



Becoming Firewise: A Neighborhood Approach

— an invited comment

As readers of this newsletter know very well, the occurrence of a natural hazard event—a hurricane, a flood, a wildfire—does not a disaster make. It is the people who are harmed, killed, displaced, or impoverished as a result of these natural events who complete the definition of a disaster. Because people are part of the disaster equation, changes in social behavior, particularly in how people behave in regard to preparedness and safety before the natural hazard event occurs, can change the results in many cases. Large-scale infrastructure improvements, sound building codes, and land use plans and patterns that take natural hazards into account are all extremely important to reducing losses, particularly over the long term. But for many places that are, right now, “disasters waiting to happen,” effective mitigation

can take place by convincing residents of their personal responsibility—and capability—to change for the safer.

As disaster educators and emergency managers, we know we cannot stop the rain from falling, the wind from blowing, or lightning from striking. Our more than century old determination to suppress nature’s fires in the United States is one exception, but history is proving that even when wildfire can be controlled in the short term, the impacts of excluding it from the landscape can make “the one that gets away” a catastrophic event. Rather than trying to prevent natural events from occurring, we can make great strides in reducing human losses and suffering by motivating behavioral change among those in harm’s way. While this may seem as daunting as an attempt to wrestle nature’s forces into submission, the

health and environmental fields have produced proven successes of changing human behavior through a process known as social marketing.

The national Firewise Communities program uses a particular form of this process, called Community-Based Social Marketing (CBSM) by its proponents, to work with residents of fire-prone areas to change how they prepare for wildfire in their neighborhoods. The Firewise Communities program vision is that wildland fires can occur in areas of residential development without causing disastrous loss. This can be achieved if communities are sited, designed, constructed, and maintained to be compatible with fire and resistant to its threats to life and property. A Firewise approach begins with the home's construction, landscaping, and maintenance, and incorporates the efforts of individual homeowners, neighborhoods, state and federal agencies, and tribal organizations.

The CBSM tools include commitment, prompts, norms, communication, incentives, and (most importantly) removal of barriers to behavior. But before we jump into CBSM, let's review a few principles of effective communication that move people from awareness to action. If you want to really understand it, read "Public Education for Earthquake Hazards" (see References below). Just as in effective public education for earthquakes, effective communication about wildfire helps raise questions in residents' minds, provides simple and clear answers, and reinforces messages from a variety of credible authorities over time. Firewise program staff and program proponents know that the complicated phenomena of homes burning down during wildfires must be explained in non-technical terms, that this information must come from various credible sources, and that consistent information should be repeated via many different media. The printed matter we create is helpful because people want to refer to a document as they think about their risk, but we should be sure that the information tells people what they should do before, during, and after a wildfire. We should also expect that they will discuss the issue with their peers before they will accept and act upon the information we provide. People will consistently search for more information to validate what they've already heard.

The reward for disaster safety advocates is to know that when clearly informed about risk, people comprehend the basics and remember what they read. When people understand that there is something they can do about reducing their vulnerability, they are more apt to act. This is a very important basic concept for our disaster-hardened colleagues to understand and embrace. It is working in many arenas, including for residents of wildfire-prone areas.

The Firewise Communities/USA Recognition Program incorporates these important concepts along with another important social behavior theory—Rogers' Diffusion of Innovation Theory. This is the theory of how people accept and act on new ideas. Its premise is that **Innovators** are a very small number of people in any given group, with particular characteristics. Once they have tried out an idea and have seen results, a small

but significant percent of their peers—known as **Early Adopters**—will begin to take action. They are followed in turn by larger portions of the group, the **Early Majority** and the **Late Majority**. The **Laggards** are another significant part of the group with their own characteristics that will keep them from quickly—or perhaps ever—adopting the group's new behavior.

How does this process work in a Firewise Community? The USA Recognition Program is based on the idea that neighbors can work together, starting at the individual home level, to make their homes and communities safer from wildfire. In addition to the social behavior research discussed here, the program also relies on physical fire science research, which strongly indicates that modifications to home construction and landscaping within 100 to 200 feet of the home can minimize the risk of ignition from wildfire. The program begins with excellent communication and education about these important scientific findings to help residents understand that there is indeed something they can do to reduce their vulnerability. It starts with fire-resistant construction, especially for roofs, siding, windows, and openings, as well as for decks, porches, and fences. It proceeds to the backyard, the woodlot, and the common areas of the community. Because homes that are spaced 100 to 200 feet apart can be potential ignition risks for one another, mitigation must happen on a neighborly basis to be effective in developments where homes are built close together.

