Working with Community Leadership to Promote Wildfire Preparedness

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Introduction

As wildland fires increasingly involve residential areas, communities have to take action to help mitigate the potential effects of wildfire. Unfortunately, residents can be uncertain about what to do, reluctant to get involved, or unclear about the impact they can have. As resources are stretched to cope with suppression and restoration efforts, agency personnel can benefit from understanding the important role local leaders can play in promoting wildfire preparedness and how agency personnel can support these leaders in their efforts.

This study focuses on the role and characteristics of community leaders in wildfire preparedness to gain insight into how leaders motivate residents to get involved. The work builds on earlier research that identified leadership as an important element in community wildfire preparedness that merited further study (Jakes *et al.* 2003a). Land managers can use findings from our research to think about how to support the preparedness efforts of local leaders in their area.

Key Findings

We interviewed 10 individuals, across three communities, identified by other residents and wildfire professionals as leaders in wildfire preparedness. Each leader was interviewed to (1) identify skills and motivations for involvement, (2) measure participation in the leadership process, and (3) characterize leadership style. We found a number of characteristics for managers to consider in working with community leaders.

Leaders become involved for a variety of reasons. Seven of the ten leaders were motivated because their job involved fire management or political office. Leaders also cared about their personal property and the safety of other residents as well as the surrounding environment. A few became involved at the request of other residents.

Leaders bring important skill sets with them. Community leaders identified five skills critical to success, most of which were interpersonal: knowing the constituency, communicating with others,

working toward a goal, using residents' talents, and delegating tasks. *Managers can identify people with these skills and find a variety of ways to develop the skills and motivate them to work on preparedness.*

Community leaders in wildfire preparedness are valuable to their communities for many reasons. As residents themselves, they understand the community and are able to encourage mitigation and preparedness in a number of ways including:

- Helping to identify important local issues and create a vision for action.

- Developing a preparedness strategy that takes community members' goals into account.

- Obtaining commitment to act by communicating with other residents and building one-on-one relationships. Almost all emphasized the importance of individuals taking on responsibilities that would benefit the community.

- Mobilizing financial and material resources.

To get things started, managers may need to be more active in the critical early stages of identifying the issue and creating a vision, but community leaders will take over in later stages. Land managers can help leaders in identifying key preparedness and mitigation issues by supplying information, providing training to improve leaders' skills, and rewarding commitment by sharing ownership or providing funding for future efforts. Local land managers were often an important first link in establishing the ties between community groups and public land agencies that facilitate resource mobilization. In mobilizing resources, agency managers become partners who can identify mutually beneficial resources at all scales.

Leaders consider motivating people and facilitating activities as more important than directing people and activities. Differentiating between motivational and directive leadership can be helpful in understanding leaders' qualities and their work with residents. Land managers may want to use this concept when working in their own areas.

Detailed Findings

Leaders become involved for a variety of reasons. Community leaders cared not only about their personal property and the safety of other residents, but also about the surrounding environment. Seven of the ten leaders were motivated because their job involved fire management or political office. For a few, it took other residents asking them to become involved. One leader noted, "I've been told… by other people that (this) was an area we should concentrate on." Some leaders got involved because they feared no one else would. One leader said, "Basically, it was a void. There didn't seem to be any people who were getting involved at a level that change was going to take place." Almost all had personally

experienced a wildfire. When leaders experienced smelling/seeing smoke or being evacuated, fire became a personal reality for them and raised their awareness. One leader remembered, "…my first exposure to wildfire was being evacuated from [my hometown] in 1959 as a first grader."

Leaders bring many skills from past experiences; interpersonal skills are considered the most important. Once motivated, community leaders in wildfire preparedness were able to draw on skills and knowledge gained from past experiences. Several leaders brought up childhood experiences as Eagle Scouts or the influence of a role model; these experiences helped them believe they could do something. Over time, these individuals had developed a knowledge base that assisted them in their leadership role. Most leaders had informal training that proved relevant in mobilizing residents around wildfire preparedness: ecology and wildfire knowledge, experience managing businesses, public speaking experience, and even leadership training. Seven out of ten added to this knowledge with wildfire preparedness courses.

These community leaders identified five skills critical to successful leadership, most of which were interpersonal skills: knowing the constituency, communicating with others, working toward a goal, using residents' talents, and delegating tasks. "To be a good leader, you have to understand the people…and what their capabilities are," one leader commented.

