CSUF | Environmental Health and Safety
ADMINISTRATION AND FINANCE

Wildfire Smoke Program

I. Purpose

This program provides guidance to CSUF employees on implementing appropriate measures to provide protection from wildfire smoke and poor air quality, consistent with California Code of Regulations (CCR), Title 8, 5141.1 Protection from Wildfire Smoke.

II. Authority

California Code of Regulations, Title 8, Section 5141.1 – Protection from Wildfire Smoke

III. Scope

A. This program is in effect when the Air Quality Index for PM2.5 is 151 or greater, regardless of the AQI for other pollutants.
B. Per CCR Title 8, 5141.1, the following work places are exempt from this section:
    1. Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed, except when it is necessary to open doors to enter or exit.
    2. Enclosed vehicles in which the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed, except when it is necessary to open doors to enter or exit the vehicle.
    3. Employees exposed to a current AQI for PM2.5 of 151 or greater for a total of one hour or less during a shift.

IV. Definitions

Wildfire Smoke – Emissions from fires in "wildlands," as defined in Title 8, section 3402, or in adjacent developed areas.

Air Quality Index (AQI) – The method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a real-time basis.

PM2.5 – Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller.

NIOSH - The National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

V. Identification of Harmful Exposures

A. Environmental Health and Safety

1. Shall determine employee exposure to PM2.5 for worksites before each shift and periodically thereafter, as needed to protect the health of the employee, by any of the following methods:

    a. Check AQI forecasts and the current AQI for PM2.5 from any of the following: South Coast Air Quality Management District website, U.S. EPA AirNow website, U.S. 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; or
    b. Measure PM2.5 levels at the worksite and convert the PM2.5 levels to the corresponding AQI in accordance with Appendix A.

VI. Communication

As required by the Illness and Injury Prevention Program (IIPP) a system of communicating wildfire smoke hazards shall be implemented in a language and manner that is readily understandable by employees (Appendix B). The system shall include methods of:

A. Informing employees of

    1. The current AQI for PM2.5

    2. Protective measures available to reduce wildfire smoke exposures.

B. Encourage employees to report:

    1. Worsening air quality or changes in conditions.

    2. Adverse symptoms that may be a result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

VII. Training and Instruction

As required by the Injury & Illness Prevention Program, the employer shall provide employees with effective training and instruction in a language and a manner that is readily understandable by employees on the following:

A. The health effects of wildfire smoke
B. The right to obtain medical treatment without fear of reprisal.
C. How employees can obtain the current Air Quality Index (AQI) for PM2.5.
D. The requirements in Cal/OSHA's Title 8, section 5141.1 about wildfire smoke.
E. The employer's two-way communication system.
F. Employers' methods to protect employees from wildfire smoke and the importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.

VIII. Control of Harmful Exposures to Employees

A. In emergencies, including rescue and evacuation, subsections (f)(2) and (f)(3) do not apply, and employers shall comply with subsection (f)(4). Emergencies include utilities, communications, and medical operations, when such operations are directly aiding firefighting or emergency response.
B. Engineering Controls. The employer shall reduce employee exposure to PM2.5 to less than a current AQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered. If engineering controls are not sufficient to reduce exposure to PM2.5 to less than a current AQI of 151, then the employer shall reduce employee exposures to the extent feasible.
C. Administrative Controls. Whenever engineering controls are not feasible or do not reduce employee exposures to PM2.5 to less than a current AQI of 151, the employer shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM2.5 is lower, changing work schedules, reducing work intensity, or providing additional rest periods.
D. Control by Respiratory Protective Equipment

    1. Where the current AQI for PM2.5 is equal to or greater than 151, but does not exceed 500, the employer shall provide respirators to all employees for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM2.5, such as N95 filtering face-piece respirators. Respirators shall be cleaned, stored, maintained, and replaced so that they do not present a health hazard to users. See Appendix C to this section for training regarding voluntary use of respirators.

        i. NOTE: For voluntary use of filtering face-pieces, such as N95 respirators, some of the requirements of section 5144 do not apply, such as fit testing and medical evaluations.

    2. Where the current AQI for PM2.5 exceeds 500, respirator use is required in accordance with section 5144. The employer shall provide respirators with an assigned protection factor, as listed in section 5144, such that the PM2.5 levels inside the respirator correspond to an AQI less than 151.
E. AQI-Based Decision-Making Matrix

    1. This matrix takes into account AQI levels, and is meant to aid in decision making for various campus stakeholders. This can be found in Appendix D.

