



## **Eastern Oregon University's Wildfire Smoke Response Plan**

### **Purpose**

Changing weather patterns, including longer, hotter summers, are leading to more wildfires. This means employees are more likely to be exposed to unhealthy levels of wildfire smoke. Oregon OSHA permanently adopted OAR 437-002-1081 and OAR 437-004-9791, Protection from Wildfire Smoke on July 1, 2022.

EOU Wildfire Smoke Protection Program outlines the procedures required to meet the Oregon OSHA rule and to maintain a safe and healthy work environment.

### **Scope**

The Oregon OSHA Wildfire Smoke Protection Standard OAR 437-002-1081 applies to employees who are or will be exposed to unhealthy or hazardous levels of wildfire smoke. These conditions specifically refer to when the ambient air concentration for fine particulate matter (PM 2.5) at or above 35.5  $\mu\text{g}/\text{m}^3$  (AQI 101).

### **Exemptions**

The following workplaces and employees working within these workplaces are exempt from these rules:

- Employees working in enclosed buildings and structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to open doors to enter or exit.
- Employees in 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 and exit.
- When it is predetermined that departmental and/or EOU campus wide operations will be suspended to prevent employee exposure to wildfire smoke levels for PM 2.5 at or above 35.5  $\mu\text{g}/\text{m}^3$  (AQI 101).
- Employees working from home.

### **Definitions**

Air Quality Index – The Air Quality Index (AQI) was developed by the US Environmental Protection Agency (EPA) as an indicator of overall air quality and is based on the five criteria pollutants regulated under the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.

Filtering Facepiece Respirators - Disposable, negative-pressure, air purifying respirators

where an integral part of the facepiece or the entire facepiece is made of air contaminant filtering material.

NIOSH – The National Institute for Occupational Safety and Health of the United States Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

PM2.5 – Solid particles and liquid droplets suspended in air, known as fine particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller and measured in micrograms per cubic meter (ug/m3).

Sensitive Groups – Individuals with pre-existing health conditions and those who are sensitive to air pollution who are among those likely to experience health problems from exposure to wildfire smoke.

### **Responsibilities**

The majority of EOU employees fall under the exemptions listed above. Any employee or department not part of the exemptions are required to participate in the wildfire smoke protection plan, the most effected departments are Facilities and Athletics.

#### **Employees**

- Participate in wildfire smoke protection training annually.
- Follow precautions and departmental work practices for wildfire smoke protection.
- Notify supervisor if air quality at their work location necessitated a change in exposure controls.
- Employees are responsible for knowing and educating themselves about their own personal risk factors that may increase their chance for experiencing wildfire smoke related illnesses.
- Notify supervisor of any health symptoms that may be the result of wildfire smoke exposure and necessitate immediate medical attention, this may include health issues such as, asthma attacks, difficulty breathing, and chest pain.

#### **Supervisors**

- Ensure all employees, including new employees and student workers receive and complete wildfire smoke training annually.
- Monitor employee exposure to wildfire smoke when employees are likely to be exposed to wildfire smoke levels at or above AQI 101. Perform monitoring at the beginning of each shift and periodically throughout the day.
- Develop and implement a two-way communication system to communicate wildfire smoke information between supervisors and employees.
- Provide employees with NIOSH-approved filtering facepiece (N95) for voluntary use at no cost to the employee.
- If an employee reports or exhibits health symptoms that may be the result of wildfire smoke exposure. The employee will be offered medical assistance as needed. After the employee is safe and offered treatment the supervisor will complete a workplace incident report.

### **Safety and Security (Emergency management & EHS)**

- Develop, implement, and periodically update the EOU wildfire smoke protection plan.
- Monitor forecasted air quality conditions and conduct incident assessment if wildfire smoke levels are forecasted at or above 35.5 µg/m<sup>3</sup>(AQI 101).
- Assist in coordinating EOU's institutional level response activities for wildfire smoke levels according to Table 1.0- *wildfire smoke standards' key requirements for exposure levels*.
- Develop and provide Wildfire Smoke Protection training materials to be accessible to departments.

