



CAL FIRE

Office of the State Fire Marshal

Wildfire Mitigation Advisory Committee Meeting

November 15, 2022

Call to Order

Welcome!



If you have technical difficulties during this meeting, please contact Kara Garrett at (916) 201-5539 or Kara.Garrett@fire.ca.gov

Roll Call / Quorum Established

- The State Fire Marshal
 - **Mike Richwine**
- Department of Forestry and Fire Protection
 - **Curtis Brown**
- Department of Conservation
 - **Keali'i Bright**
- Office of Energy Infrastructure Safety
 - **Caroline Thomas Jacobs or Sandy Cooney**
- State Board of Forestry and Fire Protection
 - **J. Lopez**

(Continued on Next Slide)

Roll Call / Quorum Established

- Governor's Office of Emergency Services
 - **Ryan Buras or Robert Troy**
- California Department of Insurance
 - **Deborah Halberstadt or Mike Peterson**
- Governor's Office of Planning and Research
 - **Michael Maguire (sitting in for Neil Matouka)**
- California Fire Safe Council
 - **Jessica Martinez**
- Insurance Institute for Business & Home Safety
 - **Roy Wright**

(Continued on Next Slide)

Roll Call / Quorum Established

- California Fire Chiefs Association
 - **Dave Winnacker or Todd Lando**
- California Building Industry Association
 - **Christopher E. Ochoa or Nick Cammarota**
- University of California Cooperative Extension
 - **Lenya N. Quinn-Davidson**
- California Fire Science Consortium
 - **Yana Valachovic**
- Department of Housing and Community Development
 - **Maziar Movassaghi or Clay Kerchof**

(Continued on Next Slide)

Roll Call / Quorum Established

- Rural County Representatives of California
 - **Staci Heaton**
- California Association of Resource Conservation Districts
 - **Sophia Lemmo**
- League of California Cities
 - **Sean McGlynn**
- California State Association of Counties
 - **Catherine Freeman**
- A representative from tribal government
 - **Don Hankins**

Approval of Past Meeting Minutes – Motion Required

WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING

Meeting Minutes – Tuesday, October 18, 2022

Posted 11/4/2022



Committee Members Present

Curtis Brown, Department of Forestry and Fire Protection (Virtual)
Mike Richwine, Office of the State Fire Marshal
Keali'i Bright, Department of Conservation
Sandy Cooney, Office of Energy Infrastructure Safety
J. Lopez, State Board of Forestry and Fire Protection
Robert Troy, California Office of Emergency Services
Deborah Halberstadt, California Department of Insurance (Virtual)
Michael Maguire, Office of Planning and Research (Virtual)
Jessica Martinez, California Fire Safe Council (Virtual)
Roy Wright, Insurance Institute for Business & Home Safety (Virtual)
Dave Winnacker, California Fire Chiefs Association (Virtual)
Christopher Ochoa, Representative from the Building Industry
Lenya N. Quinn-Davidson, University of California Cooperative Extension
Yana Valachovic, California Fire Science Consortium
Clay Kerchhof, Department of Housing and Community Development
Staci Heaton, Rural County Representatives of California (Virtual)
Sophia Lemmo, California Association of Resource Conservation Districts (Virtual)
Sean McGlynn, League of California Cities
Catherine Freeman, California State Association of Counties
Don Hankins, Professor, CSU Chico (Virtual)

Members Absent

None

CAL FIRE Staff in Attendance

Daniel Berlant, Deputy Director
Steve Hawks, Assistant Deputy Director
Andrew Henning, Assistant Deputy Director
Frank Bigelow, Staff Chief
Jim McDougald, Staff Chief
John Morgan, Deputy Chief
Scott Witt, Deputy Chief (Virtual)
Matt Damon, Deputy Chief (Virtual)
Jeff Fuentes, Division Chief (Virtual)
Rick Carr, Southern Region Staff Chief of Resource Management (Virtual)
Jamie Sammut, Staff Counsel (Virtual)
Justine Grafton, Associate Governmental Program Analyst (Virtual)
Will Brewer, Research Data Specialist III
Kara Garrett, Associate Governmental Program Analyst

1. CALL TO ORDER 1:00 PM

A. Welcome

Mike Richwine

Scan the QR Code Below to Access the Complete Meeting Minutes Document!



Agenda Review – Motion Required

WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING
Meeting Agenda – Tuesday, November 15, 2022, 1:00 PM – 3:00 PM
Posted November 4, 2022



Location:
CNRA Building, 715 P Street, 2nd Floor Conference Room 2-221
Sacramento, CA 95814

Zoom Meeting Information –
Please click the link below to join the webinar:
<https://us06web.zoom.us/j/85192423489?pwd=dnZYaUhXVFliUTFmT21nMzJYYVlxQT09>
Passcode: 462073

1. **CALL TO ORDER**
 - A. Welcome
 - B. Roll Call/Quorum Established
 - C. Approval of Past Meeting Minutes (Motion Required)
 - D. Agenda Review (Motion Required)
2. **OLD BUSINESS**
 - A. Risk Modeling
 - 1) Work Group Update
 - B. SB 190 - Model Defensible Space Ordinance Update
 - 1) Final feedback due at the end of November.
 - 2) Will review the final document at December's Meeting.
 - C. Division Report
3. **NEW BUSINESS**
 - A. Board of Forestry and Fire Protection – Claire McCoy
 - B. Attorney General's Office – Nicole Rinke
 - C. University of California Cooperative Extension – Lenya Quinn-Davidson and Yana Valachovic
4. **ROUNDTABLE**
5. **PUBLIC COMMENT**
6. **UPCOMING MEETING DATES FOR 2022 and 2023**
 - A. Third Tuesday of each month starting at 1 PM and ending at 3 PM.
 - B. December 20, 2022 is cancelled due to the holiday.
 - C. January 17, 2023 will be in a different conference room, same building.
 - 1) CNRA Building, 715 P Street, 2nd Floor Conference Room 2-310
Sacramento, CA 95814
7. **MEETING ADJOURNMENT (Motion Required)**

Scan the QR Code Below to Access the Meeting Agenda!



Risk Modeling Advisory Workgroup Update

- More information will be shared as the workgroup moves forward.
- Contacts for the workgroup are listed below:
 - Jim McDougald
 - Jim.McDougald@fire.ca.gov
 - Celeste Jovanovic
 - Celeste.Jovanovic@fire.ca.gov



SB 190

Model Defensible Space Ordinance Update

- Final feedback due at the end of November.
- We were initially going to review the final document at the December meeting, we will now be reviewing at the January meeting for final comments and suggested changes.
- Final Draft Presentation on February 21st.





Division Report

Community Wildfire Preparedness and Mitigation

- **Wildfire Risk Reduction**
- **Wildfire Planning & Statistics**
- **Upcoming Webinar Information**

Division Report

Wildfire Risk Reduction

- **Burn Permits:**
 - Doing some upgrades to the application to include attaching burn plan and any other paperwork the reviewer will need to review the application.
 - Adding a map layer to flag a property in the “buffer” area of another jurisdiction.
 - Beginning to create the training videos for units.
 - Burn Permit Policy and Procedures are currently being reviewed.



Division Report

Wildfire Risk Reduction

- **Defensible Space :**
 - We will be holding two presentations next week for Land Use Planning Workshops.
 - We will be recording a video to showcase the first home to receive a Wildfire Prepared Home designation. The home was rebuilt from the ground up following the devastating Camp Fire in 2018 using specific choices in building materials and overall design that can help raise a home's wildfire rating.
 - Defensible Space and Home Hardening programs are working on revising the self-assessment survey.





Division Report

Wildfire Risk Reduction

- Utility Wildfire Mitigation:

- Site visit with PG&E on overhead grid hardening and undergrounding efforts in Butte County.
- Identified Cooperative and Publicly Owned Utilities (POU) within CA that have their own infrastructure that intersects with State Responsibility Areas (SRA). Starting to acquire their contacts and GIS infrastructure data to assist with emergency response, firefighting, and prevention efforts.
- In the Greensheet review process for an equipment exemption request from PRC 4292 pole clearance for PG&E on the S&C Electric Scada Mate switch.
- Conducted Interagency Powerline Fire Prevention Training with Energy Safety Staff.

Division Report

Wildfire Planning and Statistics Update

- **California Incident Data & Statistics**
 - 2021 Redbook is now Final.
 - Sent out the 2022 Redbook quarterly update to the Units to ensure they are starting to review and quality control now. This is an attempt to complete future Redbooks more timely.
 - Sent out our first quarterly CalStats newsletter to all Fire Departments in the State that are reporting NFIRS data. This was focused on tips, tricks, and updates on how to import their NFIRS data into eNFIRS and how the validation process works.



Division Report

Wildfire Planning and Statistics Update

- **California Incident Data & Statistics**
 - CalStats Team has begun to develop our first CALFIRS dashboards using AGOL software and preparing for additional dashboards that will focus on CA eNFIRS data, “Live” Redbook, and other ideas that can showcase the statistical data that the program is working with.
 - CalStats program is hosting a two-day free National Fire Academy - Basic NFIRS training course in Monterey on November 15-16th.
 - Completed FY 21/22 Public Resource Code 4137 Annual Report.



Division Report

Community Wildfire Mitigation Assistance

- **Fire Safe Regulations:**
 - We are currently developing some training webinars for CAL FIRE & Contract County staff on interpreting and enforcing the regulations.
- **Subdivision Review:**
 - Staff have been actively engaged in numerous statewide projects of interest including: working with Cal OES on the State Hazard Mitigation Plan and working with OPR on the Wildfire Plan Alignment Guide.
 - Staff recently presented a pilot training for local planners on Land Use Planning for Wildfires, it was well received.



