

# Wildfire Smoke Emergency Rule Stakeholder Meeting

***Dr. Nicholas Reul***  
*Occupational Physician*  
*reni235@lni.wa.gov*

***Chris Pyke***  
*IH Technical Services*  
*pykc235@lni.wa.gov*



# Purpose

- Review of California OSHA's wildfire smoke rule.
  - California Labor Code Title 8 Section 5141.1  
Protection from Wildfire Smoke rule.
- DOSH is seeking feedback on the CA rule requirements.
- The following is not official DOSH language.

# California: Rule overview

- Scope and Exemptions
- Identification of harmful exposures
  - Exposure level and how to measure exposures
- Communication
- Training and Instruction
- Control of harmful exposures
  - Engineering controls
  - Administrative controls
  - Respiratory protection

# California: Definitions

- **Current Air Quality Index (Current AQI).** The method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a real-time basis. Current AQI is also referred to as the “NowCast,” and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible.

# California: Definitions

- **PM2.5.** Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller.
- **Wildfire Smoke.** Emissions from fires in “wildlands,” as defined in Title 8, section 3402\*, or in adjacent developed areas.
  - **\*Wildlands.** Sparsely populated geographical areas covered primarily by grass, brush, trees, crops, or combination thereof.

# California: Scope

The rule applies to employers with workplaces and operations when both of the following conditions are in place:

- The current Air Quality Index (current AQI) for PM<sub>2.5</sub> is 151 or greater (*PM<sub>2.5</sub> of 55.5 micrograms per cubic meter or 55.5 $\mu$ g/m<sup>3</sup>*), regardless of the AQI for other pollutants; and
- The employer should reasonably anticipate that employees may be exposed to wildfire smoke.

# California: Exempt workplaces

- Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed to minimize contamination by outdoor or unfiltered air.
- 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 to minimize contamination by outdoor or unfiltered air.

# California: Exempt workplaces

- The employer demonstrates that the concentration of PM<sub>2.5</sub> in the air does not exceed a concentration that corresponds to a current AQI of 151 (*PM<sub>2.5</sub> of 55.5 $\mu$ g/m<sup>3</sup>*) or greater by measuring PM<sub>2.5</sub> levels at the worksite.
- Employees exposed to a current AQI for PM<sub>2.5</sub> of 151 (*PM<sub>2.5</sub> of 55.5 $\mu$ g/m<sup>3</sup>*) or greater for a total of one hour or less during a shift.
- Firefighters engaged in wildland firefighting.



# California: Identification of Harmful Exposures

For worksites covered by the rule, employers must determine employee exposure to PM<sub>2.5</sub> before each shift and periodically after that, as needed, by any of the following methods:

- **Check AQI forecasts and the current AQI for PM<sub>2.5</sub> from specific websites:** U.S. EPA AirNow, U.S. Forest Service Wildland Air Quality Response Program, California Air Resources Board, local air pollution control district, or local air quality management district
- **Obtain AQI forecasts and the current AQI for PM<sub>2.5</sub> directly from specific sources:** the EPA, California Air Resources Board, local air pollution control district, or local air quality management district by telephone, email, text, or other effective method
- **Measure PM<sub>2.5</sub> levels at the worksite using a direct-reading instrument** and convert the PM<sub>2.5</sub> levels to the corresponding AQI

# California: Identification of Harmful Exposures

Exceptions to the requirement to determine the current exposure:

- Does not apply where the employer assumes the current AQI for PM2.5 is greater than 500 and uses that assumption to comply with required respiratory protection
- Does not apply in an emergency situation\* where the employer assumes the current AQI for PM2.5 is 151 or greater and uses that assumption to comply with voluntary respiratory protection requirements.
  - \*Rescue, evacuation, utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations:

# California: Communication

The employer must implement a system for communicating wildfire smoke hazards in a form readily understandable by all affected employees, including provisions designed to encourage employees to inform the employer of wildfire smoke hazards at the worksite without fear of reprisal.

# California: Communication

The communication system must include effective procedures for “two-way” communications:

- Informing employees of:
  - The current AQI for PM2.5...; and
  - Protective measures available to employees to reduce their wildfire smoke exposures.
- Encouraging employees to inform the employer of:
  - Worsening air quality; and
  - Any adverse symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

# California: Training and instruction

The employer shall provide employees with effective training and instruction, including providing the mandatory information in the rule appendix that discusses:

1. The health effects of wildfire smoke.
2. The right to obtain medical treatment without fear of reprisal.
3. How employees can obtain the current AQI for PM2.5.
4. The requirements of the wildfire smoke rule.

# California: Training and instruction

5. The employer's two-way communication system.
6. The employer's methods to protect employees from wildfire smoke.
7. The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke.
8. How to properly put on, use, and maintain the respirators provided by the employer.

# California: Control of harmful exposures

**Engineering Controls.** The employer shall reduce employee exposure to PM<sub>2.5</sub> to less than a current AQI of 151 ( $55.5\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>) by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered.

- If engineering controls are not sufficient to reduce exposure to PM<sub>2.5</sub> to less than a current AQI of 151 ( $55.5\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>), then the employer shall reduce employee exposures as much as feasible.

# California: Control of harmful exposures

**Administrative Controls.** Whenever engineering controls are not feasible or do not reduce employee exposures to PM<sub>2.5</sub> to less than a current AQI of 151 ( $55.5\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>), the employer shall implement administrative controls, if practicable, such as:

- Relocating work to a location where the current AQI for PM<sub>2.5</sub> is lower, changing work schedules, reducing work intensity, or providing additional rest periods.



