



Wildfire Preparedness 101 & 102

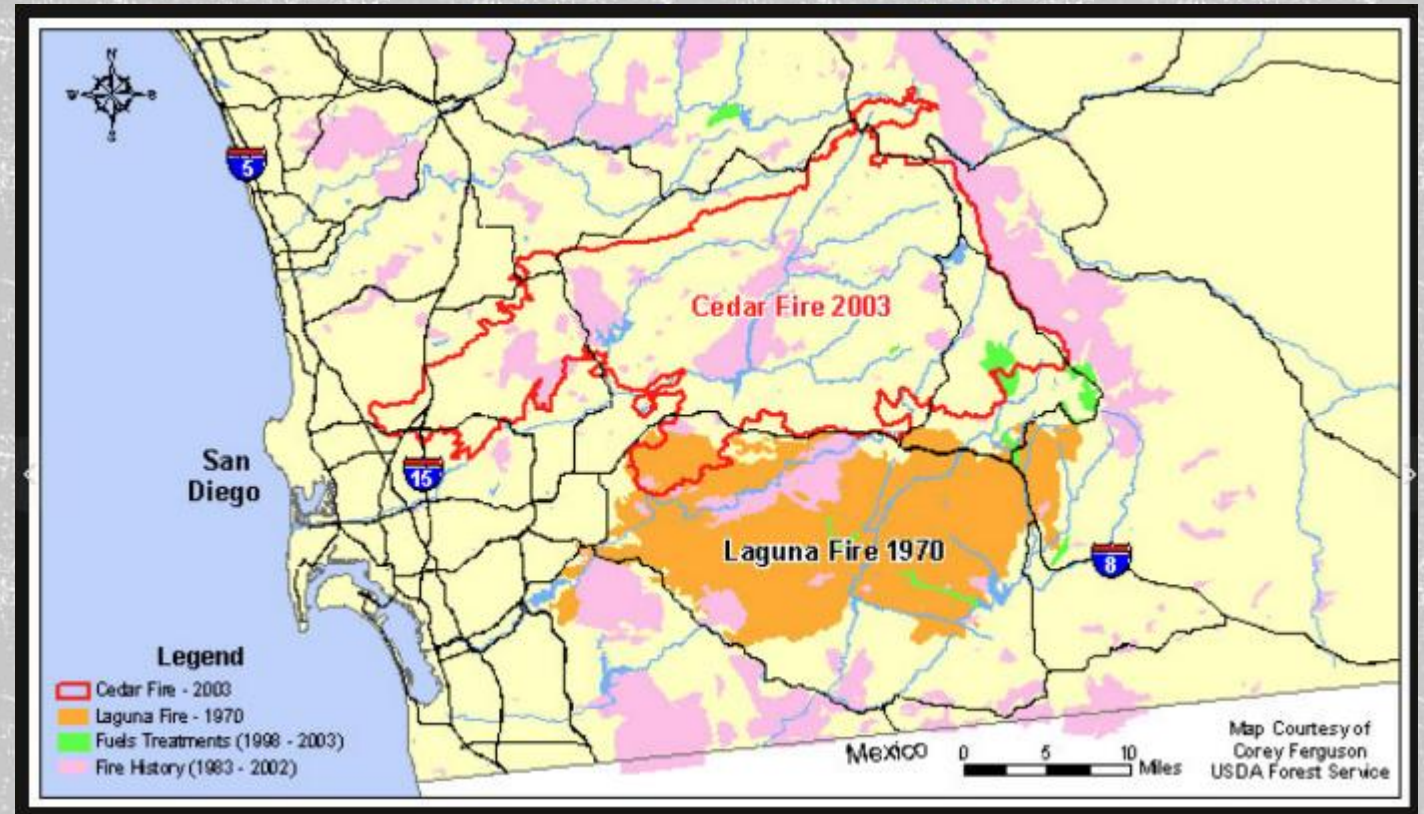


- Wildfire Risk
- Wildfire Behavior
- How to help save your home from wildfire
- Cal-OSHA S5141.1
“Protection from Wildfire Smoke”
- Preparing your Household

