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

Response actions for consideration:

<table>
<thead>
<tr>
<th>Levels of Health Concern</th>
<th>Current Outdoor AQI Value</th>
<th>Who is Affected?</th>
<th>DR-OSHA Req's</th>
<th>Indoor workers with functioning HVAC systems</th>
<th>Outdoor workers/Volunteers</th>
<th>Classes</th>
<th>Campus Facilities Operations</th>
<th>Athletics &amp; Outdoor Rec (NCAA or Other Campus Athletics) with regulatory guidelines</th>
<th>Outdoor Camps/Events</th>
<th>Youth Programs/Child Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>0-50</td>
<td>None exposed</td>
<td>No Action</td>
<td>No Action Anticipated</td>
<td>No Action Anticipated</td>
<td>No Action</td>
<td>No Action Anticipated</td>
<td>No Action Anticipated</td>
<td>No Action Anticipated</td>
<td>No Action Anticipated</td>
</tr>
<tr>
<td>Moderate</td>
<td>51-150</td>
<td>Unusually sensitive individuals (people with lung or heart disease) may be affected.</td>
<td>No Action Anticipated</td>
<td>No Action Anticipated</td>
<td>No Action Anticipated</td>
<td>No Action</td>
<td>No Action Anticipated</td>
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</table>
| Unhealthy for Sensitive Groups | 101-150 | Sensitve groups including people with heart or lung diseases, older adults, pregnant women, and children. | No Action Anticipated | Email expectation | no outdoor work and work outdoors for more than one hour | No Action Anticipated | No Action Anticipated | No Action Anticipated | Medical/athletic staff should consult with
diagnosed individuals who fall into the sensitive group about participation in practice, competition, and/or outdoor events. | No Action Anticipated | No Action Anticipated |
| Unhealthy                | 151-300                   | Everyone         | Training required | Notify employees of AQI change | Engineering/Admin controls (HVAC) reduce AQI below 300 if flexible | No Action Anticipated | No Action Anticipated | No Action Anticipated | Consider closing building | At higher end of range, consider moving activities indoors. | No Action Anticipated |
| Very Unhealthy           | 301-400                   | Everyone         | Training required | Notify employees of AQI change | Engineering/Admin controls (HVAC) reduce AQI below 300 if flexible | No Action Anticipated | No Action Anticipated | No Action Anticipated | Consider making N95 respirators available to
diabetes patients | No Action Anticipated | No Action Anticipated |

Recommendation to close Campus/no operations, Essential Employees allowed at Supervisor Discretion

- AQI: Air Quality Index
- HVAC: Heating, Ventilation, and Air Conditioning
- NIOSH: National Institute for Occupational Safety and Health
- N95: N95 tight-fitting respirator
- OSU: Oregon State University
- PM2.5: Particulate Matter with an aerodynamic diameter of 2.5 microns
- TVOC: Total Volatile Organic Compounds

Please refer to the complete matrix for detailed actions and considerations.
### Levels of Health Concern

<table>
<thead>
<tr>
<th>Current Outdoor PM2.5 AQI Value</th>
<th>Who is Affected</th>
<th>OR-OSHA Reqs.</th>
<th>Indoor workers with functioning HVAC systems</th>
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</thead>
<tbody>
<tr>
<td><strong>Hazardous 301‐500</strong></td>
<td>Everyone</td>
<td>• Training required</td>
<td>No Action Anticipated if indoor AQI is below 201</td>
<td>• Follow recommendations for the Very Unhealthy category.</td>
<td>• Follow recommendations for the Very Unhealthy category.</td>
<td>• Cancel or move indoor all outdoor athletic and recreation events/activities.</td>
<td>• Consider cancellation of indoor events/activities based on indoor air quality measurements.</td>
<td>• Cancel all outdoor events and camp activities.</td>
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</tr>
<tr>
<td><strong>Hazardous &gt; 501</strong></td>
<td>Everyone</td>
<td>• Formal Respirator Protection Program applies (Medical clearance and fit test)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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.
- 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.

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6/27/2022