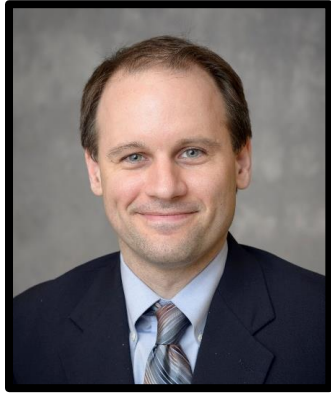


Recommendations for Post-Fire Building Sampling, Testing, and Remediation



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LightBox and Resident impacted
by the Palisades Fire, California

Prepared for:
Smoke Claims and Remediation Task Force, California Department of Insurance

October 13, 2025

Special thanks to....

- ♥ Households and business owners who participated and encouraged their community to participate in surveys and shared their experiences with us
- ♥ Households and business owners from prior disasters and chemical incidents who have shared their experiences and insights
- ♥ Faculty, students, and staff at participating institutions who volunteered their time
- ♥ Community groups such as Pali Strong and Eaton Fire Residents United who encouraged people to participate

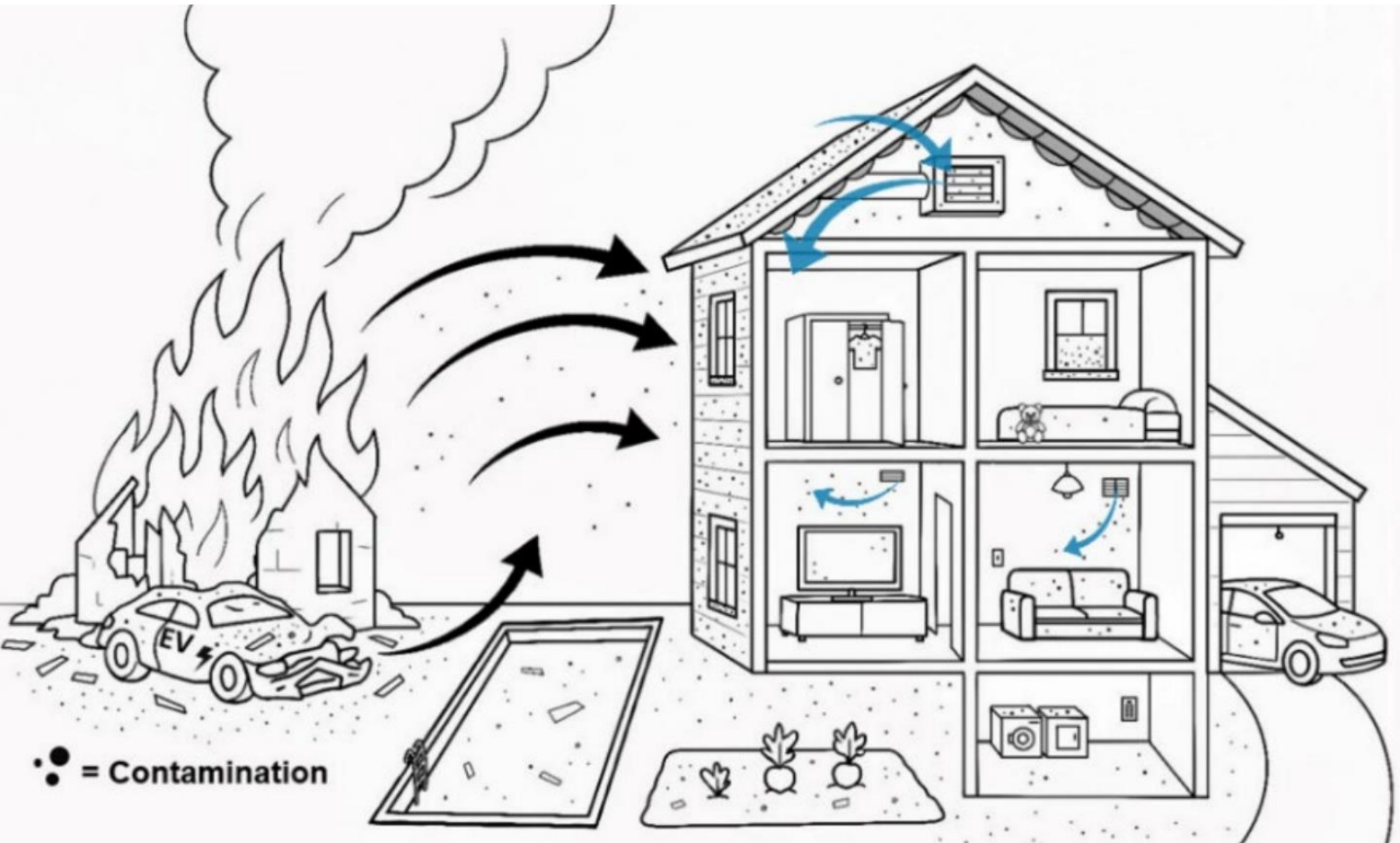
Key Definitions

Restoration: Returning a property to a “pre-loss condition by the removal of damaging residues or odor to remedy damage or distress.”

Remediation: The act of removing specific environmental contaminants from a property to return it to safe use.

Cleaning: Removing residues or contaminants *BUT cleaning should be without fear of major contaminant exposure-caused injuries (i.e., mesothelioma, metal poisoning, cancer)*. **So, remediation is used here.**

Fire damage can be physical and contamination in nature



Damage

Physical damage

Contamination damage

- Chemical
- Microbiological

Risks

- Occupational Health
- Public Health
- Environmental

NEWS RELEASE



313 N. Figueroa Street, Room 806 | Los Angeles, CA 90012 | [\(213\) 288-8144](tel:(213)288-8144) | media@ph.lacounty.gov

For Immediate Release:

February 11, 2025

Public Health Advisory Noted for Those Residing Near Burned Structures in Palisades and Eaton Areas

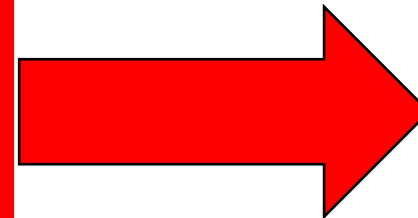
The Los Angeles County Department of Public Health is reminding residents about the dangers associated with fire debris and issuing a **Public Health Advisory** for individuals residing within **250 yards of a burned structure or parcel** within or near the **Palisades and Eaton burn areas**.

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Residents in these areas may face an increased risk of exposure to hazardous substances from ash, soot, and fire debris before the completion of **Phase 1 (hazardous materials removal)** and **Phase 2 (fire debris removal)**. Exposure to these materials may lead to **physical health symptoms** ([American Chemical Society, EST Air, 2025, 2, 13-23](#)) and may pose long-term health impacts.

Fire debris from burned structures can contain a variety of harmful substances, including:

- **Asbestos** from older building materials
- **Heavy metals like lead**
- **Hazardous chemicals** from household products
- **Fine particulate matter** created by the fire

