
PROJECT BACKGROUND:

California's Fire Hazard Severity Zone Update and Building Standards Revision



California Department of Forestry and Fire Protection Office of the State Fire Marshal

The Department of Forestry and Fire Protection (CAL FIRE) is revising maps that identify wildfire hazard in areas for which the State has financial responsibility for wildland fire protection (state responsibility areas). Early next year recommendations will be made for very high fire hazard zones in areas where locals provide fire protection (local responsibility areas).

CAL FIRE is mandated by Public Resources Code 4201-4204 and Govt. Code 51175-89 to identify fire hazard severity zones statewide. These are areas of significant fire hazard based on fuels, terrain, weather, and other relevant factors. In state responsibility area, CAL FIRE has mapped three hazard ranges - moderate, high and very high. In local responsibility area, the law only requires identification of very high fire hazard severity zones. These state statutes arose out of legislation following large, catastrophic urban conflagrations and are designed to implement mitigations to reduce damages from wildfires.

The existing fire hazard severity zone maps in state responsibility area were last approved in the mid-1980s. Maps in local responsibility area were completed in the mid 1990s. CAL FIRE is now updating the maps because they will be used to implement the new wildland-urban interface building standards adopted by the California Building Standards Commission. The new building codes establish ignition-resistant construction for roofing, walls, decks, windows and other building elements for homes in the wildland-urban interface based upon the area's fire hazard severity zone classification.

The maps will be the basis of legal requirements affecting property owners in state responsibility areas, very high fire hazard severity zones in local responsibility areas, and other fire-prone areas zoned by local government. The updated fire hazard severity zones will influence choice of construction materials and techniques for new buildings in the wildland urban interface. The new wildland-urban interface building codes will increase the cost for new construction an average of \$1,800 per home.



This graphic, posted on industry and association websites, is a link to CAL FIRE's "Living and Building in the Wildland" FHSZ/BSR Website at www.fire.ca.gov/wildland.php

The updated zones will also be used by property owners to comply with natural hazards disclosure requirements at time of sale of property. In addition, it is possible that the fire hazard severity zones will be used by local governments as they update the safety element of general plans. The re-mapping project is funded in part by a \$250,000 Federal Emergency Management Agency grant facilitated by the Governor's Office of Emergency Services.

There are separate maps for state responsibility area and local responsibility area; each requires a different adoption process. The adoption process for the *state responsibility area maps* will include public hearings in the 56 counties that have state responsibility areas. The hearings will be conducted throughout the summer and the maps are scheduled for adoption under CCR Title 14 regulation by December 31,

2007. Following the hearings, the CAL FIRE Director may elect to amend the maps or adopt them without revision.

Release of the *local responsibility area maps*, which only identify very high fire hazard severity zones, will follow next year. Local governments will conduct public hearings and adopt local ordinances based on recommendations from the Director for implementing the ignition-resistant construction standard.

The draft state responsibility area maps have been reviewed by the 21 CAL FIRE units statewide and six contract counties. Recommendations for changes have been provided. The recommendations were reviewed by Cal FIRE technical staff, and all the state responsibility area maps have been released. The public hearing process will take place in June and July 2007.

The existing state responsibility area maps were developed in the mid-1980s, using available mapping techniques and information. Local responsibility area maps were developed in the mid-1990s. For several reasons, existing maps have been updated and now reflect improved fire science, mapping techniques, and data. The most significant new factor is ember production and the intrusion of embers into buildings through vents, or collecting/gathering in areas that ignite combustible materials. The assumptions used were developed to create a scientifically-based hazard map for one use - to reduce structure losses in the case of wildland fires by instituting more protective ignition-resistant building requirements in areas where the fire hazard is greater.

The fire hazard severity zone maps evaluate hazard, not risk. Hazard is based on the physical conditions that give us a likelihood that an area will burn over a 30- to 50-year period without considering modifications such as fuel reduction efforts. Risk is the potential damage a fire can do to the area under existing conditions, including any mitigation taken. The model used to develop the fire hazard severity zone maps focuses on hazard alone, which only takes into account the probability of the area burning and potential fire behavior in the area based on elements such as fire history, potential fuel over a 30- to 50-year period, blowing embers, terrain and weather. It is not an evaluation of the level of risk the area faces because it does not consider modifications such as defensible space, community-based fuel modification or fire breaks, building construction, irrigation and sprinklers.

Representatives from stakeholder groups including the California Building Officials Association, the California Building Industry Association, California Fire Chiefs Association, California League of Cities, Regional Council of Rural Counties, product manufacturers, the insurance industry and the Sierra Club have been involved in development and implementation of the building standards throughout the process.