
FREQUENTLY ASKED QUESTIONS ABOUT:

Fire Hazard Severity Zoning and New Building Codes for California's Wildland-Urban Interface



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

Question: What can be done to reduce buildings loss from wildfire?

Answer: Years of experience by fire agencies and others have led to a statutory strategy for reducing the chance of building loss or damage. It is a two-pronged approach: 1) defensible space - reduce flammable material around homes to keep direct flames and heat away from the side of the building. (The law already requires property owners to create 100 feet of defensible space around buildings); 2) exterior wildfire exposure protection - construct buildings so that they have less chance of catching fire from burning embers. We have learned that we must make changes to the surrounding property and to the buildings themselves.

Question: What do the new building codes do?

Answer: Recently adopted building codes and standards reduce the risk of burning embers igniting buildings. Codes already in effect place standards on roofing construction and attic venting. The new building codes require siding, exterior doors, decking, windows, eaves wall vents, and enclosed overhanging decks to meet new test standards.

Question: Do the building codes apply equally in the different Fire Hazard Severity Zones?

Answer: Yes. The new ignition resistant codes apply to all fire hazard zones in the state responsibility area and in very high Fire Hazard Severity Zones in local responsibility areas.

Question: Why are fire hazard severity maps being updated?

Answer: The hazard maps are being updated to more accurately reflect the zones in California that are susceptible to wildfire. The hazard mapping process incorporates new science and technology in determining hazard ratings.

How was the fire hazard severity determined?

Answer: Using the latest fire science, CAL FIRE has developed and field tested a model that serves as the basis of zone assignments. The model evaluates properties using characteristics that affect the probability of the area burning and potential fire behavior in the area. Many factors are considered such as fire history, existing and potential fuel, flame length, blowing embers, terrain, weather and the likelihood of buildings igniting.

Question: Can the new building codes protect my home from fire?

Answer: Fire safe building practices can't make your home fire proof but they can improve the chances that it will still be standing after the wildfire is out.

Question: How will the new building codes affect me as a property owner?

Answer: It depends on your specific situation. Always check with your local building department for specific information.

If your property is in state responsibility area and:

You applied for a building permit for your home before January 1, 2008 - You need only concern yourself with the fire safety practices that are already on the books. That means you must clear a defensible space around your property, keep your roof clear of flammable material like twigs and leaves, trim tree branches away from your chimney and keep a spark arrester on your chimney. Visit the CALFIRE website at www.fire.ca.gov for information on living safely in California's fire prone areas. Use appropriate roofing assembly for your hazard zone

- You applied for a building permit on or after January 1, 2008 - In addition to complying with the fire safety requirements mentioned above you must:
 - Use approved building products and construction methods. That information is available from the Office of the State Fire Marshal's [Building Materials Listing Program](#).
 - Use exterior wildfire exposure protection materials and construction methods for exterior siding, windows, eaves vents, exterior doors, decks
 - Enclose all under-floor areas and the underside of decks to within six inches of the ground
- You are remodeling a home on your property after January 1, 2008 -
The new codes apply to the design and construction of new buildings located in the wildland-urban interface fire area. Local ordinances may require improved exterior wildfire exposure protection materials and construction methods for remodel projects. Check with your local building department to determine which ignition resistant building codes apply to your project.

Question: Is there an easy way to determine the Fire Hazard Severity Zone of my property?

Answer: If you know your address or the address of a nearby property, you can find the designation for state responsibility area lands on the web at:

<http://www.fire.ca.gov/fireprone>

QUESTIONS ABOUT FIRE HAZARD SEVERITY ZONES

What is a "Fire Hazard Severity Zone," or FHSZ?

Answer: California law requires CAL FIRE to identify areas based on the severity of fire hazard that is expected to prevail there. These areas, or "zones," are based on factors such as fuel (material that can burn), slope and fire weather. There are three zones, based on increasing fire hazard...medium, high and very high.

How is a FHSZ determined?

Answer: Using the latest fire science, CAL FIRE has developed and field tested a model that serves as the basis of zone assignments. The model evaluates property using characteristics that affect the probability of the area burning and potential fire behavior in the area. Many factors are considered such as fire history, existing and potential fuel, flame length, blowing embers, terrain, weather and the likelihood of buildings igniting.

