

Working with Neighborhood Organizations to Promote Wildfire Preparedness

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Introduction

The structure of neighborhood organizations can encourage resident participation in a range of activities, which suggests that neighborhood organizations may be one of the more effective ways to involve people in adopting wildfire preparedness actions. Examples of neighborhood organizations include homeowner associations, neighborhood councils, and volunteer fire departments. Using established neighborhood organizations potentially offers several advantages over forming new groups or working with service and church-based organizations, social groups, and sport clubs. This has been recognized by a growing number of government agencies, nonprofit organizations, and fire departments that are working with neighborhoods to promote wildfire preparedness (Boura 1998, McGee and Russell 2003, NWCG 1998). This research project was designed to learn about the role neighborhood organizations play in helping people reduce their wildfire risk. Results show these groups are a readymade physical, social, and political entity capable of playing that important role.

In this paper we present insights developed in interviews with leaders of the local neighborhood organizations and employees of community fire departments and forestry agencies to learn about wildfire prevention efforts and the role of neighborhood organizations in these efforts. The interviews showed tremendous diversity in neighborhood organization membership structure, functions, dues and budget, and wildfire preparedness activities offered. These characteristics were examined to identify possible relationships with the willingness of neighborhood organizations' to participate in wildfire preparedness activities.

Key Findings

We interviewed individuals in six communities that had WUI neighborhoods at risk of wildfire, a history of fire within the region, and a history of wildfire education and outreach efforts. The study communities included Anchorage, Alaska; Bastrop, Texas; Berkeley Township, New Jersey; Colorado Springs,

Colorado; Ormond Beach/Volusia County, Florida; and Spearfish, South Dakota. Findings from the interviews highlight several areas that may help resource managers work with neighborhood organizations and develop effective programs within their jurisdictions.

- **Working with neighborhood organizations can be one of the best ways for resource managers to reach residents and extend agency outreach.**
- Neighborhood organizations can help model fire mitigation behavior for community members.
- There is no one-size-fits-all neighborhood organization; instead these organizations fit the character of the people and the place. Managers need to adjust their approach to fit the local organization's characteristics.
- Wildfire preparedness activities cannot be explained by an organization's resources, membership, or budget.
- Leaders who are networked with other groups may be the key to increased preparedness activities. Identifying active neighborhood leaders and providing opportunities for recognition can greatly increase the effectiveness of outreach efforts.
- Managers can support local fire mitigation efforts by providing resources and technical assistance to neighborhood organizations.
- Open communication facilitates the process. Managers need to work to create, maintain, and support good lines of communication.

Detailed Findings

Working with neighborhood organizations can be one of the best ways for resource managers to reach residents and extend agency outreach efforts. Neighborhood leaders mentioned many preparedness activities, but educating homeowners and creating efficiencies by supporting group projects were the major activities undertaken. Basic wildfire preparedness activities conducted by neighborhood organizations ranged from disseminating information in newsletters and Web sites to having fire department and Firewise representatives speak or show a video at meetings. More comprehensive programs included activities such as holding chipping/mulching events, working on common areas to reduce wildfire risk, and scheduling special events to educate residents, e.g., fairs, picnics, and school programs. In several cases, communities provided cost-sharing grants or equipment to the neighborhood organizations to facilitate the chipping/mulching events and common area cleanups.

Other types of advanced preparedness activities included creating demonstration areas around homes, assisting residents with evacuation planning, holding workdays to assist elderly and disabled residents, and forming a committee to address wildfire preparedness. In some neighborhood organizations, leaders

reviewed covenants and regulations to determine if they contributed to wildfire risk. They worked to make changes either in their own covenants or at the community level in the areas of roofing material, vegetation clearing, and slash burning. Two neighborhood organizations enforced their covenants to require noncomplying homeowners to manage overgrown vegetation and replace wood-shake roofs.

