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An Appeal to Fire Agencies

Emphasizing home flammability and the value of nature can save more homes during wildfires and help create healthier communities

Local, state, and federal fire agencies are urged to expand their approach to reduce loss of life and property to wildfires. Currently, the primary, and sometimes the only message citizens hear is to clear native vegetation ("fuel") from around their homes. While creating 100 feet of defensible space is a critical component of fire risk reduction, it fails to address the main reason homes burn - embers landing on flammable materials in, on, or around the home, igniting the most dangerous concentration of fuel available, the house itself.

In addition, by designating native habitat as merely "fuel," citizens are encouraged to see nature as something dangerous rather than a valuable part of their local community. **Intact natural habitat provides vital ecosystem services** that are necessary to maintain the health and well-being of surrounding human communities.

Fire risk reduction efforts must emphasize BOTH how to reduce home flammability and how to create defensible space without demonizing nature. **Many homeowners have complied with defensible space regulations only to see their homes burn in a wildfire.**

Public education materials must make clear that without addressing the entire fire risk reduction equation your home has a greater chance of burning in a wildfire. This includes creating defensible space AND retrofitting flammable portions of homes such as,

- roof/under eave low-flow **exterior sprinklers/misters**
- replacement of wood shake roofing and siding with fire resistant materials
- installation of ember resistant attic vents
- removal of flammable landscaping plants such as Mexican fan palms and low-growing acacia
- removal of leaf litter from gutters and roofing
- removal of flammable materials near the home such as firewood, trash cans, wood fences, etc.

It also must be made clear to homeowners that by having well maintained and lightly irrigated vegetation within the outer 70-foot portion of the 100-foot defensible space zone can play an important role in protecting the home from flying embers and radiant heat. Bare earth clearance **creates a bowling alley for embers** and can actually increase fire risk if invaded by flammable, non-native weeds. In addition, research has shown that there is **no additional structure protection provided by clearing beyond 100 feet**, even on steep slopes, and the most important treatment zone is from 16-58 feet.

Applicable fire research and a comprehensive approach to home protection can be found here:
<http://www.californiachaparral.org/bprotectingyourhome.html>

Mountain communities learning to use federal grants to install ember-resistant vents and eliminate wood roofs, vital to reducing home loss during wildfires

David Yegge, a fire official with the Big Bear Fire Department, is about to submit his fourth grant proposal to the FEMA pre-disaster mitigation grant program to pay up to 70% of the cost of re-roofing homes with fire-safe materials in the Big Bear area of San Bernardino County. Yegge has also assisted the towns of Idyllwild and Lake Tahoe to do the same. The grant includes the installation of non-ember intrusion attic vents.

Yegge's first grant was for \$1.3 million in 2008. He identified 525 wooden-roofed homes in need of retrofits in the community of Big Bear Lake. Only 67 remain. Helping to push homeowners to take advantage of the program is a forward-thinking, "no-shake-roof" ordinance passed by the Big Bear City Council in 2008 requiring roofing retrofits of all homes by this year. San Bernardino County passed a similar ordinance in 2009 for all mountain communities. Homeowners have until next year to comply. Such "future effect clause" ordinances can be models for other local governments that have jurisdiction over high fire hazard areas. "The California Legislature should adopt such an approach and Cal Fire should incorporate such retrofit programs into its new Vegetation Treatment Program," Halsey said.

In order to qualify for the FEMA grant, a cost/benefit analysis must be completed. "Our analysis indicated that \$9.68 million would be saved in property loss for every \$1 million awarded in grant funds," Yegge said. "FEMA couldn't believe the numbers until they saw the research conducted by then Cal Fire Assistant Chief Ethan Foote in the 1990s. There's a 51% reduction in risk by removing wooden roofs."

"The FEMA application process is challenging, but well worth it," said Edwina Scott, Executive Director of the Idyllwild Mountain Communities Fire Safe Council. "More than 120 Idyllwild homes are now safer because of the re-roofing program."

Additional Information

In California, the state agency that manages the grants is the Governor's Office of Emergency Services (Cal OES), Hazard Mitigation Grants Division. Cal OES is the go between agency and they decide what grants get funded based upon priority established by the State Hazard Mitigation Plan.

The Mountain Area Safety Taskforce re-roofing program:

<http://www.thisisin.org/shake/>

The San Bernardino County re-roofing ordinance:

http://www.thisisin.org/shake/images/DOWNLOADS/ORDINANCES/ord_4059.pdf

FEMA grant program:

<http://www.fema.gov/pre-disaster-mitigation-grant-program>