

Protecting workers from wildfire smoke exposure: best practices



Note: This guide is intended for indoor and outdoor workplaces that may experience exposure to wildfire smoke through wind and weather patterns. This guide does not cover the hazards that fire fighters and other personnel are exposed to when working at or near active wildland fires.

Wildfire smoke contains many hazardous chemicals. It can affect the lungs, worsening conditions like asthma, chronic obstructive pulmonary disease (COPD), bronchitis and pneumonia. Wildfire smoke can also affect the heart, and increase the risk of heart attack. This fact sheet provides some best practices employers can use to protect their workers from the effects of wildfire smoke. These recommendations are encouraged for the safety of both indoor and outdoor workers.

Know the air quality level

Visit the Washington Smoke Blog www.wasmoke.blogspot.com for smoke forecasts and wildfire information. The Smoke Blog has a map showing the Environmental Protection Agency's (EPA) PM2.5 Air Quality Index (AQI) and has a link to the more protective Washington Air Quality Advisory: www.ecology.wa.gov/waqa. **The Washington State Department of Labor & Industries does not enforce the EPA Air Quality Index (AQI) nor the Washington Air Quality Advisory (WAQA) as a regulatory standard.** These air quality indexes are information tools that indicate when outdoor air quality is good, moderate, unhealthy, very unhealthy, or hazardous and signal when healthy workers may begin to experience health effects.

Workers at risk

Not everyone exposed to smoke will be affected in the same way. Factors such as the amount of smoke, duration of exposure, and level of physical exertion will influence how workers feel on-the-job. Additionally, consider the following groups and conditions:

- Workers with current heart or lung disease
- Workers 65 or older
- Remote or lone workers
- Hazardous work, such as working at height or operating heavy machinery may be harder to complete safely if workers have respiratory and heat symptoms or reduced visibility.

Protecting outdoor workers

When outdoor air quality is unhealthy, a basic approach to minimize the health risks is to reduce contact time with wildfire smoke. Workers may also be affected by high temperatures, and some workers may be more susceptible than others to poor air quality. These recommendations are not mandatory, but to the extent practical, consider these best practices:

- Relocate work to less smoky areas
- Reschedule work until air quality improves
- Reduce the level or duration of physical exertion
- Where feasible, provide enclosed structures for employees to work in, where the air is filtered
- Where feasible, provide enclosed vehicles. During times of poor air quality, operate the air conditioning in "recirculate" mode and keep vents and windows closed.



Protecting indoor workers

Windborne wildfire smoke can be a hazard for workers in office and other commercial buildings. The following steps can improve indoor air quality. These recommendations are not mandatory, but to the extent practical, consider these best practices:

- Ensure the heating, ventilating, and air conditioning (HVAC) system is working properly, and that air filters are clean and properly seated.
- Work with an HVAC technician to determine the highest filtration rating your HVAC system will support and use the highest rating possible when smoke is present. Filters with high filtration ratings require more frequent change-outs, but these steps can improve indoor air quality.
- Consult with a qualified HVAC technician or ventilation engineer before reducing building air intake to ensure air pressure remains slightly positive. If the air pressure becomes negative compared to the outdoors, pollution will infiltrate the building through the exhaust system and other openings.
- Portable high efficiency HEPA air cleaners can improve air quality in small, defined spaces by removing fine particulates. Do not use ozone generators, personal air purifiers or electrostatic precipitators and ionizers that produce ozone.

Respirators

When chosen and worn correctly, respirators can reduce exposure to wildfire smoke. One common type of respirator suitable for protection against wildfire smoke is an N95 filtering facepiece mask.

Learn more about respiratory protection from wildfire smoke with L&I's Wildfire Smoke and Dust Masks at Work: www.Lni.wa.gov/Safety/Topics/AToZ/WildlandFireFighting/WildfireSmokeSafety.

What to do if a worker becomes ill due to wildfire smoke exposure

Workers who believe their health has been impacted by wildfire smoke should undergo a medical evaluation. Workers should go to the emergency room or health-care provider of their choice, and explain they were exposed to wildfire smoke at work. The health-care provider may help them file a claim. For more information see the L&I publication, *What to do if a worker becomes ill due to wildfire smoke exposure* (F101-191-000).

Workers' rights

Workers entitled to Washington State's paid sick leave protections may be entitled to use accrued paid sick leave to care for themselves or a family member whose health has been affected from exposure to wildfire smoke and/or high temperatures. Additionally, workers may use accrued paid sick leave if their child's school or place of care, or the employer's business or worksite has been shut down by a public official due to health-related reasons resulting from exposure to wildfire smoke and/or high temperatures. For more information about WA State's Paid Sick leave protections, see the following link: www.Lni.wa.gov/WorkplaceRights/LeaveBenefits/VacaySick/PaidSickLeave.asp.

Workers can file safety, wage, hour, and leave complaints at www.Lni.wa.gov/Safety/TrainingPrevention/Help/ReportHazards, contacting any L&I office, or by calling 1-800-4BESAFE, 1-800-423-7233.

Regulatory requirements

The Washington State Department of Labor & Industries has no occupational safety and health rules specific to wildfire smoke exposure. Wildfire smoke exposure should be regarded in a manner similar to other general workplace hazards. Safety and health rules that may apply during wildfire events include:

- Outdoor Heat Exposure (Heat Stress): www.Lni.wa.gov/Safety/Topics/AToZ/HeatStress/Rules.asp
- Safety Standards for Fire Fighters: www.Lni.wa.gov/Safety/Rules/Chapter/305

For more information about the health effects of wildfire smoke, symptoms of exposure, at-risk workers and how to determine air quality please visit our online resource at: www.Lni.wa.gov/Safety/Topics/AToZ/WildlandFireFighting/WildfireSmokeSafety.