

INITIAL STATEMENT OF REASONS

Fire Hazard Severity Zones, 2007

[Notice Published May 25, 2007]

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
Title 14, Chapter 7. Fire Protection, Subchapter 3 Fire Hazard,
Article 1. Fire Hazard Severity,
of the California Code of Regulations (14 CCR):

Amend:

§1280. Fire Hazard Severity Zones

The Department of Forestry and Fire Protection (CAL FIRE) is proposing amendments to the regulation in 14 CCR, Section 1280, which designates Fire Hazard Severity Zones (FHSZ) in State Responsibility Area (SRA). Within this section are referenced maps titled "Maps of the Fire Hazard Severity Zones (FHSZ) in State Responsibility Areas of California". These maps are being updated as part of the proposal pursuant to California Public Resource Code (PRC) 4201- 4204.

Fire Hazard Severity Zones are geographical areas (lands) designated pursuant to PRC 4201- 4204 and classified as Very High, High or Moderate in State Responsibility Area (SRA). Lands are grouped into these classes in accordance with the severity of wildfire hazard expected to prevail in those areas. The zones are designated so that measures may be identified which will reduce the potential for losses to life, property and resources from wildfire.

While CAL FIRE creates fire hazard severity maps for the entire State, the maps/zones proposed for adoption in this regulation apply to SRA.

PUBLIC PROBLEM, ADMINISTRATIVE REQUIREMENT, OR OTHER CONDITION OR CIRCUMSTANCE THE REGULATION IS INTENDED TO ADDRESS

Statutory Requirement

The proposed regulation and referenced maps are being updated as required in California Public Resource Code (PRC) 4201- 4204. This is the primary administrative requirement for which the regulation is intended to address.

Wildfire Hazards

The on going raging wildfires that threaten and destroy communities, threaten lives, and harm natural resources is the underlying public problem the regulation is intended to address. When homes, property and natural resources are burned, lives are lost, businesses ruined, communities are devastated and million of dollars are spent trying to suppress those fires.



With Statewide levels of wildfire often exceeding over 500,000 acres burned per year, costs of fire suppression and losses of property have been increasing. Since the initial production of the fire hazard maps by CAL FIRE in 1985, there has been increasing catastrophic loss of buildings in the wildland urban interface (WUI) areas. For example, substantial structure losses occurred during the 1991 Oakland Hills “Tunnel Fire” (2900 homes destroyed) and the 2003 fire siege in Southern California (over 6000 homes destroyed). Clearly, population and building growth, historical development and construction practices, increasing vegetation/fuel density, and climate change factors are contributing to these losses. Thousands of new homes are built each year in hazardous fire locations, increasing potential damage from wildfire.

Effectuates wildland urban interface building standards

CAL FIRE and its governmental and private partners have for many years created and implemented wildland fire prevention programs to combat hazards from wildfire. Programs to help reduce building fire losses include development and implementation of fire resistant building standards. Building standards are effectuated by the proposed FHSZ maps, meaning some special fire resistant building code requirements will depend on the hazard zone in which the building is located.

Fire resistant roofing construction is one significant building standard that is effectuated by the proposed SRA FHSZ map. The existing California Building Codes and authorizing statutes require specific roofing construction requirements for new structures and specific remodeling (See Health and Safety Code 13132.7 (c)) . For roofing in SRA, different roof standards are required depending on the FHSZ designation at the site where the home is located (see more in next section: Specific Purpose). By providing the FHSZ map update, builders and building officials can understand where roofing codes apply and effectively implement the building code requirements.

Other recently implemented and newly planned fire resistant building codes (Title 24, Part 2, 9, and 12) are/will be applicable to all SRA, and apply to all hazard

zones. In 2005, the Office of the State Fire Marshal submitted to the California Building Standards Commissions ignition resistant building requirements for roof assemblies and attic venting. These were known as the Phase I “wildland urban interface building standards”, or WUIBS (effective December 1, 2005). In May of 2006, the State Fire Marshal submitted Phase II WUIBS that will affect requirements for exterior walls, decking, windows and ancillary buildings. Phase II codes will become effective in January, 2008. Together, existing health and safety codes and WUIBS address fire points of entry in the building during conflagration fire events. Because conflagration fire events have caused significant home losses in the wildland urban interface, these building standards will substantially reduce fire losses and costs.

