

# San Leandro Fire Hazard Severity Zone (FHSZ) Map Update

May 19, 2025

# Why We're Here

- Repeal of 2009 ordinance
- Adoption of newly released 2025 FHSZ maps



# What Are Fire Hazard Severity Zones?

- Created by CAL FIRE
- Zones are used to classify level of wildfire hazard based on factors like fuel load, topography, weather, and fire history
  - Measure \*hazard\* (not risk)
- Zones inform building standards, land use planning, insurance, and public safety measures



# A Brief History of Fire Hazard Zones

Year	Event
Pre-2000s	No statewide fire hazard mapping for Local Responsibility Areas (LRAs)
2005	State law mandates CAL FIRE to map LRA fire hazard zones under Government Code § 51175–51189.
2008	First LRA FHSZ maps released (Moderate, High, Very High)
2008+	Local governments begin adoption of Very High Zones
2025	CAL FIRE's latest maps incorporate modern fire science, modeling, and statewide data consistency.

# Hazard vs. Risk

- Hazard = Physical environment (vegetation, slope, weather)
- Risk = A combination of hazard and human factors - like proximity to homes, roads, evacuation constraints, and preparedness
- San Leandro's risk remains high, despite map changes
- But the hazard mapping update better isolates where the most extreme fire behavior is likely, based on new science
- FHSZ maps are regulatory triggers, not predictive tools



