

 <b>Portland Community College Health &amp; Safety Manual</b>	Dept: <b>Environmental Health and Safety (EH&amp;S)</b>	
	Function: <b>Facilities Management Services</b>	
	Topic: <b>Chapter 25: Wildfire Smoke Protection Plan</b>	
	Board Policy: B507	Effective Date: <b>November 2021</b>

<b>Authority</b>	PCC Board Policy—B507
	Portland Community College is committed to providing a safe and healthy work and educational environment for our employees, students and visitors.

<b>Summary</b>	This Wildfire Smoke Protection Plan establishes safe work practices that will prevent the exposure to wildfire fire smoke and its health effects to employees at Portland Community College (PCC) whenever they perform work activities and the concentration of particulate matter less than 2.5 micrometers in size, resulting from wildfire smoke, equals or exceeds a concentration of 35.5 ug/m <sup>3</sup> which corresponds to an Air Quality Index of 101.1. This Plan is intended to allow PCC to maintain compliance with Oregon OSHA’s Temporary Rule on Protection from Wildfire Smoke.
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<b>Sections</b>	<b>I. Purpose</b>
	<b>II. Authority</b>
	<b>III. Responsibility</b>
	<b>IV. Procedures</b>
	<b>A. Applicability and Exemptions</b>
	<b>B. Monitoring</b>
	<b>C. Communications System</b>
<b>Appendix</b>	<b>D. Exposure Controls</b>
	<b>V. Training</b>
	<b>VI. Recordkeeping</b>
<b>Reference Documents</b>	<b>A. Definitions</b>
	<b>B. PCC Locations</b>
	<b>C. Employee Communication Template</b>
	<b>D. Exposure Controls</b>
	<b>E. Filtering Facepiece User Seal Checks</b>
	<b>F. 5-3-1 Visibility Chart</b>
	<b>1. OR OSHA: List of filtering facepiece respirators acceptable for use in Oregon under temporary rule protecting workers against wildfire smoke</b>
	<b>2. OR OSHA: Partners helping distribute respirators in light of wildfire smoke emergency requirements</b>
	<b>3. Health &amp; Safety Manual Chapter 2 - <i>Online Injury or Property Report</i></b>
	<b>4. Health &amp; Safety Manual Chapter 17 - <i>Form 4 Respirator Voluntary Use</i></b>

## I. PURPOSE

The purpose of this Wildfire Smoke Protection Plan (the Plan) is to establish procedures that protect Portland Community College (PCC) employees that are required to work in conditions in which they are exposed to particulate matter less than 2.5 micrometers in diameter (PM2.5), in concentrations of 35.5 ug/m<sup>3</sup> or higher in ambient air resulting from wildfire smoke. The Plan applies to all operations performed by PCC employees and contractors which expose them to such concentrations and sources of PM2.5 unless exempted by Section IV.A.

## II. AUTHORITY

PCC Board Policy B507  
OR OSHA 437-002-0155 Temporary Rule on Protection from Wildfire Smoke

## III. RESPONSIBILITY

### A. Department Managers:

- Remain aware of local air quality advisories and wildfire notifications
- Download and use the OregonAir or EPA AirNow apps
- Communicate with affected employees when PM2.5 concentrations equal, exceed, or fall below the levels shown in section IV.C. *Communications System*
- Purchase NIOSH-approved filtering facepiece respirators (e.g., N95, P95, R95, etc.) and/or other NIOSH-approved respiratory protection
- Limit the availability and use of such respiratory protection to wildfire smoke exposures
- Implement engineering and administrative controls to control wildfire smoke exposure
- Implement the required components of this Plan when ambient air concentrations of PM2.5 reach or exceed levels in Section IV. D. or Appendix C: *Exposure Controls*
- Require affected employees to sign-up for Alert Notifications on the Public Safety website
- Ensure affected employees receive district-level training on wildfire smoke exposure
- Implement alternative work schedules or relocate work as needed
- Be alert to signs and symptoms of wildfire smoke exposure
- Complete the *Online Injury or Property Incident Report* when exposed employees experience health effects of wildfire smoke exposure

