OPINION

Ember alerts or media misinformation?

By Wayne Tyson

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Up, up, up goes the smoke, and with it dreams and lives and insurance rates. Largely — unfortunately — for nothing.

Why?

I don't know, but these tragedies keep happening. Accidents, dumb stunts, arson and other idiocy always will be with us, as will wildland fires. Lives will be lost. These are the givens, inevitable.

But what need not continue to happen is the loss of homes — at least not at nearly the rate they continue to be burned.

Raging fire fronts and burned-out houses make dramatic television, and anchormen and women sagely proclaim the failures of hapless homeowners to "clear enough brush" or "have tile roofs." A few make casual mention of "embers" or firebrands, but most imply that the fire front itself — those impressive flames — are the main culprit.

It's natural to think those ugly flames are the main culprit, but unless the fire front is closer than about 30 feet from a flammable structure, it is unlikely to cause ignition. (Some authorities think ignition might be possible at greater distances, but to cover their legal posteriors and account for exceptional conditions, they recommend not trusting real firestorms closer than a hundred feet. But it's clear that they feel comfortable with that figure.) Virtually all wildland fire scientists agree that hot firebrands or glowing embers are the primary cause of structure fires beyond the 30- to 100-foot separation distance (and probably most of those inside those distances).

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Many homes do court disaster because of too much flammable vegetation too close, but those homeowners who either live adjacent to naturally low-fuel areas or have modified the natural vegetation or landscaping to create a "defensible space" as the fire suppression authorities call it, have relatively little to worry about from the fire front itself. What they do have to worry about is firebrands (a.k.a. "embers").

Firebrands from wildland fires can travel far greater distances than the width of any defensible space boundary, and they come in swarms as thick as killer bees on the rampage. They will find their way into any opening, any crack, any open window or vent opening big enough to admit them, and they are nearly always less than a half-inch in diameter, usually much less.

Firebrands from structure fires are another matter, especially when the structure is fully involved. The variety of fuels, from asphalt to plastic to wood can create larger and/or longer-lasting firebrands that can be thrust higher and farther in the stronger convection column produced by the much greater heat, which also is of longer duration than a wildland fire.

That greater heat and duration also mean that the separation distance for ignition by radiation is greater than a wildland fire. This fact is largely academic in most cases, however, as houses are commonly separated by only eight feet, more or less. Larger structures, such as mansions and apartments or condominium structures with multiple units, can be a real horror. Makes a wildland fire relatively tame.

In recent years, TV anchors have gotten the message about shake-shingle roofs, but they need to emphasize that it is firebrands, almost exclusively (if not entirely), that ignite those roofs. They also need to emphasize that any combustible surface also is susceptible.

While creating an adequate defensible space (complete clearing is rarely if ever necessary) of at least 30 feet from all combustible structures is important, the great emphasis placed on this practice has not only distracted attention from other important issues like the firebrand phenomenon, but also establishes a false sense of security: Clear the brush, and all will be well.

Wrong! The planting of so-called "fire-retardant" vegetation is similarly useful, true, but misleadingly simplistic. All vegetation will burn — it will burn explosively when its water content is boiled quickly off by a fire front — the important thing is the quantity of the fuel, not the species of plant.

Firebrands are the exclusive propagators of "spot" fires downwind of the fire front. "Downwind" can be in almost any direction, as the fire creates its own winds, even whirlwinds.

So while some TV anchors and reporters do mention firebrands or "embers," this most important cause of structure ignitions needs much more emphasis. People need to understand the "why" of the actions recommended by the authorities, including the media. They need to know how impossible it is to save their homes when they are engulfed by millions of firebrands — or even one — in the wrong place.

They need to know that exposed flammable surfaces need to be minimized, and that they must have an on-site means (such as water storage, a pump and water delivery system that can operate by itself) of effectively preventing ignition of decks, fences and other structures that could in turn ignite their homes.

It is important that they have defensible space around their homes and rapid, safe access for fire suppression crews, but closed windows and gas valves and very fire resistant building and site design if they expect their home and its contents to survive a fire of any scale or origin.

Your home is still gone, whether it is the only one or one among hundreds. Don't let it happen. You owe it to yourself — and your neighbors.

Tyson, a former city park planner, chaired an inter-agency task force on urban-wildland fire hazard reduction following the Laguna Mountain fire in 1970.