

# Adapting to Wildfire is Living with Fire

By Kimberly Giuliacci  
Division Chief / Fire Marshal  
Woodside Fire Protection District



# Topics for Today

- History of Wildfire
- Shift the Paradigm
- What should we know as homeowners?
- What can we do as a responsible homeowner?
- Where do we go from here?

# DESIGN FOR DISASTER: PLEASE WATCH!

This 1962 documentary tells the story of a fire that started on November 5th, 1961. The Bel Air/Brentwood Fire, in Los Angeles, and over the course of three days destroyed 484 homes, damaged 190 others, and burned over 16,000 acres. The \$30 million disaster led to new laws by the city to eliminate wood shingle roofs and to clear dry brush away from homes. The film was produced by the Los Angeles Fire Department and is narrated by actor William Conrad.



2025 Palisades  
Fire: Burned 23,448  
acres, 6,831  
structures  
destroyed, 13  
fatalities

2017 Tubbs Fire:  
Burned 40,000  
acres, pprox 1300  
structures  
destroyed, 22  
fatalities in

2020 August Complex:  
largest  
recorded 1,032,648  
acres, destroyed 935  
buildings due to

## HISTORY OF CALIFORNIA WILDFIRES

### Santiago Canyon Fire

1889

Approximately 300,000 acres burned across Orange County, San Diego County, and Riverside County

### Tunnel-Oakland Hills Fire

1991

The Tunnel-Oakland Fire is one of the most



### Tubbs Fire

2017

The Tubbs Fire burned nearly 40,000 acres and took 22 lives. This is one of California's most deadly fires

### Mendocino Complex Fire

2018

This fire is the third largest recorded in California. It burned 459,123 acres.



### August Complex

2020

This is California's largest recorded wildfire with 1,032,648 acres burned



1

CALIFORNIA'S MOST SIGNIFICANT FIRES



### Griffith Park Fire

1933

This fire is one of California's most deadly fires which went through L.A county with 29 deaths



### Cedar Fire

2003

The Cedar Fire burned 273,246 acres, 2,820 structures destroyed, and 15 deaths



### Camp Fire

2018

The Camp Fire caused 85 fatalities. It destroyed more than 18,000 structures. The towns of Paradise and Concow were almost completely destroyed.



### CZU Lightning Complex Fire

2020

This is California's 4th largest fire. It burned 396,625 acres in Stanislaus County



### Dixie Fire

2021

California's second largest wildfire that burned a total of 963,309 acres



2018 Camp Fire:  
burned 153,336 acres,  
over 18,000  
structures, 85  
fatalities, burned  
for 17 days

2020 CZU Fire:  
burned approx  
90,000 acres,  
destroyed 1,490  
buildings, 1

# Paradigm Shift - It's an absolute must!



**INCREASE IN FREQUENCY AND INTENSITY OF FIRES.....WHY ?**

# Role of Housing crisis in Damages

- A wildland–urban interface (or WUI) refers to the zone of transition between unoccupied land and human development. These lands and communities adjacent to and surrounded by wildlands are at risk of wildfires. Since the 1990s, over 43% of new residential buildings have been constructed in this area in California.



# Change the Paradigm From

**BUILT TO BURN**



**BUILT TO RESIST**



**A house burns because of its interrelationship with everything in its immediate surroundings (up to 100 feet of any structure)**

# What Should We Know As Homeowners?

There are three ingredients of a wildfire

- ❑ **Fuel** (the vegetation that burns)
- ❑ **Ignition** (sources can be human, either accidental or arson, or from lightning)
- ❑ **Weather** (hot, dry, windy weather is what make fires grow and also really hard to put out)



FUEL

- By December 2017, there was a record 129 million dead trees in California.



IGNITION

- Accidental fire ignition cause 95% of the wildfires in California.
- The major source of wildfire in 2018 was found to be overhead power lines.