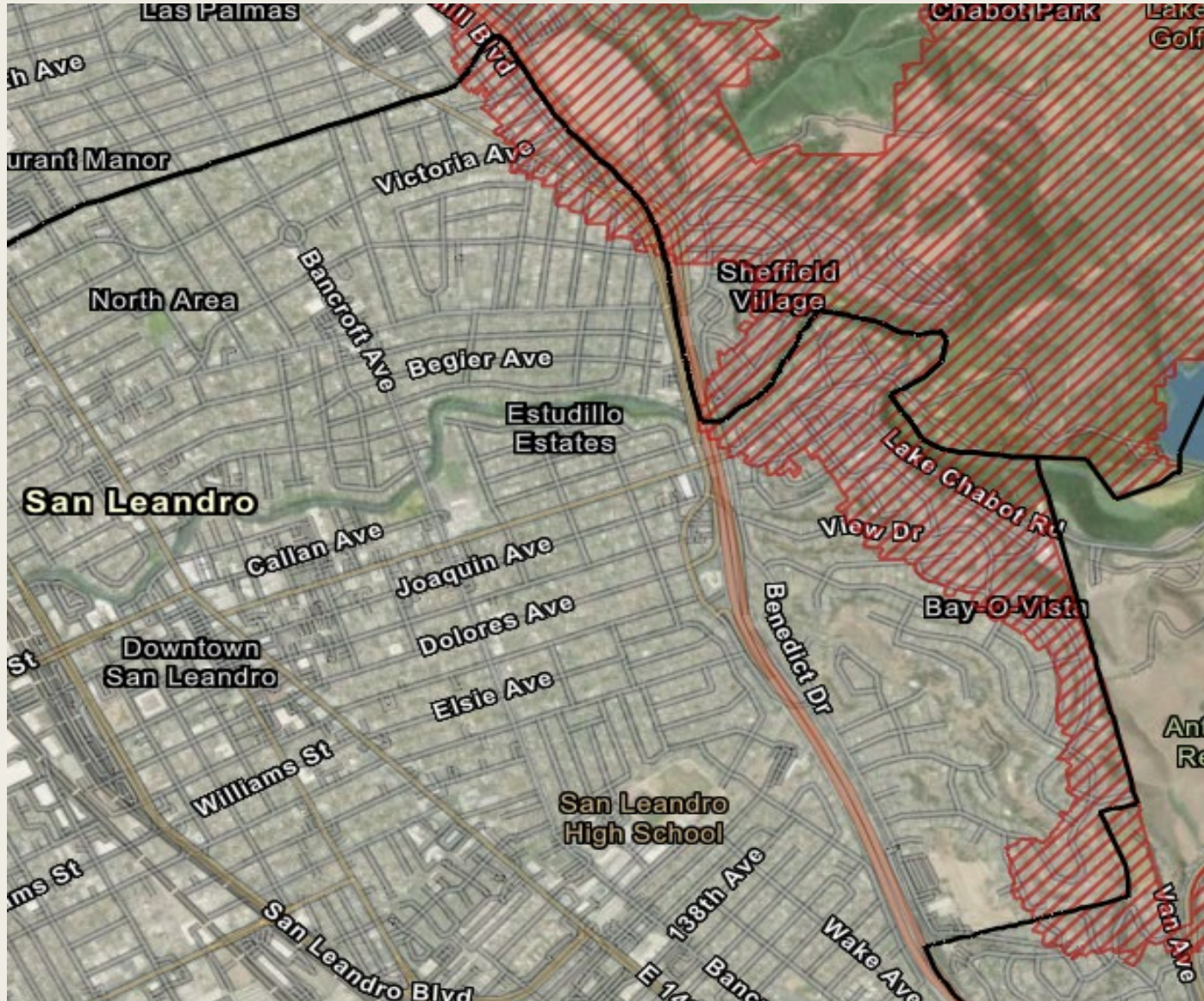


# 2009 vs 2025 Map Comparison

- 2009: 'Very High' zones adopted based on best available data at the time
- 2025: CAL FIRE removed all 'Very High' designations in San Leandro
- Instead, they designate zones as High or Moderate hazard — a reflection of refined data, not a reduction in fire danger or risk



# 2009 Map



- Only the Very High Zone was evaluated in the Local Response Area (LRA) in 2007-2011.
- San Leandro had 557 parcels in the Very High Fire Hazard Severity Zone





