Protection from Wildfire Smoke

For compliance with Cal/OSHA General Industry Safety Standard, CCR Title 8, Sec. 5141.1

San Diego State University Environmental Health & Safety October 2019
Training Content

in compliance with CCR Title 8, Sec. 5141.1 (e) and Appendix B

- The health effects of wildfire smoke.
- The right to obtain medical treatment.
- The employer’s two-way communication system.
- The requirements in Title 8, section 5141.1 about wildfire smoke.
- How employees can obtain the current Air Quality Index (AQI) for PM2.5.
- The employer’s method to protect employees from wildfire smoke.
- The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.
- How to properly put on, use, and maintain the respirator provided by the employer.
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.

• 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.
The right to obtain medical treatment

• Employers shall 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 shall 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.

• SDSU employees should notify their supervisor and EH&S within 24 hours of any workplace-caused injury or illness, including those related to work-related wildfire smoke exposure.
  – The supervisor must complete the Supervisor’s Report of Work Related Injury/Illness Form and submit it to SDSU Human Resources.
  – Employees seeking treatment for wildfire smoke exposure can be evaluated at Sharp Rees-Stealy Occupational Health Services, Sharp Rees-Stealy Urgent Care, or another designated facility for evaluation and treatment.
How employees can obtain the current Air Quality Index (AQI) for PM2.5

- In the event of a wildfire, the SDSU Office of Emergency Management and/or the SDSU Department of Strategic Communications and Public Affairs will provide Air Quality Index (AQI) information to the campus community. However, individuals can also monitor the AQI by visiting one of the following websites:

  - United States Environmental Protection Agency: [https://www.airnow.gov/](https://www.airnow.gov/)
  - San Diego Air Pollution Control District: [https://www.sdapcd.org/](https://www.sdapcd.org/)
  - U.S. Forest Service Wildland Air Quality Response Program: [https://wildlandfiresmoke.net](https://wildlandfiresmoke.net)

<table>
<thead>
<tr>
<th>Air Quality Index (AQI)</th>
<th>Levels of Health Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 50</td>
<td>Good</td>
</tr>
<tr>
<td>51 to 100</td>
<td>Moderate</td>
</tr>
<tr>
<td>101 to 150</td>
<td>Unhealthy for Sensitive Groups</td>
</tr>
<tr>
<td>151 to 200</td>
<td>Unhealthy</td>
</tr>
<tr>
<td>201 to 300</td>
<td>Very Unhealthy</td>
</tr>
<tr>
<td>301 to 500</td>
<td>Hazardous</td>
</tr>
</tbody>
</table>
Protection from Wildfire Smoke

Cal/OSHA General Industry Safety Standard, CCR Title 8, Sec. 5141.1
SDSU’s two-way communication system for protection from wildfire smoke

1. **Strategic Communications and Public Affairs** and the **Office of Emergency Management** are responsible for informing the campus about air quality, protective measures, and campus closures, with consultation provided by EH&S. Communication methods can include emails, text alerts, and/or **SDSU website updates**.

2. Employees are encouraged to notify their supervisors of worsening air quality and any adverse symptoms they may be experiencing due to smoke exposure. Supervisors must then relay this information to **EH&S (619-594-6778)** for follow-up.
1. The primary method of controlling exposure to wildfire smoke at SDSU is Engineering Controls. Acceptable Engineering Controls include enclosed buildings, structures, or vehicles where the air is filtered.

2. Whenever Engineering Controls are not feasible or do not reduce employee exposure to PM 2.5 to less than a AQI of 151, SDSU will implement Administrative Controls. Acceptable Administrative Controls include relocating workers to a location where the AQI is lower, changing work schedules, reducing work intensity, or providing rest periods.

The SDSU Wildfire Smoke Exposure Management Program, which can be found on the SDSU EH&S webpage, provides additional wildfire smoke exposure protection information.
The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke

1. When properly selected and worn, respirators can provide respiratory protection against airborne hazards such as PM2.5.

2. Filtering facepiece respirators, such as N95 respirators, do not protect you against gases and vapors, and they do not provide oxygen.

3. During a wildfire event, respiratory protection can be beneficial even when the AQI for PM2.5 is <151.

4. When the AQI for PM2.5 is 151-500, respirator use is voluntary. When the AQI is >500, respirator use is required.
The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke

5. Medical clearance is not required for voluntary N95 respirator use in the event of a wildfire however, employees with heart or respiratory conditions should consult their physician before using a respirator.

6. Respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH). The respirator or packaging should indicate that it has been NIOSH certified.

7. The respirator manufacture’s use, maintenance, cleaning, and care instructions must be followed.
How to properly put on, use, and maintain the respirator provided by the employer

The manufacturer’s instructions will inform the user of how to properly put on, use, and maintain that specific respirator.

The following are general guidelines:

• To be effective, respirators must have a tight seal around the user’s face.
• Facial hair should not interfere with the seal of the mask.
• N95 filtering facepiece respirators are disposable and should be replaced at the beginning of each work shift.
• Respirator filters or N95 filtering facepiece respirators should be replaced if they are damaged, heavily soiled, or are difficult to breathe through.
• If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with cleaner air, take off the respirator, and seek medical attention.
For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

**Step 1:**
Place mask over the nose and under the chin, with one strap below the ears and on strap above.

**Step 2:**
Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.
For additional information

San Diego State University
Environmental Health & Safety
619-594-6778
ehsoffice@sdsu.edu