WILDFIRES



<https://www.flickr.com/photos/calfire/>



LA FIRES 2025

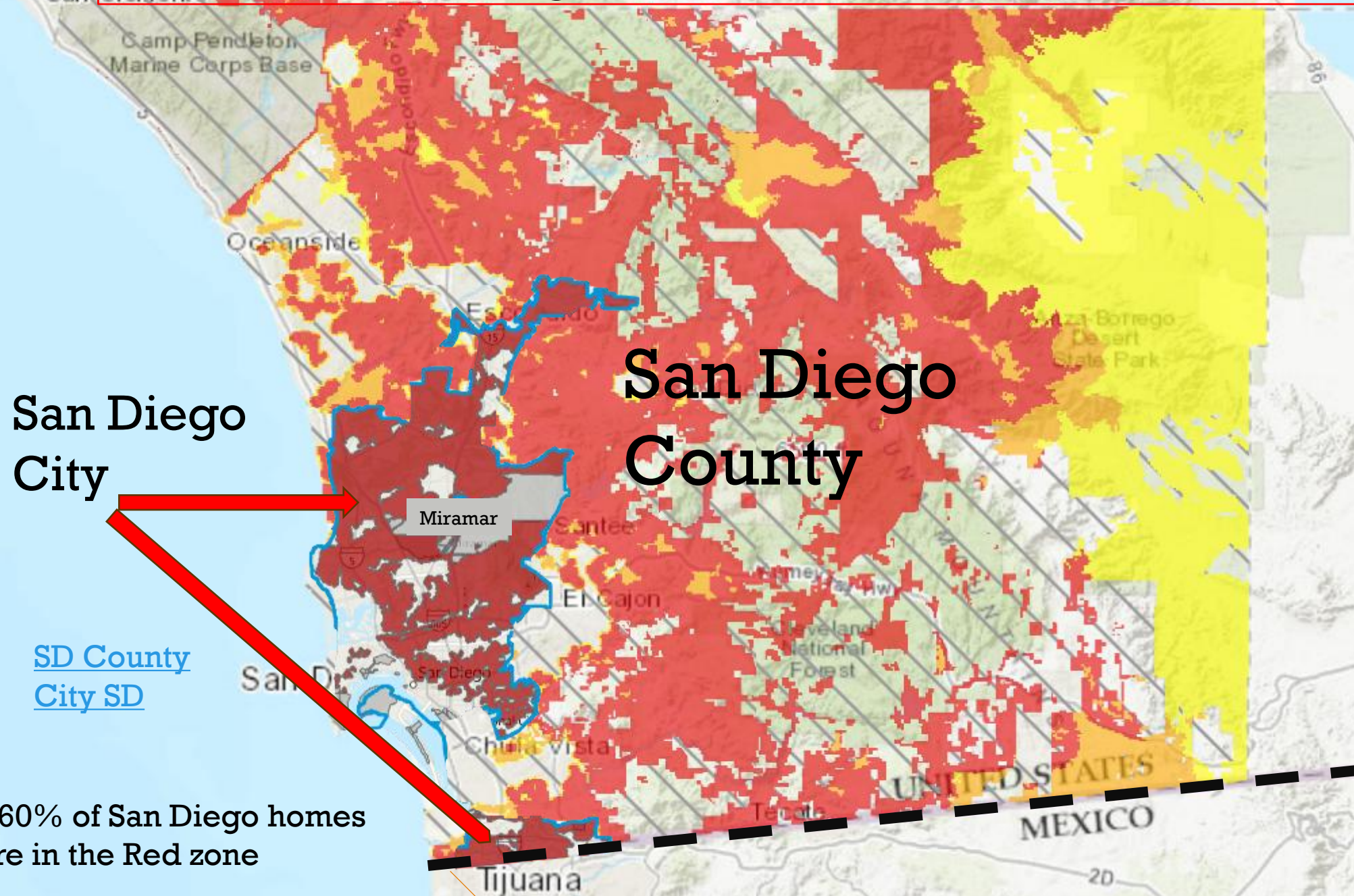
- 16,000 Structures
 - Homes
 - Condominiums
 - Businesses
 - Apartment Buildings