# 2025 Map

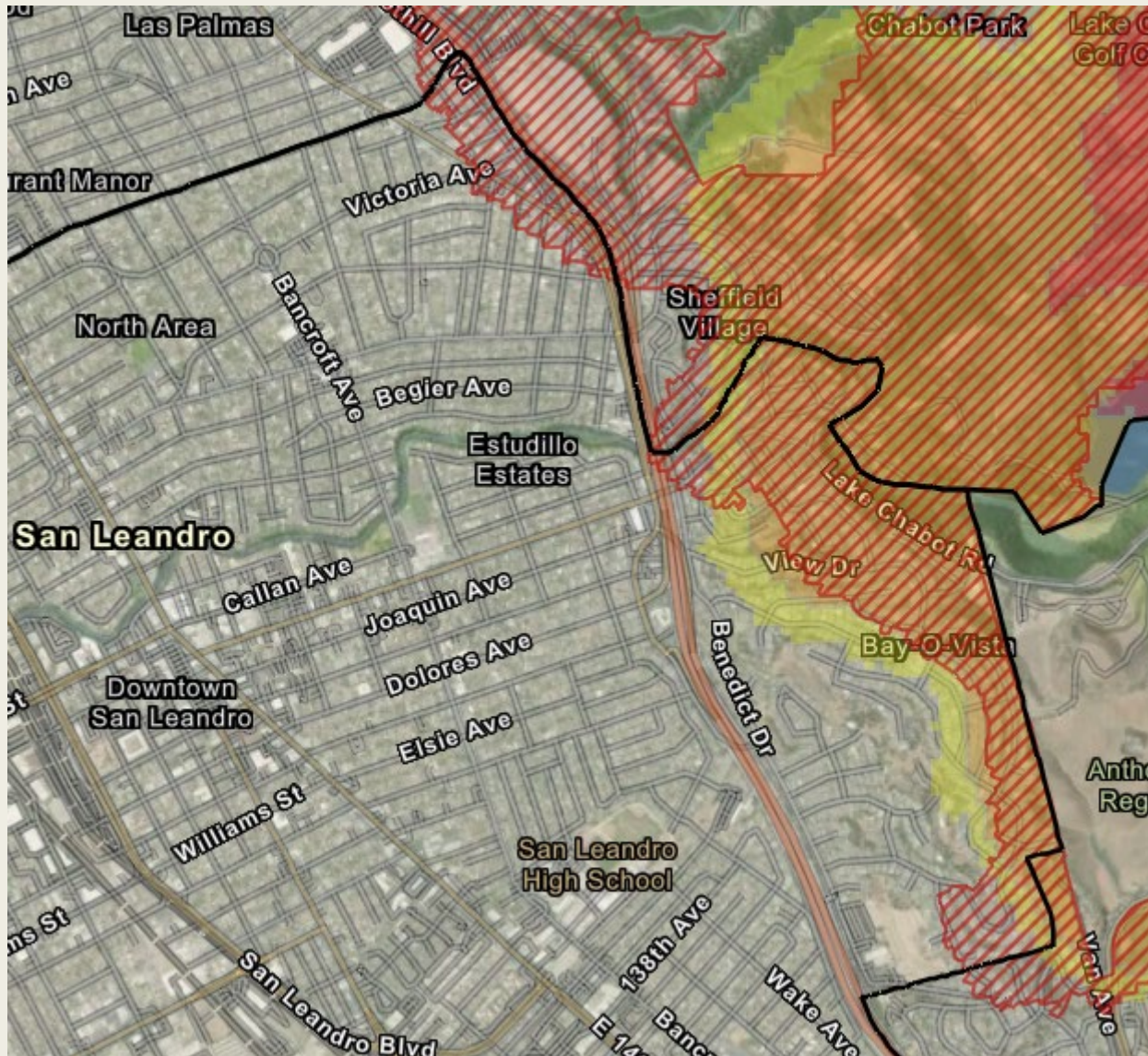


- The LRA 2025 evaluation included Very High, High, and Moderate
- Results:
  - 443 parcels in High
  - 184 parcels in Moderate
  - Grand total of 627





# Map Comparison



- 360 parcels that used to be Very High are now High
- 41 parcels that used to be Very High are now Moderate
- 156 parcels that used to be Very High are now Non-Wildland



# Science Behind the Maps

- The maps estimate **long-term** wildfire hazard potential across California, focusing on areas where wildland and urban environments meet.
- Zones are categorized as Moderate (M), High (H), or Very High (VH) based on **burn probability** and **expected fire behavior**.
- Two Modeling Tracks:
  - **Wildland Areas:** Modeled using fire behavior science (spread, intensity) and historic burn data.
  - **Non-Wildland Areas (WUI):** Modeled based on ember (firebrand) exposure from adjacent wildlands and likelihood of ignition/spread through urban vegetation.



# Wildland Modeling

- Two Key Components
  - Burn Probability: Based on 30 years of fire history (1991–2020), vegetation, and climate types.
  - Fire Behavior: Potential flame length calculated using slope, vegetation type, and extreme local fire weather.
- Worst-Case Conditions: Models use the hottest, driest, windiest 5% of weather days that can sustain fire.
- Long-Term Perspective: Does not factor in recent fires or fuel treatments, focusing instead on hazard potential over decades.





# Non-Wildland Modeling

- Focuses on embers landing from adjacent wildlands and conditions promoting ignition and spread.
- Three Inputs:
  1. Brand Load (number of embers landing, based on flame length and wind)
  2. Slope ( $>20\%$  = more hazardous)
  3. Tree Cover (more trees = higher ignition potential)
- A “cost surface” is calculated from these inputs to determine how far hazard extends into developed areas.
- Buffers of decreasing hazard classes (from VH to M) are mapped outward from wildland boundaries based on these values.



# Zone Construction Summary

- Zones are defined by areas with similar fire behavior potential.
- Final hazard score per zone is an average of all grid cell scores within it.
- Map updates incorporate:
  - New climate and fire weather data
  - Improved ember modeling
  - Localized vegetation and slope detail
  - Advanced burn probability modeling



# What the Maps Trigger

- CBC Chapter 7A: Fire-resistant construction for new buildings
- Gov Code 51182: Mandatory defensible space enforcement
- Natural Hazard Disclosure: Home sale disclosure of Very High and High zones





