

WELCOME

4290 Workgroup Progress Report
Board of Forestry
November 7, 2013
Chico California

CA Department of Forestry and Fire Protection

4290 Workgroup
Vision/Scope

July 11, 2012



Document Revision History

Date	Document Version	Updated By	Description of Changes
7/2/10	Ver. 1.0	cz	Initial draft
8/31/10	1.1	md	Draft
2/7/12	1.2	md	Amended time frames
5/21/12	1.3	jc	Amended time frames and short term goals
6/13/12	1.4	jc	Amended goal

Background

- ▣ The State Board of Forestry and Fire Protection adopted regulations in 1991 for building construction and development in State Responsibility Areas. These regulations are titled “State Responsibility Area Fire Safe Regulations” and they are contained in 14 CCR 1270 et seq. The Board recognizes that these regulations have not been reviewed or updated since their inception. The Board has periodically received input on issues regarding the implementation and interpretation of these regulations from CAL FIRE units and stakeholders affected by the regulations. Also, CAL FIRE has reported to the Board that other regulations contained in Title 19 and in Title 24, Part 9, Chapter 5, known as the California Fire Code, have similar and potentially conflicting regulations.
- ▣ Beginning in September 2008, the Board began a review of these regulations to address specific issues brought to the Board. The review primarily focused on proposed regulatory changes for the Administrative Article related to Scope, Inspection Authority, and Exceptions. Given the continuing issues stated above, the Board and CAL FIRE Executive Team determined that it was necessary to do a complete review of the SRA Fire Safe Regulations and requested that CAL FIRE and appropriate stakeholders initiate a review beginning in 2011.

Vision Statement

- ▣ Ensure consistent, technically sound, and appropriate regulations and guidelines are established for governing fire safe development in State Responsibility Area and other locations determined to be within the statutory responsibility of CAL FIRE.

Vision Scope, Tasks

- ▣ Evaluate effectiveness of relevant guide books such as:
 - Structure Fire Protection Field Guide
 - Fire Hazard Zone Field Guide
 - Fire Safe Guide for Residential Development
 - Planning documents.

- ▣ Develop a process for local ordinance for certification of PRC 4290.

- ▣ Blend Title 14 and Local Governments' General Plan Safety Element process by utilizing PRC 4290 certification and integrating the outcomes of the evaluation of the guide books.

- ▣ Make recommendations to CCR Title 14, 1270, State Responsible Area Fire Safe Regulations.

- ▣ Distribute to CAL FIRE field users, Fire Prevention Officers and local government stakeholders for review and input.

- ▣ Review and revise 14 CCR 1270; provide revisions to the Statewide Fire Prevention Committee (FPAC) and Resource Protection committee (RPC).

- ▣ Identify short term and long term solution changes in statute, regulations, codes, interpretation, IB and policy changes.

Deliverables

- Suggested recommendations to CCR Title 14, 1270, SRA Fire Safe Regulations
- 4290 Certification process for local government to become the inspection authority
- Local Government General Plan Safety Element review process

Team Members

▣ Working Members

- Eric Huff, CAL FIRE Sacramento
- Jana Luis, CAL FIRE Sacramento
- Cristina Kiefer, San Ramon Valley
- Ron Eldridge, CAL FIRE South
- Preston Fouts, CAL FIRE South
- Matt Damon, CAL FIRE North

▣ Advisory Support

- Mike Wilson, CAL FIRE Division Chief
- George Gentry, Board of Forest Executive Officer
- Kevin Reinertson, CAL FIRE Division Chief

Fundamentals to CCR Title 14, 1270 Fire Safe Regulations

- ▣ Fire Fighter Safety
- ▣ Public Safety and Evacuation
- ▣ Reduce Structure Loss
- ▣ Minimum Standards for the SRA

Public Resource Code 4290

- ▣ Authority
- ▣ (a) The board shall adopt regulations implementing **minimum fire safety standards related to defensible space** which are applicable to state responsibility area lands under the authority of the department. These regulations **apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas** approved after January 1, 1991. The regulations shall include all of the following:
 - (1) Road standards for fire equipment access.
 - (2) Standards for signs identifying streets, roads, and buildings.
 - (3) Minimum private water supply reserves for emergency fire use.
 - (4) Fuel breaks and greenbelts.
- ▣ (b) These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state.