Some neighborhood organizations contacted government agencies about reducing wildfire risk on adjacent lands through prescribed burning or mechanical vegetation removal. Bob Bendlin and Jim Mozo, officers with the 200-home Plantation Pines Homeowners Association (Volusia County, Florida) have established strong relationships with Ormond Beach and Volusia County fire departments and The Nature Conservancy. In addition to attending local government-sponsored Firewise training workshops and meetings, the two men helped coordinate a prescribed burn on adjacent public lands that included outreach to neighborhood residents. Said Bendlin, “We felt it was important to educate residents so they understood why we were doing the burn and what effects they could expect from it. Reactions from residents have been favorable for the most part. The one person who complained moved.” Bendlin and Mozo also convinced residents in the rural subdivision to pay for the installation of horizontal hydrants to improve firefighting capabilities. Recently, they worked with fellow residents to convince the fire department to locate a new station next to their subdivision on a donated parcel of land.

Neighborhood organizations can help model fire mitigation behavior for community members.

The type and frequency of social events offered by neighborhood organizations do not suggest a strong relationship with their proclivity to undertake wildfire preparedness activities. At the same time, social networks do seem to play a role in wildfire preparedness. Several of the interviewees from more active neighborhood organizations commented that residents who see neighbors remove vegetation or take other preparedness actions are often inspired to do the same. The Texas Forest Service and Bastrop Volunteer Fire Department worked with Pine Forest and Tahitian Village neighborhood associations to organize two mulch festivals for residents. According to Mike Norman, Chief of the Bastrop Volunteer Fire Department, “During the second festival, chippers went around to peoples’ properties, ground the vegetative debris, and left the chips for homeowner use. The chipping was supposed to be done in two weekends. Residents saw their neighbors clearing vegetation and decided they needed to do the same. It ended up taking 2 months to do all the chipping.”

In Hunters Ridge (Volusia County, Florida), board members and association staff worked hard to reduce their wildfire risk in several common areas located within the 400-home subdivision. Ken Duvall, president of the homeowners association, explained, “We trimmed trees, cleared brush, and removed all highly flammable types of vegetation such as palmettos, replacing it with less flammable species. In addition to reducing wildfire risk, we want to set a good example for residents since we are encouraging them to do the same.” The association made the common area cleanup a priority and was able to fund cleanup and planting costs within their budget.

There is no one-size-fits-all neighborhood organization that is best to work with; instead these organizations fit the character of the people and the place. Characteristics such as size, membership type, and budgets do not matter in selecting neighborhood organizations to work with. Managers need to adjust their approach to fit the local organization's characteristics. They need to talk to leaders to determine what priority wildfire preparedness may have and to identify possible barriers to adopting preparedness behaviors. Learning about each neighborhood organization's structure, communication system, demographics, and social norms will be helpful in assessing resource and information needs and developing effective messages.

Neighborhood organizations in this study include homeowner associations, community councils, volunteer fire departments, and neighborhood block clubs. The number of homes in each neighborhood ranges from 15 to more than 1,000. Membership types include mandatory, voluntary, or mandatory with a grandfather clause for residents that pre-dated formation of the association. Membership dues for these organizations range from \$25 to more than \$1,000 per year. Some neighborhood organizations secure additional funds through voluntary assessments, fund-raising events, and grants.

Annual operating budgets vary considerably depending on the services provided. Neighborhood organizations that provide infrastructure elements such as road building and maintenance, water systems, and fire protection tend to have larger budgets and typically hire part- or full-time staff. Other functions performed by neighborhood organizations include reviewing and controlling architecture/landscape actions, enforcing codes and covenants, providing social opportunities, operating recreational facilities, solving neighborhood problems, educating homeowners about important issues, and representing the neighborhood in the larger community.

Activities common to almost all neighborhood organizations include holding general membership and board meetings, organizing social events, and communicating with other entities. Frequent interactions have occurred with government agencies, fire departments, and umbrella organizations (e.g., coalition of homeowner associations) on issues such as zoning, subdivision infrastructure, wildfire preparedness, neighborhood schools, and adjacent developments. Several of the neighborhood organizations have some type of internal neighborhood communication system. According to Bill Bomberg, president, the Mountain Plains II Homeowner Association (Spearfish, South Dakota) is especially effective at communicating with its members:

We probably communicate more than anyone, we try to keep information out in front of people. We have up to 75 percent of the homeowners' e-mail addresses so if anything needs immediate attention, we'll go ahead and put out an e-mail. If the information can wait, then we put it out in a newsletter every 2 months. If it's something important, we have a

calling tree. We've used it for rationing water when levels in the tank were low and could use it if we're threatened by fire.