Map Updates use improved science

Current FHSZ maps do not necessarily incorporate those factors that drive structure ignition potential and are not as useful as they could be in clearly defining hazardous areas. The 1983 legislation establishing PRC Sections 4201 – 4204 and the original FHSZ maps (which are still in place), were mapped on paper 7½ and 15 minute quadrangle maps. These maps are difficult to read and define specific hazard locations. They also do not include the state-of-the-science site specific fire behavior calculations or the contribution of embers to ignition risk. These factors result in existing maps not providing sufficient resolution or ease of access to support building permit issuance business processes or accurate real estate disclosure information.

The opportunity now exists to update the SRA fire hazard zones using current technology, fire modeling science, and detailed remotely sensed wildland fuels information. The technology also exists to make this information readily available to building officials in support of the building permit issuance and enforcement process, to members of the public considering real estate purchases or new building projects, or to governmental policy makers who make land use decisions. The new maps are expected to significantly improve information and awareness for these policy makers, potential homeowners, and building permit issuance and enforcement officials.

SPECIFIC PURPOSE OF THE REGULATION

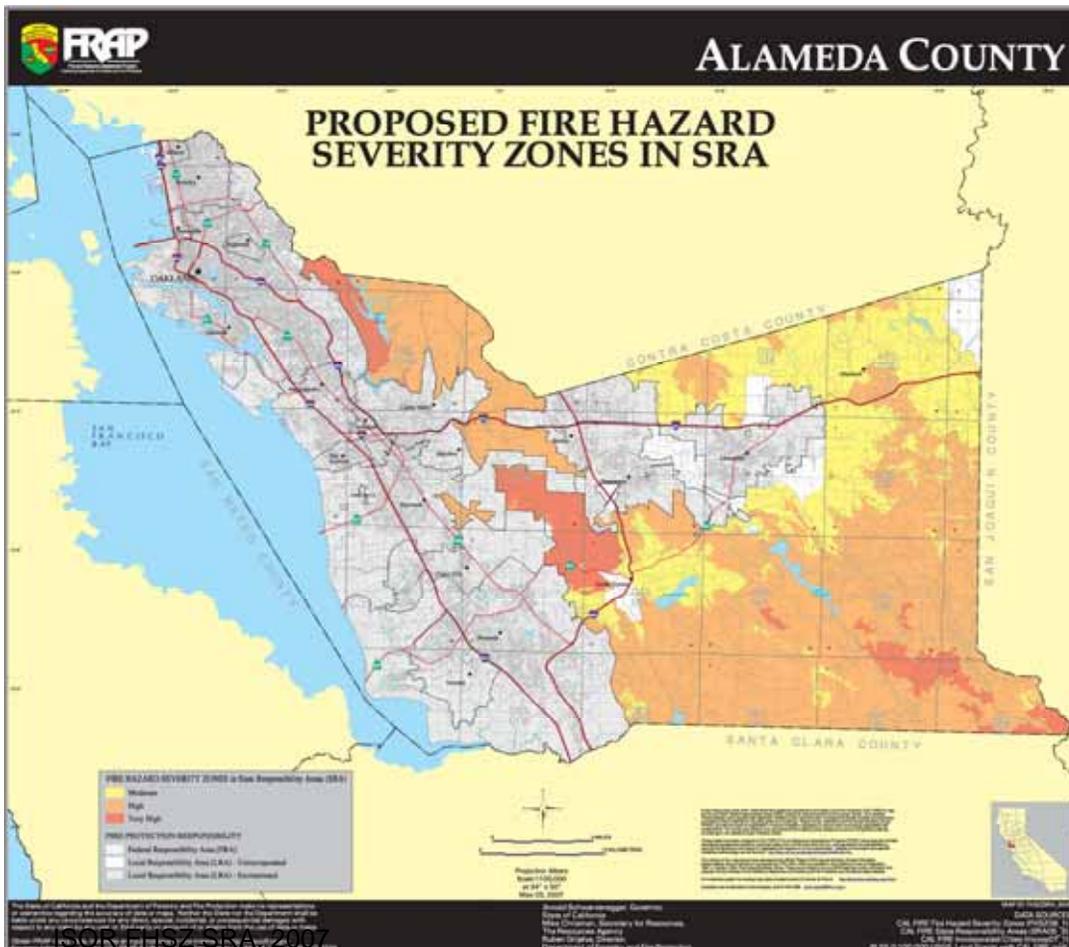
The purpose of the regulation is to revise language that refers to the previously adopted maps and document an update to the FHSZ zone designations for SRA. The regulation amends the location where the map can be viewed and date of the SRA FHSZ map update. The map is a referenced attachment to the regulatory text. The FHSZs define the locations of application of various mitigation strategies to reduce risk associated with wildland fires.

