

OSU Guidelines: AQI-Based Decision-Making Matrix for Wildfire Smoke Events

Response actions for consideration.										
Levels of Health Concern	Current Outdoor PM2.5 AQI Value	Who is Affected?	OR-OSHA Reqs.	Indoor workers with functioning HVAC system	Outdoor Workers/Volunteers	Classes	Campus Facilities Operations	Athletics & Outdoor Rec (NCAA or Other Campus Athletics with regulatory guidelines)	Outdoor Camps/Events	Youth Programs/Child Care
Good	0-50	None expected		No Action Anticipated	No Action Anticipated	No Action Anticipated	No Action Anticipated	No Action Anticipated	No Action Anticipated	No Action Anticipated
Moderate	51-100	Unusually Sensitive Individuals (people with lung and heart disease) may be affected.		No Action Anticipated	<ul style="list-style-type: none"> Unusually sensitive people may require work accommodations. <ul style="list-style-type: none"> Discuss with supervisor alternate work schedule or work location with conditioned air as needed. 	No Action Anticipated	No Action Anticipated	No Action Anticipated	No Action Anticipated	<ul style="list-style-type: none"> "LIMIT" activity Encourage very young children (birth to age 2) and unusually sensitive youth to limit their exposure and reduce vigorous outdoor activities.
Unhealthy for Sensitive Groups	101-150	Sensitive groups including people with heart or lung disease, older adults, pregnant women, and children.	<ul style="list-style-type: none"> Training required Notify employees of AQI change Engineering/Admin controls (HVAC) reduce AQI below 101 if feasible Voluntary use of NIOSH approved N95 respirator 	No Action Anticipated	<ul style="list-style-type: none"> Unusually sensitive people may require work accommodations. <ul style="list-style-type: none"> Discuss with supervisor alternate work schedule or work location with conditioned air as needed. 	No Action Anticipated	<ul style="list-style-type: none"> Consider closing building doors and windows to reduce outdoor air intake. 	<ul style="list-style-type: none"> Medical/athletic staff/outdoor recreation staff should consult with individuals who fall into the sensitive groups about participation in practice, competition, and/or outdoor events. 	<ul style="list-style-type: none"> At higher end of range, consider moving activities indoors. 	<ul style="list-style-type: none"> "MODIFY" activity For longer activities over 2 hours, take more breaks and do less intense activities. Where possible, make indoor space available to all youth, especially very young children (birth to age 2) and anyone with asthma or heart/lung conditions.
Unhealthy	151-200	Everyone	<ul style="list-style-type: none"> Training required Notify employees of AQI change Engineering/Admin controls (HVAC) reduce AQI below 101 if feasible Voluntary use of NIOSH approved N95 respirator 	No Action Anticipated	<ul style="list-style-type: none"> Limit outdoor work and prolonged or heavy exertion if practicable. Reassign employees who work outdoors for more than one hour 	<ul style="list-style-type: none"> Consider academic accommodations for students and faculty with pre-existing health conditions. Consider cancelling or moving outdoor classes indoors. 	<ul style="list-style-type: none"> Consider making N95 respirators and use/care guidance available for voluntary use. Consider increasing campus-managed shuttle/bus service. As feasible, modify filtered mechanical ventilation systems to reduce outdoor air intake. 	<ul style="list-style-type: none"> Medical/athletic training staff should closely monitor the health of all athletes in practice and competition. Modifications to athletic activities should be considered and implemented as necessary. Shorten/modify outdoor recreational activity to limit prolonged or heavy exertion. 	<ul style="list-style-type: none"> Consider cancellation of more intense outdoor events or move events indoors. 	<ul style="list-style-type: none"> "AVOID" activity Vigorous outdoor activities should be avoided for all children, and sensitive individuals should remain indoors. Consider moving longer or more intense activities indoors or rescheduling them to another day or time.
Very Unhealthy	201-300	Everyone	<ul style="list-style-type: none"> Training required Notify employees of AQI change Engineering/Admin controls (HVAC) reduce AQI below 101 if feasible Required use of NIOSH approved respirator at work if at or above 251 AQI Follow OR-OSHA rules Appendix A for fit test 	No Action Anticipated if indoor AQI is below 201	<ul style="list-style-type: none"> Suspend outdoor work. If work is absolutely necessary, provide NIOSH-approved N95 respirators for mandatory use when at or above 251 AQI. 	<ul style="list-style-type: none"> In consultation with the President and Provost Offices, cancel or restructure classes if current AQI levels have maintained in this range and are expected to continue (academic or research activities that are inside HVAC buildings may be excluded from cancellation). 	<ul style="list-style-type: none"> Monitor indoor air quality and implement mitigation actions if indoor AQI is within this range. 	<ul style="list-style-type: none"> Outdoor athletic activities should be moved indoors or delayed, postponed, or relocated. Cancel or move indoors outdoor recreational activities. 	<ul style="list-style-type: none"> Cancel outdoor events involving activity (e.g., sports). Consider cancellation of outdoor events that do not involve activity (e.g., concerts). 	<ul style="list-style-type: none"> "CANCEL" activity Close if current AQI levels have maintained in this range and are expected to continue. Close activity if local school district has closed for air quality issues.
Recommendation to close Campus/no operations, Essential Employees allowed at Supervisor Discretion										