Wildfire preparedness activities cannot be explained by an organization's resources, membership, or budget. Our review suggests that the size, membership type, and budget of a neighborhood organization do not have a significant effect on the type and number of wildfire preparedness activities conducted. The more active groups vary widely in their structures, ranging from one organization with less than 50 voluntary members run by volunteer officers with a small budget to another with several hundred mandatory members run by paid staff with a more substantial budget.

Neighborhood organizations that provide infrastructure services tend to be among those more actively involved in wildfire preparedness. It is possible that the officers and staff of those organizations view wildfire preparedness as similar to a service such as fire protection. The Circle D Civic Association (Bastrop, Texas) encompasses 460 homes and provides road maintenance and paving, architectural review and control, maintenance of two common areas, and neighborhood representation on issues such as endangered species and unexploded Army ordinance. Tammy Pickering, office manager of the Circle D Civic Association, explained,

The association is closely intertwined with the volunteer fire department. We lease the fire station to the VFD for \$1 per year and contributed an addition on the building and money for trucks. Ten dollars of every assessment goes to the fire department. We work closely with the VFD to help homeowners with wildfire mitigation and give fire department officials time at every board meeting.



Photo credit: Holly Johnson Shiralipour

Board members cleaned up vegetation in common areas and around their Florida clubhouse to reduce wildfire risk and demonstrate a firewise landscape to the community.

Leaders who are networked with other groups may be the key to increased preparedness activities. Identifying active neighborhood leaders and providing opportunities for recognition can greatly increase the effectiveness of outreach. Identifying neighborhood organization leaders who will champion the cause of wildfire preparedness is an important place to start. The most obvious leaders are officers or committee members. Other potential leaders include residents with a personal interest

in the issue such as environmentalists (e.g., members of The Nature Conservancy or Audubon), people with a related occupation (e.g., firefighters), or residents with previous wildfire or home fire experiences. Managers can obtain contact information for neighborhood leaders from property appraisers, planning and zoning departments, fire departments, and areawide councils of neighborhood associations. If neighborhood organization officers do not appear to be the most appropriate contacts for working on wildfire preparedness, they may be helpful in identifying residents who would be willing contacts.

Bill Robertson and Richard Randall, officers with Top of Skyway Homeowner Association (Colorado Springs, Colorado), are examples of neighborhood leaders that act as champions. A wildfire risk map produced by the Colorado Springs Fire Department helped them realize their neighborhood was at high risk of wildfire. “We want to be responsible homeowners and were naturally drawn to the topic of wildfire preparedness,” Robertson said. “We put our civic hats on and decided to get our association involved,” Randall added. The two worked frequently with the Colorado Springs Fire Department to organize a neighborhood meeting that featured a fire department speaker and traveling Firewise trailer, set up a home demonstration site to show vegetation removal, and obtained material for their association newsletter. They also organized a cleanup. A neighborhood survey they conducted showed a very positive reaction to the Firewise initiative.

Recognition programs for neighborhood leaders who effectively champion wildfire preparedness increase local awareness of wildfire preparedness actions, provide positive feedback to participants, and help to establish a social norm of increased wildfire preparedness. The Colorado Springs Fire Department started a program to recognize neighborhood leaders that promoted wildfire preparedness in their subdivisions. The neighborhood champions receive awards and media recognition for their efforts. Kathy Prudhomme with the Colorado Springs Fire Department noted, “The recognition program has been very well received and seems to help motivate other neighborhood leaders to act as champions.” Another opportunity for recognition is the national Firewise program. Neighborhoods can elect to participate in the program and if they meet the criteria of the program, they will be certified as Firewise communities (www.firewise.org).

Managers can support local fire mitigation by providing resources and technical assistance to neighborhood organizations.

A number of helpful wildfire preparedness resources and ideas for technical assistance identified during the interviews are useful to consider when developing a neighborhood outreach program. Many of the government agencies and fire departments in the study made staff available to assist neighborhoods with presentations at meetings, hazard assessments and evaluations, and evacuation planning. These agencies also helped neighborhoods plan vegetation removal/cleanup events (sometimes offering

incentive grants), conduct demonstration sites at neighborhood homes, and review covenants and regulations pertaining to wildfire preparedness. Resources provided to neighborhood organizations include articles for their newsletters; wildfire preparedness checklists or assessment tools; videos; and brochures, magnets, posters, and demonstration site signs.