Division Report

Community Wildfire Mitigation Assistance

- **Firewise USA:**
 - California continues to lead the nation with 600 National Fire Protection Association (NFPA) Firewise USA Communities in good standing, equating to over 25% of all NFPA Firewise USA Communities nationwide.
 - We are currently in the process of preparing a news release to be distributed shortly and will also be presenting a “certificate of congratulations” to the 600th community to celebrate this momentous occasion.





Division Report

Wildfire Planning and Statistics Update

- Pre-Fire Planning

- FHSZ (SRA) Training in mid-November “How to conduct a FHSZ public hearing” targeting Units & Contract Counties.
- Draft FHSZ (SRA) maps are being finalized.
- Public information (website/videos/FAQs/phone-AI) will be released in early December.
- FHSZ (SRA) Public Hearing in 56 Counties will start Dec 15th and run for 45-days concluding Jan 30th, 2023.
- CalMAPPER QA/QC cleaned up hundreds of projects (improving accuracy & reducing errors); this will be an ongoing process.

Division Report

CAL FIRE - Office of the State Fire Marshal

Community Wildfire Preparedness and Mitigation Division

Join us for our next webinar!
Featuring: Fire Hazard Severity Zones



Monday | 28 November 2022 | 11:30 AM | Via Zoom



- The purpose of this webinar is to host a live and interactive platform via Zoom to discuss and educate on Community Wildfire Preparedness and Mitigation (CWPM) fire safety topics.
- Open to the general public, Fire Safe Councils, and anyone who would like to learn more about the Programs within the Community Wildfire Preparedness and Mitigation Division.
- This webinar will be recorded and posted at a later time to our California Office of the State Fire Marshal YouTube Channel.

Zoom Link Available at
bit.ly/CWPM_Nov28_Webinar

osfm.fire.ca.gov/wildfire-public-education/

**Join us for our next webinar on
November 28th at 11:30 AM!**

Featuring – Fire Hazard Severity Zones

This webinar is open anyone who would like to learn more about the Programs within the Community Wildfire Preparedness and Mitigation Division.

- All webinars are recorded and posted to our California Office of the State Fire Marshal YouTube Channel at youtube.com/channel/UCelazGRRGPnrJ-1KbaMzqEA .
- The Zoom meeting link for November 28th is available at https://bit.ly/CWPM_Nov28_Webinar.
- Visit osfm.fire.ca.gov/wildfire-public-education/ to learn more.



Board of Forestry & Fire Protection

Land Use Planning Updates:
Defensible Space Zone 0,
Fire Safe Regulations, and the Fire
Risk Reduction Communities list

Claire McCoy, Wildfire Planning Specialist

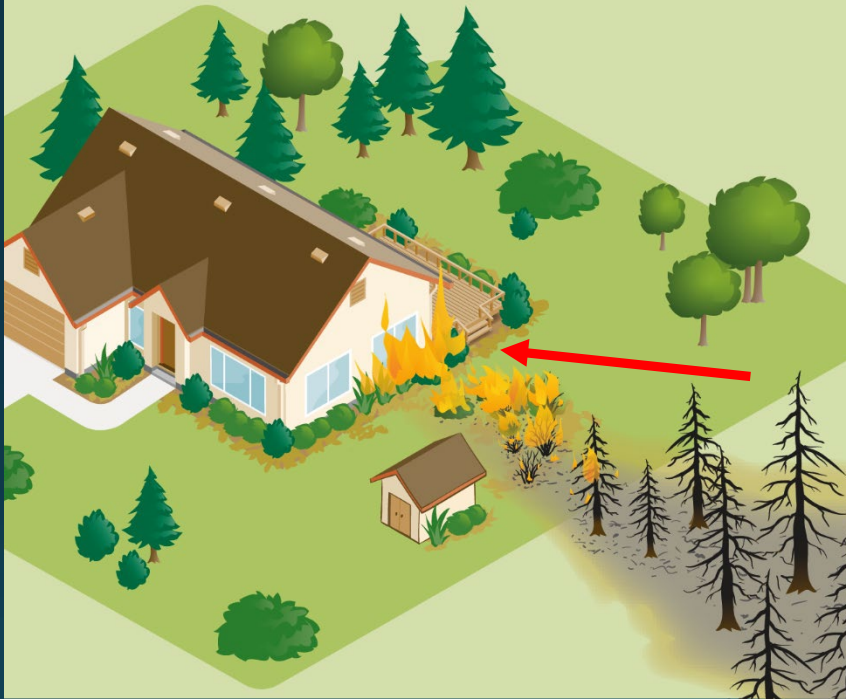
Zone 0

Guidance,
interpretation, and
regulations for
enhanced defensible
space as directed by
AB 3074 (2020)