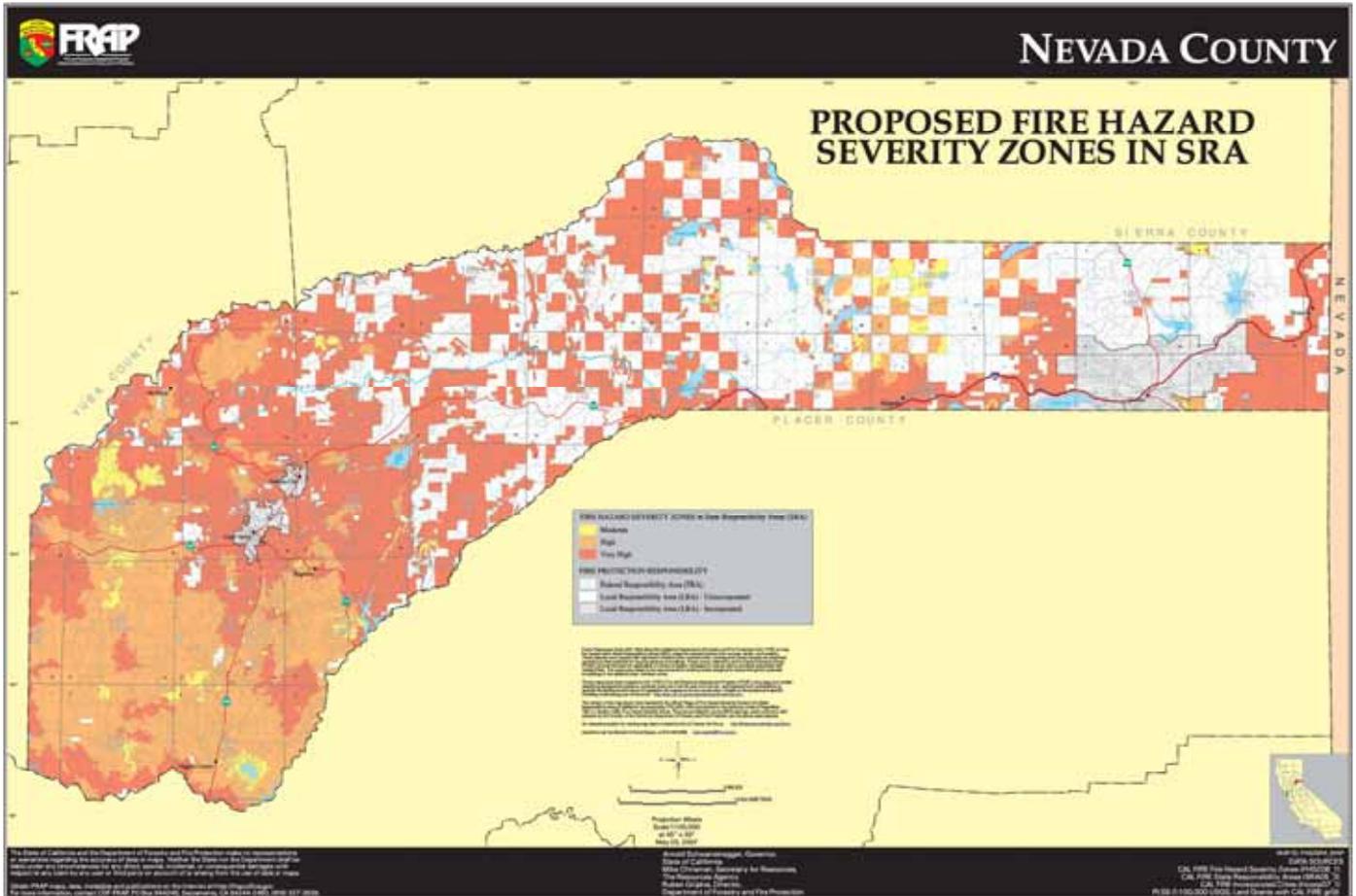
The new FHSZ maps are intended to map fire hazard, using factors such as fuel profiles, terrain, fire history and weather. These factors are combined into the term “hazard” to refer to the physical conditions that create fire behavior that can that lead to damage.

