



Protecting Your Employees from Wildfire Smoke

Focus on Exposure Control, Communication and Training

Wildfire smoke can pose serious occupational health risks. Employers need to keep their workers safe.

Particle pollution is a principal health threat from short- and long-term exposure to wildfire smoke. However, wildfire smoke is a complex mixture that includes other pollutants shown to lead to a variety of health effects. These range from relatively minor (e.g., eye and respiratory tract irritation) to more serious health impacts (e.g., exacerbation of asthma and heart failure, and premature death).

Health Effects Attributed to Wildfire Smoke Exposure

SHORT-TERM EXPOSURES (i.e., over a few days)

Irritation of the eyes and respiratory tract

Respiratory symptoms

- Coughing
- Phlegm
- Wheezing
- Difficulty breathing

Respiratory effects

- Bronchitis
- Reduced lung function
- Increased risk of asthma exacerbation and aggravation of other lung diseases
- Increased risk of emergency room visits and hospital admissions

Cardiovascular effects

- Heart failure
- Heart attack
- Stroke
- Increased risk of emergency room visits and hospital admissions

Increased risk of premature death

CUMULATIVE SHORT-TERM EXPOSURES

(i.e., over multiple days up to a few weeks)

Reduction in lung function*

LONG-TERM EXPOSURES

— **

The Air Quality Index (AQI) is a nationally uniform color-coded index developed by the EPA for reporting and forecasting daily air quality. The AQI reports the most common ambient air pollutants regulated by the Clean Air Act, including ozone and particle pollution. The AQI informs the public about air quality in the area, tells who may be affected, and provides steps to reduce exposure when pollution levels are unhealthy. The AQI is divided into six categories corresponding to different levels of health concern. The category breakpoints are based on a review of health effects' evidence. Each category has a specific color that makes it easy for people to know when air quality is reaching unhealthy levels in their communities.

AIR QUALITY INDEX: CATEGORY / COLOR / VALUE

DESCRIPTION
Good / Green / 0 to 50 Air quality is satisfactory, and air pollution poses little or no risk.
Moderate / Yellow / 51 to 100 Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups / Orange / 101 to 150 Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Unhealthy / Red / 151 to 200 Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy / Purple / 201 to 300 Health alert: The risk of health effects is increased for everyone.
Hazardous / Maroon / 301 and Higher Health warning of emergency conditions: everyone is more likely to be affected.

Source: Environmental Protection Agency

*Information only available from a study of wildland firefighters.

**Studies have not evaluated the health effects attributed to wildfire smoke exposure over multiple seasons.

Source: Environmental Protection Agency

Continued on next page.



What Employers Can Do to Keep Workers Safe

Focus on these key areas:

Exposure Control

Check the AQI level at the start of each shift and periodically thereafter. Various government agencies monitor the air. To obtain data closest to your business, go to the EPA page, www.airnow.gov, which also provides other methods to obtain AQI data.

Consider the following steps:

Whenever feasible, employ engineering controls, such as providing enclosed buildings, structures, or vehicles where the air is filtered to reduce exposure.

- If engineering controls are insufficient, implement administrative controls (e.g., relocating work to a healthier location, changing work schedules, reducing work intensity, or providing additional rest periods).
- Provide National Institute for Occupational Safety and Health-approved respirators, such as N95 respirators. Use these respirators rather than dust masks, bandanas, scarves, etc.

- As air quality worsens, mandate the use of respirators for all employees.

Communication with Employees

- Establish and implement a system to inform employees about the wildfire smoke hazards in a language and manner understandable by all employees. Include information on the current and protective measures available.
- Encourage employees to inform their employer if the air quality worsens or if they experience any adverse respiratory symptoms from wildfire smoke.

Training

- Provide training on specific wildfire smoke hazards, including its health effects, the right to obtain medical treatment without fear of reprisal, and how to obtain the current AQI.

Wildfire smoke poses a serious occupational health risk. Act now to protect your employees.

RESOURCES

[Outdoor Workers Exposed to Wildfire Smoke](#)

[Wildfire Smoke and Your Patients' Health](#)

[Fire and Smoke Map](#)

If you have any questions or would like additional information, please contact your local PMA Risk Control Consultant or reach out to us at heretohelp@pmagroup.com.

PMACOMPANIES.COM

IMPORTANT NOTICE

The information and suggestions presented by PMA Companies in this risk control technical bulletin are for your consideration in your loss prevention efforts. They are not intended to be complete or definitive in identifying all hazards associated with your business, preventing workplace accidents, or complying with any safety related or other laws or regulations. You are encouraged to alter the information and suggestions to fit the specific hazards of your business and to have your legal counsel review all your plans and company policies. PMA Companies and Old Republic Companies do not provide legal advice and the information and suggestions in this bulletin should not be construed as such.

PMA COMPANIES (PMA) is a trusted leader and recognized expert in commercial risk management insurance solutions and services. PMA specializes in workers' compensation, commercial auto, general liability, and commercial package & umbrella coverages as well as offering claims administration and risk management services through PMA Management Corp., its wholly owned TPA. PMA's issuing insurance companies are Pennsylvania Manufacturers' Association Insurance Company, Manufacturers Alliance Insurance Company, and Pennsylvania Manufacturers Indemnity Company. PMA is part of Old Republic International, a Fortune 500 company (NYSE: ORI). ORIG.COM