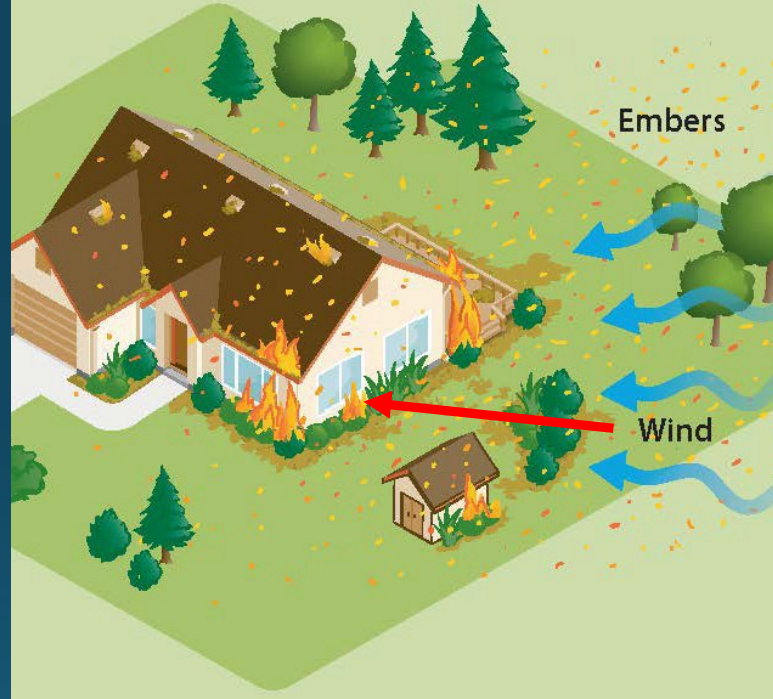


Three types of fire exposures

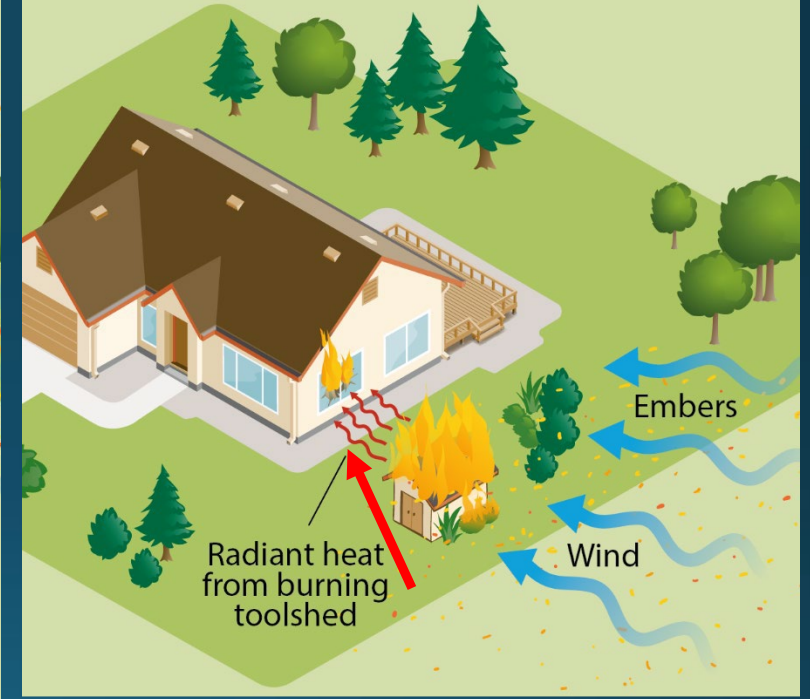
Direct flame contact



Embers

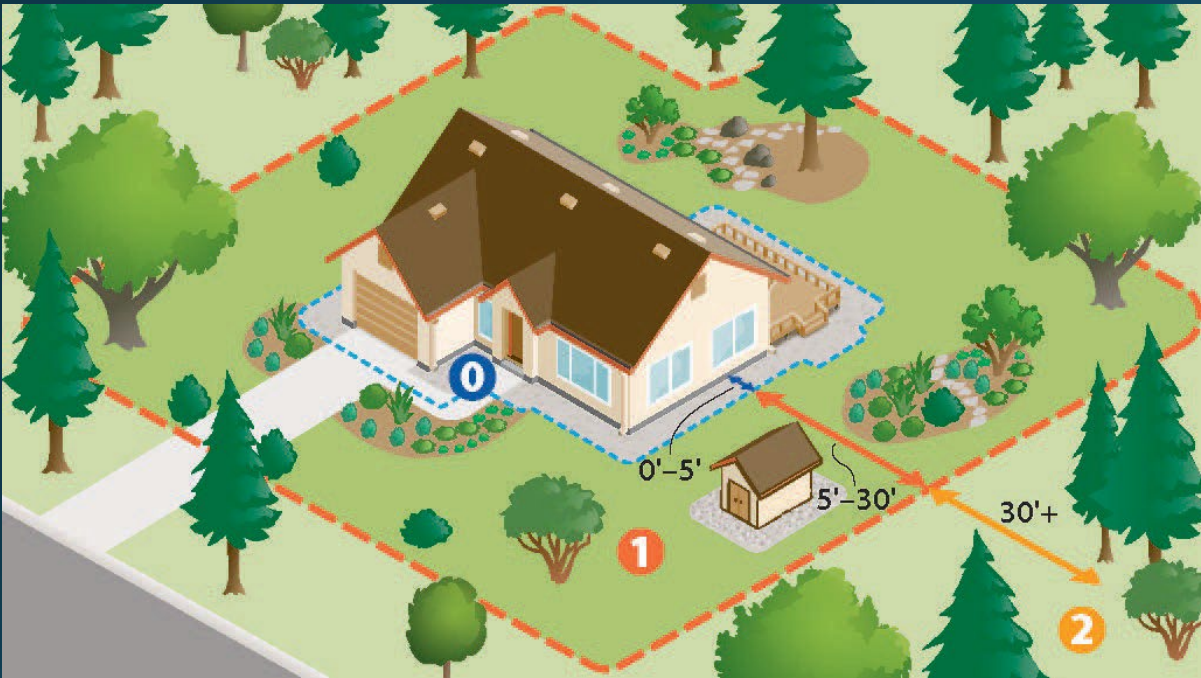


Radiant heat



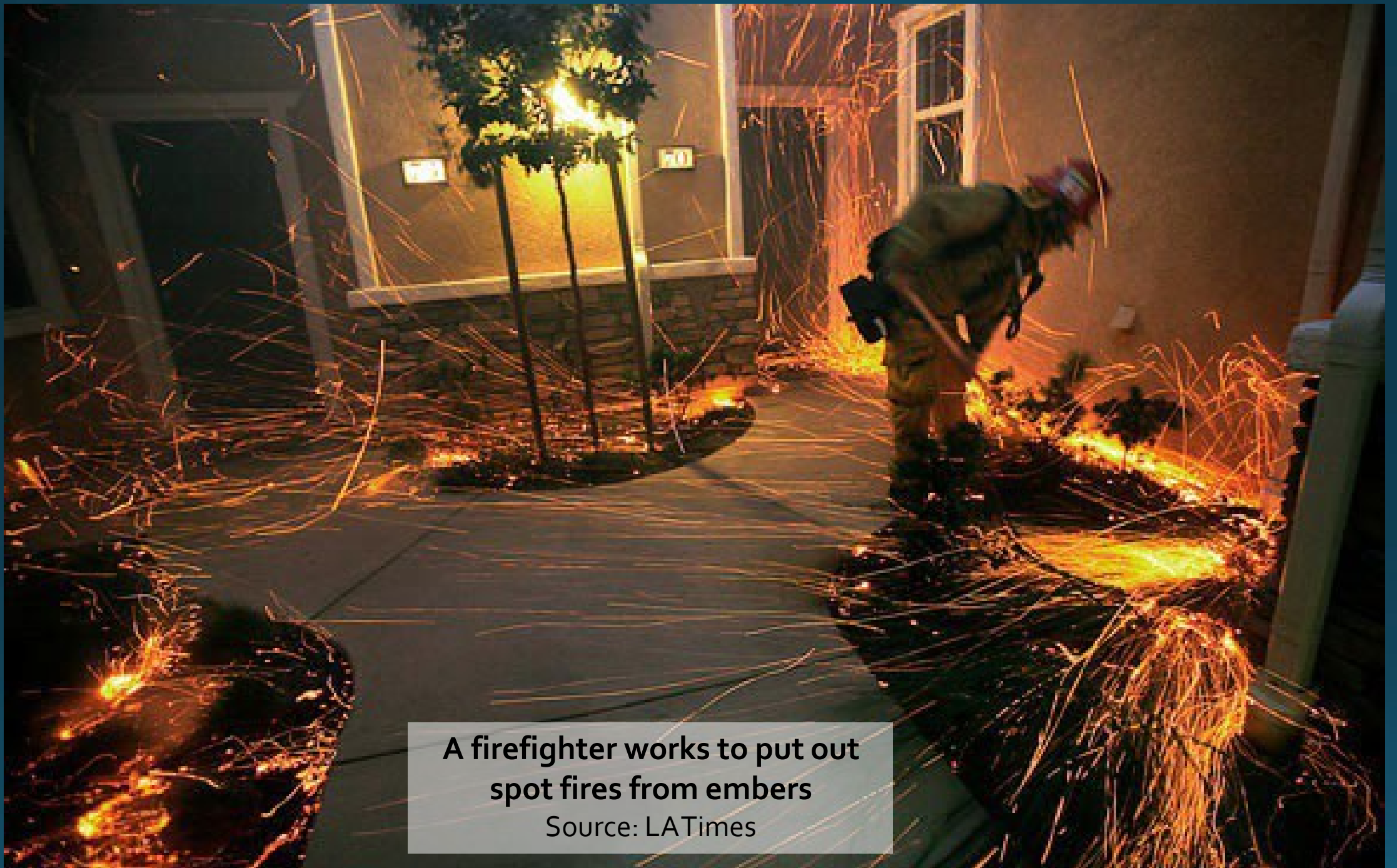
- Defensible space strategies have focused on how to reduce direct flame contact.
- Preparing for embers and radiant heat exposures takes a different approach.

Purpose- Zone 0



Zone 0 reduces the likelihood of **structure ignition** by reducing the potential for **direct ignition of the structure from flame contact**, by embers that **accumulate at the base of a wall**, and/or indirect ignitions when **embers ignite vegetation, vegetative debris or other combustible materials located close to the structure that result in either a radiant heat and/or a direct flame contact exposure to the structure.**

Zone 0 is the **horizontal area within the first five feet around the structure and any outbuildings and attached decks, and stairs.**



**A firefighter works to put out
spot fires from embers**

Source: LATimes

What does AB 3074 require?

- Create an **ember-resistant zone within 5 feet of the structure**, based on regulations promulgated by the State Board of Forestry and Fire Protection
- On or before **January 1, 2023**, the State Board of Forestry and Fire Protection, in consultation with the Department of Forestry and Fire Protection, shall update the **guidance document** to include suggestions for creating an ember-resistant zone within five feet of a structure based on regulations promulgated by the State Board of Forestry and Fire Protection, in consultation with the Department of Forestry and Fire Protection, to **consider the elimination of materials in the ember-resistant zone that would likely be ignited by embers**.
- For purposes of this section, **a structure for the purpose of an ember-resistant zone shall include any attached deck**. This section does not limit the authority of the State Board of Forestry and Fire Protection or the Department of Forestry and Fire Protection to require the removal of fuel or vegetation on top of or underneath a deck pursuant to this section.
- (2) (A) The requirement for an ember-resistant zone pursuant to Section 51182 **shall not take effect for new structures until the State Board of Forestry and Fire Protection updates the regulations**, pursuant to paragraph (1) of subdivision (a) of Section 51182, and the guidance document, pursuant to paragraph (2) of subdivision (c) of Section 51182.
- (B) The requirements for an ember-resistant zone pursuant to Section 51182 **shall take effect for existing structures one year after the effective date for the new structures**.

Bill Supporters

- ✓ American Planning Association, California Chapter
- ✓ American Property Casualty Insurance Association
- ✓ Building Owners and Managers Association California Apartment Association
- ✓ California Association of Realtors
- ✓ California Association of Resource Conservation Districts
California Building Industry Association
- ✓ California Business Properties Association
- ✓ California Fire Chiefs Association
- ✓ California Fire Safe Council
- ✓ California Forestry Association
- ✓ California State Association of Counties
- ✓ California State Firefighters' Association
- ✓ City of Malibu
- ✓ Congress of California Seniors
- ✓ County of Del Norte, Board of Supervisors
- ✓ County of Humboldt, Board of Supervisors
- ✓ Defenders of Wildlife
- ✓ Fire Districts Association of California
- ✓ Fire Safe Council of San Diego County
- ✓ Midpeninsula Open Space District Orange County Fire Authority
- ✓ Pacific Forest Trust
- ✓ Pacific Gas and Electric Company
- ✓ Perimeter Solutions
- ✓ Personal Insurance Federation of California
- ✓ Resource Conservation District of Greater San Diego County Rural County Representatives of California
- ✓ San Diego Gas & Electric
- ✓ Sierra Club California
- ✓ Southern California Edison
- ✓ The Nature Conservancy
- ✓ Tree Care Industry Association
- ✓ Western Wood Preservers Institute

Workgroup Efforts

- November 2021: Workgroup formed
- Developed framework & voted on recommendations for elements commonly found in Zone 0
- Several presentations to Board of Forestry & Fire Protection and public workshop in May 2022, workgroup expanded
- Consideration of guidance document update & public outreach