Open communication facilitates the process. Managers need to work to create, maintain, and support good lines of communication.

Study results suggest that creating and maintaining good communication with neighborhood leaders helps foster more wildfire preparedness activity at the neighborhood level. Contacting neighborhood organization leaders several times a year will engage them and encourage them to use available resources.

The degree of internal and external communication occurring within neighborhood organizations also appears to have a bearing on how active these organizations are in conducting wildfire preparedness activities. Neighborhood organization leaders who communicate regularly with both members and outside entities act as champions for issues such as wildfire preparedness. They use personal conversations, phone trees, e-mail messages, Web sites, and newsletters to create awareness, educate members, and galvanize them to take action. These individuals readily seek outside expert assistance from fire departments, government agencies, and others to enhance their efforts.

Methods

We selected six communities that had WUI neighborhoods at risk of wildfire from nearby forested wildlands (public or private) and a history of fire within the region. In addition, State forestry agencies and fire departments that serve the six study sites had implemented wildfire education and outreach with a number of the local neighborhoods. The study communities include Anchorage, Alaska; Bastrop, Texas; Berkeley Township, New Jersey; Colorado Springs, Colorado; Ormond Beach/Volusia County, Florida; and Spearfish, South Dakota. Within each of the six communities, four to six geographically defined neighborhoods were identified with assistance from local fire department personnel and State forestry agency staff. Each neighborhood is located in the WUI around a community. Some have formal, functional neighborhood organizations and some do not. The neighborhoods also differ in the amount of wildfire prevention education they received, ranging from none to considerable.

Interviews were held from October 2003 to May 2004. Across the six communities, 27 interviews were carried out with officers and staff from neighborhood organizations. Three interviews were conducted with volunteer fire departments that effectively functioned as neighborhood organizations. An additional 14 interviews were held with fire department personnel and government agency staff.

One interview guide was prepared for neighborhood organization officials and staff with qualitative and quantitative questions. The first section contained qualitative questions designed to elicit open-ended responses. Questions were asked about:

- History and activities of the organization
- Neighborhood layout, lot sizes, average home prices, and number of developers
- Fire risk to the neighborhood including fuel treatments
- Fire preparedness activities specific to the neighborhood
- Social capital within the neighborhood; “Social capital refers to those stocks of social trust, norms, and networks that people can draw upon to solve common problems” (Sirianni and Friedland 2005)
- Interactions with government agencies.

The other section included quantitative questions about the structure of the organization and neighborhood demographics: membership requirements, meetings and meeting attendance, officers, elections, planning efforts, operating budget, staff, newsletters, active block clubs or crime watch groups, number of homes and lots in the neighborhood, and age of the development.

The second guide was developed for interviews with fire department personnel and agency officials. It contained questions about the types of actions taken to promote wildfire preparedness within the general community and specifically with the residents of the study neighborhoods, fuels treatments carried out near the study neighborhoods, and general background data on fire departments serving the area. Additional questions were asked about study neighborhoods without an association to determine the approximate number of homes and undeveloped lots present and a description of the development.

Literature Review—Neighborhood Organizations as Outreach Partners

The structure of neighborhood organizations encourages resident participation in a range of activities, which suggests that neighborhood organizations may be one of the more effective ways to engage people in adopting wildfire preparedness actions. Examples of organizational structures include homeowner associations, neighborhood councils, and volunteer fire departments. Using established neighborhood organizations potentially offer several advantages over forming new groups or working with service and church-based organizations, social groups, and sport clubs. This finding has been recognized by a growing number of government agencies, nonprofit organizations, and fire departments working with neighborhoods and neighborhood organizations to promote wildfire preparedness (Boura 1998, McGee and Russell 2003, NWCG 1998).

