

# CCS Administrative Procedure

## 2.30.05-AD Wildfire Smoke Response Plan

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Implementing Board Policy [2.30.05](#)

Contact: Environmental Health & Safety, (509) 533-8686 & (509) 533-8850

### 1.0 Wildfire Smoke Response Plan

Community Colleges of Spokane (CCS) is committed to the health and safety of its employees, and in maintaining a safe and efficient workplace that complies with all local, state and federal safety and health regulations, programmatic standards, and with any special safety concerns identified at the unit level. The purpose of this plan is to provide guidance on state regulations regarding Wildfire Smoke and to meet the Washington Administrative Codes (WAC) [296-820-805](#) through [296-820-860](#).

### 2.0 Scope

This plan establishes guidelines to protect the health and safety of individuals during periods of wildfire smoke exposure. The plan applies to all CCS employees, faculty, and staff who work outdoors where it is reasonably anticipated that personnel may be exposed to wildfire smoke, with the exception of the following:

- 2.1 They are in enclosed buildings or structures in which the department ensures that windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter and exit.
- 2.2 They are in enclosed vehicles in which the air is filtered by a properly maintained cabin air filter and the department ensures that windows, doors, and other openings are kept closed except when it is necessary to briefly open doors to enter or exit.

### 3.0 Definitions

- 3.1 Air Quality Index (AQI): A unitless index used by the U.S. Environmental Protection Agency (EPA) to communicate air quality for several pollutants, including PM<sub>2.5</sub>. References to the AQI used throughout this plan means the “NowCast AQI for PM<sub>2.5</sub>.”
- 3.2 Current PM<sub>2.5</sub>: The concentration of PM<sub>2.5</sub> for the most current hour available, calculated using an hourly average of PM<sub>2.5</sub> data.  
  
Note: The NowCast AQI as provided by the Washington State Department of Ecology, local clean air agency, or U.S. EPA is also acceptable to approximate current PM<sub>2.5</sub>.
- 3.3 High-efficiency particulate air (HEPA) filter: A filter capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometers mean aerodynamic diameter or larger.
- 3.4 NowCast: The method used by the EPA and the Washington State Department of Ecology to approximate the air quality for the most current hour available by using a calculation that involves multiple hours of past data. The NowCast uses longer averages during periods of stable air quality and shorter averages when air quality is changing rapidly, such as during a wildfire. The NowCast is generally updated every hour.
- 3.5 PM<sub>2.5</sub>: Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller. Measured in micrograms per cubic meter (µg/m<sup>3</sup>).
- 3.6 Wildfire smoke: PM<sub>2.5</sub> which includes emissions from planned and unplanned fires in wildlands, wildland urban interface, agricultural operations, or adjacent developed areas. Wildfire smoke contains a complex mixture of gases and particulates. Fine

particulates such as PM<sub>2.5</sub> are the primary pollutant of public and occupational health concern in wildfire smoke.

#### 4.0 Health Effects and Adverse Symptoms of Wildfire Smoke

- 4.1 Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not close to the fire is "particulate matter", the tiny particles suspended in the air.

These tiny particles can reach the deepest parts of the lungs and can be absorbed into the body. EPA has determined that particulate matter may cause or worsen cardiovascular disease, respiratory disease, cancer, and can harm the nervous system.

Exposure to particulate matter in wildfire smoke can cause a wide range of symptoms including (but not limited to) coughing, trouble breathing normally, stinging eyes, scratchy throat, runny nose, irritated sinuses, wheezing and shortness of breath, chest pain, headaches, asthma attack, nausea or vomiting, tiredness, fast heartbeat, and more.

- 4.2 Sensitive groups are people who are more at risk of experiencing the adverse health effects of wildfire smoke. These sensitive groups can include:
- Outdoor workers.
  - Smokers.
  - Workers under 18 or over 65 years old.
  - People with respiratory infections, like colds. Conditions can include pneumonia, acute bronchitis, bronchiolitis, colds, flus, or those recovering from COVID-19.
  - People with certain medical conditions like lung diseases, heart or circulatory problems, diabetes, pregnancy, and other conditions.
- For more details about sensitive groups, please refer to [WAC 296-820-850 \(1\)\(f\)](#).

