# Wildfire Smoke Plan

[WAC 296-62-085](https://www.lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-62.pdf#WAC_296_62_085)

<<COMPANYNAME>> employees’ who are expected to be exposed to wildfire smoke on the job are required by Washington Administrative Code [(WAC) 296-62-085](https://www.lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-62.pdf#WAC_296_62_085) to include wildfire smoke protection in their written accident prevention program.

The following workplaces and operations are **exempt** from this rule:

* Enclosed buildings or structures in which the employer ensures that windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to enter and exit.
* Enclosed vehicles in which the air is filtered by a cabin air filter and the employee ensures that windows, doors, and other openings are kept closed except when it is necessary to open doors to enter or exit.
* Employees exposed to a concentration of PM2.5 of 20.5 μg/m3 (Washington Air Quality Advisory [WAQA] 101, Air Quality Index [AQI] 69) **or more for a total of one hour or less during a shift.**

## Identification of Harmful Exposures

<<COMPANYNAME>> will determine employee exposure to PM2.5 for worksites covered by this section before each shift and periodically thereafter, as needed to protect the health of the employee, by one of the following methods to indicate employee exposure to PM2.5):

We will use any of the following resources as a guide:

* Washington Air Quality Advisory (101 or higher) – web/mobile app
* Washington Smoke Information – web
* U.S. Environmental Protection Agency (EPA) AirNow – web/mobile app
* U.S. Forest Service AirFire – web
* EPA EnviroFlash.info

EXCEPTION: The employer does not have to determine employee exposure as required by this subsection if the employer assumes the NowCast PM2.5 is more than 55.5 μg/m3 (WAQA 173, AQI 151) and uses that assumption to comply with the requirements in WAC 296-62-085.

## Hazard Communication

<<COMPANYNAME>> will set up and implement a system for communicating wildfire smoke hazards in a form readily understandable by all affected employees, including provisions designed to encourage employees to inform the employer of wildfire smoke hazards at the worksite without fear of reprisal.

## Informing Employees

Employees who have exposure to wildfire smoke will be informed of the following:

* When at least two consecutive NowCast PM2.5 readings are 20.5 μg/m3 or more, and
* When the NowCast PM2.5 is 55.5 μg/m3 or more, and
* Available protective measures to reduce employees’ wildfire smoke exposure.

Employees working in areas with outdoor activities are encouraged to report to their supervisor any worsening air quality and adverse symptoms that may be the results of wildfire smoke exposure. Supervisors will review indexes and adjust the level of exposure and inform employees of any changes or processes.

## Information and Training

<<COMPANYNAME>> will provide all employees effective information and training regarding wildfire smoke before work that exposes the employee to PM2.5 levels of 20.5 μg/m3 (WAQA 101, AQI 69) or more, and at least annually thereafter.

Our communication system is:

## Employee Training

Employees and Supervisors will take the [online wildfire smoke safety course](https://wisha-training.lni.wa.gov/training/articulate/WildfireSmokeSafety/story.html) required as part of our wildfire smoke safety training. They will also be shown **where to obtain N95** masks and how to properly wear them.

## Supervisor Training

Supervisors will be given additional instruction on:

* The procedures the supervisor must follow to implement the applicable provisions of [WAC 296-62-08550](https://www.lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-62.pdf#WAC_296_62_085) through [296-62-08590](https://www.lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-62.pdf#WAC_296_62_085).
* Procedures to follow if an employee shows adverse symptoms of wildfire smoke exposure, including proper emergency response procedures.
* Procedures for moving or transporting employees to an emergency medical service provider, if necessary.

## Exposure Symptom Response

Employees displaying adverse symptoms of wildfire smoke exposure must be monitored to determine whether medical attention is necessary.

We will allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment and may not retaliate against affected employees for seeking such treatment.

<<COMPANYNAME>> has made provisions in advance for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure.

Explain the provisions in your workplace to provide employees with prompt medical treatment for symptoms of wildfire smoke exposure:

## Exposure Controls

When the [NowCast](https://fire.airnow.gov/) PM2.5 is 20.5 µg/m3 (WAQA 101, AQI 69) or more, we will implement exposure controls.