Appendix A Measuring PM2.5 Levels at the Worksite
Appendix B Information to be Provided to Employees
Appendix C Training on Voluntary Respirator Use
Appendix D AQI-Based Decision Making Matrix

Responsible Executive: Vice President for Administration and Finance
Responsible Office: Environmental Health and Safety

Originally Issued: 11/2020
Revised: 03/2022, 10/2025, 01/2026

Appendix A to CSUF Wildfire Program
Measuring PM2.5 Levels at the Worksite

A. An employer may use a direct-reading particulate monitor to determine PM2.5 levels if the employer can demonstrate that it has complied with this appendix and selected a monitor that:

   a. Does not underestimate employee exposures to wildfire smoke; or

   b. May underestimate wildfire smoke exposures, but information on the possible error of the monitor was obtained from the manufacturer and has been accounted for when determining exposures to PM2.5 to ensure that employee exposure levels are not underestimated.

B. The monitor shall be designed and manufactured to measure the concentration of airborne particle sizes ranging from an aerodynamic diameter of 0.1 micrometers up to and including 2.5 micrometers. The employer may use a monitor that measures a particle size range beyond these limits, if the employer treats the results as the PM2.5 levels.

C. The employer shall ensure that the monitor is calibrated and maintained.

D. The employer shall use the following table to convert the PM2.5 concentration to the AQI for PM2.5.

PM2.5 in Micrograms per Cubic Meter ($\mu g/m^3$)	Air Quality Index (AQI) – Categories for PM2.5
0 to 12.0	0 to 50
12.1 to 35.4	51 to 100
35.5 to 55.4	101 to 150
55.5 to 150.4	151 to 200
150.5 to 250.4	201 to 300
250.5 to 500.4	301 to 500

E. The person supervising, directing, or evaluating workplace monitoring for PM2.5 shall have the training or experience necessary to apply this section and to ensure the correct use of the monitor and the interpretation of the results, so that exposures are not underestimated.

F. Air Quality Guide for Particle Pollution

Air Quality Index	Who Needs to be Concerned?	What Should I do?
Good (0-50) 	-	It's a great day to be active outside
Moderate (51-100)	Some people who may be unusually sensitive to particle pollution.	**Unusually sensitive people:** *Consider reducing* prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier. These are signs to take it easier. **Everyone else:** It's a good day to be active outside.
Unhealthy for Sensitive Groups (101-150) 	Sensitive groups include **people with heart or lung disease, older adults, children, teenagers, pregnant women, minority populations, and outdoor workers.**	**Sensitive groups:** *Reduce* prolonged or heavy exertion. It's OK to be active outside, but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. **People with asthma** should follow their asthma action plan and keep quick relief medicine handy. **If you have heart disease:** Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.
Unhealthy (151-200) 	Everyone	**Sensitive groups:** *Avoid* prolonged or heavy exertion. Consider moving activities indoors or rescheduling. **Everyone else:** *Reduce* prolonged or heavy exertion. Take more breaks during outdoor activities.
Very Unhealthy (201-300) 	Everyone	**Sensitive groups:** *Avoid all* physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. **Everyone else:** *Avoid* prolonged or heavy exertion. Consider moving activities indoors or rescheduling to a time when air quality is better.
Hazardous (301-500) 	Everyone	**Everyone:** *Avoid all* physical activity outdoors. **Sensitive groups:** Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.

Appendix B to CSUF Wildfire Program
Information to be provided to employees

The following information must be provided to affected employees of wildfire smoke:

A. The health effects of wildfire smoke, including:

   I. 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.

   II. 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.

   III. People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects.

   IV. The smallest, and usually the most harmful, particulate matter is called PM2.5 because it has a diameter of 2.5 micrometers or smaller.

B. The right to obtain medical treatment without fear of reprisal.

   I. 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.

C. How employees can obtain the current Air Quality Index (AQI) for PM2.5.

   I. 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.

   II. Although there are AQIs for several pollutants, Title 8, section 5141.1 about wildfire smoke only uses the AQI for PM2.5.

   III. The easiest way to find the current and forecasted AQI for PM2.5 is to go to 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/ or a local air district, which can be located at www.arb.ca.gov/capcoa/dismap.htm. Employees who do not have access to

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

D. The requirements in Title 8, section 5141.1 about wildfire smoke.

   I. If employees may be exposed to wildfire smoke, then the employer is required to find out the current AQI applicable to the worksite. If the current AQI for PM2.5 is 151 or more, the employer is required to:
      1. Check the current AQI before and periodically during each shift.
      2. Provide training to employees.
      3. Lower employee exposures.
      4. Provide respirators and encourage their use.

E. The employer's two-way communication system.

   I. Employers shall alert employees when the air quality is harmful and what protective measures are available to employees.

   II. 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.

F. The employer's methods to protect employees from wildfire smoke.

   I. Employers shall take action to protect employees from PM2.5 when the current AQI for PM2.5 is 151 or greater. 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 current AQI for 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.