### B. Affected Employees:

- Receive training on the topics listed in section IV.D.3, *Exposure Controls*, and section V. *Training*
- Sign-up for Alert Notifications on the Public Safety website
- Adhere to the requirements of the Plan whenever receiving alerts from their management and/or Public Safety regarding ambient air concentrations of PM2.5

- Be alert to signs and symptoms of wildfire smoke exposure
- Notify Public Safety or 911 in the event of observing/exhibiting any serious signs of wildfire smoke exposure
- Complete the online Injury or Property Incident Report after experiencing health effects of wildfire smoke exposure

### **C. District Emergency Operations Committee**

- Receive notifications from FMS Director and determine the effect of wildfire smoke and its potential effects to PCC's operations
- Advise the Vice President of Finance and Operations about PCC's continued ability to optimize the overall health of employees due to extreme wildfire smoke, extreme heat or other competing risks

### **D. Environmental Health & Safety (EH&S):**

- Provide subject matter expertise regarding wildfire smoke protection at PCC
- Maintain and modify the Plan to reflect current regulatory requirements, industry standards and best management practices
- Develop district-level training for complying with the OR OSHA temporary Wildfire Smoke Protection Standard and the requirements of this Plan

### **E. Facilities Management Services (FMS):**

- Monitor local ambient air concentrations of PM2.5 daily by means of the AirNow app or the DEQ Air Quality Index website (see Section IV.B. *Monitoring*)
- Maintain the ability to monitor indoor air quality at PCC campuses and centers
- Assess extent of power or ventilation disruptions
- Coordinate with applicable and/or affected departments to convey temporary working conditions
- FMS Director to advise the District Emergency Operations Committee members of any negative impact to the function of a building's mechanical ventilation system or any risks to the PCC community due to wildfire smoke exposure

### **F. Project Managers**

- Communicate the requirements of the Plan with contractors
- Monitor contractor operations to ensure that the Plan requirements are being implemented

### **G. Public Relations**

- Provide communications to PCC staff and students regarding wildfire smoke closures

### **H. Public Safety**

- Maintain a link to the AirNow website on the Public Safety webpage for use by employees

- Use the OCEANS system to communicate building or site-specific emergency alerts to all personnel in a building or at a location

#### I. Vice President of Finance and Administration

- Make decisions regarding PCC's continued ability to optimize the overall health of employees due to wildfire smoke, extreme heat or other competing risks based on input received from the District Emergency Operations Committee.
- Communicate decisions to Public Relations

### IV. PROCEDURES

**A. Applicability & Exemptions** – This Plan is applicable to all PCC work locations where employees are or will be exposed to wildfire smoke where the ambient air concentration for particulate matter with a diameter of 2.5  $\mu\text{m}$  (PM<sub>2.5</sub>) or less is 35.5  $\mu\text{g}/\text{m}^3$ . This concentration is the equivalent in the U.S. Environmental Protection Agency's Air Quality Index (AQI) of 101. These terms are more fully explained in Appendix A: *Definitions*.

This Plan does not apply to intermittent exposures of less than 15 minutes in any hour or short-duration exposures of less than two hours in a single 24-hour period.

**Exemptions:** The following workplaces and operations are exempt from this Plan:

Enclosed buildings and structures in which the air is filtered by a mechanical ventilation system and windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to enter or exit.

Enclosed vehicles in which the air is filtered by a cabin air filter and employees/operators ensure that windows, doors, and other openings are kept closed, except when it is necessary to open the doors to enter and exit. Buses and other enclosed vehicles where doors are frequently opened to board and deboard passengers are NOT exempt from this Plan.

**B. Monitoring** – Managers can determine PM<sub>2.5</sub> levels by referring to the Air Quality Index (AQI), developed by the U.S. Environmental Protection Agency. The AQI is an indicator of overall air quality and includes PM<sub>2.5</sub> (See Appendix A: *Definitions* for more information about AQI).

The current Oregon AQI and statewide PM<sub>2.5</sub> levels can be determined by means of the following online resources:

1. OregonAir app from the Oregon Department of Environmental Quality (DEQ): Search for the free "OregonAir" app in the app store
2. U.S. Environmental Protection Agency's AirNow website: <https://www.airnow.gov/>
3. DEQ website: <https://oraqi.deq.state.or.us/home/map>

Managers and employees should download the free OregonAir app or EPA AirNow app for viewing local ambient PM<sub>2.5</sub> concentrations.