www.nbcnews.com



Very High Fire Hazard Severity Zone





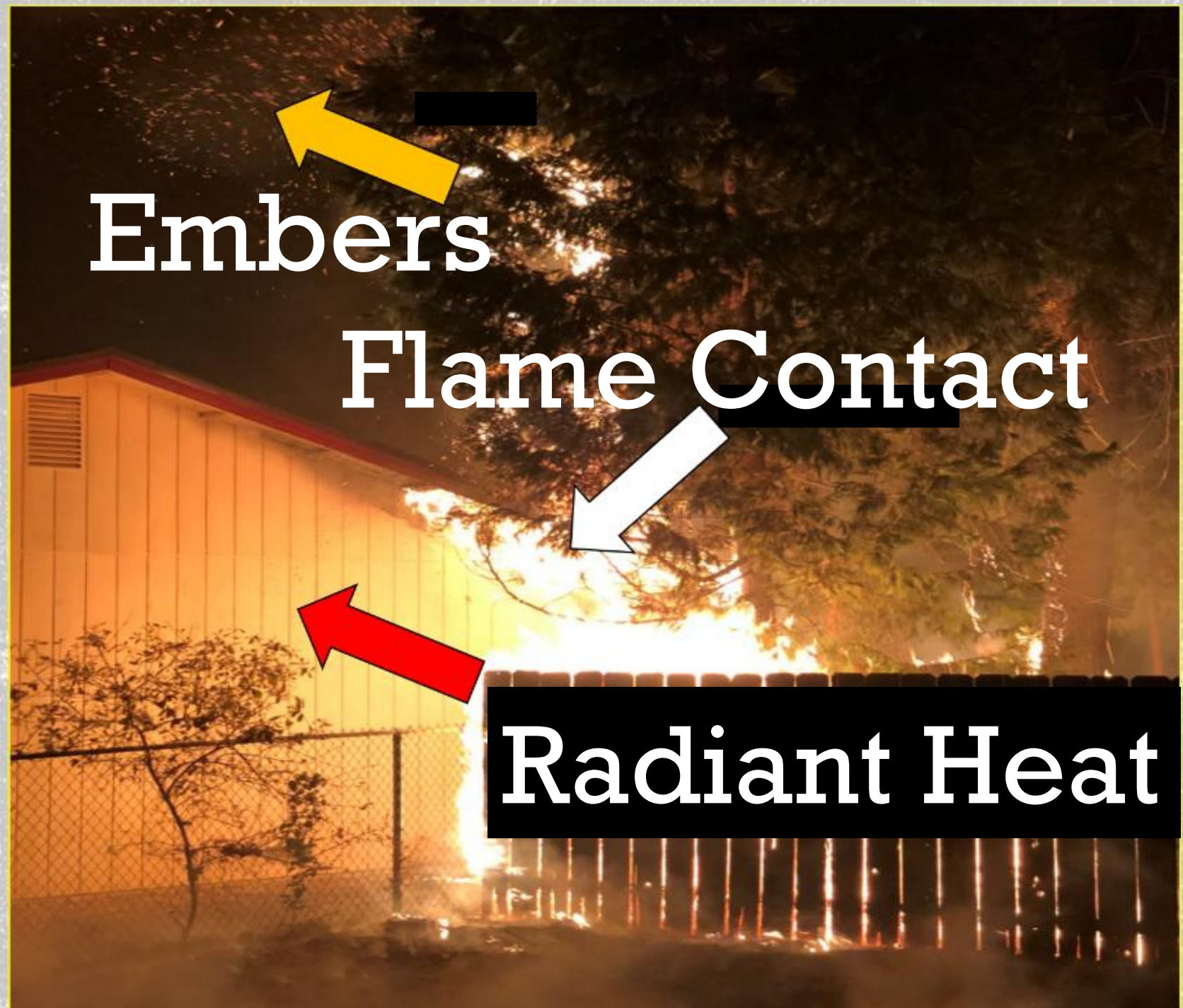
abc13.com



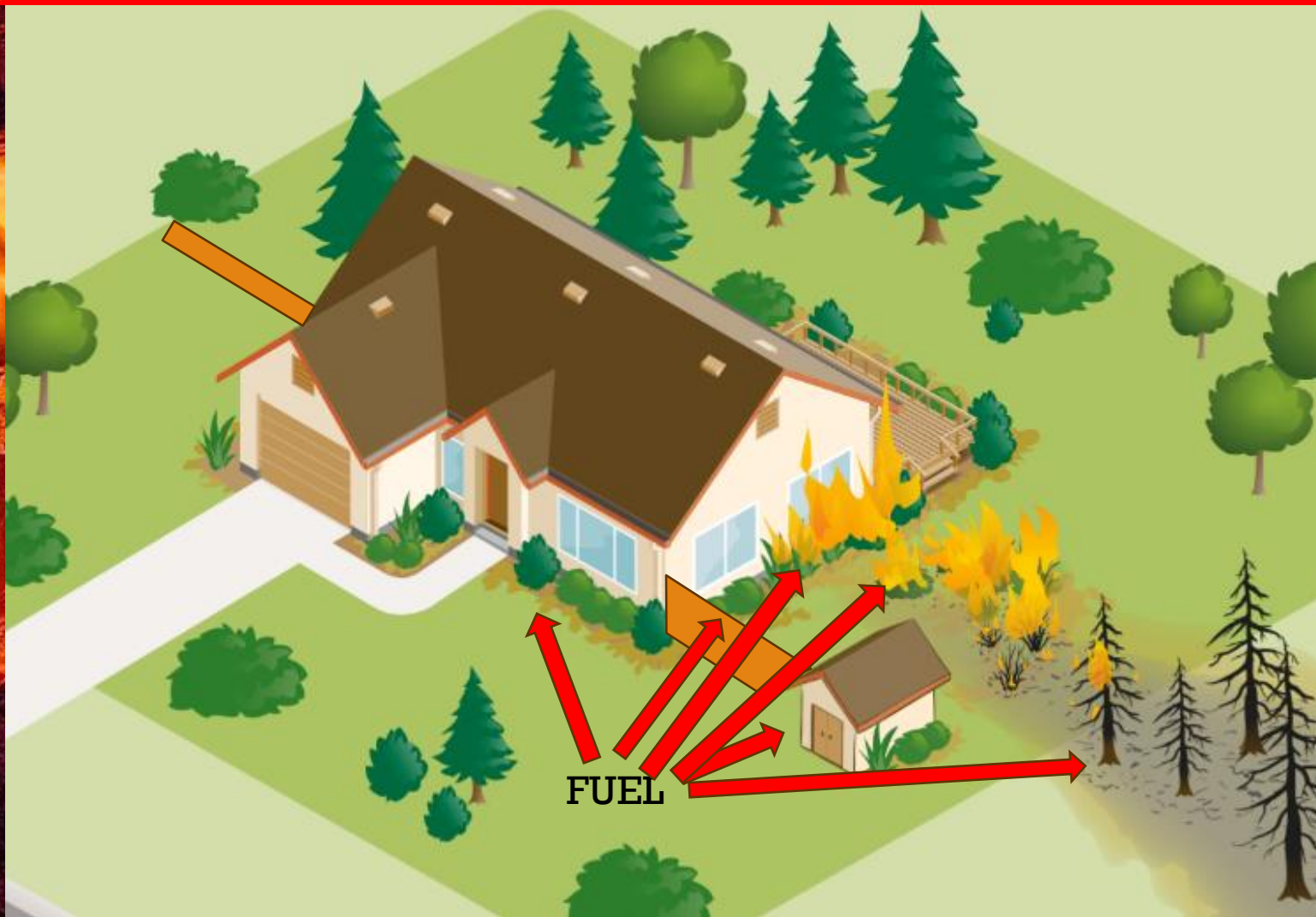
Employees risk total loss
Employees risk injury trying to help
Employees might work in unsafe air quality



- **Flames**
- **Radiant Heat**
- **Embers**



FLAMES & RADIANT HEAT & EMBERS



Source: www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf

FLAMES & **RADIANT HEAT** & EMBERS



Source: www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf

FLAMES & RADIANT HEAT & EMBERS



60-90% Homes lost are due to embers flying ahead of the wildfire

Source: www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf

Audience Participation:

IS there anything we can do?



YES!



www.foxnews.com

We have learned the solution to this madness.

Help our home be resilient to wildfires!



The Good Old Days



Source: <https://www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf>

- You planted trees
- You planted bushes
- You stored propane for disaster preparedness
- You didn't notice leaves in gutters



Today



Source: <https://www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf>

- Trees grew and grew
- Insects are killing trees
- Wildfires reported daily
- On and on.....



THE SOLUTION...

