



# Wildfire Mitigation Advisory Committee Meeting

**October 17, 2023**

CAL FIRE -

Office of the State Fire Marshal



# Call to Order

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Welcome!

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



# Roll Call / Quorum Established

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- ▶ State Fire Marshal
  - **Daniel Berlant**
  
- ▶ Department of Forestry and Fire Protection
  - **Mike Parkes**
  
- ▶ Department of Conservation
  - **Keali'i Bright**
  
- ▶ Office of Energy Infrastructure Safety
  - **Caroline Thomas Jacobs**
  
- ▶ State Board of Forestry and Fire Protection
  - **J. Lopez**

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# Roll Call / Quorum Established

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- ▶ Governor's Office of Emergency Services
  - **Ryan Buras or Robert Troy**
  
- ▶ California Department of Insurance
  - **Mike Peterson**
  
- ▶ Governor's Office of Planning and Research
  - **Neil Matouka**
  
- ▶ California Fire Safe Council
  - **Jacy Hyde**
  
- ▶ Insurance Institute for Business & Home Safety
  - **Roy Wright**

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# Roll Call / Quorum Established

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- ▶ 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**

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# Roll Call / Quorum Established

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- ▶ 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

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



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## **WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING** *Meeting Minutes – Tuesday, September 19, 2023* *Posted: 10/10/2023*



### **Committee Members Present**

Daniel Berlant, CAL FIRE – Office of the State Fire Marshal  
Mike Parkes, Department of Forestry and Fire Protection  
Caroline Thomas Jacobs, Office of Energy Infrastructure Safety  
J. Lopez, State Board of Forestry and Fire Protection  
Robert Troy, California Office of Emergency Services  
Michael Peterson, California Department of Insurance  
Michal Maquire, Office of Planning and Research (Virtual)  
Roy Wright, Insurance Institute for Business & Home Safety  
Todd Lando, California Fire Chiefs Association  
Nick Cammarota, Representative from the Building Industry  
Maziar Movassaghi, 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 (Virtual)  
Don Hankins, Professor, CSU Chico

### **Members Absent**

Keali'i Bright, Department of Conservation  
Jacy Hyde, California Fire Safe Council  
Lenya N. Quinn-Davidson, University of California Cooperative Extension  
Yana Valachovic, California Fire Science Consortium

### **CAL FIRE Staff in Attendance**

Wendy Collins, Assistant State Fire Marshal (Virtual)  
Frank Bigelow, Assistant Deputy Director  
Anale Burlew, Assistant Deputy Director (Virtual)  
Matt Damon, Staff Chief  
Jim McDougald, Staff Chief  
John Morgan, Deputy Chief  
Scott Witt, Deputy Chief (Virtual)  
Dennis O'Neil, Assistant Chief  
Carmel Barnhart, Deputy Chief  
Jeff Hakala, Division Chief  
Jeff Fuentes, Division Chief  
Rudy Baltazar, Division Chief  
Chris Ramey, Division Chief (Virtual)  
Steven Hawks, Retired Annuitant  
Mark Rosenberg, Research Data Manager (Virtual)  
Bryan Carter, Battalion Chief (Virtual)  
Shane Vargas, Battalion Chief (Virtual)  
Kevin Lindo, Battalion Chief (Virtual)  
Randy Northrup, Battalion Chief (Virtual)



# Approval of Meeting Agenda Motion Required

- ▶ Scan the QR Code Below to Access the Complete Meeting Agenda Document!



## WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING Meeting Agenda – Tuesday, October 17, 2023, 1:00 PM – 3:00 PM Posted: October 6, 2023 – Revised October 10, 2023



Location:  
CNRA Building, 715 P Street, 2<sup>nd</sup> Floor Conference Room 2-302 (A-B)  
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

### Virtual Attendee Information –

- Roy Wright, Insurance Institute for Business & Home Safety
  - 5335 Richburg Road
  - Richburg, SC 29729
- Yana Valachovic, California Fire Science Consortium
  - 5630 South Broadway
  - Eureka, CA 95503

### 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. Division Report
- B. California Wildfire Mitigation Program (CWMP) Report
- C. Board of Forestry Update

### 3. NEW BUSINESS

- A. National Institute of Standards and Technology (NIST) – Presentation on Hazard Mitigation Methodology (HMM) and Sheds - Structure Specification Distance

### 4. ROUNDTABLE

### 5. PUBLIC COMMENT

### 6. UPCOMING MEETING DATES FOR 2023

- A. Third Tuesday of each month starting at 1 PM and ending at 3 PM.
  - a. November 28, 2023
    - i. CNRA Building, 715 P Street, 2nd Floor Conference Room 2-221 (A-C), Sacramento, CA 95814







# Community Wildfire Preparedness and Mitigation Division Report



# Wildfire Preparedness

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## Defensible Space

- ▶ Statewide SRA Total:
  - **94,058** inspections, **38%** of the goal (**250,000**)
- ▶ Qualified Entity Program:
  - The qualified entity program has been launched and training is underway for CCC personnel.
  - This collaboration will enable crews to conduct assessments and implement defensible space measures at CNRA-owned facilities.



# Wildfire Preparedness

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## Home Hardening

- ▶ A Joint News Release was sent on September 21st highlighting the program and its efforts on the Community Wildfire Mitigation Program.
  - Can be located at the link below:
    - <https://bit.ly/CWMP-JPA>



# Wildfire Preparedness

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## Utility Wildfire Mitigation Program

- ▶ Draft 2024 Powerline Fire Prevention Field Guide in the review process.
- ▶ Working with National Wildfire Coordinating Group (NWCG) on updates to X-900, Investigating power line caused wildfires course.
- ▶ October 25<sup>th</sup> Powerline Fire Prevention Training PRC4292/PRC4293 in Shasta County.



# Wildfire Planning and Statistics

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## Fire Prevention Efforts FY 23/24

- ▶ Fuel Reduction Projects:
  - 226 projects, 45.2% of the goal
  
- ▶ Combined Fuel Reduction:
  - 8,394.6 acres treated, 8.4% of the goal
    - Unit Projects - 5,201.2 acres
      - Northern Region: 3,754.8 acres
      - Southern Region: 1,446.4 acres
    - Grant Projects: 872.2 acres
    - CFIP Projects: 2,321.2 acres
  
- ▶ Prescribed Fire (also counted in fuel reduction):
  - 3,120.6 acres treated, 6.2% of the goal



# Wildfire Planning and Statistics

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(Cont.)

- ▶ 2022 Redbook Posted online
  - ▶ CAL FIRE incident information
- ▶ Risk Modeling Report
  - ▶ Workgroup approved the final report on 10/10/23



# Wildfire Planning and Statistics

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## Fire Hazard Severity Zones

- ▶ State Responsibility Area (SRA):
  - Open comment period October 13<sup>th</sup> through October 30<sup>th</sup>.
  - We have until December 15<sup>th</sup> to turn in our Final Statement of Reasons for the SRA.
  - More information:
    - [osfm.fire.ca.gov/fhsz](https://osfm.fire.ca.gov/fhsz)



# Wildfire Planning and Statistics

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## Fire Hazard Severity Zones

- ▶ **Statewide Change**
  - 16,971 acres were reclassified (0.05%)
- ▶ **Very High FHSZ down 7,168 acres**
  - 6,993 High
  - 175 Moderate
- ▶ **Effects 5 Counties**
  - Kern, Los Angeles, Orange, San Bernardino, and San Luis Obispo.





# Community Wildfire Mitigation Assistance

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## Land Use Planning (LUP)

- ▶ On average 5-6 Safety Elements are reviewed by the Board of Forestry and Fire Protection Resource Protection Committee at each meeting. Six were reviewed at September's meeting.



# Community Wildfire Mitigation Assistance

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## Firewise

- ▶ Assistance throughout the state with new applications continues. Noticing more communities in the Southern area of state.
- ▶ Currently 732 communities in good standing.
- ▶ Renewal applications will be due Friday before Thanksgiving holiday.



# Community Wildfire Mitigation Assistance

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## Subdivision Review

- ▶ Fire Safety Surveys scheduled in Monterey for the week of October 23, 2023.
- ▶ Continued jurisdictional meetings throughout CA.
- ▶ Resource Protection Committee (RPC) reviewed the fire safety surveys at the September RPC for these areas:
  - City of Poway
  - Yuba County



# Community Wildfire Mitigation Assistance

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## Wildfire Prevention Grants Program

- ▶ Reviewing the new Grants Management Handbook which is anticipated to be completed and published by winter.
- ▶ Preparing for the FY 2023-24 WP Grants Anticipated to open early November 2023.



