

## Respiratory Protection for Wildfire Smoke Inhalation - Washington State

The Washington Department of Labor & Industries (L&I) filed [proposed draft language](#) for permanent wildfire smoke rules on May 10, 2023. The purpose of the proposed rules is to protect the health of workers who are exposed to wildfire smoke while on the job. Previously, L&I had adopted an emergency rule called WAC 296-62-085, which expired on September 29, 2022. While it is no longer in effect, employers can choose to voluntarily follow safety measures outlined in this expired emergency rule to help protect workers from wildfire smoke.

The expired emergency rule required employers to provide respiratory protection to employees for voluntary use who are exposed to wildfire smoke where the Air Quality Index is at or above 151. The rule did not apply to short term exposures of one hour or less during a single shift.

### Where can I find AQI information?

The United States AirNow system contains current AQI data, which includes a clickable map for area-specific AQIs. The U.S. Forest Service AirFire website (<http://tools.airfire.org/>) is another tool that can be used as a resource. Local resources such as the Washington State Department of Ecology website, local air pollution control district websites, or local air quality management district websites, may also be helpful. A direct-reading particulate monitor may also be used to determine the amount of particulate matter in the air at a given moment.

### What does it mean for you?

#### When the AQI is at or above 69, but below 151:

According to the expired emergency rule, employers are encouraged to implement exposure controls and to provide National Institute for Occupational Safety and Health (NIOSH) approved respirators for employees for voluntary use, such as N95 Respirators. [WAC 296-62-085](#) states: “Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM<sub>2.5</sub>, such as N95 filtering facepiece respirators.” Employees may also request to wear their own respiratory protection. Employers are required to provide training that covers the information in Appendix B in WAC 296-62-085.

#### When the AQI reaches levels of 151 or greater:

Employers must have an adequate supply of NIOSH-approved respirators available to exposed workers for voluntary use. [WAC 292-62-085](#) states: “Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM<sub>2.5</sub>, such as N95 filtering facepiece respirators.” Employers also need to provide training as specified in Appendix B of WAC 296-62-085. If feasible, employers should provide engineering and administrative controls. Wildfire smoke must be included in the written Accident Prevention Program (WAC 296-62-08590 Appendix B).

#### What is PM<sub>2.5</sub>?

PM<sub>2.5</sub> means particulate matter measuring 2.5 microns or less across. A micron is a very small unit of measure—one millionth of a meter.

- These particles are so small that they cannot be seen by the human eye.
- Particles this small can be easily inhaled and travel deep into the respiratory tract and have been associated with a variety of short-term and long-term health conditions.

Source: [United States Environmental Protection Agency](#)

#### AQI Categories for PM<sub>2.5</sub>

Air Quality Index	Level of Health Concern
0 to 50	Good
51 to 100	Moderate
101 to 150	Unhealthy for Sensitive Groups
151 to 200	Unhealthy
201 to 300	Very Unhealthy
301 to 500	Hazardous

Source: <https://www.airnow.gov/aqi/aqi-basics/>

#### AQI at or above 69, but below 151:

Employers are encouraged to provide NIOSH approved respirators for voluntary use.

#### AQI greater than or equal to 151:

Employers must provide NIOSH approved respirators for voluntary use.

<sup>1</sup> Respirators help protect against certain airborne contaminants. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. Follow all local regulations. In the U.S., a written respiratory protection program must be implemented meeting all the requirements of OSHA 29 CFR 1910.134 including training, fit testing, and medical evaluation. Misuse may result in sickness or death. For correct use, consult supervisor and User Instructions, or call 3M Personal Safety Division Technical Service at 1-800-243-4630.

# Respiratory Protection for Wildfire Smoke Inhalation

## Why is this important? What risks are associated with inhaling wildfire smoke?

Although there can be many hazardous chemicals and other constituents in wildfire smoke, one of the most significant pollutants for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air. Those particles can be carried by wind and air currents to thousands of miles away from the fire itself, impacting people living in other states and even other countries. According to the [United States Environmental Protection Agency](#), PM<sub>2.5</sub> can be easily, and often unknowingly, inhaled and due to the small particle size, it can travel deep into the respiratory tract, potentially irritating the lungs and being accompanied by persistent coughing, wheezing, or difficulty breathing. These small particles can also enter the bloodstream from the lungs and have been associated with more serious long-term health problems such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.

## What about employees in states other than Washington?

Although this guidance applies to Washington, employers in other states may choose to use the expired emergency rule as a “best practice and decide to help protect their employees similarly. Employers should follow the United States Occupational Safety and Health Administration (OSHA) [Respiratory Protection Standard 29 CFR 1910.134](#), or the Respiratory Protection standard in their state.

## How 3M can help?

3M provides a variety of NIOSH-approved N95 filtering facepieces that can be used to help protect workers from airborne particulate matter.



**3M™ Aura™ Particulate Respirator 9205+**

Three-panel, flat-fold disposable respirator designed to help provide comfortable, reliable worker protection against non-oil based particles.

3M ID 7100232940  
UPC 638060430613



**3M™ Particulate Respirator 8200**

Designed to help provide reliable worker respiratory protection against certain non oil based particles.

3M ID 7000052787  
UPC 50051131070238



**3M™ Particulate Respirator 8577**

Helps provide respiratory protection against certain oil and non oil based particles.

3M ID 7000002062  
UPC 50051138543711



**3M™ Particulate Respirator 8511**

Premium protection with comfort and protection combined. Manufactured with 3M™ Cool Flow™ Exhalation Valve to help reduce heat buildup inside the respirator.

3M ID 7000002056  
UPC 50051138543438

## Other 3M Resources

### Center for Respiratory Protection Program

If you are implementing a respiratory protection program for the first time, or would like more information on programs, consider visiting [3M's Center for Respiratory Protection](#) for a step-by-step guide.

### Medical Evaluations

The [3M™ Online Respirator Medical Evaluation](#) provides immediate medical evaluation of respirator wearers for compliance with OSHA's Respiratory Protection Standard 29 CFR 1910.134. It can be used for all brands of respirators and is available in English and Spanish.

### Fit Testing

3M™ Qualitative Fit Test kits are designed to help your organization meet respirator fit testing requirements. The kits can be used to check face-to-respirator seal on any particulate respirator or gas/vapor respirator with a particulate prefilter. A free instructional video on [Qualitative Fit Testing](#) using saccharin and Bitrex™ can be found on our [YouTube channel](#).

#### 3M™ Qualitative Fit Test Apparatus, Sweet FT-10

Uses a test solution of sodium saccharin that produces a sweet-tasting aerosol.

3M ID 70-0701-2151-5  
UPC 00051138163587

#### 3M™ Qualitative Fit Test Apparatus, Bitter FT-30

Uses a test solution of denatonium benzoate to produce a very bitter taste.

3M ID 70-0707-0964-0  
UPC 00051138542030

For more information, please consult the [3M Personal Safety Division's wildfire resource webpage](#).