SD Fire–Rescue

Frequently Asked Questions

2025 LRA Fire Hazard Severity Zones

Fire Hazard Severity Zones Explained

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

Answer: Government Code 51178; The State Fire Marshal shall identify areas in the state as moderate, high, and very high fire hazard severity zones based on consistent statewide criteria and based on the severity of fire hazard that is expected to prevail in those areas. Moderate, high, and very high fire hazard severity zones shall be based on fuel loading, slope, fire weather, and other relevant factors, including areas where winds have been identified by the Office of the State Fire Marshal as a major cause of wildfire spread.

2. Why are fire hazard severity maps being updated?

Answer: The previous maps date back to 2007. They are being updated to more accurately reflect the zones in California that are susceptible to wildfire and enhance public safety measures. The hazard mapping process will incorporate new science in local climate data and improved fire assessment modeling in determining hazard ratings. These updates will more accurately represent current conditions and fire hazards from both the state and local levels. This includes significant changes in climate patterns, vegetation growth and urban development since the release of the 2007 maps.

3. What do Fire Hazard Severity Zones measure?

Answer: The Fire Hazard Severity Zone (FHSZ) map evaluates **"hazard," not "risk". FHSZ maps do not mandate specific outcomes**; rather, they classify areas by their likelihood of experiencing a specific **hazard** (fire behavior), not by forecasting actual losses or defining **risk** to people or structures. The map is like flood zone maps, where lands are described in terms of the probability level of a particular area being inundated by floodwaters, and not specifically prescriptive of impacts. **"Hazard"** is based on the physical conditions that create a likelihood and expected fire behavior over a 30 to 50-year period without considering mitigation measures such as home hardening, recent wildfire, or fuel reduction efforts. **"Risk"** is the potential damage a fire can do to the area under existing conditions, accounting for any modifications such as fuel reduction projects, defensible space, and ignition-resistant building construction.

4. Where do Fire Hazard Severity Zones apply?

Answer: Fire Hazard Severity Zones are found in areas where the state has financial responsibility for wildfire protection and prevention, called the State Responsibility Area. More than 31 million acres are in this area. Under Senate Bill 63 (Stern, 2021) Government Code 51178 was amended to add the Moderate and High Fire Hazard Severity Zones with the Very High in local jurisdictions.

5. What are the uses of Fire Hazard Severity Zones?

Answer: The zones are used for several purposes, including to designate areas where California's defensible space standards and wildland urban interface building codes are required. They can be a factor in real estate disclosure requirements, and local governments may consider them in their general plan. Under California Civil Code 1103, the Natural Hazard Disclosure (NHD) Statement can include the State's map and other areas designated Wildland Fire Areas by the local authority having jurisdiction.

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

Answer: Yes, if you know the address of the property, you can find the designation by accessing the link for the Very High Fire Hazard Severity Map on the City's Fire-Rescue Department's website by simply clicking on the City of San Diego Fire Hazard Severity Map.

7. 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 an area burning and expected fire behavior under extreme fuel and weather conditions. The zones reflect areas that have similar burn probabilities and fire behavior characteristics. The factors considered in determining fire hazard within wildland areas are fire history, flame length, terrain, local weather, and potential fuel over a 50-year period. Outside of wildlands, the model considers factors that might lead to buildings being threatened, including terrain, weather, urban vegetation cover, blowing embers, proximity to wildland, fire history, and fire hazard in nearby wildlands. FHSZs are not a structure loss model, as key information regarding structure ignition (such as roof type, etc.) is not included.

8. How do the Fire Hazard Severity Zone Maps differ from California Public Utilities Commission (CPUC) High Fire Threat District Maps?

Answer: The California Public Utilities Commission (CPUC) sponsored map, known as "CPUC High Fire Threat District Map" (HFTD), includes similar factors as those in the FHSZ maps, however the CPUC HFTD Map is designed specifically for identifying areas where there is an increased risk for utility associated wildfires. As such, the CPUC map includes fire hazards associated with historical powerline-caused wildfires, current fuel conditions, and scores areas based on where fires start, as opposed to where potential fires may cause impacts.