Community leaders can lead and encourage mitigation and preparedness in a number of ways. We investigated the degree of participation in five identified stages of the leadership process: identifying issues, creating a vision, developing strategies, obtaining community commitment, and mobilizing resources (Chrislip and Larson 1994, Wilkinson 1970). Overall, the majority of respondents played a role in three to four stages (table 1). To get things started, managers may need to be more active in the critical early stages of identifying the issue and creating a vision, but community leaders will take over in later stages.

Identifying the issue(s). As a leader, an individual must first recognize an issue exists and believe it is important enough to take action. Community leaders were asked to rank, on a scale of 1 to 5, how critical wildfire preparedness is for the community. Most leaders believed wildfire preparedness was very critical for the community, giving an average ranking of 4.6 (5 was very critical). In this first stage, three leaders reported they had identified wildfire as an issue for the community, while other leaders found out about the issue through county, State, or Federal natural resource agency personnel, or concerned residents.

Creating a vision. A vision has been defined as "a set of idealized goals established by the leader that represent a perspective shared by followers" (Conger and Kanungo 1998: 156). In wildfire preparedness,

Table 1.—Leader involvement in different stages of the leadership process (n = 10), 2003.[1]

Leader	Leadership stage					Total # stages
	Identify issues	Create vision	Develop strategy	Obtain commitment	Mobilize resources	
1			X	X	X	3
2			X		X	2
3	X	X	X			3
4	X	X			X	3
5			X	X	X	3
6	X		X	X	X	4
7			X			1
8			X	X	X	3
9		X	X	X	X	4
10		X	X	X		3
Total leaders	**3**	**4**	**9**	**6**	**7**	

[1] Stages modified from Chrislip and Larson (1994) and Wilkinson (1970).

fewer than half the leaders reported being involved in creating a vision, but at least one leader in each community reported participating in vision development. Others stated that staff in natural resource agencies, such as the USDA Forest Service, the Lawrence County Fire Advisory Board, and the New Jersey State Forest Fire Service, generated the initial visions. There may be several reasons for this. In some cases, leaders may not wish to give themselves too much credit, or leaders may not have an analytical understanding of the function of a vision or be able to differentiate between early stages. Another possibility is that natural resource agencies are taking on this role and communities have let them, because they have a greater mandate to address wildfire issues. Or, with wildfire, the vision might already be clear: reduce potential damage.

Because wildfire preparedness is a relatively new challenge for communities, leaders may be looking for ideas from land managers who have dealt with this issue for a long time. Managers have the experience to provide the initial support a citizen leader may need in creating a vision for community preparedness. As partners with community leaders, land managers can model how to think beyond property boundaries for landscape-level planning in wildfire preparedness.

Developing a strategy. Community leaders for wildfire preparedness were most comfortable reporting concrete tasks used to achieve the community goals based on their vision for informed citizens, wildland interface protection, and an organized community. For example, leaders disseminated information packets to residents, assessed property for wildfire risk, or formed a FireSafe committee. In developing strategies with other residents, leaders took community members' goals into account. They felt residents

had moderately shared goals for addressing wildfire issues with an average score of 3.8, on a scale of 1 to 5. Respondents said residents wanted protection for their homes and lives, and services from the local fire department and natural resource agencies, including evacuation routes and vegetation management.

Obtaining community commitment. To effect change, leaders had to obtain community members' commitment that wildfire was an important issue that needed a joint effort. One leader stated, "…I think everybody agrees it (wildfire) is a demon that we all have to deal with." Nine leaders noted increased awareness and sense of importance after a wildfire occurred, but many community members already knew the historical importance of fire and landscape changes. Despite the overall agreement about the importance of wildfire, there was still a range of opinions about how critical the wildfire issue was and whether it was worth a joint effort.

Leaders worked with other community members using three primary techniques to motivate residents to get involved: written information, presentations, and workshops. Almost all leaders used the media to encourage people to get involved; they wrote newspaper articles and spoke on the radio. They also provided residents with information using signage, such as fire danger signs, and mailings. In the Gunflint Trail community, leaders asked local businesses to post information. Presentations were done at schools, group meetings, and associations. In the Gunflint Trail and Berkeley Township, workshops proved to be an effective strategy.

Leaders paid special attention to how they constructed their messages. When speaking to homeowners, almost all emphasized the importance of individuals taking on responsibilities that would benefit the community. One leader said, "It (wildfire) is a community-wide problem and each person in the community plays a part in solving the problem or dealing with it." Several stressed the nature of wildfire as a crisis to raise awareness. "…We had this fire this year and it really just brought it to the forefront." To make wildfire a reality for community members, half of the leaders focused on the results of past wildfires, emphasizing stories of property damage and providing graphic images of homes on fire. One leader showed residents pictures of damaged property and told them, "It's not a scare tactic; it's a reality check…this is your community and I'm going to give you the address so you can go and see it (house)… this can happen again…" In two communities, individuals presented the future possibilities of preparedness by using their own property as a model of defensible space and brush thinning.

