

UC Davis

Environmental Policy and Management

Title

Implications for Future Housing Development within Fire Hazard Severity Zones in California

Permalink

<https://escholarship.org/uc/item/34z4n6b5>

Author

Rodriguez, Marisa

Publication Date

2026-05-05

Peer reviewed



Implications for Future Housing Development within Fire Hazard Severity Zones in California

Executive Summary

California is in the midst of a housing crisis, prompting the State and local governments to identify sites for development and secure funding to build homes for residents at all income levels. State law requires local governments to adopt a Housing Element that plans for housing for all income levels within areas with suitable conditions; however, supply is not meeting demand in adequate time.

Concurrently, California faces some of the world's most destructive wildfires, which are anticipated to increase [50 percent by 2100](#) due to climate change effects such as drought and extreme heat. In 2020 alone, 5 of the 6 largest fires recorded in California history occurred, spanning over [4 million acres](#) – more than double the area burned in any previous year.

Jurisdictions throughout California juggle the issue of increasing housing supply to support constituents of all income levels with the constraint of limited suitable land for development. While California has adopted the most stringent [wildfire code](#) in the United States, existing law still allows development within fire hazard severity zones (FHSZ). As climate change continues to create ideal conditions for wildfire, local jurisdictions may consider stronger enforcement to deter development within these regions. This policy brief dives into the implications of housing development within FHSZs as current law stands and recommends smart-growth land use and zoning policies to ensure future housing development does not further exacerbate wildfire risks on human and ecosystem health.

Background

Current California wildfire law and policy requires several [mitigation measures](#) to build

in FHSZs. CAL FIRE breaks wildfire management roles down by state responsibility areas (SRAs) and local responsibility areas (LRAs), which include cities and counties. Figure 1 shows the state minimum requirements for each responsibility area.

Examples of State Minimum Requirements

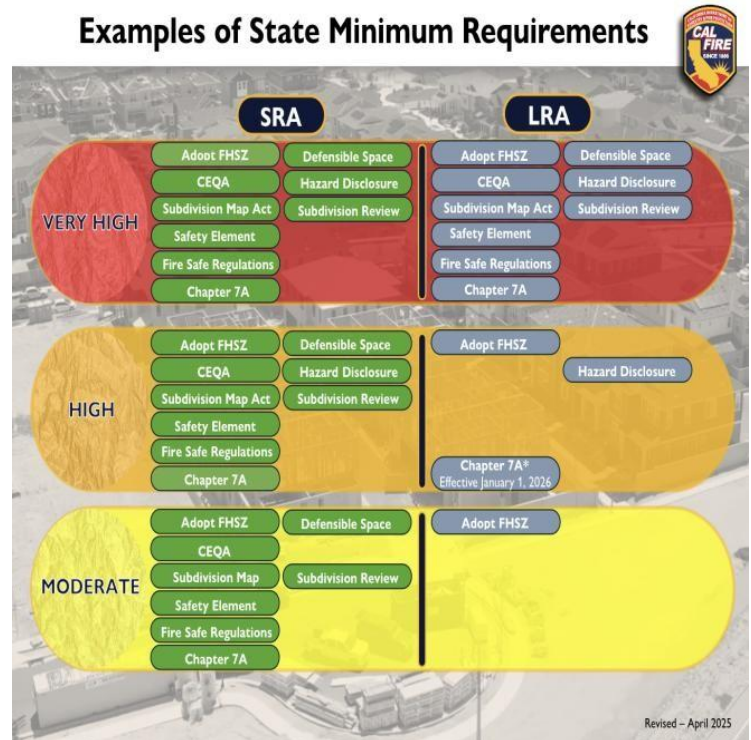


Figure 1: CAL FIRE State Minimum Requirements for FHSZs

Approximately [7 percent](#) of California land is considered wildland-urban interface (WUI), or the zone where human development meets undeveloped land or wildlands like shrubs, forests, or grasslands. Roughly 5 million housing units, or approximately 45 percent of California's total housing, are located in the WUI. Of the buildings destroyed by wildfire throughout California since 1985, [75 percent](#) were located within a WUI, demonstrating a direct correlation



between fire hazard and human development vulnerability within a WUI.