9. Why is my property in a different zone than the adjacent area, which looks similar?

Answer: In non-wildland areas, zone edges occur based on distance to the wildland edge. Because hazard in these areas is largely determined by incoming embers from adjacent wildland, urban areas that are similar in vegetation type and housing density may have a change in FHSZ class as the distance to the wildland edge increases. Areas immediately adjacent to wildland receive the same FHSZ score as that wildland where fire originates, and the model then produces lower scores as the distance to wildland edge increases. In wildland areas, zone edges are a result of the way zones are delineated. Specifically, zones represent areas of similar slope and fuel potential. Zone boundaries divide zones based on geographic and vegetation features that align with fire hazard potential; although, at a local scale, it may appear that the immediate area is similar on both sides of the edge. The class value within a zone is based on the average hazard score across the whole zone, so areas that are in the same zone but not immediately adjacent to a local area can have an influence on the final zone classification.

Data Related Questions

10. How are Fire Hazard Severity Zones determined?

Answer: CAL FIRE used the best available science and data to develop, and field test a model that served as the basis of zone assignments. The model evaluated the probability of the area burning and potential fire behavior in the area. Many factors were included such as fire history, vegetation, flame length, blowing embers, proximity to wildland, terrain, and weather.

11. What new data will be included in the new model, and how does this differ from the previous model?

Answer: A 2 km grid of climate data covering the years 2003-2018 is being used in the update. The previous model used stock weather inputs across the state to calculate wildland fire intensity scores. The updated model will adjust fire intensity scores based on the most extreme fire weather at a given location, considering temperature, humidity, and wind speed. In addition, ember transport is being modeled based on local distributions of observed wind speed and direction values instead of using a generic buffer distance for urban areas adjacent to wildlands.

12. What is the difference between the various Fire Hazard Severity Zones?

Answer: Classification of a wildland zone as Moderate, High, or Very High fire hazard is based on the average hazard across the area included in the zone, which have a minimum size of 200 acres. In wildlands, hazard is a function of modeled flame length under the worst conditions and annual burn probability. Both these factors generally increase with increasing hazard level, but there may be instances where one value is Very High and the other is low, pushing the overall hazard into a more intermediate ranking. On average, both modeled flame length and burn probability increase by roughly 40-60% between hazard classes. Classification outside of wildland areas is based on the fire hazard of the adjacent wildland and the probability of flames and embers threatening buildings.

13. Why does the model place an emphasis on the spread of 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.

Local Regulated Area Questions

14. What is "Local Responsibility Area", or LRA?

Answer: Local Responsibility Areas (LRA) are incorporated cities, urban regions, agriculture lands, and portions of the desert where the local government is responsible for wildfire protection. This is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract.

15. When did Fire Hazard Severity Zones start in Local Responsibility Area?

Answer: The "Bates Bill" (AB 337), Government Code Section 51175, was prompted by the devastating Oakland Hills Fire of 1991. This mid-1990s legislation calls for CAL FIRE to evaluate fire hazard severity in local responsibility area and to make a recommendation to the local jurisdiction where very high FHSZs exist. The Government Code then provides direction for the local jurisdiction to take appropriate action.

16. 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.

17. What are the requirements for landowners in FHSZs in local responsibility areas?

Answer: The building standards in Chapter 7A of the California Building Code, as adopted and amended by the City of San Diego, apply to all new buildings, additions to existing buildings and to exterior alterations to existing buildings impacting one or all of the regulated building features addressed in Chapter 7A. In addition, Government Code Section 51182 calls for defensible space 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.

18. Does the designation of Very High Fire Hazard Severity Zones in the Local Responsibility Area trigger the 100-foot clearance requirement?

Answer: Yes, per Government Code 51182 the 100-foot defensible space clearance applies. Additional requirements are included in the Brush Management Regulations in Chapter 14, Article 2, Division 4 of the San Diego Municipal Code.

19. What is the process for developing Fire Hazard Severity Zones in the Local Responsibility Area?

Answer: CAL FIRE uses the same modeling data that is used to map the State Responsibility Area. The map, along with a model ordinance, are then sent to the governing body for adoption.

