

# MT SAN ANTONIO COMMUNITY COLLEGE

## Protection from Wildfire Smoke Program

### Purpose

Mt San Antonio Community College will follow the procedures in this program to protect our outdoor workers from wildfire smoke and comply with the Cal/OSHA Protection from Wildfire Smoke regulation [8CCR5141.1](#).

### Scope

This policy will apply when it **can be expected that our employees may be exposed to wildfire smoke and the current Air Quality Index (AQI) for PM2.5 is 151 or greater**. This policy does not apply to the following workplaces or operations:

- Enclosed buildings where windows, doors, and other openings may need to be kept closed and the air is filtered by mechanical ventilation
- Enclosed vehicles where windows, doors, and other openings are kept closed and the air is filtered by a cabin air filter
- Where worksite measurements of PM2.5 show that the current AQI does not equal or exceed 151
- Employees exposed to a current AQI of 151 or greater for less than one hour during their shift
- Firefighters engaged in wildland firefighting

### Responsibilities

#### Overall Program Management

This program will be administered by Director of Safety and Risk Management of this program will include the following:

- Maintain and update this written program.
- Provide training to employees who are covered by this program.
- Maintain an adequate supply of N95 respirators.
- Ensure this program is being followed and enforced.

#### Manager Responsibilities

- Attend all trainings.
- Determine the Air Quality Index (AQI) when your employees may be exposed to wildfire smoke.
- Check AQI for PM2.5 level before each shift and periodically during the day when the AQI exceeds 151. This information will be provided to the managers via email notification and or through the Risk Management website, and or through emergency notifications sent to staff.
- Inform employees periodically of the current AQI for PM2.5 and protective measures available.
- Implement control measures for outdoor workers exposed to wildfire smoke.
- Ensure availability of N95 respirators and enforce required respirator use when the AQI for PM2.5 is greater than 500.

- Take action when an employee reports symptoms of poor air quality, such as providing clean air breaks or removing employees from poor AQI environments.

**Employee Responsibilities**

Employees working outdoors exposed to wildfire smoke have the following responsibilities:

- Understand and follow the requirements of this program.
- Attend all trainings.
- **Talk to your doctor if you have health issues that affect your ability to wear a respirator. If health issues exist, tell your employer about them.**
- Wear a respirator when AQI PM2.5 is greater than 500.
- Request a N95 for voluntary use when AQI PM2.5 is 151 or greater
- Inform their manager if air quality is getting worse.
- Inform their manager if suffering from symptoms of poor air quality such as asthma attacks, chest pain, nausea, or trouble breathing.

**Determining Exposure**

Air quality is described using the US EPA’s Air Quality Index (AQI) – the higher the number, the more polluted and hazardous the air. The current AQI is divided into the six categories shown in Table 1 below. Small particulates, known as PM2.5, pose the greatest health hazard because they can be inhaled deep into the lungs. Therefore, PM2.5 is the pollutant to monitor when working outdoors during wildfire activity.

<b><i>Air Quality Index (AQI) - Categories for PM2.5</i></b>	
<b><i>Index Value</i></b>	<b><i>Description of Air Quality</i></b>
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

*Table 1 – AQI Categories, Title 40 of Federal Regulations, Part 58, Appendix G*

Managers/Supervisor(s) will determine the potential employee exposure to PM2.5 before each shift and periodically thereafter to protect employee health by **any** of the following methods (choose at least one):

- Check AQI forecasts and current AQI for PM2.5 by consulting the following online resources: [US EPA AirNow](#) website, [US Forest Service Wildland Air Quality Response Program](#) website, [California Air Resources Board](#) website, local air pollution control district website, or local air quality management district website.
- Obtain AQI forecasts and current AQI for PM2.5 directly from the EPA, California Air Resources Board, local air pollution control district, or local air quality management district by phone, email, text, or other effective method.
- Measure PM2.5 at the worksite and convert to AQI according to [Appendix A](#) of 8CCR5141.1.

## Communication of Hazard

Managers will communicate wildfire smoke hazards in such a way to be understood by all employees. Information provided to employees will include the current AQI for PM2.5 and protective measures available to reduce wildfire smoke exposure.

Employees will be encouraged to inform their direct Manager of worsening air quality and any adverse symptoms they may be experiencing due to wildfire smoke exposure such as asthma attacks, chest pain, nausea, or difficulty breathing.

