

Cal/OSHA Emergency Regulation on Protection from Wildfire Smoke

The following information applies to all UC ANR outdoor workplaces where employees may be exposed to wildfire smoke.

In an effort to protect outdoor workers from hazards associated with wildfire smoke, the Cal/OSHA Standards Board recently approved an emergency regulation establishing protection standards. The emergency regulation, [Title 8, Section 5141.1](#) Protection from Wildfire Smoke, took effect July 29, 2019.

Under the new regulation, employers must take the following steps to protect outdoor workers who may be exposed to wildfire smoke:

- **Identify** potential exposures to harmful air quality caused by wildfire smoke.
- **Communicate** wildfire smoke hazards, air quality conditions, and protective measures and encourage feedback.
- **Train** employees who are reasonably anticipated to be affected by unhealthy air quality caused by wildfire smoke.
- **Control** harmful exposure to outdoor workers by various methods as feasible, including modifying duties and/or work schedules, relocating tasks, and/or making use of enclosed filtered buildings/vehicles. When these measures are not feasible and employees must work outdoors during unhealthy air conditions the employer must make respirators (N95 masks) available, for voluntary use.

NOTE an initial supply of N95 respirators will be provided by ANR Risk & Safety. The respirators are for outdoor workers exposed to unhealthy wildfire smoke that cannot otherwise be averted. If the respirators are used for other purposes and not available during a wildfire smoke event, the worksite may be subject to a Cal/OSHA violation.

A Spanish-language summary of the standard was developed by AgSafe and is available here:

<http://ucanr.edu/sites/safety/files/308915.pdf> and the Spanish version of the regulation is available from Cal/OSHA: <https://www.dir.ca.gov/dosh/doshreg/Protection-from-Wildfire-Smoke/Spanish/Protection-from-Wildfire-Smoke-Emergency-proptxt-spanish.pdf>.

Exemptions

The regulation applies to employees who work outdoors, the following workplaces and operations are exempt:

- Working within an enclosed building or structures where air is filtered by a mechanical ventilation system and windows, doors, bays, and other openings are kept closed to minimize contamination by outdoor or unfiltered air.
- Enclosed vehicles with a cabin air filter and windows, doors, and other openings are kept closed to minimize contamination by outdoor or unfiltered air.
- The employee working outdoors is exposed to a total of one hour or less, during a shift, of an AQI for PM2.5 of 151 or higher.

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Guidance for ANR supervisors

- The regulation applies to outdoor workers exposed to unhealthy air for longer than one hour in a shift. The standard applies when local outdoor air quality monitoring reports an Air Quality Index (AQI) of 151 or higher for Particulate Matter (PM) 2.5. Note that the AQI reports must be differentiated between PM 2.5 (the pollutant of concern for this standard) and *NOT* Ozone.
- When it is reasonably anticipated that a wildfire event may affect the air quality at an ANR outdoor work location, the AQI rating for PM 2.5 shall be checked before and periodically during each shift. Guidance for monitoring this information and sources of air quality information are included in the “*How to Comply*” section below.
- Exposure to unhealthy air can be reduced by relocating workers to an enclosed building with filtered air (HVAC), an enclosed filtered vehicle, or moving workers to another outdoor location where the AQI for PM2.5 is less than 150. ANR EH&S can help you identify whether your building meets this criteria.
- When the air quality is unhealthy (an AQI of 151 or higher for PM2.5), adjusting outdoor work schedules/activities, reducing work intensity, and providing additional rest periods are recommended controls.
- Where the current AQI for PM2.5 is rated 151 or higher (but does not exceed 500), the ANR work location must provide respirators to all outdoor workers for *voluntary* use and encourage their use.
 - ✓ Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM2.5, such as a N95 filtering facepiece respirators. Respirators shall be cleaned, stored, maintained, and replaced so that they do not present an additional health hazard to users. The longevity or usable lifecycle of N95 masks for *voluntary use* vary by manufacturer, user, environment of use, and care. N95 masks are most commonly discarded and replaced after an 8-hr work shift; or when the voluntary user no longer feels the mask is providing a tight, secure fit, or has become obstructed. When N95 respirators are made available for voluntary use, fit testing and medical evaluations are not required. However, the employee needs to be trained on how to properly put on and use the respirator (see training links below).
 - ✓ Note: mandatory use of respirators is required whenever the current AQI for PM2.5 exceeds a rating of 500.

