

---

# WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING

**Meeting Minutes – Tuesday, May 17, 2022**

*Amended June 21, 2022*

---



## **Committee Members Present**

Mike Richwine, State Fire Marshal  
Keali'i Bright, Department of Conservation  
Caroline Thomas Jacobs, 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)  
Clay Kerchof, State Planning and Research  
Jessica Martinez, California Fire Safe Council (Virtual)  
Roy Wright, Insurance Institute for Business & Home Safety  
Ray Gayk and Chris Tubbs, California Fire Chiefs Association (Virtual)  
Nick Cammarota, California Building Industry Association  
Lenya N. Quinn-Davidson, University of California Cooperative Extension (Virtual)  
Yana Valachovic, California Fire Science Consortium (Virtual)  
Maziar Movassaghi, Department of Housing and Community Development (Virtual)  
Sean McGlynn, League of California Cities  
Don Hankins, Professor, CSU Chico (Virtual)

## **Members Absent**

Department of Forestry and Fire Protection  
Rural County Representatives of California  
California Association of Resource Conservation Districts  
California State Association of Counties

## **CAL FIRE Staff in Attendance**

Wendy Collins, Assistant State Fire Marshal (Virtual)  
Daniel Berlant, Deputy Director  
Steve Hawks, Acting Assistant Deputy Director  
Frank Bigelow, Staff Chief  
Jim McDougald, Staff Chief  
Chris Keithley, Chief FRAP Program  
Dave Sapsis, Supervisory Senior Environmental Scientist  
Matt Damon, Deputy Chief, Land Use Planning Program (Virtual)  
John Morgan, Deputy Chief, Wildfire Preparedness (Virtual)  
Scott Witt, Deputy Chief, Pre-Fire Planning  
Jamie Sammut, Staff Counsel  
Jourdan Shuluk, EEO DEI Associate Governmental Program Analyst  
Crystal Sujeski, Deputy State Fire Marshal - Code Development and Analysis (Virtual)  
Kara Garrett, Associate Governmental Program Analyst

## 1. CALL TO ORDER 1:01 PM

### A. Welcome

Mike Richwine

The meeting was called to order at 1:01 PM by Mike Richwine.

### B. Roll Call – Kara Garrett

Quorum Established with sixteen committee members present, seven of which attending virtually.

### C. Approval of Past Meeting Minutes (Motion Required) – Mike Richwine

<b>Motion:</b>	J. Lopez moved to accept the meeting agenda as amended, Maziar Movassaghi seconded the motion.
<b>Action:</b>	All members voted to unanimously to approve the motion.

### D. Agenda Review (Motion Required) – Mike Richwine

<b>Motion:</b>	Roy Wright moved to accept the meeting agenda as amended, Caroline Thomas Jacobs seconded the motion.
<b>Action:</b>	All members voted to unanimously to approve the motion.

## 2. OLD BUSINESS

Daniel Berlant / Steve Hawks

### A. Risk Modeling

- a. Discussed PRC 4204.1
  - i. Review and ensure your agency is listed. Submit letters of recommendations to Kara by May 31<sup>st</sup>.
- b. Letter Template and PRC 4204.1 to be sent with the meeting minutes.

### B. Draft Charter (Motion Required)

- a. Reviewed charter to see if the WMAC (parent committee of the Risk Modeling Advisory Committee) has feedback on the draft. The final version will be created in the Risk Modeling Advisory workgroup itself; this is not the final version. This is to be moved forward to be heard at the first and possibly the second Risk Modeling workgroup meeting so the group can make necessary adjustments at that time.
- b. The verbiage is taken directly out of the Public Resource Code 4204.1.
- c. Objectives are also directly out of Public Resource Code 4204.1.
- d. Meeting schedule is open as it will be to the Risk Modeling Advisory workgroup's discretion on how often they will meet.
- e. We are still doing research on Bagley-Keene requirements for this meeting, until we receive confirmation, we will need to follow the Bagley-Keene requirements due to this being listed as a risk modeling "workgroup" not a committee.
  - i. Question: Thomas Jacobs:
    1. In terms of the objectives, are they in statute?
    2. As a part of their wildfire mitigation advisory plan, they created a workgroup on how the utilities do risk modeling and this is a great companion effort. Is there an opportunity to incorporate a broader

base? This workgroup is developing a utility risk model that will inform the other group.