1. Maintaining Defensible Space
“Zone 0” + 1 + 2
2. Home Hardening
3. Community Hardening



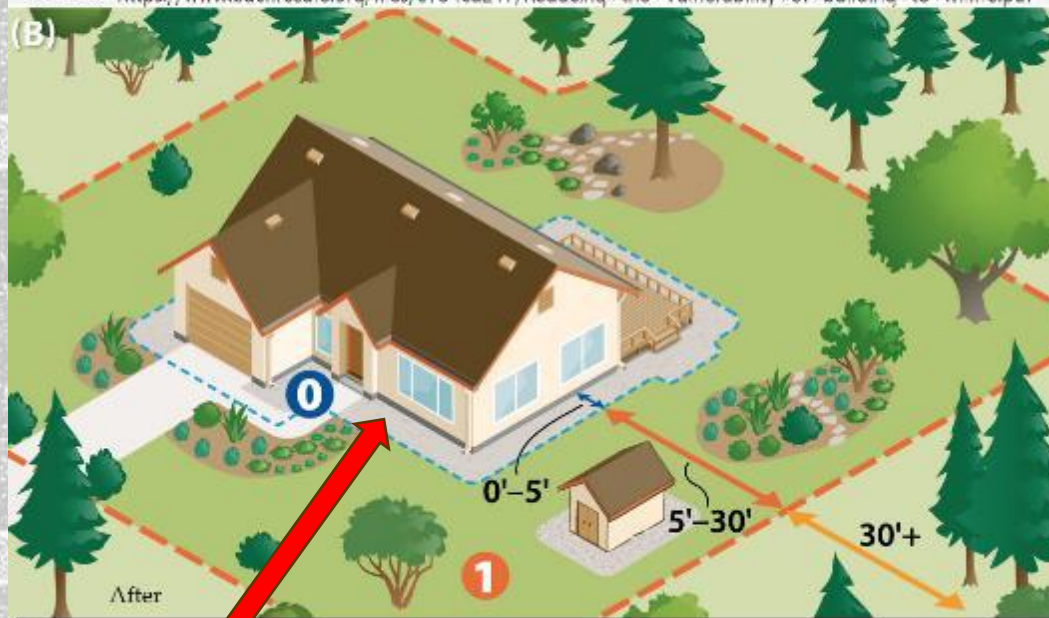
Before



Source: <https://www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf>

After

Ember resistant



Zone 0 - Ember resistant zone

Even the Welcome mat
was combustible!



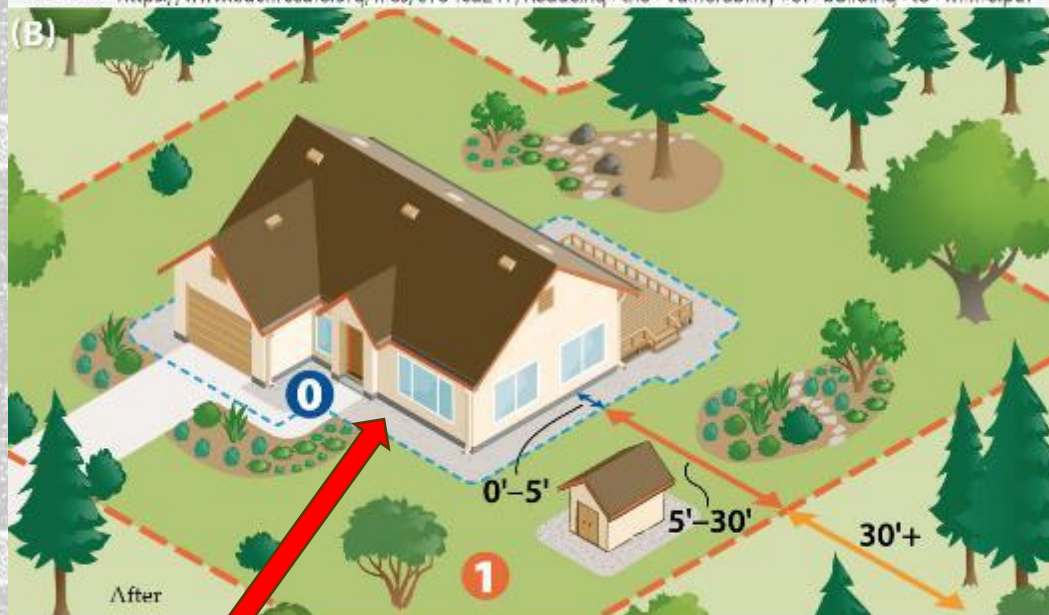
Before



Source: <https://www.edcfiresafe.org/files/e734cd217/Reducing+the+Vulnerability+of+building+to+wildfire.pdf>

After

Ember resistant



Zone 0 - Ember resistant zone

Probably...

- Some plants will be permitted in Zone Zero*
- Some trees will be permitted in Zone Zero with restrictions*

*Insurance companies can be more restrictive than city/county/state.



ZONE ZERO

WHY FIVE FEET?

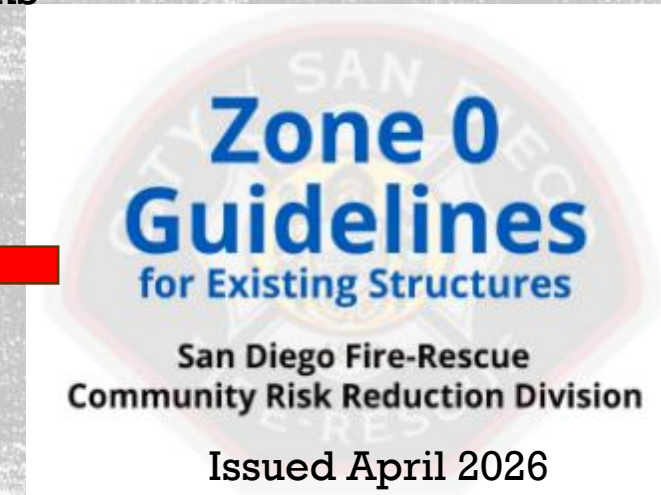
BREAK WILDFIRE'S PATH TO YOUR HOME.



- **California** Zone Zero Regulations
 - Expected to be finalized early this month
 - Focused on CA residences in VHFHSZ
 - (Very High Fire Hazard Severity Zone)

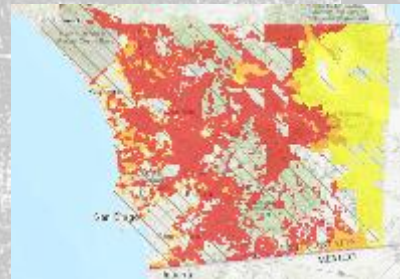


- San Diego **City** Zone Zero Guidelines/Regulations
 - **April 2026**
 - Close to current CA Zone Zero draft
 - Focused on City residents in VHFHSZ
 - Both give homeowner time to complete corrective actions



San Diego **COUNTY**

Fire-Hazard-Severity-Zones



San Diego **CITY**



Likely to be Ignited by Embers

**Vegetation
and Organic
Materials**



**Stored
Combustible
Materials**



**Combustible
Landscape
Features**



**Common
Locations of
Ember Ignition**



Likely to be Ignited by Embers

Vegetation
and Organic
Materials



Stored
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Common
Locations of
Ember Ignition



1. What combustibles do you have in your Ember Resistant Zone (Zone 0) wood, plastic, resin, vegetation, etc?
2. What easy things can you do to reduce the amount of combustibles in your Zone 0?
3. What causes 60-90% of the home fires in a wildfire.