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How to Comply: There are four main steps to compliance with this regulation: Identification of potential exposures, communication with employees, training, and control of exposures.

Identification

In order to identify potential exposures during wildfire events, supervisors must monitor the local Air Quality Index (AQI). For ANR offices, the County Director or REC Director may assign a safety coordinator or other employee to monitor local AQI. Be sure to consider the various offsite field locations, educational partner locations, etc. that ANR employees are visiting regularly. Check AQI forecasts and the current AQI for PM2.5—the pollutant of concern—from any of the following:

- U.S. EPA AirNow website: <https://airnow.gov/>
- California Air Resources Board website: <https://mobile.arb.ca.gov/breathewell/>
- Local Air Pollution Control District or Local Air Quality Management District websites
Find your local air district:
by ZIP code or city (<https://www.arb.ca.gov/app/dislookup/dislookup.php>)
by map: <https://ww3.arb.ca.gov/capcoa/dismap.htm>
- U.S EPA www.enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.
- U.S Forest Service Wildland Air Quality Response Program website: <https://wildlandfiresmoke.net>
- Contacting any of the above by telephone, email, text, or other effective method

Communication

When there is a wildfire event in your region that may affect air quality at ANR work locations, maintain communication with employees about the AQI and steps they should take to reduce their exposure. This education can be in the form of an e-mail to all employees, or other means of communication that works best for your location. Employees must also be encouraged to provide feedback and report worsening air quality or adverse symptoms of smoke exposure. When the AQI in your area is forecast to be 151 or greater for PM 2.5 due to wildfire smoke, notify employees to curtail outdoor activities if possible and make respirators available for those employees who must continue to work outdoors.

Training

Employees must be trained about the requirements of this new Cal/OSHA standard. ANR Risk & Safety Services is currently developing training and other resources, which will be posted on the Protection from Wildfire Smoke webpage at the link on the bottom of this page. Until those resources are available, we recommend sharing this document with all employees to make them aware of the standard and discussing local procedures such as how you will share information about air quality conditions and how to obtain a respirator if needed.

Employees must also review the information at these webpages about the health effects of wildfire smoke:

<https://www.airnow.gov/index.cfm?action=smoke.index>

<https://www.cdc.gov/air/wildfire-smoke/default.htm>

Employees must also be made aware that they should report any workplace-caused injury or illness (including injury or illness related to work-related wildfire smoke exposure) via the reporting process described online at: <http://ucanr.edu/injury>

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When employees need to wear a respirator to reduce their exposure to wildfire smoke for outdoor work, they must complete ANR's online Voluntary N95 Respirator Training: <http://ucanr.edu/voluntaryN95training> to learn how to properly use a respirator and notify ANR EHS via the Voluntary N95 Respirator Registration survey: <http://ucanr.edu/voluntaryN95registration>

In compliance with Cal/OSHA, employees must also be provided with the following training information: (<http://ucanr.edu/sites/safety/files/308848.pdf>)

Control of Exposures

When wildfire smoke is causing unhealthy air quality (AQI 151 or higher for PM2.5) supervisors must take measures to protect employees from exposure to the smoke. This may include engineering controls, administrative controls, or, if the first two measures are ineffective or not available, use of respirators that can filter the air.

1. Engineering Controls – Whenever possible, reduce exposure by providing filtered air, such as a building or vehicle. This can be the most effective way to control exposure to wildfire smoke
2. Administrative Controls – If engineering controls are not feasible or effective, use administrative controls to reduce the exposure, if practicable. This may include relocating the work to another location, changing work schedules, postponing outdoor work, reducing the intensity of physical work, etc.
3. Provide Respirators – When the AQI for PM2.5 is 151 or higher, respirators must be provided to employees who must work outdoors for their voluntary use. If the AQI for PM2.5 exceeds 500, respirator use is mandatory.

UCANR EHS is making arrangements to have a selection of respirators shipped directly to each location (REC, CE office, etc.). An assortment of sizes and types will be provided to ensure a good fit. Please note that as stated above, the respirators are required to be provided for employees who must work outside whenever the AQI for PM 2.5 is 151 or higher. Therefore, these respirators should be reserved to employees who need them for work.