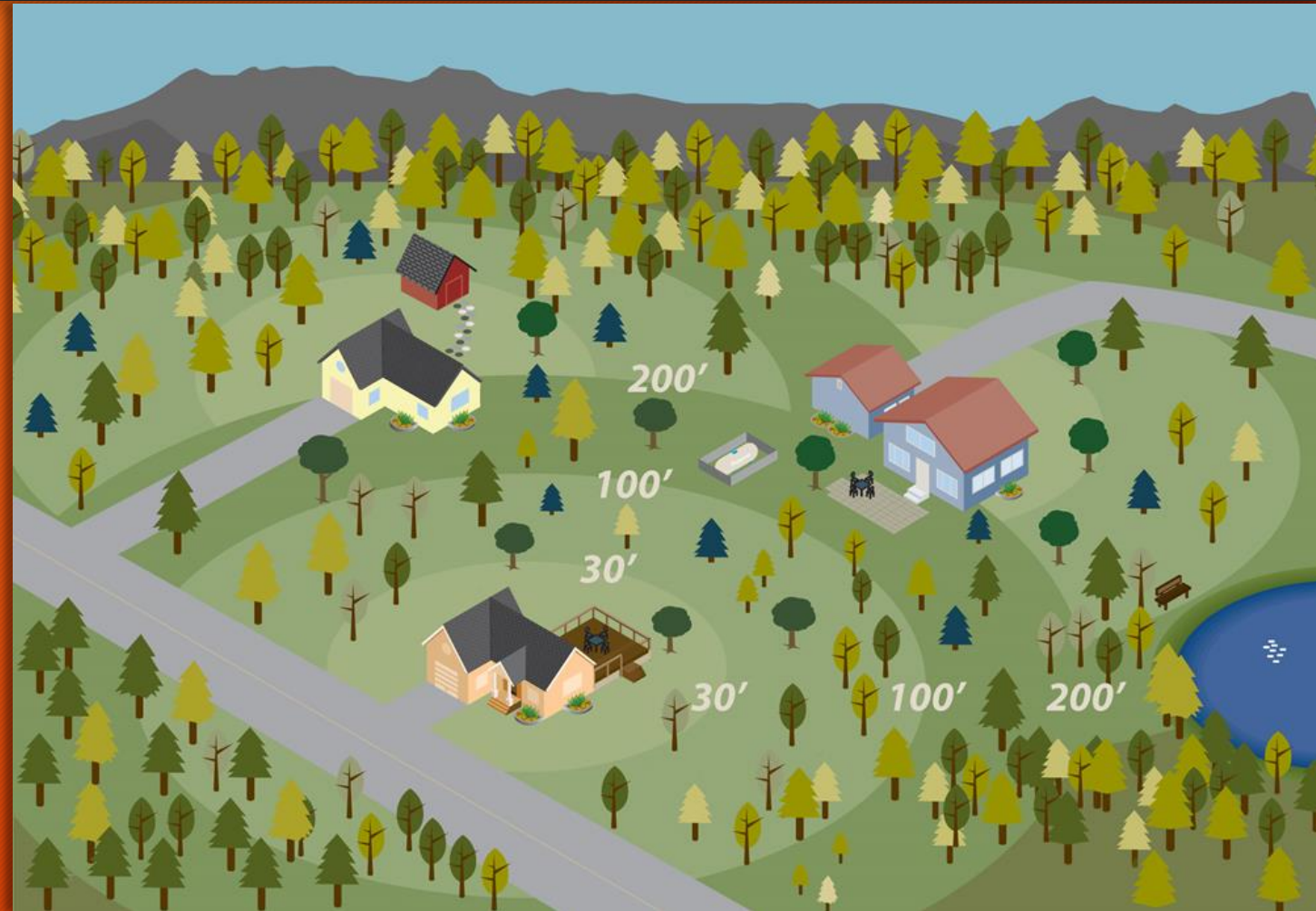
WEATHER

- Strong wind
- Dry climate
- Humidity levels



# What Should We Know As Homeowners ?

- Reduce fuels to slow a fire
- Harden homes to prevent ignitions
- Structure to structure density



