

## Protecting Property from Fire Losses

November 5, 2003

In the wake of the recent tragedy of wildfire in San Diego, everyone will want to know how to prevent a future disaster. As our organization and its many members throughout San Diego County works to help victims, we also continue to work on preventing future disasters.

After the Pines fire, several members of our organization decided to investigate wildfires more deeply. After that fire, many people wanted to greatly increase brush clearance zones. We were concerned that this approach would be expensive, damaging, and worst of all, ineffective.

We discovered that brush control zones are already as wide as they need to be, based on scientific research into how and why buildings burn, which shows that radiant heat from burning material acts over a very short distance in terms of directly igniting a building. (For more information, see the extensive work by Jack Cohen, Missoula Fire Sciences Laboratory, [www.firelab.org/fbp/fbresearch/wui/home.htm](http://www.firelab.org/fbp/fbresearch/wui/home.htm).) We also concluded that the term “brush control zone” is deceptive, because it encourages home owners to think that the only danger to their homes are native plants, allowing them to overlook combustible material such as wood piles, deck awnings, wood fences, wooden decks and outbuildings, and ornamental plants, all of which can ignite a susceptible house.

Photos from our recent fire show that living trees and shrubs still surround many destroyed buildings. What caused the fire to leap over trees and burn the houses while the landscape around them remained intact? Houses (which are dry) burn more easily than irrigated landscaping (which is wet). Research indicates that burning embers are a major cause of structure fires; embers can fly from hundreds of yards away, much farther than the brush control zone. While there are strict rules governing brush control, the only rules we have on how to fire-proof buildings addresses wood-shake and -shingle roofs. No laws require that structures built in areas of high fire danger be constructed with less combustible materials and incorporate less dangerous designs. Vegetation management requires annual maintenance and expense, whereas fire-resistant building design lasts for many years. The recent fires show that tile roofs alone are not sufficient for fire-resistance. A house should also have, for example, fire-resistant siding, enclosed eaves, screened attic vents, properly designed windows, and nonflammable decks, fences and outbuildings.

We propose a program to reduce the risk of future disasters. We hope that this may be implemented promptly, so that people who are rebuilding may do so with the best information.

1. Carry out forensic investigations to determine the cause of ignition in the recent fires.
2. Consult with fire-safety professionals and building experts to come up with a complete

set of recommendations for fire-proofing new construction and retrofitting older structures with noncombustible surfaces, sprinklers or other techniques.

3. Provide incentives for homeowners to implement the recommendations.
4. Work with the insurance industry and request that beneficial rates are offered to homeowners who implement the recommendations.
5. Concentrate development in defensible areas. We put firefighters at great risk when we ask them to protect structures that are scattered over a gigantic burning area. Backfires were an effective tool for stopping the fire in Santee and Chula Vista; residential development placed in the wrong area may limit the use of this tool.
6. Engage in thoughtful and effective fuel modification in the defensible space around structures. The California Department of Forestry, the Fire Safe Council, the County of San Diego, and the cities within our County have resources to guide homeowners in these activities. Our organization is working to bring consistency and effectiveness to these programs.

After each major fire, task forces are organized and come up with recommendations to reduce the chances that lives and property will be lost to fire. While some recommendations are implemented, the important ones - the location, design and construction of homes - have been always been deferred. We hope it will be different this time.

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