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Weathering the Storm: Navigating the Aftermath of Natural Disasters Part 2

In this second of our two articles we consider how to safely clear and restore your home post-disaster while prioritizing your health.

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25 Feb, 2025

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In the aftermath of a natural disaster, the immediate priority often seems to be clearing debris, making repairs, and recovering from losses incurred. It's only natural to wish to return to a sense of normalcy after this kind of trauma, yet while the visible destruction may seem like the biggest challenge, hidden hazards often pose even greater risks. Contaminated floodwaters can introduce bacteria and toxic chemicals into homes, wildfire smoke can settle into walls and fabrics, and structural damage from hurricanes and earthquakes can weaken buildings in ways that aren't always obvious. Without the right precautions, the cleanup process itself can lead to illness, injury and further property damage.

In this guide, the second in our double feature, we focus on the often-overlooked health hazards of home recovery in disaster response and outline practical steps for cleaning up in a way that protects both you and those around you. Time is critical as acting quickly can prevent long-term health complications and reduce the likelihood of future damage. Whether facing flooding, wildfires, hurricanes or earthquakes, understanding how to restore your home safely is just as important as preparing for the disaster. This advice should be taken as guidelines only, we encourage consultation with appropriate professionals or local authorities before embarking on home restoration in the aftermath of a disaster.

Flooding

Flooding can introduce a host of health hazards into your home, including contaminated water, mold and bacteria. Stagnant water often harbors sewage, industrial chemicals and harmful microorganisms, creating an environment ripe for illness and infection. Respiratory issues are common due to rapid mold growth in damp conditions, especially for individuals with allergies or asthma.

Steps to Safely Recover:

- Wear protective gear, including gloves, waterproof boots, and an N95 mask to prevent inhaling mold spores. If you have extensive exposure concerns, consult an environmental health specialist for guidance on personal protection.
- Remove standing water as quickly as possible using pumps and dehumidifiers. If flooding is severe, hire a water damage restoration professional to ensure proper drying and prevent long-term structural issues.
- Safely dispose of water-damaged porous materials, such as carpets, mattresses

and drywall. Regulations for the disposal of items, particularly those contaminated by mold, vary by state, and many areas require them to be taken to designated facilities, often with disposal fees. If you're unsure about the proper process or the materials are heavily contaminated with black mold or other hazardous substances, it's safest to hire a licensed disposal company.

- Clean all hard surfaces with a disinfectant or a bleach solution (one cup of bleach to one gallon of water).
- Monitor air quality and run air purifiers with HEPA filters until the home is safe to inhabit. If your home has a central HVAC system it's important to use a filter with a MERV 13 rating or higher to capture finer particles. If persistent air quality issues arise, consider an indoor air quality assessment by a specialist.

“There’s a general misperception that after the flames go out the hazard has gone away.”

JOSEPH ALLEN, DIRECTOR OF HARVARD HEALTHY BUILDINGS PROGRAM

Wildfires

“There’s a general misperception that after the flames go out the hazard has gone away,” says the director of Harvard Healthy Buildings Program, Joseph Allen. The aftermath of a wildfire often lingers in the form of hazardous air quality, soot-covered surfaces and structural damage. An elevated level of lead in the air is also a cause for concern. Smoke from burning buildings contains a variety of gases and particles from the materials that fuel the fire. These include ozone, carbon monoxide, polycyclic aromatic compounds, nitrogen dioxide and particulate matter – pollutants linked to cancer, and respiratory and cardiovascular illnesses according to the Journal of the American Heart Association.

Steps to Safely Recover:

- Ventilate the home by opening windows and using fans, but only when outdoor air quality is deemed safe. If air quality remains poor, consult an indoor air quality specialist for further assessment.
- Use HEPA air purifiers to remove lingering smoke particles from the air. Those with activated charcoal filters are particularly effective in capturing the gases emitted from fires.
- Vacuum floors and upholstery with a HEPA-filter vacuum to avoid redistributing soot. If smoke damage is extensive, hire a professional fire damage restoration service to ensure a thorough cleanup.
- Wipe down all surfaces with a damp microfiber cloth and clean with mild soap or vinegar to neutralize odors.
- Test the air quality of your home regularly. The EPA’s AirNow tool is useful as a first step but air quality monitors are available for more localized testing.
- Have the soil around your property tested for contamination if significant burning occurred nearby. If heavy metals or hazardous chemicals are detected, seek guidance from environmental remediation experts before replanting or landscaping.

Hurricanes and Storms

Hurricanes and storms can combine flooding, wind damage and power outages, creating complex health risks. Flooded homes may harbor mold, while damaged roofs and walls allow pests and bacteria to enter. Power outages can lead to food spoilage and unsafe drinking water.

Steps to Safely Recover:

- Arrange for qualified professionals to inspect your home for structural damage before entering as injuries are common in the debris removal phase.
- Dispose of spoiled food immediately and sanitize refrigerators and freezers.
- Test tap water for contamination or boil water before use. If unsure, consult a water quality expert or local authorities for guidance.
- Dry out damp areas thoroughly within 24–48 hours to prevent mold growth. If mold is extensive, hire a professional mold remediation specialist to ensure safe removal.
- Repair roof and wall damage to prevent pests and water infiltration. If structural issues are severe, consult a licensed contractor or engineer before making repairs.

Earthquakes

Earthquakes can cause severe structural damage, disrupt utilities and create hazardous living conditions. Beyond the immediate danger of collapsing buildings, they can expose residents to long-term health risks from airborne debris, contaminated water and unstable infrastructure. Power outages, gas leaks and damaged roads can also delay emergency response and access to essential resources.

Steps to Safely Recover:

- Assess structural damage before re-entering your home; look for cracks, exposed wiring and gas leaks. If major damage is visible, consult a structural engineer or building inspector before entering.
- Wear protective gear like masks, gloves and sturdy boots when clearing debris to avoid injuries and inhaling harmful dust. If there is suspected asbestos or hazardous materials, contact remediation experts.
- Ventilate indoor spaces to reduce airborne contaminants and use HEPA air purifiers if possible.
- Test and purify water before drinking, as municipal supplies may be contaminated. If unsure, contact local authorities for water safety guidance.
- Check for gas leaks before turning on appliances, and if you smell gas or suspect a leak, immediately evacuate and call emergency services.

In the wake of a disaster, recovery is about more than just repairing homes, it's about rebuilding lives. The emotional toll can be just as overwhelming as the physical damage, making it essential to seek mental health support and stay connected with community networks. Leaning on others, whether through local resources, support groups, or simply neighbors helping one another, can provide the strength and resilience needed to heal and move forward together.

Feature Image: Nielsen Schuh Architects designed a fire-resistant home in Sonoma County for a couple whose original house was lost to wildfire. Photo courtesy of Ethan Gordon.

FURTHER INFO

[Rebuild By Design](#)

[EPA Flood Cleanup](#)

[FEMA Hurricane Cleanup](#)

[Resources for Emergencies & Natural Disasters](#)

[Tips on Staying Safe in a Wildfire](#)



3 MIN READ

Weathering the Storm: Navigating the Aftermath of Natural Disasters Part 1

The rising tide of environmental crises poses a risk to many regions around the world. This first article in our two-part feature examines the impact that natural disasters have on individuals, homes and communities.

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