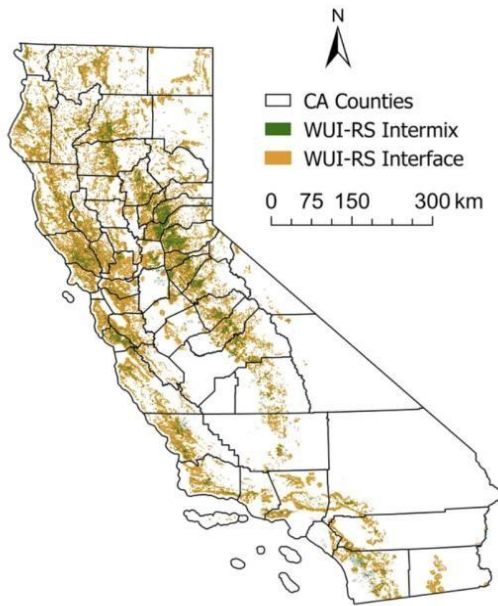


Figure 2 Map of WUI Distribution in California through Remote Sensing (RS), [Nature.com](https://www.nature.com)

Compounded with this issue, California faces a severe housing supply shortage. According to the California Department of Housing and Community Development, California must produce 180,000 new homes annually, with a larger goal to produce [2.5 million](#) houses between 2015 and 2030. Cities and counties throughout the state have been tasked with planning for and supporting funding efforts to meet their housing goals every 8 years through their General Plan's [Housing Element](#). The Housing Element requires the local government to identify suitable sites for housing through thorough analysis of infrastructure capacity and land use and zoning compatibility. As of January 2026, this process does not include wildfire risk.

Issue Analysis

As shown in Figure 1, a variety of policies have been enacted to reduce catastrophic impacts on existing and future housing development within FHSZs. For example, [Chapter 7a](#) of the California Building Code includes standards for structures within

FSHZs such as home hardening, requirement for defensible space, and utilization of noncombustible construction materials for residential, commercial, and educational uses. However, even with protection, wildfires can rapidly spread from structure to structure, turning buildings into fuel and producing more toxic smoke due to burning metals and synthetic materials. An increase in resident population within WUIs would also significantly hinder the ability to quickly and safely evacuate the impacted area. With an estimated [50 percent increase](#) in fires over 25,000 acres by 2100, local governments may consider land use and zoning regulations that limit development within FHSZs.

The cost of wildfire damage has also been well-documented through multiple record-breaking fires in California in the past decade. Between 2017 and 2021, the average annual economic cost of wildfires in California was over [\\$117.4 billion](#). The Los Angeles fires in January 2025 alone resulted in an estimated \$164 billion in capital losses. These costs include property damage, increased utility bills, or paying taxes for public infrastructure recovery – which primarily fall on California residents. With [4 in 10 households](#) already spending more than 30 percent of their income on housing alone, rising costs for essential services and insurance due to wildfire damage will further exacerbate cost of living issues.

Policy Recommendations

California currently lacks statewide policy that limits building within FHSZs, revealing a critical gap in land use policy and hazard safety. Below are state and local-level land use policy recommendations that foster the balance between housing development and mitigated wildfire vulnerability.

- **State-level: Regulation to prohibit future housing development within Very High Fire Hazard Severity Zones.** Prohibiting housing development within



Severe Fire Hazard Severity Zones will reduce the most significant destruction to future development and can potentially create a natural barrier to wildfire if managed through additional strategies such as prescribed burning.

- **Local and Regional-level: Incorporate wildfire hazard analysis within the Housing Element site inventory criteria.** Integrating wildfire risk into the site suitability analysis ensures jurisdictions proactively avoid planning future housing within high hazard areas and aligns their housing plans with long-term safety goals.
- **Local and Regional Level: Increase infill development incentives for affordable housing developers.** Encouraging infill development through incentives such as additional density bonuses, permitting fee reductions, and streamlined permitting processes direct new housing toward areas with existing services and infrastructure, reducing pressure to build in FHSZs while expanding housing supply.

Further reading

- Biber, E., O'Neill, M. (2021). [Building to Burn? Permitting Exurban Housing Development in High Fire Hazard Zones.](#)
- Kramer, H., et al. (2019). [High Wildfire Damage in Interface Communities in California.](#)
- Governor's Office for Land Use and Climate Innovation. (2020). [OPR Fire Hazard Planning Technical Advisory.](#)
- UC Berkeley Center for Law, Energy, and the Environment. (2025). [Cost of Climate Change: Financial and Economic Impacts on California and U.S. Households.](#)

Authorship

This policy brief was prepared by Marisa Rodriguez, 1st Year Graduate Student, Environmental Policy and Management at UC Davis, mhrodriguez@ucdavis.edu