An important technique used by leaders was working one on one with residents. These methods may be important in helping overcome residents' different perceptions of risk and responsibility, which make it particularly challenging when trying to steer people toward a general goal of wildfire preparedness. Land managers can also use these methods when they communicate with private landowners and community officials. However, in some cases it may be beneficial for managers to contact local leaders

who have already established a relationship with their neighbors and have gained respect and trust. In addition, local leaders can identify with resident needs.

Mobilizing resources. Finally, 7 out of 10 leaders played a key role in mobilizing resources to address wildfire preparedness (table 1). Within all three communities, leaders encouraged residents to give their time, knowledge, and material and monetary donations to the community effort. Residents attended meetings, gave feedback to local leaders, volunteered for the fire department or a committee, hosted fundraisers, and cleaned up their own property. In addition to individuals, volunteer fire departments, businesses, homeowner associations, and schools got involved. However, as in many community development efforts, some residents were more active than others, and others were not involved at all.

One major component of resource mobilization is the ability to bring in resources from State and Federal agencies to support community goals for wildfire preparedness (Brown and Nylander 1998). In all three communities, some leaders were effective in linking community fire preparedness objectives to programs and resources at the county, State, and Federal levels. As one individual said, "It is a total commitment of the mayor and his administration, the town facilities, the state, and the federal." Another mentioned "…agencies—we've had just excellent help. I would say it was a joint effort." Gathering resources from external groups may be especially important in rural and unincorporated spaces (Duhl 1997). This was especially true for the Gunflint Trail and Spearfish communities that, because of isolation and a small tax base, found it challenging to provide services to their residents without the help of others.

Local land managers are often the most important first link in establishing ties between community groups and public land agencies. In addition to providing more information to citizens, managers may be able to link leaders into national initiatives, saving leaders time looking for contacts and brainstorming options as they develop their own ideas. In helping mobilize resources, agency managers become partners who can identify mutually beneficial resources at all scales. Managers are often able to provide resources to communities in the form of new partners, equipment, or grants. For example, Jakes *et al.* (2003a) found that "agencies…have resources that influence and help implement their decisions relating to the purchase and availability of gear, scheduling and conduct of training, and implementation of protocols (p. 4).

Leaders consider motivating people and facilitating activities as more important than directing people and activities. As a group, the community leaders ranked both transformative (motivational) and transactional[1] (directive) qualities as important, with a range of 1.15 to 2.7 average scores on a scale of 1 to 5 with 5 being least important (table 2). However, they consistently placed more emphasis

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[1] A more detailed discussion of transformative and transactional leadership can be found in the Literature Review section.

Table 2.—Average scores for the evaluation of transformative and transactional leadership style qualities on a scale of 1 to 5 in close-ended questions; 1 = most important and 5 = least important (n = 10), 2003.[1]

Leadership style	Type of quality	"A leader should…"	Average
Transformative	Process	"motivate people"	1.15
Transactional		"train people"	2.15
Transformative	Risk	"take risk"	1.90
Transactional		"go with what you know will work"	2.70
Transformative	Role	"facilitate others"	1.33
Transactional		"direct others"	2.30
Transformative	Outcome	"be evaluated by process"	1.88
Transactional		"be evaluated by product"	2.50

[1] Qualities modified from Burns (1978) and Bass (1985).

on transformative qualities, such as motivating people to get involved over training people. One leader stated, "You certainly should motivate people. If you aren't going to motivate people… then you are really not a leader." Leaders who were city officials placed a greater emphasis on training residents, a transactional quality.

In terms of risk, leaders emphasized trying new things and taking a risk, a transformative quality, as opposed to reducing risk and going with what you know will work. On one hand, most leaders were willing to take risks, and each identified some risk in their leadership experience. Just getting involved in wildfire issues was seen as a risk for half the leaders because they risked their credibility, relationships, and the safety of others. On the other hand, several leaders did not want to risk something new. Often, these individuals were volunteer firefighters whose primary concern was safety. "You want to be safe… Human safety would be my first concern."

In describing how they work with residents, leaders ranked facilitating activities as more important than directing activities. When working with other residents, the majority of leaders either felt they were equally involved in the work or delegated tasks, a transformative quality. Leaders remarked, "It was just a question of utilizing the attributes of the personnel that were willing to volunteer their time," and "…you don't always want to be leading. There are times when you have to be the volunteer." Leaders who stressed the need to direct people were positional leaders, who do this as part of their job.