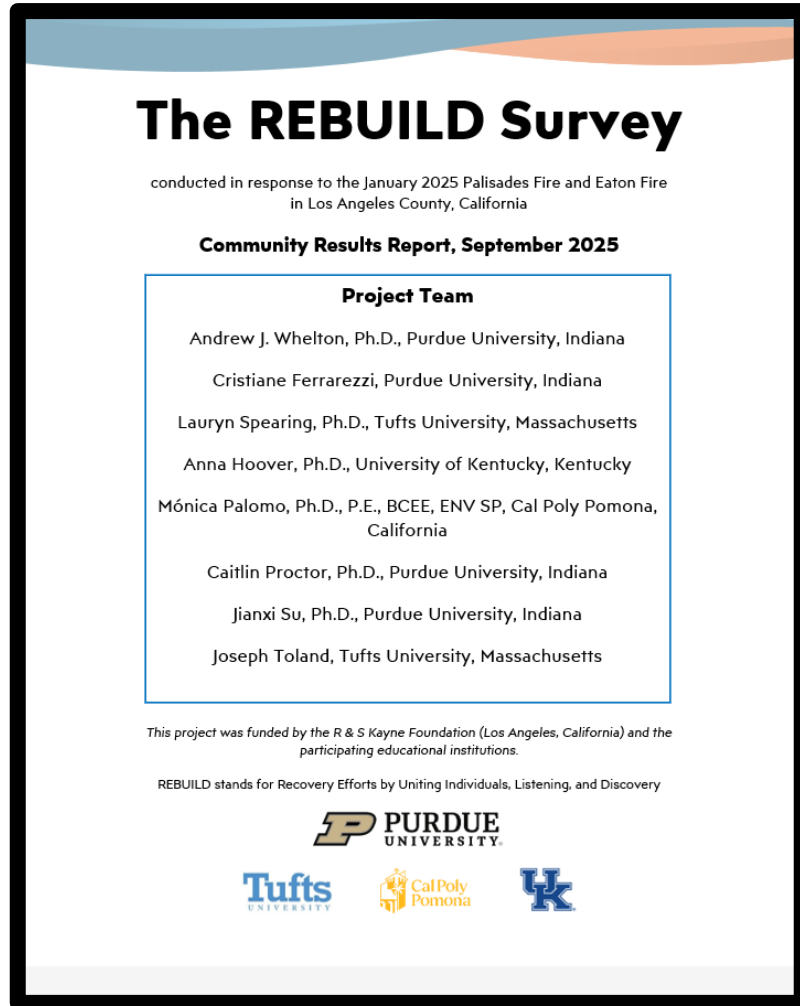


Explicit warning:

- **Asbestos**
- **Heavy metals like lead**
- **Particulate**

Strong winds and weather fluctuations may **increase both the exposure risk and the affected distance**.

Report is freely available
www.PlumbingSafety.org



Some perspective: The REBUILD Household Survey

