

Workers lack protections when wildfire smoke makes the air dangerous

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Credit: Unsplash/CC0 Public Domain

Millions of American workers have breathed in dangerous levels of air pollution this year as smoke from Canada's record wildfire season blankets cities across the Northeast.

Now experts are calling on [federal regulators](#) to adopt standards

protecting [outdoor workers](#) from worsening [air quality](#), potentially modeled after the few states that have such standards, including California and Oregon.

Rules could require employers to monitor air pollution and provide protective equipment such as N95 masks on days when air quality levels fall below certain thresholds. But regulations are not common in much of the country, where wildfire smoke and the health damage it wreaks are both relatively new concerns. And even supporters of regulations say states with rules have had some difficulty with implementation.

Cities across the Northeast and Midwest broke longtime records for air pollution last month, prompting a wide range of employer reactions. In Wilkes-Barre, Pennsylvania, the U.S. Postal Service pulled some mail carriers from their routes as conditions worsened. In Minneapolis, [construction workers](#) finished out their shifts even after reporting fatigue and asthma symptoms.

In New York City, William Medina—a delivery worker for Uber and several other apps—donned his own mask and drove his moped through a thick gray haze that made it difficult to breathe. The state labor department had encouraged employers to limit or suspend outdoor work, but compliance was voluntary.

"They alert us when there are storms," Medina said, of the apps he works for. "But there was no notification about the air quality and no preparations for it."

Such incidents will grow more common in a changing climate, labor and workplace safety advocates say. Wildfires are growing larger, and wildfire smoke increasingly clouds a wider swath of U.S. states.

Last year, a report by the National Academy of Sciences concluded that

"too many workers are left unprotected" from wildfire smoke.

"Workplace hazards are becoming suddenly and rapidly more threatening because of the very alarming growth in the climate crisis," David Michaels, the former assistant secretary of labor for the Occupational Safety and Health Administration, said in an interview with Stateline.

"At the mercy' of the outdoors

North American wildfires have grown steadily larger and more intense since at least the 1980s, worsened by drought, early snowmelt, extreme heat and other effects of climate change. For decades, they were seen as a regional problem. But wildfire smoke is increasing in much of the country.

According to a study published this year in the *American Journal of Public Health*, 87% of Americans experienced more days of heavy smoke in 2021 than they did in 2011. The change was starkest east of the Mississippi River, in states including New Jersey, New York, Ohio and Pennsylvania, as well as in Western states including Arizona, California, Colorado and Washington.

The increase poses significant risks to public health, as wildfire smoke contains an unpredictable cocktail of vaporized chemicals and microscopic particles that can enter the bloodstream when inhaled. At low levels, pollution from wildfire smoke can irritate the eyes and respiratory tracts of particularly sensitive people, such as children, older adults and those with preexisting respiratory or cardiovascular conditions. At higher levels, it can prompt heart attacks and damage lung function.

Breathing wildfire smoke also can expose people to assorted microbes

and carcinogens, depending on the materials that burned, said Nellie Brown, an industrial hygienist and the director of Workplace Health and Safety Programs at Cornell University's School of Industrial and Labor Relations. That can pose serious dangers to construction workers, farmhands, first responders and many of the other 11 million Americans whose job requirements put them outside for much or all of their workday, according to 2022 figures from the Bureau of Labor Statistics.

"We sometimes say to people, 'Adjust the hours you're working, don't do outside labor when it's really bad'—but not everybody's job can be addressed like that," Brown said. "When you work outdoors, you're at the mercy of the outdoor environment."

To help employers and workers navigate these growing hazards, the National Institute for Occupational Safety and Health—a division of the U.S. Centers for Disease Control and Prevention—recommends that workplaces monitor local air quality and take steps to limit employees' exposure to wildfire smoke.

Employers can, for instance, reschedule or relocate outdoor work, require more frequent breaks and provide personal protective equipment such as N95 respirators. (Surgical and cloth masks don't screen out the tiny particles in wildfire smoke pollution.)

Those recommendations are advisory, however: Employers do not have to follow them. In fact, there is no specific federal standard to protect outdoor workers from wildfire smoke, said Arden Rowell, a professor at the University of Illinois College of Law who has studied respiratory safety regulations. Only three states—California, Oregon and Washington, which is in the process of finalizing its rules—have developed their own enforceable standards on worker safety and wildfire smoke.