### **Procedures and Requirements**

*Table 1.0- wildfire smoke standards' key requirements for exposure levels.*

AQI Value	Wildfire Smoke Key Requirements for Exposure Level
101 - 276	<ol style="list-style-type: none"><li>1. Assess and monitor air quality at each work location where employees are exposed</li><li>2. Provide and document employee training</li><li>3. Implement two-way communication system</li><li>4. Implement engineering and administrative controls</li><li>5. Provide NIOSH-approved filtering facepiece respirators for voluntary use</li></ol>
277-848	<ol style="list-style-type: none"><li>1. 1-4 for AQI 101 – 250 above; and</li><li>2. Provide NIOSH-approved filtering facepiece respirators (N-95) for mandatory use by implementing a Wildfire Smoke Respiratory Protection Program in accordance with Appendix A, in the Protection from Wildfire Smoke Standards</li></ol>
849 and above	<ol style="list-style-type: none"><li>1. 1-4 AQI 101 – 250 above; and</li><li>2. Provide NIOSH-approved respirators for mandatory use by implementing a Respiratory Protection Program in accordance with 29 CFR 1910.134 or OAR 437-004-1041</li></ol>

Employee exposure to wildfire smoke must be monitored when employees are, or are likely to be exposed to wildfire smoke levels for PM 2.5 at or above 35.5 µg/m<sup>3</sup>(AQI 101). This monitoring will be performed at the start of each shift and periodically throughout the day.

Emergency Management monitors forecasted air quality conditions and conduct incident assessment if wildfire smoke levels are forecasted PM 2.5 at or above 35.5 µg/m<sup>3</sup>(AQI 101). Supervisors, and departments should also monitor forecasted air quality throughout the shift to determine if changes in air quality would necessitate an increase or decrease in the level of exposure controls for their employees. Should changes be deemed necessary supervisors should notify the Director of Safety and Security.

Employees will be provided N95 filtering facepiece, to use voluntarily at any time that wildfire smoke response plan has been activated (AQI 101). The use of an N95 mask becomes

mandatory for outdoor activities when the AQI reaches 277. When the AQI reaches 849 or greater NIOSH-approved respirators will become mandatory for any outdoor employee. Additionally, an employee's work location may be modified when possible to move indoors. In extreme cases executive leadership of the university may decide to suspend operation and send then employees' home until the air quality improves.

Monitoring will be completed by monitoring [www.airnow.gov](http://www.airnow.gov) or via the Oregon Department of Environmental Quality air quality monitoring data site <https://oraqi.deq.state.or.us/home/map>.

Supervisors must develop and implement a two-way communication system to communicate wildfire smoke information between supervisors and employees before employees are exposed to wildfire smoke levels for PM 2.5 at or above 35.5 µg/m<sup>3</sup>(AQI 101). At a minimum, this communication must include

- A means to notify exposed employees of any changes in the air quality at their work location that would necessitate an increase or decrease in the level of exposure controls.
- A means to enable and encourage employees to inform their supervisor of at least the following. Any changes in air quality at their work location that would necessitate an increase or decrease in the level of exposure controls. Any availability issues of appropriate exposure control measures, such as running out of N-95 mask. Any health symptoms that may be the result of wildfire smoke exposure and that could necessitate medical attention.

Unit Directors or unit designee will monitor the local air quality reports via the above listed resources. There are three levels of air quality reports that will trigger actions and communications from supervisors to employees.

- AQI >101 This triggers mandatory notification to all employees. Use of N95 masks is recommended but not mandatory.
- AQI >277 This triggers mandatory notification to all employees. Use of N95 masks mandatory for all employees participating in outdoor activity.
- AQI 849 and above This triggers mandatory notification to all employees. Use of NIOSH-approved respirators for mandatory use for employees working outside.

The Director of Safety & Security will also monitor air quality throughout the day and notify directors when possible of changes and AQI measurements requiring notifications.

Employees who feel that they are sick from exposure to smoke shall notify their immediate supervisor. The supervisor will remove the employee from the smoke effected area and in to a building. The employee will be offered medical assistance as needed. The employee will be encouraged to seek medical treatment from their health care provider. If symptoms of exposure are severe the supervisor (or designee) should call 911 immediately. After the employee is safe and offered treatment the supervisor will complete a workplace incident report.