After the January 2025 Eaton Fire and Palisades Fire, L.A. County, California

Whelton et al (2025).

Access FREE here → <https://docs.lib.purdue.edu/red/2/>

1,229 responses

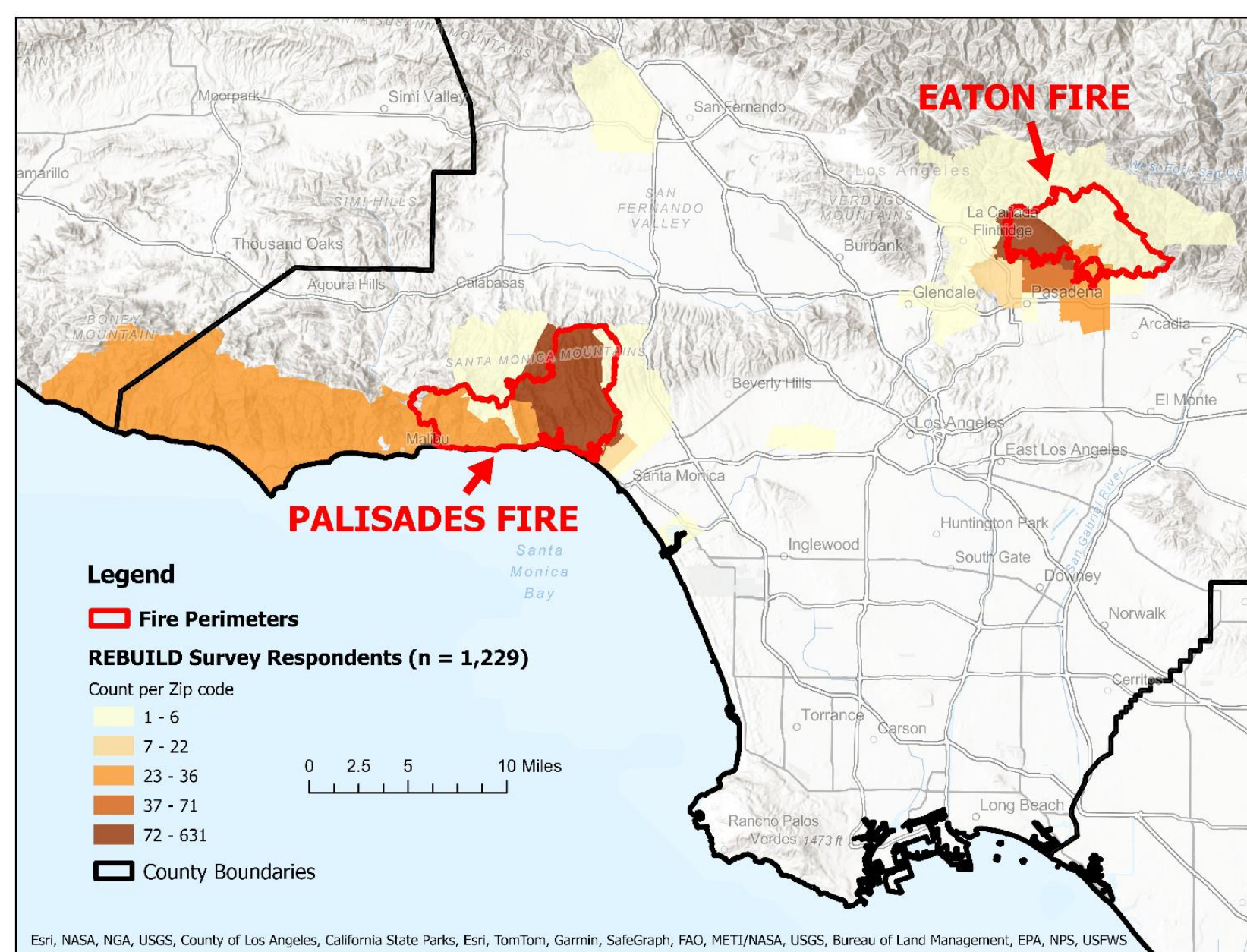
When mapped by
zipcode, **most
households** lived
INSIDE a fire
perimeter:

94.2 %

Palisades Fire
vs. **73.4 %**
Eaton Fire

Nearly all had
insurance

98.8 % Palisades vs.
99.0 % Eaton Fires



Ash and Debris



Rank	Palisades Fire	Eaton Fire
1	On the floor	On the floor
2	Windowsills	Windowsills
3	Other	Attic
4	Garage	Other
5	Attic	Garage
6	HVAC filter	HVAC filter

Combustion byproduct testing (ash, soot, and char) will not determine if lead or asbestos contaminants are present.

Property Testing and Insurance

“ Was environmental testing conducted on your property for fire-related contamination? – The REBUILD Survey n= 1,073 ”

Palisades Fire

44% Yes

39% No, but want it

11% No

6% Not sure

Eaton Fire

36% Yes

49% No, but want it

9% No

6% Not sure

***Policyholders
wanted testing, but
were not getting it***

“ Do you believe your insurance company will provide you enough money to rebuild your home to what it was before the fire? – The REBUILD Survey n= 541 ”

***Policyholders were
financially stressed***

Palisades Fire

20.5%

Eaton Fire

17.8%

Property Remediation

Respondents explained what was done with a variety of their household items

Clothing	Pet bedding or pet crate
Pillows	Children's plastic toys
Mattresses	Electronics
Stuffed animals	Appliances
Window blinds	Fruit from outdoor plants
Carpets	Fruit from indoor plants
Rugs	Other
HVAC filter	

Most common actions:

Discarded pillows, mattresses and fruit

Cleaned clothing, and appliances

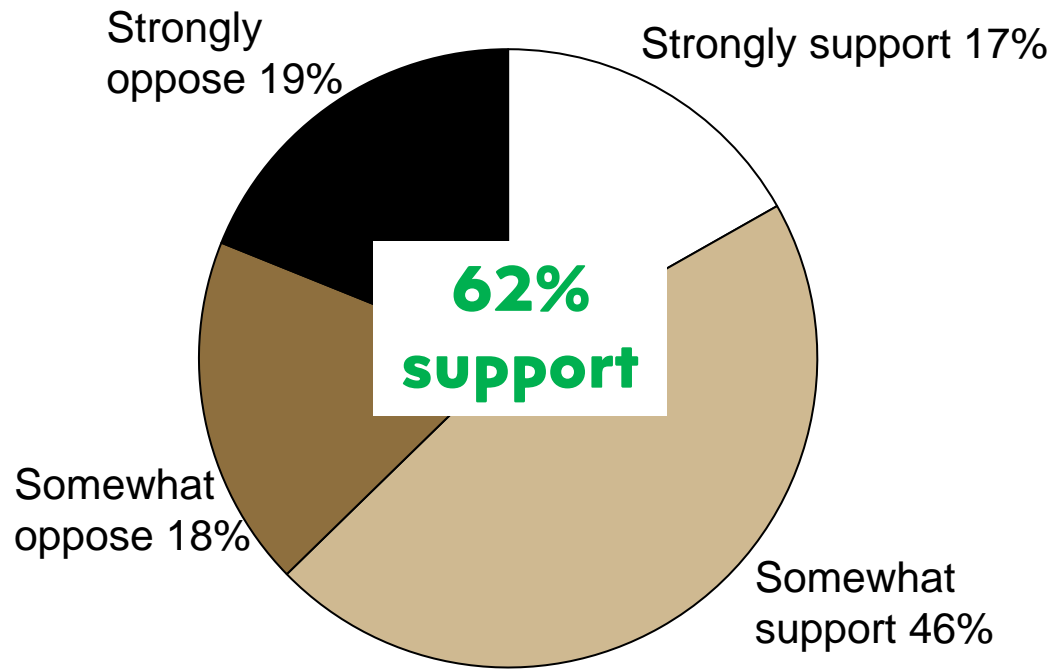
n= 524



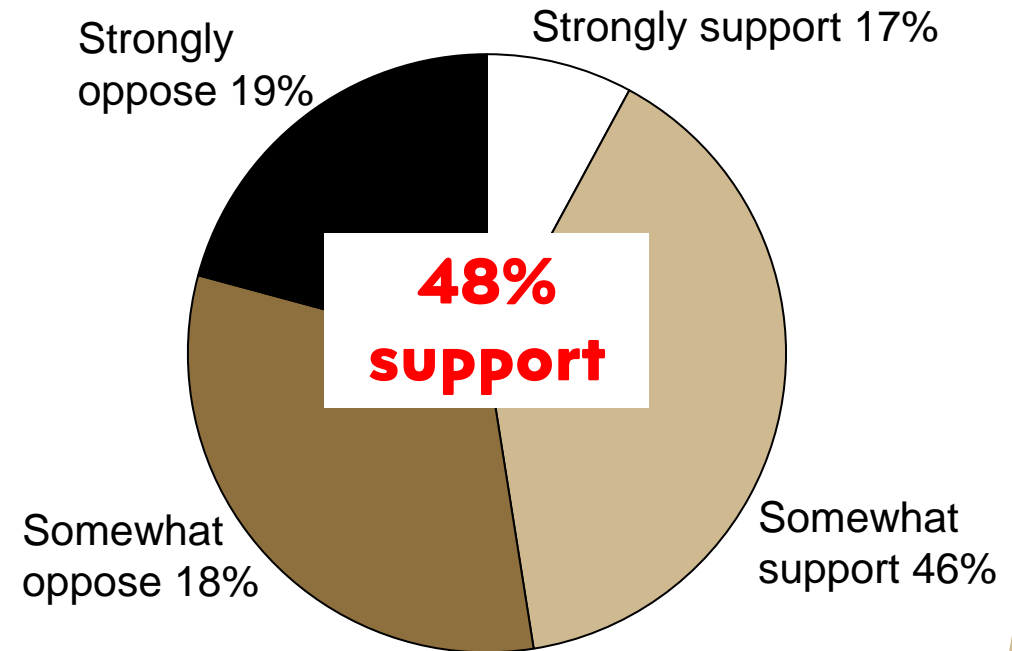
Insurance

“ As the region rebuilds, policy makers should allow insurance companies to increase their rates for fire insurance if this enables them to offer insurance for everyone? – The REBUILD Survey ”

