



CITY OF SEBASTOPOL CITY COUNCIL

AGENDA ITEM REPORT FOR MEETING OF: June 17, 2025

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**To:** Honorable Mayor and City Councilmembers  
**From:** Dave Bray, Division Chief, Gold Ridge Fire District  
**Subject:** Informational Presentation on Fire Hazard Severity Map

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**RECOMMENDATION:**

Receive and file this informational presentation on the updated Fire Hazard Severity Zone (FHSZ) map issued by the Office of the State Fire Marshal.

Note: This item is intended to provide information specifically on the updated FHSZ maps. It does not address evacuation routes. The status of evacuation routes will be discussed separately under the informational item related to the Emergency Operations Plan (EOP) update.

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**EXECUTIVE SUMMARY:**

The California Department of Forestry and Fire Protection (CAL FIRE) recently published Fire Hazard Severity Zone (FHSZ) maps designating certain areas as falling within the Moderate, High, and Very High Fire Hazard Severity Zones. Small portions of the City are designated as within the Moderate Fire Hazard Severity Zone. State law requires the City to adopt the FHSZ maps by ordinance.

**BACKGROUND:**

The California Department of Forestry and Fire Protection (CAL FIRE), through the Office of the State Fire Marshal (OSFM), has released updated Fire Hazard Severity Zone (FHSZ) maps for State Responsibility Areas (SRAs) and is in the process of finalizing maps for Local Responsibility Areas (LRAs). These updates are part of the state's broader effort to identify areas with elevated wildfire risk and to support informed decisions related to land use planning, building code enforcement, and public safety initiatives.

FHSZ maps are developed to indicate areas where there is a greater likelihood of wildland fire based on CAL FIRE's hazard classification system. The updated maps incorporate advanced fire behavior modeling, new vegetation and fuel data, historical fire patterns, and climate change projections to more accurately reflect the wildfire risk across California today.

**DISCUSSION:** Tonight's presentation will provide an overview of the updated Fire Hazard Severity Zone (FHSZ) maps, including their purpose, the methodology used in their development, key changes affecting our local area, and how this information will inform future planning, permitting, and public outreach efforts.

**STAFF ANALYSIS:**

To comply with state law, it is anticipated that the City Council will have adopted the Fire Hazard Severity Zone (FHSZ) map by ordinance earlier in the agenda. The Council will retain the ability to consider future adjustments to the map if warranted, based on updated data or local conditions.

**CITY COUNCIL GOALS/PRIORITIES/ AND OR GENERAL PLAN CONSISTENCY:**

This agenda item represents the City Council goals/priorities as follows:



**PUBLIC SAFETY**

*Strengthen the public's safety and improve the quality of life. Includes supporting our first responders (police, fire, public works), responding to emergencies, protecting people, property, and businesses, and engaging in emergency preparedness community outreach, public education and prevention activities.*

*Emergency Preparedness/Management*

*Restoring public trust*

*Improve Public Communications*

This agenda item represents the City Council General Plan Consistency (if applicable):

*Goal CSF 5: Provide Effective, High Quality, and Responsive Police and Fire Services to All Areas of the City*

*Goal SA 3: Protect the Safety of Life and Property by Ensuring Emergency Preparedness*

*Policy SA 4-8: Continue to work cooperatively with state, regional, and local public agencies with responsibility for fire protection.*

**FISCAL IMPACT:** There is no fiscal impact with receipt of this presentation.

**COMMUNITY OUTREACH:**

This item has been noticed in accordance with the Ralph M. Brown Act and was available for public viewing and review at least 72 hours prior to the scheduled meeting date. The City has also used social media to promote and advertise the City Council Meeting Agenda Items.

As of the writing of this staff report, the staff has not received any public comments. If staff receives public comment from interested parties following the publication and distribution of this staff report, such comments will be provided to the City Council as supplemental materials before or at the meeting.

**RESTATED RECOMMENDATION:**

That the City Council receive and file this informational presentation on the updated Office of the State Fire Marshal's Fire Hazard Severity Zone (FHSZ) map. No formal action is required.

**CITY COUNCIL OPTION(S):**

As this is an informational item, the Council can provide comments and direction to staff for future Mapa amendments.

**ATTACHMENT(S):**

1. Presentation Slides
2. Fire Hazard Severity Zones Local Responsibility Area
3. Local Responsibility Area Map (Sebastopol)
4. CALFIRE FAQ
5. California Department of Insurance FHSZ FAQ

**APPROVALS:**

Department Head Responsible for Agenda Item:

Dave Bray

Approval Date: 6-10-2025

CEQA Determination (Community Development/Planning):

Emi Theriault

Approval Date: 6.6.25

The proposed action is not a project under the California Environmental Quality Act (CEQA) as it is exempt under the General Rule pursuant to CEQA Guidelines Section 15061(b)(3).



Administrative Services (Financial):

Ana Kwong

Approval Date: June 6, 2025

Costs authorized in City Approved Budget: ☐ Yes ☐ No ☒ N/A

City Attorney Approval

Approval Date:

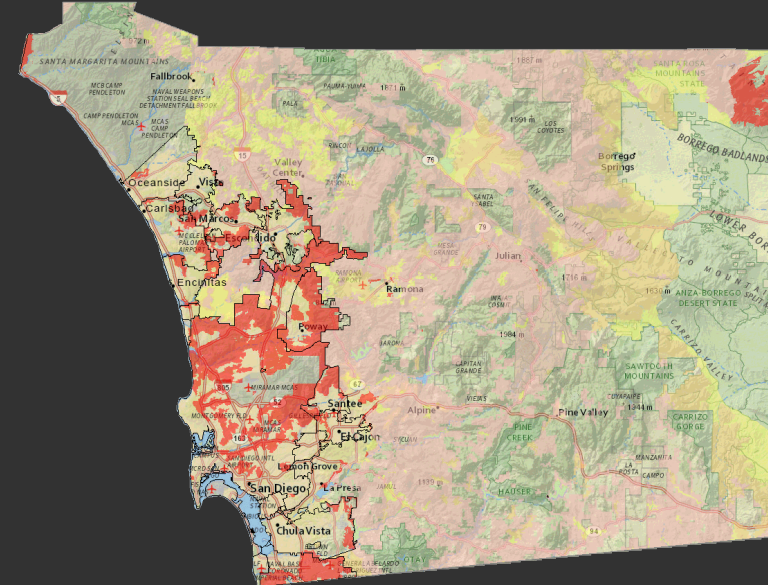
June 6, 2025

City Manager Approval:

Approval Date:

June 6, 2025

# Fire Hazard Severity Zones

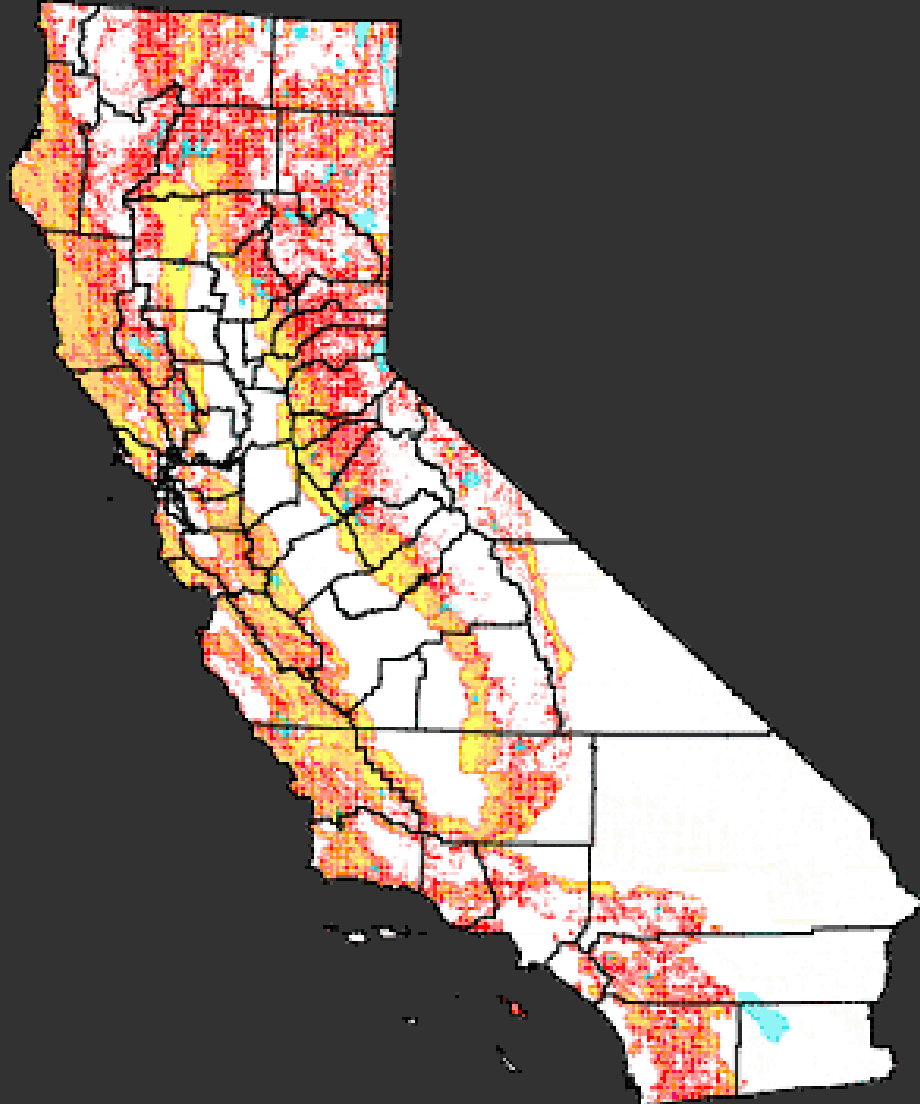


# ***CAL FIRE***





# Fire Hazard Severity Zones

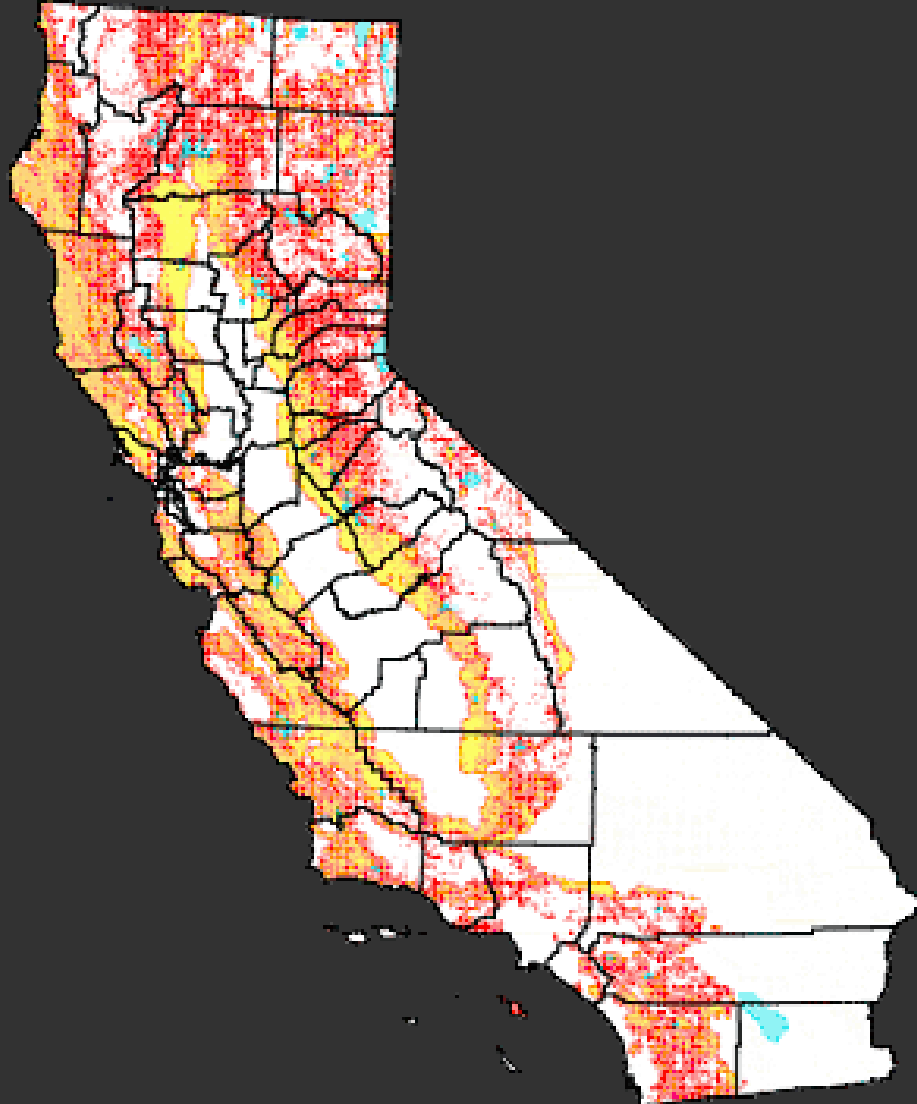


## What are the Zones?

- The maps are required by Government Code 51178 & 51179
- CAL FIRE is required by law to map areas of *significant* wildfire hazard. This is fulfilled, in part, by FHSZs
- Identify levels of fire hazard: 3 levels (Moderate, High, & Very High)



# Fire Hazard Severity Zones



*These zones indicate the probability of a wildfire breaking out and the expected behavior of wildfires based on factors such as terrain and historical weather patterns.*

*NOTE: We have TWO OPTIONS ONLY*

- 1. Adopt the map as shown, or*
- 2. Increase the hazard to High/Very High*

# Fire Hazard Severity Zones



## How are the Zones determined?

- 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.
- Factors: fire history, vegetation, flame length, blowing embers, proximity to wildland, terrain, and weather

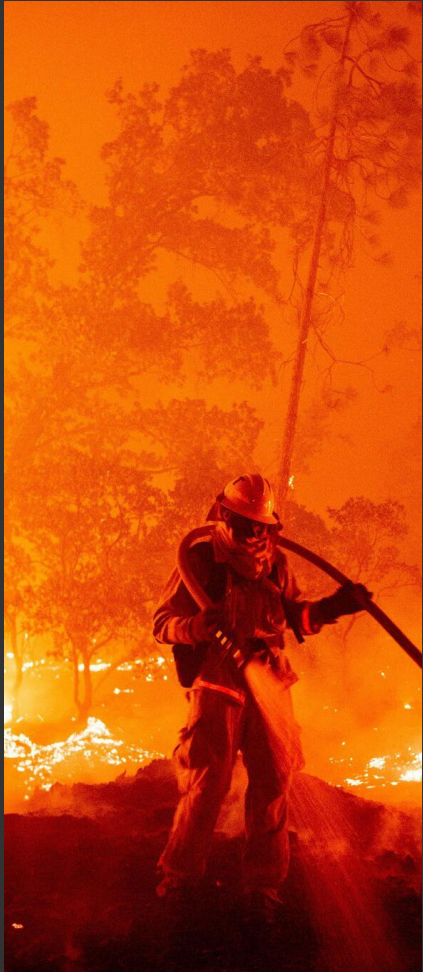




# Fire Hazard Severity Zones

## New Updates

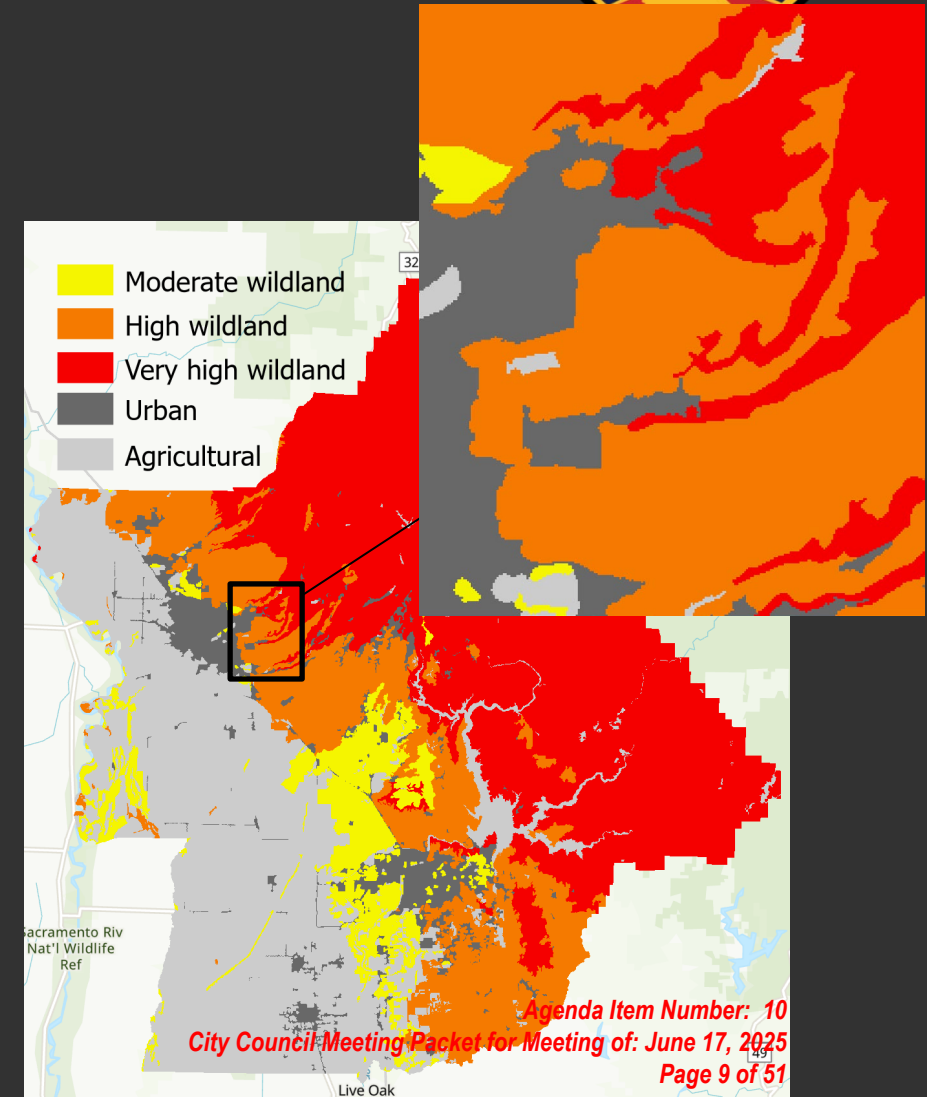
- Updated burn probabilities for wildland areas (inclusive of 2020 fires)
- Updated fire environment footprints (urban/developed)
- Updated Vegetation density for urban areas
- Inclusion of slope in the urban zoning model
- **Localized fire weather used in both wildland and urban models**
- **New firebrand production and transport model using discrete local wind vector distributions**



# Fire Hazard Severity Zones

## Wildland FHSZ

- Minimum size of 200 acres
- Burn probability
  - Based on fire occurrence from 1991-2020
- Fire intensity
  - Vegetation type
  - Slope
  - Local fire weather – how hot/dry/windy are the worst conditions at a given location (based on 2 km data from 2003-2018)



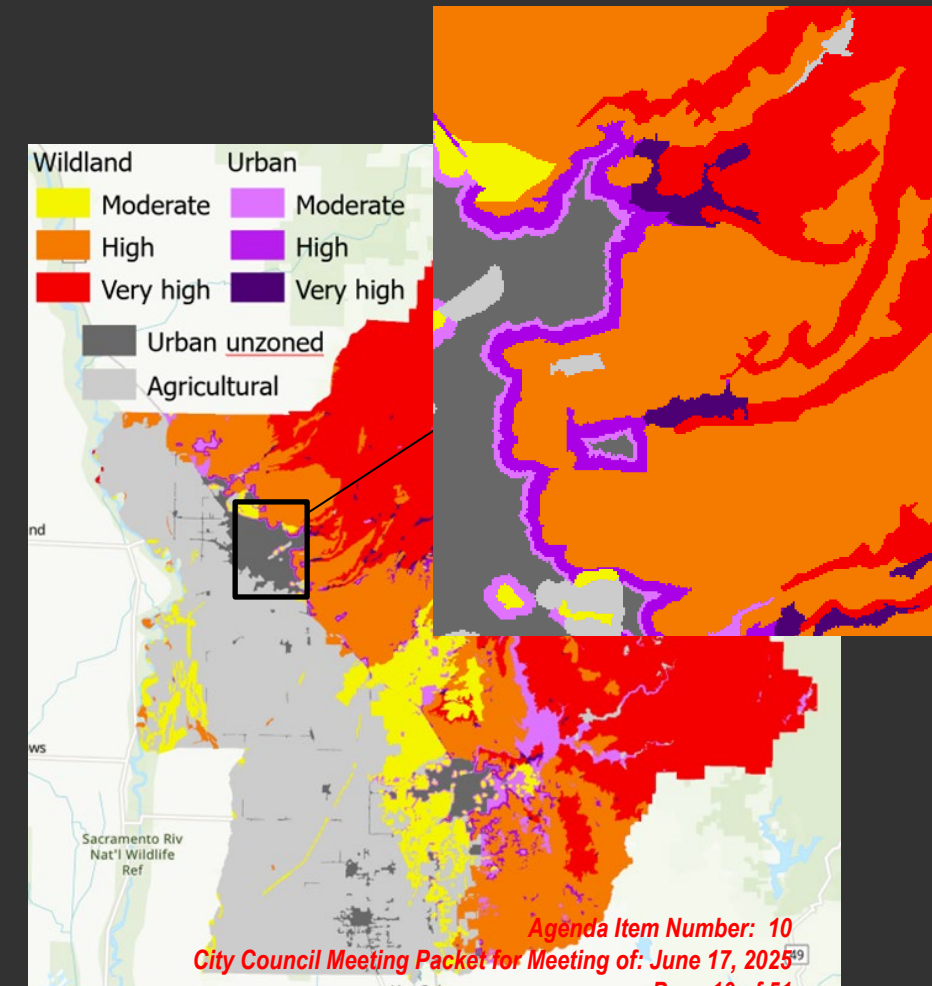




# Fire Hazard Severity Zones

## Urban FHSZ

- Minimum size of 20 acres for isolated islands of vegetation embedded in non-wildland.
- Based on distance to wildland and hazard level of adjacent wildland
- Ember production based on vegetation type and fire weather
- Ember transport based on wind speed/direction observed under the most extreme fire weather at a given location
- Width of moderate, high, and very high bands in urban areas is based on ember load, urban tree cover, and slope