OSU Guidelines: AQI-Based Decision-Making Matrix for Wildfire Smoke Events

Response actions for consideration.										
Levels of Health Concern	Current Outdoor PM2.5 AQI Value	Who is Affected?	OR-OSHA Reqs.	Indoor workers with functioning HVAC system	Outdoor Workers/Volunteers	Classes	Campus Facilities Operations	Athletics & Outdoor Rec (NCAA or Other Campus Athletics with regulatory guidelines)	Outdoor Camps/Events	Youth Programs/Child Care
Hazardous	301-500	Everyone	<ul style="list-style-type: none"> • Training required • Notify employees of AQI change • Engineering/Admin controls (HVAC) reduce AQI below 101 if feasible • Required use of NIOSH approved respirator at work if at or above 251 AQI • Follow OR-OSHA rules Appendix A for fit test 	<p>No Action Anticipated if indoor AQI is below 201</p> <p>Email expectation to keep windows/doors closed</p>	<ul style="list-style-type: none"> • Follow recommendations for the Very Unhealthy category. • Suspend outdoor work and activities. If outdoor work is absolutely necessary, NIOSH-approved respirators for PM2.5 such as N-95 respirators are mandatory and require training and fit testing. 	<ul style="list-style-type: none"> • Follow recommendations for the Very Unhealthy category. 	<ul style="list-style-type: none"> • Follow recommendations for the Very Unhealthy category. 	<ul style="list-style-type: none"> • Cancel or move indoors all outdoor athletic and recreation events/activities. • Consider cancellation of indoor events/activities based on indoor air quality measurements. 	<ul style="list-style-type: none"> • Cancel all outdoor events and camp activities. • Consider cancellation of indoor camps that require participants or families to travel to and from campus. 	<ul style="list-style-type: none"> • Follow recommendations for the Very Unhealthy category.
Hazardous	> 501	Everyone	Formal Respirator Protection Program applies (Medical clearance and fit test)							

Key characteristics:

- The matrix is designed for use when wildfire smoke conditions result in worsening and unhealthy air quality. It does not apply if there is a direct threat of wildfire and/or other significant hazard to the location, or for smog-related air quality conditions. OR-OSHA rules exempt buildings, structures, and vehicles with air filtration mechanical systems. Sustained air quality readings are considered a 4 hour interval or more.
- Suggested *required actions* are in **bolded red text**. These are definitive actions that must take place when - but not before - the corresponding AQI threshold is met.
- Non-bolded actions are recommended for consideration and should be implemented at discretion of senior administration.
- The matrix is not a stand-alone document. It should be used in conjunction with existing response plans, protocols, and procedures including the *Emergency Operations Plan*, *Crisis Communication Plan*, and *Natural Hazards Mitigation Plan*.
- If building indoor air quality is measured at a level consistent with the AQI thresholds, applicable mitigation measures such as, decreasing fresh air makeup, increasing filtration efficiency of the supply air, or point of use local air filtration, should be implemented if feasible.
- Contractors working at OSU locations should follow the advice of their own employers.
- The Pre-K-12 actions apply to OSU-managed facilities only.
- The matrix incorporates actions proposed by Oregon/OSHA.
- University sponsored outdoor events held at off-campus locations are subject to actions associated with that location's AQI levels.
- Actions for athletic practice and competition were based on current National Collegiate Athletic Association (NCAA) guidance. Decisions regarding the cancellation and/or rescheduling of athletic competitions should be made in accordance with the NCAA. Rescheduling of athletic and recreation competitions may take place when the AQI lowers to an acceptable level.
- Locations should ensure timely communication of AQI-based decisions and expected actions via multiple and redundant communication methods.
- Higher AQI thresholds automatically incorporate all guidance and actions associated with lower AQI levels.

6/27/2022

Adopted in-part from the University of California Wildfire Smoke and Air Quality Report (https://www.ucop.edu/safety-and-loss-prevention/_files/systemwide_aqwg_report_final_20190925.pdf)