# Insurance Institute for Business & Home Safety (IBHS) Burn Demonstrations

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Officials gathered for a side-by-side look at fire behavior impacts on mitigated and unmitigated structures



# Insurance Institute for Business & Home Safety (IBHS) Burn Demonstrations

Southern California 9/18 in collaboration with the Orange County Fire Authority



# Insurance Institute for Business & Home Safety (IBHS) Burn Demonstrations

Northern California 9/19 in collaboration with the Sacramento City Fire Department





**National Institute of Standards and Technology (NIST)**  
**Hazard Mitigation Methodology (HMM)**





# WUI Structure / Parcel / Community Fire Hazard Mitigation Methodology (HMM)

presented to: CAL FIRE Wildfire Mitigation Advisory Committee  
October 17, 2023



NIST Technical Note 2205

## WUI Structure/Parcel/Community Fire Hazard Mitigation Methodology

Alexander Maranghides  
Eric D. Link  
Steven Hawks  
Jim McDougald  
Stephen L. Quarles  
Daniel J. Gorham  
Shonali Nazare

This publication is available free of charge from:  
<https://doi.org/10.6028/NIST.TN.2205>

NIST National Institute of Standards and Technology U.S. Department of Commerce



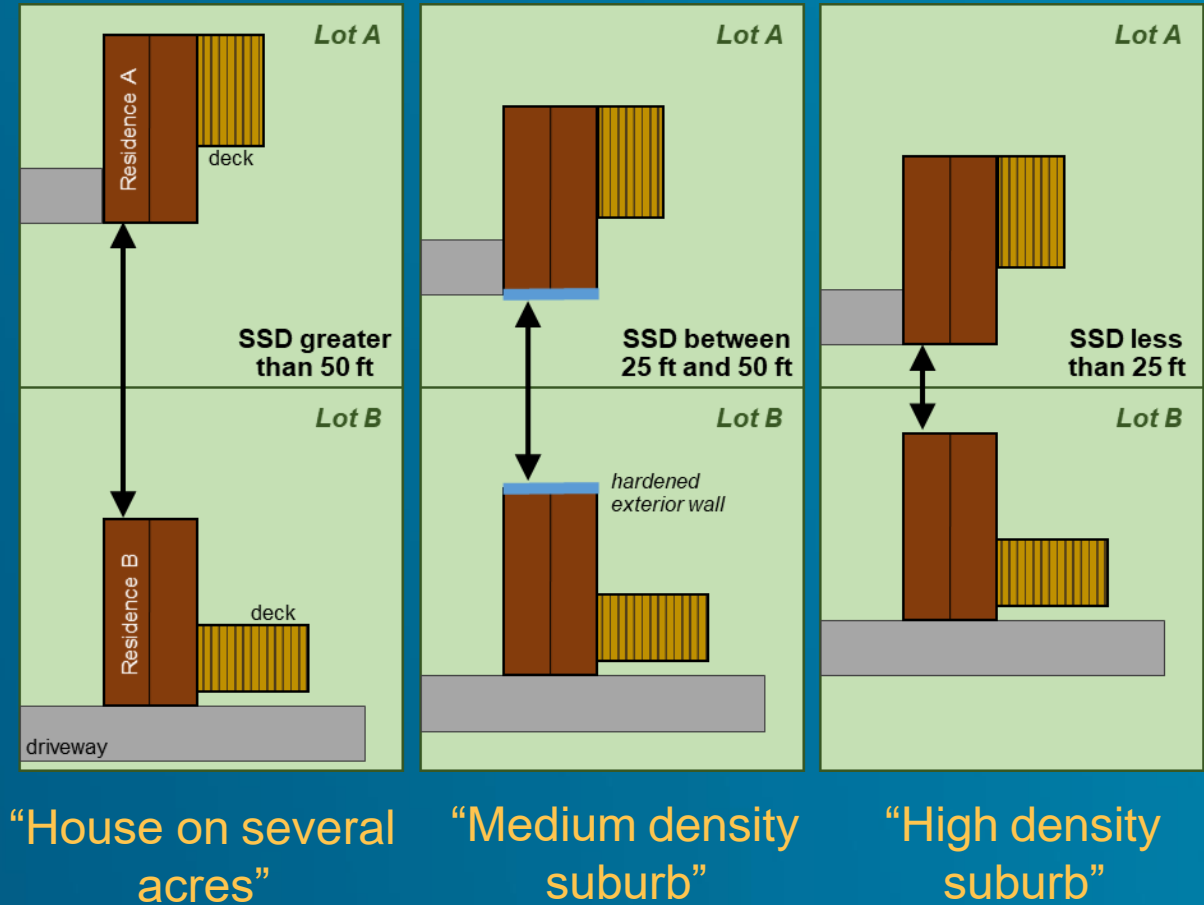
Alexander Maranghides  
Eric Link  
National Institute of Standards and Technology

- WUI Definitions
- Overview of WUI Fires and Structure/Parcel/Community Hardening
- Exposures in the WUI
- Evolution of Mitigation Guidance
- HMM
- Codes: Value Added and Limitations
- Impacts of Partial Parcel and Community Hardening
- Paths Forward for Existing and New Communities

# WUI Definitions

# WUI Definitions

- Traditional definitions: Interface/ intermix
- Revised: Need to add Structure Separation Distance (SSD)
- Housing density and parcel-level fuel loading have significant Impact on WUI structure loses



Different WUIs — Different Solutions

# WUI by SSD and Parcel Size

**Table 2.** WUI Types classified by structure separation distance (SSD) and typical parcel size.

Type #	WUI Type Name	SSD (ft)	Typical Parcel Size (ac)	Typical Housing Density (struct/ac)
1	High Density Interface – Perimeter	6 <sup>a</sup> to 30	< 0.5	2 to 8 +
2	High Density Interface – Interior <sup>b</sup>	6 <sup>a</sup> to 30	< 0.5	2 to 8 +
3	Medium Density Interface – Perimeter	30 to 100	0.5 to 1+	< 2
4	Medium Density Interface – Interior <sup>b</sup>	30 to 100	0.5 to 1+	< 2
5	Medium Density Intermix	30 to 100	0.5 to 1+	< 2
6	Low Density Interface	100+	1+	< 1
7	Low Density Intermix	100+	1+	< 1

For SI: 1 ft = 0.305 m, 1 ac = 0.4 ha

<sup>a</sup> representative of parcels with a 3 ft setback (common for new construction of sprinklered residences)

<sup>b</sup> interior of community defined as > 0.25 mi (400 m) from wildlands

# Overview of WUI Fires and Structure/Parcel/Community Hardening

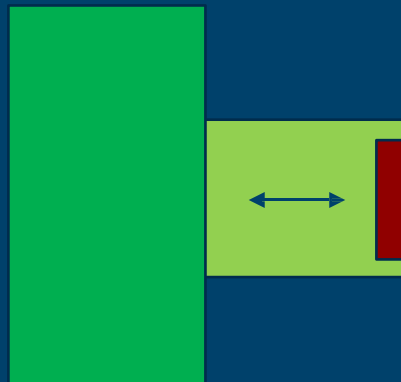
# WUI Fires and Structure/Parcel/Community Hardening

1. A WUI FIRE is a **self propagating disaster** - the energy that drives the disaster is contained in the assets that we are trying to protect (homes, vegetation, vehicles, infrastructure). This is further enhanced by the contributions of external energy from local weather (wind).
  2. **Exposure has two parts:**
    - a. Fire (flames - radiation/convection)
    - b. Embers
  3. WUI fires are **defended during the event**. This ultimately stops/contains the fire.
  4. **Effective home hardening is directly related to exposure**. You cannot effectively harden a home without defining the exposure.
  5. Selecting the Design FIRE
    - a. Current Codes in a broad sense are designed to work together with Defensible Space and rely on defensive actions.
    - b. Large WUI events and Fire Storms overpower resources. To survive, **homes must stand alone**.
1. **Hardening existing vs designing for new** - different options available.
  2. **FIRE does not care about “a la carte” hardening**
  3. The **benefits of partial hardening are not proportional to the amount of hardening**. **Effects of partial hardening (home and community) are directly related to housing density** - amendment of WUI definition in HMM.

