

SAFETY MATTERS RISK MANAGEMENT NEWSLETTER

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WILDFIRES AND SCHOOLS

OBJECTIVE Understand risk factors to educational facilities associated with wildfires in California, wildfire mitigation strategies, and what to do during and after a wildfire event.

Wildfires in California, which are expected to increase in intensity and frequency due to climate change, have been a longstanding and frequent threat to Californians. They are a significant threat to property and public safety for residents and businesses in California. The following information includes risk factors to educational facilities, fire mitigation strategies and what to do during and after a wildfire.

WILDFIRE PREVENTION

The following prevention strategies should be considered to mitigate risks associated with wildfires:

Determining Your Facilities Wildfire Risk -

Low risk areas typically have:

- · A humid climate with a short dry season
- · Flat terrain with no grades greater than 9 percent
- Limited wildland or conservation area exposure
- · Sites that are not crowded by trees or dead grass
- Manmade fuels located > 50ft from the buildings
- A fire hydrant within 300 feet
- · Easy access for fire trucks









Moderate risk areas typically have:

- · A dry season that is less than 3 months long
- Hilly terrain with grades averaging between 10-20%
- A shared border with a wildland or conservation area with light brush, small trees, or grass
- · Trees located close to the building
- Manmade fuels located within 50 feet of the building
- A fire hydrant within 500 feet
- Access for fire trucks

High risk areas typically have:

- · A dry season that is more than 3 months
- Steep terrain with grades averaging more than 20%
- Forested wildland within 100 feet of the school
- Trees or vegetation that are crowded within 30 feet of the school
- Manmade fuels within 30 feet of the school
- No fire hydrants
- · Limited access for fire trucks



Understanding Fire Hazard Severity Zone Rating -

Educational facilities can obtain information regarding their fire hazard severity zone rating from local fire officials. The <u>fire hazard severity zone maps</u> are available online and provided by California Department of Forestry and Fire Protection (CAL FIRE) as required by the Public Resources Code 4201-4204.

Defensible Space and Weed Abatement Program -

A defensible space around an educational facility means using ignition-resistant materials on and around the facility to help it withstand flying embers and radiant heat. By creating and maintaining a minimum of 30 ft. of defensible space around structures, removing dry tree limbs and shrubs, using fire-resistant landscaping if possible, and adhering to local fire and building codes, and complying with weed abatement ordinances.

Operations and Maintenance -

Daily maintenance outside of the facility such as regular checks on rain gutters, maintaining walkways, evacuation routes, and that exits are clear of obstructions. In addition to outdoor maintenance, indoor areas should be maintained in accordance with fire life safety codes, such as classrooms and common areas. These areas should only contain flame-resistant curtains, draperies, and decorative materials.

Emergency Planning -

Educational institutions should have regularly scheduled reviews and updates as applicable to emergency operations planning and regular training for students, staff and faculty.

WILDFIRE PROTECTION

Recommended steps during a wildfire event:

- Ensure safety Follow your campus's emergency evacuation plan and know the location of your evacuation assembly area.
- Check local air quality Current Air Quality Index (Current AQI) is the method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a realtime basis. Current AQI can be checked at https://www.airnow.gov/.







- Respiratory Protection With certain exceptions, employers must reduce workers' exposure to wildfire smoke in the following ways:
 - a. If feasible, by providing an enclosed location with filtered air so that employee exposure to particulate matter (PM)_{2.5} is less than a current AQI of 151, or to the extent feasible.
 - b.If that is not feasible or adequate, by relocating to another outdoor location where the current AQI for PM_{2.5} is lower, changing work schedules, reducing work intensity, or providing more rest periods.
 - c. With respiratory protective equipment if employers cannot reduce workers' exposure to PM_{2.5} to a current AOI of less than 151.