Neighborhood organizations represent a physical, social, and political entity. Each neighborhood is a limited territory within a larger urban area where people inhabit dwellings and interact socially. As a territory, a neighborhood is a physical place that others can visualize in terms of structures, streets, and natural features. To residents, their neighborhood has a distinct appearance that they use to differentiate themselves from other neighborhoods (Hallman 1984). Residents vary considerably in perceptions of fire mitigation measures such as creating defensible space (Nelson *et al.* 2004, 2005; Vogt *et al.* 2003). How they view their neighborhood may influence their perceptions of these measures. At the same time, having the same physical territory in common can facilitate participatory opportunities such as organizing a cleanup mulching event or a work day to clean out common areas, or addressing a neighborhood concern such as insufficient evacuation routes.

In addition to being an objective reality, a neighborhood is a subjective entity. Informal neighboring activities, travel patterns, status and bonds of race, religion, or social class are among the factors that shape how each resident perceives his or her personal neighborhood identity (Hallman 1984). Residents may have strong social ties, particularly if they live in a neighborhood populated by strong racial, ethnic, or socioeconomic groups. Neighborhoods may also contain residents who hold conflicting values over various issues (Hallman 1984, Perkins *et al.* 1996, Sampson *et al.* 2001). Being aware of this information can help community officials and fire protection departments tailor their messages to each neighborhood (McKenzie-Mohr and Smith 1999, Mileti *et al.* 2004, Tierny *et al.* 2001). These characteristics will also come into play as neighborhood organizations address the wildfire threat in ways that meet their specific needs.

Because many neighborhoods are relatively homogeneous, most of their residents have similar behavioral norms and values. These might include common expectations of house upkeep, yard care, use of yards, level and timing of noise, and acceptability in terms of displaying wealth and other status symbols (Hallman 1984). Much of the process of communicating neighborhood values and norms occurs informally within the family, neighbor-to-neighbor, or through peer groups (Hallman 1984, Sampson *et al.* 2001). The communication process helps residents confirm information they receive from outside sources. These values and norms influence behavior as residents see neighbors creating defensible space and doing other wildfire preparedness activities (McKenzie-Mohr and Smith 1999, Rogers 1995). Neighborhoods also have more formal channels of communication including newsletters, newspapers, posters, e-mail listservs, and phone trees. The informal and formal communications process forms the nerve system of the neighborhood community. This communication process can help foster acceptance of responsibility for reducing the wildfire threat because residents will be more likely to personalize a message when they receive it via multiple channels and see others taking action (Mileti and Fitzpatrick 1992, Mileti *et al.* 2004, Rohrmann 1999).

Neighborhood organizations are a political entity. Governance can range from informal self-governance over a few aspects of neighborhood life to full-scale self-governance. The neighborhood can be a base of political action for dealing with local governments or function as an interest/advocacy group for wider representation in those domains (Berry *et al.* 1993, Hallman 1984, Thomson 2001). The issues they tackle often range widely. Regular or annual meetings can be used to provide wildfire education to residents or to discuss how the members of the organization want to address wildfire preparedness (NWCG 2004). Communities may find it easier to approach and work with neighborhood organizations on wildfire preparedness issues because they have previously established relationships (Kruger *et al.* 2003, Tierny *et al.* 2001). Conversely, residents may find the ties useful for obtaining information and assistance with activities such as mulching events and common area cleanup projects. Residents look to their neighborhood to provide protection of values, properties, and personal safety, which may be accomplished through homeowner associations, volunteer fire departments, crime watch groups, or hired security patrols (Hallman 2004). Some neighborhoods are involved in providing services such as overseeing home construction oversight and constructing and maintaining open spaces, facilities, and roads (Berry *et al.* 1993, Hallman 1984, Thomson 2001). In some cases, neighborhood organizations may have restrictive covenants that prevent or discourage wildfire preparedness activities such as creating defensible space. The neighborhood organization can work alone or with the community to make regulations more favorable (NWCG 2004).

Acknowledgments

Funding for this research project was provided by the USDA Forest Service, North Central Research Station; the University of Florida IFAS Extension; and the University of Minnesota Experiment Station.

