

by Mary C. Meyer, MD MPH Kaiser Permanente NCAL

# How to determine the Air Quality Index? AQI Basics | AirNow.gov

**AQI Basics for Ozone and Particle Pollution** 

Daily AQI Color	Levels of Concern	Values of Index	
Green	Good	0 to 50	Air quality is satis
Yellow	Moderate	51 to 100	Air quality is accept particularly those
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensi public is less likely
Red	Unhealthy	151 to 200	Some members or members of sensi effects.
Purple	Very Unhealthy	201 to 300	Health alert: The I
Maroon	Hazardous	301 and higher	Health warning of affected.

### Why worry about wildfire smoke? WILDFIRE SMOKE: A GUIDE FOR PUBLIC HEALTH OFFICIALS (airnow.gov)

### Respiratory effects:

• Cough, bronchospasm, bronchitis, exacerbation of asthma and chronic lung diseases, reduced lung function

### Cardiovascular effects:

• Heart failure, exacerbation of pre-existing cardiovascular disease, premature mortality

### Other health effects:

• Eye irritation, systemic inflammation

### Effects on healthcare:

• Increased use of medication, school absences, sick leaves, respiratory-related emergency department visits and hospital admissions

### Who is at risk?

- **People with cardiovascular disease, older adults**
- Children, pregnant women
- Low socioeconomic status
- **Outdoor workers**

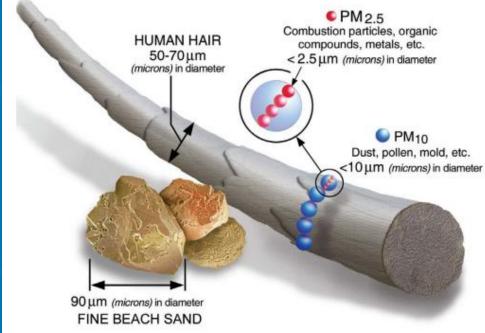


Figure 1. Fine, inhalable particulate matter (PM<sub>2,5</sub>) is the air pollutant of greatest concern to public health from wildfire smoke because it can travel deep into the lungs and may even enter the bloodstream.

### Who are outdoor workers?

- Single-point-of-entry workers

# **Poor Air Quality due to Wildfire Smoke: Protecting Staff, Patients, and Visitors** Regional Medical Director, Emergency Management

Description of Air Quality

tory, and air pollution poses little or no risk.

eptable. However, there may be a risk for some people, e who are unusually sensitive to air pollution.

tive groups may experience health effects. The general to be affected.

of the general public may experience health effects; sitive groups may experience more serious health

risk of health effects is increased for everyone.

f emergency conditions: everyone is more likely to be



# **Engineering Controls:**

- Increase cleaning frequency at entry points to decrease particulate entering facility
- entry points and areas of high air movement, such as elevator foyers
- Consider placement of mobile air scrubbing units at high volume facility

# **Control by Respiratory Protective Equipment:**

## Patients/Visitors:

- Respirator use/distribution is voluntary and fit-testing is not required
- Patients/visitors who request an N95 respirator for protection against poor air quality when they are **outside** may be given a NIOSH-approved N95 respirators Consider distributing a "Talking Points" memo with
- distribution of N95 respirators

# Indoor workers:

- Respirator use/distribution is voluntary and fit-testing is not required
- Indoor workers who request an N95 respirator for protection against poor air quality when they are **outside** may be given a NIOSH-approved N95 and Cal/OSHA "Appendix D"

Groundskeepers, construction workers, security guards, parking lot attendants, shuttle drivers Staff in outdoor swabbing/testing/vaccination stations

# Cal/OSHA Section 5141.1: California Code of Regulations, Title 8, Section 5141.1. Protection from

# Wildfire Smoke.

# Worker Safety and Health in Wildfire Regions

The employer shall reduce employee exposure to PM2.5 to less than a current AQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered.

- Enclosed buildings or vehicles
- Close doors, windows, bays
- Restrict entry points

# **Administrative Controls:**

The employer shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM2.5 is lower, changing work schedules, reducing work intensity, or providing additional rest periods.

- Move workers indoors or reduce the time spent outdoors
- Reduce work intensity
- Provide additional breaks/rest periods

When the current AQI for PM2.5 is equal to or greater than 151, the employer shall provide a sufficient number of respirators to all employees. • N95 respirators

• Half or full-facepiece elastomeric respirators or powered air-purifying respirators (PAPRS)

### Outdoor workers:

- When the AQI for PM2.5 is 151-500: medical facilities must provide Cal/OSHA "Appendix B" and offer NIOSHapproved respirators. Use of the respirator is voluntary and fit-testing is not required for outdoor workers between AQI for PM2.5 151-500. Employees should be strongly encouraged to use the respirators.
- When the AQI for PM2.5 is 501 or greater: use of the NIOSH-approved N95 respirator is mandatory. Medical facilities must provide a medical evaluation, training and fit testing.