



Personal Protective Equipment

## The Biggest Summer Safety Hazards In Natural Disaster Cleanup And How To Mitigate Them

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For many of us, summertime brings to mind trips to the beach, a visit to a theme park or grilling with friends. For those involved in cleaning up after natural disasters, however, the summer also represents a time of increased risk. Tornadoes, wildfires and hurricanes are most common during this season.

In the past decade in the U.S., more than half of all tornadoes occurred in the months of April, May and June.<sup>1</sup> Recent data suggests that tornado activity is increasing in the Southeast and the southern part of the Midwest.<sup>2</sup> The peak month for wildfires is August, when land becomes increasingly dry, hot and susceptible to fires. The seven states with the greatest number of wildfires each year are California, Georgia, Texas, North Carolina, Florida, Arizona and Oklahoma.<sup>3</sup> Hurricane risk peaks toward the tail end of the season, with September being the most active month for hurricanes in the Atlantic region.<sup>4</sup>

At Honeywell, they are committed to the safety of the first responders who help people during and after such natural disasters. Their personal protective equipment (PPE) helps keep cleanup workers safe from a number of health and safety hazards involved in natural disaster cleanup so all of us can experience the joys of summer:

### Electrical Hazards

Downed electrical lines, wires and cables after a natural disaster can cause electrocution, shock or burns. They can also energize nearby metal objects such as ladders, fences or building parts. Water on or near power equipment can cause electric shock or electrocution. Additionally, improperly connected portable generators can cause dangerous feedback in electrical lines that can injure workers in neighboring buildings.

The National Institute for Occupational Safety and Health (*NIOSH*)<sup>5</sup> offers the following guidance when preparing for electrical risks in natural disaster cleanup:

- Do not approach or handle a downed power line unless you are a trained electrician or utility worker.

- Do not enter flooded areas or touch electrical devices in an area where the ground is wet.
- If water has been in a building, turn off the power at the main breaker or pull the main fuse on the service panel.
- Even if water is no longer visible, do not turn the power back on until electrical devices and circuits have been inspected.

Using **PPE** that has been tested to electrical standards and is rated for the level of voltage protection workers need at the cleanup site is vital. This PPE includes:

- Rubber insulating gloves and dielectric overboots or overshoes to help protect against contact with energized objects.
- Leather protector gloves, worn over the rubber gloves, to help prevent abrasions or cuts that could expose the hand to electrical current.
- Arc flash PPE—coats, hard hats, bib overalls, face shields and safety glasses—that help protect workers from electrical explosions.
- Temporary **grounding equipment**, **voltage detectors** and **insulating sticks** to help reduce the risk of injury from electric shocks and help protect equipment from damage.

## Unstable Structures

Entering a damaged structure ravaged by a fire or tornado exposes cleanup workers to a variety of risks, including falling objects. Demolition and cleanup work involving steel cutting and concrete sawing increases the risk of eye injury from flying particles or hot liquid droplets. In these environments, workers need **protection** in the form of full-face visors and hard hats.

## Ash, Soot and Dust

When working in fire-damaged structures, dust and soot can become airborne, so workers need to wear sealed eyewear to help protect their eyes from airborne debris. Anti-fog lenses help preserve vision in the heat and humidity.

Contaminants in the air after a wildfire can be 50 times smaller than a grain of beach sand.<sup>6</sup> As such, cleanup workers must also wear appropriate **respiratory protection**, such as a **disposable respirator** or **half-mask respirator**, to help guard against breathing in these contaminants.

## Carbon Monoxide and Other Gases

Various gasses can accumulate after a wildfire is extinguished, such as carbon monoxide (CO). Since CO has no odor, color or taste, it can accumulate in dangerous concentrations indoors and can stay undetected. According to the National Carbon Monoxide Awareness Association (NCOAA), CO exposure can cause dizziness, fatigue and headache in the short-term, impairing a firefighter's ability to respond to a fast-paced wildfire<sup>7</sup>. In the long-term, CO exposure can lead to heart health concerns and neurological impairments.

Cleanup workers must also stay alert to the possibility of encountering ruptured gas pipes and other flammable and toxic gas discharge after a storm or natural disaster. The following tips<sup>8</sup> can help keep cleanup workers and the general public safe from natural gas risks:

During severe weather, do not turn off a building's natural gas, even if you are evacuated.

If you smell gas, immediately leave the affected area and call 911 from a safe distance.

Never try to find the source of a gas leak using a cell phone or anything that might cause a spark, such as a generator.

If flooding occurs and gas appliances are underwater, do not try to operate them. Contact a qualified service professional to conduct a safety inspection.

If a natural gas meter is damaged or a gas line is exposed, immediately leave the area and call the emergency response number of your energy provider.

Know where the building's natural gas meter is located and ensure it is visible and free of debris. Mechanical equipment used to clean up after a natural disaster may damage the meter if it is hidden.

Natural gas distribution pipelines are mostly underground and can be damaged or tangled by uprooted trees and shifted building foundations. After a storm or other natural disaster, call 811, the U.S. "call-before-you-dig" phone number, to have the location of underground utility lines marked.

A range of technologies, from portable *gas detectors*, *flame detectors* and natural gas alarms, can monitor for gas exposure and save lives.

Across these natural disaster cleanup hazards and more, Honeywell has the personal protective equipment workers need to promote safety in high-risk settings. Check out their range of high-performing and comfortable *PPE options*.

1 – *Weather Underground, April Starts the Most Dangerous Three Months for Tornadoes in the U.S., March 2022.*

2 – *EHS Today, How to Prevent Injuries and Deaths Due to Natural Disasters , June 2022.*

3 – *Rainbow International Restoration, When Is Wildfire Season? 2022.*

4 – *Fox Weather, Where tropical storms and hurricanes typically occur during each month of Atlantic hurricane season, June 2022.*

5 – *NIOSH, Hazard Based Guidelines: Personal Protective Equipment for Workers in Hurricane Flood Response, September 2018.*

6 – *Honeywell, Protecting Employees from Wildfire Smoke Webinar, 2019.*

7 – *NCOAA, Protecting the Protectors from CO in Wildfires, October 2020.*

8 – *Atmos Energy, Severe Weather Safety Tips.*

*Previously Featured on Honeywell's blog.*

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