20. Why does the 2025 Draft map for San Diego include significantly less area designated as Very High Fire Hazard Severity Zones?

Answer: Some areas that were previously mapped as Very High Fire Hazard Severity Zones were designated as Moderate and High zones in 2025 which did not exist for the LRA during the last adoption in 2009. The City also designated additional High Fire Risk Areas known as Brush Management Zones as Very High Fire Hazard Severity Zones in 2009 which increased the mapped area.

21. Why didn't CAL FIRE include areas within the City of San Diego that appear to be at a high fire risk?

Answer: These areas did not meet the State's modeling criteria. Fire Hazard Severity Zones aim to capture patches of contiguous "fire environments" within which similar fire behavior potential could be expected. For example, CAL FIRE's model does not have a maximum zone size, but there is a minimum size of 200 acres in wildland and 20 acres for isolated islands embedded in non-wildland. Anything less than that would not be zoned.

22. I don't think my property should have been included in a Fire Hazard Severity Zone. Can the city request that an area be excluded from the map?

Answer: No. Government Code section 51179 (b)(3) specifically prohibits a local agency from decreasing the level of fire hazard severity zone as identified by the State Fire Marshal and may only increase the level of fire hazard severity zone for any area within the jurisdiction.

23. Does the city plan to modify the FHSZ as designated by Cal Fire?

Answer: Yes, the City plans to re-designate areas mapped as Moderate and High FHSZ to Very High FHSZ. The City has also identified additional Wildland Fire Areas determined to be at significant risk from wildfire that will be included as a VHFHSZ. This action will ensure consistent mitigation measures in all High Fire Risk areas. For example, there are not currently any WUI related requirements contained within the Moderate FHSZ in the LRA which would leave those areas vulnerable to wildfire. Multiple houses along a canyon rim in different zones could have varying requirements ranging from the most restrictive to no requirements at all. Wildfire prevention measures must be consistent across the city and especially within neighborhoods to be effective. These modifications will help maintain consistency with the 2009 San Diego FHSZ map.

24. What criteria did San Diego use to determine the additional areas to be included as a VHFHSZ?

Answer: San Diego conducted a fire risk assessment utilizing spatial analysis tools and the City's Geographical Information System (GIS) and developed a Fire Severity Map for the City. The factors considered in the analysis included density of vegetation; slope severity; fire department access and fire history in the area. These areas are primarily located in and around canyons and designated open space or other areas primarily covered in native or naturalized vegetation. A 500-foot buffer was included around these areas for ember cast.

25. My building is located on a lot that is partially located within the Very High Fire Severity Map. Do the requirements of Chapter 7A apply to my project?

Answer: Yes, if any portion of the lot falls within the VHFHSZ map, the requirements of Chapter 7A apply.

26. How are the new Fire Hazard Severity Zones impacting development?

Answer: Many of the changes expanding fire hazard severity zones in local responsibility areas (LRA) have been supported by the building industry. CAL FIRE works closely with the building industry when setting various building codes and defensible space requirements, so we are working together to not affect development itself but to make sure development matches the hazards of that area.

27. Why haven't Moderate and High Fire Hazard Severity Zone classes been classified before in the Local Responsibility Area?

Answer: New legislation, Senate Bill 63 (Stern, 2021), now requires the adoption of all three Fire Hazard Severity Zone classes in the Local Responsibility Area. Previously only Very High Fire Hazard Severity Zones were required for adoption in Local Responsibility Areas.

Insurance Related Questions

28. Will the new Fire Hazard Severity Zones affect my ability to get or maintain insurance?

Answer: Insurance companies use risk models, which differ from hazard models, because they consider the susceptibility of a structure to damage from fire and other short-term factors that are not included in hazard modeling. It is unlikely that insurance risk models specifically call out CAL FIRE Fire Hazard Severity Zones as a factor, but much of the same data that is used in the fire hazard severity zone model are likely included in the insurance companies' risk models. However, insurance risk models incorporate many additional factors and factors that change more frequently than those that CAL FIRE includes in its hazard mapping, which is built to remain steady for the next 10+ years.