What does FHSZ measure?

Answer: Fire Hazard Severity Zone maps evaluate "hazard," not "risk". They are like flood zone maps. "Hazard" is based on the physical conditions that create 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 modifications such as defensible space, irrigation and sprinklers, and ignition resistant building construction.

Where do Fire Hazard Severity Zones apply?

Answer: Fire Hazard Severity Zones are found in areas where the State has financial responsibility for fire protection, called State Responsibility Areas. More than 31 million acres are in this area. Very high Fire Hazard Severity Zones are found in local jurisdictions as well.

What are the uses of Fire Hazard Severity Zones?

Answer: The zones serve several purposes. They are used to designate areas where exterior wildfire exposure protection building codes apply to new buildings. It can be a factor in real estate disclosure. Local government considers fire hazard severity in the safety element of the general plan.

Can I find my street address on the map?

Answer: Yes. The University of California Berkeley Center for Fire Research and Outreach has developed an interactive mapping tool for the internet. Fire hazard is shown for individual properties identified by street address. This mapping tool can be accessed through: <http://www.fire.ca.gov/fireprone>

What if I disagree with the Fire Hazard Severity Zone designation of my property?

Answer: The CAL FIRE Director will conduct public hearings in every county with state responsibility areas in June and July 2007. You may comment about Fire Hazard Severity Zone designations at these hearings or you may send in a written comment via mail or e-mail. The public notice of the regulation includes the address for submitting written comments. The Director will respond to all comments before making final adoption of the maps in state responsibility areas.

**QUESTIONS ABOUT THE FIRE HAZARD SEVERITY
ZONE MODEL USED BY CAL FIRE**

What are the key elements of the Fire Hazard Severity Zone model?

Answer: The fire hazard severity model for wildland fire has two key elements: probability of burning and probable fire behavior. Hence, the factors considered in determining fire hazard are how often an area will burn and, when it does burn, what characteristics might lead to buildings being ignited.

In the model, Fire Hazard Severity Zones are areas that have similar burn probabilities and fire behavior characteristics that result in damage to buildings.

In wildland areas, expected fire behavior is based on typical fire intensity on a normally severe fire weather day. The calculation also incorporates the potential of vegetation to be ignited by an ember and expectations based on fire history over the last 50 years.

What is the difference between moderate, high, and very high Fire Hazard Severity Zones as ranked in the model?

Answer: Classification of a zone as moderate, high or very high fire hazard is based on a combination of how a fire will behave and the probability of flames and embers threatening buildings. Each area of the map gets a score for flame length, embers, and the likelihood of the area burning. Scores are then averaged over the zone areas. Final zone class (moderate, high and very high) is based on the averaged scores for the zone.

Why does the model place an emphasis on the spread of burning embers?

Answer: Embers spread wildfire because they can travel long distances in the wind and ignite vegetation, roofs, attics (by getting into vents), and decks.

How do model elements relate to the law that requires Fire Hazard Severity Zones to be designated?

Answer: The Public Resources Code Section 4202 calls for zones to embrace relatively homogenous lands and shall be based on fuel loading, slope, fire weather, and other relevant factors present. The zone

model considers these elements by zoning homogenous vegetation and slopes and considers fire behavior within these zones. Fire behavior is based on fuel type, slope, and severe fire weather.

Has the model been tested and verified to be accurate locally by CAL FIRE or other fire agencies?

Answer: The model uses on nationally accepted fire behavior calculation systems. Model results were reviewed extensively in four counties: Butte, Calaveras, Sonoma, and San Diego. These four counties were selected to represent the different fuel conditions found in California. Further, results were reviewed and field validated in the 56 counties with state responsibility areas.

QUESTIONS ABOUT FIRE HAZARD SEVERITY ZONES AND BUILDING STANDARDS IN STATE RESPONSIBILITY AREAS

What is "State Responsibility Area," or SRA?

Answer: State responsibility area is a legal term defining the area where the State has financial responsibility for wildland fire protection. Incorporated cities and federal ownership are not included. The prevention and suppression of fires in all areas that are not state responsibility areas are primarily the responsibility of local or federal agencies. There are more than 31 million acres in state responsibility area with an estimated 1.7 million people and 750,000 existing homes.

How is state responsibility area determined?