# Fire Hazard Severity Zones



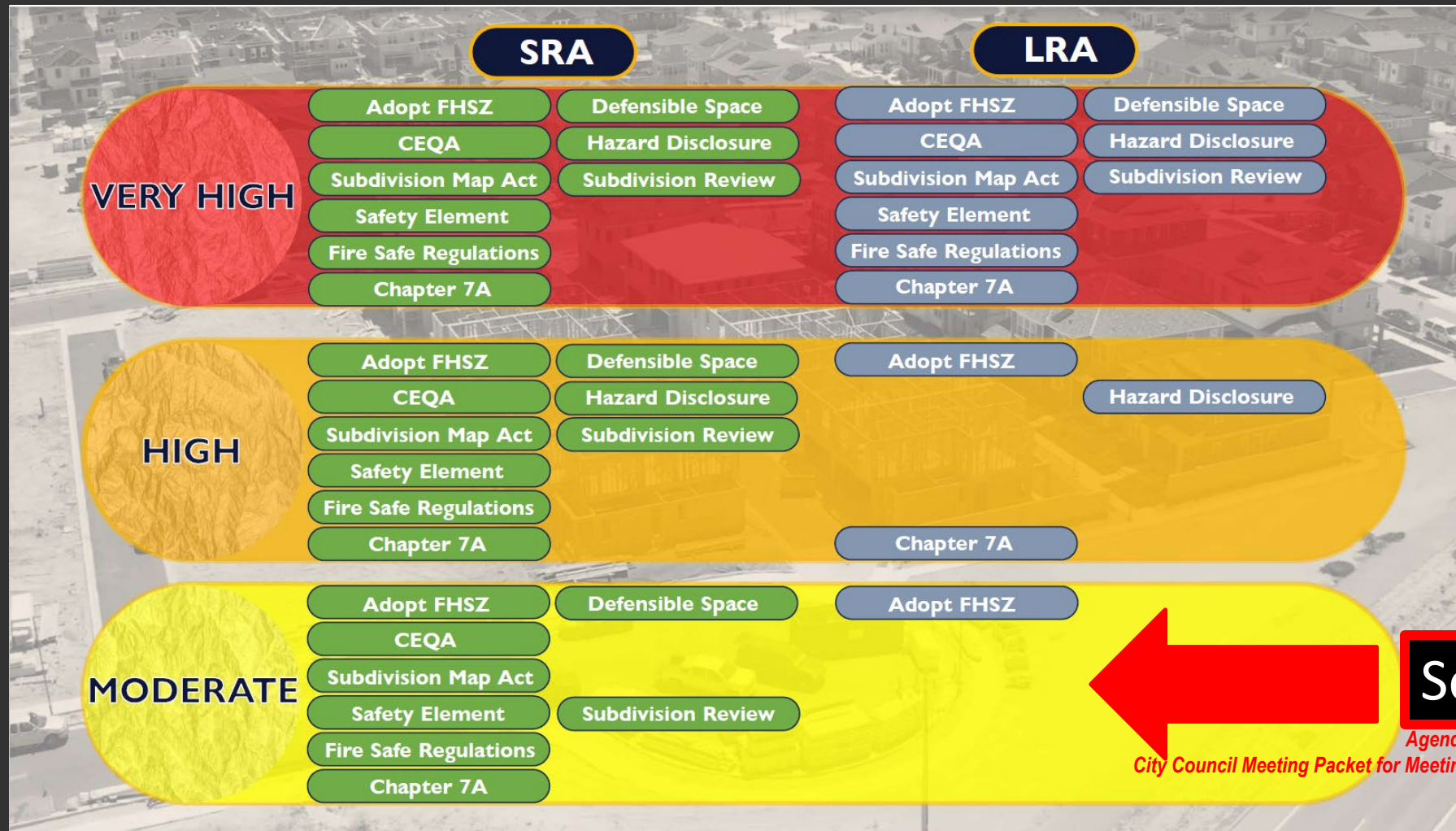
## What is the map for?

- Building standards for new construction in the Wildland-Urban Interface (California Building Code Chapter 7A)
- Property development standards such as road widths, water supply and signage (Fire Safe Regulations)
- Defensible Space Requirements (Government Code 51182)
- Natural hazard real estate disclosure

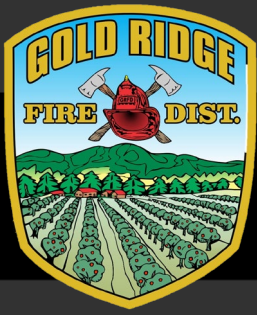


# Fire Hazard Severity Zones

## What's Impacted...



**Sebastopol**



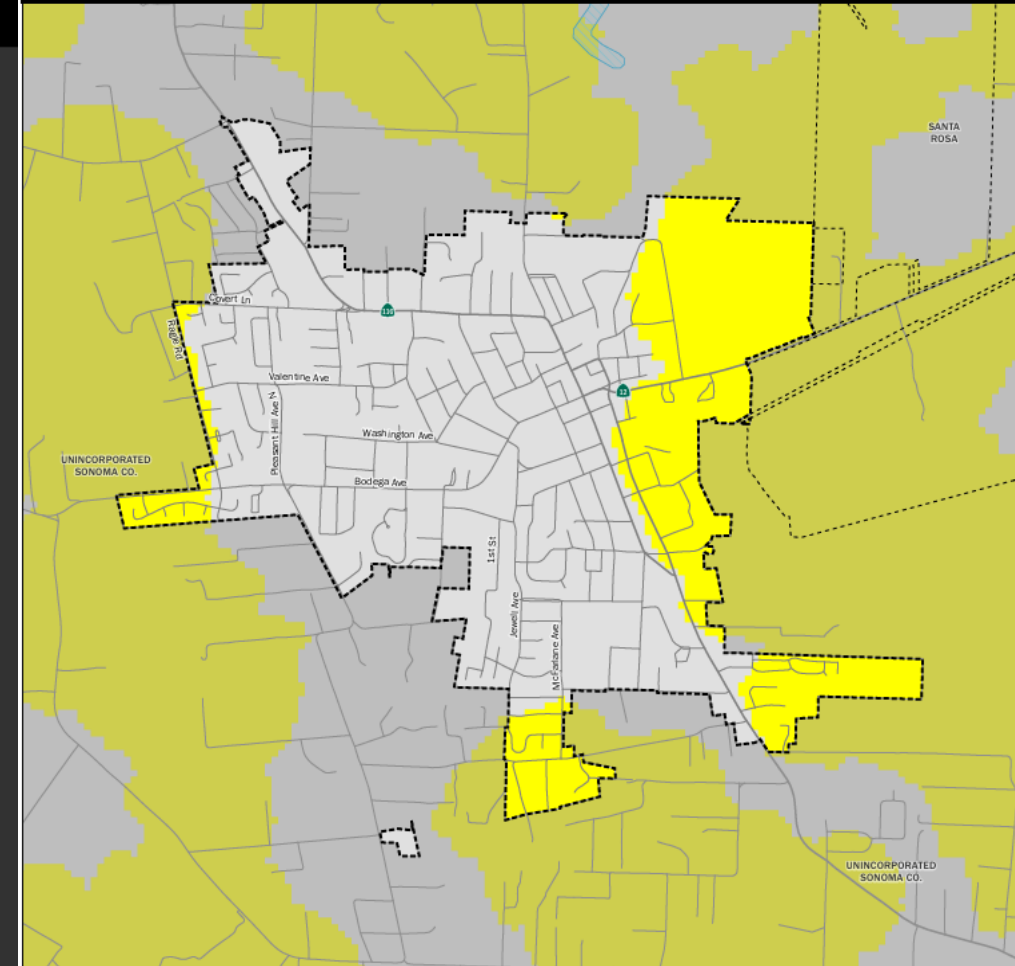
# SEBASTOPOL

- Most of the City of Sebastopol is Unzoned LRA (considered to have relatively low wildfire risk because little vegetation is present)
- The yellow areas indicate Moderate Hazard, which is the lowest available rating.
- This does NOT mean there is no risk.
- Homeowners should still create defensible space and harden their homes.



## Local Responsibility Area Fire Hazard Severity Zones

As Identified by the  
State Fire Marshal  
February 24, 2025



Fire Hazard Severity Zones (FHSZ) in Local Responsibility Area (LRA), as Identified by the State Fire Marshal

Moderate

Miles 0 0.2 0.4 0.6 0.8 1.0 1.2  
Kilometers 0 0.2 0.4 0.6 0.8 1.0 1.2

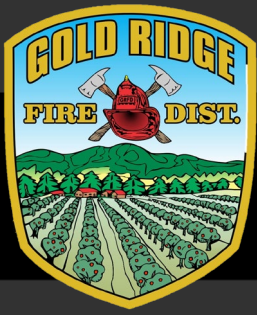
Projection: NAD 83 California Teale Albers  
Scale: 1:17,000 at 11" x 17"

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# HOMEOWNERS INSURANCE

- CALFIRE'S maps are intended to drive local planning decisions, NOT insurance decisions.

