



November 13, 2019



Matt Dias
Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Defensible Space Policy (PRC 4291)

Dear Matt:

As you put together the 2020 Board priorities, I am writing to ask if the Board has some discretion in the interpretation of our existing defensible space code?

We are in desperate need for uniform messaging around defensible space. California's current defensible code (PRC 4291) does not address near home vegetation and as the last three fire seasons have demonstrated, does not protect homes and buildings from ember-driven ignitions that occur near homes and commercial buildings. There is clear science that demonstrates that a zone 0 (a.k.a. a 0-5 noncombustible zone) is essential to help homes and buildings resist embers and the development of spot fires adjacent to the building. (See demonstration video at <https://disastersafety.org/wildfire/protect-your-home-from-wildfire/>) Incorporating a 0 to 5-foot noncombustible zone would address the missing piece in defensible space protection.

I have attached a few thoughts around defensible space in relation to the recent efforts with AB 1516 (2019) that may be helpful to this conversation.

Thanks for your time and consideration of this request.

Warmest regards,

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California needs improved defensible space messaging

...to save lives, protect homes, and other vital resources

Defensible space must include a 0 to 5-foot noncombustible zone:

- Wildland fires spread** by a combination of a moving flame front and the **wind distribution of burning embers**. Embers are small pieces of plants, trees, or buildings that are light enough to be blown through the air and can result in the rapid spread of wildfire by where embers are blown ahead of the main fire, starting new fires.
- Home and building loss during wildfires occur as a result of some part of the building igniting from one or more of the three basic wildfire exposures: 1) embers, 2) radiant heat, and 3) direct flame contact. **Embers cause the majority of wildfire home ignition by directly igniting the home or igniting vegetation or materials on or near your home** that results in flames touching the house or a high heat (radiant heat) exposure that may directly ignite combustible siding or break glass in a window.
- The 0 to 5-foot noncombustible zone addresses the missing piece in defensible space protection. California's current defensible code (PRC 4291) that does not address near home vegetation and **does not protect homes and buildings from ember-driven ignitions** that occur near homes and commercial buildings.
- Adopting 1516 would help provide improved messaging for California.** Educational messaging has not consistently addressed (see Figure 1) the vulnerability of homes and buildings to the ignition of combustible materials in the area close to the home (i.e. the 0 to 5-foot zone).
- By working from the house outward there are many ways that **residents and business owners can participate in creating their own fire resilience.**

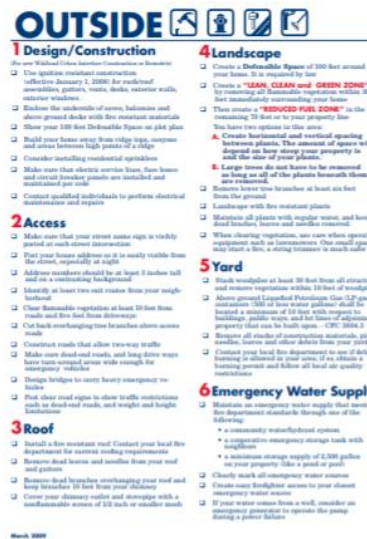


Figure 1. California has been a leader in defensible space guidance (PRC 4291) and construction code policy with Chapter 7A, however, given new awareness of the importance of the noncombustible zone, educational materials need consistent messaging. See point 1 where vegetation is allowed immediately around the house.



Figure 2. Many organizations in the US and California have already moved to incorporating a noncombustible zone, however, none have as much influence on Californian's behavior as CAL FIRE does. Image courtesy of the National Fire Protection Association.

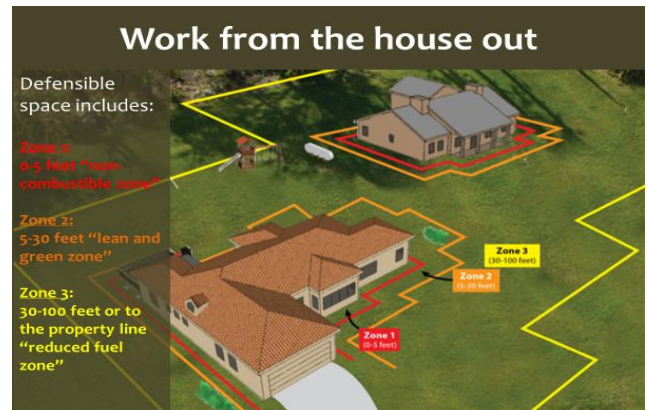


Figure 3. Both UC Cooperative Extension and the Insurance Institute for Business & Home Safety (IBHS) have adopted a three-zone system demonstrating the importance of a noncombustible zone 5-feet outward of a building. Image is courtesy of IBHS.

