

An aerial photograph of a landscape, likely in San Bernardino County, California. The image shows a winding river or canal cutting through a dry, hilly terrain. A major road or highway runs vertically through the center of the image. The background is hazy, suggesting a distant city or mountains. The overall color palette is warm and earthy, with various shades of brown, tan, and muted green.

Fire Safety Overlay Zone

San Bernardino County

OVERVIEW

REGION

Southern California

POPULATION

2.18 million

TOOL TYPES

*Overlay Zone, Development
Code, Fire Hazard
Abatement, General Plan
Integration*

LEAD AGENCIES

*County Fire District, Land
Use Services Department
(including Planning
& Code Enforcement
Divisions)*

CLIMATE IMPACT AREA

Wildfire Resilience

SUMMARY

In 2007, San Bernardino County established a Fire Safety (FS) Overlay Zone within their Development Code (Chapter 82.13) that requires additional development standards to provide greater public safety in areas with identified wildfire hazard. The FS Overlay was updated in 2017 to remove duplicitous policies that were no longer relevant or needed within the county code because they have since been addressed by state regulations.

The boundaries of the FS Overlay Zone were delineated utilizing data and institutional knowledge from CAL FIRE, the United States Forest Service (USFS), and the San Bernardino County Fire Protection District. As an overlay zone and associated development code tied to hazardous areas, particularly wildfire hazard, this land use planning tool allows the County Land Use Services Department and Fire District to require fire protection standards within the planning and entitlement process, including fuel modification plans. The FS Overlay is also included within the County's General Plan, known as the Countywide Plan – Policy Plan, Hazards Element as a geography in which wildfire risk reduction policies are applicable.

To strengthen long-term risk reduction outcomes of the FS Overlay standards, San Bernardino County implements an extensive fire hazard abatement inspection program for County and state regulations that confirm annual compliance with some standards outlined in the FS Overlay, including defensible space and fuel modification plans.

This case study was selected as a Wildland-Urban Interface (WUI) Planning Best Practice because it shows a county that took early initiative in adopting an overlay zone as a regulatory strategy to address wildfire risk. In addition, this case study highlights several unique requirements within the overlay zone that help achieve fire risk reduction objectives while allowing for performance-based alternative means and methods. Finally, this case study shows how previously adopted regulations can continue to be supported by broader policies within the General Plan.

A fire hazard overlay zone is a type of overlay zone within a zoning ordinance or land use development code that applies requirements to specific areas of the community designated as a wildland-urban interface area or areas that are exposed to fire hazards. Specific land use restrictions or development standards for fire safety apply in these overlay zones, in addition to the development requirements established in the base zone.

TOOL DESIGN

The FS Overlay Boundaries pre-date the California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zones (FHSZs) Maps and include a wide range of geographic and vegetative diversity, from the mountains, characterized by steep sloping terrain and heavy vegetative fuel loadings; through the valley foothills with moderate slopes and moderate fuel loading; to the relatively flat areas of the desert with relatively light, but volatile fuels; all of which contribute to high fire hazard conditions. Unique weather influences, such as the Santa Ana winds were also accounted for in the hazard

delineation. The FS Overlay is used as a means for enforcing fire protection development standards and adequate mitigation, as well as implementing General Plan Policies and additional ordinances, including Fire Hazard Abatement.