When the [NowCast](https://fire.airnow.gov/) PM2.5 is 55.5 µg/m3 (WAQA 173, AQI 151) or more, we will implement additional exposure controls whenever feasible by:

* Providing enclosed buildings, structures, or vehicles where the air is adequately filtered
* Providing portable HEPA filters in enclosed areas
* Relocating work to a location with a lower ambient air concentration of PM2.5
* Changing work schedules to a time with a lower ambient air concentration of PM2.5
* Reducing work intensity
* Providing additional rest periods

## Respiratory Protection

When [NowCast](https://fire.airnow.gov/) PM2.5 is 20.5 µg/m3 (WAQA 101, AQI 69) or more, the employer is encouraged to provide respirators at no cost to employees upon request. We will stock N95 masks for employees that request them.

Where the [NowCast](https://fire.airnow.gov/) PM2.5 is 55.5 µg/m3 (WAQA 173, AQI 151) or more, the employer must provide respirators at no cost to all employees and encourage employees to use respirators. We will have available and encourage employees to wear masks.

## WAC 296-62-08590 Appendix B

Protection from wildfire smoke information to be provided to employees (mandatory).

1. The health effects of wildfire smoke. Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air.
Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. Particulate matter can also cause more serious problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.
Greater concentrations of particulate matter in the air create more of a hazard for workers. This rule requires that employers implement protections for workers once the amount of particulate matter in the air reaches a certain concentration: A NowCast PM2.5 55.5μg/m3 (WAQA 173, AQI 151).
However, some workers may experience health effects at NowCast PM2.5 levels of 20.5µg/m3 (WAQA 101, AQI 69) or lower, especially if they belong to a sensitive group. Employers are encouraged to implement exposure controls and provide respirators at no cost to employees where the NowCast PM2.5 is 20.5µg/m3 (WAQA 101, AQI 69). Employees may request to provide their own respirator for voluntary use at any NowCast PM2.5 level below 55.5μg/m3 (WAQA 173, AQI 151).
Sensitive groups. People with preexisting health conditions and those who are sensitive to air pollution who are among those most likely to experience health problems from exposure to wildfire smoke. Examples of sensitive groups include:
	1. People with lung diseases such as asthma or chronic obstructive pulmonary disease (COPD), including bronchitis and emphysema, and those who smoke;
	2. People with respiratory infections, such as pneumonia, acute bronchitis, bronchiolitis, colds, flu, or those with, or recovering from COVID-19;
	3. People with existing heart or circulatory problems, such as irregular heart beat, congestive heart failure, coronary artery disease, angina, and those who have had a heart attack or stroke;
	4. Children under eighteen years old, and adults over age sixty-five;
	5. Pregnant women;
	6. People with diabetes;
	7. People with other medical or health conditions which can be exacerbated by exposure to wildfire smoke as determined by a physician.
2. The right to obtain medical treatment without fear of reprisal.
Employers must allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment and may not punish affected employees for seeking such treatment. Employers must also have effective provisions made in advance for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure.
3. How employees can obtain the NowCast PM2.5 in the air. Various government agencies monitor the air at locations throughout Washington and report the NowCast PM2.5 for those places. Both the Washington air quality advisory (WAQA) and the Air Quality Index (AQI) use the air quality data from these regulatory monitors. While both the WAQA and AQI use the same data to provide an indicator of how unhealthy the current air quality is, the WAQA uses lower thresholds for reporting the health hazard.
Although the government monitoring stations may measure several pollutants, this chapter only uses PM2.5. There are several ways to determine the PM2.5 levels. Note that if you choose to use an index such as WAQA or AQI, use the following table to find the equivalent WAQA or AQI for PM2.5.