Why invest in defensible space?

6. **Ember-ignitions are responsible for the majority of home ignitions.** Wildfires that have had the highest number of home loss all have had a significant component of wind (e.g. Tunnel Fire, Tubbs Fire, Cedar Fire, Camp Fire, etc.)
7. The National Fire Protection Association/ Firewise, Insurance Institute for Business & Home Safety (IBHS), UC Cooperative Extension, California Fire Safe Council, FIRESAFE Marin, University of Nevada Living with Fire (among others) all **have adopted 0 to 5-foot noncombustible language** as part of their defensible space and home hardening guidance. It is important to create unified educational messaging to improve the resilience of California's homes and businesses.
8. **California's building code (Chapter 7A) is helping** reduce the vulnerability of homes to wildfire, however, it would be bolstered by improvements in California's Defensible Space Code (PRC 4291). The town of Paradise had 142 new homes built to the 2008 Chapter 7A standards; however, only 42% survived. The good news is that the trend is improving with the new construction codes, but we could be doing better. The addition of the 0 to 5-foot **noncombustible zone is the missing ingredient.**
9. The cities **Paradise and Redding** had homes that survived their 2018 wildfires, but had **significant damage because of the lack of near-home defensible space**, resulting in cracked windows, entry into the under eave vents, and fascia combustion (see Figure 5).
10. We must do everything we can to help prevent the tragedies of the 2017 and 2018 fire seasons. **AB 1516 is an important tool to help California achieve fire resiliency.**

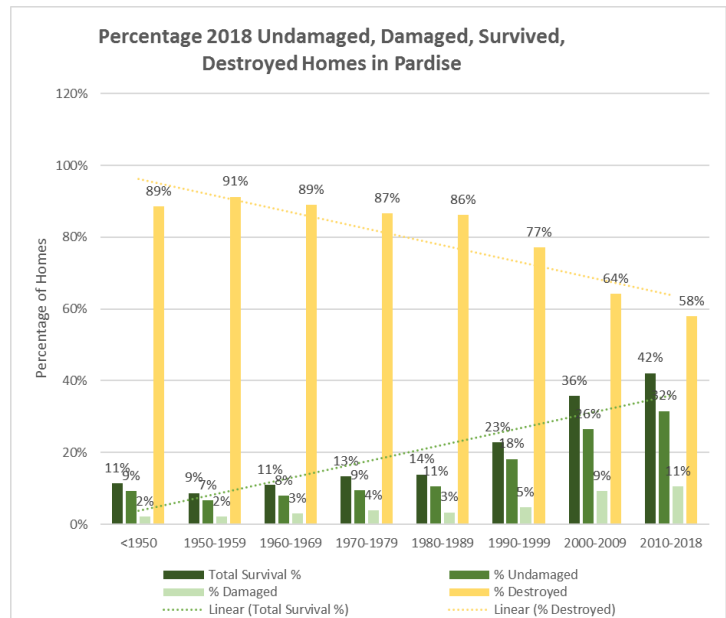


Figure 2. Data from the Camp Fire demonstrating that home survival rates in Paradise are improving with 2008's Chapter 7A construction standards. The noncombustible zone is the missing element in fire resiliency.



Figure 3. Cracked windows on a newly constructed Paradise home attributed to the use of combustible mulches surrounding the home (left image), cracked windows in Redding attributed to embers igniting combustible mulch and landscape plants (middle image), and new research from IBHS demonstrates the importance of incorporating a noncombustible zone (right image with rock mulch on the right-hand side. See <https://disastersafety.org/wildfire/protect-your-home-from-wildfire/> for more details on the research.)