Once residents are convinced of their risk and that they can do something about it, the Firewise Communities/USA template provides them with the next steps. An expert on wildland-urban interface fire provides a community-level assessment to help residents understand the most important areas to address for wildfire safety. Residents form a board or committee, accept the assessment, and create an action plan based on the assessment's findings. They perform mitigation work to begin addressing the wildfire risks. Communities must commit to work that is valued at a minimum of \$2 per capita each year. This is usually easy to achieve through volunteer labor (currently valued at almost \$19 per hour), in-kind services from local fire departments or forestry staffs, loaned equipment, or small grants. The community must hold a Firewise Day or similar event, which helps the Early Adopters reach the majority they need to change community behavior, and then document its annual activity on a simple application form.

For their efforts, these small neighborhoods and subdivisions are rewarded with road signs proclaiming their recognition status, a customized plaque, an opportunity for their story to appear on the Firewise Web site, and myriad networking and educational opportunities. Each year as the community renews its status by documenting its annual mitigation activity and Firewise Day, it receives a decal with the current year to show that it is continuing its commitment to wildfire safety. A biennial Firewise conference also provides opportunities for residents to share their successes with their peers around the nation.

The Firewise Communities/USA Recognition Program uses CBSM tools throughout the spectrum of

resident awareness, understanding, and acceptance. Commitment is achieved when a local Firewise board is formed and a plan created, and it is strengthened when the application is complete and annual renewals come in. Prompts from the national program in the form of seasonal reminders (monthly e-mail alerts and quarterly newsletters), as well as from state Firewise liaisons and community leaders, are effective in maintaining interest in Firewise activity. Norms are established as Firewise activity becomes a regular—and neighborly—form of behavior. When community residents contact the national program office looking for their current-year decal, they are now people who see themselves as Firewise and proudly proclaim their new behavior as the right thing to do. Communication is constant through the national Web site, the state liaisons, email and written updates, and press releases about new products, programs, and successes of local communities. Incentives include the powerful motivator of national fame, continued annually with updates and opportunities to share successes. Communities have an increased chance of obtaining grants, particularly Pre-Disaster Mitigation Planning or Project Grants, for which recognized communities receive a higher ranking.

Personal responsibility for wildfire safety is achieved through this national program, and community-building often occurs as a result of the group effort required by Firewise. The education and communication by the national program and its partners in state forestry and the local fire service help to remove the potential barriers to changing behavior—perhaps the most powerful tool in the CBSM toolbox. Much effort is applied to help residents see that becoming Firewise will not harm their local environment nor damage the natural beauty or aesthetics of the community. Firewise action at the local level can often improve wildlife habitats as well as local property values.

As of the end of 2007, the sixth year of life for the Firewise Communities/USA Recognition Program, more than 300 communities in 36 states actively participate in the program. Ninety percent of communities have remained active and renewed their status, and a large proportion of the earliest adopters are celebrating their fifth and sixth anniversaries of participation. Since 2003, residents of these communities have invested more than \$20 million in their own wildfire safety (far exceed-

ing their \$2 per capita minimum requirement). Nearly 400,000 residents of fire-prone communities are touched by this program. A very few of the participating communities have been tested by fire to date, but there is already evidence that the principles of community-wide Firewise action are working to protect homes and lives.

A Russian proverb states, “Perfection is the enemy of good enough.” It reminds me that the goal is to make every community Firewise, but that we can only achieve that goal by persuasion—one community at a time, at their own pace, in their own place. The “Laggards” will always be with us, according to Rogers’ theory—all the more reason to use the powerful tools of social behavior change to work with the “sparkplugs” who move their neighborhoods from awareness to understanding, from acceptance to action.

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References

1. McKenzie-Mohr, D. and W. Smith. 1999. *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. Gabriola Island, B.C., Canada: New Society Publishers.
2. Nathe, S., P. Gori, M. Greene, E. Lemersal, and D. Miletic. 1999. “Public Education for Earthquake Hazards.” *Natural Hazards Informer*, Number 2. Boulder: Natural Hazards Research and Applications Information Center, University of Colorado.
3. Rogers, E.M. 1995. *Diffusion of Innovations*, 4th Edition. New York: The Free Press/Simon & Schuster, Inc.

Web Resources

Firewise Communities/USA

www.firewise.org/usa

Social Marketing

www.cbsm.com

www.toolsofchange.com

“Public Education for Earthquake Hazards”

www.colorado.edu/hazards/publications/informer/infrmr2/infrm2wb.htm

Welcome Zeke!

The Natural Hazards Center welcomes Ezekiel (Zeke) Peters, who joined the staff at the beginning of the year as the Center’s Program Manager. A licensed attorney and paramedic, Zeke holds a J.D. from the University of Colorado School of Law and a B.A. in wildlife and fisheries ecology and environmental policy from Hampshire College. He also served as editor-in-chief of the *Colorado Journal of International Environmental Law and Policy* and has worked in Alaska, New York, and Colorado, most recently serving at the Denver Paramedic Division.

Zeke is interested in information flow and decision making at all levels of local emergency medical response and in the tensions between preparing for infrequent catastrophic events and providing day-to-day services. He is also interested in the role that disasters play in calling attention to poor environmental planning and pre-existing social inequity, especially as they affect indigenous peoples.