The fire hazard was modeled and the FHSZ maps were built focusing only on fire hazard, which is best understood in terms of the nature of fire. Here nature of fire is expressed in such things as how often the area will burn, and what characteristics occur when it burns that might lead to structure being ignited. In summary, central to the FHSZ mapping model is two key components: probability of burning and fire behavior.

Zones in this context are defined as areas that have similar burning probabilities and fire behavior characteristics. Data used to determine minimum zone size is averaged over 20 acres in urbanized areas and 200 acres in non-urbanized wildland areas. Thus the zone classification minimum size is 200 acres for wildlands and 20 acres for urban developed areas.

The product of the FHSZ model is a Geographical Information System (GIS) data set that can be used to produce maps of the hazard zones at any scale. Areas are mapped in Moderate, High and Very High Categories. Example FHSZs for Alameda and Nevada counties are shown below:





Production of the FHSZ maps using a GIS system, with maps and GIS data on a publicly accessible web site <http://www.fire.ca.gov/wildland.php>, should provide superior access to the information at the scale that is relevant to the user.

The proposed map results in the following geographic zones designations for SRA in each county:

Area of Fire Hazard Severity Zone for SRA in each County, (1000 acres)

County Name	SRA Fire Hazard Severity Zone Classification		
	Very High	High	Moderate
Alameda	23	150	72
Alpine	14	10	11
Amador	82	35	175
Butte	296	144	101
Calaveras	309	158	64
Colusa	45	17	197
Contra Costa	25	131	44
Del Norte	106	50	47
El Dorado	311	117	139
Fresno	76	392	297
Glenn	71	87	154
Humboldt	594	952	75
Imperial	0	1	1
Inyo	0	2	332
Kern	298	659	877
Kings	3	31	64
Lake	242	40	113
Lassen	345	86	616
Los Angeles	401	96	11
Madera	24	66	283
Marin	8	36	156
Mariposa	61	99	283
Mendocino	327	1,362	177
Merced	-	135	287
Modoc	195	264	175
Mono	4	5	190
Monterey	386	717	187
Napa	152	76	143
Nevada	252	123	21
Orange	100	9	4
Placer	245	19	127
Plumas	341	36	60
Riverside	498	94	96
Sacramento	1	0	117
San Benito	154	429	146
San Bernardino	155	84	123
San Diego	808	216	171