Workgroup participants

Board of Forestry

Edith Hannigan

J. Lopez

Claire McCoy

UC Cooperative Extension

Steve Quarles

Yana Valachovic

CAL FIRE Office of the State Fire

Marshal

Greg Anderson

Daniel Berlant

Frank Bigelow

Steve Hawks

Anthony Massucco

John Morgan

Crystal Sujeski

Daniel Gorham - Insurance Institute for
Business and Home Safety

Foster McLean – City of Glendale

Ryan Boykin – Southern Marin Fire

Larry Williams – Ventura County Fire

Chris Vallergera – CAL FIRE Mendocino Unit

Jeremy Davis – Lakeside Fire Protection
District

Marcus Hernandez – CAL FIRE / Morgan
Hill Fire Department

Caerleon Safford – County of Sonoma

Todd Lando – Central Marin Fire

Department, Marin Wildfire Prevention
Authority

Craig Wittner – Redding Fire Department

Ron Durbin – Los Angeles County Fire
Department

William Romo – Los Angeles County Fire
Department

Margaret Belska – landowner

Jeff Isaacs – Moraga Orinda Fire District

MJ Lee – Wildfire Preparedness Committee,
Town of Portola Valley

Marco Mack – Santa Cruz Fire Safe Council,
Cal Chiefs Assoc. WUI Committee

Jaime Scott Guthrie – Monterey County
Housing & Community Development

Curtis Johnson – Butte County Development
Services

Polina Pivak – Mariposa County Planning

Ron Marley – San Ramon Valley Fire
Protection District

Ruben Grijalva – FireChiefs.com LLC

Ethan Foote – Retired CAL FIRE/OSFM

Draft requirements: Striking a balance

- Remove all dead & dying vegetative material
- Plant spacing & care (placement is more important than plant type)
- Tree branches 10' above roof
- Replace wooden fences within 5 feet



Timeline

- **Late August 2022:** Draft regulations submitted for Natural Resources Agency & Governor's Office review
- **Fall 2022:** Developing detailed economic impact analysis & public outreach strategy
- **First quarter of 2023:** Anticipated 45-day public comment period

State Minimum Fire Safe Regulations

2022 Update

Summary

- Permanent regulations adopted in August 2022
- Effective date: April 1, 2023
- Purpose: to effectuate changes made to PRC 4290 by SB 901 (2018)

What's changed?

Changes

- Article 1. Administration
- Article 5. Building Siting, Setbacks and Fuel Modification

No Changes

- Article 2. Emergency Access and Egress
- Article 3. Signing and Building Numbering
- Article 4. Emergency Water Standards

Article 1

- Permanent applicability to LRA VHFHSZ
- Local regulations which equal or exceed standards still supersede FSRs, but no Board certification process
- Improved clarity on inspection delegations

Article 5

- Prohibits new buildings on undeveloped ridgelines identified as strategically important; new residential units at top of drainages or other high-risk topographic features common to ridgelines
- Provides for local determination of fuel break need & location for new development
- Provides for disposal of flammable vegetation & fuels from construction

Timeline

- Approved by Board August 17, 2022
- Currently under review by Office of Administrative Law
- Anticipated effectiveness date: April 1, 2023

Fire Risk Reduction Communities List

2022 Update



Background



- **PRC 4290.1:** “On or before July 1, 2022, the board shall develop criteria for and maintain a “Fire Risk Reduction Community” list of local agencies located in a state responsibility area or a very high fire hazard severity zone....that meet best practices for local fire planning.
- **PRC 4124.7(a):** “The department shall, except for activities described in paragraph (5) of subdivision (c) of Section 4124.5, prioritize local assistance grant funding applications from local agencies based on the “Fire Risk Reduction Community” list, upon development of that list, pursuant to Section 4290.1.

Timeline



- First application period: **January - April 2022**
- First version of List published online: **July 1, 2022**
- Application deadline for next List update: **April 30, 2024**, and April 30 of each even-numbered year thereafter (2026, 2028, etc.)
- Updated versions of List published online: **July 1, 2024**, and July 1 of each even-numbered year thereafter



List Structure

- **Local Agency:** Any city, city and county, or county; tribal agency; agency, department, district or other **publicly funded entity** serving a city or and county.
- **Cities & counties** qualify by meeting a combination of mandatory & optional criteria; meeting state minimum standards + demonstrating that they go the extra mile beyond state minimums
- **Non-cities & counties** qualify by meeting a combination of optional criteria demonstrating that they go the extra mile to meet best practices

FAQ's



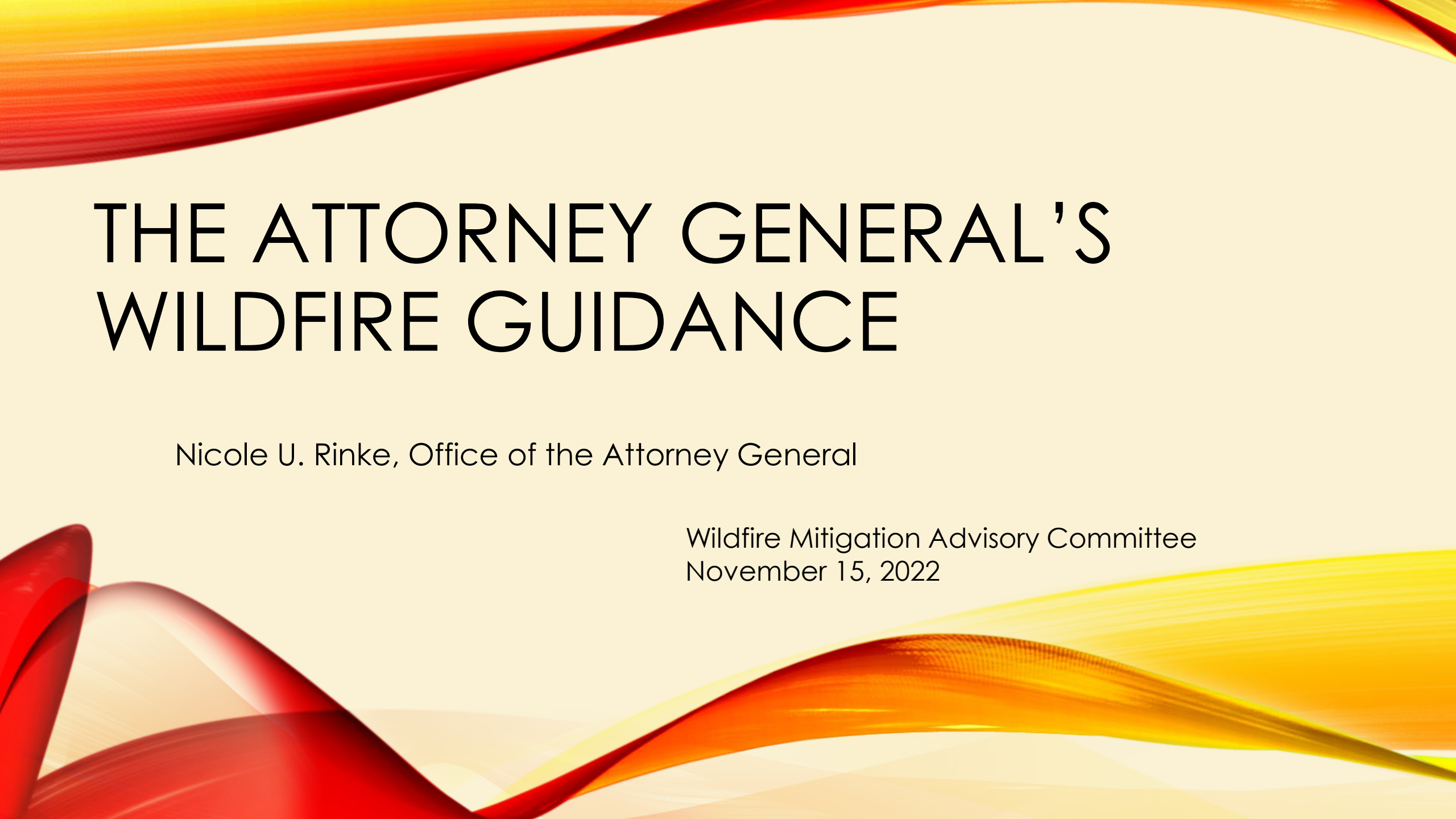
- Not being on the List does NOT impact eligibility to apply for or receive CAL FIRE grant funding.
- The Board is unable to make interpretations or provide geographic boundary files of agencies on the List for use by the insurance industry.



Thank you!

Claire McCoy

Claire.mccoy@bof.ca.gov



THE ATTORNEY GENERAL'S WILDFIRE GUIDANCE

Nicole U. Rinke, Office of the Attorney General

Wildfire Mitigation Advisory Committee
November 15, 2022



THE ATTORNEY GENERAL'S ROLE

1. Thinking proactively about land use decisions and wildfire risks
2. Thinking across issues
3. Enforcing CEQA and other state laws

