



WHEN THE LIGHTS GO OUT

A Guide to Protecting Indoor Air Quality During a Wildfire or Earthquake

altadenafiresafe.org

Our Mission

The **Altadena Fire Safe Council** is working to reduce wildfire risk across our community through GIS-informed planning, science-based integrated vegetation management and regenerative land stewardship. We will pursue Firewise USA® neighborhood recognition by educating our community about home hardening, defensible space design, soil restoration and native plant landscaping.



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Preparedness recommendations on this site and pdf are general in nature and are not a substitute for professional advice, official emergency guidance, or manufacturer instructions. In an emergency, always follow directions from local authorities.

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Clean Indoor Air During Wildfire Season

In Altadena, wildfire smoke isn’t hypothetical — it’s a seasonal reality. With the San Gabriel Mountains directly to our north and canyon systems like Eaton Canyon and Millard Canyon acting as wind corridors, smoke can funnel quickly into neighborhoods and linger for days. Even when flames are miles away, fine particulate matter (PM2.5) can infiltrate homes through attic vents, crawlspaces, and the tiniest cracks in aging window frames.

Creating a clean indoor air strategy is one of the most effective resilience upgrades homeowners can make. **The goal is simple:** reduce smoke exposure, especially for children, seniors, and those with asthma or heart conditions. The tools are accessible — a designated clean air room, proper filtration, and well-fitted respirators when needed. Below is a practical guide designed specifically for Altadena’s housing stock — from 1920s bungalows to mid-century ranch homes and newer hillside construction.

Step 1: Create a Clean Air Room	
Choosing the Right Room	Seal the Space
In many Altadena homes, ideal rooms are:	Altadena’s older housing stock often has air leakage. Focus on:
Interior bedrooms	Weatherstripping doors
Rooms on the leeward (south-facing) side during north wind events	Sealing window gaps with painter’s tape during smoke events
Rooms without fireplaces	Damp towel along thresholds if needed
Spaces with minimal attic penetrations	Closing fireplace dampers fully
Avoid:	Turning off whole-house fans
Sunrooms	Sealing unused wall AC units temporarily
Rooms with older single-pane windows	If you have a crawlspace or attic fan, confirm it is not pulling outdoor air inside during smoke events.
Converted garages which are often poorly sealed	



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Step 2: Upgrade Your Filtration	
HVAC Filters (Whole-House Systems) Install a MERV 13 filter or higher — this is the minimum recommended to capture wildfire smoke particles.	
Recommended HVAC Filters	
3M Filtrete 1900 (MERV 13)	Nordic Pure MERV 13
☐ Widely available	☐ Strong performance
☐ Good balance of airflow and filtration	☐ Available in multiple sizes
☐ Suitable for many residential systems	☐ Good value for bulk purchase
Always confirm your system can handle higher MERV ratings. Older systems common in Altadena ranch homes may require HVAC consultation before upgrading beyond MERV 13.	
Run your HVAC fan continuously during smoke events to circulate filtered air.	
Step 3: Portable HEPA Air Purifiers	
Even with HVAC filtration, a dedicated HEPA purifier in your clean air room is essential.	
What to Look For	Best for Bedrooms (Small to Medium Rooms)
☐ True HEPA filter	Coway Airmega AP-1512HH Mighty
☐ CADR appropriate for room size	☐ Excellent CADR for its size
☐ Low noise for overnight operation	☐ Quiet on low
☐ Easy-to-source replacement filters	☐ Reliable long-term performance
Best for Large Living Rooms / Open Floor Plans	☐ Strong value
Blueair Blue Pure 211+	Levoit Core 300S
☐ Strong airflow	☐ Compact
☐ Good for larger spaces	☐ Good for smaller rooms
☐ Washable pre-filter sleeve	☐ Smart app connectivity
Medify MA-40	☐ Budget-friendly
☐ Medical-grade HEPA H13	Budget DIY Option: Corsi–Rosenthal Box DIY air filtration can supplement commercial units. The Corsi–Rosenthal box uses: A standard 20” box fan, four MERV 13 filters, and duct tape. It can significantly reduce PM2.5 levels at low cost.
☐ Strong CADR	
☐ Effective during heavy smoke days	