The Public Safety webpage contains a link to the AirNow website so PM2.5 levels can be obtained by affected employees. The AirNow website allows personnel to determine the PM2.5 level for the PCC facility at which they are located by entering the zip code for that facility. Appendix B – *PCC Locations*, contains a list of PCC campuses and centers along with their zip codes.

If none of the previous methods for determining ambient PM2.5 levels are practical, personnel must use the information contained in Appendix F: *5-3-1 Visibility Chart*.

**C. Communications Systems** – Managers will communicate wildfire smoke hazards to affected employees via one of the following options: email, text messages, phone calls.

Notifications will be sent to affected employees whenever ambient air concentrations of PM2.5, resulting from wildfire smoke reach, exceed, or drop below the following thresholds:

1. 35.5 ug/m<sup>3</sup> (AQI 101)
2. 150.5 ug/m<sup>3</sup> (AQI 201)
3. 500.4 ug/m<sup>3</sup> (AQI 501)

These notifications serve as a means of directing employees to apply safeguards and controls to protect themselves from wildfire smoke hazards. These notifications can also be used to encourage employees to inform their manager should air quality either improve or worsen, or they are experiencing severe health symptoms as a result of workplace wildfire smoke exposure (i.e., asthma attacks, difficulty breathing and chest pain). An example of such a notification is found in Appendix C: *Employee Communication Template*.

Affected employees experiencing an emergency due to severe health symptoms must notify Public Safety and or 911 in the event of a medical emergency. The *Online Injury or Property Incident Report*, available from the Risk Services webpage, will be completed subsequently by the employee, if able, or the manager.

<https://intranet.pcc.edu/finance/safety/accident-and-incident-reporting-procedures/>

In the event of a facility-wide or district-wide emergency, Public Safety may opt to use the On Campus Emergency Alert Notifications System (OCEANS) to alert personnel inside PCC buildings of the need to leave PCC property due to an emergency resulting from wildfire smoke.

Public Relations may also send communications to PCC staff in the event of a campus or district-wide closure

**D. Exposure Controls** – The following controls must be implemented whenever ambient air concentrations of PM2.5 reach or exceed certain thresholds. The controls are listed below as well as in Appendix C – *Exposure Controls*.

1. Voluntary Use of Respirators - Whenever employees are exposed to ambient air concentrations of PM<sub>2.5</sub> at or above 35.5 ug/m<sup>3</sup>, managers must maintain a sufficient number and sizes of respirators approved by the National Institute for Occupational Safety and Health (NIOSH) to protect wearers from PM<sub>2.5</sub> at each work location where employees are exposed. These NIOSH-approved respirators are provided at no cost to the employee and must be readily available for voluntary use to all exposed workers at their request.

NIOSH-approved respirators may be either filtering facepiece respirators or elastomeric respirators.

Voluntary use of filtering facepiece respirators for protection against wildfire smoke hazards does not trigger the voluntary use provisions of OR OSHA's Respiratory Protection Standard.

Voluntary use of elastomeric respirators must be in compliance with OR OSHA's Respiratory Protection Standard (CFR 1910.134) and requires that the employee receive a copy of Appendix D of CFR 1910.134. Copies of this document are included in Chapter 17 of PCC's Health & Safety Manual - *Respiratory Protection Plan*, and are available for printing.

2. Engineering and Administrative Controls - These must be implemented to reduce employee exposures to PM<sub>2.5</sub> to less than 150.5 ug/m<sup>3</sup> (AQI 201) whenever feasible. Such controls must be considered and implemented in the order presented:

Engineering Controls – Managers will direct employees to remain within an enclosed building, structure or vehicle where the air is adequately filtered.

Administrative Controls – If directing affected employees to work indoors is not feasible, managers must consider having the work performed at an alternate location and/or time where employees would be exposed to a lower ambient air concentration of PM<sub>2.5</sub>. Managers may need to consult with Human Resources when considering changes to employees' work locations, schedules or assignments.

