



CONTRA COSTA COUNTY OFFICE OF EMERGENCY SERVICES

EMERGENCY OPERATIONS PLAN ANNEX

2024

Air Quality Response Plan



Contents

Introduction	4
Purpose.....	4
Scope	4
Assumptions.....	5
Concept of Operations.....	6
Phase I – Readiness	6
Air Quality Index Range in Phase I (AQI 0-100):.....	6
Phase II – Warning and Preparation.....	7
Phase III – Emergency Response.....	8
Emergency Operations Center Activation Triggers:	8
Public Messaging:.....	9
Overnight Operation Triggers	9
Roles and Responsibilities.....	10
County Department of Health Services (Lead Agency).....	10
County Office of Emergency Services (Supporting Agency)	10
Community Warning System Unit	11
County Employment and Human Services Department (Supporting Agency)	11
County Office of Communications and Media (Supporting Agency).....	11
County Department of Conservation and Development (Supporting Agency)	11
Cities Tribal Governments, and Special Districts (Partner Agency).....	11
Office of the Sheriff/ Municipal Law Enforcement (Partner Agency)	12
Fire/EMS (Partner Agency)	12
Schools (Partner Agency)	12
Pacific Gas and Electric (Partner Agency).....	12
Appendix A: Vulnerable Populations and Wildfire Smoke Health Risks.....	13
Appendix B: Air Quality Index.....	15
Appendix C: Clean Air Center Considerations.....	16
Appendix D: Public Information Phase 2 & 3 Checklist.....	17
Appendix E: Extreme Weather Terminology	18
References.....	20

Introduction

Purpose

The Air Quality Response Plan is a hazard-specific plan that supports the Emergency Operations Plan, and outlines actions Contra Costa County may take in support of the operational area when air quality issues arise within the County. This plan incorporates lessons learned and best practices from state and local governments.

This Annex provides direction for Operational Area stakeholder organizations including County departments, cities, special districts, community groups, and others, ensuring interagency coordination in accordance with the County's Emergency Operations Plan, California Emergency Services Act, Standardized Emergency Management System (SEMS), and National Incident Management System (NIMS).

This Annex accomplishes the following:

- Define a concept of operations to guide a coordinated response to air quality and/or wildfire smoke event.
- Identify County departments and Operational Area agencies roles and responsibilities in the coordination and response to air quality event and that align with the Emergency Operations Plan and;
- Sets parameters to activate the Emergency Operation Center, Joint Information Center (JIC)/ Joint Information System (JIS), and/or Shelter Operations in response to an air quality event.
- Identifies Vulnerable Populations and how they are affected by a poor Air Quality event.
- States guidelines for opening a Clean Air Center

Scope

The Annex was developed to guide emergency management planning and response to an air quality event of any severity. This plan focuses on the county's response in support of the local jurisdiction within the operational area. Additionally, it provides guidance to local cities and jurisdictions during their planning and preparedness, response, and recovery efforts.

This Annex does not alter existing County department or other Operational Area jurisdictions emergency response standard operating procedures (SOPs), processes, resources.

The scale and scope of the response will depend on the intensity and duration of the air quality event, which could be a few days to several weeks. Key factors that could impact the scale and scope of the response include:

- The ability of the public to receive and understand educational/ prevention information regarding air quality emergencies.
- Underlying health conditions in the population (e.g. mental illness, chronic health conditions)
- Source of pollution (wildfire, vehicle emissions, industry incidents etc.)
- Temperature and Wind Patterns
- Significant morbidity and/or mortality
- Infrastructure issues such as the availability of gas and electricity.

Assumptions

- In the event of simultaneous excessive heat and poor air quality events, excessive heat response actions take precedence over air quality response actions.
- Public health advisories related to prolonged reduced air quality events will occur, when necessary, throughout the year.
- Timely tailored and specific health messages may mitigate the adverse effects of reduced air quality.
- Access and Functional Needs populations may be disproportionately impacted by poor air quality.
- The demand for emergency public information will be immediate and sustained. Social and traditional media coverage may be extensive.
- Each local jurisdiction (ex. city) may have its own air quality response plan, procedures, and implementation criteria. Each jurisdiction is responsible for its own coordinated response to a poor air quality event incident in its area of responsibility. The County has responsibility for the unincorporated areas.
- As per the EOP, response efforts will utilize County department response protocols and the Incident Command System (ICS). This may include establishing a unified command among law enforcement, fire, EMS, and state, and federal response agencies.
- The County/Operational Area Emergency Operations Center (EOC) may be activated to coordinate incident support.
- Extreme temperature incidents may occur concurrently with PG&E Public Safety Power Shutoffs (PSPS), rotating outages, significant wildfires, and/or periods of degraded air quality (ex. wildfire smoke).
- Weather conditions often vary greatly from one geographic area to another.

