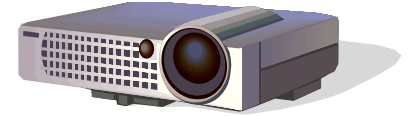


PowerPoint Training Program – Wildfire Smoke



For employees exposed to wildfire
smoke at work

Instructor's Guide

Purpose of This Training Module

You may use this slide presentation to comply with the training requirements of the DOSH emergency Wildfire Smoke rule regulations (WAC 296-62-085). You can read the training requirements in the rule at the end of this guide.

The topics covered in this module are those required in the rule. However, you may use different materials that cover these topics if you believe that they will be more effective.

Getting Ready

1. Resources and materials you will need:

- A quiet room with basic accommodations for comfort of participants
- Computer and projector for PowerPoint presentation
- Copies of the handouts (optional)
- Certificates to hand out to the class as proof of attendance (optional)
- A training roster to pass around for your records (recommended)

2. Review the presentation materials.

Take the time to look through each of the slides and read the instructor's notes that come with each slide. If you have any questions after looking through these materials, you can contact your local L&I office (see page 3) for assistance before you give your first presentation.

3. Customizing the presentation.

- The information contained in this module applies to all workplaces. To provide an effective training experience, customize this content to reflect your actual workplace safety practices and precautions that reflect your actual work practices (monitoring air quality, emergency response procedures, etc.). Several slides indicate where workplace-specific information can be included. *Just using the training module without the workplace-specific information may not satisfy all training requirements.*

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- If you have PowerPoint on your computer, additional information is easily added to the PowerPoint version after downloading. The PowerPoint version can be modified, but modification that changes the essential meaning or deletes information may not meet the training requirements.
- If you use the PDF paper version, the slides cannot be changed, but you can provide the workplace specific information orally or as paper handouts.

4. Prepare the materials and schedule the class

- If you have a computer video projection system, all you need to do is check to make sure the presentation works and make copies of the handouts.
- Schedule the class for a date and time convenient to most people. If you want many employees and supervisors to participate, try not to make groups larger than 15 attendees.

Presenting the Training

Give the presentation

You can use your own words rather than just reading from the script.

Ask for participation

It also helps to involve the audience as much as possible by asking them questions and getting them to talk about their own jobs, their exposure to wildfire smoke, use of personal protective equipment and any suggestions they may have on how to reduce their exposure to wildfire smoke.

Questions and answers

Answer any questions the best that you can. Even if you don't have the technical knowledge to answer a lot of questions on wildfire smoke, you can still answer the important questions about the way that your company is addressing employee exposure. If any questions on wildfire smoke are asked that you need help answering, you can contact your local L&I office listed on the following page or email EyeOnSafety@lni.wa.gov.

Follow-up

Within a week or two of giving the training, you might want to take a few minutes to talk to some of the employees and supervisors to make sure they understood what was presented and how it applies to them.

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Getting help

If you have questions while preparing to give this presentation, or if questions come up during the presentation that you need help in answering, email EyeOnSafety@lni.wa.gov or contact your local L&I office listed below for assistance:

City	Phone Number	City	Phone Number
Bellingham	360-647-7300	Tacoma	253-596-3800
Everett	425-290-1300	Tukwila	206-835-1000
Kennewick	509-735-0100	Tumwater	360-902-5799
Mount Vernon	360-416-3000	Vancouver	360-896-2300
Seattle	206-515-2800	East Wenatchee	509-886-6500
Spokane	509-324-2600	Yakima	509-454-3700

Training Requirements in the Wildfire Smoke Emergency Rule

WAC 296-62-08550 Information and training.

The employer must provide all workers effective information and training regarding wildfire smoke before work that exposes the worker to PM_{2.5} levels of 20.5µg/m³ (WAQA 101, AQI 69) or more, and at least annually thereafter.

- (1) Information and training must be provided in a manner and language readily understood by the workers.
- (2) At a minimum, the training must include the information in WAC 296-62-08590 Appendix B.
- (3) Supervisor training. Prior to supervising employees performing work that exposes the worker to PM_{2.5} levels that are 20.5µg/m³(WAQA 101, AQI 69) or more, supervisors must have training on the information in WAC 296-62-08590 Appendix B, and the following topics:
 - (a) Procedures the supervisor must follow to implement the applicable provisions of WAC 296-62-085 through 296-62-08590 wildfire smoke;
 - (b) Procedures the supervisor must follow if an employee exhibits adverse symptoms of wildfire smoke exposure, including appropriate emergency response procedures; and

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- (c) Procedures for moving or transporting employees to an emergency medical service provider, if necessary.

WAC 296-62-08590 Appendix B: Protection from wildfire smoke information to be provided to employees (mandatory).

- (1) The health effects of wildfire smoke.

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.

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.

Greater concentrations of particulate matter in the air create more of a hazard for workers. This rule requires that employers implement protections for workers once the amount of particulate matter in the air reaches a certain concentration: A NowCast PM_{2.5} 55.5µg/m³ (WAQA 173, AQI 151).

However, some workers may experience health effects at NowCast PM_{2.5} levels of 20.5µg/m³ (WAQA 101, AQI 69) or lower, especially if they belong to a sensitive group. Employers are encouraged to implement exposure controls and provide respirators at no cost to employees where the NowCast PM_{2.5} is 20.5µg/m³ (WAQA 101, AQI 69). Employees may request to provide their own respirator for voluntary use at any NowCast PM_{2.5} level below 55.5µg/m³ (WAQA 173, AQI 151).

Sensitive groups. People with preexisting health conditions and those who are sensitive to air pollution who are among those most likely to experience health problems from exposure to wildfire smoke. Examples of sensitive groups include:

- People with lung diseases such as asthma or chronic obstructive pulmonary disease (COPD), including bronchitis and emphysema, and those who smoke;
- People with respiratory infections, such as pneumonia, acute bronchitis, bronchiolitis, colds, flu, or those with, or recovering from COVID-19;
- People with existing heart or circulatory problems, such as irregular heart beat, congestive heart failure, coronary artery disease, angina, and those who have had a heart attack or stroke;
- Children under eighteen years old, and adults over age sixty-five;
- Pregnant women;
- People with diabetes;
- People with other medical or health conditions which can be exacerbated by exposure to wildfire smoke as determined by a physician.

- (2) The right to obtain medical treatment without fear of reprisal.

Employers must 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

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treatment. Employers must 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.

(3) How employees can obtain the NowCast PM_{2.5} in the air.

Various government agencies monitor the air at locations throughout Washington and report the NowCast PM_{2.5} for those places. Both the Washington air quality advisory (WAQA) and the Air Quality Index (AQI) use the air quality data from these regulatory monitors. While both the WAQA and AQI use the same data to provide an indicator of how unhealthy the current air quality is, the WAQA uses lower thresholds for reporting the health hazard.

Although the government monitoring stations may measure several pollutants, this chapter only uses PM_{2.5}. There are several ways to determine the PM_{2.5} levels. Note that if you choose to use an index such as WAQA or AQI, use the following table to find the equivalent WAQA or AQI for PM_{2.5}.

NowCast PM_{2.5} in Micrograms per Cubic Meter (µg/m³)	NowCast Washington Air Quality Advisory (WAQA)	NowCast Air Quality Index (AQI)
20.5µg/m ³	101	69
55.5µg/m ³	173	151

(4) Some sources to obtain this data include:

(a) NowCast PM_{2.5}, available at:

- U.S. Forest Service AirFire website <https://tools.airfire.org/monitoring>.

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- (b) NowCast AQI, available at:
- U.S. EPA AirNow website <https://www.airnow.gov/>;
 - “EPA AirNow” mobile app (free);
 - U.S. Forest Service AirFire website <https://tools.airfire.org/monitoring>;
 - EPA Enviroflash.info <http://www.enviroflash.info/>(provides notifications).
- (c) NowCast WAQA, available at:
- Washington Air Monitoring Network website <https://enwiwa.ecology.wa.gov/home/map>;
 - “Air Quality WA” mobile app (free);
 - Washington Smoke Information website <https://wasmoke.blogspot.com/>.
 - Employees who do not have access to the internet or phone can contact their employer for the NowCast PM_{2.5}.
- (5) The requirements of WAC 296-62-085 through 296-62-08590, wildfire smoke rule. If employees may be exposed to wildfire smoke, then the employer is required to:
- (a) Check the NowCast PM_{2.5} before and periodically during each shift.
 - (b) Provide training to employees if they are exposed to wildfire smoke at NowCast PM_{2.5} levels of 20.5µg/m³ (WAQA 101, AQI 69) or more.
 - (c) Implement a two-way communication system.
 - (d) Provide engineering and administrative controls when the NowCast PM_{2.5} is 55.5µg/m³ (WAQA 173, AQI 151) or more if feasible.
 - (e) Provide respirators and encourage their use when the NowCast PM_{2.5} is 55.5µg/m³ (WAQA 173, AQI 151) or more.

Employers shall alert employees when the NowCast PM_{2.5} is 55.5µg/m³ (WAQA 173, AQI 151) or more, and what protective measures are available to employees.

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.