■ Home Hardening

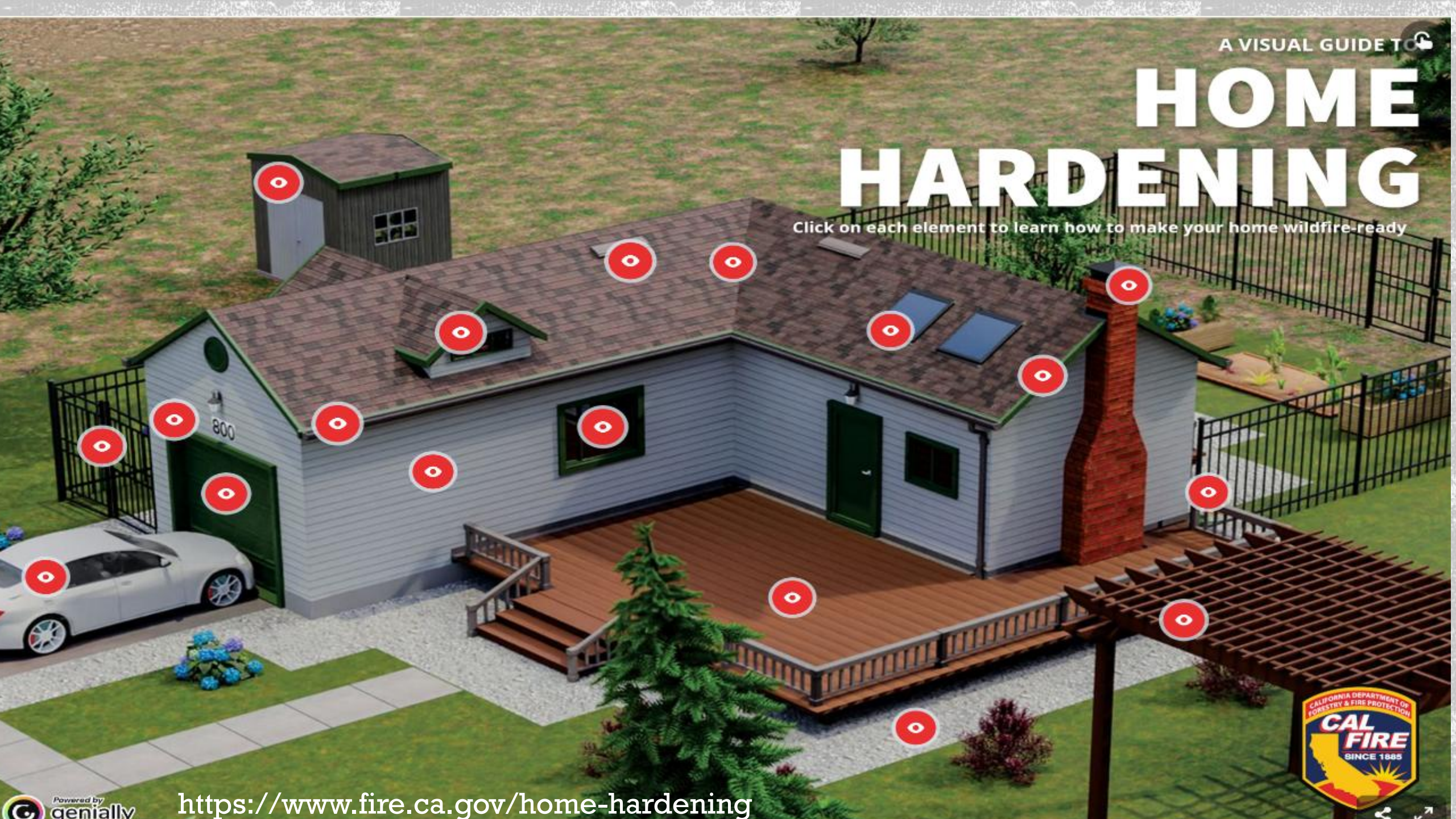
- Gaps -allow embers in
- Roofs -bad roofs are bad
- Gutters –metal, clean
- Vents- 1/8” metal screen or ember and flame resistant vents
- Decks – No storage, or combustible lattice
- Eaves - vents, gaps, enclosed
- Combustible exterior siding - at least 8”



A VISUAL GUIDE TO

HOME HARDENING

Click on each element to learn how to make your home wildfire-ready



You may have GAPS in your vents



YOUR HOME CAN SURVIVE A WILDFIRE

- Take aways:
 - Wildfire Behavior and Ignition Processes
 - Flame
 - Intense Radiant Heat
 - Embers – Millions of fire starters looking for a home
 - Defensible Space –
 - Zone 0 – Ember-Resistant Zone
 - Zone 1 – Don't ignore fire risks in this Zone
 - Home Hardening –
 - Find and eliminate gaps that could let embers in attic and garage
 - Use Cal-FIRE Home Hardening checklist
- It is good to come home after a wildfire and see that your house is undamaged.