**3. If you are a homeowner and your zone changed from High Hazard to Very High Hazard, will this impact your insurance premiums or renewal ability?**

For many years, insurance companies have been using alternate wildfire risk tools for determining where they will write and renew policies, and how much premium to charge a policyholder, not the Fire Hazard Severity Zone maps. Therefore, **a change in designation on the maps for a single homeowner is unlikely to affect their insurance.** The reality is that more accurate risk information enables homeowners and communities to reduce their wildfire risks, and Commissioner Lara's new wildfire mitigation regulation clarifies what actions you should take to reduce wildfire risks. Once that regulation is fully implemented, if a homeowner or business owner takes those risk mitigation actions, they will be able to see a discount in their insurance premium.



# HOME HARDENING

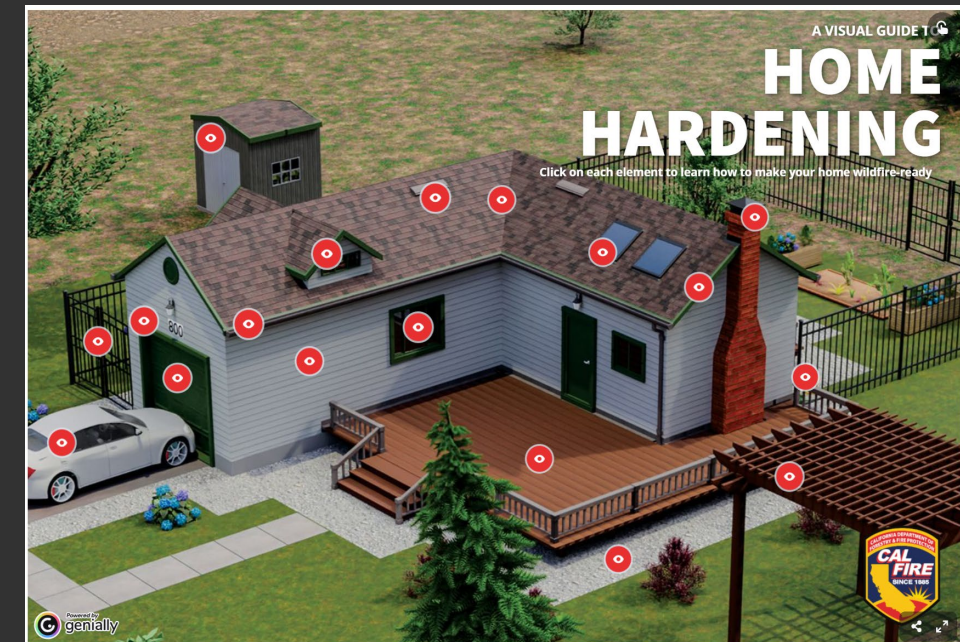


## Learn the 10 steps to being Safer from Wildfires

Every action under Safer from Wildfires will qualify you for an insurance discount. By doing more, you can save more.

[Read the full text of the new Safer from Wildfires insurance regulation.](#)

- **Class-A fire rated roof** – Most roofs qualify including asphalt shingles, concrete, brick, or masonry tiles, and metal shingles or sheets. Wood shake shingles are not Class A fire-resistant rated. [The Office of the State Fire Marshal maintains a list of tested and approved materials.](#)
- **5 foot ember resistant zone, including fencing** – Removing greenery and replacing wood chips with stone or decomposed granite 5 feet around your home prevents fire from getting a foot in the door. Replacing wood fencing connecting to your home with metal is critical because it can act like a candle wick leading fire straight to your home.
- **Ember- and fire-resistant vents** – Installing 1/16 to 1/8 inch noncombustible, corrosion-resistant metal mesh screens over exterior vents can keep wind-blown embers out of your house.
- **Non-combustible 6 inches at the bottom of exterior walls** – Having a minimum of 6 vertical inches measured from the ground up and from any attached horizontal surface like a deck can stop embers from accumulating and igniting your walls. Noncombustible materials include brick, stone, fiber-cement siding or concrete.
- **Enclosed eaves** – Installing soffits under your eaves can prevent heat and embers from getting trapped and igniting. When enclosing eaves, non-combustible or ignition resistant materials are recommended.
- **Upgraded windows** – Multi-paned windows are more resistant to breaking during a wildfire, which helps keep flames from entering. Multi-paned glass or added shutters all qualify.
- **Cleared vegetation, weeds and debris from under decks** – Noncombustible materials like concrete, gravel, or bare soil are permitted.
- **Removal of combustible sheds and other outbuildings to at least a distance of 30 feet** – These include sheds, gazebos, accessory dwelling units (ADUs), open covered structures with a solid roof, dog houses and playhouses.
- **Defensible space compliance** – following state and local laws requiring defensible space including trimming trees and removal of brush and debris from yard. See [CAL FIRE's defensible space page](#) and your local city or county for details.



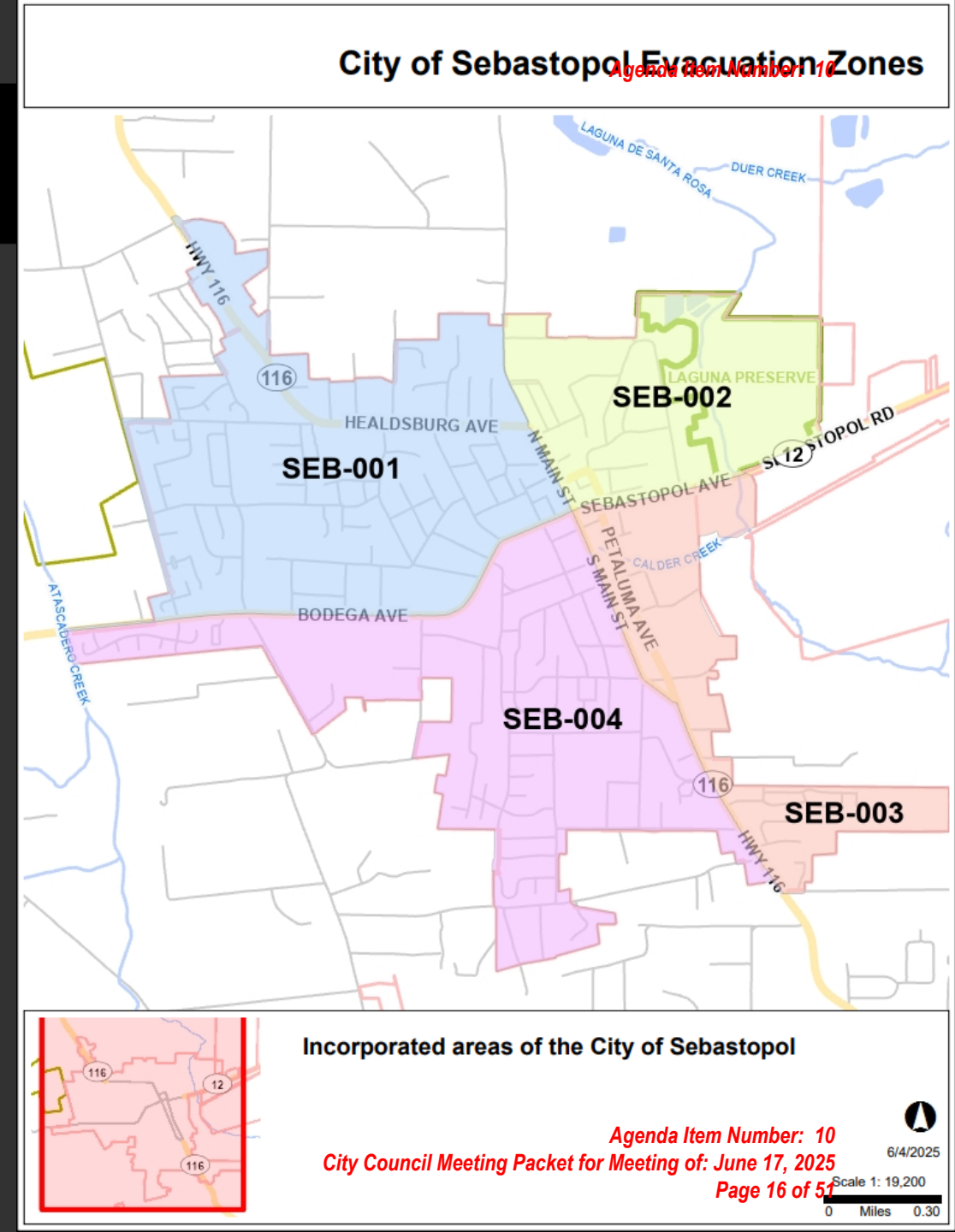
Source: CA Department of Insurance/Safer from Wildfires



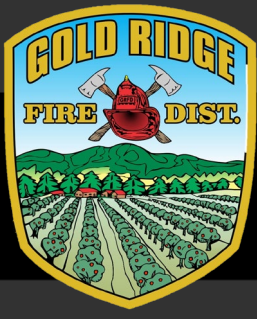


# EVACUATION ZONES

- Know your evacuation zone
- To learn your zone, you can search by address:
- <https://socoemergency.org/get-ready/evacuation-map/>







# EVACUATIONS

## Evacuation **WARNING**

- Means impending danger to your life or property.
- Start gathering important items for your family and pets. Get your GO BAG!
- Individuals who need extra time to evacuate should pack up and leave when a warning is issued.

## Evacuation **ORDER**

- Means there IS AN IMMEDIATE THREAT to you life and you need to leave right now!
- It is critical to follow all directions from law enforcement to ensure you and your family evacuate safely.



# STAY INFORMED

- SoCoAlert & Nixle require you to register
- All others do not require registration

## KNOW YOUR ALERTS

The City of Sebastopol uses multiple notifications and warning systems to make sure emergency alerts are delivered to the people who need the information.



### Emergency Alert System (EAS) - No Registration Required

National public warning system that will interrupt local broadcast tv and radio programming to provide an alert in the event of a large-scale emergency.



### Wireless Emergency Alerts (WEA) - No Registration Required

Urgent alerts sent as text-like messages to your mobile phone based on your location (you will only receive notification if you are in the area of the emergency). WEAs have three alert categories-- Imminent Threat, AMBER, Presidential. You must keep the factory settings on to your WEA- capable phone to receive a WEA.



### SoCoAlert - Registration Required

Emergency notification service providing Sonoma County first responders the ability to alert residents by landline or mobile phone, text message and email about imminent threats to life and property in specific impacted areas. Register all addresses that you'd like to receive alerts for (work, child's school, etc.). You don't have to be in the location of the emergency to receive alert.

Must register at [SoCoAlert.com](https://www.socoalert.com) OR call (866) 939-0911, press "0" at the menu, ask operator for assistance with registering for SoCoAlert.



