property. Remember to consult a professional when you're not certain of what to do or for assistance with larger trees.

- Remove dead vegetation and small dead trees up to 15 feet in height (taller trees should be removed by a professional)
- Trim branches, live and dead as follows:
 - For trees taller than 15 feet, remove lower branches up to 6 to 8 feet from the ground
 - For trees less than 15 feet, remove live and dead branches within 3 to 4 feet of the ground
 - Remove branches within 10 feet of a chimney opening and all dead branches overhanging a structure
 - Remove any live branches overhanging structures and vertically within 10 feet of any part of the roof line
- Prune and thin overgrown shrubs, removing all dead branches and selectively thinning live foliage
- Remove accumulated pine needles
- Selectively thin native trees less than 6 inches in diameter, especially those within 8 feet of a larger native tree or other small trees
- Selectively thin trees that are deformed, crooked, or that have damaged bark, dead tops or show evidence of disease or insect infestation
- Selectively remove trees that have grown next to buildings or pavement, or that are under power lines or along fences

•••

How-To thanks David Yegge and the Thin Is In website for providing the information for this Firewise Around the Home feature.

THE FIREWISE LEADER:

Communicating When Your Community Is Tested By Fire

Terri Whaley lives in Marble Falls, Texas, a Firewise community in the central part of the state. During Labor Day weekend, fires began moving toward Marble Falls and its neighboring communities. Her own community had already done most of what was needed to protect their homes, but other communities suddenly got very serious about wanting to become Firewise.

As a result, several people contacted Terri. "Because we were known as the first Firewise Community in this area, they wanted information on what they could do to prevent wildfire damage in the near and distant future," she recalled. "It's amazing how an event like this motivates people to get moving on a protection plan!"

She continued, "While their homes were not in immediate danger, there really wasn't time to deal with protecting them; it was too late. The

winds were so strong and the fires were moving too fast for that."

So, Terri told those who contacted her about resources on the Firewise website, and how to contact a representative to come speak to their communities. "I also sent them information about the upcoming Backyards and Beyond Conference, which was a very rewarding experience for me and my community when I attended a few years ago."

She added, "One of the best resources was the NFPA September Fire Break News e-mail. I forwarded that, along with a pdf file of the "Ready, Set, Go!" program. Those documents contain all the information a community needs to begin to become Firewise."

Terri noted that she keeps a small supply of Firewise materials that she ordered from the

online catalog and distributes them to anyone she encounters who may be interested, including her local Master Naturalist chapter. She also has sent a Texas Forest Service Wildfire Hazard Risk Assessment to individuals who wanted to evaluate their own properties.

"Since September, there have been numerous programs on wildfires and Firewise," she said. "Lexi Maxwell and others from Texas Forest Service, as well as all of our local fire departments, have been working overtime educating the public about how to protect themselves from wildfires. To date, at least four communities in the immediate vicinity have begun efforts to become Firewise, and I expect even more with all the interest we're seeing."

If, like Terri, you would like to have materials on hand to share with others, visit the Firewise website's online catalog at www.firewise.org.

Developing strategies for increasing public awareness

In 2007, Georgia experienced its worst fire season in its history. The catalyst for these fires was severe drought conditions and heavy fuel loading in state forests. Realizing that this year's drought conditions were very similar to those experienced in 2007, the GOAL Waycross Wildfire Prevention Education Team, in Waycross, GA, developed strategies for increasing public awareness on fire prevention and wildfire hazard assessments. They identified objectives and target audiences, developed an assessment protocol and media outreach strategy, and scheduled community meetings to inform community members of the potential risks and the actions they could take.

The team's objectives included:

- Conducting door-to-door contacts with local residents to distribute approved literature and communicating wildfire preparedness actions.
- Identifying potential "special needs" of local residents to aid and assist emergency services and incoming incident management teams in their planning in the event that wildfire(s) encroach near their homes.
- Communicating with local schools and churches about wildfire preparedness.
- Work closely with local officials to plan and holding meetings within local communities.
- Working closely with communications and public relations of the state forestry com-

mission and with public information section of the U.S. Fish and Wildlife Service regarding all media and publication requests.

Among the audiences they targeted were local residents within a one- to three-mile radius of the Okefenokee Swamp border where their concerns centered, as well as elementary and middle schools in the area, community leaders, church leaders and the local landowners association. They also reached out to media contacts at local television and radio stations, newspapers and relevant websites.

