

6.4 Wildfire Smoke Mitigation

6.4.1 Recommended Household, Workplace, and Community-Level Mitigation Strategies

The [Wildfire Smoke Guide for Public Health Officials, 2021](#), identifies strategies to reduce exposure and risks to wildfire smoke. The best thing to do is to limit exposure to smoke. Staying indoors when the air quality is at unhealthy levels is usually the best way to seek refuge from wildfire smoke. These priority risk reduction strategies can be implemented at the household, workplace and community level, along with information on how to access resources locally.

- Stay indoors
- Limit physical activity
- Reduce indoor air pollution sources
- Use air conditioners and air filters or cleaners
- Provide cleaner air spaces
- Use respiratory protection

6.4.2 Organizational Mitigation Actions

Mitigation priorities and actions identified in this plan are based on recommendations from the:

- EPA's *Wildfire Smoke Guide for Public Health Officials, Revision 2019*,
- Multnomah County's *Wildfire Threat and Smoke Intrusion Incident After Action Report (2020)*
- Regional Disaster Preparedness Organization's *Extreme Heat and Wildfire Smoke: Reducing Risks to Public Health in the Portland Region Report (2021)*
- Public surveys described in **6.2.2 Surveys: Understanding Public Preparedness**
- CWPP Smoke Subcommittee's wildfire smoke mitigation action workshops
- Interviews with stakeholders in 2021 and 2022.

Six overarching priorities for action items emerged during the planning process and were confirmed by the CWPP Smoke Subcommittee.

1. Preparedness- Actions taken before a wildfire smoke incident to help reduce impacts of smoke.
2. Community partnership- Actions that involve engaging with and getting feedback from the community or organizations that serve the community.
3. Community outreach- Actions in which information or resources are provided to the community.
4. Caring for the most vulnerable- Actions that specifically help to mitigate impacts of wildfire smoke on the populations with the highest risk of health effects.

5. Safety/Shelters- Actions specifically related to emergency shelter spaces and life safety resources and procedures.
6. Collaboration and coordination- Actions involving multiple agencies or organizations working together and leveraging existing efforts to increase efficiency and resilience.

The mitigation actions are listed in two tables below. The first table has seventeen actions with an identified lead agency or agencies. Each action includes a description, lead, partners and identifies which mitigation priorities are addressed by that strategy. A lead is one or more organization most likely to coordinate that action, and the actions are grouped by lead agencies. Supporting partners are listed alphabetically – those organizations are a selection of partners that may have roles in the implementation of actions. Ultimately, implementation will be driven by the lead agency, and the list of supporting partners may add or subtract partners as projects are developed.

The second table lists actions that were identified as priorities by the Wildfire Smoke subcommittee, but do not yet have leads identified. These actions are considered to of equal importance, and are maintained in to ensure they remain available for future work planning, where a coordinating agency can be eventually identified.

For actions in both tables, it is important to note that these actions are not regulatory requirements, but a representation of a roadmap for reducing wildfire smoke risk over time. Changes in priorities, resources and research may alter these actions over time, and new partnerships may develop that will change the approach or coordination point for actions. Future planning efforts will continue to track actions for progress or to note how they may shift roles, responsibilities or goals over time. A description of specific steps to ensure these actions will continue to be monitored and improved is located in [Chapter 4 – Plan Implementation and Maintenance](#).

Action No.	Mitigation Action	Lead Agency	Supporting Partners	Priorities					
				Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
1	<p>Update Multnomah County's Wildfire Smoke Standard Operating Procedure (SOP) annually to align with new and updated plans, policies, procedures, rules, and/or lessons learned.</p> <p>Specifically ensure procedures related to populations with greater health risks to wildfire smoke (as identified in Subsection 6.3.4) are reviewed and updated as appropriate.</p> <p>Coordinate with all County departments and partners on Wildfire Smoke SOP roles and responsibilities to ensure the updated SOP is actionable.</p>	Multnomah County Emergency Management	<p>Partners listed in the Wildfire Smoke SOP</p> <p>Partners that serve populations at highest risk identified in this chapter.</p> <p>Wildfire Smoke Subcommittee members</p>	●			●	●	●
2	Identify permanent warehouse locations for the storage of smoke mitigation and safety supplies for county functions and the community.	Multnomah County Emergency Management	<p>Multnomah County Department of County Assets, Facilities</p> <p>Portland Bureau of Emergency Management</p>	●				●	●
3	Add wildfire smoke to Multnomah County's annual summer preparedness coordination meeting to ensure local situational awareness, coordination and preparedness with countywide, regional, state and federal partners.	Multnomah County Emergency Management	Partners listed in the Wildfire Smoke SOP	●					●
4	Add wildfire smoke topics to the agenda for wildfire operational coordination calls.	Multnomah County Emergency Management	Partners listed in the Wildfire Smoke SOP					●	●
5	Host operational coordination calls for events when smoke is the only wildfire-related county impact.	Multnomah County Emergency Management	Partners listed in the Wildfire Smoke SOP					●	●