# Local Authority to Designate Additional Very High Zones

- No Local Changes to State Designations
  - Cities cannot reduce or request modifications to CAL FIRE's designated hazard zones.
- Expansion Is Allowed
  - Under Gov. Code §51179(b)(1), local agencies may add areas not identified by CAL FIRE as Very High Fire Hazard Severity Zones, if justified.
- Requirements for Local Designation:
  - Must be supported by substantial evidence in the record
  - Must find that applying defensible space laws (Gov. Code §51182) is necessary for effective fire protection



# Potential Benefits of Requesting “Very High” Designation

- Stronger public awareness and risk perception
- Enables local defensible space enforcement



# Potential Downside of Requesting “Very High” Designation

- Mandates local inspections and enforcement
  - Comes with significant cost, administrative demand, and legal complexity
  - May reduce compliance and trust
  - Why many cities opt for education-first strategies rather than formal zoning or enforcement.





# What Other Cities Are Doing

- Berkeley: Mandating compliance
- Marin County: Most cities opted for voluntary compliance
- Focus on:
  - Homeowner education
  - Outreach and defensible space support
  - Community resilience over mandates



# What's In Our Control

Issue	Who Controls It	Can the City Change It?
FHSZ Maps	CAL FIRE	✓ Yes* – City may add zones with justification
Insurance	Insurance Companies	✗ No
Defensible Space Enforcement	City	✓ Yes
Education & Outreach	City	✓ Yes

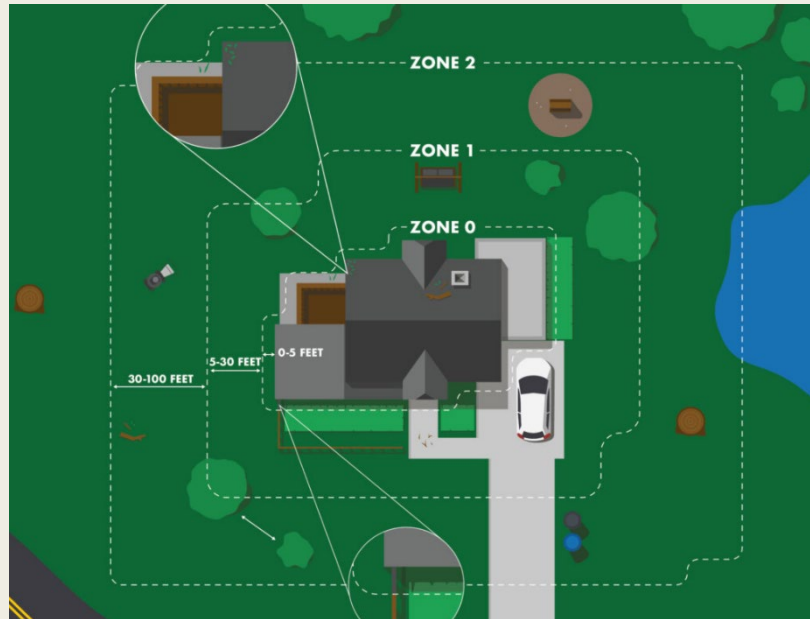
# City Fire Safety Efforts

- Continued annual Defensible Space Inspections of High FHSZ areas
- Chipper Program
- Community Preparedness Training
  - Emergency Preparedness Workshop May 20 & June 11
  - Community Emergency Response Training (CERT)
    - May 29, 31, June 7
  - Personal Emergency Preparedness
- Red Flag Days - Engine upstaffing and patrolling





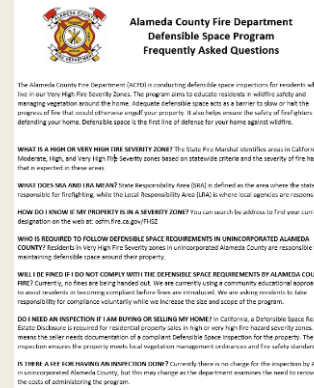
**Request a Defensible Space Inspection**  
acfddefensiblespace@acgov.org