Wildfire Smoke Protection

Wildfire smoke is composed of harmful chemicals and tiny particles suspended in the air that present a significant health hazard for workers exposed to it. These particles can irritate the lungs and cause serious or even fatal health effects, such as:

- Reduced lung function
- Bronchitis
- Worsening of asthma
- · Heart failure

Provide proper respiratory protection equipment, such as disposable filtering facepiece respirators (dust masks), other half facepiece respirators, or full facepiece respirators*.

The employer must provide enough respirators for employee use on a voluntary basis when the current AQI for $PM_{2.5}$ is equal to or greater than 151 but does not exceed 500. The employer must require employees to use respirators when the current AQI for $PM_{2.5}$ is greater than 500.

See the "Resources" section below for further information on providing respirators to employees.

* To filter out fine particles, respirators must be labeled N-95, N-99, N-100, R-95, P-95, P-99, or P-100, and must be labeled as approved by the US National Institute for Occupational Safety and Health (NIOSH). Full facepiece respirators provide at least five times as much protection from fine particles as half facepiece respirators such as filtering facepiece respirators (dust masks).

Wildfire Smoke Mitigation in Facilities

Building Structure and Exterior Upgrades

- Identify and Seal Gaps: Inspect areas around windows, doors, plumbing vents, electrical outlets, and other penetrations. Use appropriate materials like caulk, foam sealant, or flexible tape to seal these gaps.
- Upgrade to High-Efficiency Filters: Implement Minimum Efficiency Reporting Value (MERV) 13 or higher filters in HVAC systems to effectively capture fine particulate matter (PM2.5) present in wildfire smoke.
- Seal Filter Racks: Ensure that filter racks are airtight to prevent unfiltered air from bypassing the filtration system.
- Install Smoke Scrubbers: Consider integrating smoke scrubbers into the ductwork to treat incoming air, especially in areas with frequent smoke events.
- Adjust Ventilation Settings: During smoke events, set HVAC systems to recirculate indoor air to minimize the intake of polluted outdoor air.











Supplemental Air Cleaning Solutions

 Deploy Portable Air Cleaners: Use portable air purifiers equipped with High-Efficiency Particulate Air (HEPA) filters in occupied spaces to reduce airborne contaminants.

Operational Best Practices

- Monitor Indoor Air Quality: Implement air quality sensors to continuously assess indoor pollutant levels, enabling timely responses to deteriorating conditions.
- Establish Maintenance Protocols: Develop and adhere to maintenance schedules for HVAC systems and air purifiers, ensuring filters are replaced as needed, especially during peak wildfire seasons.

Post Wildfire Event

The hazards don't end when the smoke clears. Do not enter district property or turn on any gas fixtures, water faucets, or any electrically powered items, until it has been deemed safe by either the fire department or proper authorities have cleared entry to the property. Once clearance has been given, inventory and documentation of property damage to district property (including photographs) should be obtained and reported. For safety during the cleanup and rebuilding after wildfires visit: https://www.dir.ca.gov/dosh/worker-health-and-safety-in-wildfire-regions.html

Resources

- Cal/EPA Guidance for Schools During Wildfire Smoke Events
- California Code of Regulations, Title 8
 - o §5141.1 Protection from Wildfire Smoke
 - o §5144. Respiratory Protection
- Fire Hazard Severity Zones Maps
- Using the Air Quality Index
- · AQI-Based Decision Making Matrix for Wildfire Smoke Events
- . N95 Mask Commonly Asked Questions
- "Using Disposable Respirators" (in English and Spanish)

This California Schools JPA fact sheet is not intended to be exhaustive. The discussion and best practices suggested herein should not be regarded as legal advice. Readers should pursue legal counsel or contact their insurance providers to gain more exhaustive advice.







SIGN-IN SHEET

WILDFIRES AND SCHOOLS

Facilitator:	Facilitator's Signature:
Date: Organization:	Department:
Participants:	
Name:	Signature:
Name:	6:
Name:	
Name:	
Name:	C: 1
Name:	787
Name:	
Name:	C:
Name:	Cianatura
Name:	Signature:

