[UNIT Name] Wildfire Smoke Response Plan

## Introduction

The purpose of the Wildfire Smoke Response Plan is to help prevent smoke-related illnesses and injuries. University units and departments with personnel who work outdoors are required to complete this template to create a customized plan that serves as a component of their [Supplemental Accident Prevention Plan](https://www.ehs.washington.edu/workplace/accident-prevention-plan).

This Wildfire Smoke Response Plan template meets the requirements in [Washington Administrative Code, WAC 296-820](https://lni.wa.gov/rulemaking-activity/AO20-29/2029Adoption.pdf) enforced by the Washington State Department of Labor and Industries (L&I), Department of Occupational Safety and Health.

*Instructions: Supervisors are required to complete this plan and review it with personnel initially, annually, and when updates are needed.*

* *Evaluate and consider the specific conditions (i.e., Air Quality Index and level of physical activity) during your outdoor work activities to successfully tailor this plan and procedures.*
* *Refer to the* [*Wildfire Smoke*](https://www.ehs.washington.edu/environmental/wildfire-smoke) *page on the Environmental Health & Safety (EH&S) website for detailed information on required actions when air quality worsens due to wildfire smoke.*
* [*Attachment A*](#_ATTACHMENT_A:) *can be used to document the review of this plan with unit/department personnel*.

| The following table summarizes the required protections in Washington Administrative Code (WAC) [296-62-085](https://www.lni.wa.gov/rulemaking-activity/AO22-21/2221CR103EAdoption.pdf) and [296-820](https://www.lni.wa.gov/rulemaking-activity/AO20-29/2029Adoption.pdf). Column 1 provides ranges of current or forecasted hourly particulate matter concentrations with an aerodynamic diameter of 2.5 microns (PM2.5) measured in micrograms per cubic meter (µg/m3). The current Air Quality Index (AQI, shown in column 2) is directly related to the PM2.5 ranges and can also be used to estimate PM2.5 concentrations. Both levels are provided so units can utilize the various recognized information sources.**Table 1: Wildfire Smoke Worker Protections** |
| --- |
| **Current PM2.5(μg/m3)** | **Air Quality Index (AQI)** | **Required Protections** |
| 0.0 - 20.4 | 0 - 71 | * Prepare a written wildfire smoke response plan.
* Provide wildfire smoke training to personnel.
* Watch the PM2.5 conditions and forecasts.
* Prepare a two-way communication system.
* Make provisions for prompt medical treatment and permit that treatment without retaliation.
 |
| 20.5 - 35.4 | 72 - 100 | All of the above and:* Notify personnel of PM2.5 conditions.
* Ensure only trained personnel work outdoors.
* Consider implementing exposure controls.
* Consider providing voluntary use respirators.
 |
| 35.5 - 250.4 | 101 - 350 | All of the above and:* Implement exposure controls.
* Make N95 respirators available for voluntary use.
 |
| 250.5 - 500.3 | 351 - 848 | All of the above and:* Ensure workers experiencing adverse symptoms requiring medical attention are moved to a location that ensures sufficient clean air.
* Directly distribute N95 respirators to personnel for voluntary use.
 |
| 500.4 - 554.9 | 849 - 956 | All of the above and:* Implement a complete required use respiratory protection program, including fit-testing, medical evaluations, requiring personnel to be clean-shaven, and requiring the use of particulate respirators. \*Enrollment not required if personnel exposed at this level for 15 minutes or less in a 24-hour period.
 |
| 555 or more | 957 or more | All of the above and:* Require respirators with an assigned protection factor (APF) of 25 or more. N95 Respirators are not sufficient at this level of smoke.
 |

## Scope

This Plan applies to UW personnel who work outdoors in work areas where it is reasonably anticipated that personnel may be exposed to wildfire smoke with some exceptions.

The Wildfire Smoke rule does ***not*** apply when University personnel are:

* Inside enclosed buildings or structures in which the employer 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; or
* Inside enclosed vehicles in which the air is filtered by a properly maintained cabin air filter and the employer ensures that windows, doors, and other openings are kept closed except when it is necessary to briefly open doors to enter or exit (Buses, light rail, and other enclosed vehicles used for transit systems where doors are frequently opened to board and deboard passengers are not included under this exemption.); or
* Engaged in firefighting (within the scope of [WAC 296-305](https://app.leg.wa.gov/wac/default.aspx?cite=296-305)); or
* Performing prescribed burns.

*[Name of unit/department] personnel doing work activities at a University location that are covered by this Plan:*

* *[List job titles/types and/or tasks]*

## Roles and responsibilities

**University units**

To ensure personnel safety and compliance with the Washington state rule ([[WAC 296-820 Wildfire Smoke](https://uwnetid.sharepoint.com/sites/og_ehs_osh/Shared%20Documents/Industrial%20Hygiene/Wildfire%20Smoke/Final%20Rule%20Drafts/wildfire-smoke-response-plan-template%20DRAFT121423.docx?web=1)](https://lni.wa.gov/rulemaking-activity/AO20-29/2029Adoption.pdf)), units are required to:

* Ensure personnel who work outdoors and their supervisors complete the EH&S [[[Wildfire Smoke Safety training course](https://www.ehs.washington.edu/training/wildfire-smoke-safety-online)](https://www.ehs.washington.edu/training/outdoor-heat-safety)](https://www.ehs.washington.edu/training/wildfire-smoke-safety-training-online) initially and annually.
* Develop and implement a [Wildfire Smoke Response Plan](https://www.ehs.washington.edu/resource/outdoor-heat-exposure-prevention-plan-template-1155) by completing this template. Review this plan with your personnel initially and annually.
* Inform personnel that they are protected from retaliation for reporting signs or symptoms of wildfire smoke exposure, or for seeking medical care for wildfire smoke-related illnesses or symptoms resulting from outdoor work.

**Personnel**

* Complete the EH&S [[[[Wildfire Smoke Safety training course](https://www.ehs.washington.edu/training/outdoor-heat-safety)](https://www.ehs.washington.edu/training/wildfire-smoke-safety-training-online)](https://www.ehs.washington.edu/training/wildfire-smoke-safety-training-online)](https://www.ehs.washington.edu/training/wildfire-smoke-safety-online) initially and annually.
* Follow the University and unit requirements for preventing wildfire smoke-related illnesses or symptoms.
* Report wildfire smoke-related health symptoms to your supervisor.
* Recognize and monitor yourself for [wildfire smoke health effects](https://www.cdc.gov/wildfires/risk-factors) and know your [personal risk factors](https://www.cdc.gov/wildfires/risk-factors/wildfire-smoke-and-people-with-chronic-conditions.html) for wildfire smoke, which may include asthma, COPD, heart disease, diabetes, pregnancy, and respiratory infections among others.

## Worker health and safety requirements

Personnel and supervisors share responsibility for safety at the worksite. This includes watching out for yourself and others and communicating worsening air quality and potential wildfire smoke-related health symptoms.

1. **Hazard communication**
2. Units are required to have a reliable 2-way communication method to relay current air quality conditions and protective measures available to reduce wildfire smoke exposures. Personnel must have a mechanism for and given the opportunity to report smoke-related health symptoms, availability issues of protective measures, such as respirators, and changing conditions.

*[Describe your unit’s communication system.]*

1. Notification to personnel and increasing protective measures are required when at least two consecutive PM2.5 readings or forecasted readings cross a threshold listed in Table 1. Controls can be reduced when two consecutive readings fall below a threshold.

*[Describe how your unit will obtain accurate AQI information (Check all that apply).*

*\_\_\_\_* [*fire.airnow.gov*](https://www.airnow.gov/?city=Seattle&state=WA&country=USA)

*\_\_\_\_ The University AQI forecasts*

*\_\_\_\_ EH&S* [*homepage*](https://www.ehs.washington.edu/)*.*

*\_\_\_ Other (List source)*

1. **Exposure symptom response**
2. Units must allow personnel who display or report any symptoms (listed in section 5 below) that may potentially be related to wildfire smoke exposure to seek medical attention or follow medical advice they have been given. Units must not retaliate against an affected individual for seeking such medical attention or following medical advice.

Units must monitor personnel displaying symptoms of wildfire smoke exposure to determine whether medical attention is necessary. Units must have procedures in place for obtaining medical attention for affected employees.

*[Describe your unit’s system for monitoring personnel for exposure-related symptoms and responding to exposures.]*

1. Units must take steps to reduce or eliminate continued exposure to wildfire smoke as appropriate to an individual’s symptoms, intensity of exposure, and exposure controls in place, including respiratory protection.

*[Describe your unit’s steps to reduce or eliminate exposure based on an individual’s symptoms, intensity of exposure, and exposure controls in place.]*

1. Where the current **AQI is at or above 351** at the location where outdoor work is occurring, units must ensure personnel who are experiencing symptoms that require immediate medical attention are moved to a location with sufficient clean air such as:
* A location where the current AQI is less than 351; or
* An enclosed building, structure, or vehicle with HEPA filtration sufficient for the volume of the space.

*[Describe your unit’s reduction steps to reduce or eliminate exposure based on individual’s symptoms when the AQI is at or above 351.]*

1. Units must have effective provisions made in advance for prompt medical attention of personnel who display symptoms of wildfire smoke exposure. Units can reference the current Supplemental Accident Prevention or First Aid Plans if they already provide suitable provisions.
2. **Exposure controls**

Controls help prevent personnel from being exposed to wildfire smoke.

1. **AQI at or above 72**

When the current AQI is at 69 or higher at the location where work is occurring, units are responsible for communicating wildfire smoke hazards, providing wildfire smoke safety training, and providing respiratory protection for voluntary use to personnel upon request.

Exposure controls that are required when the AQI is at 101 or higher are optional to implement when the AQI is between 72 and 100.

*[Describe how your unit is providing required training and respiratory protection for voluntary use. List any additional optional exposure controls*.]

1. **AQI at or above 101**

When the current AQI is at 101 or higher where work is occurring, units are required to implement effective exposure controls whenever feasible. Such controls include, but are not limited to:

* Providing work and/or rest areas in enclosed buildings, structures, or vehicles where the air is effectively filtered
* Providing portable HEPA filters in enclosed areas
* Relocating work indoors, or to an outdoor location with a lower AQI
* Changing work schedules so outdoor work can occur when the AQI is lower
* Avoiding or reducing work that creates additional exposures to dust, fumes, or smoke
* Reducing the amount of work that involves physical exertion
* Providing additional rest periods
* Monitoring personnel for exposure symptoms
* Making N95 respirators available for voluntary use, and provide [Advisory Information for Employees who Voluntarily Use Respirators](https://www.ehs.washington.edu/system/files/resources/voluntaryrespiratorform405.pdf) to all personnel using a respirator voluntarily

*[Units should describe which controls will be utilized and how the selected control measures will be implemented and communicated to personnel.]*

1. **Respiratory Protection**

Units may need to provide respirators and either encourage or require personnel to wear them (based on the level of wildfire smoke pollution) if work must continue outdoors during a wildfire smoke event. Respirators are used in addition to other exposure controls; they do not replace other exposure controls.

When the current **AQI is between 72 and 100** where work is occurring, units are responsible for providing N95 filtering-facepiece respirators at no cost to personnel upon request. If personnel choose to wear a respirator, the unit must also provide [advisory information](https://www.ehs.washington.edu/system/files/resources/voluntaryrespiratorform405.pdf) with the respirator.\*

When the current **AQI is between 101 and 350** where work is occurring, units are required to provide N95 filtering-facepiece respirators to exposed personnel. Units are required to encourage personnel to use a respirator; however, personnel are not required to use them. If personnel choose to wear a respirator, the unit must also provide [advisory information](https://www.ehs.washington.edu/system/files/resources/voluntaryrespiratorform405.pdf) with the respirator.\*

Units must provide respirators by either of the following methods:

* Directly distribute to each exposed employee; or
* Maintain a sufficient supply for all exposed personnel at each work location where exposure occurs. Respirator supply availability and locations must be made known and be readily accessible to all exposed personnel in a manner that does not restrict or hinder employee access to obtain and replace respirators when needed.

When the current **AQI is between 351 and 848** where work is occurring, units must distribute N95 filtering-facepiece respirators directly to each exposed individual. Units are required to encourage personnel to use a respirator; however, personnel are not required to use them. If personnel choose to wear a respirator, the unit must also provide [advisory information](https://www.ehs.washington.edu/system/files/resources/voluntaryrespiratorform405.pdf) with the respirator.\*

When the current **AQI is between 849 and 956** (beyond the AQI) where work is occurring, personnel must be enrolled in the [UW respiratory protection program](https://www.ehs.washington.edu/workplace/respiratory-protection). The unit is required to provide to personnel working outdoors (and personnel are required to wear) one of the following respirators:

* N95 filtering facepiece respirator;
* Half-facepiece air-purifying respirator equipped with P100 filters; or
* Other respirators equipped with P100 filters, with an assigned protection factor of 10 or greater.

The requirement for enrollment in the respiratory protection program does *not* apply to personnel exposed to PM2.5 above the AQI of 849 for a total of 15 minutes *or less* during a 24-hour period.

When outdoor work is required at levels above the AQI of 957 and over 555 µg/m3, respirators with an assigned protection factor of 25 are required.

\*UW personnel voluntarily wearing a respirator in the workplace when it is *not*required must be provided with [Advisory Information for Employees who Voluntarily Use Respirators,](https://www.ehs.washington.edu/system/files/resources/voluntaryrespiratorform405.pdf) regardless of whether the respirator is provided by the University or acquired by other means.

*[Describe the procedure for providing and distributing respiratory protection for the increasing levels of wildfire pollution.]*

1. **Training**

Personnel working on the jobs listed above are required to receive wildfire smoke safety training initially and annually thereafter. This requirement can be met by completing the online [EH&S Wildfire Smoke safety training](https://www.ehs.washington.edu/training/wildfire-smoke-safety-training-online), which includes the risks of wildfire smoke exposure, signs and symptoms of smoke-related illness, and the steps to reduce exposure.

Optional: Units may choose to pair an experienced worker with new personnel to monitor each other and ensure they can put the training into practice.

Additional information, online videos and other training resources are available on the L&I [Wildfire Smoke resource page](https://lni.wa.gov/safety-health/safety-topics/topics/wildfire-smoke).

Units may need to provide translation services to ensure all personnel fully understand the materials and feel comfortable asking questions.

EH&S provides a [Wildfire Smoke webpage](https://www.ehs.washington.edu/environmental/wildfire-smoke) with helpful information.

**Personnel need to be informed of the following as part of the training:**

1. The health effects and symptoms of wildfire smoke exposure;
2. The importance of informing their supervisor when personnel are experiencing symptoms of wildfire smoke exposure;
3. The right to obtain medical attention without fear of reprisal;
4. The requirements of [WAC 296-820-805](https://lni.wa.gov/rulemaking-activity/AO20-29/2029Adoption.pdf) through 296-820-860;
5. The unit's methods of monitoring the current air quality where work is occurring;
6. How personnel can obtain information about the current air quality where work is occurring, and the unit’s methods to communicate changes in air quality;
7. The unit's Wildfire Smoke Response Plan, including methods to protect personnel from wildfire smoke, and the response procedures when personnel have symptoms of wildfire smoke exposure;
8. The importance, benefits, and limitations of using a properly-fitted respirator when exposed to wildfire smoke;
9. The risks and limitations of using an unfitted respirator, and the risks of wearing a respirator without a medical evaluation; and
10. How to properly put on, use, and maintain the respirators provided by the unit.

**Supervisors need to know the following as part of training (in addition to what is detailed for personnel above):**

1. The procedures the supervisor must follow to implement this Plan;
2. The procedures the supervisor must follow if an employee exhibits symptoms of wildfire smoke exposure; and
3. Procedures for moving or transporting personnel to an emergency medical service provider, or other appropriate level of care, if necessary.

## Responding to wildfire smoke-related illness

Personnel are encouraged to let a supervisor (or someone nearby) know if they or a co-worker are experiencing symptoms of wildfire smoke-related illness and take immediate action to ensure things don’t get worse. Supervisors should ensure the protection of personal health information to the extent possible.

Symptoms of wildfire smoke-related illness can include:

* Coughing, difficulty breathing, wheezing, shortness of breath, asthma attack, runny nose, sore throat, sinus pain or pressure.
* Chest pain or discomfort, fast or irregular heartbeat, feeling weak, light-headed, faint, dizzy, pain or discomfort in the jaw, neck or back.
* Sudden numbness or weakness in the face, arm or leg – especially on one side of the body; sudden confusion; trouble speaking or difficulty understanding speech; sudden trouble seeing in one or both eyes; sudden trouble walking, dizziness, loss of balance, or lack of coordination; sudden severe headache with no known cause.
* Headache, scratchy or irritated eyes, fatigue or tiredness.

*Describe unit-specific emergency response procedures below.*

1. Let the individual(s) rest and move to area of better air quality. [*List other practices adopted to respond to wildfire smoke-related health emergencies.]*
2. [*For personnel working alone, specify the supervisor or designee staying in contact with the individual to monitor their recovery and assess the need to contact emergency medical services.]*
3. If the individual does not respond quickly, call emergency medical services. [*Describe the method to access emergency medical services. Include a map and clear directions to give if emergency services are called.]*
4. *[If the individual is in a remote or non-developed area with unidentified roads, create procedures for moving or transporting them to a place where they can be reached by emergency medical services. For example, you may need to have the supervisor or another person meet emergency services at the closest point to guide them to the ill employee’s location.]*

If an individual who was exposed to wildfire smoke receives medical attention, the individual will request written authorization from the healthcare provider indicating whether the worker can return to work, and if so, whether there are any restrictions or limitations.

The supervisor, the person injured, or another University representative must submit a report of the incident within 24 hours to EH&S via the UW’s [Online Accident Reporting System (OARS).](https://oars.ehs.washington.edu) Any inpatient hospitalization requires immediate notification to EH&S.

The University will **not**retaliate against University personnel for reporting an air quality hazard, an adverse health effect, or for seeking medical treatment due to a work-related illness or injury, including exposure to wildfire smoke.

## ATTACHMENT A: Sample Documentation Form

**Unit or Site-Specific Wildfire Smoke Safety Plan Review**

**Workplace Name:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Training Date** | **Signature** |
| Click here to enter name. | Click here to enter date. |  |
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**By signing this log, you confirm that you have been provided with site specific wildfire smoke safety information, that the content of the information is understood, and that you have had an opportunity to ask questions.**