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Step 4: Respirators for Outdoor Exposure	
Even with indoor precautions, residents may need to evacuate, clear debris, or travel through smoky conditions.	
Best Protection Options: Disposable Respirators	
3M Aura 9205+ N95	Honeywell DF300 N95
☐ Fold-flat	☐ Good fit
☐ Excellent facial seal	☐ Durable design
☐ Comfortable for extended wear	
Best Protection Options: Reusable Option	
3M 7500 Series Elastomeric Half Mask + P100 Filters	Important Notes
☐ Superior filtration	☐ Must be NIOSH-approved
☐ Replaceable cartridges	☐ Should seal tightly to the face
☐ Long-term cost effective	☐ Facial hair reduces effectiveness
Reusable respirators are especially useful for homeowners doing ash cleanup after wind-driven events.	☐ Not recommended for very young children
	For official respirator guidance, consult the Centers for Disease Control and Prevention.
Additional Indoor Air Protection Tips	
Avoid Indoor Pollutants During Smoke Events	Monitor Air Quality
☐ Do not burn candles	☐ PurpleAir outdoor sensors
☐ Avoid wood-burning fireplaces	☐ AQI.gov
☐ Minimize cooking with gas stoves	☐ LA County Public Health alerts
☐ Do not vacuum unless using a HEPA vacuum	Smoke can settle in foothill neighborhoods overnight and worsen at sunrise due to inversion layers.
☐ Skip indoor painting or solvent-based projects	

Clean Air Buyer Checklist	
Whole-House Filtration	☐ Confirm your HVAC system can support MERV 13 or higher
	☐ Install new MERV 13 filter (3M Filtrete 1900 or Nordic Pure MERV 13)
	☐ Purchase 2–3 backup filters
	☐ Set HVAC fan to “ON” during smoke events
	☐ Schedule annual HVAC maintenance
	Goal: Reduce smoke infiltration throughout the home.
Clean Air Room Setup	☐ Select interior room with minimal windows
	☐ Confirm windows seal properly
	☐ Install weatherstripping where needed
	☐ Keep painter’s tape for temporary sealing
	☐ Identify electrical outlet for purifier placement
	☐ Ensure door closes tightly
	Goal: Create one room that maintains significantly cleaner air.
Portable HEPA Air Purifiers	☐ Bedroom purifier (e.g., Coway Airmega AP-1512HH)
	☐ Large room purifier (e.g., Blueair 211+ or Medify MA-40)
	☐ Confirm unit CADR matches room size
	☐ Purchase 1–2 replacement HEPA filters per unit
	☐ Test-run units before fire season
	Goal: Continuous filtration during smoke events.
Budget Backup Option: DIY Corsi-Rosenthal Box	☐ Purchase 20” box fan
	☐ Purchase four MERV 13 filters
	☐ Store duct tape for assembly
	DIY Corsi–Rosenthal guidance available from the California Air Resources Board. (2.arb.ca.gov)
	Goal: Emergency supplemental filtration.

Clean Air Buyer Checklist	
Respiratory Protection	☐ Stock NIOSH-approved N95 respirators (10+ per person)
	☐ Consider reusable respirator (3M 7500 series)
	☐ Purchase extra P100 cartridges
	☐ Store masks in airtight container
	☐ Confirm proper fit for each adult
	Respirator guidance available from the Centers for Disease Control and Prevention. (cdc.gov)
	Goal: Safe outdoor exposure during smoky conditions.
Indoor Pollution Reduction Supplies	☐ HEPA vacuum (or confirm existing vacuum has HEPA filter)
	☐ Avoid candles and indoor burning
	☐ Plan no-paint/no-solvent projects during fire season
	☐ Consider portable induction cooktop during smoke season
	Goal: Minimize adding pollutants indoors.
Air Quality Monitoring	☐ Bookmark AQI.gov
	☐ Download PurpleAir app
	☐ Identify nearest local sensor
	☐ Set alerts for AQI > 100
	Goal: Act early before smoke becomes severe.
Special Considerations for Foothill Homes	☐ Inspect attic vents for proper sealing
	☐ Confirm fireplace damper seals tightly
	☐ Check crawlspace vents
	☐ Store backup filters before Santa Ana season
	☐ Consider battery backup for medically vulnerable residents
	Goal: Prepare for wind-driven smoke and potential power outages.
Recommended Minimum Kit Per Household	☐ 2–3 HEPA air purifiers
	☐ 3 HVAC MERV 13 filters
	☐ 20–30 N95 respirators
	☐ 1 reusable P100 respirator
	☐ DIY backup fan filtration kit