References

- Berry, J.M.; Portney, K.E.; Thomson, K. 1993. The rebirth of urban democracy. Washington, DC: The Brookings Institute. 326 p.
- Boura, J. 1998. Community fireguard: creating partnerships with the community. CFA Occas. Pap. 2. Mt. Waverly, VIC Australia: CFA Community Safety Directorate: 16.
- Hallman, H. 1984. Neighborhoods: their place in urban life. Beverly Hills, CA: Sage Publications, Inc. 320 p.

Kruger, L.E.; Agrawal, S.; Monroe, M.; *et al.* 2003. Keys to community preparedness for wildfire. In: Jakes, Pamela J., comp. Homeowners, communities, and wildfire: science findings from the National Fire Plan: proceedings of the 9th International symposium on society and natural resource management; 2002 June 2-5; Bloomington, IN. Gen. Tech. Rep. NC-231. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station: 10-17.

McGee, T.K.; Russell, S. 2003. It's just a natural way of life...an investigation of wildfire preparedness in rural Australia. *Environmental Hazards*. 5: 1-12.

McKenzie-Mohr, D.; Smith, W. 1999. Fostering sustainable behavior: an introduction to community based social marketing (Education for sustainability series). Gabriola Island, BC, Canada: New Society Publishers. 176 p.

Mileti, D.S.; Fitzpatrick, C. 1992. Causal sequence of risk communication in the Parkfield Earthquake Prediction Experiment. *Risk Analysis*. 12(3): 393-400.

Mileti, D.S.; Nathe, S.; Gori, P.; *et al.* 2004. Public hazards communication and education: the state of the art. *Natural Hazards Informer*. Boulder, CO: National Hazards Research and Applications Information Center, University of Colorado-Boulder: 13.

Nelson, K.C.; Monroe, M.C.; Fingerman Johnson, J.; Bowers, A. 2004. Living with fire: homeowner assessment of landscape values and defensible space in Minnesota and Florida, U.S.A. *International Journal of Wildland Fire*. 13(4): 413-425.

Nelson, K.C.; Monroe, M.C.; Fingerman Johnson, J.; Bowers, A. 2005. The look of the land: homeowner values, actions, and defensible space landscapes in Minnesota and Florida. *Society and Natural Resources*. 18(4): 321-336.

National Wildfire Coordinating Group (NWCG). 1998. Wildfire prevention strategies. PMS 455/NFES 1572. [City, State unknown]: U.S. Department of Agriculture, U.S. Department of the Interior: National Association of State Foresters: National Wildfire Coordinating Group: 118.

National Wildfire Coordinating Group (NWCG). 2004. FIREWISE: making sensible choices in the wildland/urban interface. Quincy, MA: National Wildland/Urban Interface Fire Program.

Perkins, D.; Brown, B.; Taylor, R. 1996. The ecology of empowerment: predicting participation in community organizations. *Journal of Social Issues*. 52(1): 85-111.

Rogers, E. 1995. Diffusion of innovations. 4th ed. New York, NY: The Free Press. 518 p.

- Rohrmann, B. 1999. Community-based fire preparedness programmes: an empirical evaluation. *Australasian Journal of Disaster and Trauma Studies*. 1999-1: 23.
- Sampson, R.; Squires, G.; Zhou, M. 2001. How neighborhoods matter: the value of investing at the local level. Washington, DC: American Sociological Association. 61 p.
- Sirianni C.; Friedland L. 2005. Social capital definition: civic dictionary. CPN-Civic Practices Network Web site. Waltham, MA: Brandeis University <http://www.cpn.org/tools/dictionary/capital.html> September 18, 2005.
- Thomson, K. 2001. From neighborhood to nation: the democratic foundations of civil society. Hanover, NH: University Press of New England. 195 p.
- Tierny, K.J.; Lindell, M.K.; Perry, R.W. 2001. Facing the unexpected: disaster preparedness and response in the United States. Washington, DC: John Henry Press. 306 p.
- Vogt, C.; Winter, G.; Fried, J. 2003. Antecedents to attitudes toward prescribed burning, mechanical thinning, and defensible space fuel reduction techniques. In: Jakes, Pamela J., comp. Homeowners, communities, and wildfire: science findings from the National Fire Plan: proceedings of the 9th International symposium on society and natural resource management; 2002 June 2-5; Bloomington, IN. Gen. Tech. Rep. NC-231. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station: 74-83.