# Evolution of Structure/Parcel and Community Hardening

## Early Experiments

- Limited exposure to structure coupling
- Limited ambient wind
- No ember hardening

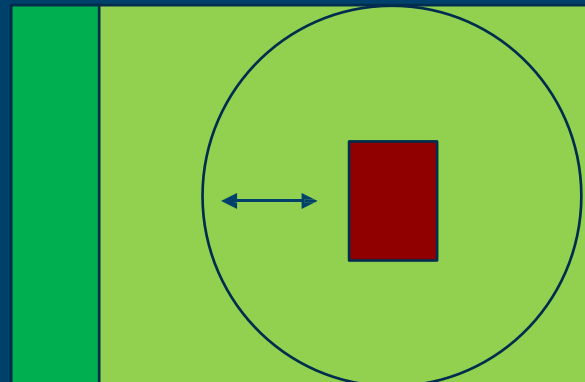


“House in the woods”



## Early Building Codes (2008-2020)

- Defensible Space
- Some exposure to structure coupling
- Some ember hardening

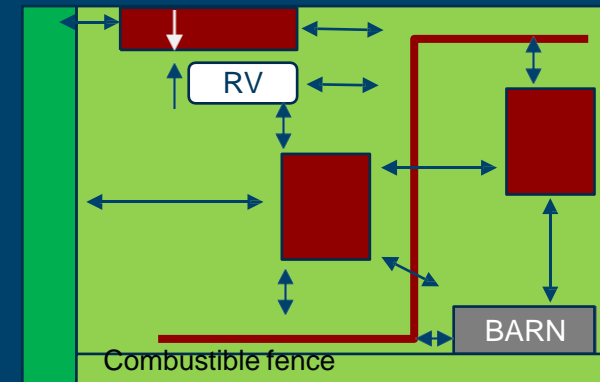


“Parcel and zones”



## Structure / Parcel / Community HMM (2022)

- **Goal: Stand alone structures**
- Comprehensive exposure to structure coupling for fire and embers
- Multiparcel fuels
- Housing density (H, M, L)
- Community hardening



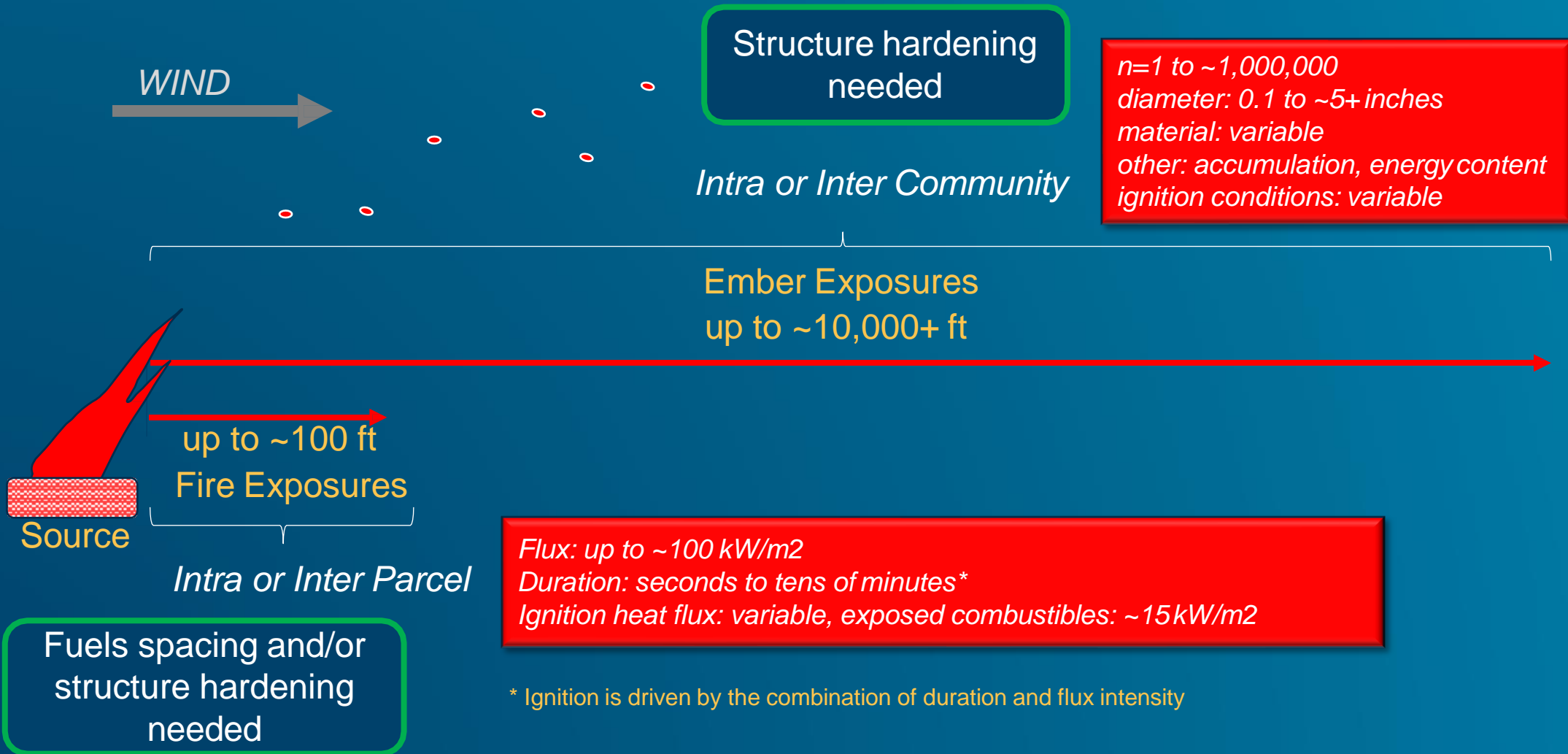
“Multiparcel spatial analysis”



# Exposures in the WUI

# Fire and Ember Exposures

Two Different Problems with Different Spatial Scales

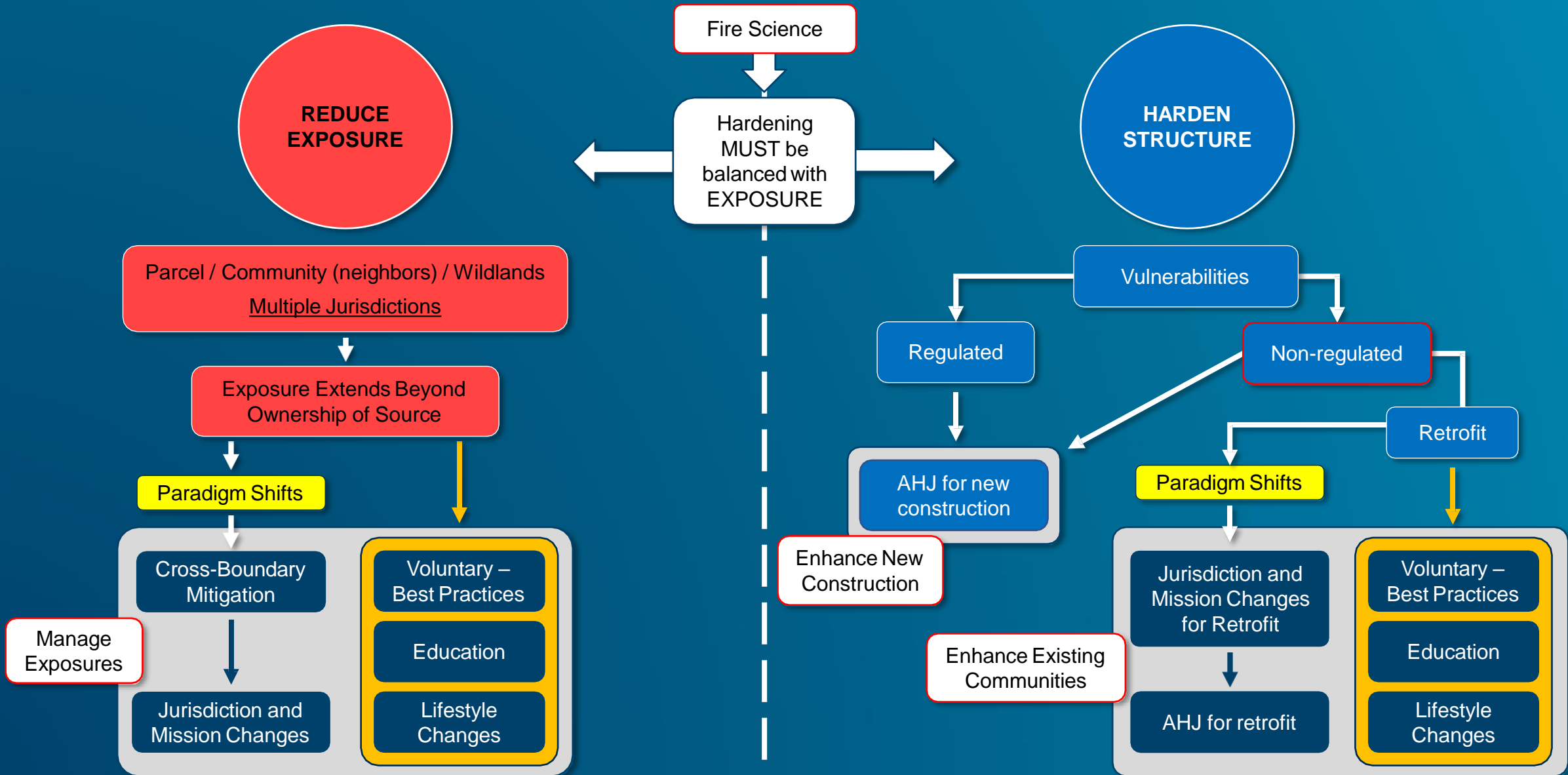


# WUI Fire Hazard Mitigation Components

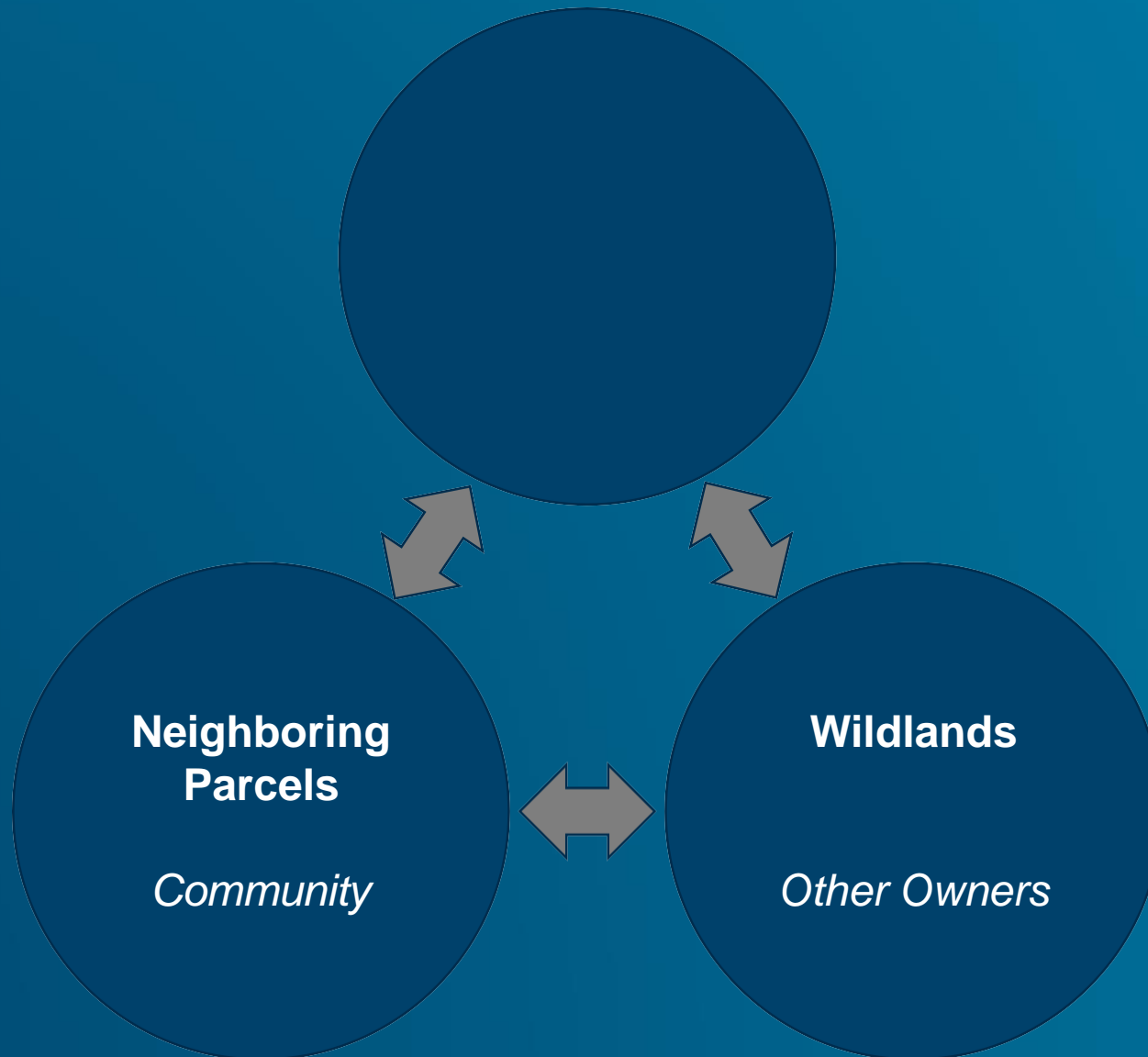


WUI fire hazard mitigation is a balance between two input dials —  
reducing exposure and increasing structure hardening

# Need for Paradigm Shift in Mitigation



# Cross-Boundary Mitigation



**HMM**

# WUI Structure / Parcel / Community Fire Hazard Mitigation Methodology (HMM)

- A **performance-based approach** to structure/parcel and community spatial hazard mitigation
- **Comprehensive** coupling of fire and ember exposures to structure/parcel and community hardening
- Designed specifically to address hazard **mitigation of existing communities – retrofit ready methodology**
- HMM can also be used for new construction
- Graphical User Interface tool online: <https://www.nist.gov/el/hmm>

Fire does not care about parcel boundaries or legislative mandates

# HMM Tech Transfer Tool Webpage

An official website of the United States government [Here's how you know](#)

NIST Search NIST Menu

Engineering Laboratory / Fire Research Division

## WILDLAND-URBAN INTERFACE FIRE GROUP


### HAZARD MITIGATION METHODOLOGY (HMM)

- Why Implement HMM in your Community? +
- How Fire Spreads in the WUI +
- Community-Wide Structure- and Parcel-Level Hardening Actions +
- Hardening Actions: Construction Guidance
- Contacts


### HAZARD MITIGATION METHODOLOGY (HMM)

**WHAT IS HMM?**  
HMM is a performance-based approach to WUI fire hazard mitigation for structures, parcels, and communities. The proposed methodology was developed to reduce structural losses in WUI fires by hardening structures and parcels across a community. HMM prioritizes mitigation efforts to reduce overall mitigation costs. [Click here](#) to go the [HMM project site](#).


**WHY WAS HAZARD MITIGATION METHODOLOGY (HMM) CREATED?**  
In the last 20 years, WUI fires have become more severe and destructive. Structural losses occur due to exposures from both embers (firebrands) and fire. HMM was created to harden structures to fire and ember exposures from WUI fires. Traditional hazard mitigation strategies focus on individual structures or parcels; however, comprehensive WUI fire mitigation requires a community-wide hazard assessment and mitigation method to address this complex community problem. The HMM goes beyond the traditional approach of protecting individual homes and addresses the unified problem of protecting the entire WUI community.



**LINKS TO:**



[NIST Technical Note 2205](#)

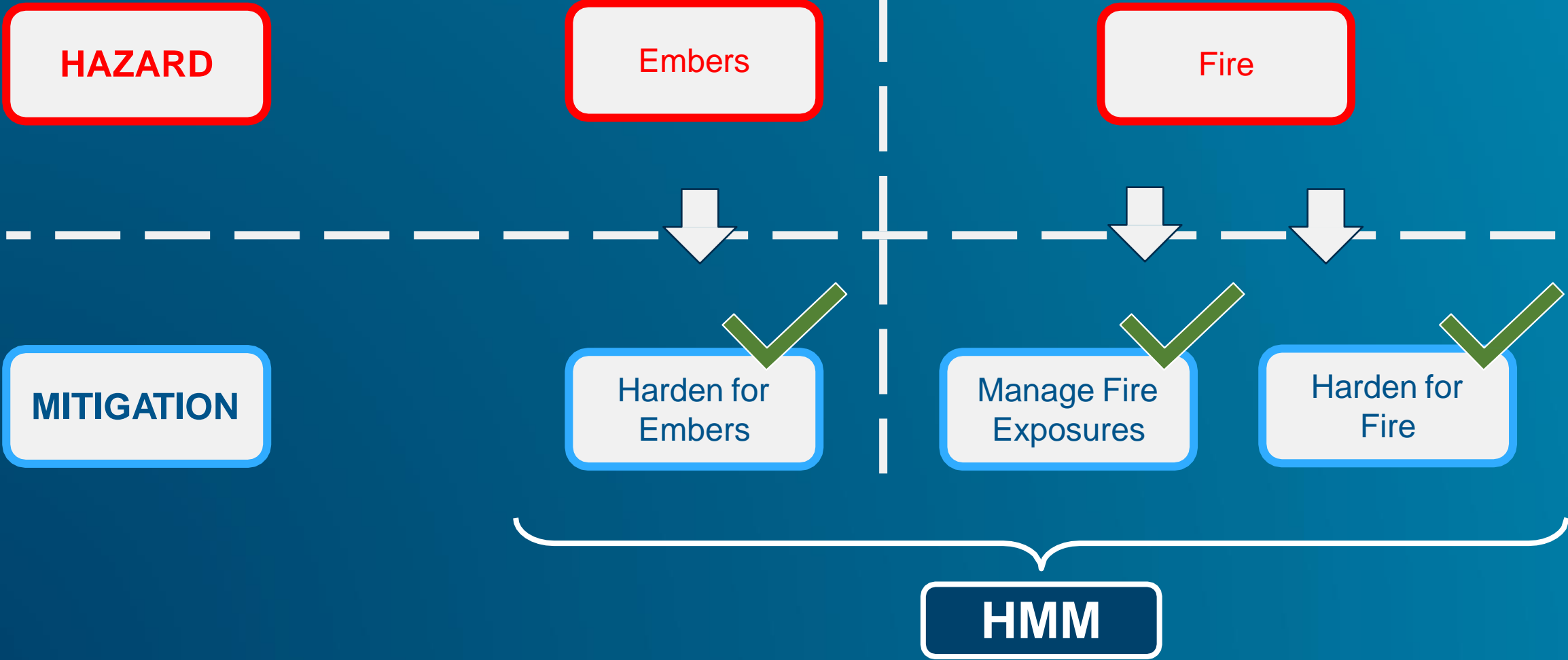


[NIST HMM presentation materials](#)

