

THOUGHTS ON THE 2025 LOS ANGELES FIRES

Greg Rubin

After witnessing the horror in LA earlier this month, I just want to start by sharing my condolences with anyone who was affected by this nightmare, including those who lost their homes, pets, or God forbid, friends and family. It truly was the “perfect (fire)storm”, and I wanted to share some thoughts about ways we can better prepare ourselves for the next one, which at this point seems inevitable. I have some experience in this area, going back to around 1998, when some of my first clients were hit by wildfire. Since then, we’ve had about 20 or so homes that have experienced major fire events (such as Poomacha, Pines, Cedar, Witch Creek, Harris, etc.) and we have yet to lose a home (thanking our lucky stars). While I could never guarantee a home won’t burn in a firestorm, especially as violent as these, there are quite a few things we can do that will give us a much better chance of success and create defensibility without destroying the natural environment that we so love. I will apologize in advance for the length of this article.

My primary mentor along the way was the late Bert Wilson, owner of Las Pilitas native nursery, who was also a CalFire firefighter for 14 years. He had stressed the importance of fire safety since the beginning, some 30 years ago, and how so much of the conventional wisdom about chaparral (not forest!) fire ecology is misguided, and that much of what we have been told can make the problem worse. Using his protocols along the Wildland-Urban Interface (WUI) has led to dramatic, positive results. The response of the native landscapes to fire has played out pretty much as predicted.

Here is a summary of basic assumptions that feed into what has been a successful approach, later tested in a 4-year research study for the US Navy, with Dr. Jon Keeley and me as the Co-Principal Investigators:

- Hydration, not plant selection, generally determines flammability (in most cases).
- It requires very little supplemental water to hydrate drought-tolerant native plants, on the level of a summer thunderstorm or fog drip 2-3 times per month during the warm season.
- Using light overhead irrigation, like MP-Rotators, is essential to watering the whole symbiotic mycorrhizal biome, and is key to matting down the shredded mulch, leaving it as a dense, low, poorly oxygenated fuel that burns (smolders?) with low flame height. Shredded mulch adheres to the soil in this process. It also enhances the ability of the plants to maintain hydration levels by promoting moisture retention in the soil and the mycorrhizal fungi.
- Lightly hydrated native vegetation can catch and cool embers, while providing obstacles to disturb the ferocious flow of wind-blown ignition sources before they hit your house, fire then spreading from house to house.
- Many of the plants characterized as the worst “fire-bombs” benefit the most from light hydration.
- While most of our clients had enough property to implement these defensible landscape principles individually, they can be applied at the community level as well.
- The zonal approach can be very helpful, especially Zone 0 (0-5’ from the house) and Zone 1 (subsequent 30-50’ or more).
- True fire resistance starts at the house outward, not the landscape inward.

The sad truth in both the Palisades and Eaton fires is that these communities were comprised of closely packed homes, most of which were constructed before fire-resistant architecture was the norm. These developments were wide open to wind-driven ember attack, virtually independent of home landscapes – so many of the trees still stood green after the devastation. The preceding 8 months of extreme drought certainly didn't help the situation.

The finger pointing is in full force, blaming politicians, agencies, and conservationists. Much of the response has been to turn the native plant communities into a boogeyman, reduced in description to “brush” or “fuel”. Many would have us strip the hillsides if they could. Certainly many insurance companies agree with this. This is one of the problems with categorizing these burns as fuel-driven, instead of wind-driven. Removing the native shrublands only replaces one “fuel” with another – flashy non-native weeds and grasses. Erosion would be out of control, habitat would be eradicated, and the whole area would be well on its way to desertification. Many areas of Riverside County are a good example, unfortunately.

So how do we protect an entire community? For starters, create lightly irrigated greenbelts as buffers between the unmodified chaparral and the houses. Some have suggested iceplant would be good for this; well, not in our experience. It would require about 2-3 times the water to achieve the same level of fire-resistance as the native greenbelt; it is awful erosion control; it has zero habitat value (unless you're a snail or a rat); and it burns. So do Red Apple and Ivy.

Populate this greenbelt with a mix of taller trees right at the interface, laid out in a way that avoids groupings of more than 3, but providing blockage in separate but visually overlapping coverage a little downslope. Oaks, sycamores, cottonwoods, Catalina cherry are some examples. Here and there add large shrubs like toyon and Lemonadeberry, again not in large masses but separated overlapping coverage. Finally, the plantings can be unified with native ground covers, including Baccharis, Ceanothus, Manzanita, etc. A greenbelt like this would provide ember catching and cooling, and most importantly, perturb the otherwise unbroken flow of cinders blasting homes.