CCR Title 14, 1270

- ▣ Minimum Fire Safe Regulations for development in State Responsibility Area and its origins are from PRC 4290.

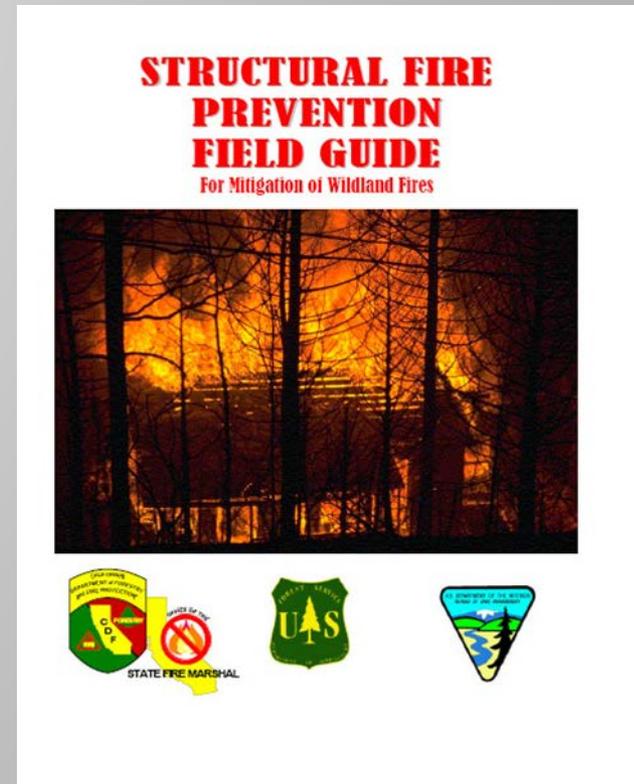
- ▣ Five parts:
 - Administration (revised in 2012).
 - Road standards for fire equipment, roads, and buildings
 - Standards for signs identifying streets, roads, and buildings.
 - Minimum private water supply reserves for emergency fire use.
 - Fuel breaks and greenbelts

Methodology

- ▣ Reviewed history of SRA Fire Safe Regulations
- ▣ Reviewed substantial changes in the fire service since 1991
- ▣ Performed emergency equipment ground evaluations of the SRA Fire Safe Regulations
- ▣ Code comparison of relevant State regulations
- ▣ Received input and comments from stakeholders