Palisades Fire



Eaton Fire



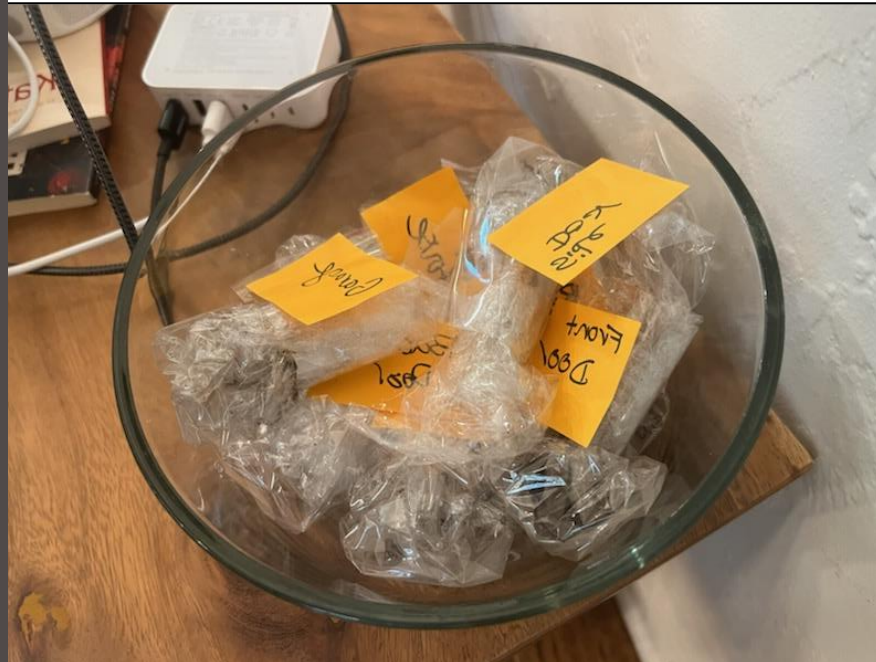
n= 995

Environmental Test Result Study for Households Impacted by the 2025 Eaton Fire and Palisades Fire

Andrew Whelton, Ph.D., Cristiane Ferrarezzi

Created as a direct result of households asking for assistance navigating the complexity of home environmental testing and guidance provided by contractors.

- Households can participate and upload their reports here: **[Home Environmental Test Result Study](#)**.
- Results are being compiled, anonymized, and summarized. We are individually interacting with households about their reports and company experiences.



Preliminary Results: Information provided to households not easily understandable, sampling, testing, and recommendations vary widely

- Dissimilar reporting of metal surface loading: $\mu\text{g}/\text{wipe}$ OR $\mu\text{g}/\text{sqft}$ OR $\mu\text{g}/100\text{cm}^2$
- Indoor wipe samples for lead, no lead detected, but they recommended “remediate”
- Any indoor detection of a metal led to “remediate.” None exceeded an exposure standard.
- Used beryllium (Be) worker safety guideline of “ $0.2 \mu\text{g}/100\text{cm}^2$ – ACGIH”. Infants and members of the public are NOT workers. No Be general standard.
- Company explained results in one lab report, but for another home and lab report just says the property isn’t unsafe
- “Deodorization” recommended but not explained
- Conflict, Pb surface standard: $5 \mu\text{g}/\text{sqft}$ = USEPA vs. $10 \mu\text{g}/\text{sqft}$ = CDPH
- Skip testing of garage, attic, or crawlspace – where contamination sometimes the highest
- Picked 8 specific primary and secondary VOCs claiming to be smoke related. If 1 VOC present, but not another – VOC present is claimed to not be smoke related.
- Recommended all soft goods be discarded or sign liability waiver. Other consultants said soft items should be “cleaned” by policyholder instead..
- Insurance adjusters and consultants not wearing proper PPE or preventing contamination spread when visiting a property

Some insurance adjusters and consultants ...

... recommended policyholders “smell” their impacted items. If no odor, told assume it’s safe.

... not wearing proper PPE or preventing contamination spread when visiting a property.

NEW: Household Recovery Decisions


Helps establish a basic understanding

Developed from our response to the East Palestine chemical disaster and January wildfires.

- Environmental sampling and testing focus.
- Accessible to property owners and officials.
- Includes discoveries from 100s of home environmental testing reports and in 1-on-1 meetings.
- Valuable for inspection, testing and sampling companies as well as insurance companies.

Whelton, Bollens, Ferrarezzi (2025).