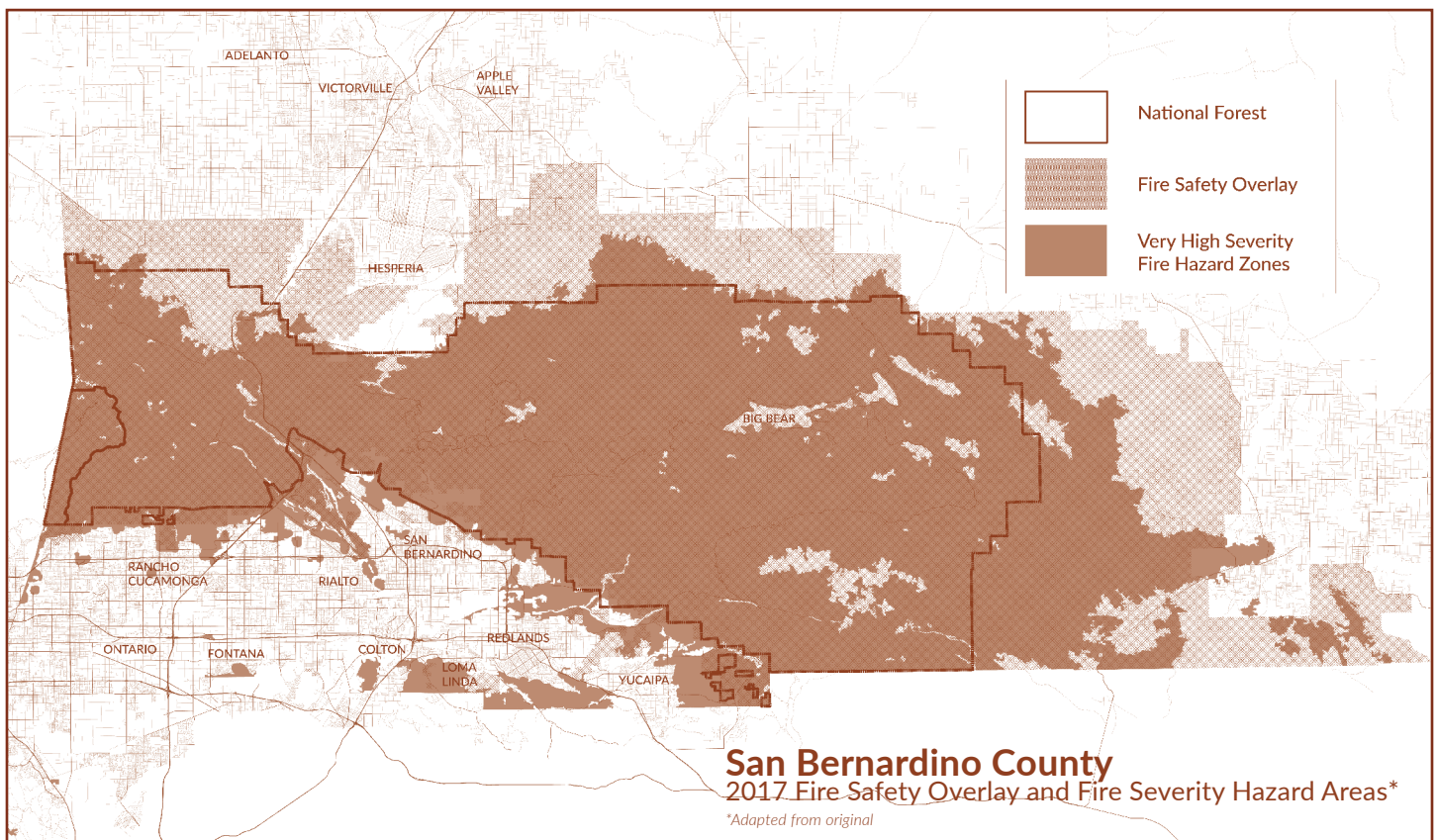
Each project located in the FS Overlay that goes through the entitlement process must submit a fuel modification plan that addresses fuel loading, ungraded slopes, maintenance, on-site water availability, and landscaping. In addition, each proposed development must comply with FS Overlay general development standards (82.13.050), including but not limited to:

1. Residential density criteria that limit the number of dwelling units per gross acre based on slope percentage
2. Site and emergency access that requires a minimum of two points of ingress and egress, and minimum width of 26 feet of all-weather surface for roads
3. Private driveways or access roadways for residential units that have a 150-foot

maximum length

4. Fencing requirements, including a minimum five-foot separation for wood or vinyl fencing and the wall of the nearest structure
5. Cul-de-sac length limits of 350 feet in length
6. Vehicular access to water sources, including ponds, lakes, swimming pools, reservoirs, and water storage tanks
7. Permanent fuel modification areas around a development project or portions adjacent or exposed to hazardous fire areas

All applications must also comply with fire authority standards, including California Building Code Chapter 7A and California Residential Code Chapter 327. Some provisions offer exceptions with alternate hazard protection measures, dependent upon site-specific conditions. For example, fuel-modified areas around the perimeter of the development project may be expanded in cases when exterior wall separation requirements cannot be met.





IMPLEMENTATION

Parcels located within the FS Overlay are tagged in the County's electronic parcel recording system. Any new application for a planning, building/safety, or land use permit for the construction of new structures, expansion of existing structures, or the subdivision of land within the FS Overlay Zone automatically triggers an additional review by the Fire Authority. Any recommendations from reviewing authorities are incorporated as conditions of approval where possible.

The FS Overlay was updated in 2017, as changes to the California Building Code Chapter 7A and California Residential Code Chapter 327 made some of the provisions redundant. However, the policies that exceed state standards remain, and the inclusion of fire prevention planning within the County's general planning and entitlement process remains a key outcome of the Overlay's standards.

After a project is approved, the code enforcement division is responsible for ensuring compliance with the conditions agreed upon in the approved permit, as well as annually inspecting fuel modification and defensible space.

COLLABORATION & ENGAGEMENT

As mentioned previously, a major benefit of the FS Overlay is that it allows the San Bernardino County Land Use Services Department and the Fire District to collaborate in addressing wildfire risk reduction, including requiring fuel modification plans within the planning and entitlement process. These fuel modification plans can determine on a case-by-case basis the types of plants and their spacing permitted, allowing for a specific treatment plan to be established based on fire behavior studies or prescriptions by fire professionals.