3. Control by Required Use of Respirators – Whenever employee exposure to PM<sub>2.5</sub> is at or above 150.5 ug/m<sup>3</sup> (AQI 201), even after the application of engineering and administrative controls, managers must ensure that employees wear NIOSH-approved respirators.

The required use of filtering facepiece respirators under the Wildfire Protection Plan does not trigger OR OSHA's Respiratory Protection Standard. The use of such respirators at ambient air concentrations of PM<sub>2.5</sub> below 500.4 ug/m<sup>3</sup> (AQI 501) requires the employee to receive training in the following topics:

- Proper use of the respirators, including putting them on and removing them
- Any limitations on the use of the respirator
- How to care for the respirator
- The ability to demonstrate a seal check

Seal checks that are described in Appendix D – *Filtering Facepiece User Seal Checks*, or those recommended by the respirator manufacturer, must be used.

Managers of affected employees must restrict the availability and use of filtering facepiece respirators to those periods where employees are exposed to wildfire smoke. The use of such respiratory protection in the absence of wildfire smoke hazards subjects the employee to OR OSHA’s Respiratory Protection Standard.

Note: For the 2021 wildfire season, KN-95 respirators previously on the U.S. FDA’s Emergency Use Authorization (EUA) can be used to substitute for NIOSH-approved filtering facepieces respirators for exposures to PM<sub>2.5</sub> under 500.4 ug/m<sup>3</sup> (AQI 501). A list of such respirators can be found on OR OSHA’s website: <https://osha.oregon.gov/Pages/topics/wildfires.aspx>. Additionally, if a KN95 respirator has been distributed by the State of Oregon that is not on the EUA list, OR OSHA will consider it an acceptable substitute for those respirators on the list.

The required use of elastomeric respirators must be in compliance with OR OSHA’s Respiratory Protection Standard including the requirements for medical evaluation, annual fit-testing, annual training, and the removal of facial hair.

4. Control by Required Use of Respirators – Whenever employee exposure to PM<sub>2.5</sub> is at or above 500.4 ug/m<sup>3</sup> (AQI 501), even after the application of engineering and administrative controls, managers must ensure that employees wear NIOSH-approved respirators.

The required use of respiratory protection, regardless of type, must be in compliance with OR OSHA’s Respiratory Protection Standard including the requirements for medical evaluation, annual fit-testing, annual training, and the removal of facial hair. For more information, please refer to H&SM Chapter 17 – *Respiratory Protection Plan*.

## V. TRAINING

Affected employees will receive district-level training on the topics covered in this Plan prior to being exposed to an ambient air concentration of PM<sub>2.5</sub> at or above 35.5 ug/m<sup>3</sup> (AQI 101). At a minimum, training must consist of the following topics:

- Symptoms of wildfire smoke exposure, including:
  - Eyes: burning sensations, redness, and tearing of the eyes caused by irritation and inflammation of the eyes that can temporarily impair one’s vision.
  - Respiratory system: runny nose, sore throat, cough, difficulty breathing, sinus irritation, wheezing, shortness of breath
  - Fatigue, headache, irregular heartbeat, chest pain
- The potential health effects of wildfire smoke, including increased risk of health effects to sensitive groups;
- The definition of sensitive groups as defined in OR OSHA 437-002-1080;

- The employee's right to report health issues related to wildfire smoke exposure and obtain medical treatment for workplace exposure to wildfire smoke without fear of retaliation;
- The procedures PCC must follow if an employee exhibits severe symptoms of wildfire smoke exposure, including appropriate emergency response procedures;
- How employees can obtain the current and forecasted ambient air concentration for PM2.5 and equivalent AQI level;
- How to effectively operate and interpret any air quality monitoring device provided by PCC to comply with this Plan, for each employee designated by PCC to operate such devices;
- PCC's methods to protect employees from wildfire smoke;
- PCC's communication system for wildfire smoke hazards covered under this Plan;
- The importance, limitations, and benefits of using a filtered facepiece respirator when provided by PCC, and how to properly put them on

## **VI. RECORDKEEPING**

### **A. Training Records**

District-level training records will be maintained in Cornerstone, PCC's Learning Management System, located at MyCareer@PCC.