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				Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
6	Add Multnomah County's <i>Wildfire Smoke Exposure Control and Protection</i> training to the training program for non-county shelter personnel before their first shift of the year.	Multnomah County Emergency Management	Portland Bureau of Emergency Management Multnomah County Department of Human Services	●	●			●	
7	Engage partners who serve populations most sensitive to wildfire smoke in the annual review and update of the Wildfire Smoke Section of the CWPP.	Multnomah County Emergency Management	Partners listed in the Wildfire Smoke SOP Public, private, and community groups that serve and represent populations most sensitive to wildfire smoke WF Smoke Subcommittee members	●	●	●	●	●	●
8	Develop a countywide operational Wildfire Smoke Plan. Align the new plan with existing county smoke plans and SOPs.	Multnomah County Emergency Management	Multnomah County Department of Assets, Facilities Multnomah County Department of County Human Resources Multnomah County Department of County Management, Risk Management Multnomah County cities	●			●	●	●

Action No.	Mitigation Action	Lead Agency	Supporting Partners	Priorities					
				Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
9	Review current capabilities and coordination processes for transportation assistance to/from cleaner air spaces. Identify unmet needs and opportunities to increase efficiency. Identify funding sources, vehicles, drivers, and other logistical needs to further address unmet transportation needs and enhance transportation coordination.	Multnomah County Emergency Management	211 Info Multnomah County Department of County Assets, Fleet Multnomah County Department of Human Services Portland Bureau of Emergency Management Portland Office of Management and Finance, Division of Asset Management, City Fleet TriMet			●	●	●	●
10	Synthesize available best practice literature on wildfire smoke mitigation and preparedness and update annually for partners. Post information on the county's smoke and wildfire websites.	Multnomah County Health Department, Environmental Health	Multnomah County Communications Office Multnomah County Office of Sustainability	●		●	●	●	

Action No.	Mitigation Action	Lead Agency	Supporting Partners	Priorities					
				Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
11	<p>Use the Action 10 synthesis to inform an outreach campaign on protective measures for various housing types.</p> <p>Target outreach to populations most sensitive to wildfire smoke (as identified in Subsection 6.3.4), and in the language of that community.</p> <p>Review survey findings (as identified in Subsection 6.2.2) when developing outreach strategies.</p>	<p>Multnomah County Health Department, Environmental Health</p> <p>with</p> <p>Multnomah County Communications Office</p>	<p>Affordable housing organizations</p> <p>Gresham Communications Office</p> <p>Multnomah County Department of Human Services</p> <p>Portland Bureau of Emergency Management</p> <p>Portland Housing Bureau</p> <p>Portland Office of Community and Civic Life</p>	●	●	●	●	●	
12	<p>Continue to build on existing public engagement campaigns that align with local, regional and national readiness initiatives such as <i>Smoke Ready Week</i>, to encourage the community to better prepare for the health risks associated with wildfire smoke.</p> <p>Utilize survey findings (as identified in Subsection 6.2.2) to inform public engagement strategies.</p>	<p>Multnomah County Health Department, Environmental Health</p> <p>with</p> <p>Multnomah County Communications Office</p>	<p>Gresham Communications Office</p> <p>Multnomah County Emergency Management</p> <p>Northwest Air Quality Communicators Group</p> <p>Portland Bureau of Emergency Management</p> <p>Portland Office of Community and Civic Life</p>	●		●		●	

Action No.	Mitigation Action	Lead Agency	Supporting Partners	Priorities					
				Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
13	Collaborate across health agencies before wildfire smoke events, to identify funding sources and purchase air filters and air cleaners to meet best practice thresholds for cleaner air spaces. Coordinate this action through the lead identified in Action 23.	Multnomah County Health Department, Environmental Health	Multnomah County Office of Sustainability	●					●
14	Build off Actions 15 and 24 to develop a distribution plan that targets populations most sensitive to wildfire smoke (as identified in Subsection 6.3.4). Utilize survey findings in (as identified in Subsection 6.2.2) to inform public engagement strategies.	Multnomah County Health Department, Environmental Health	Affordable housing organizations Multnomah County Department of Human Services Portland Bureau of Emergency Management School districts Community Organizations Active in Disasters	●	●	●	●	●	●
15	Define roles and responsibilities regarding the delivery of guidance and thresholds for the cancellation of outdoor events and activities, and work with MCEM to add to the Wildfire Smoke SOP.	Multnomah County Health Department, Public Health, Environmental Health and Health Officer	Multnomah County Emergency Management Portland Bureau of Emergency Management Portland Bureau of Transportation Portland Parks and Recreation Portland Police Bureau	●				●	●