THE GUENOC VALLEY PROJECT





OTAY RANCH VILLAGE 14 AND PLANNING AREAS 16/19



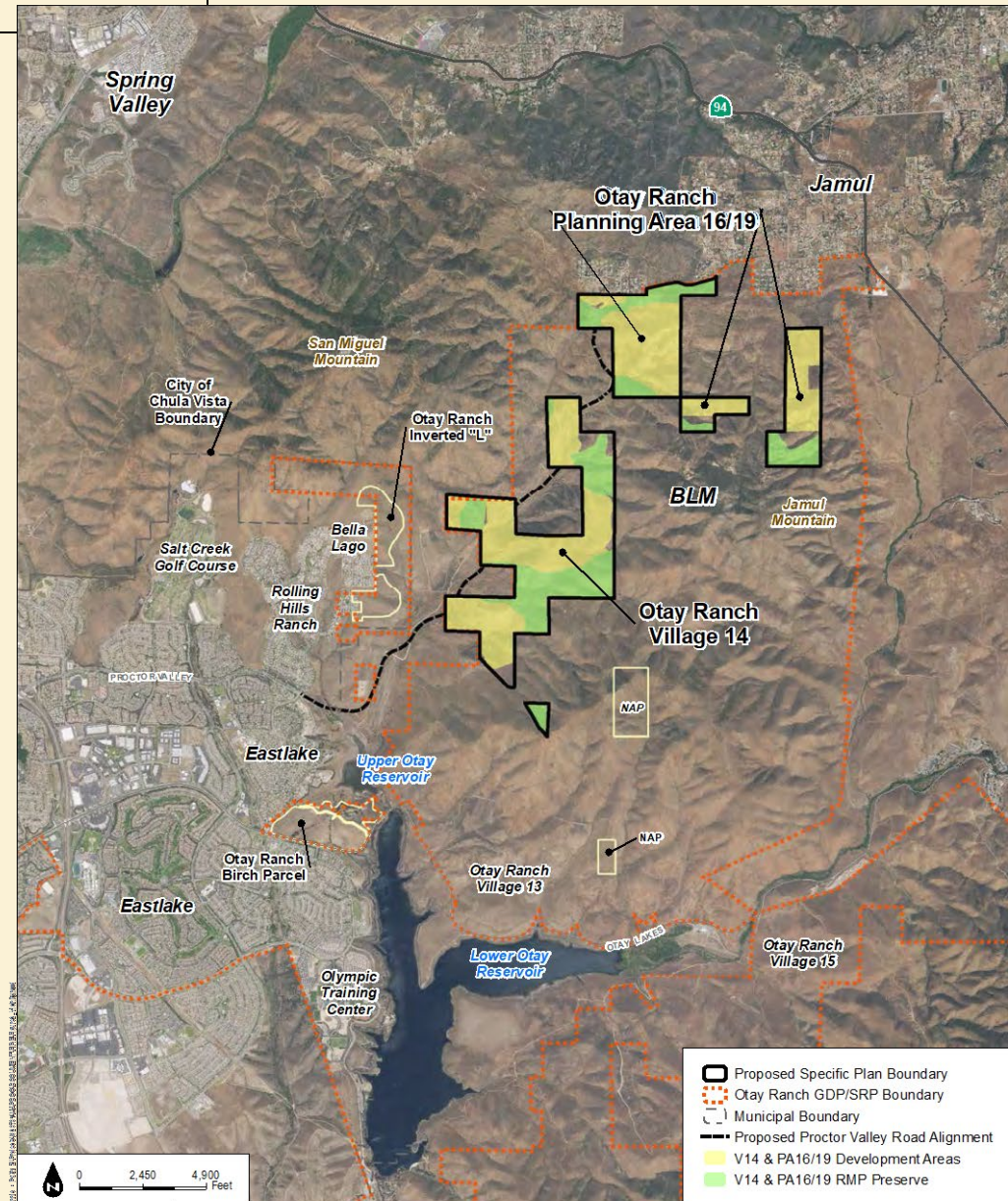


SOURCE: Munsicker 2017

FIGURE 1
Regional Map

Otay Ranch Village 14 and Planning Areas 16/19

DUDEK



SOURCE: NAD 2016, Munsicker 2017, County of San Diego 1997

FIGURE 2
Vicinity Map

Otay Ranch Village 14 and Planning Areas 16/19

DUDEK

- Proposed Specific Plan Boundary
- Otay Ranch GDP/SRP Boundary
- Municipal Boundary
- Proposed Proctor Valley Road Alignment
- V14 & PA16/19 Development Areas
- V14 & PA16/19 RMP Preserve



THE GUIDANCE



State of California
Office of the Attorney General

ROB BONTA
ATTORNEY GENERAL

**Best Practices for Analyzing and Mitigating Wildfire Impacts of
Development Projects Under the California Environmental Quality Act**

<https://oag.ca.gov/news/press-releases/attorney-general-bonta-issues-guidance-local-governments-mitigate-wildfire-risk>

ANALYSIS OF A PROJECT'S IMPACT ON WILDFIRE RISKS – FACTORS

- Project Density
- Project Location in the Landscape
- Water supply and infrastructure

ANALYSIS OF A PROJECT'S IMPACT ON WILDFIRE RISKS – TOOLS

- Modeling and qualitative analyses
- Thresholds of significance

ANALYSIS OF EVACUATION AND EMERGENCY ACCESS - FACTORS

- Evacuation of project residents and simultaneous emergency access
- Evacuation of nearby existing communities
- Scale the analysis according to the associated wildfire risks and impacts

ANALYSIS OF EVACUATION AND EMERGENCY ACCESS - TOOLS

- Modeling
- Transportation analysis
- Local fire officials
- Existing evacuation plans
- Be cautious with shelter in place
- Thresholds of significance

MITIGATE IMPACTS AND RISKS - EXAMPLES

- Higher density and infill
- avoid leap frog developments
- decrease the project's edge
- Buffers and defensible space
- Utilization of landscape features
- Underground power lines
- Consider the terrain
- utilize existing ingress and egress
- Consider proximity to emergency services
- Fire harden structures and communication infrastructure
- On site water supply

LOOKING FORWARD - THE ROLE OF THE GUIDANCE







QUESTIONS?

Nicole.Rinke@doj.ca.gov

Building Community Fire Adaptation and Resiliency Throughout California Using UC ANR's Capacities

November 15, 2022
Wildfire Mitigation Committee

Lenya Quinn-Davidson
Yana Valachovic
UC Cooperative Extension



Best management practices



Trusted experts



Research



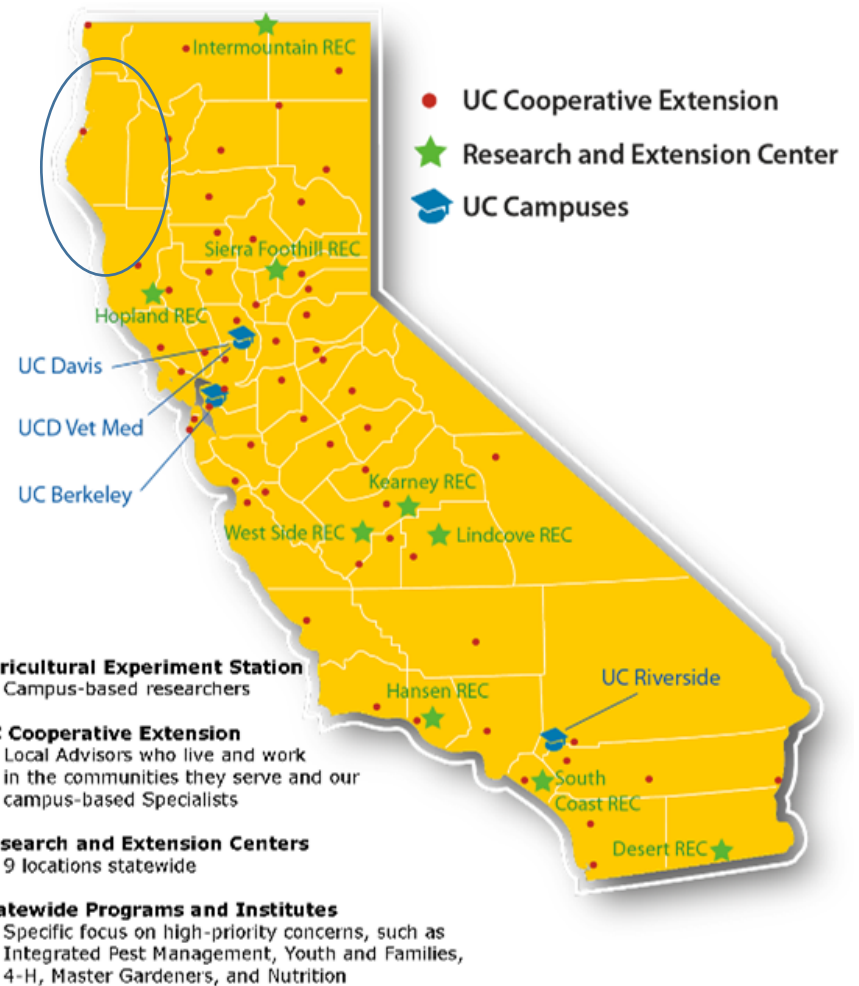
Connection between communities



Hope

Fire Advisor Concept Origins and Opportunities

- Piloted the **fire advisor** concept with Lenya Quinn-Davidson (starting in 2011)
- **Cross-boundary** programming/talent to help lift our existing network of advisors and specialists
- Geographic coverage includes **urban and rural communities**
- **Diversity of disciplines:** disaster response, wildland fire management, prescribed fire, workforce training, economic development, community recovery, public health and air quality, fire impact analysis on agricultural products, wildland-urban interface issues, community planning



2019 Oregon Legislature Creates an Extension Program in Fire

- 6 Specialists, 1 Director, 1 Program Manager
- <https://extension.oregonstate.edu/fire-program>

TOPICS GET INVOLVED ABOUT CONTACT US EN ESPAÑOL COVID-19 SAFETY AND SUCCESS

Programs

Fire Program

Fire Program

Faculty & Staff

Events

About

Online Webinar Guide

After a Wildfire

The Forestry & Natural Resources Extension Fire Program assists in identifying landscapes in highest need of a strategic focus of resources to reduce wildfire and landscape health risks at a statewide scale. We also assist with the implementation of cross-boundary projects on the ground in priority landscapes and provide education and outreach throughout the process.

We acknowledge that *Oregon State University in Corvallis, Oregon, is located within the traditional homelands of the Mary's River or Ampinefu Band of Kalapuya. Following the Willamette Valley Treaty of 1855, Kalapuya people were forcibly removed to reservations in Western Oregon. Today, living descendants of these people are a part of the Confederated Tribes of Grand Ronde Community of Oregon and the Confederated Tribes of Siletz Indians.* All Extension programming throughout the state of Oregon happens on traditional homelands. To learn more, [click here](#).