### Nixle - Registration Required

Community information service managed by Sonoma County Fire District and Sonoma County Sheriff's Office. Community messages are sent to email, and for critical emergencies, Alert messages are sent via text message and email (notifications are NOT delivered by phone call). Customize your settings at [nixle.com](https://nixle.com) to control which types of notifications you receive. Must register at [nixle.com](https://nixle.com) or text your zip code to 888-777



### Local Radio and Television

Local news broadcasters to provide updates during an emergency. Tune radio to **1350 AM, 103.5 FM, 100.1 FM, 89.1 FM (bilingual), 98.7 FM (Spanish)**; watch preferred local TV news channel.



### Hi/Lo Sirens

Sebastopol police cars and fire department vehicles are outfitted with new Hi/Lo sirens, a different sound than traditional sirens. This European-style, 2-tone siren will only be used in an emergency to alert residents within specific areas of the need to evacuate.

### Other Ways to Stay Informed

Sebastopol Police Dept.  
Sebastopol Fire Dept.  
City of Sebastopol



More information on emergency alerts and notifications at [socoemergency.org](https://www.socoemergency.org)







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Thank you to the City of Santa Rosa for sharing their graphics.



# MAKE AN EVACUATION PLAN

## 12 WAYS TO PREPARE

<input type="checkbox"/>  Sign up for Alerts and Warnings	<input type="checkbox"/>  Make a Plan	<input type="checkbox"/>  Save for a Rainy Day	<input type="checkbox"/>  Practice Emergency Drills	<input type="checkbox"/>  Test Family Communication Plan	<input type="checkbox"/>  Safeguard Documents
<input type="checkbox"/>  Plan with Neighbors	<input type="checkbox"/>  Make Your Home Safer	<input type="checkbox"/>  Know Evacuation Routes	<input type="checkbox"/>  Assemble or Update Supplies	<input type="checkbox"/>  Get Involved in Your Community	<input type="checkbox"/>  Document and Insure Property

- How will I receive emergency alerts?
- What is my shelter plan?
- What is my evacuation route?
- What is my family communication plan?
- What is in my Go Bag?

Evacuations are coordinated by law enforcement.





# GO BAG SUGGESTIONS

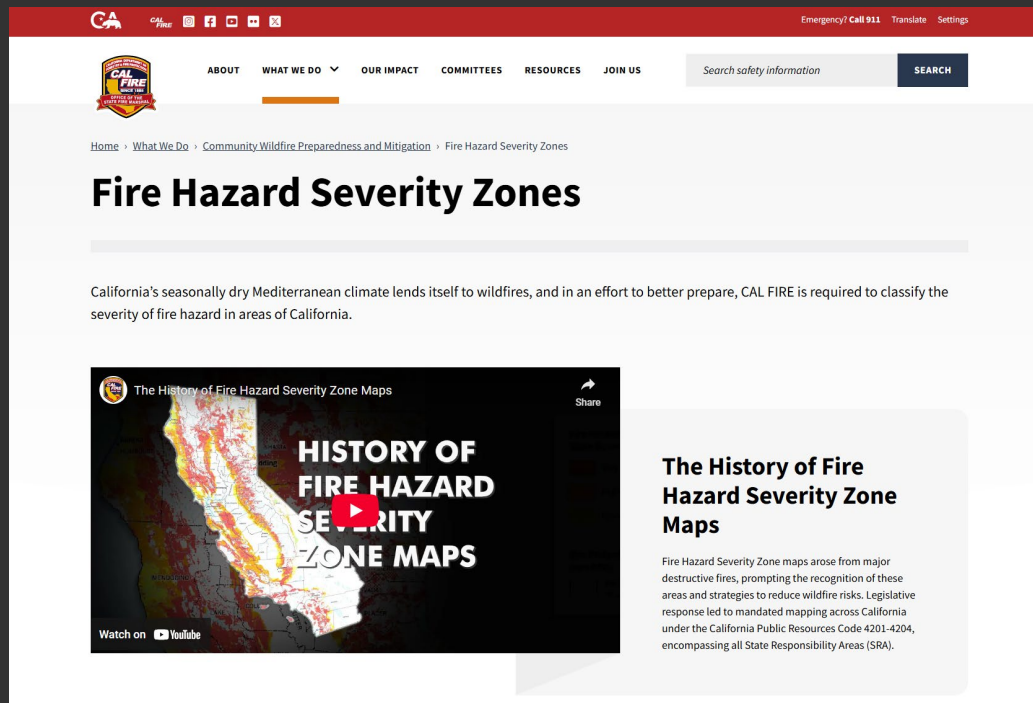
- 3-day supply Food & 3 gallons of water per person
- Important Documents
- Keys, Cash, & Credit Cards
- Prescriptions & Medicine
- Phone Charger & Backup Battery
- Change of Clothes & Eye Glasses
- Sanitation Supplies
- Flashlight
- Pet Food & Water, copies of Vaccinations

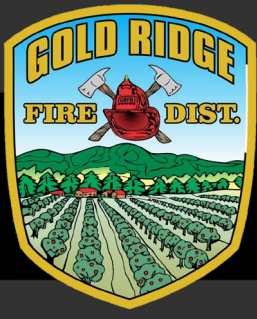




# Questions?

# osfm.fire.ca.gov/fhsz





# ADDITIONAL RESOURCES

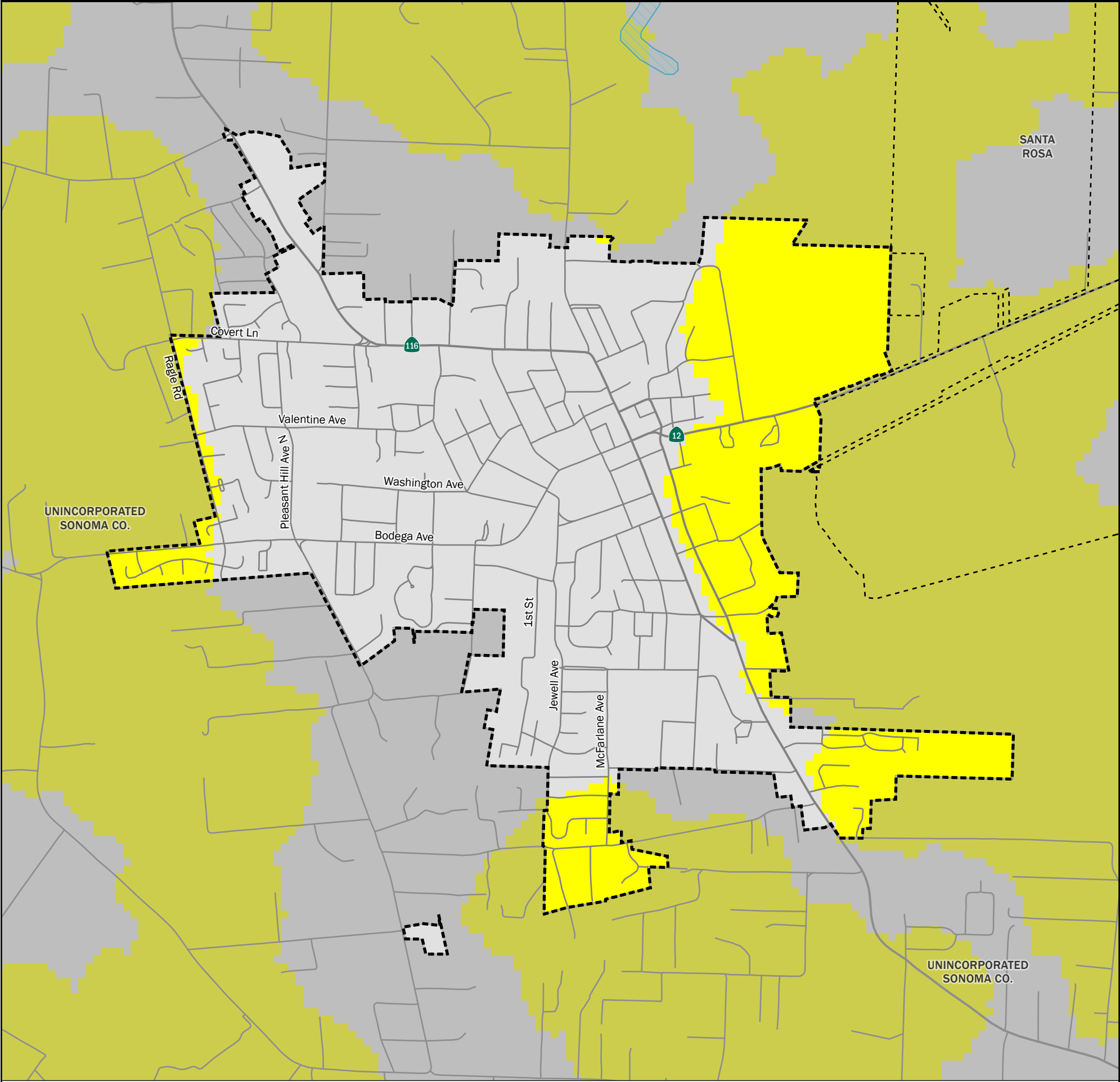
- ▶ [www.ReadyforWildfire.org](http://www.ReadyforWildfire.org)
- ▶ [www.Ready.gov](http://www.Ready.gov)
- ▶ [www.FIRESAFESONOMA.ORG](http://www.FIRESAFESONOMA.ORG)
- ▶ [www.INSURANCE.CA.GOV/-CONSUMERS/200-WRR/Safer-from-Wildfires.cfm](http://www.INSURANCE.CA.GOV/-CONSUMERS/200-WRR/Safer-from-Wildfires.cfm)
- ▶ <https://socoemergency.org/>
- ▶ [www.fire.ca.gov/home-hardening](http://www.fire.ca.gov/home-hardening)
- ▶ [www.ucanr.edu/site/homeowners-wildfire-mitigation-guide](http://www.ucanr.edu/site/homeowners-wildfire-mitigation-guide)





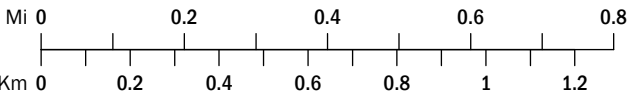
# Local Responsibility Area Fire Hazard Severity Zones

As Identified by the  
State Fire Marshal  
February 24, 2025



**Fire Hazard Severity Zones (FHSZ) in Local Responsibility Area (LRA), as Identified by the State Fire Marshal**

Moderate



Projection: NAD 83 California Teale Albers  
Scale: 1:17,000 at 11" x 17"

- Incorporated City
- Unzoned LRA
- Waterbody

Government Code section 51178 requires the State Fire Marshal to 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.

