



## California State Fire Marshal Information Bulletin 16-001

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### Rebuilding After a Wildfire

California has recently faced some of the most damaging wildfires in California State history. The Office of the State Fire Marshal (OSFM) is issuing this Information Bulletin to aid homeowners, homebuilders, building officials, fire officials, and other interested parties with the rebuilding process. This publication is intended to outline the materials and construction methods for exterior wildfire exposure and residential sprinkler requirements for buildings being repaired or rebuilt.

#### **Materials and Construction Methods for Exterior Wildfire Exposure:**

In 1992 Assembly Bill 337 (Bates) was chaptered into law. This was a result of the 1991 Oakland Hills fire which destroyed some 2500 housing units, caused over \$2 billion in damages, and 25 fatalities. This legislation required the California Department of Forestry and Fire Protection (CAL FIRE) in cooperation with local fire authorities to identify areas of Very High Fire Hazard Severity Zones in the Local Responsibility Areas (LRA) of California. The local authority had the option of adopting the model ordinance developed by the Office of the State Fire Marshal, adding to or subtracting areas from the identified zone(s), indicating that they already "meet or exceed" AB 337 minimum requirements, or some combination of the above. In short, the ordinances adopted require in most cases a "class B" roof for new construction or replacement of existing roofs (subsequent legislation raises this to Class A after January 1, 1997), plus other fire defense improvements including minimum clearances of 30 feet around structures. Newer legislation, AB 1216 (Vargas) and SB 1369 (Kuehl), gave additional regulatory requirements associated with amendments to both the relevant Government and Resource Codes associated with wildfire hazards.

New buildings located in any Fire Hazard Severity Zone or Wildland-Urban Interface (WUI) Fire Areas designated by the enforcing agency shall comply with the provisions of 2013 edition of California Building Code (CBC) Chapter 7A and/or the 2013 edition of California Residential Code (CRC) Section R327. These areas include:

1. All unincorporated lands designated by the State Board of Forestry and Fire Protection as State Responsibility Area (SRA) including:
  - 1.1. Moderate Fire Hazard Severity Zones
  - 1.2. High Fire Hazard Severity Zones
  - 1.3. Very-High Fire Hazard Severity Zones
2. Land designated as Very-High Fire Hazard Severity Zone by cities and other local agencies.
3. Land designated as Wildland Interface Fire Area by cities and other local agencies.

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WUI Fire areas are a geographical area identified by the State as a “Fire Hazard Severity Zone” in accordance with Public Resources Code Sections 4201 through 4204, and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. Maps of these areas can be found at <http://frap.fire.ca.gov/>.

The purpose of the requirements is to establish minimum standards for the protection of life and property. These minimum standards increase the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or Wildland-Urban Interface Fire Areas to resist the intrusion of flames or burning embers projected by a vegetation fire. These requirements contribute to a systematic reduction in conflagration fire losses.

Requirements do not apply to the following building types, as defined by the CBC:

1. Buildings of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building.
2. Buildings of an accessory character classified as Group U occupancy of any size located at least 50 feet from an applicable building.
3. Buildings classified as a Group U Agricultural Building, as defined in Section 202 of the CBC, when located at least 50 feet from an applicable building.

All destroyed buildings being rebuilt within a Fire Hazard Severity Zone or a Wildland-Urban Interface (WUI) Fire Area **must** comply with the provisions of CBC Chapter 7A and/or CRC Section R327.

For damaged buildings being repaired within a Fire Hazard Severity Zone or any Wildland-Urban Interface (WUI) Fire Area, all new construction must meet the provisions of CBC Chapter 7A and/or CRC Section R327. When more than 50 percent of the total roof area is replaced, the entire roof covering must be replaced with the appropriate classification as required per code.

### **Residential Sprinkler Requirements:**

Since January 2011 residential fire sprinklers have been required in all new one- and two-family dwellings and townhouse construction statewide. Supporting reasons were numerous and included:

- Vulnerable and special need populations are growing and require higher levels of protection than we commonly think of with able-bodied, English-speaking adults.
- Sprinkler fire protection systems are the best, first defense against life and property loss but are not infallible. Layered fire protection is the appropriate risk mitigation approach.
- Life loss history in California continues to need improvement. Too many people still die in preventable, mitigatable fires.
- Firefighter safety is important. More firefighters are injured or die in residential fires than any other occupancy.
- The State Fire Marshal is charged with setting the fire and panic standards for California and has done so with an open, participative, researched, and professional process for this adoption.
- The impact of our amendments is not far-reaching or overly restrictive. They are reasonable, focused, limited to those buildings with the greatest risk of life loss, and economically neutral.

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The OSFM strongly recommends that all rebuilt one-and two-family dwellings and townhouse install a fire sprinkler system. However, the final decision to require the installation of fire sprinklers in a one-and-two family dwellings rebuilt (after a disaster) is determined by the local building and fire officials. Below are some items to consider when determining if fire sprinklers should be installed:

1. If the local Authority having Jurisdiction (AHJ) is permitting the dwellings as a new building to be built to the current Building Standards (i.e. 2013 California Residential Code) then residential fire sprinklers would be required.
2. Insurance companies typically require that homes being rebuilt be constructed to the current building standards. If the insurance company is requesting that the home be constructed to the current building code than fire sprinklers would be required.
3. Non-sprinklered, existing dwellings damaged by a wildfire that are being repaired, would not require residential sprinklers per CRC R313. Consider the CRC definitions of repair, alteration and addition when allowing this CRC R313 exception to be utilized.
4. Does the house meet the CRC definition of an existing building? The CRC definition indicates the structure must have been legally permitted to use the exception in Section R313.

Often when rebuilding in areas supplied by wells, there are concerns about the increased cost of water storage tanks for residential sprinkler systems. Typically these tanks are less than 400 gallons and are already present onsite for domestic water supply. Residential fire sprinkler system design only requires a limited quantity of water delivered in a short duration of time. Local fire and building officials can assist with design criteria.

In conclusion, buildings that are being repaired or rebuilt within a Fire Hazard Severity Zone or Wildland-Urban Interface (WUI) Fire Area must comply with the provisions of CBC Chapter 7A and/or CRC Section R327. One-and two-family dwellings and townhouse that are being rebuilt under current adopted code requirements should be provided with a residential fire sprinkler system.