Finally, in terms of final outcome, most leaders thought process was more important than product. As one leader noted, "…the product can be a single entity and end there. But the process is an ongoing thing used over and over again." A few leaders, however, placed more emphasis on the product. "You want it done, you don't care how it is going to be done."

Overall, differentiating between motivational and directive leadership can be helpful in understanding leaders' qualities and their style of working with residents. Land managers may want to use this concept when working in their own areas. Like leaders, land managers may have to influence people's opinions, especially if the issue is contentious. Transformative qualities are important and may help land managers shift their focus from equipment and tasks to a broader presentation of the crisis. Managers can also emphasize the importance of citizen ownership, resulting in leaders ready to take over a project when the land manager is gone.

Study Sites

In the broader community preparedness study, 10 researchers in 15 cases throughout the United States focused on wildfire actions and the social factors a community needs to maintain or improve wildfire preparedness (Jakes *et al*. 2003a). In three pilot case studies, researchers found several important "community characteristics critical to wildfire preparedness," including social capital and, in particular, leadership (Jakes *et al*. 2003a: 7). As one resident of the Gunflint Trail community observed, "leadership is the critical piece."

Our study focused on 3 of the original 15 communities. Previously we had visited the communities and interviewed 15-18 key informants about wildfire preparedness. Three leaders were identified in the Gunflint Trail, Minnesota; three in Spearfish and the Northern Black Hills, South Dakota; and four in Berkeley Township, New Jersey. These 10 were identified multiple times as important leaders in wildfire preparedness during key informant interviews with local residents or natural resource agency employees.

The Gunflint Trail, Minnesota. Located in northeastern Minnesota, this community is known for its pristine beauty and many recreational opportunities available to its 2,500 permanent and seasonal residents. The region is characterized by northern boreal forest and rocky terrain that experiences annual surface and crown fires. In 1999, a straight-line windstorm affected 477,000 acres in the region, dramatically increasing the fuel load. Community residents are aware of the wildfire risk and have taken action to increase their preparedness (Nelson *et al*. 2003b). Actions include creating a volunteer fire department, holding a Firewise meeting, and marketing wildfire sprinkler systems for both homes and businesses (Jakes and Nelson 2002).

Spearfish and the Northern Black Hills, South Dakota. Surrounded by the foothills of the Black Hills National Forest and rolling prairies, Spearfish is home to more than 13,000 permanent and seasonal residents. After years of fire suppression, the historically open ponderosa pine ecosystem has been transformed into a dense forest with large fuel loads. In response to recent wildfires, residents, volunteer fire departments, and natural resource agencies throughout Lawrence County are working together to

address wildfire issues. Activities include educating the public, organizing a Firewise conference, assessing property, establishing fuel breaks, and thinning brush (Lang *et al.* 2003).

Berkeley Township, New Jersey. Located adjacent to the Atlantic Ocean and divided by the Garden State Parkway, Berkeley Township in New Jersey is made up of 43,000 residents living in single homes or retirement communities. On the landward side, this community is surrounded by a fire-dependent pine/scrub oak ecosystem. Two major wildfires have threatened homes and lives in the last 10 years. In response to these wildfires, a Fire Safe committee was created, linking town officials, citizen groups, volunteer fire companies, and natural resource agencies. Neighborhood associations have provided information on key topics such as evacuation routes (Nelson *et al.* 2003a).

Methods

We conducted audiotaped phone interviews during February/March 2003. Leaders were asked 19 open-ended and 2 close-ended questions in a semi-structured interview (table 3). Each interview tape was transcribed and then coded based on the key themes. Multiple researchers independently coded open-ended questions in a random assignment manner.

Table 3.—Questions focused on community leadership in wildfire preparedness

Skills theme: In thinking about your leadership role in wildfire preparedness—
    What personal attributes made you successful?
    What do you consider the essential characteristics of a leader?
    What experiences/training have you had that may contribute to your leadership ability?

Motivation theme
    Why did you choose to get involved in wildfire preparedness?
    What risks did you have to take as a leader in wildfire preparedness?

Stages/roles theme
    What role(s) did you play in identifying wildfire as an issue?
    What did you do as a leader? Please describe.
    How did you convey your idea(s) to others and motivate them to get involved?
    What tools and tactics were used to motivate people?

Transformative and transactional qualities ranking
    In a series of close-ended questions, leaders were asked to rank the importance for them of four transformative qualities and four transactional qualities, using a scale of 1 to 5; 1 = most important and 5 = least important.

    Transformative qualities: motivating people, taking risks, facilitating others, and being evaluated by how they achieve outcomes (process).