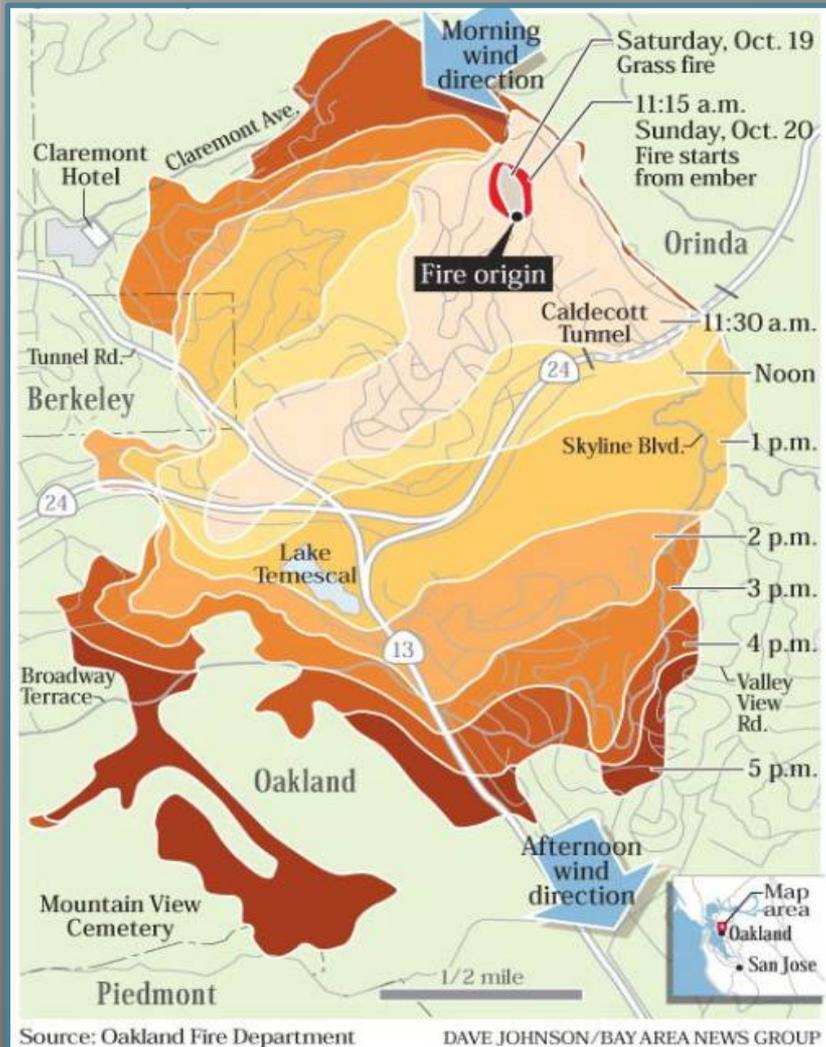
History of SRA Fire Safe Regulations

- ▣ 1980, Defensible space was coined
- ▣ 1987, SB 1075 added section 4290 to the PRC
- ▣ 1991, SRA Fire Safe Regulations were adopted
- ▣ 1993- 2003, several documents were developed to help aid in fire planning and development
 - Fire Safe Guides for Residential Development in California
 - Structural Fire Prevention Field Guide
 - OPR Fire Hazard Planning Guide



Methodology

SRA Fire Safe Regulations



Methodology

Substantial Fire Service Changes Since 1991

- ▣ Defensible space regulations of 30 feet increased to 100 feet (PRC 4291) in 2006
- ▣ Increased community involvement through Fire Safe Councils, Unit Fire Plans and Fire Wise programs
- ▣ 2007 California Building Codes, Chapter 7A, “Ignition Resistive Construction,” in the SRA and Very High Fire Hazard Severity Zones
- ▣ Outreach of CAL FIRE’s education programs through the uses of technology, webpages, videos and social media
- ▣ WUI Wildland Firefighter tactics, CAL FIRE WUI standards for firefighting operations incorporate the physical built environment and tactical operations of wildland firefighting

Wildland Urban Interface Placard

As time and resources permit, complete the following:

Access: Does it appear to have access/egress and turnarounds for Type I fire engines?

Yes = Circle

No = Circle with diagonal slash

Street Name and Address:

Complete for address being assessed

Water Source: Does the structure appear to have a water source for use by fire engines?

Yes = Circle (describe in the "Special Notes or Hazards area")

No = Circle with diagonal slash

Defensible Space: Does it appear that a minimum of 100' of combustible vegetation has been cleared away from the structure?

Yes = Circle

No = Circle with diagonal slash

Civilians Present: Do civilians appear to be present at the site?

Yes = Circle (describe in the "Special Notes or Hazards area")

No = Circle with diagonal slash

Special Notes or Hazards: Note the presence of hazards or useful pieces of information.

Date and Time: Complete

Resource ID: Complete using agency identifier and unit id.

If conditions change, and as time and resources permit, you may complete a new placard and place it over the top of the previous placard.

Instructions for use

 Type I Engine Access?		
3246 OAK St. Street Name and Address Number		
 Water Source? Define Below	 100 Feet Defensible Space?	 Civilians Present?
Special Notes or Hazards: <i>Wood pile under deck on west side</i> <i>Pool in back no vehicle access</i>		
Date 7/10/09 Time 1645 Resource ID SAC-E17		

The final decision to defend a structure is always up to the assigned resource

California Code of Regulations

- ▣ Title 14, Natural Resource,(Adopted by Board of Forestry)
 - Fire Protection
 - ▣ SRA Fire Safe Regulation
 - Comments given at plan review and building permit

- ▣ Title 19, Public Safety (Parts are adopted by State Fire Marshal)
 - State buildings, review by locals and SFM

- ▣ Title 24, California Building Codes (Adopted California Building Standards Commission)
 - Some similarities to Title 14, implemented when building permit is issued

1990's Fire Equipment

- ▣ The CAL FIRE Model 9 was the engine used to help determine road standards for SRA Fire Safe Regulations.