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Gavin Newsom, Governor, State of California  
Wade Crowfoot, Secretary for Natural Resources, CA Natural Resources Agency  
Joe Tyler, Director/Fire Chief, CA Department of Forestry and Fire Protection  
Daniel Berlant, State Fire Marshal, CA Department of Forestry and Fire Protection

Data Sources:  
CAL FIRE Fire Hazard Severity Zones (FHSZSRA23\_3, FHSZLRA\_25\_1)  
CAL FIRE State Responsibility Areas (SRA25\_1)  
City and County boundaries as of 10/22/24 (CA Board of Equalization)



# Fire Hazard Severity Zones Local Responsibility Area



# Fire Hazard Severity Zones

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## What is a Fire Hazard Severity Zone?

The State Fire Marshal shall identify areas in the State as Moderate, High, and Very High Hazard Severity Zones based on consistent statewide criteria and the severity of fire hazard that is expected to prevail in those areas. – [CA GOV 51178](#)

## When did Fire Hazard Severity Zones begin in Local Responsibility Area?

Assembly Bill 337 (Bates 1992), prompted by the devastating Oakland Hills fire of 1991, 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 FHSZ exist. – [CA GOV 51175](#)

## What do Fire Hazard Severity Zones measure?

The maps evaluate "Hazard", not "Risk". Hazard is based on physical conditions that create expected fire behavior over a 50-year period without considering short-term modifications. Risk is the potential damage a fire can do to the area under existing conditions, including fuel reduction projects, defensible space, and ignition resistant building construction. – [osfm.fire.ca.gov/fhsz](https://osfm.fire.ca.gov/fhsz)

## Will the new Fire Hazard Severity Zone maps affect my insurance?

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. Insurance risk models incorporate additional factors that change more frequently than those that CAL FIRE includes in its hazard mapping, which is built to remain steady.

– [California Department of Insurance](#)

## What are the requirements within Fire Hazard Severity Zones?

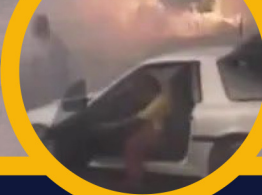
- Materials and Construction Methods for Exterior Wildfire Exposure – [CBC Chapter 7A](#)
- Natural hazard real estate disclosure at the time of sale – [CA CIV 1102.19 \(AB 38 2019\)](#)
- 100-foot defensible space clearance requirements – [CA GOV 51182](#)
- Property development standards such as road widths, water supply, and signage – [CA PRC 4290](#)
- Consideration during future development of Cities and Counties General Plan – [CA GOV 65302](#)

1980



Panorama Fire burns 28,800 acres, destroying 325 structures and resulting in 4 fatalities in San Bernardino.

1991



Tunnel Fire burns 1,600 acres, destroying 2,900 structures and resulting in 25 fatalities in the Oakland Hills.

PRC 4201 mandates that CAL FIRE develop Fire Hazard Severity Zones.

1982

Fire Hazard Severity Zone maps are created.

1985

The "Bates Bill" calls for CAL FIRE to identify Very High Fire Hazard Severity Zones in LRA.

1992

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# Frequently Asked Questions

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

You can search by address to find your current designation on the website: [osfm.fire.ca.gov/fhsz](https://osfm.fire.ca.gov/fhsz)

## Why are Fire Hazard Severity Zones being updated?

The hazard maps are being updated to more accurately reflect the zones in California that are susceptible to wildfire. The process will incorporate new science in local climate data and improved fire assessment modeling in determining hazard ratings. – [PRC 4125](#) and [GC 51178](#)

## What are the key elements of the Fire Hazard Severity Zone Model?

The model has two key elements: probability of an area burning and expected fire behavior under extreme fuel and weather conditions. The factors considered in determining fire hazard within wildland areas is 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. This is not a structure loss model, as key information regarding structure ignition is not included. – [osfm.fire.ca.gov/fhsz](https://osfm.fire.ca.gov/fhsz)

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

Embers spread wildfire because they can travel long distances in the wind and ignite vegetation, roofs, attics (by getting into vents), and decks. – [osfm.fire.ca.gov/fhsz](https://osfm.fire.ca.gov/fhsz)

## What is the difference between SRA and LRA?

State Responsibility Area (SRA) is a legal term defining the area where the State has financial responsibility for wildland fire protection and prevention. – [CA PRC 4102](#)

Local Responsibility Area (LRA) includes incorporated cities, urban regions, agriculture lands, and portions of the desert where the local government is responsible for wildfire protection. – [CA PRC 4125](#)

## How are Fire Hazard Severity Zones determined in Local Responsibility Areas?

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.

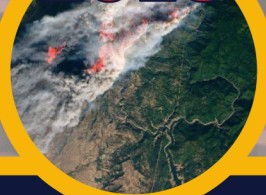
– [PRC 4202](#) and [GC 51178](#)

2017



Tubbs Fire burns 36,810 acres, destroying 5,643 structures and resulting in 22 fatalities in Santa Rosa.

2018



Camp Fire burns 153,336 acres, destroying 18,804 structures and resulting in 85 fatalities in Paradise.

CAL FIRE finalizes the Statewide FHSZ Model to include Very High FHSZ in LRA.

2007

AB 642 and SB 63 require CAL FIRE to identify Moderate and High FHSZ in LRA.

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2021

AB 211 requires local agency to designate by ordinance Moderate and High FHSZ in LRA.

2022

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## General

### What is a Fire Hazard Severity Zone or FHSZ?

[Public Resource Code 4202](#); The State Fire Marshal shall classify lands within State Responsibility Areas into Fire Hazard Severity Zones. Each zone shall embrace relatively homogeneous lands and shall be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread.

[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.

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

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 would utilize 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 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.

### What do Fire Hazard Severity Zones measure?

The Fire Hazard Severity Zone map reflects "hazard," not "risk". 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.



## General

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

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.

### Where do Fire Hazard Severity Zones apply?

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 also identify the Moderate and High Fire Hazard Severity Zones with the Very High in Local Responsibility Area (LRA).

### What are the uses of Fire Hazard Severity Zones?

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, and local governments may consider them in their general plan.

### When were the maps last updated?

In 2007, CAL FIRE updated the FHSZs for the entire State Responsibility Area (SRA). Between 2008-2011 the department worked with local governments to make recommendations of the Very High Fire Hazard Severity Zones within Local Responsibility Area (LRA).

### Why are fire hazard severity maps being updated?

The hazard maps are being updated to more accurately reflect the zones in California that are susceptible to wildfire. The hazard mapping process will incorporate new science in local climate data and improved fire assessment modeling in determining hazard ratings.





## General

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

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.

### **How are Fire Hazard Severity Zones determined?**

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.

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

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.

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

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. Classification outside of wildland areas is based on the fire hazard of the adjacent wildland and the probability of flames and embers threatening buildings.



## General

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

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

### **Why do waterbodies have a Fire Hazard Severity Zone Classification?**

All areas in State Responsibility Area, including water bodies, require a Fire Hazard Severity Zone designation. The 2007 FHSZ maps zoned all water as Moderate by default. In the 2023 FHSZ model we added a buffer of FHSZ from the surrounding wildland into water bodies to account for potential threat of embers to buildings on docks and house boats, as well as variation in reservoir height that occurs with drought.

### **How does CAL FIRE assist Local Governments in Fire Hazard Severity Zones?**

CAL FIRE's Land Use Planning Program is a specialized unit that provides support to local governments by providing fire safety expertise on the State's wildland urban interface building codes, wildfire safety codes, as well as helping in the development of the safety elements in general plans.

### **How can I search the Fire Hazard Severity Zone of a property?**

You can search by address to find your current designation on the web at: [osfm.fire.ca.gov/FHSZ](https://osfm.fire.ca.gov/FHSZ)



## State Responsibility Area

### What is State Responsibility Area or SRA?

SRA is a legal term defining the area where the state has financial responsibility for wildland fire protection and prevention. Incorporated cities and federal ownership are not included. Within the SRA, CAL FIRE is responsible for fire prevention and suppression. There are more than 31 million acres in SRA, with an estimated 1.7 million people and 800,000 existing homes.

### How is State Responsibility Area determined?

The Board of Forestry and Fire Protection (Board) classifies land as State Responsibility Area. The legal definition of SRA 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 SRA 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 SRA automatically, the Board typically reviews changes every five years.

### What Fire Hazard Severity Zones are in State Responsibility Area?

All of the 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 are the wildland urban interface (WUI) building codes in State Responsibility Area?

The WUI building codes ([California Building Code \(CBC\) Chapter 7A](#)) reduce the risk of embers fanned by wind-blown wildfires from igniting buildings. The codes for roofing, siding, decking, windows, and vents apply throughout all State Responsibility Area regardless of the fire hazard severity ranking. Ember-resistant building materials can be found at: <https://osfm.fire.ca.gov/divisions/fire-engineering-and-investigations/building-materials-listing/>



## State Responsibility Area

### **What is the difference between the various Fire Hazard Severity Zones?**

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.

### **Is the GIS data for Fire Hazard Severity Zones available for download?**

The data inputs used to develop the Fire Hazard Severity Zones are identified in the Initial Statement of Reasons (ISOR) Title 19 Development (ca.gov). CAL FIRE has developed an additional data package which consists of sequential modeling steps, including any data inputs that were not already publicly available and referenced in the ISOR. The data package encompasses 34 spatial datasets and 8 tables, provided in raster, polygon, and table format. These datasets are formatted for Esri ArcGIS software, except for four tables provided in Excel. Ten of the datasets are updated versions used to produce an edited SRA FHSZ map following the public comment period that ended April 4, 2023. Upon formal adoption of the FHSZ map, the final SRA FHSZ geospatial data file will become available. The data package is available on the FHSZ website Fire Hazard Severity Zones (ca.gov) under the science and methods banner.



## Local Responsibility Area

### What is Local Responsibility Area or LRA?

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.

### When did Fire Hazard Severity Zones begin in Local Responsibility Area?

Assembly Bill 337 (Bates, 1992) prompted by the devastating Oakland Hills Fire of 1991, 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 FHSZ exist. [Government Code 51175](#) then provides direction for the local jurisdiction to take appropriate action.

### How are Fire Hazard Severity Zones determined in Local Responsibility Areas?

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.

### What are the requirements for landowners in Fire Hazard Severity Zones in Local Responsibility Areas?

California's WUI building codes ([CBC Chapter 7A](#)) apply to the design and construction of new buildings located in High and Very High FHSZs 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 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. For information regarding home hardening and defensible space clearance, visit [www.readyforwildfire.org](http://www.readyforwildfire.org).

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

Yes, per [Government Code 51182](#) unless a local government has passed a more stringent requirement, the 100-foot defensible space clearance applies. For information regarding home hardening and defensible space clearance, visit [www.readyforwildfire.org](http://www.readyforwildfire.org).





## Local Responsibility Area

### **What is the process for developing Fire Hazard Severity Zones in the Local Responsibility Area?**

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.