## Exposure Control

Mt San Antonio Community College will use the following controls to reduce employee exposure to PM2.5:

- Engineering controls will be used **first** to reduce employee exposure.
  - Enclosed buildings, structures, or vehicles where the air is mechanically filtered—air that is forced by a fan through a filtering material that traps particles and removes them from the air—will be provided when feasible and or a decision to keep openings closed except when it is necessary to open doors to enter or exit a building or vehicle.
  - The goal is to reduce exposure to an AQI of less than 151 or as much as possible.
- Administrative controls will be implemented if engineering controls are unable to reduce PM2.5 exposure to less than a current AQI of 151, such as:
  - Relocating work activities to a location where the current AQI for PM2.5 is lower, such as buildings or vehicles with filtered air
  - Changing work schedules
  - Lowering work intensity to reduce breathing and heart rate
  - Providing rest areas with filtered air
  - Allowing extended or additional rest periods.

**Note: Engineering and administrative controls do not apply to emergency situations when operations (such as medical, communications, utilities) are directly aiding firefighting or emergency response. In these situations, N95s will be provided for voluntary use when AQI for PM2.5 is equal or greater than 151 per section 5141.1(f)(4).**

- Respiratory protection will be provided as follows:
  - **Voluntary use for AQI of 151-500.** NIOSH approved N95 respirators (filtering face pieces) will be provided by Mt San Antonio Community College and affected employees will be encouraged to use them whenever the current AQI for PM2.5 is equal or greater than 151. N95 filtering face piece respirators will be stored, maintained, and replaced so they do not create a health hazard to the wearer.
  - **Required use for AQI greater than 500.** Respirator use is required when the current AQI for PM2.5 is greater than 500. Required respirator use must follow the requirements of [8CCR5144 \(Respiratory Protection Plan\)](#), which includes training, medical evaluation, and fit testing of respirator users. The protection provided by the respirator during these conditions must reduce the AQI PM2.5 to below 151 inside the respirator.

**Note - When the AQI is above 500, respirators with a higher [assigned protection factor \(APF\)](#) than an N95 respirator, such as a full-face respirator or a powered-air-purifying respirator (PAPR), may be necessary.**

## **Training**

Training will be provided by Director of Safety and Risk Management and or an outside professional, to all employees and managers with potential exposure to wildfire smoke. This training will include the following topics found in [Appendix B](#) of the regulation, which can be printed out or sent via internet link for employees:

- The health effects of wildfire smoke
- The right to obtain medical treatment without fear of reprisal
- How to obtain the current AQI for PM2.5
- The requirements of [8CCR5141.1](#)
- How Mt San Antonio Community College will communicate harmful AQI and protective measures available
- How employees should inform Mt San Antonio Community College of worsening air quality or if they are experiencing any symptoms due to the air quality.
- The methods that Mt SAC will use to protect employees from wildfire smoke
- The N95 filtering face piece respirator is the minimum level of protection for wildfire smoke.
- Employees with a heart or lung problem should consult with a physician prior to wearing an N95 respirator
- The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke
- How to properly put on, use, and maintain the respirators provided by Mt San Antonio Community College
- Dispose and replace the respirator when it becomes damaged, deformed or increases breathing resistance

Additional information on the use of N95 respirators for protection from wildfire smoke can be found on the Cal/OSHA page [N95 Mask Commonly Asked Questions](#).

### **Resources:**

[Cal/OSHA - N95 Mask Commonly Asked Questions](#)

[Fire and Smoke Map \(airnow.gov\)](#)

## Health Effects Attributed to Wildfire Smoke Exposure

<p><b>Short-term exposure (constant exposure over a few days)</b></p>	<p>Irritation of the eyes and respiratory tract</p> <p>Respiratory symptoms</p> <ul style="list-style-type: none"> <li>• Coughing</li> <li>• Phlegm</li> <li>• Wheezing</li> <li>• Difficulty breathing</li> </ul> <p>Respiratory Effects:</p> <ul style="list-style-type: none"> <li>• Bronchitis</li> <li>• Reduced Lung function</li> <li>• Increased risk of asthma exacerbation and aggravation of other lung diseases</li> <li>• Increased risk of emergency room visits and hospital admissions</li> </ul> <p>Cardiovascular effects:</p> <ul style="list-style-type: none"> <li>• Heart failure</li> <li>• Heart attack</li> <li>• Stroke</li> <li>• Increased risk of emergency room visits and hospital admissions</li> </ul> <p>Increased risk of premature death</p>
<p><b>Cumulative short-term exposures (i.e., over multiple days up to a few weeks)</b></p>	<p>Reduction in lung function</p>