These plantings need to be lightly irrigated with overhead irrigation, as well as mulched with a shredded bark product, namely Redwood, which has proven to be highly fire resistant when matted down correctly. This last suggestion is controversial and not universally shared, mostly because burn tests are not representative of the landscape condition. In fact, many areas of the state have banned this fantastic product; I can tell you that despite my public outreach, in articles, books, and presentations, we were never contacted by any entity regarding this. They would have seen lots of documented photographic evidence of its true behavior in real fire events, exactly how Bert Wilson predicted 30 years ago.

Beyond these planted areas, the natural native shrubland should be maintained, not eliminated, at about 50-60% coverage and no weeds, removing dead wood and some branches, which are then chipped and spread on site to encourage the ecology and discourage weeds. Studies have shown that thinning more than this yields rapidly diminishing returns, or worse, creates more problems than it solves (weeds, unimpeded embers, etc.). We are even experimenting with providing very light irrigation to the modified native shrubland, so far with excellent results. This would be especially useful where there is no practical way to create a planted native greenbelt. One issue for many homes along the WUI was overgrowth of vegetation (often non-native) into people's yards.



California's Own Native Landscape Design, Inc.
25950 LOS ARBOLES RANCH ROAD, ESCONDIDO, CA 92026
(760)-746-6870

www.calown.com

C-27 License No. 717147



Figure 1: An example of Zone 0 (up to 5' from the house) as part of the landscape installation.

Turning to individual homes, in tight communities like these, you typically don't have large enough yards to implement beyond Zone 1. However, the zones closer to the house yield the greatest payoff. Even before the concept of Zone 0 was official, we had been creating 5-10' aprons around the foundations of our customers' homes. Whether composed of DG, gravel, concrete, or bare dirt, they were very effective at preventing flames reaching underneath the eaves. Zone 1, usually the next 30-50', is the domain of hard-scape and permanently irrigated plantings. Northern coastal manzanita, Ceanothus, Clinopodium, Erigeron, Epilobium, etc. do very well for this.

will never be enough firefighters or engines to guarantee home protection in a conflagration like this. A number of countries are implementing a program of volunteer fire fighters local to the residential areas that are trained and equipped to put out spot fires, which is often how structure fires start. Those with pools should have gas-powered pumps and fire hoses, as the first things to go in large fires are electricity and water pressure, which was very evident in this case.

Beyond the scope of this article, we need to start looking at community-based fire response. There

My last piece of advice would be GET RID OF THE PALMS!



Figure 2: An example of a native landscape that, although singed, is perfectly alive. Its hydration level and ember catching ability helped prevent the ignition of the large wooden deck at the back of the house during the Witchcreek fire of 2007



California's Own Native Landscape Design, Inc.

25950 LOS ARBOLES RANCH ROAD, ESCONDIDO, CA 92026

(760)-746-6870

www.calown.com

C-27 License No. 717147



Figure 3: Decomposed granite apron between the house and landscape. This house has survived 3 wildland fires since this installation in 1998.



Figure 4: Light hydration of naturally occurring Coastal Sage Scrub contrasts with the unirrigated portion beyond. The plants are not overgrown nor unhealthy, just hydrated.

Figure 5: This is how existing chaparral should be thinned (no more than 50%). This is what should be done where natural vegetation comes up against the community greenbelt. You end up with a beautiful park-like setting, while also preserving the plant community and all the habitat that goes with it.


California's Own Native Landscape Design, Inc.
25950 LOS ARBOLES RANCH ROAD, ESCONDIDO, CA 92026
(760)-746-6870

www.calown.com

C-27 License No. 717147



Figure 5: This is how existing chaparral should be thinned (no more than 50%). This is what should be done where natural vegetation comes up against the community greenbelt. You end up with a beautiful park-like setting, while also preserving the plant community and all the habitat that goes with it.



Figure 6: This is what hundreds of feet of clearing beautiful, pristine chaparral got this homeowner, unfortunately. The perfect bowling alley for embers. We see this repeatedly.



California's Own Native Landscape Design, Inc.
25950 LOS ARBOLES RANCH ROAD, ESCONDIDO, CA 92026
(760)-746-6870

www.calown.com

C-27 License No. 717147



Figure 7: This is an example of how the consolidated shredded redwood bark actually behaves in fires. With overhead irrigation it mats down to less than an inch thick and adheres to the soil. In this case, you can clearly see the scorch marks at the base of the house - <2". Also note the un-melted marker flags that were placed BEFORE the fire (except the one that is partially melted due to the burning hose!). Also note the drain grate next to the flagstone that is unaffected