In reaching out to television, radio and newspaper contacts, the team sent out press releases to regional outlets, scheduled interviews and made sure they had appropriate experts available to respond to interview requests, provided public service announcements, and offered human interest and feature story ideas that offered a hook relevant to fire prevention and preparedness. They also provided prevention messaging to partner organizations for use on their websites and for posting to their social media pages on Facebook and Twitter.

Finally, they used community meetings to raise awareness of the drought and what that could mean in terms of wildfire potential. They drew parallels to historic fires in the area and provided information about efforts by the Georgia Fire Commission and USFW since the 2007 fires. Most importantly, they informed the residents in attendance about the actions



For more information about Georgia's Firewise Program contact The Georgia Forestry Commission at 1-800-GA-TREES or The Okefenokee Wildlife Refuge

Be Wise, Be Very Wise, Be Firewise Georgia

An example of materials used in Okefenokee to raise awareness concerning the threat of wildfire

they could take to prevent fires, minimize damage in the event of fire, and to evacuate in the event of a wildfire.

While your own community's history and fire threat may differ, you can take similar steps to develop strategies for communicating effectively with community members and other potential audiences about making wildfire preparations and the actions that can be taken to be safe.

...
How-To thanks Terri Whaley, of Marble Falls, TX, and Eric Mosley, from the Georgia Fire Prevention & Education Team, for providing the information for these Firewise Leader items.

ADDITIONAL SOURCES OF INFORMATION:

2012 Firewise Calendar

Think Firewise throughout the year with the [2012 Firewise Calendar](#). Be sure to ring in the new year by ordering your free copy of the calendar!

Engaging Fellow Firewise Friends

As you make your own efforts and engage with other like-minded communities, you will find there are many ways to go about pursuing and renewing Firewise status. The national program is using social media to help you connect. Check out the Firewise page on Facebook at <http://www.facebook.com/firewise>, the Firewise Blog at <http://nfpa.typepad.com/firewise/> or follow the program “tweets” on Twitter at <http://twitter.com/firewise>. There’s also an NFPA group with a Wildland Fire Management/Firewise subgroup on LinkedIn, the business networking site (<http://www.linkedin.com>). (To join the Wildland Fire Management/Firewise subgroup, first join the NFPA LinkedIn group and then choose the subgroup you would like to join.)

Keeping Up with Firewise – Renewing Your Recognition Status

Part of being a recognized Firewise Communities/USA® site is the ongoing work you and your Firewise Board do each year to reduce local fire risks and address the issues in your community wildfire hazard assessment. Each year, as you conduct these activities, the Firewise program staff wants to hear from you about your efforts. This keeps your recognition status active and helps us share your successes with others.

In working to make the yearly status renewal process as easy as possible, this February, we mailed 2011 renewal material to all active communities. To maintain your Firewise Communities/USA® recognition status, here’s all you have to do:

- 1) Conduct your Firewise Day event anytime during 2011. This can be a community clean up day, a fair, or any public get-together where you take Firewise action or promote your local programs.
- 2) Document your time and effort in Firewise for 2011. Each year, your Firewise Board must demonstrate a level of effort equal to at least \$2 per capita in the community. You can track volunteer hours (worth \$21.36 for 2011), count grants you’ve received, or the value of in-kind services, hired help, or loaned equipment. If it’s Firewise work, it counts.
- 3) Tell us about it! Fill out the Renewal Form we mailed to you (or use the Web Renewal or online forms) to tell us about your Firewise Day and your 2011 investments. You can update your contact information at the same time.

If you need help figuring out your investment or planning your event, visit the Firewise website [here](#) to see what others are doing, download sample tracking forms, and get help calculating volunteer hours. You can also contact your [regional Firewise Advisor](#), your [Firewise state liaison](#), or the [national Firewise office](#) for assistance.



GO TO THE WEB!

Firewise.org is your resource for information about home and community safety from wildland fire.

Additionally, following are some websites connected to this issue’s stories, which offer useful, helpful information:

www.gfc.state.ga.us

www.fws.gov/okefenokee/

www.thisisin.org

www.thisisin.org/home/images/stories/downloads/az1397.pdf

<http://www.sbnfa.org/forestcare.php>

GO TO THE VIDEO!

To view the latest in Firewise and other fire safety videos, tune into our YouTube channel at www.youtube.com/nfpadotorg. And, to access presentations that NFPA and Firewise make public, visit our SlideShare site at <http://www.slideshare.net/mhazell>.

Firewise® and Firewise Communities/USA® are programs of and registered by the National Fire Protection Association. NFPA is an equal opportunity provider.

Copyright © 2011 NFPA. All Rights Reserved.

This publication was produced in cooperation with the USDA Forest Service, the US Department of the Interior and National Association of State Foresters.

