

INVITING OTHER PROFESSIONS TO HELP REDUCE WILDFIRE PROPERTY LOSSES



Anne Fege and Jim Absher

Preventing structure loss has become a major focal point of wildland firefighting. Most days, it feels like wildland fire professionals and land managers are becoming more and more responsible for reducing property losses in the wildland/urban interface (WUI).

What if this impression—and reality—could change?

What if architects, insurance underwriters, and other professionals considered this responsibility a part of their jobs, too? What if this fire risk prevention charge also became important to real estate agents, property managers, and others in the business sector—and they actually found creative, cost-effective solutions?

For instance, it just might be that we can frame some of the WUI changes as sound investments. Broadly stated, the hope is that we can work with nonwildland fire professionals and the business community to ensure that this also matters to them. Maybe they can—and *want to*—change their business practices to reduce wildfire losses.

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If so, what prevents us from working—better—together? As you'll see in this article, that's what we set out to discover.

In short, fire management professionals know how to greatly reduce property losses during wildfires. The rest of us know how to construct or remodel "fire-safe" houses. We can reduce fuel loads around houses. And we can avoid building houses and developments in fire-prone locations. Yet most of us are frustrated because too few homeowners and businesses are making these changes.

The hope is that we can work with nonwildland fire professionals and the business community to ensure that reducing wildfire losses matters to them, too.

Moving toward this "ideal" outcome for firefighters—mile after mile of FireSafe* WUI homes—requires that we give greater recognition to the fact that this is a socially constructed landscape, which necessarily involves many issues and tradeoffs. Thus, our operating assumption became that the folks who are

the source of the "problem" are also the source of the solution.

Three Workshops

To gain further insight into "*why we don't do what we know needs to be done*," we rounded up 155 southern California professionals who represent land management agencies, as well as those people who advise homeowners and make decisions in their communities about risk reduction in chaparral WUI settings. Three workshops were held during June 2005.

These workshops were part of a larger prior effort—in response to the fatal southern California wildfires of 2003 that claimed 23 human lives—by the Forest Service Pacific Southwest Research Station's Riverside Fire Laboratory. The specific focus of this 2003 effort was to improve the knowledge of fire ecology, WUI dynamics, and decisionmaking in chaparral ecosystems. Initial findings from these 2003 workshops were presented in January 2006 (Padgett and others 2006).

We identified our 2005 workshop attendees by searching the Internet for professional, community, and environmental groups. We placed announcements in newsletters and business publications and used contact lists for wildfire professionals. Our research design called for participants who represent a broad cross-section of disciplines and affiliations. They did.

* Formed in 1993, the California FireSafe Council's mission is to provide leadership and support that mobilizes all Californians to protect their homes, communities, and environment from wildfires. The council is comprised of 50 public and private organizations.

There's no question that we enlarged the traditional circle of voices that are usually heard. While a total of 53 percent of our attendees were wildland fire professionals and land managers, the rest were landscape architects and architects, environmental consultants, city and county staff, media, educators, FireSafe council leaders, and other professionals (see table 1).

Guided Discussions

At each workshop, guided discussions were held on three central issue areas:

1. House and Homesite,
2. Habitat and Watershed, and
3. Policy and Planning.

At the end of each discussion, participants completed individual feedback forms. They were asked to identify the main benefits to individuals, communities, and agencies when these issues are addressed, as well as to describe the resulting effects when they are *not* addressed.

We also asked what keeps these issues from being resolved and what each profession can do to help or influence homeowners, land managers, fire services, and community planners. The resulting 274 individual feedback forms and notes from our three issue/discussion topic areas were content-coded for the text analysis software from SPSS (Statistical Package for the Social Sciences).

Homesite Defensible Space Conflicts

Most vegetation and brush reduction codes start with "Zone 1" where flammability must be reduced in the first 30 (9 m) to 50 (15 m) feet from a structure. Most

Table 1—List of professions that were represented at the 2005 workshops and were identified as future cooperators in reducing wildfire property losses. These workshops were part of a larger prior effort by the Forest Service Pacific Southwest Research Station's Riverside Fire Laboratory in response to the fatal southern California wildfires of 2003 that claimed 23 human lives—22 wildland/urban interface residents and 1 firefighter.

Profession	Workshop Attendees	Professions That Workshop Attendees Want To Work With More*
Fire Managers	20%	28%
County, City, State, Federal Agencies**	33%	13%
Builders, Developers	1%	10%
Planners	0%	8%
Biologists	0%	8%
Insurance Industry, Agents	0%	6%
Homeowners' Associations, FireSafe Councils	5%	6%
Architects, Landscape Architects	3%	6%
Consultants	14%	0%
Educators	7%	3%
Environmental Organizations	6%	4%
Other	11%	20%

*List of professions that the workshop attendees stated they wanted to work with more.

**Includes biologists, planners, and land managers.

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conflicts arise in "Zone 2," the area beyond the immediate homesite.