Concept of Operations

Contra Costa County uses a three-phased approach to air quality events consistent with state plans for a response to wildfire smoke and/or air quality events. These three phases and their associated Air Quality Index are:

- Phase I: Readiness (AQI 0-100)
- Phase II: Warning and Preparation (AQI 101 – 200)
- Phase III: Emergency Response (201 – 300+)

Phase I – Readiness

Phase I actions may be taken in conjunction with both wildfire season and the hotter months for extreme heat to prepare for and maintain a state of increased readiness.

Air Quality Index Range in Phase I (AQI 0-100):

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air Quality is satisfactory, and air pollution poses little to no risk.
Yellow	Moderate	51 to 100	Air Quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.

Initial Response Actions:

- Monitor AQI status and any ongoing threats
- Review of existing plans, procedures, and resources.
- Verification of use/availability of key facilities and resources.
- Coordinating and initiating public awareness campaigns through various media outlets.
- Confirming roles and identifying specific local needs.
- Provide County Officials with status updates of planning efforts regarding extreme weather.
- Clean Air Center/ Clean Air Spaces are not recommended to be activated.

Public Messaging:

The public message for Phase I is primarily public service announcements or social media campaigns issued by departments and agencies to raise awareness of the potential risks associated with the fire season and/or poor air quality. Messages may be general and focused on preventing the effects of poor air quality by providing safety awareness and health tips.

Phase II – Warning and Preparation

Phase II actions are taken due to major shifts in wind patterns, with AQI between 101 and 200. Poor air quality is expected to impact people with sensitivities and vulnerable populations. During this phase, contact and coordination with local agencies will increase. For example, wildfire smoke from a series of wildfires located outside of the region may bring wildfire smoke into Contra Costa County where it could linger for days and even weeks.

Air Quality Index Range -for Phase Activation (AQI 101-200):

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Orange	Unhealthy for Sensitives Group	101 to 150	Members of sensitive group may experience health effect. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects

Triggers

- Air patterns of wildfire smoke are expected to arrive in Contra Costa within 24 hours.
- A series of wildfires bring smoke into the County.
- AQI 101-200

Initial Response Actions:

- Monitor AQI status and any ongoing threats
- Conduct Multi-agency Coordination (MAC) calls as needed with weather, air quality, and power updates.
- Update weather and AQI forecast in County OES Weekly Situation Status Report.
- Contact local public health and other officials to encourage outreach with individuals most vulnerable to wildfire smoke.
- Increase public information efforts.
- Public Health may issue public health advisories.
- Identify available clean air centers and place them on standby, as appropriate.
- Confirming details of agency participation and staffing to open up clean air facilities.
- Consider convening a call with the County Health Officer if there are coordination issues or if a prolonged duration event is forecasted.
- Work with County Public Health to assess the need for a Public Health Emergency
- Consider opening available Clean Air Centers/ Clean Air Spaces if the air quality forecast is 151 to 200 AQI and is expected to worsen and last three or more days.
- Update the County Extreme Weather Map to reflect what Clean Air Centers are opened during the poor air quality event, as appropriate.

- Recommend extending hours for county-run clean air centers

Public Messaging:

Public Messages are directed at mitigating the health effects of wildfire smoke and poor air quality on the county’s most vulnerable populations. Messages to the public will focus on mitigation efforts such as the proper use of respirators and personal air filtration devices.

Phase III – Emergency Response

Phase III actions are initiated when a poor air quality event is occurring or expected to worsen.

Air Quality Index Range for Phase Activation (AQI 201 – 300+):

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency condition: everyone is more likely to be affected.