■ Community Hardening

- Neighbor's
 - Fences,
 - Vegetation,
 - Vents, etc

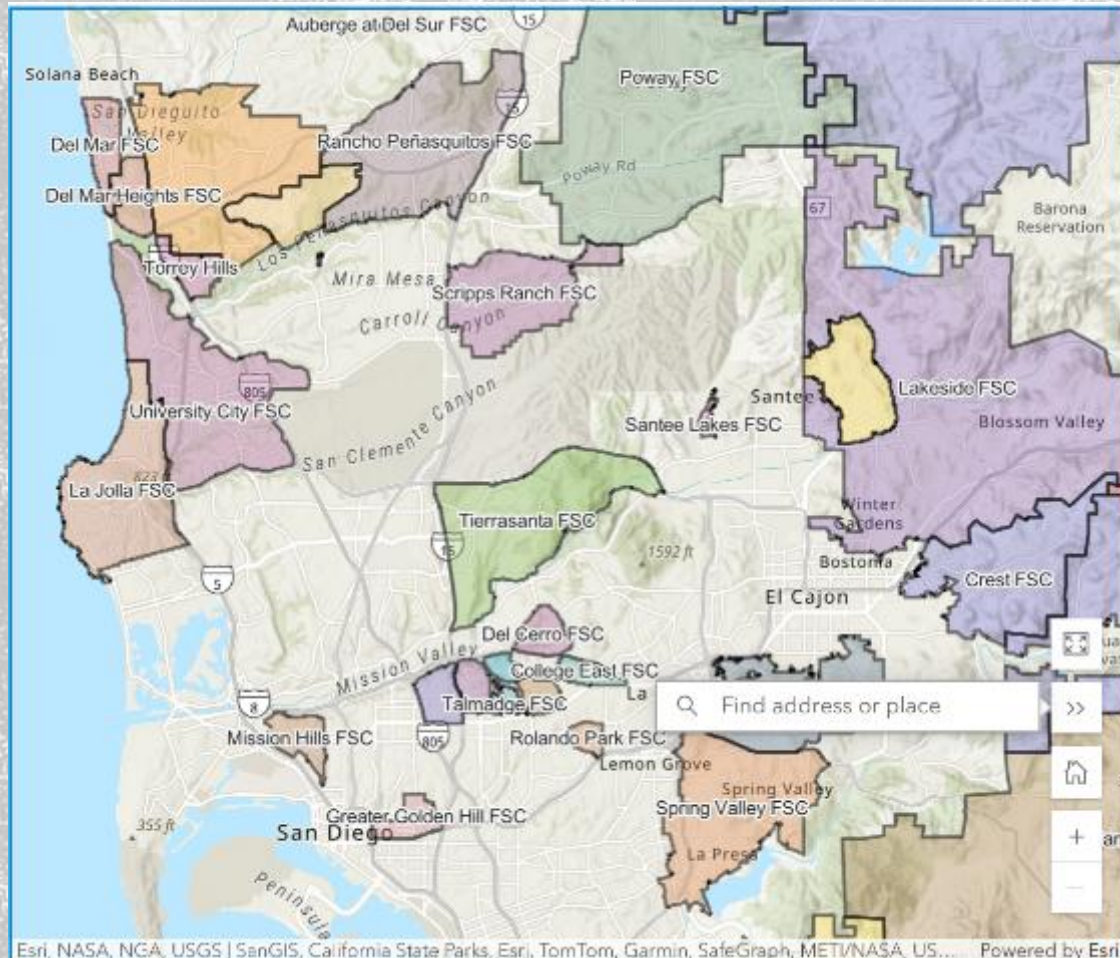


- If a house in the neighborhood catches fire the risk to your house increases





FIRE SAFE COUNCIL of San Diego County



~60 Fire Safe Councils in the County

- Local councils are run by teams of dedicated community volunteers
- Range in size from small groups with less than five members to larger organizations with dozen of members





FIREWISE USA®
Residents reducing wildfire risks

FIREWISE provides a collaborative framework to help neighbors get organized, find direction, and take action to increase the ignition resistance of their homes and community.



WHERE THERE IS FIRE...

THERE IS SMOKE!



Is this air Safe to Breathe?