The employer's communication system is: _____

- (6) The employer's methods to protect employees from wildfire smoke.
- Employers are encouraged to take action to protect employees from wildfire smoke when the NowCast PM_{2.5} is 20.5µg/m³ (WAQA 101, AQI 69) and must take action to protect employees from wildfire smoke when the NowCast PM_{2.5} is 55.5µg/m³ (WAQA 173, AQI 151). Examples of protective methods include:
- (a) Locating work in enclosed structures or vehicles where the air is filtered.
 - (b) Changing procedures such as moving workers to a place with a lower PM_{2.5}.

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- (c) Reducing work time in areas with unfiltered air.
- (d) Increasing rest time and frequency, and providing a rest area with filtered air.
- (e) Reducing the physical intensity of the work to help lower the breathing and heart rates.

The employer's control system at this worksite is: _____

- (7) The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.

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 $PM_{2.5}$ is $20.5\mu\text{g}/\text{m}^3$ or lower, to provide additional protection.

When the NowCast $PM_{2.5}$ is $20.5\mu\text{g}/\text{m}^3$ (WAQA 101, AQI 69) or more, employers are encouraged to make proper respirators available to workers who may choose to use them voluntarily.

When the NowCast $PM_{2.5}$ is $55.5\mu\text{g}/\text{m}^3$ (WAQA 173, AQI 151) or more, employers must make proper respirators available to workers who may choose to use them voluntarily.

If an employer declines to provide respirators to a worker below NowCast $PM_{2.5}$ of $55.5\mu\text{g}/\text{m}^3$ (WAQA 173, AQI 151), the worker may request to provide their own respirator for voluntary use. The training contained in this section, meets the requirements for voluntary use respirator training.

A respirator should be used properly and kept clean.

The following precautions must be taken:

- (a) Employers shall select respirators certified for protection against the specific air contaminants at the workplace. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example). KN95 respirators may also be used if adequate supply of NIOSH approved respirators is not available.

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.

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- (b) 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 to ensure the best protection against wildfire smoke, although doing so is not required for voluntary use of filtering facepiece respirators.
 - (c) 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 workers against gases or vapors, and it will not supply oxygen.
 - (d) Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.
 - (e) Employees who have a heart or lung problem should ask their doctor before using a respirator.
- (8) How to properly put on, use, and maintain the respirators provided by the employer.

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 may be worn by people with facial hair since they do not have seals that are affected by facial hair.

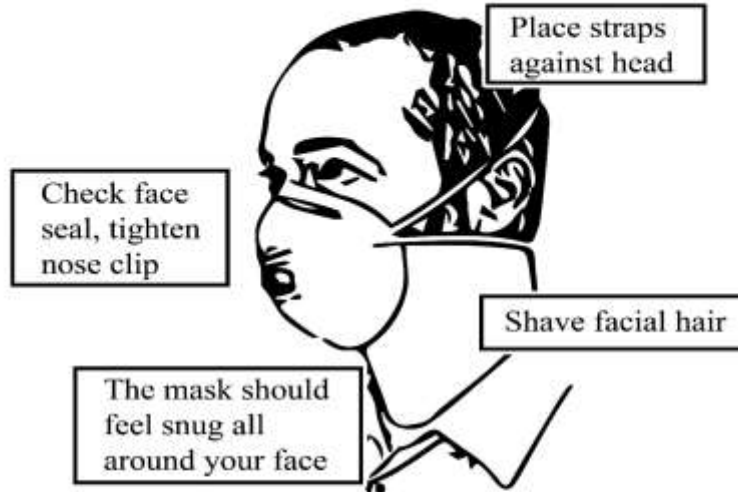
The proper way to put on a respirator depends on the type and model of the respirator. For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

- (a) Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.
- (b) Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.
- (c) Perform a seal check:
 - (i) Cover the respirator with both hands and exhale. If air leaks where the respirator seals against the face, readjust the respirator and nosepiece and try again. When a proper fit is achieved, the respirator should bulge from the face and not leak around the seal.
 - (ii) Cover the respirator with both hands and inhale. If air leaks where the respirator seals against the face, readjust the respirator and nosepiece and try again. When a proper fit is achieved, the respirator should collapse slightly and not leak around the seal.

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For a respirator that relies on a tight seal to the face, check how well it seals to the face by following the manufacturer's instructions for user seal checks. Adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives.

Respirator filters should be replaced if they get damaged, deformed, dirty, or difficult to breathe through. Filtering facepiece respirators are disposable respirators that cannot be cleaned or disinfected. A best practice is to replace filtering facepiece respirators at the beginning of each shift.

If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with cleaner air, take off the respirator, and get medical help.