3. Richwine: We can add members.
  4. Wright: Would hope that the mandate is clear that they must reach out to a whole set of private sector expertise to bring into conversations through any means.
  5. Berlant: There are subject matter experts that are not in this group. The plan for the committee is to bring in other subject matter experts. Possibly not necessarily as formal members of the workgroup but to be a player in the conversation. Would also note that if the committee wanted to, we could easily add to it.
  6. Thomas Jacobs: best to add an additional bullet to provide a broader explanation “to provide a list of other industry risk models and their modeling components”.
- ii. Question: Deborah Halberstadt:
1. Would be helpful to have more time to review before it goes to a motion.
  2. Goals and objectives language regarding the group acting as an advising body to CAL FIRE - Office of the State Fire Marshal (OSFM) and the dept of Insurance. The way legislation was drafted, this is in consultation to CDI and CAL FIRE – OSFM. Proposing to amend this language to more precisely reflect what the legislation says.

<b>Motion:</b>	Robert Troy moved to accept the meeting agenda as amended, Sean McGlynn seconded the motion.
<b>Action:</b>	All members voted to unanimously approve the motion.

### C. Division Reports

**Daniel Berlant / Steve Hawks**

- a. If there are specific programs or projects that you would like to dive into that we cover in this portion, let us know so we can expand on details.
- b. Wildfire Risk Reduction Programs:
  - i. Defensible Space Program
    1. 63,405 completed for defensible space inspections to date.
    2. Were able to augment staffing to now keep Defensible Space Inspectors for a full nine months versus the original three months to work with now permanent Forestry Technicians with AB 38 funding.
    3. Completed curriculum development required by SB 190 and will reach nearly 115 inspectors in the Spring of 2022. Has also been taken to local government agencies. Will be rolling this through the State Fire Training platform in the coming weeks.
    4. Creating a common reporting platform for data collection.
    5. Defensible Space Self-Assessment tool:  
<https://survey123.arcgis.com/share/77d52e2c982e480990320eb5bd53f5fc?portalUrl=https://CALFIRE-Forestry.maps.arcgis.com>
  - ii. Home Hardening Program

1. For Home Hardening, working with Cal OES to develop the foundation for the California Wildfire Mitigation Financial Assistance Program. Direct financial assistance program to the homeowners after their Fire Safe Council/Community is accepted in the program. The pilot communities were based on a risk analysis that determined fire hazard and vulnerable criteria. Not a competitive process at this time. Three communities are Delzura, Whitmore, and Kelseyville Riviera.
  2. Modeled after the Earthquake Brace + Bolt (EBB) program.
  3. For the three pilot counties, the benefit of having these is we can tailor the program we are developing to see the difference between a County and a Resource Conservation District working with the program and what each of the benefits will be.
- iii. Damage Inspection Program:
1. We are at a total of 33 damaged and destroyed structures to date.
- iv. Burn Permit Program:
1. Staff continue working on automating all Department burn permits. Collaboration with CAL FIRE Unit staff and California Air Resources Board (CARB) will ensure the process will function as designed and be able to share prescribed fire data with CARB. The goal is to increase the ease with which the public can obtain a burn permit (online), streamline the process, create an electronic geospatial database, and allow for better reporting and to meet the requirement for AB 642. We anticipate a trial release in late May 2022.
- v. Utility Wildfire Mitigation Program:
1. Continue to assist the Office of Energy Infrastructure Safety (OEIS) in the review of the wildfire mitigation plans for the three large Investor-Owned Utilities (PG&E, SDG&E, SCE). The CAL FIRE review team consists of subject matters experts from across the department (Forest Practice, Fire Protection, Intel, Climate & Energy, and FRAP).
  2. Remaining Small Multi-Jurisdictional Utilities (Bear Valley, Liberty, PacifiCorp) and Independent Transmission Operators (Horizon West and Transbay Cable) wildfire mitigation plan reviews began on May 6, 2022.
  3. Began cross-training DSI inspectors on PRC4292 (pole clearances) and PRC4293 (conductor clearances) regulations during the statewide defensible space training. This includes utilizing the Field Maps application for field collecting violations and exporting violations onto LE-38a forms.
  4. Finalized the update to the Powerline Equipment Identification Pocket Guide in coordination with IOU's, which is a ready-reference tool for identifying power line equipment in the field and is a companion to the Full Powerline Fire Prevention Field Guide.
  5. Participating as a planner and observer of all six of the Investor-Owned Utilities table-top and full-scale PSPS exercises in preparation for 2022 PSPS season.
- c. Wildfire Planning and Statistics Programs:
- i. Pre-Fire Planning Program:

1. Fire Hazard Severity Zone Scientific and pilot reviews started April 26, 2022 to validate the model.
  2. Programs reporting into the CalMAPPER database undergoing scheduled "Quality Assurance/Quality Control" review as part of routine data-scrubbing activities.
  3. Work continues to develop a mobile application for collecting fuels reduction project activities to streamline fuels reduction data collection into CalMAPPER.
  4. Unit Fire Plan updates were submitted to Regions for review and will be updated on the program's website in the next few months.
- ii. California Incident Data and Statistics Program:
    1. Department staff is starting the 2021 wildfire data validation process.
    2. Once complete, CalStats staff will complete the 2021 Redbook. Although it contains other information, this report is primarily a statistical record of wildfire incidents responded to by CAL FIRE personnel and resources, performing the State/CAL FIRE mission, using State funding within CAL FIRE's Direct Protection Area.
- a. Community Wildfire Mitigation Assistance Programs:
    - i. Land Use Planning Program:
      1. Still numerous Safety Element Assessments moving forward statewide, but no presentations this month.
      2. Working on filling some staffing vacancies in Sacramento.
      3. Fire Safe Regulations: Currently out for 15-day review.
      4. Subdivision Review: Identified 1,800 communities that have limited ingress and egress, charged with going out to the communities to make a report to be reviewed by the unit and local jurisdiction. Of those reviewed, 816 have had assessments completed, 666 of the reports have been completed and sent to the board and the board has posted 595 of those on their website. Numerous Cities and Counties in progress now, recent activity in Placer County and San Diego County will be presented in the coming months.
      5. Firewise USA: 513 communities in good standing, more than 250 in progress. Staff are fielding lots of inquiries statewide.
      6. Staff are engaged in numerous other ongoing activities including: OSFM Statutes and Regulations Class, OPR Best Practices Inventory, Training for Local Planners and FHSZ.
  - b. Wildfire Prevention Grants:
    - i. Will announce the awards around June 1<sup>st</sup>.
    - ii. The Wildfire Prevention Grants open solicitation for grant applications closed on February 9, 2022.
    - iii. The Department received 240 applications for nearly \$241.5 million, with up to \$120 million in available funding. Applications are still in the review process with award announcement anticipated for early June 2022.
  - c. Any questions or would anyone like to flag any of our programs for discussion?
    - i. Clay Kerchoff:
      1. Is there an intent for the wildfire mitigation program to work with FEMA hazard mitigation programs?

2. Berlant: Cal OES and CAL FIRE continue working with FEMA to resolve federal NEPA environmental and historical preservation requirements.

### 3. NEW BUSINESS

Daniel Berlant / Steve Hawks

#### A. Fire Hazard Severity Zones – Daniel Berlant / Steve Hawks

- a. Have been working on this remap for six plus years.
- b. Currently doing a peer review process and working with four pilot counties to see if the model outputs make sense and if the data is accurate.
- c. Remap Objectives:
  - i. Update the scientific factors that determine the hazard ratings including new local climate data and improved fire spread modeling.
  - ii. Provide opportunity for validation in the modeling
  - iii. Publish approved State Responsibility Area map
  - iv. Publish and submit Local Responsibility Area maps
- d. What are the Zones?
  - i. The maps are required by law
  - ii. Identify levels of fire hazard
    1. 3 levels (Moderate, High, & Very High)
  - iii. Risk versus hazard – we are mapping hazards.
  - iv. Urban and agriculture areas that do not meet the level of hazard will not appear on the map.
- e. How are the Zones determined?
  - i. Developed using a science-based model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior.
  - ii. Factors: fire history, vegetation, topography, climate, ember production and movement
    1. Question:
      - Caroline Thomas Jacobs:  
Behavior verses Movement – can you explain more about what that means in this context?
      - Hazard is a physical condition that can lead to damage. A risk is an estimate of the interaction of that hazard with things that we care about. The likelihood and consequence are risk. You cannot have an impact from an event that does not occur to generate value change. Two main building blocks of hazard here are likelihood and magnitude and are categorized by burn probability and fire behavior.
      - What is behavior?
      - It is fire intensity. The amount of energy being released.
- f. New updates:
  - i. Updated burn probabilities for wildland areas (inclusive of 2020 fires)
  - ii. Updated fire environment footprints (urban/developed)
  - iii. Updated Vegetation density for urban areas
  - iv. Inclusion of slope in the urban zoning model
  - v. Localized fire weather used in both wildland and urban models: Modeling urban hazard using slope, vegetation density, and the number of embers being deposited on that area.