4. Some sources to obtain this data include:
	1. NowCast PM2.5, available at:
		* U.S. Forest Service AirFire website <https://tools.airfire.org/monitoring>
	2. NowCast AQI, available at:
		* U.S. EPA AirNow website <https://www.airnow.gov/>
		* “EPA AirNow” mobile app (free)
		* U.S. Forest Service AirFire website <https://tools.airfire.org/monitoring>;
		* EPA Enviroflash.info http://www.enviroflash.info/ (provides notifications)
	3. NowCast WAQA, available at:
		* Washington Air Monitoring Network website <https://enviwa.ecology.wa.gov/home/map>;
		* “Air Quality WA” mobile app (free)
		* Washington Smoke Information website <https://wasmoke.blogspot.com/>
		* Employees who do not have access to the internet or phone can contact their employer for the NowCast PM2.5.
5. The requirements of WAC 296-62-085 through 296-62-08590, wildfire smoke rule. If employees may be exposed to wildfire smoke, then the employer is required to:
	1. Check the NowCast PM2.5 before and periodically during each shift.
	2. Provide training to employees if they are exposed to wildfire smoke at NowCast PM2.5 levels of 20.5µg/m3 (WAQA 101, AQI 69) or more.
	3. Implement a two-way communication system.
	4. Provide engineering and administrative controls when the NowCast PM2.5 is 55.5μg/m3 (WAQA 173, AQI 151) or more if feasible.
	5. Provide respirators and encourage their use when the NowCast PM2.5 is 55.5μg/m3 (WAQA 173, AQI 151) or more.
	Employers shall alert employees when the NowCast PM2.5 is 55.5μg/m3 (WAQA 173, AQI 151) or more, and what protective measures are available to employees.
	Employers shall encourage employees to inform their employers if they notice the air quality is getting worse, or if they are suffering from any symptoms due to the air quality, without fear of reprisal. The employer's communication system is:
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6. The employer's methods to protect employees from wildfire smoke. Employers are encouraged to take action to protect employees from wildfire smoke when the NowCast PM2.5 is 20.5μg/m3 (WAQA 101, AQI 69) and must take action to protect employees from wildfire smoke when the NowCast PM2.5 is 55.5μg/m3 (WAQA 173, AQI 151). Examples of protective methods include:
	1. Locating work in enclosed structures or vehicles where the air is filtered.
	2. Changing procedures such as moving workers to a place with a lower PM2.5.
	3. Reducing work time in areas with unfiltered air.
	4. Increasing rest time and frequency and providing a rest area with filtered air.
	5. Reducing the physical intensity of the work to help lower the breathing and heart rates. The employer's control system at this worksite is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.
Respirators can be an effective way to protect employee health by reducing exposure to wildfire smoke, when they are properly selected and worn. Respirator use can be beneficial even when the PM2.5 is 20.5μg/m3 or lower, to provide additional protection. When the NowCast PM2.5 is 20.5μg/m3 (WAQA 101, AQI 69) or more, employers are encouraged to make proper respirators available to workers who may choose to use them voluntarily. When the NowCast PM2.5 is 55.5μg/m3 (WAQA 173, AQI 151) or more, employers must make proper respirators available to workers who may choose to use them voluntarily. If an employer declines to provide respirators to a worker below NowCast PM2.5 of 55.5μg/m3 (WAQA 173, AQI 151), the worker may request to provide their own respirator for voluntary use. The training contained in this section, meets the requirements for voluntary use respirator training.
A respirator should be used properly and kept clean. The following precautions must be taken:
	1. Employers shall select respirators certified for protection against the specific air contaminants at the workplace. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example). N95 respirators may also be used if adequate supply of NIOSH approved respirators is not available. Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering facepiece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.
	2. Read and follow the manufacturer's instructions on the respirator's use, maintenance, cleaning and care, along with any warnings regarding the respirator's limitations. The manufacturer's instructions for medical evaluations, fit testing, and shaving should also be followed to ensure the best protection against wildfire smoke, although doing so is not required for voluntary use of filtering facepiece respirators.
	3. Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect workers against gases or vapors, and it will not supply oxygen.
	4. Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.
	5. Employees who have a heart or lung problem should ask their doctor before using a respirator.
8. How to properly put on, use, and maintain the respirators provided by the employer.
To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.
The proper way to put on a respirator depends on the type and model of the respirator. For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:
	1. Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.
	2. Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.
	3. Perform a seal check:
		* Cover the respirator with both hands and exhale. If air leaks where the respirator seals against the face, readjust the respirator and nosepiece and try again. When a proper fit is achieved, the respirator should bulge from the face and not leak around the seal.
		* Cover the respirator with both hands and inhale. If air leaks where the respirator seals against the face, readjust the respirator and nosepiece and try again. When a proper fit is achieved, the respirator should collapse slightly and not leak around the seal
		