<https://www.nist.gov/el/hmm>

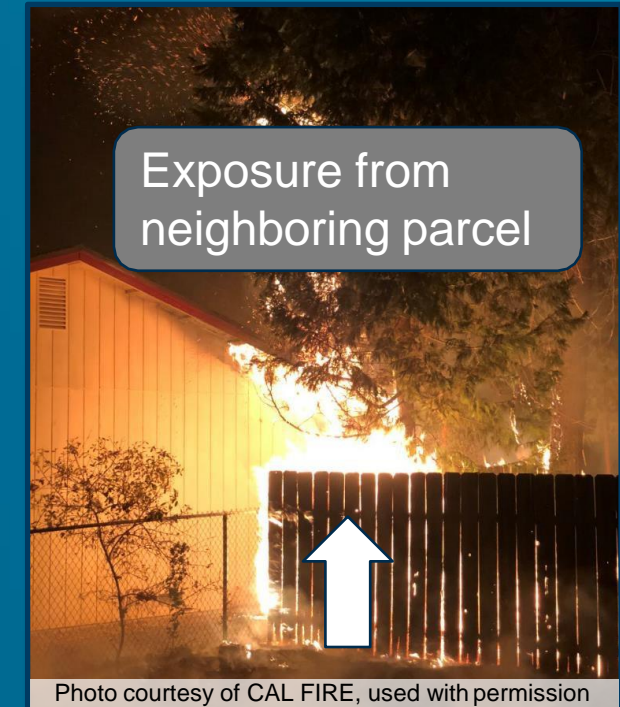
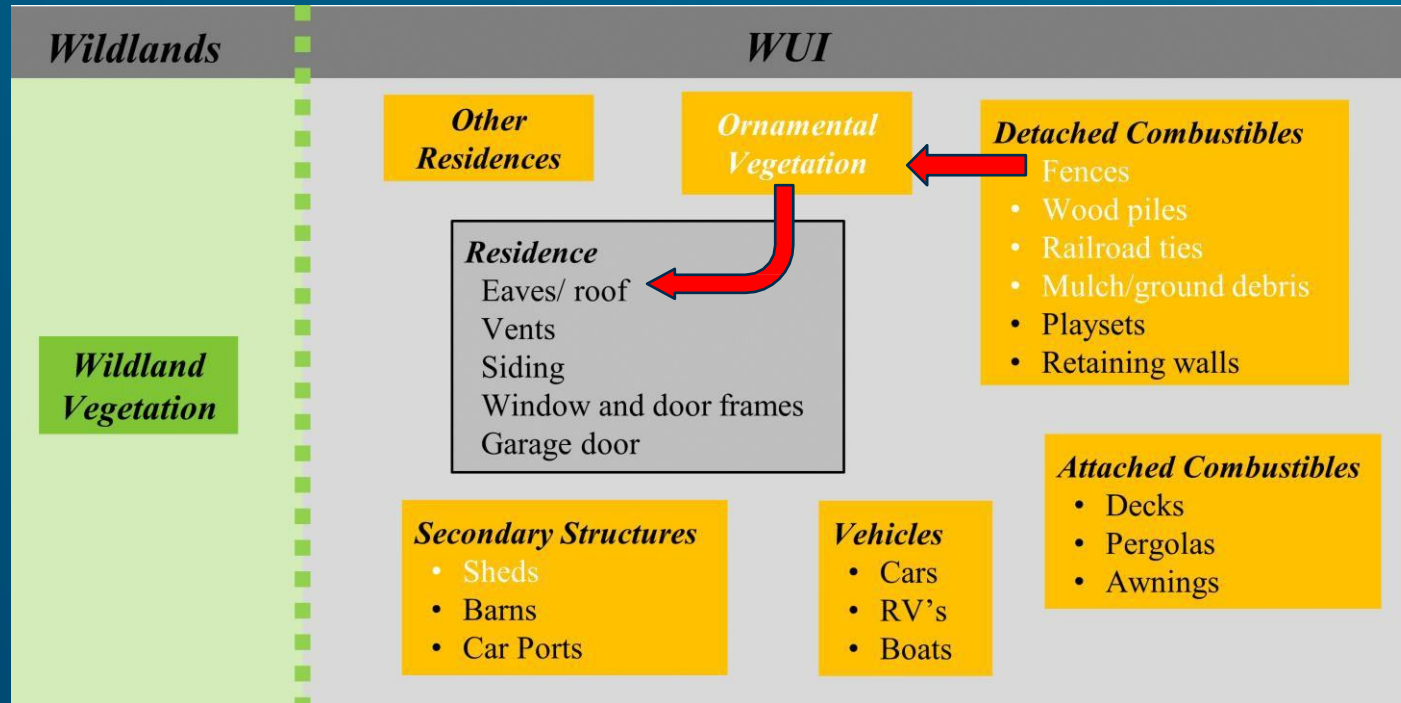


# Exposure and Structure Hardening



# Structure Ignition Pathways and Parcel Level Combustible Attributes

All burning hazards (sources) generate embers and fire exposures



➔ Local conditions will drive ember exposures to specific structure elements. Extreme variability influence actual exposures.

➔ Source placement (and local wind) will drive fire exposures to specific structure elements.

# Managing *Fire* Exposures

Manage *Fire* Exposures

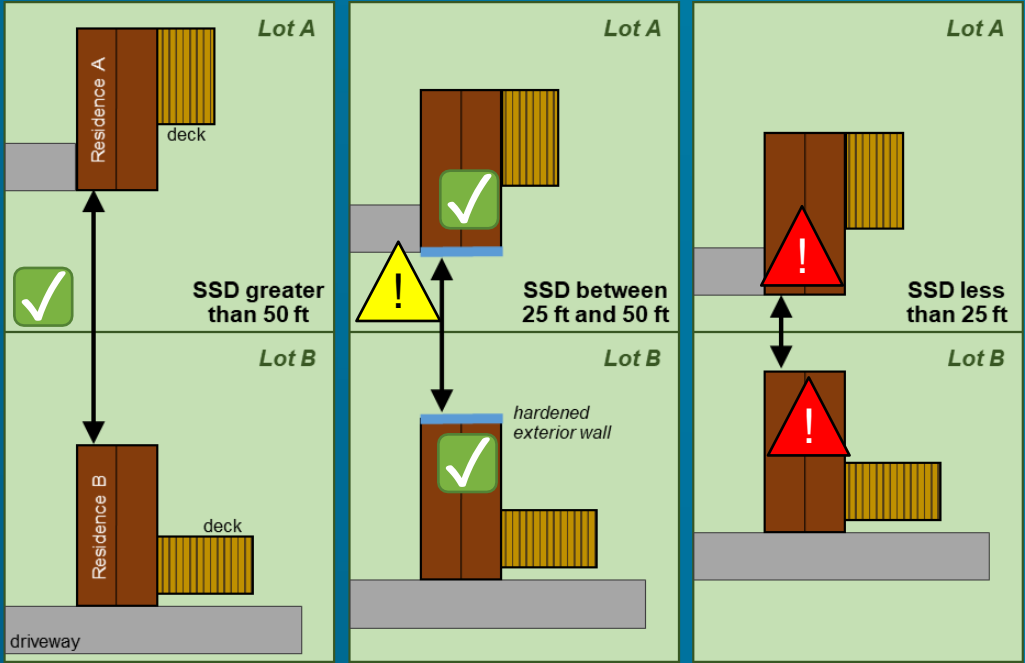
The 3 Rs:  
 • Remove  
 • Reduce  
 • Relocate