* Phase II triggers have been met and/or

* AQI is at the Very Unhealthy or Hazardous level and is expected to be sustained or get worse in 24 hours or less.

- Initial Response Actions:
- Monitor AQI status and any ongoing threats.
- Increase Multi-agency Coordination (MAC) calls as needed with weather, quality, and power updates.
- Increase Public Messaging to provide resources for the community.
- Assess and consider implementing public health measures including closing at-risk facilities and/or curtailing outdoor activities.
- Public health and other local officials to proactively provide guidance to the public on protective measures.
- Continue scheduled calls with the County Health Officer if there are coordination issues or if a prolonged duration event is forecasted.
- Continue to work with County Public Health to assess the need for a Public Health Emergency
- Consider opening available Clean Air Centers if wildfire smoke persists for 24 hours or is worsening.

Emergency Operations Center Activation Triggers:

Note: In the event of simultaneous extreme heat and poor air quality events, extreme heat response actions take precedence over air quality response.

- High-profile public health situation or event.
- Significant impacts across county jurisdiction.

- Departments and local city jurisdictions have exhausted their resources.
- Two or more local jurisdictions' EOCs activated in response to emergency events.
- Significant impact on major throughways
- Activation of mass care & shelter branch

Public Messaging:

Public messages during Phase III are oriented toward providing information related to the response. Messages are specific and tell the public how and where they can access government services (e.g., location of clean air centers/ clean air spaces, when to use 911 and hospital emergency departments, etc.). Messages should also include information from Phase II relating to mitigating the effects of the emergency.

Overnight Operation Triggers

Overnight sheltering triggers for poor air quality events may include but are not limited to the following conditions:

- The County is in Phase III of the Heat Annex Response Plan
- The Public Health Officer proclaims a health emergency or recommends overnight operations.
- Clean Air Center hours have already been extended until at least 10 PM
- There is a clearly identified need for overnight sheltering which may include:
 - Clients present at clean air centers have identified a need for overnight resources.
 - Health, Homeless, and Housing Team requests additional sheltering based on exceeded housing capacity in emergency overnight shelters and current needs of unhoused individuals.
 - Extended power outages significantly impacting vulnerable populations.

Roles and Responsibilities

County Department of Health Services (Lead Agency)

As Needed

- Assess the health impact of extreme weather (ex. extreme heat, wildfire smoke, winter storms) on general and vulnerable populations (ex. unhoused populations, elderly populations, etc.)
- Survey and assess potential impacts on local healthcare and medical systems, residential care facilities, and pharmacies.
- Conduct conference calls to distribute information to Health Care Coalition (HCC) partner agencies.
- Distribute information both through community partners and through Contra Costa Health's outreach efforts.
- Alert programs with community contacts including Health, Housing, and Homelessness (H3), the Equity Team, Health Ambassadors, Behavior Health Office for Consumer Empowerment (PH OCE)
- Make community health recommendations to county emergency management partners as appropriate.
- Assist in the management and coordination of the distribution of commercial air purifiers and air filters.
- Coordinate with the American Red Cross and partner agencies to conduct shelter assessments through Environmental Health.
- Activate CORE teams to conduct outreach to the county's unsheltered populations as well as H3 community partners around needs of the unsheltered that may arise during a crisis.
- Assess the need for a Proclamation of Local Health Emergency.
- Develop and integrate culturally appropriate public health messaging; disseminate Public Information messaging, in coordination with the Joint Information Center.
- Participate in Operational Area conference calls.
- In accordance with the phases identified within this plan, Contra Costa Health Officer may recommend opening of Clean Air Center or Clean Air Spaces.
- The Health Officer shall issue any orders as necessary to protect the health of the community.

County Office of Emergency Services (Supporting Agency)

- Receive and distribute NWS forecasts and weather products.
- Assess potential impacts of forecasted events and/or concurrent hazards.
- Notify potentially impacted jurisdictions. Distribute situation status reports and conduct Operational Area conference calls with partner agencies, as needed.
- Assess the need for and make recommendations regarding a Proclamation of Local Emergency.
- Assess potential public safety impacts and recommend appropriate Operational Area EOC staffing levels.

- Support Public Information coordination.
- As needed:
 - Activate EOC as needed.
 - Conduct public alert & warning messaging.