### **How are the new Fire Hazard Severity Zones impacting development?**

Many of the changes expanding Fire Hazard Severity Zones in Local Responsibility Areas 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.

### **When will the Local Responsibility Area Map be released?**

The Local Responsibility Area map process will happen after the State Responsibility Area process has been completed, which is estimated to occur in winter of 2025.

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

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.

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

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.

# LRA Legislation Factsheet

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## Assembly Bill No.337

An act to add Chapter 6.8 (commencing with Section 51175) to Part 1 of Division 1 of Title 5 of the Government Code, and to amend Section 13108.5 of the Health and Safety Code, relating to fire protection.

*[Enrolled, January 28, 1991]*

**AB 337**, Bates. Very high fire hazard severity zones.

- (1) Under existing law, the State Board of Forestry is required to classify all lands within the state, in accordance with prescribed criteria, for the purpose of determining areas in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state.

This bill would declare that the prevention of fires is not a municipal affair but is instead, a matter of statewide concern, and would make a finding and declaration of the Legislature that its provisions apply to all local agencies, including, but not limited to, charter cities, charter counties, and charter cities and counties. The bill would prohibit that finding from limiting the authority of a local agency, as defined, from imposing more restrictive fire and panic safety requirements, as otherwise authorized by law.

The bill would state that it is not the intent of the Legislature to limit or restrict the authority of a local agency to impose more restrictive fire and panic safety requirements, as otherwise authorized by law.

This bill would require the Director of Forestry and Fire Protection to identify areas in the state as very high fire hazard severity zones within all counties pursuant to a prescribed schedule. The bill would require local agencies, as defined, to designate, by ordinance, very high fire hazard severity zones in their jurisdiction after receiving recommendations from the director, except as prescribed. The bill would authorize local agencies to include or exclude areas following certain findings and would require changes made by local agencies to be final and not rebuttable by the director. By requiring local agencies to designate very high fire hazard severity zones within their jurisdictions, this bill would impose a state-mandated local program. The bill would require the State Fire Marshal to prepare and adopt a model ordinance that provides for the establishment of any high fire hazard security zones.

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## Assembly Bill No.337 (Continued)

- (2) Under existing law, any person who owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any mountainous area or forest-covered lands, brush-covered lands, or grass-covered lands, or any land that is covered with flammable material, is required to undertake specified fire protection measures, including the maintenance of specified firebreaks.

The bill would enact requirements of this nature for any person who owns, leases, controls, operates, or maintains, any occupied dwelling or occupied structure in, upon, or adjoining any mountainous area, forest-covered land, brush-covered land, grass-covered land, or land covered with flammable material, which area or land is within a very high fire hazard severity zone, as described in (1).

The bill would authorize local agencies to exempt certain structures and would exempt certain land or water areas.

The bill would make violation of these requirements an infraction or misdemeanor, as specified, thereby imposing a state-mandated local program by creating a new crime, and would specify related matters.

This bill would require local agencies to notify owners of property of violation and would authorize local agencies to correct the conditions and make a lien upon the property, as prescribed. By creating these requirements, this bill would impose a state-mandated local program.

The bill would permit a violation of these requirements to be considered a public nuisance, as specified.

- (3) Existing law requires the State Fire Marshal to adopt, amend, and repeal regulations for roof coverings and openings into the attic areas of buildings in those fire hazard severity zones in state responsibility lands as designated by the director. Existing law requires the director to classify lands within state responsibility areas into fire hazard severity zones.

This bill would instead require the State Fire Marshal to propose, and would require the State Building Standards Commission to adopt, amend, and repeal those regulations. The bill would also require the State Fire Marshal to propose, and would require the State Building Standards Commission to adopt, amend, and repeal, those regulations for buildings in very high fire hazard severity zones in state responsibility lands, designated by the director, and in very high fire hazard severity zones as described in (1). The bill would require roofs on all new buildings and certain existing buildings in both of those zones to be at least a class B roof that complies with Standard 32-7 of the Uniform Building Code, as adopted in the California Building Standards Code. The bill would impose requirements on installers and roofing materials and make other related changes. The bill would exempt historic buildings, as defined, from these provisions.

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## Senate Bill No.63

### CHAPTER 382

An act to amend Sections 51177, **51178, 51178.5**, 51182, and 51189 of the **Government Code**, to amend Section 13108.5 of the Health and Safety Code, and to amend Sections 4124.5 and 4291 of, and to add and repeal Sections 4123.8, 4291.5, and 4291.6 of, the Public Resources Code, relating to fire prevention.

*[Approved by Governor September 28, 2021. Filed with Secretary of State September 28, 2021.]*

**SB 63**, Stern. Fire prevention: vegetation management: public education: grants: defensible space: fire hazard severity zones.

- (1) Existing law requires the Director of Forestry and Fire Protection to identify areas of the state as very high fire hazard severity zones based on specified criteria. Existing law requires a local agency, within 30 days after receiving a transmittal from the director that identifies very high fire hazard severity zones, to make the information available for public review, as provided. This bill, among other things, would also require the director to identify areas of the state as moderate and high fire hazard severity zones. The bill would modify the factors the director is required to use to identify areas into fire hazard severity zones, as provided. The bill would require a local agency to make this information available for public review and comment, as provided. By expanding the responsibility of a local agency, the bill would impose a state-mandated local program.

This bill would also make conforming changes.

- (2) Existing law requires a person who owns, leases, controls, operates, or maintains an occupied dwelling or structure in, upon, or adjoining a mountainous area, forest-covered land, brush-covered land, grass-covered land, or land that is covered with flammable material that is within a very high fire hazard severity zone, as designated by a local agency, or a building or structure in, upon, or adjoining those areas or lands within a state responsibility area, to maintain a defensible space of 100 feet from each side and from the front and rear of the structure, as specified. Existing law authorizes a greater distance than specified above on the specified land in a very high fire hazard severity zone. Existing law specifies that clearance beyond the property line may only be required if state law, local ordinance, rule, or regulation includes certain findings and specifies that clearance on adjacent property shall only be conducted following written consent by the adjacent landowner.

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## Amended by Senate Bill No.63

### 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.

*(Amended by Stats. 2021, Ch. 382, Sec. 2.5. (SB 63) Effective January 1, 2022.)*

### Government Code 51178.5

Within 30 days after receiving a transmittal from the State Fire Marshal that identifies fire hazard severity zones pursuant to Section 51178, a local agency shall make the information available for public review and comment. The information shall be presented in a format that is understandable and accessible to the general public, including, but not limited to, maps.

*(Amended by Stats. 2021, Ch. 382, Sec. 3.5. (SB 63) Effective January 1, 2022.)*

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## Assembly Bill No. 211

CHAPTER 574

An act to amend Sections 11891, 11893, 12581, 12996, 12998, 12999.4, and 12999.5 of, and to add Sections 12999.6 and 13001 to, the Food and Agricultural Code, **to amend Section 51179 of the Government Code**, to amend Sections 44274.10, 44274.11, 44274.12, 44274.13, and 44274.14 of the Health and Safety Code, to amend Sections 3113, 4799.05, 14503.5.1, 14538, 14549.2, 14581, 42052, and 42060 of, to add Sections 14537.5, 14548, 14555, and 21166.3 to, to add Part 5 (commencing with Section 75250) to Division 44 of, and to repeal Section 75250.1 of, the Public Resources Code, to amend Section 43152.6 of, and to amend and repeal Section 43152.10 of, the Revenue and Taxation Code, to amend Section 13198 of the Water Code, to amend the Budget Act of 2021 (Chapters 21, 69, and 240 of the Statutes of 2021) by amending Item 8570-002-0001 of Section 2.00 of that act, and to amend the Budget Act of 2021 (Chapter 44 of the Statutes of 2022) by amending Items 3540-101-0001 of Section 2.00 of that act, relating to public resources, and making an appropriation therefor, to take effect immediately, bill related to the budget.

*[Approved by Governor September 27, 2022. Filed with Secretary of State September 27, 2022.]*

**AB 211**, Committee on Budget. Public resources trailer bill.

- (2) Existing law requires the State Fire Marshal to identify areas of the state as moderate, high, and very high fire hazard severity zones based on specified criteria. Existing law requires a local agency to designate, by ordinance, very high fire hazard severity zones in its jurisdiction within 120 days of receiving recommendations from the State Fire Marshal. Existing law authorizes a local agency, at its discretion, to include areas within the jurisdiction of the local agency, not identified as very high fire hazard severity zones by the State Fire Marshal, as very high fire hazard severity zones following a finding supported by substantial evidence, as provided.

This bill would additionally require a local agency to designate, by ordinance, moderate and high fire hazard severity zones within 120 days of receiving recommendations from the State Fire Marshal. By expanding the responsibility of a local agency, the bill would impose a state-mandated local program. The bill would additionally authorize a local agency, at its discretion, to include areas within the jurisdiction of the local agency, not identified as moderate and high fire hazard severity zones by the State Fire Marshal, as moderate and high fire hazard severity zones, respectively. The bill would prohibit the local agency from decreasing the level of fire hazard severity zone as identified by the State Fire Marshal for any area within the jurisdiction of the local agency, as provided.

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## Amended by Assembly Bill No. 211

### Government Code 51179

- (a) A local agency shall designate, by ordinance, moderate, high, and very high fire hazard severity zones in its jurisdiction within 120 days of receiving recommendations from the State Fire Marshal pursuant to Section 51178.
- (b) (1) A local agency may, at its discretion, include areas within the jurisdiction of the local agency, not identified as very high fire hazard severity zones by the State Fire Marshal, as very high fire hazard severity zones following a finding supported by substantial evidence in the record that the requirements of Section 51182 are necessary for effective fire protection within the area.  
  
(2) A local agency may, at its discretion, include areas within the jurisdiction of the local agency, not identified as moderate and high fire hazard severity zones by the State Fire Marshal, as moderate and high fire hazard severity zones, respectively.  
  
(3) A local agency shall not decrease the level of fire hazard severity zone as identified by the State Fire Marshal for any area within the jurisdiction of the local agency, and, in exercising its discretion pursuant to paragraph (2), may only increase the level of fire hazard severity zone as identified by the State Fire Marshal for any area within the jurisdiction of the local agency.
- (c) The local agency shall transmit a copy of an ordinance adopted pursuant to subdivision (a) to the State Board of Forestry and Fire Protection within 30 days of adoption.
- (d) Changes made by a local agency to the recommendations made by the State Fire Marshal shall be final and shall not be rebuttable by the State Fire Marshal.
- (e) The State Fire Marshal shall prepare and adopt a model ordinance that provides for the establishment of very high fire hazard severity zones.
- (f) Any ordinance adopted by a local agency pursuant to this section that substantially conforms to the model ordinance of the State Fire Marshal shall be presumed to be in compliance with the requirements of this section.
- (g) A local agency shall post a notice at the office of the county recorder, county assessor, and county planning agency identifying the location of the map provided by the State Fire Marshal pursuant to Section 51178. If the agency amends the map, pursuant to subdivision (b) or (c) of this section, the notice shall instead identify the location of the amended map.