Answer: The Board of Forestry and Fire Protection (Board) classifies land as state responsibility area. The legal definition of state responsibility area is found in the Public Resources Code Section 4125. The Board has developed detailed procedures to classify lands as state responsibility area. Lands are removed from state responsibility area when they become incorporated by a city, change in ownership to the federal government, become more densely populated, or are converted to intensive agriculture that minimizes the risk of wildfire. While some lands are removed from state responsibility area automatically, the Board typically reviews changes every five years.

Can I request that my land be taken out of state responsibility area?

Answer: Yes. While not common, property owners can petition the Board to remove their land from state responsibility area.

What Fire Hazard Severity Zones are in state responsibility area?

Answer: All of state responsibility area is in a Fire Hazard Severity Zone. Lands are either ranked as moderate, high or very high Fire Hazard Severity Zones.

What is the impact of new building codes in state responsibility area?

Answer: Recently adopted building codes reduce the risk of burning embers pushed by wind-blown wildfires from igniting buildings. Roofing standards vary by the fire hazard zone rating of the site. The new codes for siding, decking, windows, and vents apply throughout all state responsibility area regardless of the fire hazard severity ranking.

QUESTIONS ABOUT VERY HIGH FIRE HAZARD SEVERITY ZONES IN LOCAL RESPONSIBILITY AREAS

NOTE: The Fire Hazard Severity Zone maps for Local Responsibility Area will be rolled out in 2008. An expanded question/answer sheet will be provided in this space at that time. This Q and A contains a limited amount of detail and is provided as an introduction to next year's program.

What is "Local Responsibility Area", or LRA?

Answer: Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. Local responsibility areas include incorporated cities, cultivated agriculture

lands, and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government.

What is the “Bates” bill?

Answer: The “Bates” bill, Government Code Section 51175, was prompted by the devastating Oakland Hills Fire of 1991. This mid-1990s legislation calls for the CAL FIRE Director to evaluate fire hazard severity in local responsibility area and to make a recommendation to the local jurisdiction where very high Fire Hazard Severity Zones exist. The Government Code then provides direction for the local jurisdiction to take appropriate action.

How are Fire Hazard Severity Zones determined in local responsibility areas?

Answer: CAL FIRE uses an extension of the state responsibility area Fire Hazard Severity Zone model as the basis for evaluating fire hazard in local responsibility area. The local responsibility area hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area. Scientists at the U. C. Berkeley Center for Fire Research and Outreach provided an urban fuels model that was incorporated in the hazard rating.

When will CAL FIRE recommend very high Fire Hazard Severity Zones to local agencies?

Answer: CALFIRE will prepare draft very high Fire Hazard Severity Zone recommendations for local responsibility areas during the summer of 2007. These recommendations are scheduled to reflect hazard ratings in adjacent state responsibility area zones. CAL FIRE anticipates reviewing and validating these draft local responsibility area recommendations with local agencies during the fall of 2007.

What are the requirements for landowners in very high Fire Hazard Severity Zones in local responsibility areas?

Answer: The exterior wildfire exposure protection codes apply to the design and construction of new buildings located in very high Fire Hazard Severity Zones in local responsibility areas. Local ordinances may require ignition resistant construction for remodel projects. Check with your local building department to determine which ignition resistant building codes apply to your project. In addition, Government Code Section 51182 calls for flammable vegetation clearance and other wildland fire safety practices for buildings. Owners are also required to make a natural hazard disclosure as part of a real estate transfer. For information regarding clearance around buildings see the Homeowners Checklist at www.fire.ca.gov.

Does the designation of very high Fire Hazard Severity Zone in the local responsibility area trigger the 100 foot clearance requirement?

Answer: Yes, unless exempted by local government under specified conditions, the 100 foot clearance requirements apply.

Will there be a single map that shows FHSZ statewide? Countywide?

Answer: There will be a single map that shows FHSZ on state responsibility areas statewide and for each county with state responsibility areas. There will be an initial map of Very High FHSZ recommendation on local responsibility areas. However, there is no reporting requirement for local government to report back to CAL FIRE on the action they took on the VHFHSZ recommendation.

Will the FHSZ map be updated?

Answer: Yes, updates are to be periodic.

Other questions should be directed to your local building department or fire officials.