Photo: Amy Markus (Cropped from original)

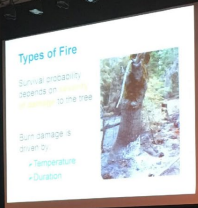
Share Print

What does UCCE bring to Californians?

Trusted local experts



Connections between communities



Network of Delivery

Evidenced-based information



Making a Difference for California | University of California Agriculture and Natural Resources | UC PEER REVIEWED

<http://anrcatalog.ucdavis.edu> | Publication 8393 | May 2010

Home Survival in Wildfire-Prone Areas: Building Materials and Design Considerations

STEPHEN L. QUARLES, UCCE Natural Resources Advisor, Contra Costa County; YANA VALACHOVIC, UCCE Forest Advisor, Humboldt County; GARY M. NAKAMURA, UCCE Area Forestry Specialist, Shasta County; GLENN A. NADER, UCCE Natural Resources Advisor, Sutter-Yuba Counties; and MICHAEL J. DE LASAUX, Natural Resources Advisor, Plumas-Sierra County

Introduction

Embers are the most important cause of home ignition. Recent research indicates that two out of every three homes destroyed during the 2007 Witch Creek fire in San Diego County were ignited either directly or indirectly by wind-dispersed, wildfire-generated, burning or glowing embers (Maranghides and Mell 2009) and not from the actual flames of the fire. These embers are capable of igniting and burning your home in several ways. In order to have a wildfire-safe home, two equally important factors must be implemented: 1) the wise selection of building materials and designs that will help the home resist the wildfire; and 2) the home must have adequate defensible space, based on the wise selection, placement, and maintenance of near-home vegetation.

There is a direct link between home survival, the vegetation management required in developing adequate defensible space around the home, and the building materials and design used to construct the home. The area where your vegetation should be managed (i.e., your defensible space) will depend on the particular topography and siting of the home on the property. Information included in this publication is focused on the home and is intended to provide information to help you make "fire wise" decisions regarding material choices and design decisions, whether you are building a new home or retrofitting your existing house. A considerable amount of information has been published in recent years on defensible space and vegetation management. Check with your local cooperative extension office or fire department for information appropriate to your area.

Ignition of Homes in Wildfire-Prone Areas

Wildfires spread by a combination of a moving fire front and airborne burning and glowing embers. Building loss during wildfires occurs as a result of some part of the building igniting from one or more of the three basic wildfire exposures, which include 1) embers (also called *firebrands*), 2) radiant heat, and 3) direct flame contact. Embers are light enough to be blown through the air, and can result in the rapid spread of wildfire by *spotting* (in which embers are blown ahead of the main fire, starting other fires). Should these embers land on or near your house, they could just as

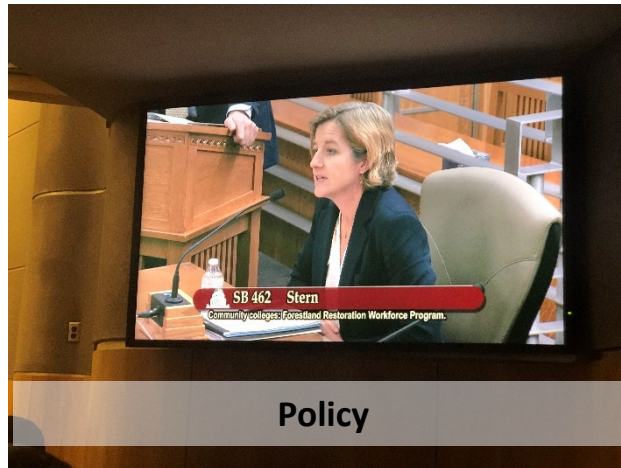
UCCE provides points of connection

For landowners, agencies, local governments, and community members to work together toward fire resilience



UCCE leads research

To inform strategic fuels management and policy efforts throughout California



Policy



Home hardening



Forest management practices



Range management practices

Building a Team of Fire Advisors



Lenya Quinn-Davidson
Area Fire Advisor
Humboldt, Mendocino,
Siskiyou, and Trinity Counties



Katie Low
Statewide Coordinator
Based in Placer and Nevada
Counties



Tori Norville
Area Fire Advisor
Marin, Napa, and
Sonoma Counties



Barbara Satink-Wolfson
Area Fire Advisor
Monterey, San Benito,
Santa Clara, and Santa
Cruz Counties



Alison Deak
Area Fire Advisor
Fresno, Madera, and
Mariposa Counties



Luca Carmignani Ph.D.
Area Fire Advisor
Los Angeles, Orange, Riverside,
and San Diego Counties



University of California Agriculture and Natural Resources



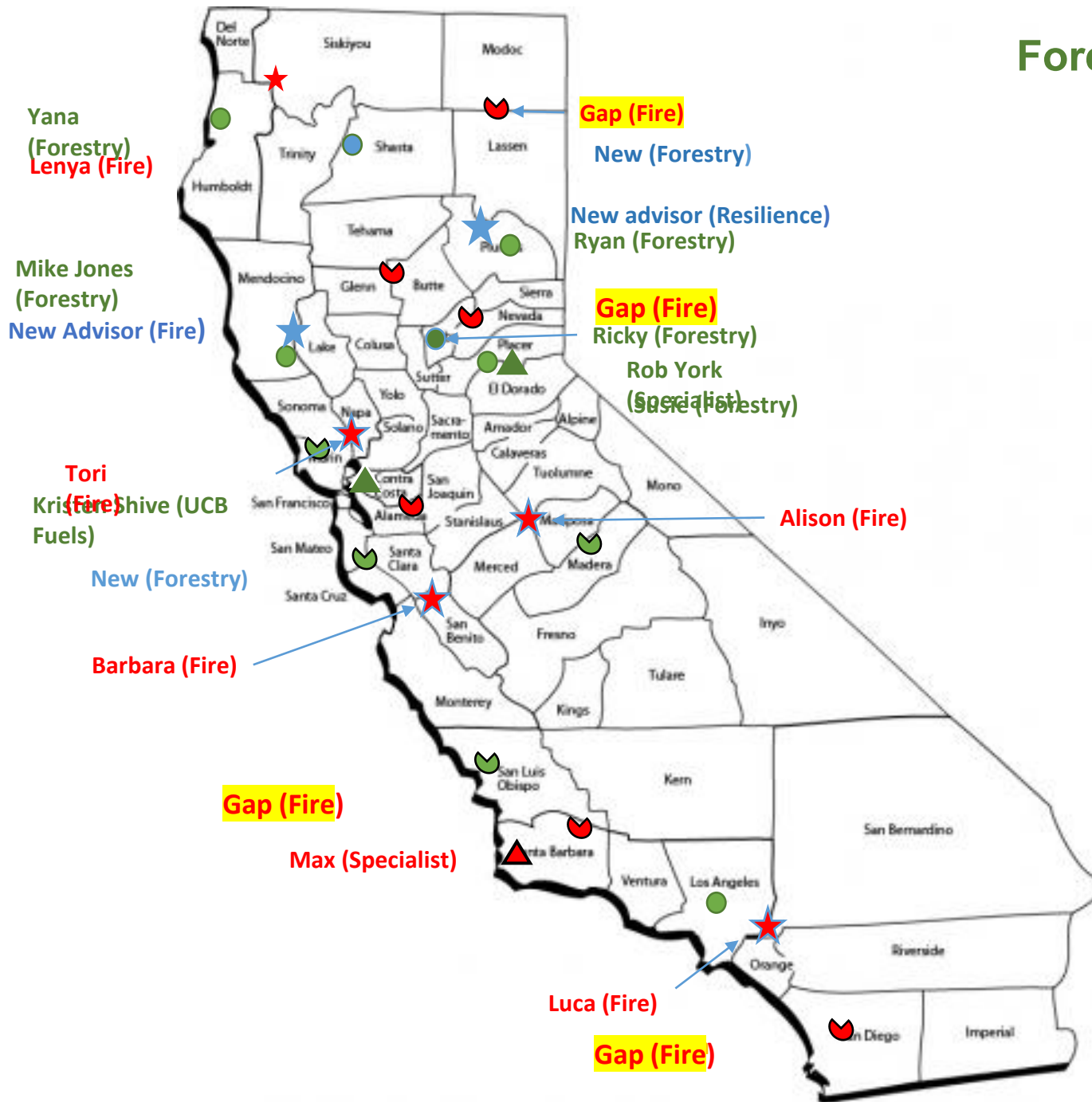
UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Cooperative Extension