Community Warning System Unit

- Send out Public Health Emergency Alerts, in coordination with the Contra Costa County Public Health Officer or their designee, when an imminent threat to health or human life requires members of the public to take immediate protective action for health or life safety.
- Disseminate alert through existing platforms including social media, website, text, phone calls, as well federal Integrative Public Alert and Warning (IPAWS) tools in accordance with Local, State, and Federal laws and regulations.
- Staff the Emergency Operations Center in the Management Section.
- Support Public Information coordination.

County Employment and Human Services Department (Supporting Agency)

As needed:

- Support the activation of shelters, as needed.
- Participate in Operational Area conference calls. Staff the Care & Shelter Branch in Operational Area EOC.
- Lead shelter operations, as needed.
- Disseminate public information messaging, in coordination with the Joint Information Center and/or with the County PIO.
- Provide air quality tips for older and disabled adults, updated by EHSD's Aging & Adult Bureau's Information & Assistance Program, to the Office of Communications & Media for heat page on the County website and further dissemination to all County partners.

County Office of Communications and Media (Supporting Agency)

- Coordinate public information with Contra Costa Health and impacted local jurisdictions.
- Evaluate the need for a JIC or JIS.
- Coordinate with CWS to obtain alert & warning messaging and dissemination through appropriate channels.
- Post information and/or updates to Contra Costa County website, social media, and CCTV as appropriate.
- Coordinate and provide situational awareness updates to the County Board of Supervisors and County Administrator.

County Department of Conservation and Development (Supporting Agency)

- Assist in the coordination of transportation efforts if needed.
- Staff the Planning Section of the EOC

Cities Tribal Governments, and Special Districts (Partner Agency)

As needed:

- Participate in Operational Area conference calls.

- Report on any response activities.
- Open warming/cooling/clean air centers.
- Coordinate public information.
- Open local EOC.
- Respond to increased medical aid and law enforcement calls for service.

Office of the Sheriff/ Municipal Law Enforcement (Partner Agency)

As needed:

- Participate in Operational Area conference calls.
- Staff Law Enforcement Branch in Operational Area EOC.
- Coordinate site security at incidents.

Fire/EMS (Partner Agency)

As needed:

- Participate in Operational Area conference calls.
- Staff Fire Branch in Operational Area EOC.
- Assess potential impacts to response capabilities.

Schools (Partner Agency)

As needed:

- Participate in Operational Area conference calls.
- Assess potential impacts to school facilities and systems.
- Communicate status of school closures or restricted operations.
- Communicate status with parents and partner agencies.

Pacific Gas and Electric (Partner Agency)

- Participate in Operational Area conference calls. Provide system status updates and forecasts.
- Coordinate with the Operational Area regarding potential/forecast PSPS incidents or CAISO emergency actions.
- Provide a representative to the Operational Area EOC upon request.

Appendix A: Vulnerable Populations and Wildfire Smoke Health Risks

At-risk Life stage/ Population	Rationale and Potential Health Effects of Wildfire Smoke Exposure
People with asthma and other respiratory diseases	<p><u>Rationale:</u> Underlying respiratory diseases result in compromised health status that can result in the triggering of severe respiratory responses by environmental irritants, such as wildfire smoke.</p> <p><u>Potential health effects:</u> Breathing difficulties (e.g. coughing, wheezing, and chest tightness) and exacerbation of chronic lung diseases (e.g. asthma and COPD) leading to increased medication usage, emergency department visits, and hospital admissions.</p>
People with cardiovascular disease	<p><u>Rationale:</u> Underlying circulatory diseases result in compromised health status that can result in the triggering of severe cardiovascular events by environmental irritants, such as wildfire smoke.</p> <p><u>Potential health effects:</u> Triggering of ischemic events, such as angina pectoris, heart attacks, and stroke; worsening of heart failure; or abnormal heart rhythms could lead to emergency department visits, hospital admissions, and even death.</p>
Children	<p><u>Rationale:</u> Children’s lungs are still developing and there is a greater likelihood of increased exposure to wildfire smoke resulting from more time spent outdoors, engagement in more vigorous activity, and inhalation of more air per pound of body weight compared to adults.</p> <p><u>Potential health effects:</u> Coughing, wheezing, difficulty breathing, chest tightness, decreased lung function in all children. In children with asthma, worsening of asthma symptoms or heightened risk of asthma attacks may occur.</p>
Pregnant women	<p><u>Rationale:</u> Pregnancy-related physiological changes (e.g. increased breathing rates) may increase vulnerability to environmental exposures, such as wildfire smoke. In addition, during critical development periods, the fetus may experience increased vulnerability to these exposures.</p> <p><u>Potential health effects:</u> Limited evidence shows air pollution-related effects on pregnant women and the developing fetus, including low birth weight and preterm birth.</p>
Older adults	<p><u>Rationale:</u> Higher prevalence of pre-existing lung and heart disease and decline of physiologic press, such as defense mechanisms.</p> <p><u>Potential health effects:</u> Exacerbation of heart and lung disease leading to emergency department visits, hospital admissions, and even death.</p>
People of low socioeconomic status	<p><u>Rationale:</u> Less access to health care could lead to a higher likelihood of untreated or insufficient treatment of underlying health conditions.</p> <p><u>Potential health effects:</u> Greater exposure to wildfire smoke due to less access to measures to reduce exposure, along with a higher likelihood of</p>