1. Question: Roy Wright – So we are not including structures as a source of fuel?
    - No, the reason we is because we do not know which ones ignite. There is research being done on structure density, there are structures that are so likely to lead to house to house spread with structures being so close together.
    - As these are rolled out, it will be interesting how this component is not included.
    - There are models out there that take this into consideration, but they are not functional. They are based on computational fluid dynamics that it takes super computers long periods to time to run one block.
    - This is going out for science peer review to focus the research on and how we would improve structural fuels and how we factor them in the model.
  2. Question: Don Hankins – The scenario that the models are running this, is it “camp” fire type winds or is it something more typical?
    - The weather inputs that we use are run through two different filters. Our climate analysis looks at hourly data over sixteen years and seasonal filtration. Take what the 10% of driest days of the entire record and from that determine 5% most severe fire weather hours. It is severe fire weather that we are calculating.
  3. Question: Yana – Would like to underscore that structures are fuel. Also do not know if vegetation will get ignited either. Updated burn probabilities for wildland areas – how was this calculated?
    - At some point we have a full suite of methodological details and is currently in peer review and unit level review.
    - We used the same modeling as 2007 which is fire rotation. We look at that data and look at the last 30 years of fire history at the amount of area that burns per year. Back cast based on an average burn rate based on the duration.
  4. Question: Caroline – It does seem like an important component that urban density is included to add in the homes in the calculation. For the impact when these will be coming out, utilities use these based on their outputs on these maps. Could have an impact on the ways **utilities** determine their risk and would be important to get this to the stakeholder group. In terms of the inputs for the model, what is the ignition of this model? What is the trigger of the ignition and is it inclusive of potential utility ignition?
    - All ignition sources that contributed to the last 30 years are inclusive. No specific relationship to this as there is not a discrete ignition component. Where is it low relative to where it is high.
    - New firebrand production and transport model using discrete local wind vector distributions.
- g. Wildland vs. Non-wildland Zones

- i. Zones are areas  $\geq 200$  acres with relatively homogeneous slope and vegetation
  - ii. Hazard map is produced at 30 m resolution
  - iii. Scores are averaged within a zone
  - iv. Wildland is scored independently of urban and agricultural
  - v. Urban zones scored using additional model steps
- h. Wildland FHSZ
  - i. Burn probability
  - ii. Based on fire occurrence from 1991-2020
  - iii. Fire intensity
  - iv. Vegetation type (potential; does not account for fuel treatments)
  - v. Slope
  - vi. Local fire weather – how hot/dry/windy are the worst conditions at a given location (based on 2 km data from 2003-2018)
    - 1. Question: Roy Wright – Are we providing the background material and the datasets or only providing the GIS map?
      - We gave the science peer review group all of our data and information.
      - There is some sequencing of the data that will occur. SRA at the unit level and LRA after.
      - We have not discussed in detail; we do not have anything to hide. We will acknowledge things that might not show on a certain data layer but the data behind it we will need to figure out the timing due to drafts that could be adjusted based on feedback and adjustments that need to be made.
      - Advise is to make this plain and put it out in an open-source way.
- i. Urban FHSZ
  - i. Based on distance to wildland and hazard level of adjacent wildland
  - ii. Ember production based on vegetation type and fire weather
  - iii. Ember transport based on wind speed/direction observed under the most extreme fire weather at a given location
  - iv. Width of moderate, high, and very high bands in urban based on ember load, urban tree cover and slope
  - v. All unclassified SRA → Moderate
    - 1. Yana:
      - Possibly look at ignition potential to take this into consideration.
- j. Skipped ahead to Adoption Section (will continue as old business at our next meeting):
  - i. Adoption Process:
    - 1. SRA
      - Peer Review (Scientific & Operational Pilots) - NOW
      - Unit / CC Review - July
      - Public Hearings in Each County - Fall
      - Adoption through Regulation – Jan 1, 2023
    - 2. LRA



- Draft map presented to local jurisdiction and receives local validation – Starting in Fall
- Final draft submitted to governing body
- City / County has 30 days to set public comment and 120 to adopt through ordinance
- Local jurisdiction can add area not identified

3. Timeline:

- Current maps were developed in 2007-2010.
- Over the past several years staff have been building the new science model.
- Summer 2022 – Adopt map in State Responsibility Areas (SRA) into regulations.
- Fall 2022 – Begin Local Responsibility Area (LRA) remap

B. Wildfire Prevention Grants Program – Daniel Berlant / Steve Hawks

- a. Pushed to the next meeting.

**4. ROUNDTABLE**

**Mike Richwine**

- A. Topic Suggestions for Next Meetings – Link to Google Forms Suggestion Portal will be posted on our website. <https://forms.gle/Wefg6YnrnUGYS8ua9>

**5. PUBLIC COMMENT**

**Mike Richwine**

- A. No public comment.

**6. UPCOMING MEETING DATES FOR 2022**

**Mike Richwine**

- A. Third Tuesday of each month starting at 1 PM and ending at 3 PM.
- B. Next meeting is June 21, 2022.

**7. MEETING ADJOURNED 2:58 PM**

**Mike Richwine**