Fire Team Support and Integration

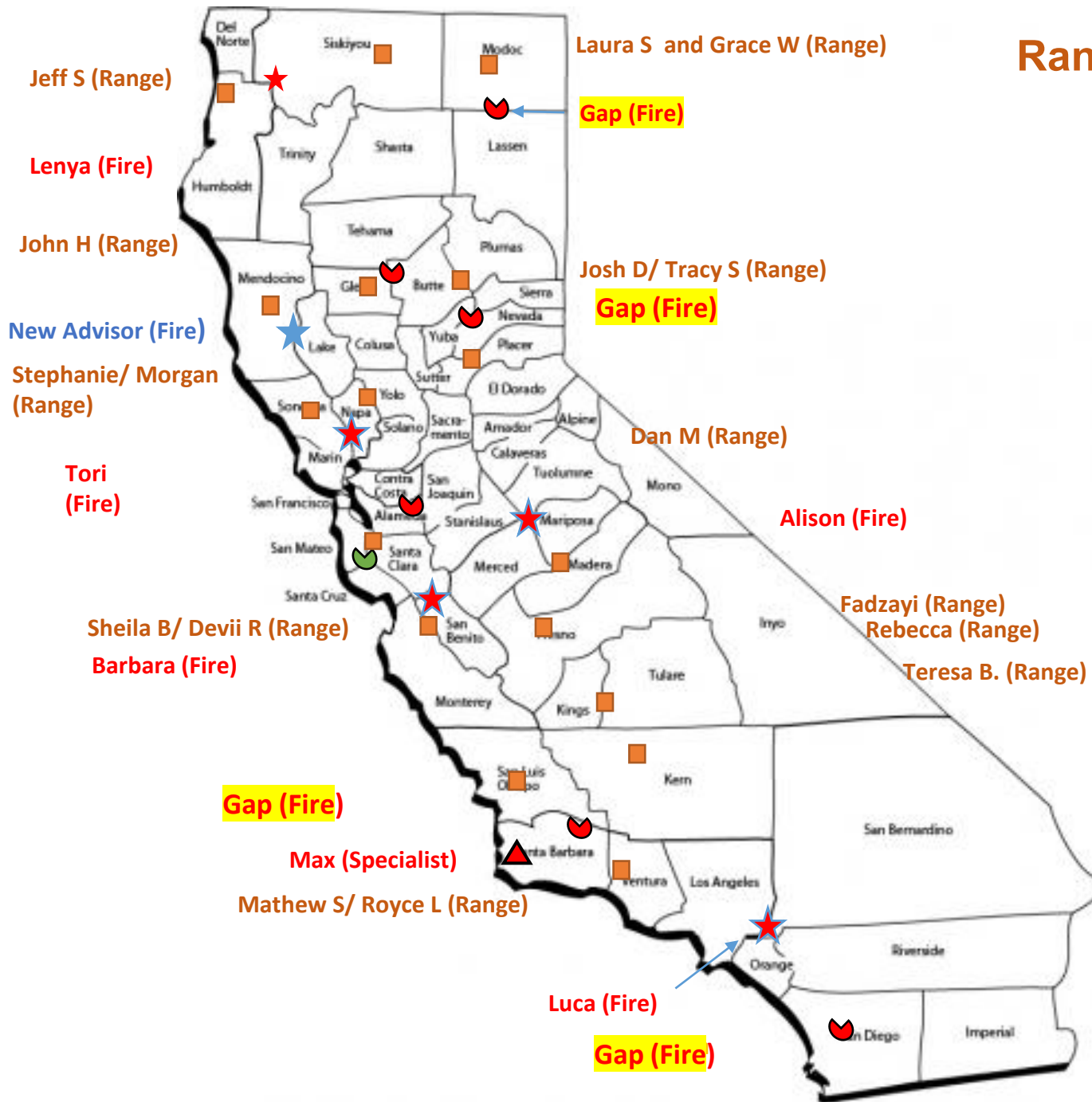
- 7 **fire** advisors and one academic coordinator (2 advisors to be recruited)
- 7 **forestry** advisors (2 to be recruited)
- 3 **biomass** utilization advisors (1 to be recruited)
- 2 **disaster resilience** advisors (1 in the search committee process)
- 16 **natural resources / livestock** advisors
- Various faculty at **UCB, UCR, UCM, UCD**

Forestry and Fire Advisors - Specialists



- ★ Fire Advisor
- ♥ Fire Advisor Opportunity
- Forestry Advisor
- ♥ Forest Adv. Opportunity

Range and Fire Advisors - Specialists



- ★ Fire Advisor
- ♥ Fire Advisor Opportunity
- Rangeland/Fire Advisor

Fuel reduction

❖ Goals

- To help support the use of prescribed fire, mechanical, and hand treatments to reduce fuels by providing temporal and special guidance to reduce ecosystem impacts and greater durability of treatments.

❖ Accomplishments- Activities

- Fuel hazard reduction permitting publication #8716
- Targeting grazing study
- Landowner and professional workshops
 - Forest Stewardship Series
 - Post-fire Restoration Program

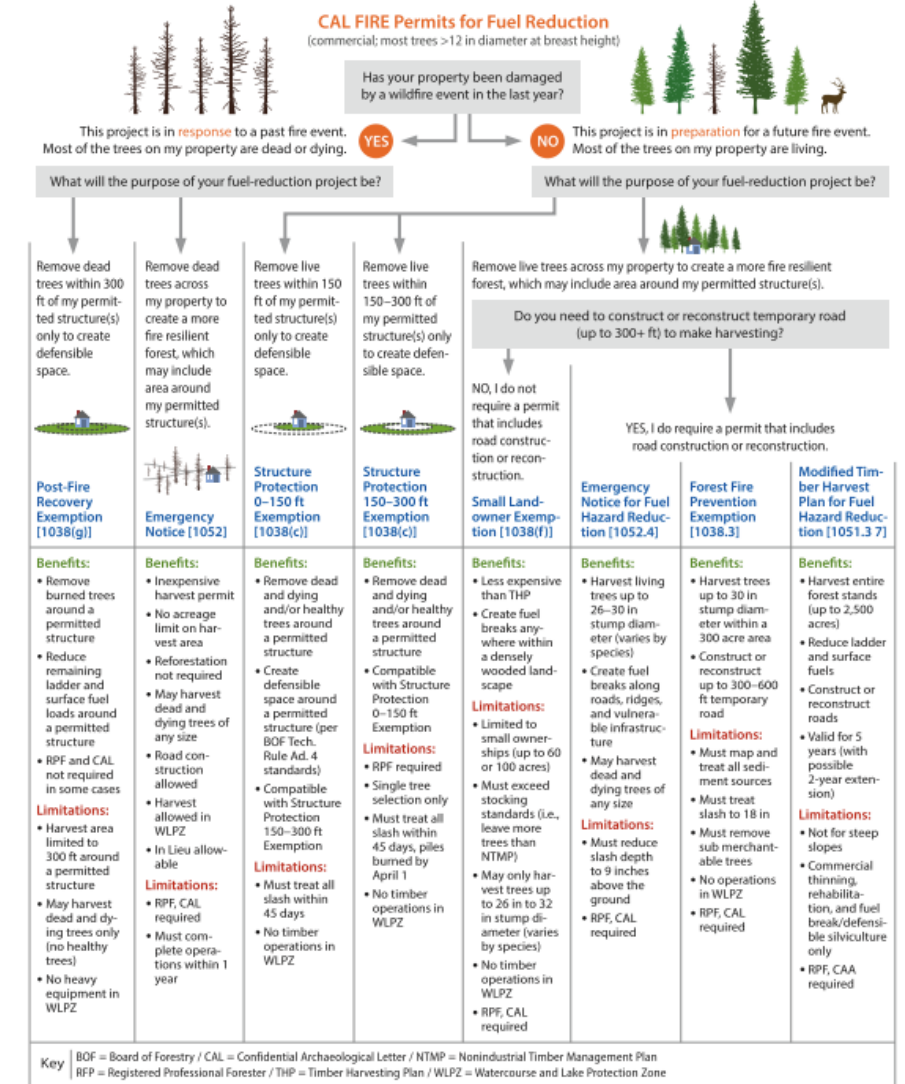


Figure 1. Summary of CAL FIRE permits for fuel-reduction projects.

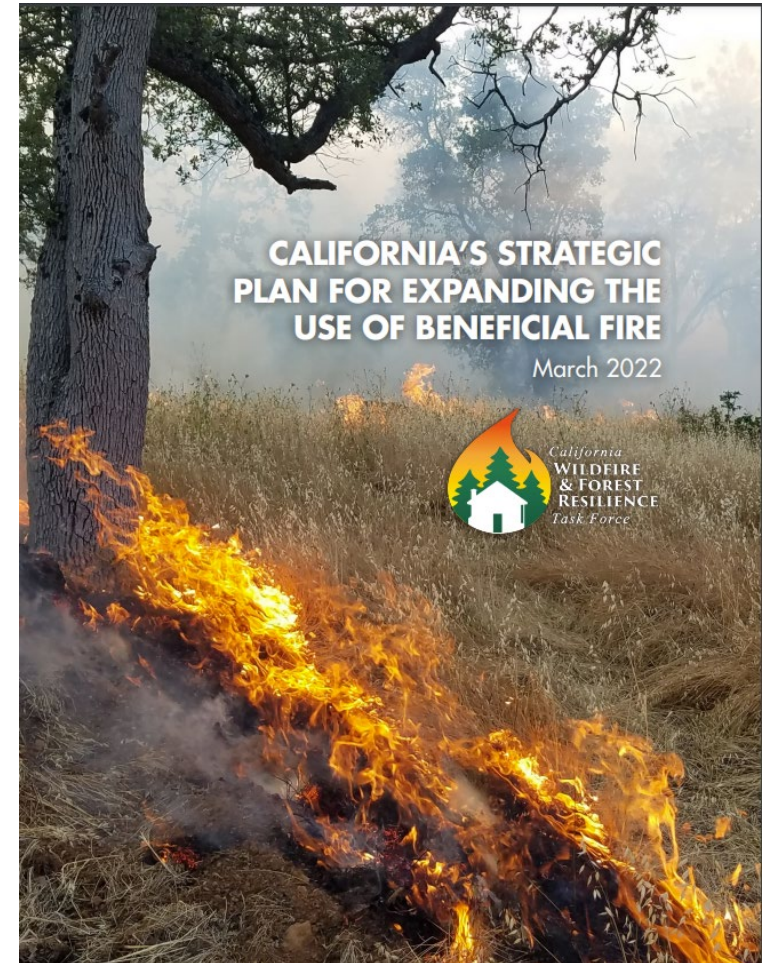
Empower the use of prescribed fire

❖ Goal

- To empower the use prescribed fire and cultural burning to reduce fuels, restore ecosystem function, improve forest and rangeland habitats, support cultural management

