

UCSB Wildfire Smoke Protection Plan and Training Tool

When it can be reasonably anticipated that employees covered under the [Cal/OSHA Wildfire Smoke Protection Standard](#) may be exposed to a PM2.5 Air Quality Index (AQI) of 151 or greater for more than one hour during their shift, supervisors must ensure that affected employees receive documented training covering the topics outlined below. For more information on when and where the standard applies, please visit the [EH&S Wildfire Smoke Protection webpage](#). A training handout is available at: https://www.ehs.ucsb.edu/files/docs/ih/UC_Wildfire_Smoke_Protection_Handout.pdf

1. Requirements of Title 8, Section 5141.1, Protection of Wildfire Smoke

Employees who work outdoors or in a location that does not have mechanical air filtration and may be exposed to a PM2.5 AQI of 151 or greater for more than one hour during your shift, must be provided the following:

- The current AQI before and periodically during each shift;
- Documented training covering the information in this document;
- Work modifications to reduce your exposure; and
- Respirators with encouragement and instruction on how to use them.

2. Health Effects of Wildfire Smoke

Although there are many hazardous constituents of wildfire smoke, the primary harmful pollutant for people who are not close to the fire is fine particulate matter (tiny particles suspended in the air). Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. It can also cause more severe problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death. People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects. The smallest—and usually the most harmful—particulate matter is called PM2.5 because it has a diameter of 2.5 micrometers or smaller.

3. 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. If necessary, please follow UCSB [incident reporting procedures](#) to obtain prompt medical treatment without fear of reprisal.

4. How you can obtain the current Air Quality Index (AQI) for PM2.5.

Various government agencies monitor the air at locations throughout California and report the current AQI for those places. The AQI is a measurement of how polluted the air is. An AQI over 100 is unhealthy for sensitive people, and an AQI over 150 is unhealthy for everyone. Although there are AQIs for several pollutants, Title 8, section 5141.1, only uses the AQI for PM2.5.

The easiest way to find the current and forecasted AQI for PM2.5 is to go to <https://www.airnow.gov/> and enter the zip code of the location where you will be working. The current AQI is also available from the U.S. Forest Service at <https://tools.airfire.org/> and the local air quality district, which can be located at <https://ww3.arb.ca.gov/capcoa/dismap.htm>. Employees who do not have access to the internet can

contact their supervisor for the current AQI. Additionally, the EPA website www.enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

5. The local two-way communication system.

Supervisors must alert employees when the air quality is harmful and what protective measures are available to employees. Supervisors shall also encourage employees to inform them 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.

This information will be communicated to employees in the following manner (e.g. in-person, via text, email, website, radio, or other effective method): _____

6. Methods for protecting employees from wildfire smoke.

Supervisors must take action to protect employees from PM2.5 when the current AQI for PM2.5 is 151 or greater. Local methods for reducing employee exposure are (check all that apply):

- Relocating work to enclosed structures or vehicles where the air is filtered.
- Moving workers to a place with a lower current AQI for PM2.5.
- Reducing work time in areas with unfiltered air.
- Increasing rest time and frequency, and providing a rest area with filtered air.
- Reducing the physical intensity of the work to help lower the breathing and heart rates.

Specific actions to reduce employee exposure are as follows: _____

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. Surgical masks or other items worn over the nose and mouth such as scarves, T-shirts, and bandanas do not provide protection against wildfire smoke. A NIOSH certified N95 filtering facepiece respirator (shown in the image below) is the minimum level of respiratory protection allowable for wildfire smoke. Filtering facepiece respirators such as N95s will not protect the user against gases, chemical vapors, oxygen deficient atmospheres or highly toxic materials. When the current AQI for PM2.5 is 151 or greater, supervisors shall provide their workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required, and individuals must enroll in the [UCSB Respiratory Protection Program](#) before using a respirator.

8. How to properly put on, use, and maintain respirators provided.

Respirators must be used properly and replaced if they become damaged, deformed, dirty, or difficult to breathe through. Filtering facepiece respirators such as N95s are disposable and cannot be cleaned or disinfected, and should be replaced at the beginning of each shift. If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with cleaner air, remove your respirator, and notify your supervisor or get medical help as needed. When wearing a respirator, the following precautions must be taken:

1. Only respirators certified by the National Institute for Occupational Safety and Health (NIOSH) for protection against particulates should be used. 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).
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, although doing so is not required by Title 8, section 5141.1, 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 you against gases or vapors, and it will not supply oxygen.
4. Individuals should keep track of their respirator so that they do not mistakenly use someone else's respirator.
5. Talk to your doctor if you have heart or lung problems before wearing a respirator.

To get the most amount of protection from a respirator, there must be a tight seal between the respirator and the user's face. A respirator will provide much less protection if facial hair interferes with the seal. Following the manufacturer's instructions for user seal checks and adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives. Follow the instructions below for proper donning of N95 and other filtering facepiece respirators:

1. Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.
2. Massage the metal part (if there is one) of the respirator over the top of the nose so it fits securely.
3. Perform user seal checks per the manufacturer's instructions.

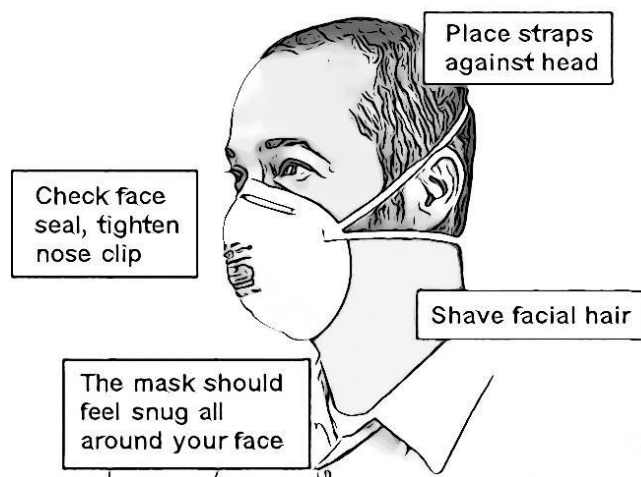


Figure 1. Drawing Showing Proper Fitting of a Filtering Facepiece Respirator (shaving is not required for voluntary respirator use).