# What Can We Do As Responsible Homeowners ?



Build with ignition resistant materials



Landscape smart



Maintain roofs

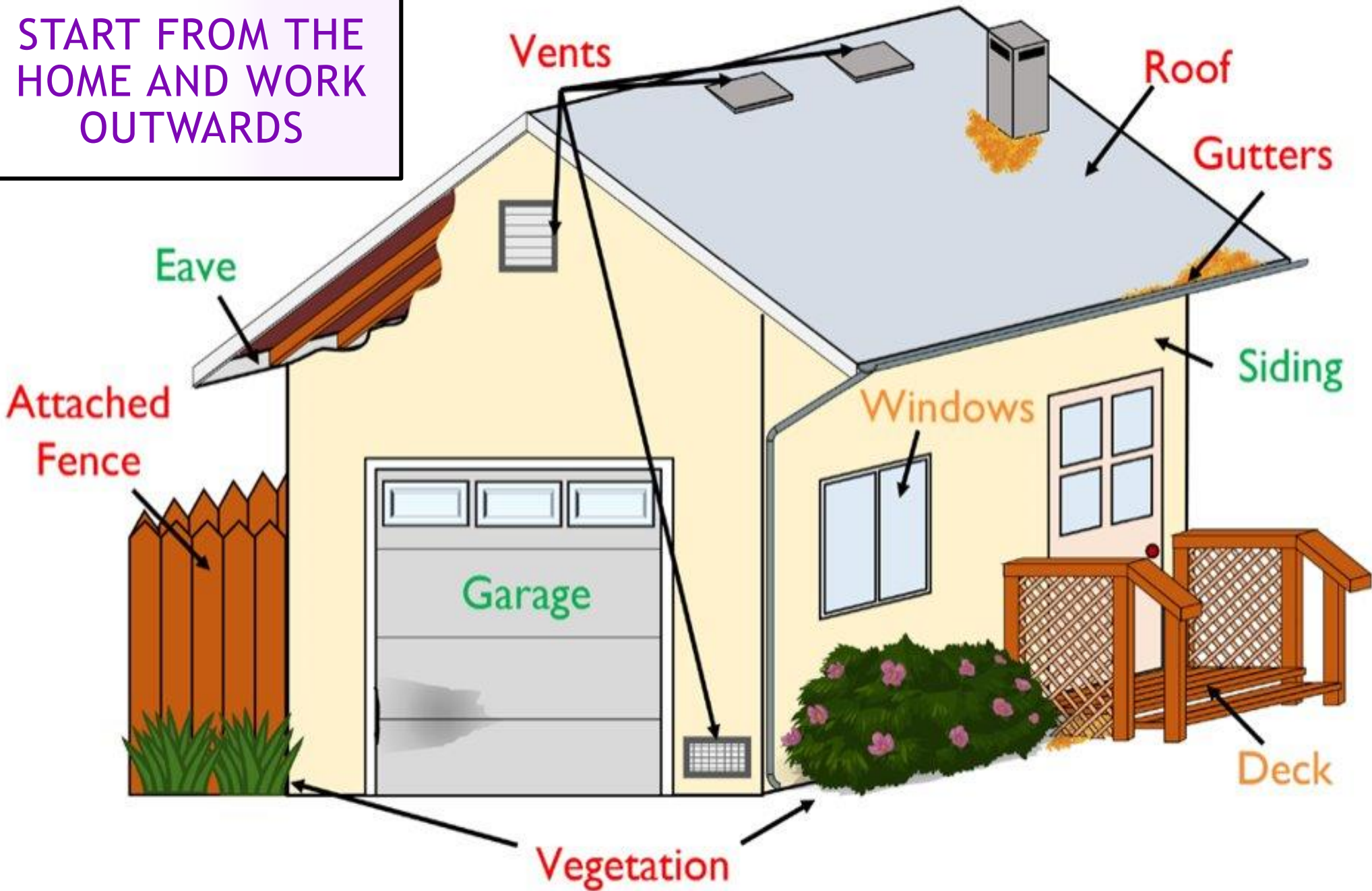


ZONE 0  
Ember resistant zone

Strategic  
planting



START FROM THE HOME AND WORK OUTWARDS

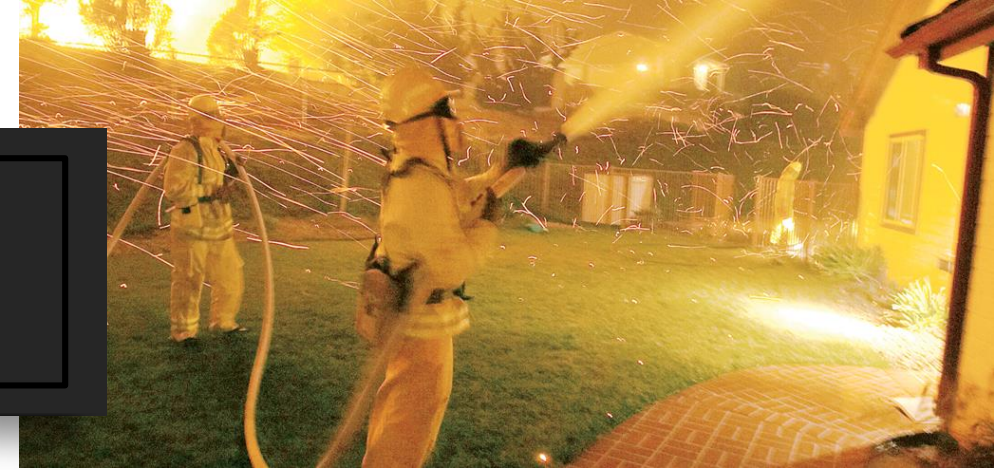


<https://www.youtube.com/watch?v=Gn0xGmTlj3l&t=15s>

# WHAT CAN WE DO AS RESPONSIBLE HOMEOWNERS



IBHS - Wildfire Research - Why half a house burned and the other didn't?



- Preparing for embers and radiant heat exposures



# WUI PLACARD SYSTEM

1

Access: Does it appear to have access/egress and turnarounds?

2

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

3

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

4

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