San Joaquin	0	43	118
San Luis Obispo	555	941	32
San Mateo	39	94	48
Santa Barbara	290	400	47
Santa Clara	149	372	34
Santa Cruz	6	158	71
Shasta	1,260	83	21
Sierra	117	27	20
Siskiyou	1,001	173	195
Solano	13	32	42
Sonoma	154	393	248
Stanislaus	64	168	219
Tehama	837	163	282
Trinity	421	61	2
Tulare	47	381	177
Tuolumne	232	78	50
Ventura	265	52	34
Yolo	26	5	145
Yuba	147	21	49
Total	12,572	10,569	7,974

As mentioned in the Necessity section of this ISOR, the primary purpose of the FHSZ maps is to define the application of various fire mitigation strategies to reduce risk associated with wildland fires. The primary are two fire mitigation strategies (for SRA) resulting from the application of the maps is fire resistant roof cover building codes:

Wildland Urban Interface Building code roof covering requirements

Specific building standards for fire resistant roof covers are required pursuant to the California Building Code Title 24, Part 2, Section 1503 Roofing Requirements in SRA. These existing requirements have been in place since the 1990's. In SRA classified as VHFSZ, there shall be fire resistant roof covering that is at least Class A (cement, ferrous metal, and some composite asphalts, for example). In SRA with High FHSZ, there shall be fire resistant roof covering that is at least Class B (some composite asphalts or specially treated wood material for example). In Moderate zones there shall be fire resistant roof covering that is at least Class C (some rolled material and certain wood material, for example) (See Health and Safety Code 13132.7 (c)). The new maps will designate the area where the required roof covering classes is needed.

Other new fire resistant building codes (WUIBS Phase I and II) also apply to all SRA areas, regardless of hazard zoning.

ALTERNATIVES TO THE REGULATION CONSIDERED BY CALFIRE AND THE REASONS FOR REJECTING THOSE ALTERNATIVES

CAL FIRE has considered alternatives to the regulation proposed.

Alternative #1: Application of the FHSZ to Communities at Risk

New fire resistant building codes (some of which are effectuated by FHSZ designation in SRA) were to be applied to buildings located in the “urban wildland communities interface” pursuant to Health and Safety Code 13108.5 (c). Relating the FHSZ maps to communities at risk was rejected as perimeters of communities at risk have not been mapped. Community locations exist as a point on a map. Extensive GIS information would need to be developed to relate FHSZs and communities at risk.

Alternative #2: Application of the Fire hazard Severity Zone Map to individual parcels

Applying the FHSZ map designations to individual parcels would provide great utility for local assessment of fire hazard for a particular parcel. With this information, building inspectors and homeowners could precisely determine the fire hazard for a specific project/building under consideration and apply the appropriate fire resistant building codes. This alternative was rejected as not all counties have GIS parcel information that could be related to a FHSZ GIS layer, substantial reconciling would be necessary to conform parcel maps to FHSZ maps (i.e. geo referencing conflicts, multiple zones in any one parcel), and the workload to map every parcel is beyond the Department’s capacity.

Alternative #3: Take no action and do not update the hazard maps

The “take no action” alternative would leave the existing fire hazard maps as the official maps on record. These hazard ratings defined in the existing maps do not reflect current wildland fire behavior science or current knowledge of wildland fuels. The current hazard maps do not incorporate new knowledge of structure ignition due to mass transport of burning embers. These maps do not meet the needs of building officials, industry, or the affected public.

POSSIBLE SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS AND MITIGATIONS

CAL FIRE has not identified any adverse environmental effects as a result of the proposed rules. These rules are expressly developed to improve fire prevention

standards and provide lessened risk to people, property and wildland resources from wildfire.

The proposed hazard mapping regulation is a Project under California Environmental Quality Act (CEQA). The Project has been determined to be Categorical Exemption pursuant to 14 CCR Article 9, Section 15300 Categorical Exemptions. Projects in these categories have been determined not to have a significant adverse affect on the environment and are exempt from the CEQA provisions. The Project was found to be exempt under the following categories: 14 CCR 1662.5(e), Information Collection [Fire Protection]; 14 CCR 1152 Declaration of Ministerial Projects [Classification of SRA]; and 14 CCR 1153(b)(3)[Adoption of Rules for the fire protection system in accordance with PRC 4111].