## **Training**

All employees, including new employees, supervisory, and non-supervisory employees will be trained in the following topics, before employees begin work that can reasonably be anticipated to expose employees to wildfire smoke levels for PM 2.5 at or above 35.5 µg/m<sup>3</sup>(AQI 101).

1. Symptoms of wildfire smoke exposure, including:
  - a. Eyes: burning sensations, redness, and tearing of the eyes caused by irritation and inflammation of the eyes that can temporarily impair one's vision
  - b. Respiratory system: runny nose, sore throat, cough, difficulty breathing, sinus irritation, wheezing, shortness of breath.
  - c. Fatigue, headache, irregular heartbeat, chest pain.
2. The potential acute and chronic health effects from wildfire smoke exposure, including increased health risks "sensitive groups" and how chronic exposures can increase the risk of cardiovascular, or impact one's asthma.
3. 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.
4. How employees can obtain the current average and forecasted ambient air concentration for PM 2.5.
5. The importance, limitations and benefits of using a filtering facepiece respirator, to reduce exposure to wildfire smoke and how to use and maintain their filtering facepiece respirator.
6. The employer's methods to protect employees from wildfire smoke.
  - a. Employees will be provided N95 filtering facepiece, to use voluntarily at any time that wildfire smoke response plan has been activated (AQI 101). The use of an N95 mask becomes mandatory for outdoor activities when the AQI reaches 277. When the AQI reaches 849 or greater NIOSH-approved respirators will become mandatory for any outdoor employee. Additionally, an employee's work location may be modified when possible to move indoors. In extreme cases executive leadership of the university may decide to suspend operation and send then employees' home until the air quality improves.
7. Review of any job tasks performed by employees that the use of a filtering facepiece respirator would expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure.
8. The procedures supervisors must follow when an employee reports or exhibits health systems that necessitate immediate medical attention such as, but not limited to, asthma attacks, difficulty breathing, and chest pain.
  - a. Employees who feel that they are sick from exposure to smoke shall notify their immediate supervisor. The supervisor will remove the employee from the smoke effected area and in to a building. The employee will be offered medical assistance as needed. The employee will be encouraged to seek medical treatment from their health care provider. If symptoms of exposure are severe the supervisor (or designee) should call 911 immediately. After the employee is safe and offered treatment the supervisor will complete a workplace incident report.
9. How to operate and interpret exposure results based on air quality monitoring devices provided by the employer.

- a. Local air quality will be monitored via [www.airnow.gov](http://www.airnow.gov) or via the Oregon Department of Environmental Quality air quality monitoring data site <https://oraqi.deq.state.or.us/home/map> . Supervisors will and employees may access either web site to obtain the current AQI for their location.
10. The two-way communication system for wildfire smoke exposure control information.

### **Emergency Medical Plan**

When the air quality due to smoke exceeds AQI 101, if a supervisor observes, or any employee reports, any signs or symptoms of smoke illness in any employee, the supervisor must take immediate action appropriate to the severity of the illness:

1. All employees should report immediately any symptoms of smoke illness in themselves or if they observe a co-worker to display them.
2. If a supervisor observes signs or an employee reports symptoms of smoke illness, the employee must be relieved from duty in the smoke effected area and be moved into a building with an air handling system that is sufficiently filtering.
3. If the signs or symptoms are indicators of severe smoke illness (such as, but not limited to, decreased level of consciousness, asthma attack, severe chest pain, struggling to breath) immediately implement emergency response procedures.
4. An employee exhibiting signs or symptoms of smoke illness must be monitored and must not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the employer's procedures.

Emergency Response Procedures include the following: Supervisor, or employee when designated emergency employee is not immediately available, shall contact emergency medical services immediately. If necessary and instructed to do so by the medical professionals, transport employees to a place where they can be reached by an emergency medical provider. While waiting for emergency responders to arrive.

Supervisor shall ensure that, in the event of an emergency, clear and precise directions to the work site is provided for first responders to quickly navigate to the location of the affected worker. Once employee is safe and receiving medical attention the supervisor will complete a work place incident report.

Appendix A Link: [Division 2, Subdivision Z, 437-002-1081 Protection from Wildfire Smoke \(oregon.gov\)](#)