#### 5.0 Reporting Wildfire Smoke Exposure Incidents

- 5.1 Wildfire smoke is a serious work-related hazard for exposed outdoor employees. If you are exposed to wildfire smoke and being experiencing the symptoms, notify your supervisor immediately and complete the [online Accident Report form](#).
- 5.2 According to [WAC 296-820-850 \(2\)](#), CCS departments will not retaliate against their employees for:
- Reporting symptoms,
  - Seeking medical attention,
  - Following medical advice they have been given,
  - Or for filing a workers' compensation claim.

#### 6.0 Methods of determining PM<sub>2.5</sub> or AQI levels

- 6.1 CCS departments must determine the current PM<sub>2.5</sub> or equivalent AQI level for worksites covered by WAC 296-820-805 through 296-820-860 periodically as needed. Supervisors will be responsible for frequently checking and communicating the findings to their employees. The departments may use any of the following methods to determine these levels:
- 6.1.1 Check PM<sub>2.5</sub> forecasts and the current PM<sub>2.5</sub> from any of the following:
- [Washington State Department of Ecology website](#);
  - [Air Quality WA mobile app](#);
  - [Washington smoke information website](#);
  - [U.S. EPA Fire and Smoke Map](#);

- [U.S. EPA AirNow website](#);
- [U.S. EPA AirNow mobile app](#);
- [U.S. Forest Service AirFire website](#); or
- [Local clean air agency website](#).

6.2 The following table indicates the NowCast AQI values that may be used from the Washington State Department of Ecology, local clean air agency, or EPA to comply with this section:

CURRENT PM <sub>2.5</sub>	NOWCAST AIR QUALITY INDEX FOR PM <sub>2.5</sub> (AQI)
20.5 µg/m <sup>3</sup>	69
35.5 µg/m <sup>3</sup>	101
250.5 µg/m <sup>3</sup>	301
500.4 µg/m <sup>3</sup>	500
555 µg/m <sup>3</sup>	Beyond the AQI

- Notes:
- The current PM<sub>2.5</sub> is updated hourly.
  - Employers are not responsible for tracking employee exposures outside of working hours.

**7.0 Exposure Controls**

- 7.1 Where the current PM<sub>2.5</sub> is 20.5 µg/m<sup>3</sup> (AQI 69) or more, the CCS departments are encouraged to implement exposure controls.
- 7.2 Where the current PM<sub>2.5</sub> is 35.5 µg/m<sup>3</sup> (AQI 101) or more, the CCS departments must implement effective exposure controls outlined below whenever feasible.
- 7.3 Such controls include, but are not limited to:
- Providing enclosed buildings, structures, or vehicles where the air is adequately filtered.
  - Providing portable HEPA filters in enclosed areas. Contact Facilities (509-533-8630) for other alternatives.
  - Relocating work to a location with a lower ambient air concentration of PM<sub>2.5</sub>.
  - Changing work schedules to a time with a lower ambient air concentration of PM<sub>2.5</sub>.
  - Avoiding or reducing work that creates additional exposures to dust, fumes, or smoke.
  - Reducing work intensity.
  - Providing additional rest periods.

7.4 The below table summarizes the key requirements:

CURRENT PM <sub>2.5</sub>	AQI	REQUIREMENTS AT CURRENT PM <sub>2.5</sub> LEVEL
0.0-20.4 µg/m <sup>3</sup>	0-68	<ul style="list-style-type: none"> <li>• Prepare a written wildfire smoke response plan.</li> <li>• Provide wildfire smoke training to employees.</li> <li>• Watch the PM<sub>2.5</sub> conditions and forecasts.</li> <li>• Prepare a two-way communication system.</li> <li>• Make provisions for prompt medical attention and permit such medical attention without retaliation.</li> </ul>
20.5-35.4 µg/m <sup>3</sup>	69-100	All of the above and: <ul style="list-style-type: none"> <li>• Notify employees of PM<sub>2.5</sub> conditions.</li> <li>• Ensure only trained employees work outdoors.</li> <li>• Consider implementing exposure controls.</li> <li>• Consider providing voluntary use respirators.</li> </ul>