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON ANY BUSINESS

CAL FIRE estimated that this regulation will not have a significant adverse economic impact on businesses. Proposed revisions (creating a new map) does not itself impose new requirements that have an economic impact. The map is used to effectuate other laws (building codes) which may have an economic impact to the regulated public. Economic impact may be imposed because there may more areas in high and very high fire hazard than previously designated by maps already in affect. Increasing these zones means increased effectuation of roofing requirements. There is currently no calculation of acreage increases or decreases of any the zones compared to the existing maps.

No precise estimate has been made of potential additional cost to homeowners or builders resulting from greater amounts of High or Very High and thus any potential increased roof covering cost associated with requirements for Class A and Class B roofing in these zones. There is no evidence that Class A or B roofing routinely is more expensive than Class C roofing or that builders or homeowners would not use Class A or B roofing in all situations regardless of hazard zone designation.

If there are additional costs associated with requirements for Class A and B roofing, potential ranges of increased cost to builders and homeowners can be framed based on the number of new homes expected to be built in newly designated High and Very High Fire Hazard Severity Zones. Allocating a number of new homes within the newly designated High or Very High Fire Hazard Zones, along with the any additional costs associated with Class A and B roofs is speculative, and there is no information that a significant cost impact is found.

ALTERNATIVES TO THE PROPOSED REGULATORY ACTION THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS

No alternatives were presented to CAL FIRE that would lessen any adverse impact on small businesses.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, REPORTS, OR DOCUMENTS

CAL FIRE relied on the following technical, theoretical, or empirical studies, reports or documents in proposing this regulation as referenced in this *Statement of Reasons*:

1. CA Department of Forestry and Fire Protection, Fire and Resource Protection Program. Wildland Fire Hazard Areas. <http://frap.cdf.ca.gov/projects/hazard/fhz.html>. April 26, 2007.
2. CA Department of Forestry and Fire Protection, Fire and Resource Protection Program. Guidelines for Fire Hazard Severity Zone Review and Validation. April 26, 2007.
3. Sapsis, Dave. CA Department of Forestry and Fire Protection, Fire and Resource Protection Program. Guidelines for Fire Hazard Severity Zone (FHSZ) Review and Validation. PowerPoint slides. April 26, 2007.
4. California Resources Agency. Natural Hazard Disclosure Statement. <http://ceres.ca.gov/planning/nhd/background2.html>. April 13, 2007.
5. California Codes Civil Code Section 1103-1103.14. www.leginfo.ca.gov April 13, 2007
6. Fire Cause Analysis. Fire at the Urban Wildland Interface: Cost-Benefit Evaluation of Proposed California State Fire Marshal Building Construction Regulations. July 28, 2004.
7. Legislative Council of California. California FHSZ Summary of Codes & Regulations." Official California Legislative Information. November, 2006. www.aroundthecapitol.com/code/
8. 2001 Title 24, Part 2, California Building Code. Revision Record for the State of California Emergency Supplement. December 1, 2005.
9. CA Department of Forestry and Fire Protection. 20 Largest California Wildland Fires (By Structures Destroyed). February 24, 2006.

Pursuant to Government Code 11346.2(b)(6): In order to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues as those addressed under the proposed regulation revisions listed in this *Statement of Reasons*; the Director has directed staff to review the Code of Federal Regulations. CAL FIRE staff determined that no unnecessary duplication or conflict exists.

PROPOSED TEXT

The proposed revisions or additions to the existing rule language are represented in the following manner:

UNDERLINE indicates an addition to the California Code of Regulations, and

~~STRIKETHROUGH~~ indicates a deletion from the California Code of Regulations.

All other text is existing rule language.