G. Sample distribution email text that is sent out to campus employees by EHS.

Smoke advisory for multiple wildfires

Three major wildfires are affecting air quality conditions in the region, including the CSUF campus. The fires are producing substantial smoke, impacting air quality conditions throughout the region.

Air quality levels may reach "Unhealthy for Sensitive Groups" or higher due to increased PM2.5 concentrations in areas directly impacted by the smoke.

HEALTH RISKS OF WILDFIRE SMOKE:

- **Stay Indoors:** keep windows and doors closed or seek alternative shelter.
- **Avoid Physical Activity:** reduce physical activity to limit smoke inhalation.
- **Use Air Conditioning:** set air conditioning to recirculate and use clean filters. Avoid using whole-house fans or swamp coolers that bring in outdoor air.
- **Create a Clean Air Space:** use a portable air cleaner in addition to or instead of an air conditioner.
- **Avoid Burning Appliances:** do not use wood-burning appliances, fireplaces, and candles indoors or outdoors.
- **Avoid Dust Masks and Cloth Coverings:** dust masks and cloth face coverings do not protect against small particles or gases in wildfire smoke. Use N-95 or P-100 respirators for some protection if they are worn properly and have a tight fit.
- **Sensitive Groups:** older adults, young children, pregnant women, and individuals with heart diseases or lung diseases (such as asthma) are especially vulnerable to health risks from wildfire smoke.

ADDITIONAL INFORMATION:

- **South Coast AQMD Advisory:** visit South Coast AQMD Advisory for updates.
- **Air Quality Alerts:** subscribe to alerts, advisories, and forecasts at AirAlerts.org.
- **Current Air Quality Map:** view current air quality conditions by region using this interactive AQI Map.
- **South Coast AQMD Mobile App:** download the South Coast AQMD Mobile App for real-time air quality information, maps, notifications, and health alerts.
- **Air Quality Forecast:** access air quality forecasts at AQMD Forecast and view a map of South Coast AQMD Forecast Areas.

Appendix C to CSUF Wildfire Smoke Program
Training on Voluntary Respirator Use

A. The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.

   I. 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 AQI for PM2.5 is less than 151, to provide additional protection.

   II. When the current AQI for PM2.5 is 151 or greater, employers shall provide their workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required.

   III. A respirator should be used properly and kept clean.

   IV. 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.

      1. 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.

      2. 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 employees against gases or vapors, and it will not supply oxygen.

      3. Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.

      4. Employees who have a heart or lung problem should ask their doctor before using a respirator.

B. How to properly put on, use, and maintain the respirators provided by the employer.

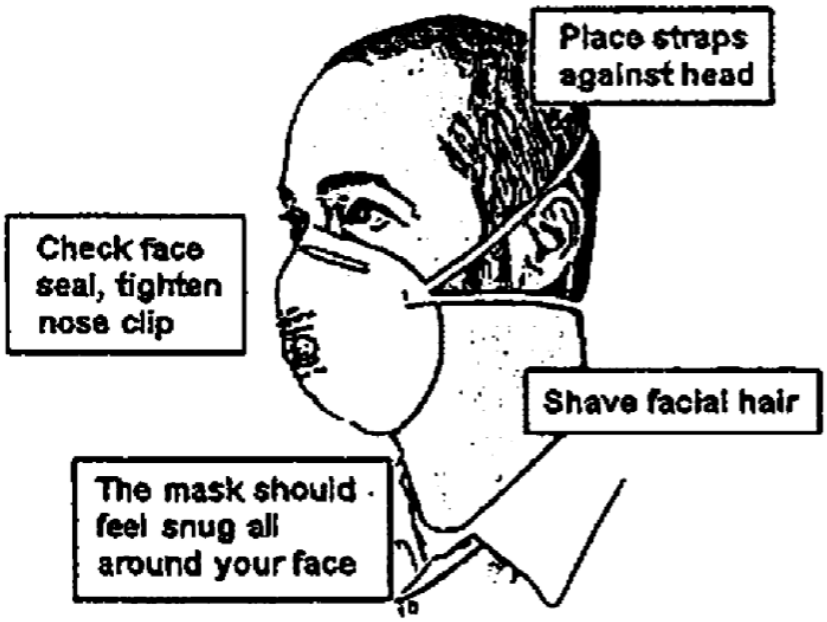
   I. To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose-fitting powered air purifying respirators (PAPRs) may be worn by people with facial hair since they do not have seals that are affected by facial hair.

II. The proper way to put on a respirator depends on the type and model of the respirator.

III. For those who use an N95 or other filtering face-piece 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 metallic tab (if there is one) of the respirator over the top of the nose so it fits securely.