"The guarantee of worker protections that so many of us presume we have seems like it's falling down here," Rowell said. "As we see more fires, we're going to see more risks. Does every single state then need to fill this gap?"

Existing state rules provide one potential model for protecting workers from wildfire smoke. While their specific details differ, California's and Oregon's regulations both generally require employers to train workers on health and safety risks and provide schedule changes, relocations or other interventions to reduce exposure on days when air quality is low.

In jobs where employees cannot be rescheduled or moved indoors, state rules mandate that employers provide high-quality masks, such as N95 respirators—and then, at higher pollution levels, require employees to wear them.

Debates over enforcement, risk

Like all worker protections, these rules aren't foolproof: Both labor and business groups have criticized aspects of their implementation. Neither California nor Oregon requires employers to offer more paid breaks on smoky days, a provision unions had requested, said Marcy Goldstein-Gelb, the co-executive director of the National Council for Occupational Safety and Health, which advocates for workers' rights.

Labor advocates in California also have faulted the state for relying on workers to report violations, arguing that many Californians—particularly people who don't speak English—will hesitate to complain out of fear of retaliation.

Setting the exact thresholds for employer action also has challenged state regulators. California requires that employers offer respirators when pollution reaches "unhealthy" levels on the U.S. Environmental

Protection Agency's Air Quality Index, for instance. Oregon's rule, and Washington's proposed rule, both kick in at a lower level: "unhealthy for sensitive groups."

A spokesperson for Washington's Department of Labor & Industries said the state chose that threshold based on guidance from the World Health Organization and state Department of Health, following the January announcement that the EPA would soon lower its own thresholds.

But adopting the lower standard forces businesses to spend money on masks for workers who don't need them, said Jan Himebaugh, the managing director of external affairs at the Building Industry Association of Washington, which has asked the state to adopt a higher standard. It also risks alienating the employees the rule is meant to protect, said Adam Airoidi, who supervises the arboriculture program for Washington's State Parks and Recreation Commission.

Airoidi's division already provides wildfire smoke training and N95 masks to its arborists, who maintain the trees and shrubs in Washington's public parks. But mask use is not necessarily widespread. Many workers are accustomed to working in air quality conditions that are "unhealthy for sensitive groups," particularly east of the Cascade Mountains, he said.

"There's this issue of perceived risk," Airoidi said. "I want the people who work for me to be safe and do their job well. But if regulations are put in place that they feel aren't necessary, then they're not going to follow them."

Some experts argue these types of debates underscore the need for further action by the Occupational Safety and Health Administration, or OSHA—the federal agency charged with regulating and enforcing workplace safety. Most states defer to OSHA rules, though 22 states and

territories operate separate health and safety plans that can be stricter or wider-reaching than OSHA's.

In 2022, the National Academy of Sciences recommended that OSHA create a new workplace exposure standard for particulate matter, including that commonly found in wildfire smoke, and mandate that employers take precautions, such as providing high-quality masks, at certain pollution levels.

But such a standard would take years to complete, said Goldstein-Gelb, of the National Council for Occupational Safety and Health, thanks to chronic understaffing at the agency and a lengthy rulemaking process. OSHA has yet to release a number of standards that have been in the works for several years, including rules on extreme heat, infectious disease and workplace violence.

OSHA has not included a standard for ambient air quality on its current regulatory agenda, a spokesperson for the agency told Stateline by email.

"The likelihood of the federal government creating a wildfire smoke protection standard is not only low—it would take four to seven years at the minimum," said Goldstein-Gelb, who recommends that workers advocate for safety measures in their own workplaces. "We can't wait that long for action."

Importantly, even if OSHA did adopt wildfire smoke protections more quickly—via an emergency temporary standard, for instance—they would still not cover millions of outdoor workers. By statute, OSHA rules do not extend to many public-sector, small-farm or gig-economy workers, including Medina, the New York City delivery [worker](#).

As air quality conditions deteriorated last month, Medina stopped his moped on a busy bridge mid-delivery to take pictures of the smoke. A

leader in the labor group Los Deliveristas Unidos, which advocates for delivery workers' rights in New York, Medina said he wanted to document the conditions that many gig workers face without the benefit of a minimum salary, insurance or basic health protections.

When he finished riding for the day, he and a colleague headed back outdoors to distribute masks to other delivery workers.

"Individual people are being required to make decisions about very complex risks," said Rowell, the University of Illinois law professor. "And they're making those decisions without the support, research and expertise they might usually hope to get from the federal government."

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