    Transactional qualities: training people, going with what they know will work, directing others, and being evaluated by what they produce (product).

Nine of the ten respondents were male. The majority of the respondents were between the ages of 40 and 50, with an equal number of remaining individuals in their 30s and 60s. More than half the leaders were long-term residents (more than 15 years). Others had moved into the community more recently after retirement or other lifestyle change. Community leaders for wildfire preparedness held various jobs including volunteer fire chief, resort owner, recruiter, lumber company manager, GIS analyst, rancher, retired accountant, municipal fire administrator, construction officer, and mayor. In addition to their jobs, seven leaders were volunteer firefighters with some wildland fire experience. The majority had a college education; others were technically trained in firefighting.

Literature Review

Key themes in leadership scholarship and practice emphasize skills, motivation, roles, and the style of the relationship between leaders and followers. In recent years, various authors have moved from what "a leader is" to what "a leader does." "Leaders will take responsibility for initiating, formulating, coordinating, and continuing local action to improve the social well-being of community residents" (Pigg 1999: 197). Leadership is also defined as a process of facilitation, mutual education, learning, mentoring of others, and collaboration and cooperation with diverse groups and individuals (Duhl 1997).

Leadership skills and motivation. When people think about a leader, an individual's skills are often the first thing they mention. Commitment, vision, and knowledge are emphasized in environmental and community leadership (Berry and Gordon 1993, Egri and Herman 2000), because environmental problems are often complex, long-term, and involve multiple constituent groups. But even if some people have the skills, they may not choose to get involved in community efforts. Motivation to become involved may arise from a natural disaster (Brown and Nylander 1998, Machlis *et al.* 2002), a position the individual holds, personal experiences over a lifetime (Duhl 1997), or a deep concern.

Leadership roles and relationships. Leadership involves several stages with unique roles. The first stage is helping create a vision and working with others to obtain resources to achieve that vision (Foster 2000). After vision development, a variety of leadership stages have been identified. Chrislip and Larson (1994) identified collaborative leadership process stages such as convening, energizing and facilitating, creating a vision, problem-solving, establishing ownership, and expanding involvement. Wilkinson (1970) defined five phases of task accomplishment by community leaders: initiation and spread of interest to raise awareness, organization of sponsorship, goal-setting and strategy formulation, mobilization of resources, and implementation to reach an outcome.

In addition to leadership roles based on stages, leadership arises from a relationship between leaders and followers (Brown and Nylander 1998, Pigg 1999). There is a back-and-forth nature to this relationship;

the origin of ideas and decisionmaking is rarely unidirectional. In all relationships, work is facilitated by the wise use of techniques to encourage collective work. Scientists and concerned citizens alike can use speeches, demonstrations, and exhibits to work with others (Jacobson 1999). In their studies of homeowners living in the interface, fire management specialists organized workshops with community leaders and distributed surveys to solicit residents' opinions on defensible space (Hodgson 1995). Unlike some leaders in business, community leaders involved in wildfire preparedness are often not in a position to mandate or tell others what to do. While the former may be able to use directive techniques, the latter must use more influential methods to receive support. Organizational leaders use authority and power when working with followers, while local leaders develop relationships and networks with groups (Pigg 1999). In contrast to business leaders who may use "institutional power differentials," environmental leaders use "social influence, such as words or deeds" (Egri and Herman 2000: 572). By knowing which combination of techniques and persuasive methods to use, a leader may be able to work more successfully with a variety of people and achieve the desired goal.

Leadership styles. Transformative and transactional leadership styles are a typology that persists in current assessments (Burns 1978).

Transformative leaders have a vision and gain support by inspiring others (Berson *et al.* 2001). Followers may be motivated because transformative leaders consider other people's needs, stimulate their minds, and empower them to take action (Bass 1990). Transformative leaders expect their followers to rely on themselves and take initiative (Bass 1985). These leaders develop new ways to solve problems while often taking risks (Berson *et al.* 2001).

Transactional leaders commonly take a position as coordinator or monitor and provide support and direction to followers (Egri and Herman 2000). In working with followers, transactional leaders address their followers' needs in exchange for the completion of tasks (Berson *et al.* 2001). Followers are expected to be goal oriented, needing clarification and reinforcement along the way (Wofford *et al.* 1998). Unlike transformative leaders, transactional leaders prefer to avoid risk by working in familiar environments (Bass 1985). While some leaders make a distinction between transformative and transactional qualities (Burns 1978), others argue that leaders may exhibit both leadership styles (Bass 1985). Using both styles, a leader may be able to work more effectively with diverse stakeholder groups.

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