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

Appendix D to CSUF Wildfire Smoke Program
AQI-Based Decision Making Matrix

Levels of Health Concern	PM2.5 (24hr avg; µm/m^3)	Current AQI Value	Who is Affected?	Actions						
				Outdoor Workers/Volunteers	Classes	Campus Operations	Health System Operations	Athletics & Outdoor Rec	Outdoor Camps/Events	Children's Center
Good	0-12	0-50	None expected.	No Action Anticipated.	No Action Anticipated.	No Action Anticipated.	No Action Anticipated.	No Action Anticipated.	No Action Anticipated.	No Action Anticipated.
Moderate	12.1-35.4	51-100	Unusually Sensitive Individuals (people with lung and heart disease) may be affected.	Unusually sensitive people may require work accommodations.	No Action Anticipated.	No Action Anticipated.	· In patient care areas, consider modifying filtered mechanical ventilation systems and/or implement other controls to reduce outdoor air intake.	No Action.	No Action Anticipated.	No Action Anticipated.
Unhealthy for Sensitive Groups	35.5-55.4	101-150	Sensitive groups including people with heart or lung disease, older adults, pregnant women, and children.	Workers in sensitive groups may require work accommodations.	No Action Anticipated.	Consider closing building doors and windows to reduce outdoor air intake.	· As feasible, modify filtered mechanical ventilation systems to reduce outdoor air intake in patient care areas.	**· Medical/athletic staff/outdoor recreation staff should consult with individuals who fall into the sensitive groups about participation in practice, competition, and/or outdoor events.**	· At higher end of range, consider moving activities indoors.	· For longer, outdoor activites, take more breaks and do less intense activities.
Unhealthy	55.5-150.4	151-200	Everyone.	**· Limit outdoor work and prolonged or heavy exertion if practiable.** **· Reassign employees who work outdoors for more than one hour or provide N95 respirators for voluntary use.**	· Consider academic accommodations for students and faculty with pre-existing health conditions. · Consider cancelling or moving outdoor classes indoors.	· Consider making N95 respirators and use/care guidance available for voluntary use. · Consider increasing campus-managed shuttle/bus service. · As feasible, modify filtered mechanical ventilation systems to reduce outdoor air intake.	· Consider making N95 respirators and use/care guidance available for voluntary use. · In patient care areas, consider monitoring indoor air quality and implement mitigation actions if indoor AQI is within this range.	· Medical/athletic training staff should closely monitor the health of all athletes in practice and competition. · Modifications to athletic activities should be considered and implemented as necessary. **· Shorten/modify outdoor recreational activity to limit prolonged or heavy exertion.**	· Consider cancellation of more intense outdoor events, or move events indoors.	**· For all outdoor activities, take more breaks and do less intense activities.** · Consider moving outdoor activities indoors, or rescheduling them to another day or time.
Very Unhealthy	150.5-250.4	201-300	Everyone.	**· Suspend outdoor work. If work is absolutely neessary, provide N95 respirators for voluntary use.**	**· Per local procedures and in consultation with the divisional Academic Senate Chair or designee, cancel or restructure classes if current AQI levels have maintained in this range and are expected to continue (academic activities that support clinical operations or research may be excluded from cancellation).**	· To the extent feasible, curtail campus operations. · Consider monitoring indoor air quality and implement mitigation actions if indoor AQI is within this range.	· To the extent feasible, curtail health system operations. · Consider monitoring indoor air quality and implement mitigation actions if indoor AQI is within this range.	· Outdoor athletic activities should be moved indoors or delayed, postponed, or relocated. **· Cancel or move any outdoor recreational acitivites, indoors.**	**· Cancel outdoor events involving activity (e.g., sports).** · Consider cancellation of outdoor events that do not involve activity (e.g., concerts).	**· Close children center if current AQI levels have maintained in this range and are expected to continue.**
Hazardous	250.5-500.4	301-500	Everyone.	**· Follow recommendations for the Very Unhealthy category.**	**· Follow recommendations for the Very Unhealthy category.**	· Follow recommendations for the Very Unhealthy Category.	· Follow recommendations for the Very Unheatlhy Category.	**· To the extent feasible, move indoors or delay, postpone, or relocate outdoor athletic activities.** · Consider cancellation of indoor events/activities based on indoor air quality measurements.	**· Cancel all outdoor events and camp activities.** · Consider cancellation of indoor camps that require participants or families to travel to and from campus.	**· Follow recommendations for the Very Unheatlhy Category.**
Beyond the AQI	>500.4	>500	Everyone.	All groups.	**· Suspend outdoor work and activities. If outdoor work is absolutley necessary, N95 respirators are mandatory and require training and fit testing.**					