**Zone 0: Ember-Resistant Zone** 0 – 5 feet from building

**Zone 1: Lean, Clean, and Green Zone** 5 – 30 feet from the building

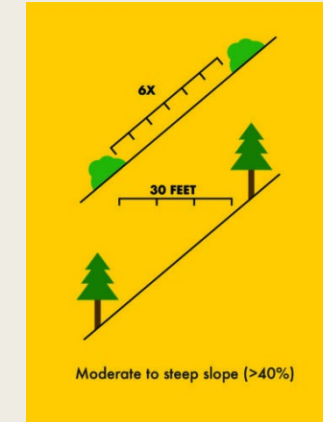
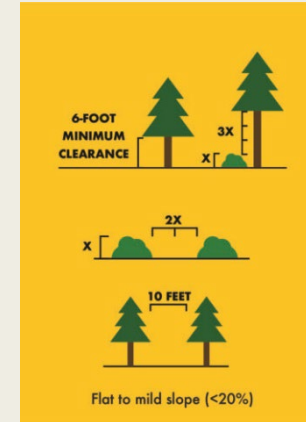
**Zone 2: Reduce Fuel Zone** 30-100 feet from the building or to the property line



## ACFD Defensible Space Inspection FAQs

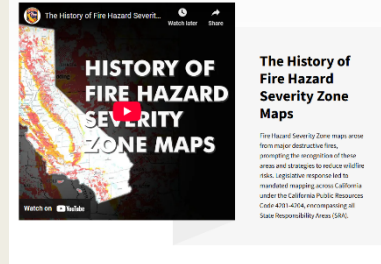


Take an interactive look at the CalFire Wildfire Action Plan



## Fire Hazard Severity Zones

California's seasonally dry Mediterranean climate lends itself to wildfires, and in an effort to better prepare, CAL FIRE is required to classify the severity of fire hazard in areas of California.



## Fire Hazard Severity Zone Locator

### ALAMEDA COUNTY FIRE / CAL FIRE Chipper Program

The **Free** community chipping program will run May 3 - June 7, 2025. This service is for residents in high fire areas aimed to reduce potential fire hazards by assisting with the \*chipping of vegetation that exceeds green bin space but too small for commercial chipping providers. This service is being offered in collaboration with ACFD's Fuels Crew 8, CAL FIRE and their Fuel Management Teams, along with Reserve Firefighter Training and Education Program.

ACFD response areas and CAL FIRE state response areas are the program priorities, most of which are located in Alameda County unincorporated areas (excluding Fairview), and San Leandro. The purpose is to create defensible space around the home and access routes for first responders.

We will not enter private property; this is a curb side service. No work will be done during Red Flag days. \*Chipped materials will not be hauled away.

### May 3 - June 7, 2025

**Chipper Weekly Priority Areas:**

May 3 — Sunol	May 24 — San Leandro
May 10 — Castro Valley	May 31 — Castro Valley
May 17 — Union City	June 7 — Sunol

**funded by:** Coastal Conservancy

The program has limited availability. To participate, please visit our website at [fire.acgov.org](http://fire.acgov.org) or email [OneLessSpark@acgov.org](mailto:OneLessSpark@acgov.org). For additional resources, visit [www.readyforwildfire.org](http://www.readyforwildfire.org).

## ACFD Chipper Program

fire.acgov.org/emergency-preparedness/

## Defensible Space Inspections



# PEP

Personal Emergency  
Preparedness (PEP)...

Thu, Apr 13 • 7:00 PM

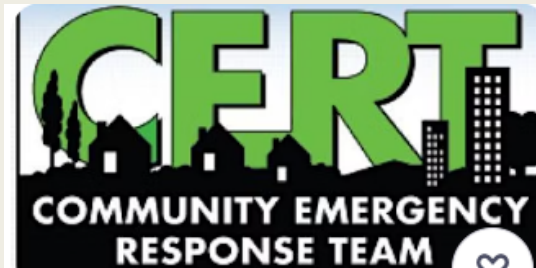
Free



## LISTOS

Sat, Aug 26 • 9:00 AM

Free



Community Emergency  
Response Team (CERT)...

Free



Mission Bay Mobile Home  
Community - PEP training

Wed, Apr 26 • 6:00 PM

Free