❖ Accomplishments

- Capacity building
 - CA Burn Boss Program
 - PBA expansion and networking
 - VFD training and collaboration
 - TREX/WTREX
 - Rx Fire Training Center
 - Community outreach and education
- Policy Improvements
 - Liability changes via SB332
 - Rx Fire Claims Fund via SB926
 - CA Strategic Plan for Beneficial Fire



Harden Homes

❖ Goal

- To build and retrofit homes for improved wildfire resilience

❖ Accomplishments

- Classes to support workforce development and general public awareness
- Policy discussions
- Research with IBHS, NIST, and other scientists
- Publications
- UCCE websites, social media



Knapp et al. *Fire Ecology* (2021) 17:25
<https://doi.org/10.1186/s42428-021-00117-0>

ORIGINAL RESEARCH

Fire Ecology

Open Access



Housing arrangement and vegetation factors associated with single-family home survival in the 2018 Camp Fire, California

Eric E. Knapp^{1*}, Yana S. Valachovic², Stephen L. Quarles³ and Nels G. Johnson⁴

Abstract

Background: The 2018 Camp Fire, which destroyed 18,804 structures in northern California, including most of the town of Paradise, provided an opportunity to investigate housing arrangement and vegetation-related factors associated with home loss and determine whether California's 2008 adoption of exterior building codes for homes located in the wildland-urban interface (WUI) improved survival. We randomly sampled single-family homes constructed before 1997, 1997 to 2007, and 2008 to 2018, the latter two time periods being before and after changes to the building code. We then quantified the nearby pre-fire overstory canopy cover and the distance to the nearest destroyed home and structure from aerial imagery. Using post-fire photographs, we also assessed fire damage and assigned a cause for damaged but not destroyed homes.

Results: Homes built prior to 1997 fared poorly, with only 11.5% surviving, compared with 38.5% survival for homes built in 1997 and after. The difference in survival percentage for homes built immediately before and after the adoption of Chapter 7A in the California Building Code (37% and 44%, respectively) was not statistically significant. Distance to nearest destroyed structure, number of structures destroyed within 100 m, and pre-fire overstory canopy cover within 100 m of the home were the strongest predictors of survival, but significant interactions with the construction time period suggested that factors contributing to survival differed for homes of different ages. Homes > 18 m from a destroyed structure and in areas with pre-fire overstory canopy cover within 30–100 m of the home of < 33% survived at a substantially higher rate than homes in closer proximity to a destroyed structure or in areas with higher pre-fire overstory canopy cover. Most fire damage to surviving homes appeared to result from radiant heat from nearby burning structures or flame impingement from the ignition of near-home combustible materials.

Conclusions: Strong associations between both distance to nearest destroyed structure and vegetation within 100 m and home survival in the Camp Fire indicate building and vegetation modifications are possible that would substantially improve outcomes. Among those include improvements to windows and siding in closest proximity to neighboring structures, treatment of wildland fuels, and eliminating near-home combustibles, especially in areas closer to the home (0–1.5 m).

Keywords: Building codes, Defensible space, Flame impingement, Fuels, Radiant heat, Structure loss, Wildfire, Wildland-urban interface

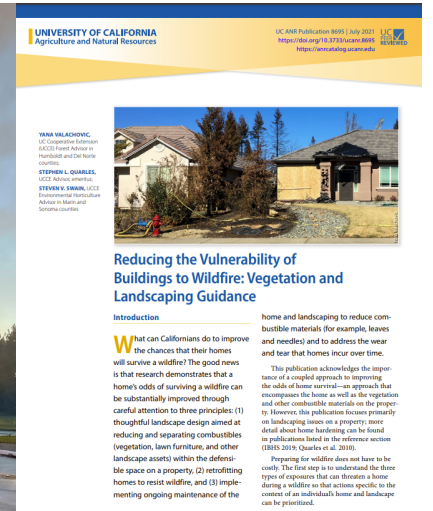
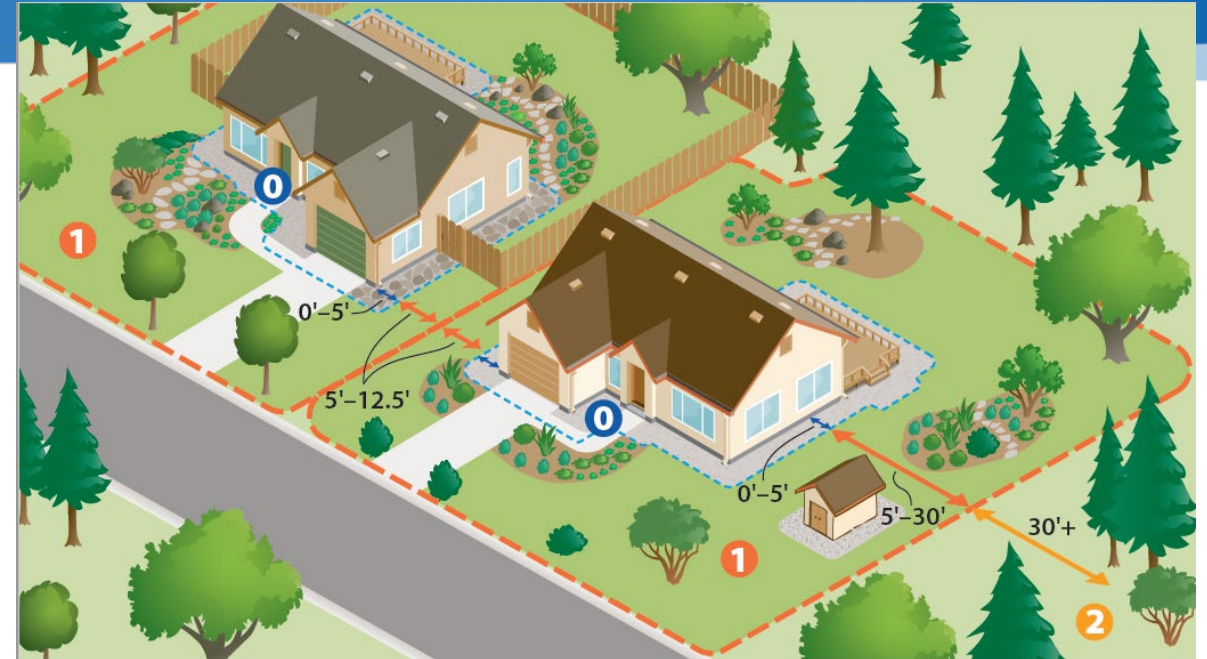
Incorporate defensible space standards

❖ Goals

- To reduce “near home” fire vulnerabilities, reduce invasive species, reduce water usage, and enhance drought tolerance.

❖ Accomplishments

- Zone 0 regulation development
- Master Gardener curriculum
- Workshops
- UCCE websites and social media
- Publications



Engage with local planners

❖ Goal

- To actively address wildfire resiliency, emergency response, and best management practices

❖ Engagements

- Ass. of Bay Area Governments
- Fire Safe Regulations
- League of Cities
- Office of Planning and Research
- Oregon Fire Marshall
- Fire Adapted Community program (National and WFRTF)
- PODS



UCCE builds community fire adaptation and resiliency throughout California

To enhance community wildfire planning, daylight best practices on community and state levels, and advance efforts on every level.



Conclusions

- The UCANR fire team is up and running (and growing)
- Active at local, regional, and state scales
- ✓ Wildfire Mitigation Advisory Committee
- ✓ Wildfire Forest Resilience Task Force (3 committees and science advisory panel)
- ✓ Prescribed Fire Claims Fund & Training Center working groups
- ✓ Department of Insurance
- ✓ Office of Planning and Research
- ✓ Board of Forestry and Fire Protection
- ✓ Wildfire Risk Modeling Committee
- ✓ CSAC/RCRC
- ✓ Legislature



Roundtable / Public Comment

- Roundtable
 - Topic Suggestions for Next Meetings
<https://forms.gle/Wefg6YnrnUGYS8ua9>
- Public Comment

Upcoming Meeting Date for 2023

The Committee shall meet on the third Tuesday of each month from 1:00 PM – 3:00 PM

- **December meeting is cancelled**
- **January 17, 2023**
CNRA Building, 2-310 Conference Room (New Room)
715 P St, Sacramento, CA
 - Featuring presentations from:
 - CAL FIRE – Office of the State Fire Marshal:
 - CalMAPPER Viewer Overview:
 - Scott Witt, Jim McDougald, and Rebecca Ferkovich
 - Subdivision Review Program Overview:
 - Carmel Barnhart and Matt Damon
 - Online Burn Permits
 - John Morgan and Frank Bigelow
 - To view the entire list of upcoming presenters, visit:
[Wildfire Mitigation Advisory Committee \(ca.gov\)](https://www.ca.gov/wildfire-mitigation-advisory-committee)

Meeting Adjournment (Motion Required)

- Copies of the written materials have been posted on the Office of the State Fire Marshal web site at <https://osfm.fire.ca.gov/>.
- For information concerning the Advisory Committee Meeting, please contact Kara Garrett at (916) 201-5539 or Kara.Garrett@fire.ca.gov.
- NOTE: Items designated for information are appropriate for committee action if the committee chooses to act. The agenda order is tentative and subject to change. Agenda items may be taken out of order to facilitate the effective transaction of business. The Committee may not discuss or act on any matter raised during the public forum period, except to decide whether to place the matter on the notice and agenda of a future committee meeting.