The County's Fire Hazard Abatement Division is housed within the Land Use Services Department, adding another layer of collaboration as those working on annual inspections partner closely with those approving development permits. Inspectors are active each year in working with homeowners to help them stay in compliance with county and state regulations for defensible space (including Public Resources Code § 4291).

The [County's Fire Hazard Abatement Ordinance](#) (which is applicable in several FS Overlay areas) provides a framework for inspectors to work across diverse fire districts in the County to complete annual inspections. If homeowners are unwilling to complete the mandated work, the County will issue an abatement warrant and send a contractor, or a type 1 hand crew, to complete the work for them. Utilizing hand crews provides off-season funding to staff that typically only work part of the year. Abatement warrants are only required for developed parcels and are not obtained for open undeveloped lots.

Homeowners who have work done for them are required to reimburse the County for costs associated with the work, any late fees, and the administrative costs of the abatement warrant. If payment is not received within 60 days, the County will place a tax lien on their property. Economically disadvantaged homeowners may be directed to a FireSafe Council's work week or fire agency cost-sharing programs where available.

INNOVATIONS

The County's Land Use Development Code and FS Overlay are tied directly into the General Plan, also known as the [Countywide - Policy Plan](#). The Plan was adopted in 2020 after a seven-year update process that utilized institutional knowledge from every department within the County government.

To help the community better access Policy Plan information, the county has created a web-based tool that allows users to select elements of the plan and search for specific goals or policies. The search function for "Fire" brings up 33 policy plan results and 12 community results across the land use, housing, transportation and mobility, personal and property protection, and hazards elements. While wildfire-related policies are included throughout the plan, they are grouped primarily within the Hazards Element including:

1. *Policy H-Z-1.13 Fire protection planning: requires all new development within the FS Overlay or CAL FIRE Very High Fire Hazard*



In some neighborhoods throughout San Bernardino County, goats are used to assist fuel modification efforts. Image: Don LeBold via Flickr

Severity Zones (VHFHSZs) to meet all state and local requirements for building and vegetation management.

2. *Policy HZ-1.14 Long-term fire hazard reduction: requires proactive vegetation management/hazard abatement within the FS Overlay or VHFHSZs on private properties and along roadsides of evacuation routes. It also mandates new development enter into a long-term vegetation maintenance agreement for defensible space and fuel modification.*
3. *Policy HZ-1.15 Evacuation route adequacy: states that the County will coordinate with state agencies and local fire districts to ensure the maintenance and reliability of evacuation routes that may be compromised by wildfire.*

FUNDING SOURCE

Administrative costs associated with implementing standards attached to the FS Overlay are recovered through permit application fees.

ADDITIONAL CONSIDERATIONS

REPLICABILITY

For communities considering adopting a fire hazard overlay zone, San Bernardino County's process offers several key insights:

1. *Communities should consider tying land use tools like fire hazard overlay zones directly into General Plan policies to align wildfire planning priorities. This strengthens both the implemented tool and the General Plan.*
2. *Strong collaboration between the planning and code enforcement departments, as well as the fire authority, is essential to the efficient implementation of a fire hazard overlay zone where multiple departments are required to review permit applications or confirm compliance.*
3. *Flexibility should be built into the review process to allow the fire authority reviewing proposals to design outcomes that achieve the main goals of the overlay zone, including building fire resilient communities.*
4. *Fire hazard overlay zones should be designed to leverage future implementation of new best practice risk reduction ordinances as wildfire science and planning evolves.*

RESPONDING TO DATA, STATE REGULATIONS, & CLIMATE CHANGE IMPACTS

California's Fourth Climate Change Assessment [Los Angeles Regional Report](#) indicates there could be a 60% increase in area burned as a result of Santa Ana driven wildfire events, and a 75% increase in non-Santa Ana driven events by the mid-21st century in the Los Angeles Region, including the western mountain communities of San Bernardino County. However, for regions of San Bernardino County located within the study area of the Inland Desert Regional Report, there is less certainty regarding the potential for increased wildfire activity as the climate continues to change due to annual variations in fuel loading, precipitation, and wind.

Any increase in wildfire activity will likely create elevated hazards for communities located in the FS Overlay, particularly [as data shows](#) that historical fire activity in the County has been clustered in and around populated areas and national parks, as well as along transportation routes. Work done to mitigate future and existing wildfire hazards through the standards included in the FS Overlay, as well as ongoing enforcement of State Fire Protection Regulations and the County Fire Hazard Abatement Ordinance, will protect communities in the future, regardless of projected risk.

For more information, please see the [County of San Bernardino Land Use Services Department Website](#) or the County's [web-based Policy Plan Tool](#).

This case study is part of a series of Wildland-Urban Interface (WUI) Planning Best Practices. Each case study focuses on a specific planning tool (or set of tools) that a community is utilizing to reduce risk and build resilience to wildfire across the state of California. This project is part of [California Climate Investments](#), a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment — particularly in disadvantaged communities.