	untreated or insufficiently treated health conditions could lead to increased risks of experiencing the health effects described above.
Outdoor workers	<p><u>Rationale:</u> Extended periods of time exposed to high concentrations of wildfire smoke.</p> <p><u>Potential health effects:</u> Greater exposure to wildfire smoke can lead to increased risks of experiencing the range of health effects described above.</p>
Unhoused Population	<p><u>Rationale:</u> Less access to health care could lead to a higher likelihood of untreated or insufficient treatment of underlying health conditions and extended periods of time exposed to high concentrations of wildfire smoke.</p> <p><u>Potential health effects:</u> Greater exposure to wildfire smoke due to less access to measures to reduce exposure, along with a higher likelihood of untreated or insufficiently treated health conditions could lead to increased risks of experiencing the health effects described above.</p>

Appendix B: Air Quality Index

The Air Quality Index (AQI) is a widely used number-based system created by the Environmental Protection Agency (EPA) to communicate air quality conditions to the general public. The AQI uses a scale of 0-301+ to let users know if air quality is Good, Moderate, Unhealthy for Sensitive Groups, Unhealthy, Very Unhealthy, or Hazardous. The AQI is referenced throughout this plan and in provided resources. It is a key metric that will help guide planning and decision-making when looking at forecasted and current air quality levels.

NOTE: The AirNow.gov website will be used to pull air quality readings throughout the county.

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air Quality is satisfactory, and air pollution poses little to no risk.
Yellow	Moderate	51 to 100	Air Quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Group	101 to 150	Members of sensitive group may experience health effect. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency condition: everyone is more likely to be affected.

Appendix C: Clean Air Center Considerations

<p>Facility Considerations</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Pre-verify locations before air quality and/or wildfire smoke events <input type="checkbox"/> Evaluate HVAC system, fresh-air intake (close intake during smoke events) <input type="checkbox"/> Install high – efficiency filters (MERV-13 or higher) <input type="checkbox"/> Weatherize buildings. <input type="checkbox"/> Utilize existing sites used for other community programs: community centers, libraries, and already established programs for elderly, childcare, or youth programs. <input type="checkbox"/> Monitor indoor air quality and institute guidelines that can preserve the cleanest air possible. <input type="checkbox"/> Keep doors and windows closed as much as possible. <input type="checkbox"/> Acquire back-up power generation that can sustain the electrical load of air purifiers. These power sources should be clean power sources like solar panel and back up battery storage rather than diesel generators.
<p>Air Filter and Air Purifier Considerations</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Acquire California Air Resources Board (CARB) certified portable air-cleaning units(s) to improve indoor air quality, making sure it is the right size for the room or building space
<p>Operations Considerations</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Have supplies on hand and know who can support the center <input type="checkbox"/> Prepare to have health care equipment as needed; wheelchairs, first aid kits, social services
<p>Staffing Considerations</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Evaluate agency staffing during events <input type="checkbox"/> Be ready to train volunteers on site protocols and job duties <input type="checkbox"/> Coordinate with Community Based Organizations (CBO) that can assist with location, staffing and supplies