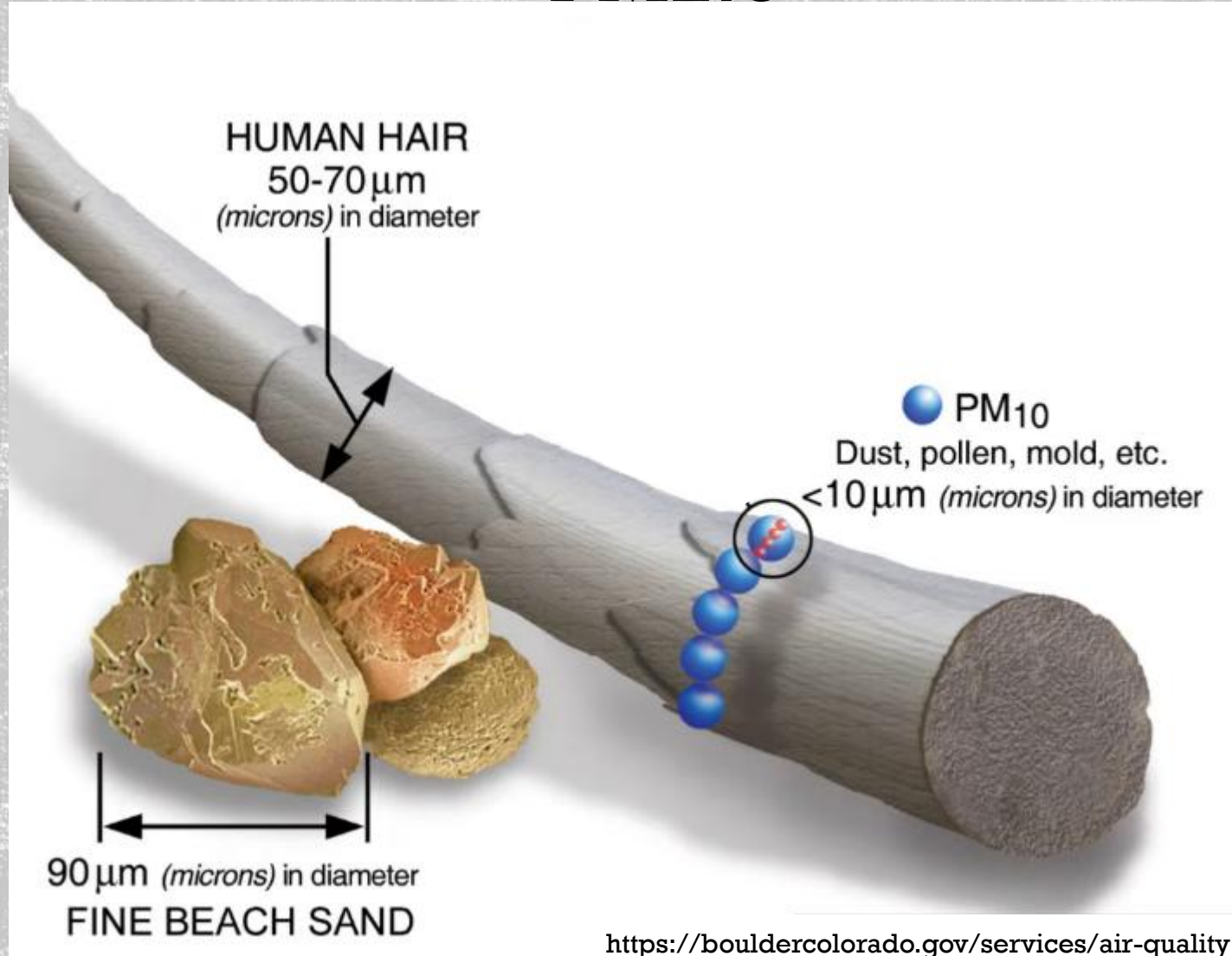
CAL-OSHA TITLE 8 S5141.1

PROTECTION FROM WILDFIRE SMOKE



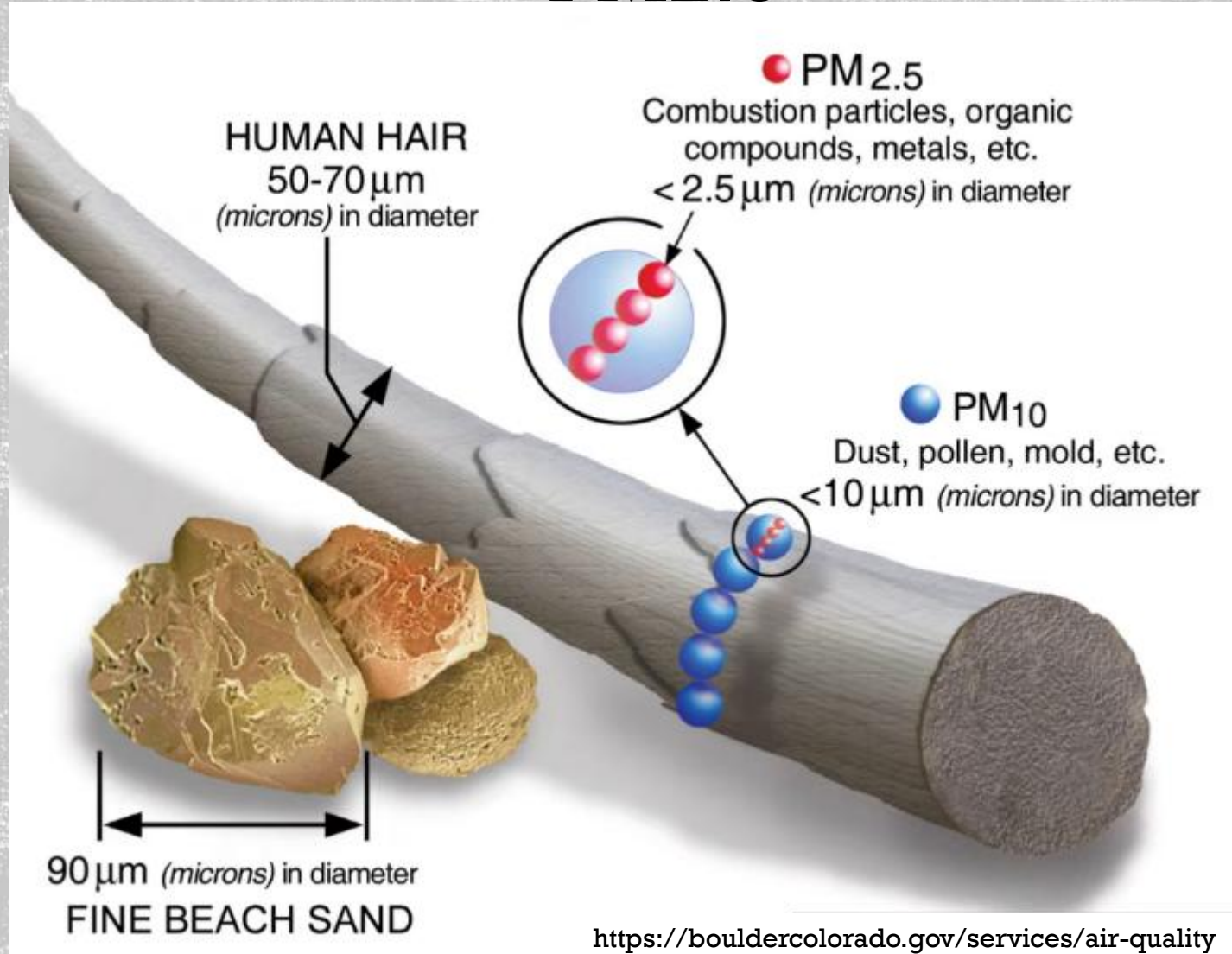
WILDFIRE SMOKE CAN BE HAZARDOUS

Particulate Matter that is 2.5 microns or smaller is usually the most harmful and is called:
PM2.5