*(Amended by Stats. 2022, Ch. 574, Sec. 10. (AB 211) Effective September 27, 2022.)*

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## Increasing Fire Hazard Severity Zone (FHSZ) Area and Designation

**Government Code section 51179** requires a local agency to designate, by ordinance, moderate, high, and very high FHSZ within 120 days of receiving the identified FHSZ's from the State Fire Marshal pursuant to Section 51178.

The law does not allow for a local jurisdiction to request changes or provide comments to the State Fire Marshal on the FHSZ designations. However, a local agency may choose to increase the designation of a FHSZ from the FHSZ identified by the State Fire Marshal, or designate areas as having a FHSZ that were not designated in a FHSZ by the State Fire Marshal. This may occur because FHSZ zone edges in the maps and data from the State Fire Marshal are not aligned with parcel boundaries or roads that some may consider for lines of convenience when adopting ordinances. A local agency is not allowed to reduce the designation of a FHSZ classification from the State Fire Marshal (i.e. a local agency cannot make an area designated as High by the State Fire Marshal, Moderate in its adopted ordinance).

However, a local jurisdiction can increase the designation from the one identified by the State Fire Marshal. If a local agency decides to increase the designation of a FHSZ, it may do so if it does the following:

1. If increasing the designation to Very High, a local agency must make a finding supported by substantial evidence in the record that the requirements of Government Code section 51182 are necessary for effective fire protection.
2. If increasing the designation to Moderate or High, a local agency may do this at its discretion.

If a local agency decides to include areas in its FHSZ adopted ordinance not identified as being in a FHSZ by the State Fire Marshal, it may include those areas if it does the following:

1. If including areas not identified as being in a FHSZ and designating it as Very High, a local agency must make a finding supported by substantial evidence in the record that the requirements of Government Code section 51182 are necessary for effective fire protection.
2. If including areas not identified as being in a FHSZ and designating it as Moderate or High, a local agency may do this at its discretion.



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## Land Use Planning Program

CAL FIRE's Land Use Planning Program is a specialized unit that provides support to local governments by providing fire safety expertise on the State's wildland urban interface building codes, as well as collaborating in the development of Safety Elements in General Plans.



For More Information  
[osfm.fire.ca.gov/fhsz](https://osfm.fire.ca.gov/fhsz)



## FREQUENTLY ASKED QUESTIONS ABOUT: *2024 Fire Hazard Severity Zones*

### Fire Hazard Severity Zones Explained

- **What is a “Fire Hazard Severity Zone,” or FHSZ?**
  - **Answer:** Public Resource Code 4202; The State Fire Marshal shall classify lands within state responsibility areas into fire hazard severity zones. Each zone shall embrace relatively homogeneous lands and shall be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread. 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.
- **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 will incorporate new science in local climate data and improved fire assessment modeling in determining hazard ratings.
- **What do Fire Hazard Severity Zones measure?**
  - **Answer:** The Fire Hazard Severity Zone map evaluates “hazard,” not “risk”. 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.
- **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.
- **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, and local governments may consider them in their general plan. **Agenda Item Number: 10**

- **Is there an easy way to determine the Fire Hazard Severity Zone of my property?**
  - **Answer:** You can search by address to find your current designation on the web at: [osfm.fire.ca.gov/FHSZ](https://osfm.fire.ca.gov/FHSZ)
- **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.
- **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.
- **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**

- **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.

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- **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.
- **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.
- **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.

### State Regulated Area Questions

- **When were the maps last updated?**
  - **Answer:** The Office of the State Fire Marshal began the regulatory process for the State Responsibility Area (SRA) in December 2022, the final maps were adopted on January 31, 2024, and became effective April 1, 2024.
- **What is "State Responsibility Area," or SRA?**
  - **Answer:** SRA is a legal term defining the area where the state has financial responsibility for wildland fire protection and prevention. Incorporated cities and federal ownership are not included. Within the SRA, CAL FIRE is responsible for fire prevention and suppression. There are more than 31 million acres in SRA, with an estimated 1.7 million people and 800,000 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 SRA 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 SRA 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 SRA automatically, the Board typically reviews changes every five years.



- **What Fire Hazard Severity Zones are in State Responsibility Area?**
  - **Answer:** All of the 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 are the wildland urban interface (WUI) building codes in State Responsibility Area?**
  - **Answer:** The WUI building codes (California Building Code (CBC) Chapter 7A) reduce the risk of embers fanned by wind-blown wildfires from igniting buildings. The codes for roofing, siding, decking, windows, and vents apply throughout all state responsibility area regardless of the fire hazard severity ranking. Ember-resistant building materials can be found at: <https://osfm.fire.ca.gov/divisions/fire-engineering-and-investigations/buildingmaterials-listing/>
- **Is the GIS data for Fire Hazard Severity Zones available for download?**
  - **Answer:** The data inputs used to develop the Fire Hazard Severity Zones are identified in the Initial Statement of Reasons (ISOR) [Title 19 Development \(ca.gov\)](#). CAL FIRE has developed an additional data package which consists of sequential modeling steps, including any data inputs that were not already publicly available and referenced in the ISOR. The data package encompasses 34 spatial datasets and 8 tables, provided in raster, polygon, and table format. These datasets are formatted for Esri ArcGIS software, except for four tables provided in Excel. Ten of the datasets are updated versions used to produce an edited SRA FHSZ map following the public comment period that ended April 4, 2023. Upon formal adoption of the FHSZ map, the final SRA FHSZ geospatial data file will become available. The data package is available on the FHSZ website [Fire Hazard Severity Zones \(ca.gov\)](#) under the science and methods banner.
- **Why do waterbodies have a Fire Hazard Severity Zone Classification?**
  - **Answer:** All areas in State Responsibility Area, including water bodies, require a fire hazard severity zone designation. The 2007 FHSZ maps zoned all water as moderate by default. In the 2023 FHSZ model we added a buffer of FHSZ from the surrounding wildland into water bodies to account for potential threat of embers to buildings on docks and house boats, as well as variation in reservoir height that occurs with drought.

### Local Regulated Area Questions

- **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.
- **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.
- **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.

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- **What are the requirements for landowners in FHSZs in local responsibility areas?**
  - **Answer:** California's WUI building codes (CBC Chapter 7A) apply to the design and construction of new buildings located in High and Very High FHSZs 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 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. For information regarding "home hardening" and defensible space clearance, visit [www.ReadyForWildfire.org](http://www.ReadyForWildfire.org).
- **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 unless a local government has passed a more stringent requirement, the 100-foot defensible space clearance applies. For information regarding "home hardening" and defensible space clearance, visit [www.ReadyForWildfire.org](http://www.ReadyForWildfire.org).
- **How does CAL FIRE assist Local Governments in Fire Hazard Severity Zones?**
  - **Answer:** CAL FIRE's Land Use Planning Program is a specialized unit that provides support to local governments by providing fire safety expertise on the State's wildland urban interface building codes, wildfire safety codes, as well as helping in the development of the safety elements in general plans.
- **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.
- **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.
- **When will the Local Responsibility Area Map be released?**
  - **Answer:** The Local Responsibility Area Map Process will happen after the State Responsibility Area process has been completed, which is estimated to occur in the winter of 2025.
- **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.

- **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.

**Resources, Additional Information, and Contact Information**

- To find the current FHSZ designation for a property, visit FHSZ Map Viewer (ca.gov).
- Helpful links:
  - FHSZ Website:
    - [osfm.fire.ca.gov/FHSZ](https://osfm.fire.ca.gov/FHSZ)
  - FHSZ Map Viewer:
    - [FHSZ Map Viewer \(ca.gov\)](https://FHSZMapViewer.ca.gov)
- Contacts for FHSZ for Public Questions:
  - (916) 633-7655
  - [FHSZinformation@fire.ca.gov](mailto:FHSZinformation@fire.ca.gov)

# RICARDO LARA

## INSURANCE COMMISSIONER

California Department of Insurance

### Q&A – Insurance and CAL FIRE Fire Hazard Severity Zone Maps

#### 1. How will the updated CAL FIRE maps affect insurance availability and affordability?

CAL FIRE's maps are intended to drive local planning decisions, not insurance decisions. Under Commissioner Lara's new regulation finalized in October 2022, insurance companies must provide discounts for wildfire safety actions such as community mitigation and home-hardening, which CAL FIRE's maps do not assess. In addition, insurance companies are already using risk analysis tools and models that go beyond CAL FIRE's proposed maps in determining what properties they will underwrite.

Commissioner Lara's new wildfire safety regulation will help increase access to insurance by promoting wildfire safety across the state. Reducing wildfire risks throughout the state is the primary way we can make insurance more available and affordable, and our regulation is a major step towards that goal. CAL FIRE's maps support that goal through improving public education about hazard and the need for safety preparation.

#### 2. How will these maps benefit the public?

Public education about where current wildfire hazards exist is essential to reducing the threat to local communities and maintaining access to available and affordable insurance. When communities know and understand their risks, they can plan and prepare.

In addition, the Department's [first-ever report on climate insurance](#) recommended updated wildfire hazard mapping to improve public safety.

#### 3. If you are a homeowner and your zone changed from High Hazard to Very High Hazard, will this impact your insurance premiums or renewal ability?

For many years, insurance companies have been using alternate wildfire risk tools for determining where they will write and renew policies, and how much premium to charge a policyholder, not the Fire Hazard Severity Zone maps. Therefore, a change in designation on the maps for a single homeowner is unlikely to affect their insurance. The reality is that more accurate risk information enables homeowners and communities to reduce their wildfire risks, and Commissioner Lara's new wildfire mitigation regulation clarifies what actions you should take to reduce wildfire risks. Once that regulation is fully implemented, if a homeowner or business owner takes those risk mitigation actions, they will be able to see a discount in their insurance premium.

#### 4. How is the state addressing wildfire mitigation?

By design, CAL FIRE's maps are focused on long-range wildfire hazard, which includes only certain variables, like wind, vegetation, ember production and movement, climate, topography, and fire history. CAL FIRE's maps will give up to date information to communities about the level of wildfire hazard they face, which could help target resources at the state and local level. Expanded state grant programs and Commissioner Lara's new wildfire safety regulation are aimed at reducing wildfire risks to communities through programs such as Firewise USA and the new Fire Risk Reduction Community designation from the California Board of Forestry and Fire Protection.