Examples include:  
 Sheds, fences, wood piles,  
 RVs, cars, boats

Non-  
 Manageable  
*Fire*  
 Exposures

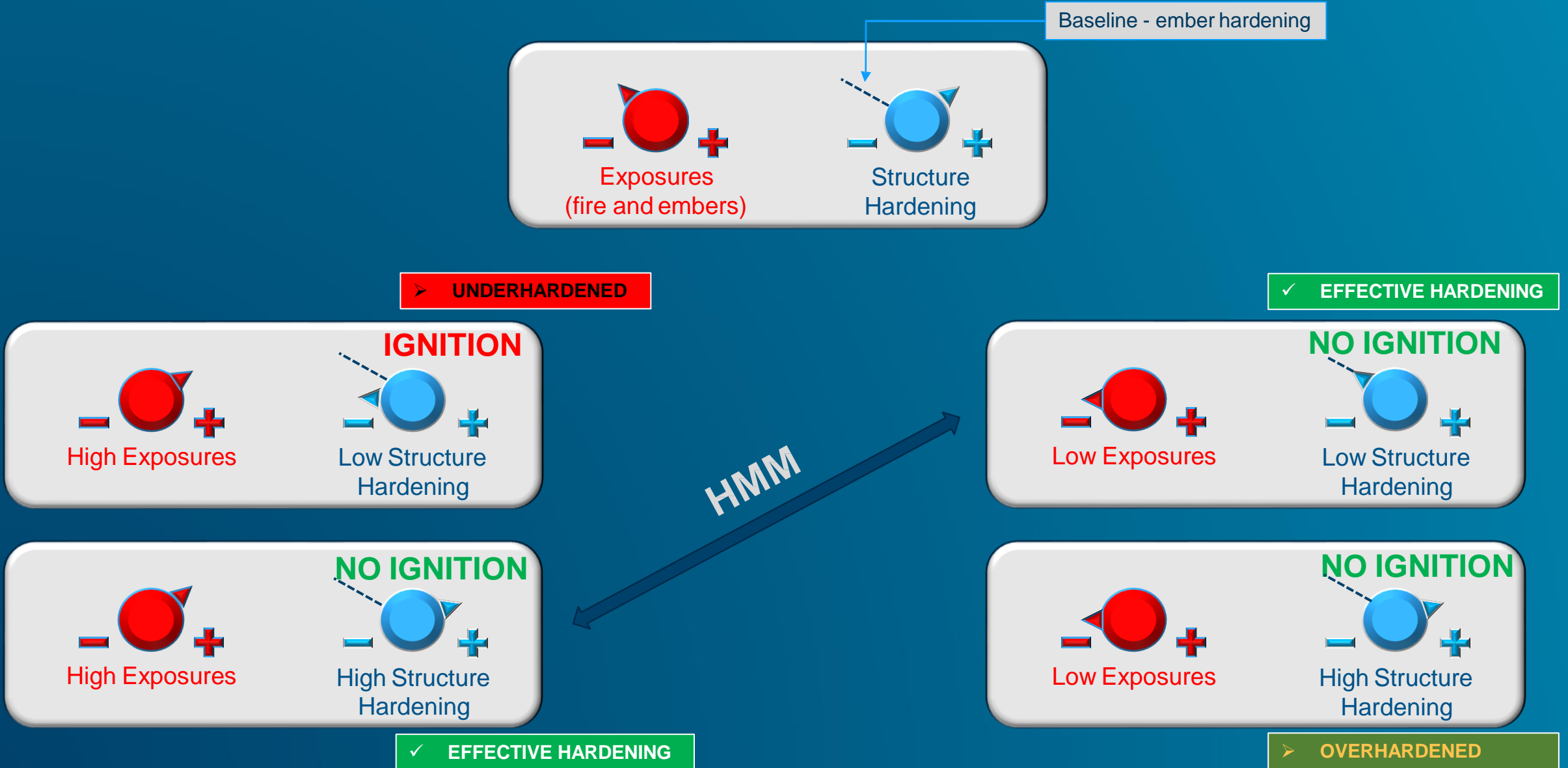
Examples include:  
 Neighboring residences,  
 large auxiliary structures

Harden for  
*Fire* only  
 when  
 Appropriate

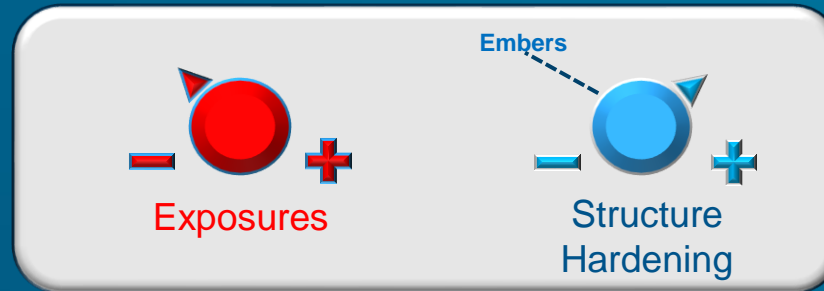


-  Low/reduced hazard
-  Hazardous condition
-  Likely ignition condition

# Exposures and Structure Hardening



# Structure Ignition Hazard Mitigation



## Existing Buildings/Communities

- Limitations to exposure reduction - existing Structure Separation Distance (SSDs)
- Limited ignition resistance
- Transition from parcel to multiparcel hazard assessment and mitigation needed
- Lifestyle - paradigm shift needed
- Large building stock – cost effective hardening/funds needed

## New Buildings/Communities

- Greater exposure reduction options:
  - Community design
  - Structure spacing
- Cost effective construction/hardening
- Lifestyle/paradigm shift easier to implement

Jurisdictional authority



Does not matter how the hazards are addressed, but they must all be addressed – combination of state/local

# Defensive Actions, Defensible Space and Structure Response Design Threshold

- Defensible space contributes to making structures defensible by first responders
- Defensible space is not a substitute for homes standing completely alone throughout a large WUI fire event or a firestorm

In CA, from 2017 to 2022,  
**20% of the WUI fire incidents  
account for 95% of the losses\***

\* Statistics in Appendix A of NIST ESCAPE (TN 2262)

Structures must be designed to stand alone

# Codes: Value Added and Limitations

# Comparison of HMM to WUI Codes

## Hazard Reduction Continuum

### Current Codes and Defensible Space

- Hazard Reduction achieved for (fire and ember) certain scenarios – losses are scenario specific
- Structures will not stand alone in many scenarios
- Defensive Actions required in many scenarios

### Hazard Reduction Methodology (HMM)

- Hazard Reduction achieved for all identified scenarios
- Structures will stand alone if HMM is fully implemented
- Defensive Actions not required



### No Codes and/or No Defensible Space

- Very Limited Hazard Reduction in most cases – large losses expected
- Defensive Actions necessary in most scenarios
- Potentially Hazardous for first responders
- Potentially Hazardous for residents

HMM addresses both fire and ember exposures at the structure, parcel, and community levels