Access FREE here → <https://docs.lib.purdue.edu/red/1/>



PURDUE UNIVERSITY

After a Wildfire:

Considerations for Building Environmental Testing

Overview

1. Damage & building contamination
2. What & where are the contaminants?
3. Role of sampling & testing in restoration, damage identification, and remediation
4. Sampling & testing is conducted to understand the damage
5. Who should conduct testing & what is their scope?
6. What should be tested for & where?
7. FAQs
8. Remediation & post-remediation
9. Acknowledgement & additional information

1. Damage and Building Contamination

Wildfires can directly and indirectly make buildings unsafe by introducing physical, chemical, and microbiological pollutants. These pollutants can pose an immediate and long-term **health** and safety risks to building users. Particles, gases, and vapors are often released and created from burning structures, vehicles, and other items. Microorganisms can grow due to the presence of water due to pipe breaks and leaks, fire-fighting activities, local climate, and other conditions. Before entering a fire-impacted building, proper inspection and testing are highly recommended.

Signs of contamination being present can include broken and melted building components and systems, dust, debris, ash, and soot deposits on floors, walls, ceilings, personal items, inside HVAC components, corroded metals, electrical system malfunctions, and discolored interior and exterior walls. Indirect damage indicators can be odors and illness symptoms. Not all damage may be visible (i.e., in wall cavities, attics, drywall, personal items).

Persons impacted by wildfire should seek advice from their health department and competent professionals. The property should not be entered without proper safety equipment and protocols to protect against hazards and spreading contamination to their vehicles, other residences, and other people.

Following A Structural Assessment, A Building Inspection Should Be Conducted and Include:

<ul style="list-style-type: none">• The building exterior• Natural gas system• The garage, attic, crawlspace• The heating ventilation and air conditioning (HVAC) units and associated components• All ceilings, walls, floors, shelves in every room, including hallways and closets• Electrical system including the breaker box, wiring, and electrical components (i.e., switches, outlets).• Personal electronic items (i.e., TV, personal devices, stereo, DVD, VCR, etc.)• Personal items• Plumbing fixtures• Other fixtures (i.e., cabinets, lights, etc.)	<ul style="list-style-type: none">• Furniture (i.e., couches, mattresses, etc.)• Appliances such as microwave, oven, dishwasher, washing machine, dryer, humidifier, etc.• Pools and spas• Fire sprinkler system
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*At a minimum, persons conducting the assessment should wear proper safety **equipment** including a properly fitted respirator (P100+OV/AG elastomeric air purifying respirator with organic vapor and acid gas cartridges), safety goggles (ANSI Z87.1 D5), chemical-resistant gloves, long sleeves, long pants, sturdy shoes, disposable Tyvek suit, and shoe covers to limit exposure and contamination spread. Inspections should be carried out with more than one individual. Conditions may be present where greater levels of protection are necessary.*

Center for Plumbing Safety at Purdue University, West Lafayette, Indiana USA
Date: Sept. 9, 2025; Authors: Whelton, A.J., Bollens, E., Ferrarezzi, C.G. (awhelton@purdue.edu)

1

After the Fire: Considerations for Building Environmental Testing

1. Damage & building contamination
2. What & where are the contaminants?
3. Role of sampling & testing in restoration, damage identification, and remediation
4. Sampling & testing is conducted to understand the damage
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Observations and Impacts as a Result of Current Insurance Practices

Based on our studies and direct interactions with hundreds of residents and property owners, insurance companies are *not* consistently covering:

- Thorough, science-based **environmental testing** of fire-impacted properties
- **Remediation** of non-structural impacts and contamination resulting from the peril of fire
- **Loss of use** for properties not yet repaired to their pre-peril condition

This forces residents and businesses to either: (a) **risk their health and the health of their employees** in returning without appropriate remediation and clearance testing; or (b) **incur significant personal expenses**, often to the point of economic hardship, to restore a property damaged by a peril for which they had purchased insurance coverage.

This impacts vulnerable populations the most. Children, disabled, and elderly persons are most at risk for many of the contaminants of concern, and those of limited financial means are all but forced to return to a property even if it is not fit for normal use.

This may have long-term community consequences. If properties are not remediated, a perception will develop that these communities are unsafe, driving down property values, impacting financial security, and pressuring collateral holders.

Thank You

Questions?

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Presentation to be posted at www.PlumbingSafety.org