35.5-250.4 µg/m <sup>3</sup>	101-300	All of the above and:  <ul style="list-style-type: none"> <li>• Implement exposure controls.</li> <li>• Make N95 respirators available for voluntary use.</li> </ul>
250.5-500.3 µg/m <sup>3</sup>	301-499	All of the above and:  <ul style="list-style-type: none"> <li>• Ensure workers experiencing symptoms requiring immediate medical attention be moved to a location that ensures sufficient clean air.</li> <li>• Directly distribute N95 respirators to employees for voluntary use.</li> </ul>
500.4-554.9 µg/m <sup>3</sup>	500-beyond the AQI	All of the above and:  <ul style="list-style-type: none"> <li>• Implement a complete required use respiratory protection program, including fit-testing, medical evaluations, requiring employees to be clean-shaven, and requiring the use of particulate respirators.</li> </ul>
555 µg/m <sup>3</sup>	Beyond the AQI	All of the above and:  <ul style="list-style-type: none"> <li>• Require respirators with an assigned protection factor (APF) of 25 or more. N95 Respirators are not sufficient at this level of smoke.</li> </ul>

**8.0 Respirator usage**

The CCS departments should provide respirators for their personnel and, depending on the level of wildfire smoke pollution (see the table in section 7 of this plan), either encourage or require them to wear a respirator if outdoor work must continue during a wildfire smoke event. When wearing a respirator, the following items must be considered.

- 8.1 It is important to wear a respirator when there is a risk of exposure to elevated levels of wildfire smoke to limit, reduce, or eliminate potential symptoms.
- 8.2 Employees who are required to wear respirators, including N95 masks, must do the following:
  - 8.2.1 Receive initial Respiratory Protection training and annually thereafter.
  - 8.2.2 Complete a respirator medical evaluation before they begin using their respirator.
  - 8.2.3 Complete an initial fit testing for their respirators and annually thereafter.
- 8.3 Using a respirator that does not fit correctly may pose potential problems:
  - 8.3.1 Improper seal around the face, causing PM<sub>2.5</sub> to be inhaled through the mouth and nose.
  - 8.3.2 Too tight of a fit, causing pain to the users head/face.
- 8.4 Using a respirator without proper medical evaluation may pose potential problems:
  - 8.4.1 No consideration for pre-existing health conditions that might affect the user while wearing a respirator or checks to make sure the respirator won't cause any harm to the user.
- 8.5 To properly put on a respirator, make sure you are doing the following:
  - 8.5.1 Tighten properly selected cartridges to the facemask.
  - 8.5.2 Fasten straps over your head and tighten them until the facemask is kept firmly touching your face.
  - 8.5.3 Perform "seal check" by first placing hands on the cartridges, restricting the airflow in, and breathing in, double checking the respirator makes a tight seal. Then cover the exhale, restricting airflow out, also checking for a tight seal.

- 8.6 Employees are required to clean and maintain their own respirator:
  - 8.6.1 Respirators are to be cleaned and disinfected frequently to prevent harm to the employee.
  - 8.6.2 Monitor respirators for damage; replace if needed.
  - 8.6.3 Store in a secure environment that protects from damage, extreme temperatures, sunlight, excessive moisture, dust, contamination, and damaging chemicals.

For more information on Respirator Usage, please refer to CCS Administrative Procedure [2.30.05-K Respiratory Protection Program](#)

## **9.0 Training**

The CCS departments with outdoor employees must provide initial and annual training on wildfire smoke safety to their staff. This requirement can be fulfilled by completing the online [HSI Wildfire Smoke Safety](#) training, which covers the risks associated with wildfire smoke exposure, signs and symptoms of smoke-related illness, and strategies to reduce exposure. If your employees do not have access to the HSI training system or you are looking for other training options, please contact the EH&S office at (509) 533-8686 or (509) 533-8850.

## **10.0 Resources**

- 10.1 [CCS Wildfire Smoke](#)
- 10.2 [CCS Administrative Procedure 2.30.05-K Respiratory Protection Program WAC 296-820, Wildfire Smoke](#)
- 10.3 [WA L&I Wildfire Smoke Training and Resources](#)
- 10.4 [Spokane Regional Clean Air Agency: Preparing for wildfire smoke](#)
- 10.5 [WA State Department of Ecology: Wildfire Smoke Information](#)
- 10.6 [CDC: Wildfires and Your Safety](#)
- 10.7 [EPA: Wildland Fires and Smoke](#)