# Comparison of HMM to WUI Codes

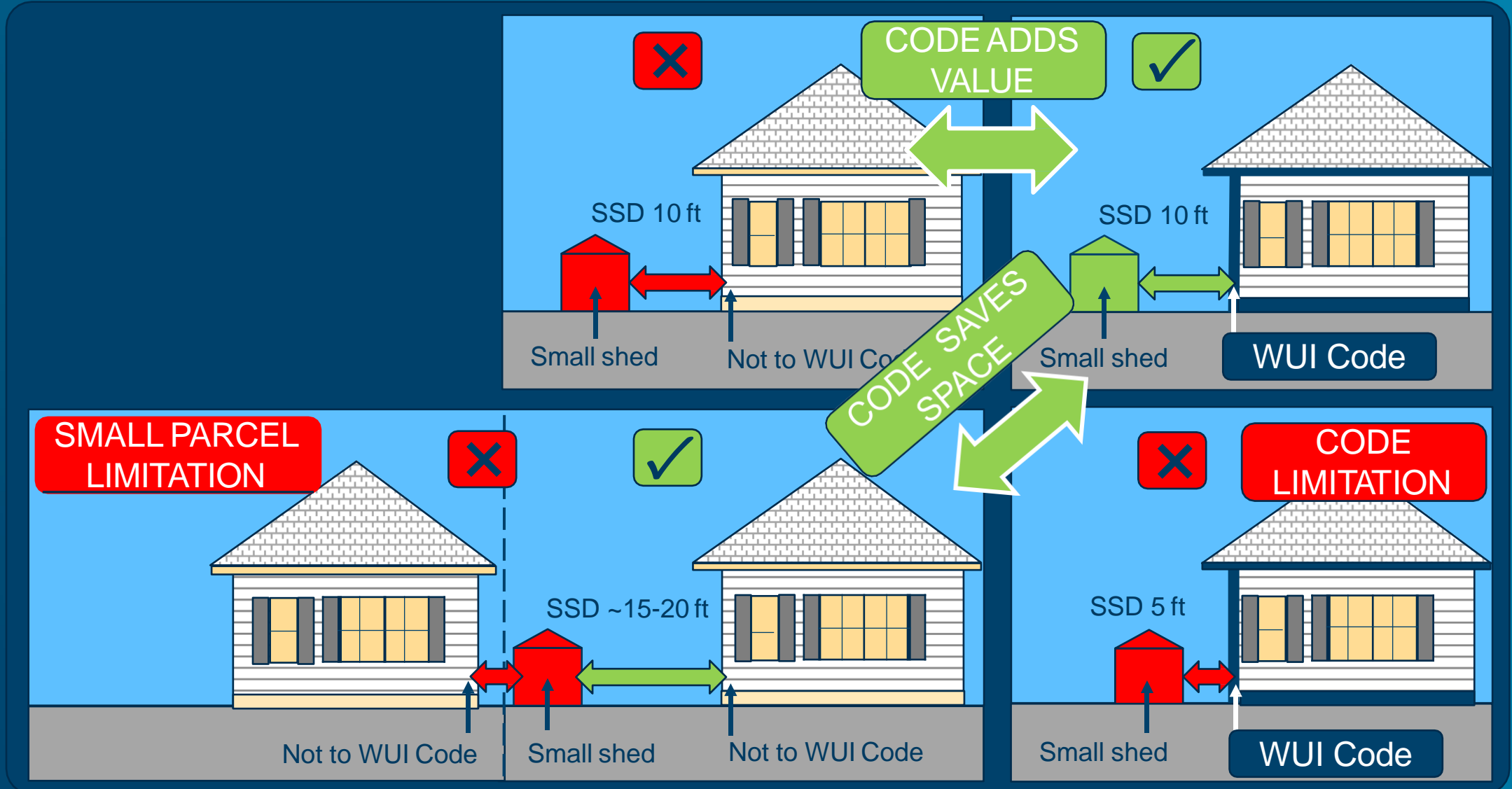
**Table 6.** HMM items completely included in selected existing WUI building codes.

WUI Code	Number of ember items from <b>Table A</b> (out of 57)	% of ember items	Number of fire items from <b>Table D</b> (out of 10)	% of fire items
7A/1140/IWUIC	5 to 13	9 to 23	0 to 5	0 to 50
All 3 codes	3	5	0	0
None	42	74	5	50



# What Codes buy us for *Fire*?

## Fuel Density – up to a point



# Impacts of Partial Parcel and Community Hardening

# Impacts of Partial Mitigation

1. Limited impact on structure survivability – in some cases mitigation can add value
2. Fuel displacement - Enhancement of fire spread through:
  - a. the creation of high fuel corridors and
  - b. increased parcel to parcel exposures
3. Unrealistic assessment of risk
  - a. False sense of returns on mitigation investment
  - b. Impacts on life safety
  - c. Impacts on insurance/finances

Partial mitigation does not by default improve structure and community survivability

# Partial Community Hardening

The impact of a partially hardened structure on the community is proportional to the inverse of SSD

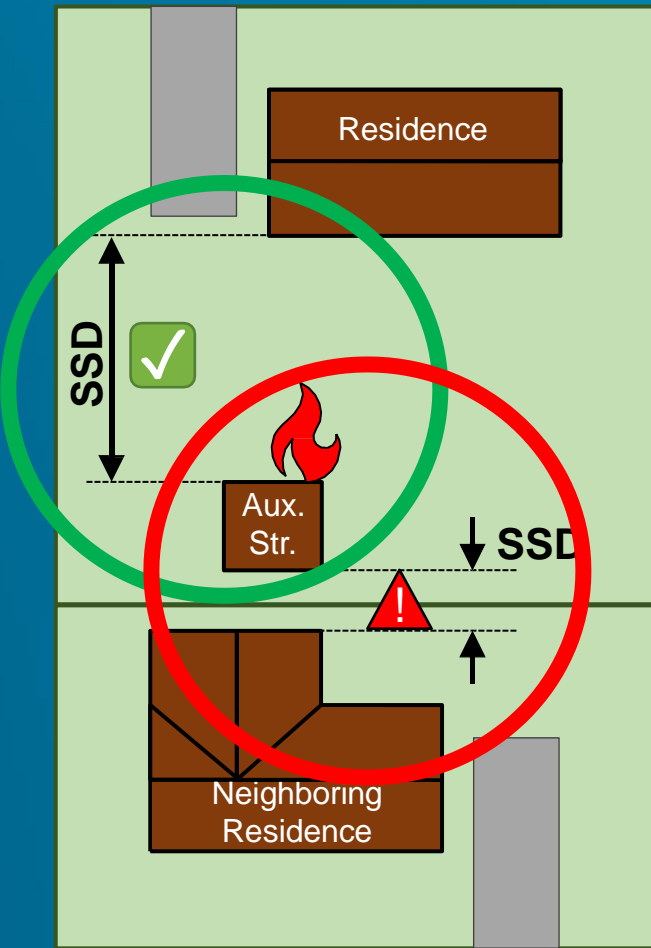
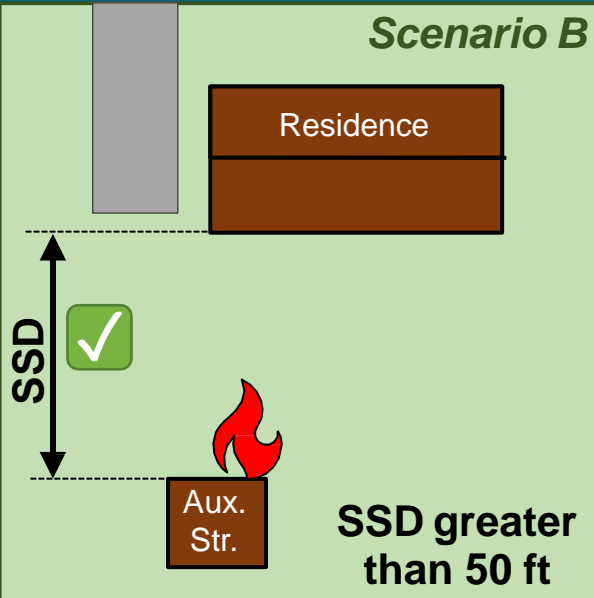
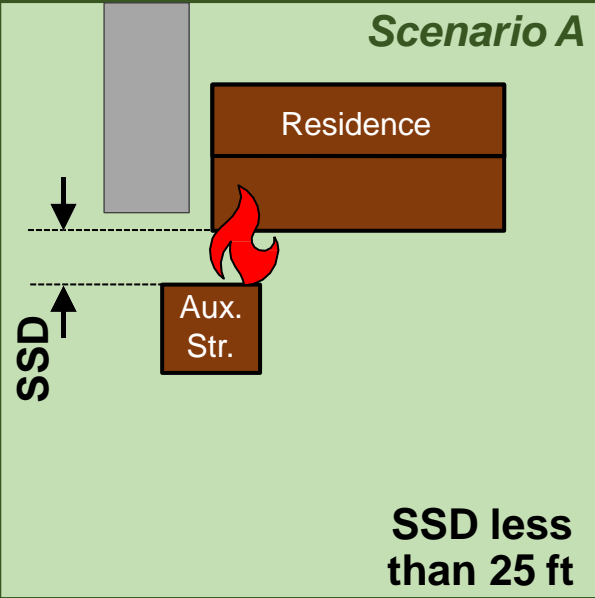
**High Structure Density (Low SSD)**  
One Structure Ignition → Large Losses

**Moderate Structure Density (Moderate SSD)**  
One Structure Ignition → Variable Losses

**Low Structure Density (High SSD)**  
One Structure Ignition → Limited Additional Losses

Partially hardened structures need to be further apart to prevent cascading losses

# Example: Partial Mitigation versus HMM



- ✓ Low/reduced hazard
- ⚠ Hazardous condition
- 🔥 Likely ignition condition

Fuel removal may be necessary in moderate and high-density communities

# Paths Forward for Existing and New Communities

# Effect of Housing Density on Mitigation Approach

Resident Participation and Complete Structure and Parcel Hardening

**High Structure Density (Low SSD)**  
One Structure Ignition → Large Losses



*“Required”*

**Moderate Structure Density (Moderate SSD)**  
One Structure Ignition → Variable Losses



*“Desired”*

**Low Structure Density (High SSD)**  
One Structure Ignition → Limited Additional Losses



*“Desired”*



# Existing Construction – HMM Hardening

Community	Density	Actions	Impact
Intermix	Low / Moderate	Partial Community Hardening <sup>1</sup>	<ul style="list-style-type: none"> <li>Impact “proportional” to number of structures/parcels <i>fully</i> hardened</li> <li>Limited return on <i>partial</i> hardening because of high density of vegetative fuels</li> <li>Limited return on <i>perimeter</i> hardening because of high density of vegetative fuels</li> </ul>
Interface	Low / Moderate	Perimeter Hardening <sup>2</sup> <b>DRAFT</b>	<ul style="list-style-type: none"> <li>Impact “proportional” to number of structures/parcels <i>fully</i> hardened</li> <li>Perimeter may be used to reduce exposures to rest of community <i>f(resources/fuels/exposure/front size)</i> (potential \$ multiplier)</li> </ul>
	High (SSD<25 ft)	Partial Community Hardening  Perimeter Hardening <sup>2</sup> <b>DRAFT</b>	<ul style="list-style-type: none"> <li>Impact “disproportionate” to number of structures/parcels fully hardened</li> <li>Value added when “sufficient resources” can prevent fire from getting deep seated in community <i>f(resources/fuels/exposure/front size)</i> (potential \$ multiplier)</li> </ul>

<sup>1</sup> Full hardening of selected structures/parcels

<sup>2</sup> Depth of Perimeter Hardening function of wildland treatments and topography. Threshold for depth of perimeter hardening is not known.