Documents property information found during structure assessment. This allow Firefighters to communicate conditions to other responding units. Can change over time.



# Where Do We Go From Here ?

## FIREWISE LANDSCAPING

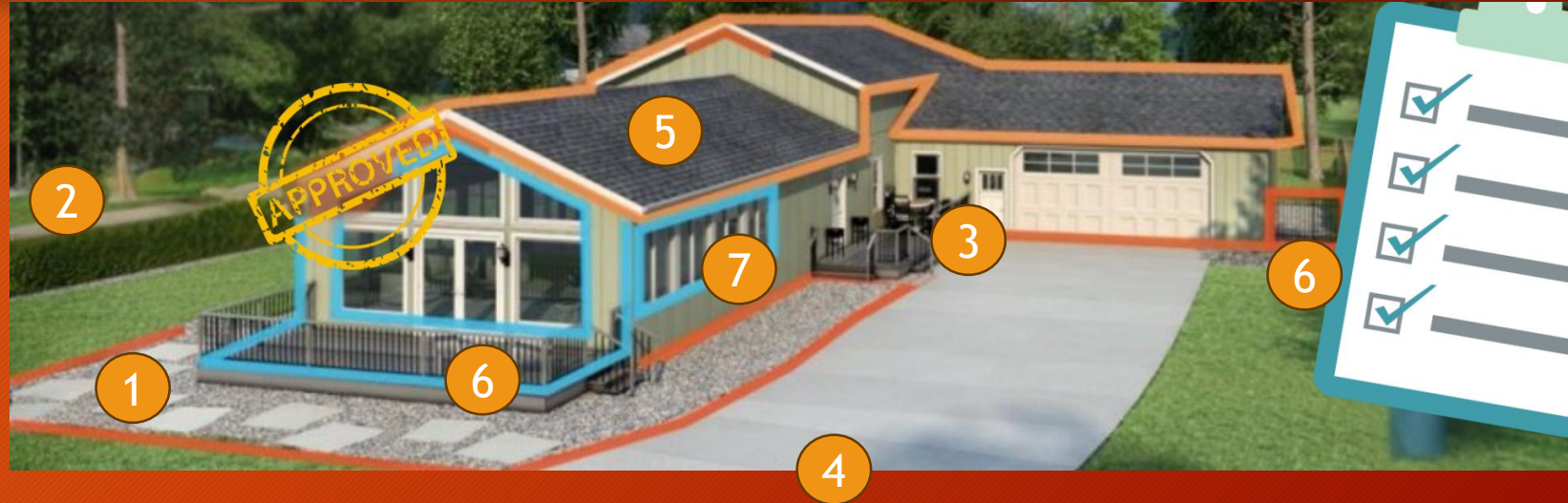
1. Home Ignition Zone
2. Landscaping & Firewise Plants

## BE PREPARED

3. Disaster Plan
4. Emergency Responder Access

## FIREWISE CONSTRUCTION

5. Fire-Resistant Roof Construction
6. Fire-Resistant Attachments - Decks
7. Fire-Resistant Siding and Windows



Become a Firewise Community and support each other to achieve community adaptation.



# Resources



Stay Informed -  
WFPD



THANK YOU!



Kimberly Giuliacci

Division Chief / Fire Marshal



[kguliacci@woodsidefire.org](mailto:kguliacci@woodsidefire.org)



(650) 851.1594



CALIFORNIA FIRES



STOP RIGHT THERE!  
YOU ARE IN CLEAR  
VIOLATION OF THE  
WILDLAND/URBAN  
INTERFACE  
BOUNDARY!

GREENBERG