Methodology

Emergency Equipment Road Standards

Model 9



Model 34



Engine Dimensions					
Model	Width	W/Mirrors	Length	Wheel Base	Height
9	96"	114"	280"	152"	109"
34	104"	120"	318"	184"	117"
Difference	8"	8"	38"	32"	8"

Methodology

Emergency Equipment Evolutions Using Modern Equipment



Methodology

Emergency Equipment Road Standards Using Modern Equipment

- ▣ Vehicle passing, opposite directions on current road width of 18-feet
- ▣ Grade testing, stop and go at 16%,17%, 18% with and without a full load of water, current standard is 16%
- ▣ Turnaround on current standard of 40-feet from centerline

Equipment on 18-Foot Road Width



Roadway Grades

The grade for all roads, streets, private lands and driveways shall not exceed 16 percent.

Grade/ slope test which consisted of stop and then a controlled departure on an all-weather surface road and at the following grade intervals: 16%, 17%, 18% and 20%.

Roadway Grades



Roadway Turnarounds

Turnarounds are required on driveways and dead-end roads as specified in this article. The minimum turning radius for a turnaround shall be 40 feet from the center line of the road.

If a hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

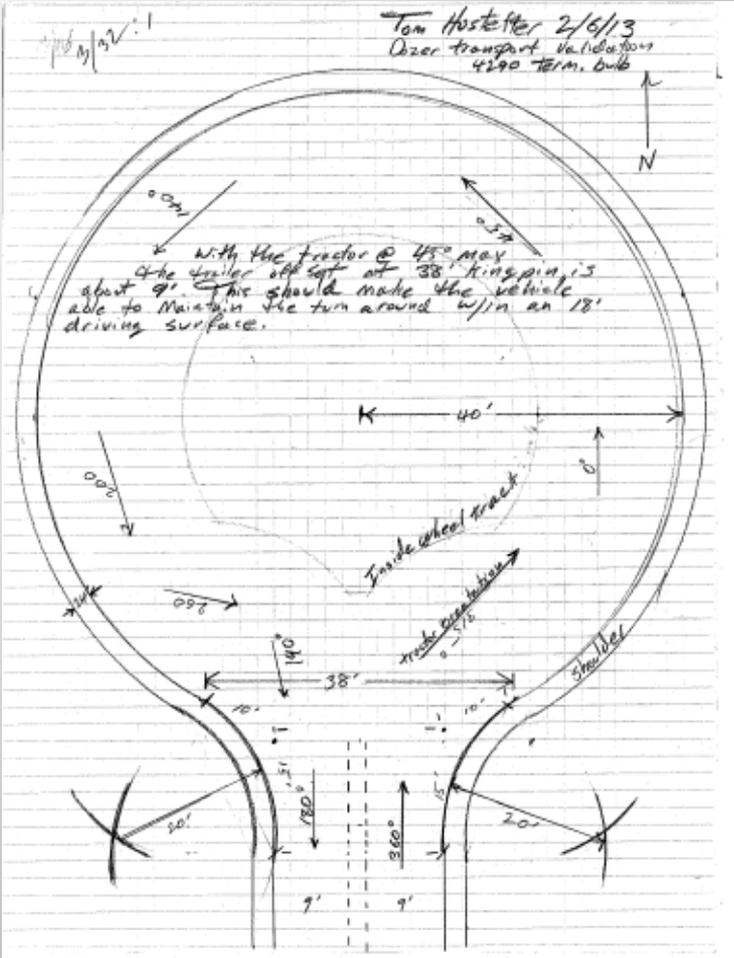
Turnaround



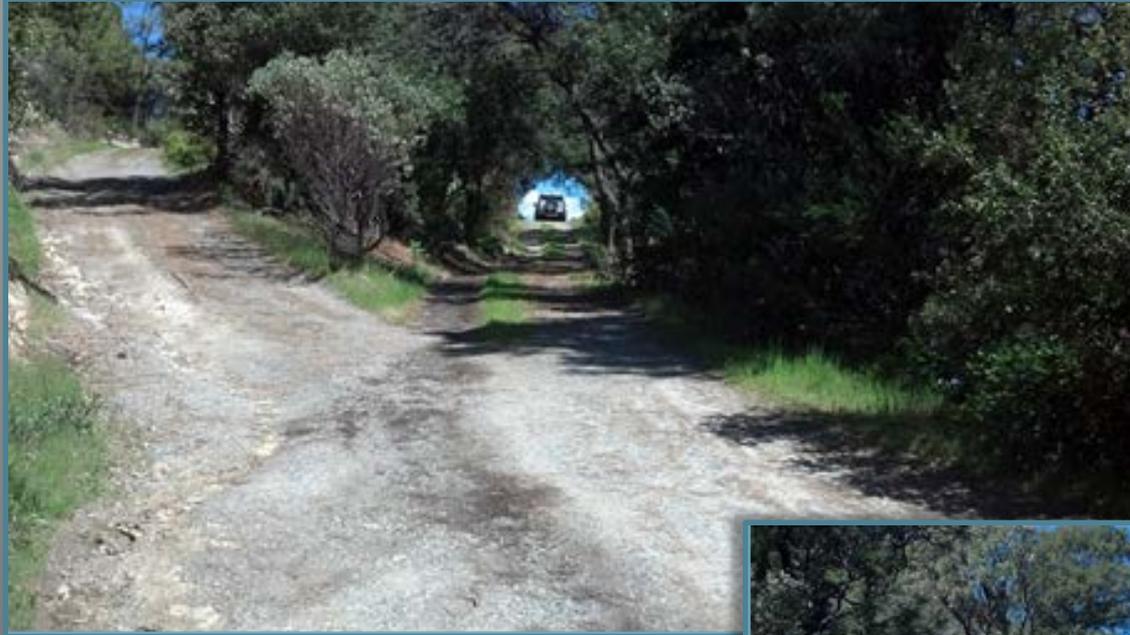
Turnaround



Modification



Examples of No Fuel Reduction



Issues and Concerns of the Workgroup

- ▣ Precedence of other State Regulations, CCR Title 19, 14 and 24. (Minor Subdivisions)
- ▣ Relevance of codes in CCR Title 14, since they are covered in CCR Title 24, Part 9 California Fire Code, examples: road width, water flow, signage and bridges.