# Paths Forward – Existing Construction

## Existing construction

- Implement HMM – where and how fully?

Create pathways for communities to readily and easily access state and federal hardening funds



### Partial Hardening

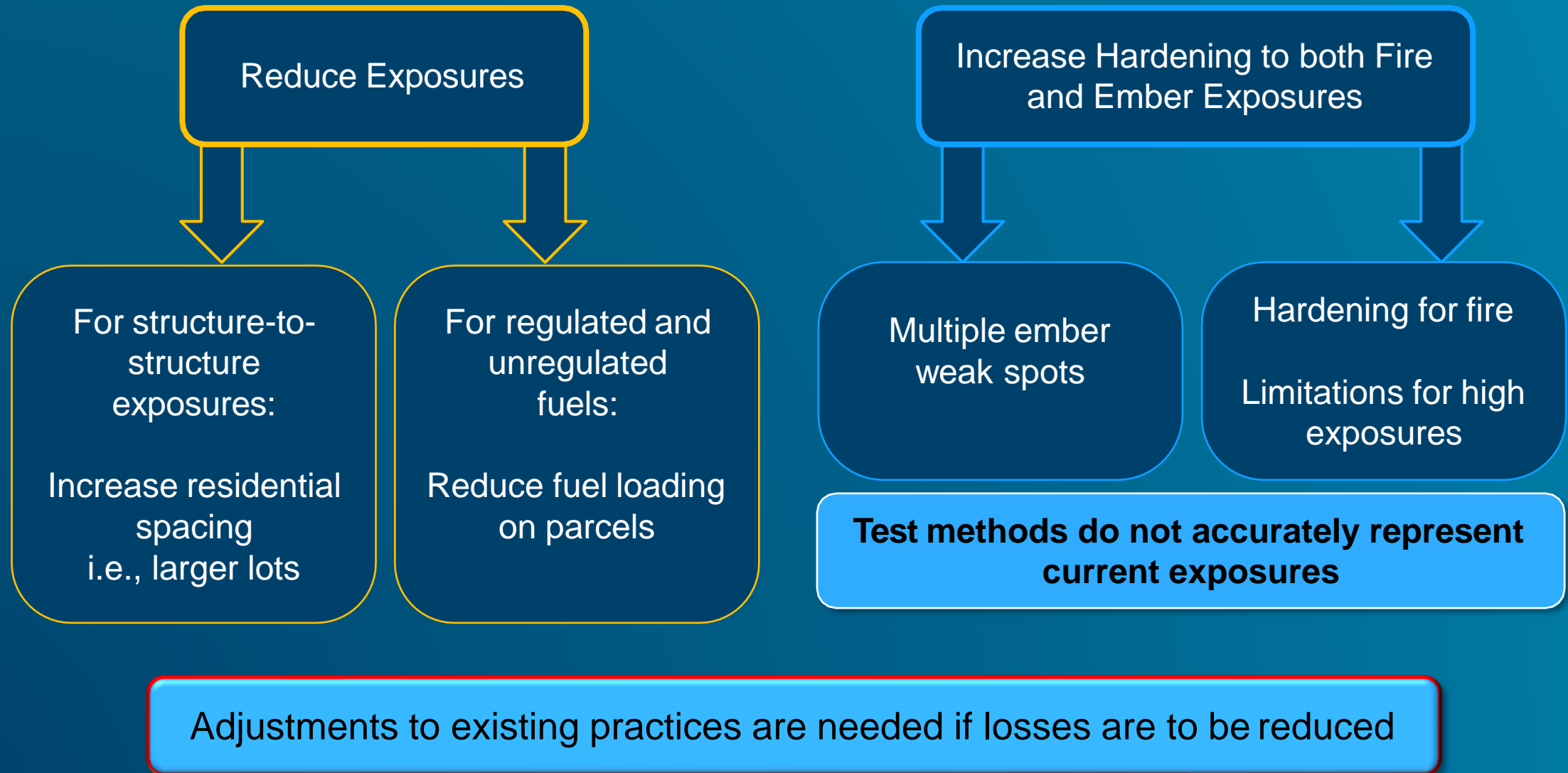
Low/Moderate Density - Intermix – significant fuels removal  
Partial Hardening provides some protection

Low/Moderate Density - Interface – perimeter will add value  
Partial Hardening provides some protection

### Full Hardening

- High Density -
1. Partial Hardening provides very limited protection
  2. Interface – community perimeter hardening will add value + ember hardening is necessary

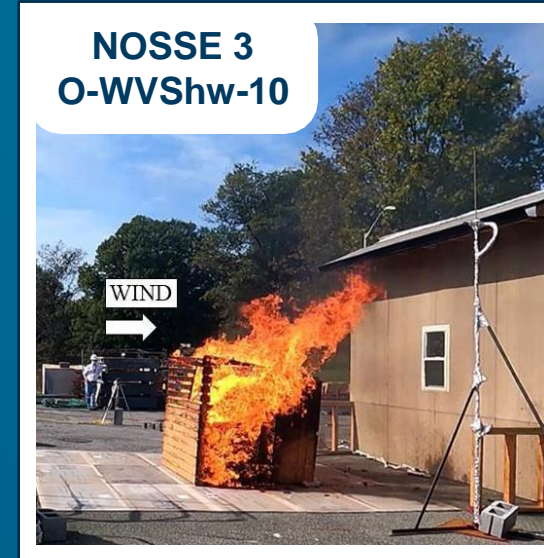
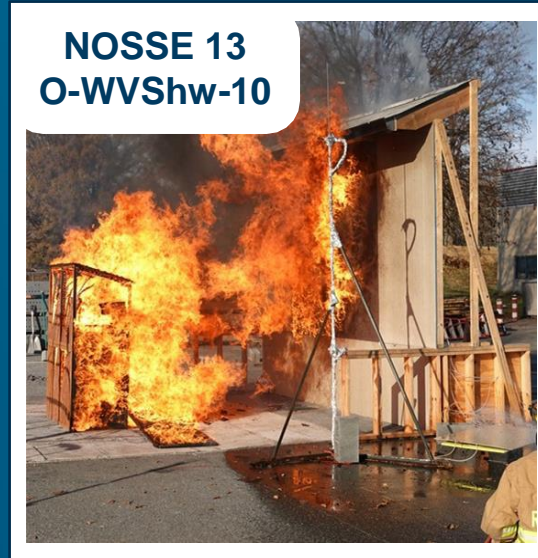
# Paths Forward – New Construction



## New Construction Codes

- We have lost significant “protection” going from townhouse to single family high density
- Multiple occupancy buildings
- “Raise the bar”
- Move to exposure centric approach – by incorporating setbacks
- Consider hazard management for high impact fuels – fences and sheds (appendix materials in 7A/49?)
- Reassess the housing density issue (SSD) to reduce conflagrations

# Structure Separation Experiments



# Thank You

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<https://www.nist.gov/el/fire-research-division-73300/wildland-urban-interface-fire-73305/hazard-mitigation-methodology>

<https://www.nist.gov/el/hmm>

# Roundtable / Public Comment

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- ▶ Roundtable
- ▶ Public Comment



# Next Meeting Information

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Last meeting of 2023

November 28, 2023

CNRA Building, 715 P Street, 2nd Floor  
Conference Room 2-221 (A-C)

Sacramento, CA 95814

- National Institute of Standards and Technology (NIST):
  - ESCAPE document that takes the lessons from Camp 4 and packages them for a small and intermediate size communities, specifically to help them develop their evacuation plans.

► Topic Suggestions for 2024 Meetings

- <https://forms.gle/Wefg6YnrnUGYS8ua9>





# Meeting Adjournment (Motion Required)

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- ▶ 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](mailto: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.