Is it enough to extend and maintain the "defensible space" 100 feet (30 m) beyond the house? Under what conditions are more than 100 feet (30 m) needed for "defensible space?" What basis do insurance companies have for demanding that policyholders reduce vegetation within 300 (91 m), 500 (152 m),

or even 1,000 feet (305 m) of their house?

We quickly realized that we had a host of even more questions that needed answers.

Like, how should vegetation be pruned and cut to reduce fuel loads *without* losing a homesite's habitat and aesthetic values? How can we prevent homeowners from remov-

ing too much vegetation and roots? How can we prevent scraping or grading the soil that causes erosion, landslides, flooding, wildlife habitat loss—and converts vegetation to nonnative flashy-fuel annuals?

Analysis of the feedback and discussion notes also identified the desire for more open dialogue with regulatory agencies, as well as concerns that fire agencies are too “single-minded” (fig. 1). Comments generally focused on:

- The difficulty of balancing habitat and watershed protections with safety,
- How chaparral and watersheds are often forgotten when planning decisions are made, and
- How neither environmental plan-

ning documents nor habitat conservation plans address wildfire risks and impacts.

Regulation or Education?

Of course, both regulation and education are necessary. Neither, however, is sufficient by itself.

The workshop discussions highlighted the importance of uniform, simple codes and the resources to enforce these codes (fig. 2). Some communities are well on their way with such uniform codes. For example, the State of California,

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County of San Diego, and City of San Diego all require 100 feet (30 m) of vegetation reduction around structures. These jurisdictions are now undertaking the tasks of both enforcement *and* education. In doing so, they are searching for resources and optimum methods for reaching millions of home and property owners.

Our southern California workshop participants identified the need for information about several aspects of property risk reduction:

- Product research concerning the fire resistance of various materials,
- Demonstrations of vegetation reduction activities,
- Science-based insurance requirements,
- Disclosures in real estate transactions,
- Impacts of vegetation management and development on watersheds and water quality, and
- The realities of “shelter-in-place” (staying in home when wildfire approaches) situations.

The job of wildfire risk reduction education is too large for any one profession to undertake. It’s, therefore, time for wildfire professionals and land managers to enlarge the circle—and help make the case that wildfires affect *everyone* in the community.

When asked which professions they expect to work more with, the workshop professionals still considered fire managers to be their best cooperators. They also expressed the desire to have local agencies,

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- *We need to take a fresh look at how we interface with the natural environment. Fuel management adjacent to housing doesn't work because it requires long-term maintenance.* Water Conservation Manager, San Diego.
- *High fire frequencies destroy indigenous landscapes. Current patterns of development do not account for their true costs.* Architect, San Diego.
- *Developers are not getting comprehensive information about watersheds, water quality, and fire-defensible space.* Land Manager, San Diego.
- *Continue to advocate for proactive building materials, reducing the need for long-term fuel modification.* Biologist, San Diego.
- *Agencies can't control maintenance issues over time. Their real (and almost only) power is at the time of initial development.* Landscape Architect, San Diego.
- *We need one message/one voice about building standards and vegetation management.* Fire Manager, San Bernardino.

Figure 1—Workshop participant comments about homesite defensible space.

builders, planners, and others more involved as cooperators in reducing wildfire property losses (table 1).

Analysis of the workshop feedback forms and discussion notes also surfaced a need for more practical—*what works?*—and theoretical knowledge needed—both scientific and human—especially regarding urbanization and community development.

Participants advocated moving away from strict regulation and narrow agency-specific viewpoints to shared decisionmaking and collaboration. In other words, one size doesn't fit all. As expressed by workshop participants, to accommodate a diversity of viewpoints and professions, coordination should be achieved without excessive centralization.

In addition, workshop attendees said that they wanted education, research, and outreach to achieve more integrated results. For example, they voiced support for promoting safety and environmental practices that complement each other. They also recognized the

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benefits of placing more emphasis on:

- Education;
- Communities as well as homeowners; and
- The development of government/industry partnerships, such as consulting services for FireSafe designs.

Public or Private Responsibility?

Public versus private responsibility debates run deep and seem to never end. Under the broad umbrella of this deliberation, our workshops illuminated many dilemmas and complexities:

- No one agrees on what is best,
- People are going to do what they want,
- Land use regulations can't take away property rights, and

- Don't regulate if you can't enforce.

Perhaps the complexity of this dilemma can best be analogized as a proverbial Gordian knot*: the pattern is so complex that it cannot be solved. But, in this case, it can. We must strive to ensure that this happens.

So, what do we use as our "sword" to cut the Gordian knot of wildfire risk?

Research suggests that our answers can be found in the values, beliefs, and attitudes of the homeowners, professionals, and managers. The social values relating to wildfire are indeed important—such as sense of place, sense of belonging, property, and public environmental resources (Absher and Vaske 2007; Kumagai and others 2004; Cheng and Becker 2005).