Additional Suggestions

- ▣ Develop a Fire Safe Regulations Handbook utilizing, but not limited to, the Structure Fire Prevention Field Guide, Fire Planning and the General Plan guide. The handbook would be a technical document design to be used by Fire Planners and/or for the use of subdivision review.
- ▣ Consult with a traffic engineer for road evacuation capacity loads.
- ▣ Update Title 14, 1299, Defensible Space, to reflect changes of SRA Fire Safe Regulations.

Additional Suggestions

(continued)

- ❑ Develop a data system that can be queried to determine if PRC 4290 was a contributing factor to human injury or death and vehicle damage.
- ❑ Do outreach and education to interested parties of the SRA Fire Safe Regulations and handbook.
- ❑ Print Title 14, SRA Fire Safe Regulations in the appropriate sections of Title 24, Part 9, Fire Code.
- ❑ Review the SRA Fire Safe Regulations on a more frequent interval.

Fundamentals to CCR Title 14, 1270 Fire Safe Regulations

- ▣ Fire Fighter Safety
- ▣ Public Safety and Evacuation
- ▣ Reduce Structure Loss
- ▣ Minimum Standards for the SRA

Special Thanks

CAL FIRE Butte Unit

Fire Engine

Dozer Transport

Personnel

CAL FIRE Academy

Fire Engines

Personnel

Fire Grounds

CAL FIRE Nevada, Yuba, Placer Unit

Placer County Water Tender

Personnel

Next Steps

- ▣ Develop a discussion page of CCR Title 14, 1270, Fire Safe Regulations for stakeholders
- ▣ Continue to work PRC 4290 certification process, crossover work of SB 1241 and Safety Element
- ▣ Assist with webpage design with BOF staff
- ▣ Work toward the development of a Fire Safe Regulation Handbook

Questions?