Appendix D: Public Information Phase 2 & 3 Checklist

Prior to an air quality event the Office of Communication and Media in coordination with OES may:

- Coordinate with Employment & Human Services to gather a list of Clean Air Centers using the existing communications flow to post on County website.
- Coordinate with Contra Costa Health to gather a list of Clean Air Centers using the existing communications flow to post on County website.
- Coordinate with the County Libraries to gather a list of open locations being used as a clean air space, as appropriate.
- Contact local cities' Public Information Officers to gather information on city run clean air centers.
- Provide a situation summary to the County Administrator's Office and Board of Supervisors
- Answer any media inquiry regarding cooling centers and/or county response efforts.
- Post Clean Air Center Dashboard on County website.

OES in Coordination with the OCM may:

- Provide clean air center information to 211 Crisis Center.
- Work with County GIS to update information Clean Air Center Dashboard
- Reach out to cities to gather on opened Clean Air Centers.

Email Example

As a reminder, information on clean air spaces as well as clean air centers updates will be posted on the Contra Costa County Website. Information includes location, hours of operations, contact information and public transportation information.

If your jurisdiction has opened a clean air center or is planning on opening a clean air center due to the air quality or wildfire smoke event, we ask to please email OESdutyofficer@so.cccounty.us and Kristi Jourdan from the County's Office of Communications and Media at Kristi.Jourdan@contracostatv.org to provide information on cooling centers.

Appendix E: Extreme Weather Terminology

AIR PURIFIERS: A device which removes contaminants from the air in a room to improve indoor air quality.

AIR FILTER: A filter that removes particles and impurities from the air.

CLEAN AIR SPACE: Publicly accessible indoor space with upgrades to air handling systems that provide improved interior air quality and offer short term relief during times of poor air quality.

COOLING CENTERS: Facilities that are made available by public, private, and volunteer organizations as a heat relief station. There is no agreement that these facilities will be exempt from power outages. These facilities are normally open to the public during regular business hours. During periods of extreme high temperatures, hours of operation may be extended beyond business hours but do not provide overnight accommodation. The Cooling Centers are not required to provide amenities and services to the public.

CLEAN AIR CENTERS: A network of locations where residents can find a respite from wildfire smoke during poor air quality.

CURRENT AIR QUALITY INDEX (AQI): The method used by the Environmental Protection Agency (EPA) to report air quality on a real-time basis. Current AQI is also referred to as “NowCast” and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible (See Appendix B for more information).

EMERGENCY SHELTERS: A location intended for overnight use (sleeping) where people can get water, food, and information on the incident. Additional services and pet sheltering are available, but specifics depend on the affected population’s needs.

HEPA FILTERS: A type of pleated mechanical air filter. It is an acronym for “high efficiency particle air [filter]” (as officially defined by the U.S. Department of Energy). This type of air filter can theoretically remove at least 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns (μm).

HVAC: Building heating and air condition.

KN95: A respirator made to filter at least 95% of particles of size down to 3 microns in diameter. The K is the international rating for this type of respirator.

MERV RATING: A scale used to rate air purifier filters. MERV stands for “minimum efficiency reporting value.” Both ASHRAE and the CDC both recommend that HVAC Systems should have filters rated at a MERV 13 or higher.

NIOSH: The National Institute of Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

VULNERABLE POPULATIONS: Vulnerable populations may include school-age children, the elderly, people experiencing homelessness, outdoor employees and people experiencing health issues exacerbated by wildfire smoke.

WILDLAND SMOKE: Particulate matter emissions from fire in “wildlands,” as defined in Section 3402 of Title 8 of the California Code of Regulations.

WILDLAND SMOKE-SENSITIVE GROUPS: People with heart or lung disease, adults over age 65, and children are considered sensitive and therefore at greater risk for health effects from particulate pollution.

References

47 CFR §10.400(a) Alert Message Requirements.

California Office of Emergency Services Extreme Temperature Response Plan, 2022.

Contra Costa County Emergency Operations Plan, 2022.

Contra Costa Health Extreme Weather Plan, 2023.

NWS HeatRisk. (n.d.). <https://www.wrh.noaa.gov/wrh/heatrisk/>