Public education campaigns can better reach homeowners if they acknowledge and address these social values. In addition, investments to reduce property risks will be made only if business values and interests are understood. At the same time, because they influence how business interests and investments are attracted (Cheng and Becker 2005), the institutional issues affecting public engagement must also be examined.

* The Gordian knot comes from the tale of King Gordius of Phrygia who presented Alexander the Great with a knot so complex it could not be untied. After hearing an oracle promise that whoever could undo it would be the next ruler of Asia, Alexander the Great swung his sword to cut the knot.

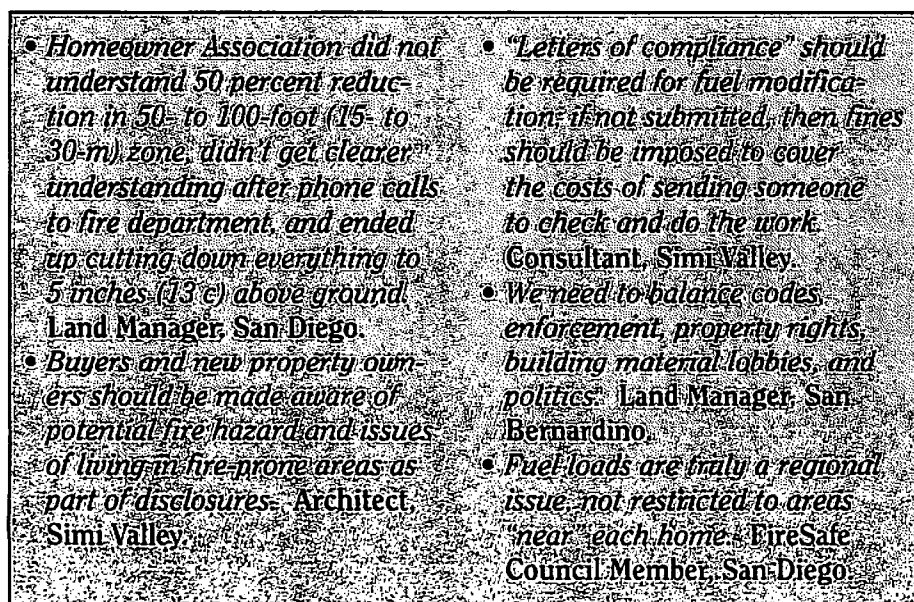


Figure 2—Workshop participant comments concerning regulation and education.

Our workshop participants also noted that organizational culture; interagency and intergovernmental relations; and laws, policies, and administrative rules must fit together as much as possible (fig. 3). They also suggested that to facilitate the insurance industry and homeowners collaborating together to reduce property losses, discounts or incentives might be established.

Engaging Other Professionals

So how can wildland professionals and land managers invite more professionals from more sectors to help share the load of reducing wildfire property losses? How can other professionals be invited to think about the tradeoffs between defensible space practices, regulation and education, and private and public responsibilities?

The social science literature supports the central ideas that were surfaced by our southern California workshop participants:

- Brooks and others (2006) examined the social issues in relation to wildland fire risk mitigation in Colorado's WUI communities. They suggest that opportunities might exist to work with such nontraditional partners as realtors, homebuilders, planners, insurance agents, and retail businesses.
- Absher and Vaske (2007) focused our attention on the cognitive processes involved, especially the attitudes and beliefs of homeowners—as they are the ultimate actors and decisionmakers.
- Toman and others (2006) emphasized the local community context in establishing ongoing relationships.

- *Set up community service districts for landscape maintenance.* Aide to Elected Official, San Bernardino.
- *California Environmental Quality Act documents should include regional fire zone maps, standardized Fire Safe manuals, and response times.* Water Agency Official, San Diego.
- *Suburban development greatly externalizes costs onto government.* Planner, Simi Valley.
- *We have more common ground than expected. Everyone is facing similar challenges and needs to communicate better.* Urban Forester, San Bernardino.
- *We need to reach a consensus among land managers, environmentalists, and land planners to influence policy makers and elected officials.* Landscape Architect, San Diego.

Figure 3—Workshop participant comments about private and public responsibilities.

In southern California, to further this work, the San Diego Natural History Museum is engaging and educating the business sector about reducing wildfire property losses while sustaining natural habitats. This Joint Fire Sciences Project undertaking began in early 2006 with a marketing survey of local professional organizations, including architects, builders, landscape architects, property managers, landscape contractors, realtors, and insurance agents. Next, in the communities where defensible space action is most needed, cross-disciplinary trainings with business professionals will be developed and conducted. Curriculum was devel-

oped and cross-disciplinary training classes were offered in March 2007 to address the interests of these professionals—as well as many of the concerns and conflicts that surfaced in our 2005 workshops.

If the cast of defensible space actors is expanded, new business practices may emerge for design, construction, maintenance, and service to clients. For there's no question that architects, landscape architects, realtors, insurance agents, and property managers also want safer communities. They will seek creative solutions for code compliance that save them—or their clients—money.

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