

Wildfire Smoke Practice Protocol Template

*If you would like more information about obtaining a free indoor and outdoor air monitor for your school, read the **PurpleAirs in Schools Project** information attached to this document*

Purpose: To protect the health and well-being of athletes and staff during wildfire smoke events by providing clear guidelines for practice and games.

Monitoring Air Quality

1. **Check Air Quality Index (AQI):** Before each practice or game, check the AQI using reliable sources such as AirNow.gov or your free registered high school PurpleAir monitor.
2. **AQI Levels and Recommended Actions:**
 - **0-50 (Good):** Normal practice and games.
 - **51-100 (Moderate):** Monitor sensitive individuals; reduce intensity if needed.
 - **101-150 (Unhealthy for Sensitive Groups):** Modify practice to low-intensity activities; consider moving practice indoors.
 - **151-200 (Unhealthy):** Move practice indoors or cancel outdoor activities.
 - **201-300 (Very Unhealthy):** Cancel all outdoor activities; move indoors if possible.
 - **301+ (Hazardous):** Cancel all activities.

Actions During High AQI Levels

1. **Communication:** Inform all coaches, staff, athletes, and parents about the AQI levels and any changes to practice schedules.
2. **Indoor Activities:** Plan indoor practice sessions, focusing on strategy, team meetings, mobility/stretching, and light exercises.
3. **Monitoring Athletes:** Closely monitor athletes with asthma or other lung or heart conditions. Ensure they have access to medications and are aware of the protocol.

General Guidelines

1. **Hydration:** Emphasize the importance of staying hydrated.
2. **Rest Periods:** Increase the frequency of rest periods and reduce the duration of intense activities.
3. **Medical Equipment:** Ensure the availability of medical equipment such as inhalers and first aid kits.
4. **Education:** Educate athletes on the symptoms of smoke exposure and encourage them to report any discomfort.

Signs of Smoke Exposure

1. **Common Symptoms:** Coughing, throat irritation, headaches, shortness of breath, fatigue, and chest pain.
2. **Immediate Actions:** Athletes experiencing these symptoms should stop activities immediately and seek medical attention if necessary.

Emergency Contact List

1. **Ensure Accessibility:** Maintain an updated list of emergency contacts for all athletes, especially those with pre-existing lung or heart conditions.
2. **Emergency Plan:** Have a clear plan for emergency situations, including transportation to medical facilities if needed.

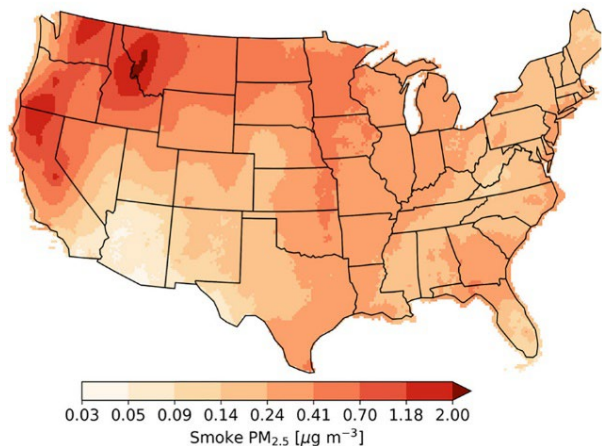


DEPARTMENT OF
**PUBLIC HEALTH &
HUMAN SERVICES**

PurpleAirs in Schools Project

Free Air Sensors for your school to monitor Montana's air pollutant of concern: Particulate Matter (PM_{2.5})

Mean Smoke PM_{2.5} 2006-2018



Plot from O'Dell et al. 2021

Significance of Smoke Impacts in Montana

- Montanans are subjected to some of the highest concentrations of smoke-derived PM_{2.5} in the United States.
- Montana represents a high outlier for percentage of annual mortalities attributed to smoke exposure.
- Wildfires and smoke-attributed PM_{2.5} are expected to increase due to intensifying drought, warming due to climate change and forests heavily over-burdened with wildland fuels.
- Wildfire smoke can have negative health effects on students participating in back-to-school extracurricular activities such as outdoor sport practices and events.

We aim to empower all Montanans, including those living in our most rural and underserved communities, with knowledge and air quality data currently unavailable to them.

School and Student Benefits

1. Inform decision-making regarding the health and safety of students and athletes during poor air quality events.
 - For example, it can be difficult to decide whether it is safe to practice sports outside especially if the closest air monitor is a few towns away!
2. Improve preparedness for your school and community ahead of poor air quality events especially during fire season.
3. Give teachers, students, and parents real-time and historical data to learn about local air quality issues.
 - Provides opportunities for students to interact with real-world data and investigate the existent threat of smoke.
 - Build student engagement in the fields of science, data and web-based technologies, and environmental health.
4. Ensure future generations have access to local air quality information and awareness of public health risks.

Armed with air quality data and knowledge about the risks of smoke, Montanans can reduce their exposure to, and health effects associated with, smoke and PM_{2.5}

Requirements

- Install indoor and outdoor air quality sensors and connect them to the school's wifi.
 - Indoor sensor installed in science teacher's classroom.
 - Outdoor sensor installed anywhere there is power and good wifi connection.
- PurpleAir PM_{2.5} sensors are about the size of a grapefruit and simple to install.
 - The equipment along with guidance and continuous support will be provided.
- PurpleAir sensors are reliable enough to meet the needs of individuals, schools, and organizations for public health decision-making.

*There are **no** reporting requirements attached to this opportunity.

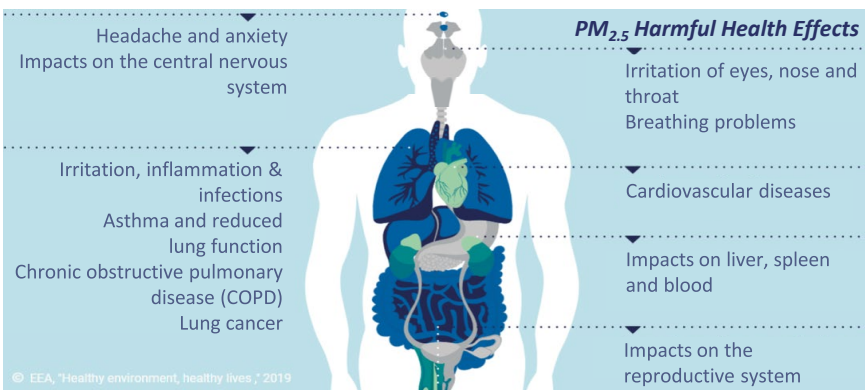


Image by: Thom Bridge, Missoulian

PurpleAirs in Schools Project

Free Air Sensors for your school to monitor Montana's air pollutant of concern: Particulate Matter (PM_{2.5})

PurpleAir Sensors Report the Air Quality Index

- Air quality index (AQI) is calculated from the measured PM_{2.5} concentration which is correlated to an AQI value.
- AQI value is on a scale of 0 to 500.
 - Lower the AQI value, the better the air quality.
- AQI index values reflect levels of health concern associated with exposure to PM_{2.5}.
- Ranges of health concern are communicated via color scale.

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 or 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 Groups	101 to 150	Members of sensitive groups may experience health effects. 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 conditions: everyone is more likely to be affected.

The online PurpleAir Air Quality Map displays your sensors in addition to other sensors that have been installed in your community. The sensors provide the real-time AQI Level of Health Concern as well as a plot of the Health Concern trends.