# California: Respiratory Protection

## Voluntary use:

- **Where the current AQI for PM<sub>2.5</sub> is 151 to 500** (*55.5 $\mu\text{g}/\text{m}^3$  to 500.4 $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>*), the employer must provide NIOSH-approved respirators to all employees for voluntary use in accordance with the respirator rule, and encourage employees to use respirators.
- Respirators effectively protect the wearers from PM<sub>2.5</sub>, such as N95 masks. Respirators shall be cleaned, stored, maintained, and replaced so that they do not present a health hazard to users.
- Note: Voluntary use of filtering facepieces, such as N95 respirators, some of the requirements of the respiratory protection rule do not apply, such as fit testing and medical evaluations.

# California: Respiratory Protection

## Required use:

### **Where the current AQI for PM<sub>2.5</sub> exceeds 500**

*(500.4 $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>)*, respirator use is required. The employer shall provide respirators that will reduce the PM<sub>2.5</sub> levels inside the respirator to an AQI less than 151 *(55.5 $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>)*.

- For required use of respirators, all requirements of the respiratory protection rule apply, including fit testing and medical evaluations.

# California: Emergencies

Rescue, evacuation, utilities, communications, and medical operations that are directly aiding emergency operations or firefighting operations:

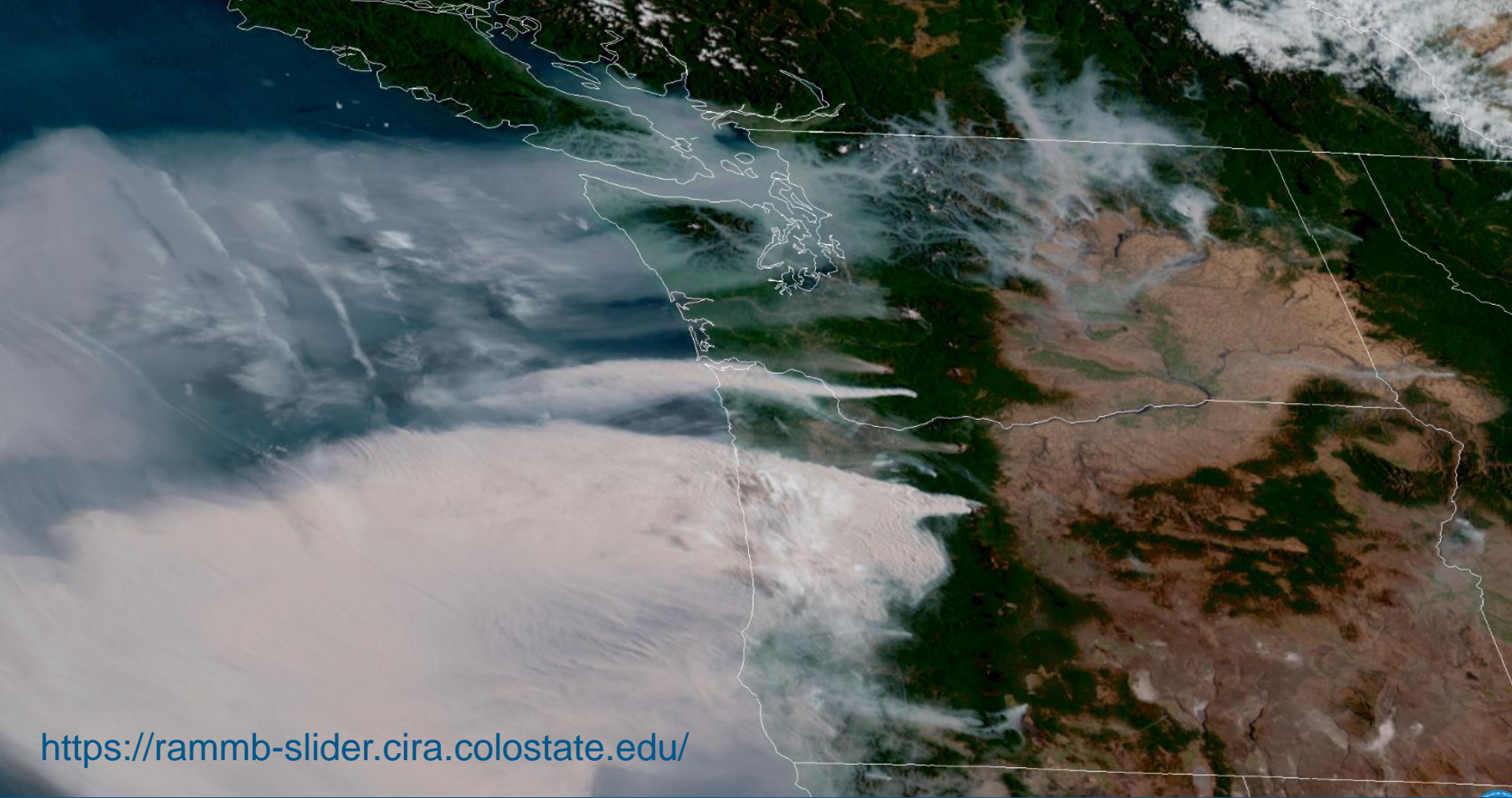
- The employer must comply with voluntary respiratory protection requirement.
- Engineering controls, administrative controls, and required use respiratory protection do not apply to emergencies.

# Wildfire Smoke Emergency Rule Stakeholder Meeting

***Dr. Nicholas Reul***  
*Occupational Physician*  
*reni235@lni.wa.gov*

***Chris Pyke***  
*IH Technical Services*  
*pykc235@lni.wa.gov*





<https://rammb-slider.cira.colostate.edu/>