WILDFIRE SMOKE CAN BE HAZARDOUS

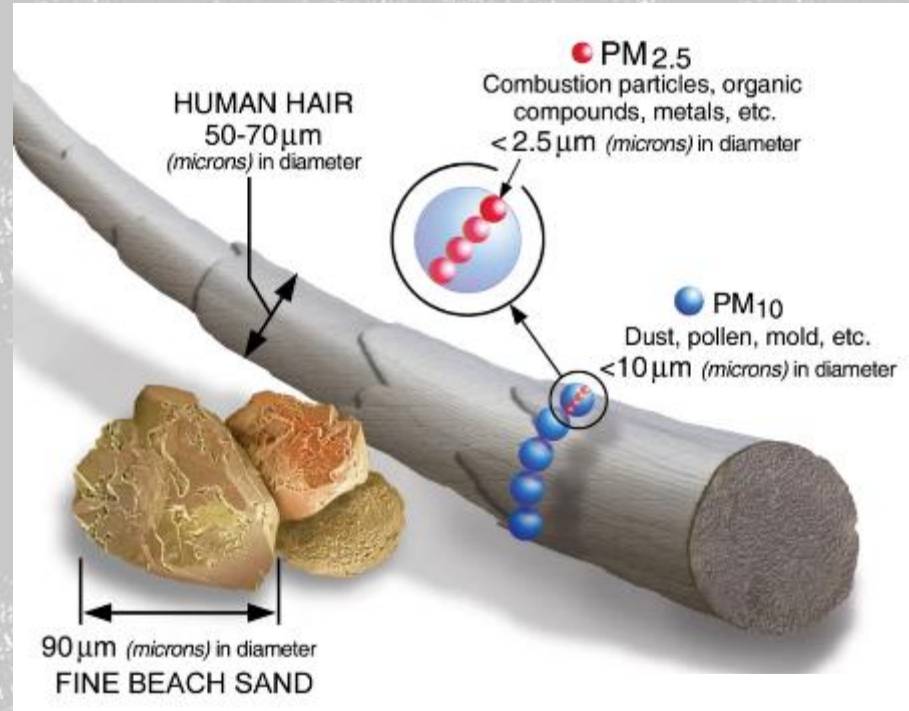
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PM2.5



WILDFIRE SMOKE CAN BE HAZARDOUS

Health effects of PM2.5

- Persistent coughing
- Phlegm
- Wheezing
- Difficulty breathing
- Reduced lung function
- Bronchitis
- Worsening of asthma
- Heart failure



<https://bouldercolorado.gov/services/air-quality>

PM2.5 Air Quality Index

Levels of Concern	PM2.5 AQI
Good	0 to 50
Moderate	51 to 100
Unhealthy for Sensitive Groups	101 to 150
Unhealthy	151 to 200
Very Unhealthy	201 to 300
Hazardous	301 and higher

CAL-OSHA TITLE 8 §5141.1

WHEN IT APPLIES:

Both conditions must exist:

- The current **PM2.5 AQI is 151 or greater**, regardless of other pollutant readings.
- The employer can reasonably anticipate employees may be exposed to wildfire smoke.

It commonly affects outdoor and semi-outdoor work: construction, landscaping, agriculture, delivery, maintenance, and loading areas.



CAL-OSHA TITLE 8 S5141.1

HOW TO GET THE AIR QUALITY INDEX?

How to get the AQI?

On scene with a hand held device



From the local Air Pollution Control District



CAL-OSHA TITLE 8 S5141.1

EMPLOYER DUTIES

For covered operations, employers must:

- Check or otherwise determine PM2.5 exposure **at the start of each shift** and again as conditions require.
- Communicate smoke hazards and protections in a language and manner employees can understand, including a way for workers to report hazards without retaliation.
- Train potentially exposed employees about smoke health effects, the rule, and respirator use.
- Reduce exposure where feasible—first using filtered indoor/enclosed locations; if that is inadequate, consider relocating work, rescheduling it, reducing exertion, or increasing rest breaks.



CAL-OSHA TITLE 8 S5141.1

CAL-OSHA VIDEOS

Cal-OSHA Wildfire smoke ~ 10min

Spanish -Video overview: Cal-OSHA Wildfire smoke ~ 10min

Cal-OSHA Respirator training video ~ 7min



CAL-OSHA TITLE 8 S5141.1

Do N-95s and Bandandas work?

Yes and No

N-95 filters 95% of particles larger than 0.3 microns – YES

Bandanas ...NO



CAL-OSHA TITLE 8 S5141.1

REQUIRED TRAINING TOPICS

Required training topics

When the *Protection from Wildfire Smoke* standard applies to a worksite, employers must provide workers training and instruction based on the information in Appendix B. This training includes information on:

1. The health effects of wildfire smoke
2. The right to obtain medical treatment without fear of retaliation
3. How employees can obtain the current Air Quality Index (AQI) for PM2.5.
4. The employer's method to communicate with workers about the Air Quality Index and protections available to workers
5. The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke

Training must be provided to workers in a language they understand. Employers can use different methods to make training effective, including [Cal/OSHA's Training Resources](#) and [videos on YouTube](#).

<https://www.dir.ca.gov/wildfire-smoke/worker-protection-requirements.html>



CAL-OSHA TITLE 8 S5141.1

MAJOR EXEMPTIONS

Section 5141.1 does not apply to, among other situations:

- Enclosed buildings with mechanical filtered ventilation, where openings are kept closed except for entry/exit.
- Enclosed vehicles with cabin air filtration, with windows and other openings kept closed.
- Workplaces where the employer demonstrates on-site PM2.5 is below the level corresponding to AQI 151.
- Employees exposed at AQI 151+ for **one hour or less total per shift**.
- Wildland firefighters engaged in wildland firefighting.

https://www.dir.ca.gov/title8/5141_1.html

Protection from Wildfire smoke

<https://www.dir.ca.gov/wildfire-smoke/worker-protection-requirements.html>





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“Protection from Wildfire Smoke”
- Prepare your Household



Prepare yourself

[Create a wildfire action plan](#)

[Prepare your family](#)

[Equipment & vehicle use](#)

[After a wildfire](#)



Prepare your property

[Create defensible space](#)

[Harden your home](#)

[Landowners assistance](#)

[Build a fire smart landscape](#)



Prepare for evacuation

[Create your go bag](#)

[Take pre-evacuation steps](#)

[Animal evacuation plans](#)

[Go evacuation guide](#)

<https://www.readyforwildfire.org/>

- ***Questions?***
- ***Any of you live in
Tierrasanta?***

