

How Construction Industry Can Help Mitigate Wildfire Impact

By **Josephine Bahn and Jeffery Mullen** (July 21, 2023)

An uptick in wildfires across North America remains an ongoing challenge for construction contractors coast to coast.

At least two separate incidents in the last several months are driving the conversation about harmful impacts on job sites and to individual contractors nationwide. The number of destructive fires involving millions of acres of land — leading to poor air quality hundreds, even thousands, of miles away — has resulted in renewed calls for job site changes and management of the sites by all project participants.



Josephine Bahn

Wildfire Ignition Materials in Job Sites

Project sites are often characterized by flammable materials, dry conditions and ample spark opportunities for fires. As a result, the location of a job site is an important factor in understanding the underlying risks a project owner has for potential damage from a fire and the steps to mitigate those risks.

Wood frame construction, welding, other hot work or running a generator for a project site could lead to a spark that finds its way onto dry vegetation igniting a wildfire. In mere minutes, an entire project site could be engulfed in flames.



Jeffery Mullen

Air Quality Concerns for Contractors

Compounding the increased risks inherent in construction activities on job sites, the implications of poor air quality and additional requirements for projects are now at the forefront.

Wildfires on the West Coast often claim hundreds of acres of land and countless construction projects in their wake. Videos and images of wildfires always make the evening news, but often overlooked is the range of smoke impacting communities and ongoing construction projects hundreds of miles away.

The recent Canadian wildfires affecting the East Coast of the U.S. have highlighted air quality concerns and created additional requirements for construction contractors hoping to maintain current project schedules on days when the air quality is abysmal and visibility is worse.

Over the last several months, the East Coast has experienced some of the worst air quality in the world.[1] The uptick in wildfires in Canada and on the West Coast of the U.S. continues to become more prevalent and forecasters assert the wildfires will continue in the future.[2]

So, even though schools across the country cancel outdoor recess because of poor air quality, owners and trades of all tiers need a plan for maintaining performance and project schedules in light of air quality degradation.

The Harmful Makeup of Wildfires

Wildfire smoke contains gaseous pollutants, water vapor, hazardous air pollutants and particle pollution. According to the [U.S. Environmental Protection Agency](#), particle pollution is the main component of wildfire smoke and the biggest public health threat.[3]

The wildfires leave the air thick with smoke and tiny particulate matter 2.5, or PM2.5. These particles are known to affect the lungs and heart — leading to possible serious health effects.

While East Coast construction contractors might be experiencing wildfires and air quality issues for the first time, they can look to their West Coast counterparts to assist in minimizing legal liability.

Wildfire Air Quality Weather-Related Harm

The presence of PM2.5 at an Air Quality Index level over 150 universally is deemed unhealthy.[4] Exposure at any level, but especially prolonged exposure can cause or exacerbate heart and lung issues like coughing, wheezing, bronchitis and heart failure.

Individuals with asthma, COPD or heart disease, or who are pregnant must take special care to avoid serious injury.[5] Construction contractors are required to provide a certain level of abatement of this hazard to mitigate some of the risks.

OSHA Required Mitigation

The Occupational Safety Hazard Administration requires that all employers provide a place of employment free from recognized hazards that cause or are likely to cause harm to its employees.

Under OSHA's general duty clause, employers can be cited if "a recognized serious hazard exists in their workplace and the employer does not take reasonable steps to prevent or abate the hazard." [6] Under the general duty clause, four elements must be met for an event to be considered a violation:

- The employer failed to keep the workplace free of a hazard to which employees of that employer were exposed;
- The hazard was recognized;
- The hazard was causing or was likely to cause death or serious physical harm; and
- There was a feasible and useful method to correct the hazard.[7]

Construction contractors should consider some of the following remedial options developed

by the [California Department of Industrial Relations](#) to mitigate some of the hazardous exposure its individual employees encounter as a result of wildfires:

- Implement engineering controls, when feasible, to reduce employee exposure to PM2.5 to less than a current AQI of 151, or to the extent feasible if less than a current AQI of 151 cannot be achieved. Examples include providing enclosed structures or vehicles for employees to work in where the air is filtered.
- Whenever engineering controls are not feasible or do not reduce employee exposures to PM2.5 to less than a current AQI of 151, implement changes to work procedures or schedules when practicable. Examples include changing the location where employees work or their work schedules.
- Provide proper respiratory protection equipment, such as disposable filtering facepiece respirators, other half facepiece respirators or full facepiece respirators.[8]

Contractors should also prioritize providing accommodations for particularly sensitive individuals or those who have underlying conditions who are at higher risk from exposure to compromised air quality.

Job Site Wildfire Mitigation

In addition to mitigating the risk associated with air pollutants, contractors can reduce the risk of wildfire outbreaks on job sites, too. Contractors can select flame retardant products over flammable building materials where possible.

In many instances — especially with wood framing — that's not possible. To prevent highly flammable items like loose lumber from sparking a wildfire, contractors can utilize metal containers or other flame retardant corrugated boxes.

In addition, contractors should enforce no smoking policies, limit or restrict the use of space heaters or unnecessary or excess use of generators, and ensure that job sites are clear of discarded trash. Planning for disposal of unwanted materials also will help mitigate unnecessary flammable objects on a job site.

Impact of Weather-Induced Delay and Force Majeure Clause

Another form of relief or exposure that comes into play for owners and contractors alike could be the force majeure clauses in their construction contracts.

Delays or impacts caused by the inability to work or lowered productivity resulting from poor air quality may be considered a force majeure event. The individual contract or subcontract will dictate the scope of a force majeure event, as well as any conditions, notice requirements and the potential relief options available.

Determining how force majeure applies to a situation is a factually intensive endeavor, which will vary by jurisdiction, situation and the contractual language. For example,

sometimes force majeure clauses require a minimum extent of harm, which may not be achieved by one or two days, or a week of wildfire-related delays.

Closing Construction Comments

An uptick in wildfires across North America will be an ongoing challenge for construction contractors coast to coast. Individual contractors are grappling with the harmful impacts on job sites and to individual contractors nationwide.

As air hazards continue to occur, contractors will be required to provide additional protection to reduce their employees' exposure. Beyond increased requirements for job sites, contractors' further expanded focus will need to encompass more job site safety measures in new areas.

Josephine M. Bahn is an associate at [Cozen O'Connor](#).

Jeffery R. Mullen is a member at the firm.

The opinions expressed are those of the author(s) and do not necessarily reflect the views of their employer, its clients, or Portfolio Media Inc., or any of its or their respective affiliates. This article is for general information purposes and is not intended to be and should not be taken as legal advice.

[1] <https://www.cnn.com/2023/06/27/us/canada-wildfire-smoke-great-lakes/index.html>.

[2] <https://www.noaa.gov/noaa-wildfire/wildfire-climate-connection>.

[3] <https://www.epa.gov/wildfire-smoke-course/why-wildfire-smoke-health-concern>.

[4] <https://www.airnow.gov/aqi/aqi-basics/>.

[5] <https://www.epa.gov/pmcourse/patient-exposure-and-air-quality-index>.

[6] <https://www.osha.gov/laws-regs/standardinterpretations/2003-12-18-1#:~:text=Employers%20can%20be%20cited%20for,applies%20to%20the%20particular%20hazard>.

[7] Id.

[8] <https://www.dir.ca.gov/dosh/wildfire/Worker-Protection-from-Wildfire-Smoke.html>.