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				Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
16	Coordinate with the Emergency Operations Center – Emergency Support Function (ESF) 6 (Mass Care and Shelter) and Emergency Support Function (ESF) 8 (Health and Medical) - to conduct targeted welfare calls to clients during wildfire smoke events.	Multnomah County Department of Human Services Multnomah County Health Department, Public Health and Integrated Clinical Services	Multnomah County Health Department, Environmental Health	●		●	●	●	
17	Purchase air filtration and air cleaner supplies and equipment necessary to meet best air filtration practices for each location designated as a cleaner air space.	Each jurisdiction would identify a lead as applicable	Multnomah County Department of County Assets, Facilities Multnomah County Department of County Management, Risk Management Multnomah County Department of Human Services Multnomah County Emergency Management Portland Bureau of Emergency Management Portland Parks and Recreation	●				●	

Mitigation Actions Without Identified Leads

Action No.	Mitigation Action	Potential Lead or Supporting Partners	Priorities					
			Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
18	Establish prioritization criteria for cleaner air spaces. Include the following criteria: 1) ability to implement indoor air filtration best practices, 2) daytime shelter capacity 3) nighttime shelter capacity and 4) other criteria as determined by subject matter experts.	Multnomah County Department of County Assets, Facilities Multnomah County Department of County Management, Risk Management Multnomah County Department of Human Services Multnomah County Emergency Management Multnomah County Health Department, Environmental Health Multnomah County Health Department, Public Health Portland Bureau of Emergency Management Portland Parks and Recreation	●			●	●	
19	Create a county map to illustrate the location, spatial distribution and characteristics of cleaner air spaces as determined in Action 18	211 Info Multnomah County Communications Office Multnomah County Department of Human Services Multnomah County Emergency Management Portland Bureau of Emergency Management Multnomah County, Department of County Assets, IT	●			●	●	

Action No.	Mitigation Action	Potential Lead or Supporting Partners	Priorities					
			Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
20	Share the results of the Action 10 synthesis and Action 11 outreach campaign with policy-makers and housing providers.	<p>Affordable housing organizations</p> <p>Multnomah County Health Department, Environmental Health</p> <p>Multnomah County Office of Sustainability</p> <p>Portland Bureau of Emergency Management</p> <p>Portland Housing Bureau</p>	●			●		●
21	<p>Build off the Multnomah County Preparedness Advocates model to develop a train-the-trainer model to create and conduct multi-lingual training and outreach to county populations most sensitive to wildfire smoke (as identified in Subsection 6.3.4).</p> <p>Outreach includes:</p> <ul style="list-style-type: none"> critical wildfire smoke health and safety information preferred filtration supplies clear instructions on how to filter air at home how to find a cleaner air space where to find air and smoke forecasts how to stay safe indoors how to stay safe outdoors 	<p>Affordable housing organizations</p> <p>Community Based Organizations</p> <p>Gresham Community and Neighborhood Engagement</p> <p>Multnomah County Department of Human Services</p> <p>Multnomah County Health Department, Community Partnerships and Capacity Building</p> <p>Multnomah County Health Department, Environmental Health</p> <p>Neighborhood Associations</p> <p>Neighborhood Emergency Teams</p> <p>Portland Office of Neighborhood Involvement</p> <p>School Districts</p>	●	●	●	●	●	●

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22	Echo OHA and OSHA messaging for people who are likely to be outdoors during wildfire smoke events, including outdoor workers, people who are unsheltered, and others who cannot access a cleaner air space.	Multnomah County and City of Portland Joint office of Homeless Services Multnomah County Health Department, Environmental Health Organizations that serve people who are unsheltered	●			●	●	
23	Identify an entity to lead the coordination of procurement and distribution of air filtration and air cleaning supplies for the community prior to smoke events. Goals include reducing duplication and increasing efficiency and effectiveness of distribution efforts.	Multnomah County Department of Human Services Multnomah County Health Department, Environmental Health Multnomah County Office of Sustainability Portland Office of Emergency Management COAD organizations	●					●
24	Conduct outreach to community organizations on how to access clean air resources 1) before a wildfire smoke event, through the lead agency identified in Action 23, and 2) through an established resource request process during a wildfire smoke event.	Affordable housing organizations Community Organizations Active in Disasters Multnomah County Emergency Management Portland Bureau of Emergency Management Portland Housing Bureau	●	●	●	●		

Action No.	Mitigation Action	Potential Lead or Supporting Partners	Priorities					
			Preparedness	Community Partnership	Outreach	Care for Most Vulnerable	Safety & Shelter	Collaboration & Coordination
25	Work with partners to identify which air filtration and air cleaner supplies and equipment are needed to meet cleaner air best practices for shelters, and add those items to the shelter inventory list.	Multnomah County Department of County Assets, Facilities Multnomah County Department of County Management, Risk Management Multnomah County Department of Human Services Multnomah County Emergency Management Multnomah County Health Department, Environmental Health Portland Bureau of Emergency Management Portland Parks & Recreation	●				●	