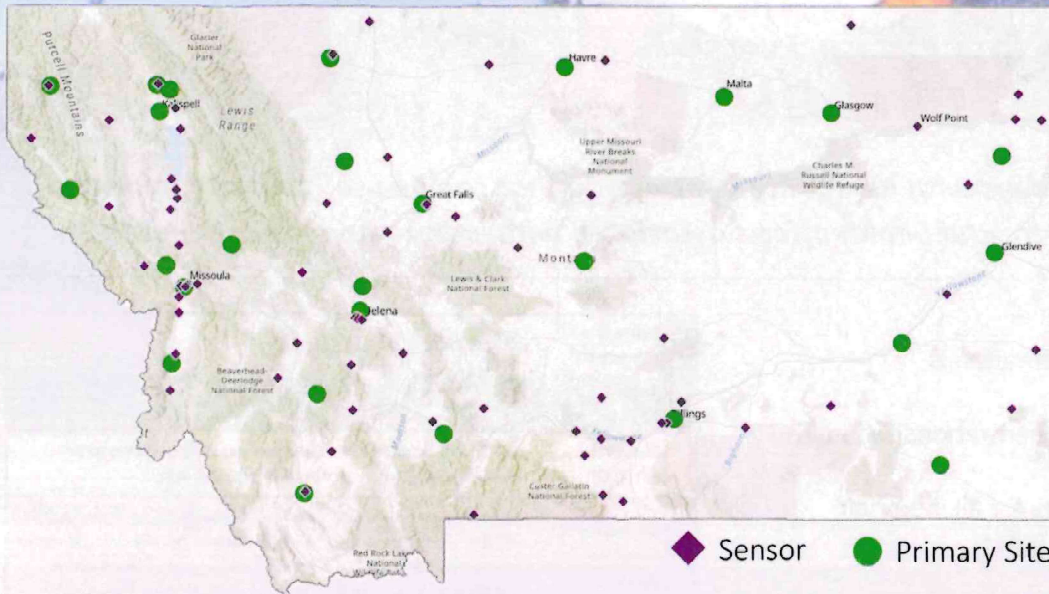
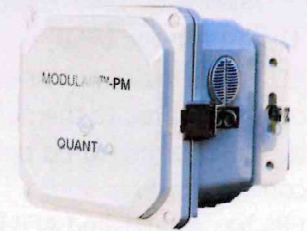


Montana's PM_{2.5} Monitoring Network – Includes Low-Cost Sensors!



PurpleAir Sensor



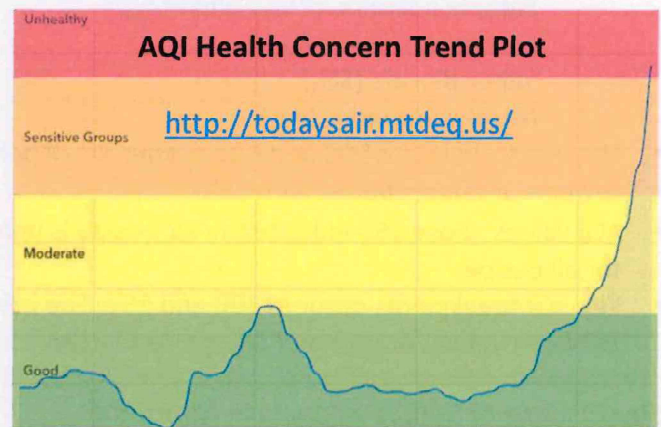
QuantAQ MODULAIR Sensor

DEQ Statewide Ambient Air Monitoring Network

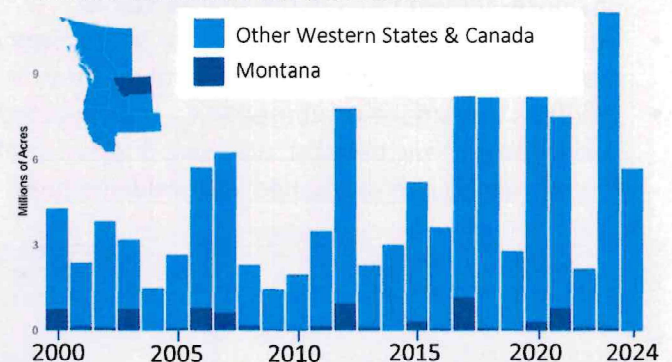
- 26 primary monitoring sites across the state provide highest-quality measurements of PM_{2.5}, PM₁₀, O₃, NO₂, CO, SO₂ and particulate chemical composition.
- Low-cost sensors fill-in gaps and provide real-time air quality information to smaller communities that have not previously had access to local air quality data.
- DEQ's PurpleAirs in Schools program provides free indoor/outdoor air quality sensors to schools in the state. 125 schools are currently enrolled in the program; 76 schools have installed their sensors and are reporting real-time data.

Please help us get the word out to schools about this on-going program!

- DEQ's online Today's Air map displays hourly air quality data from primary monitoring stations. The website also provides hourly AQI and concentration trend plots. Sensors will be added to Today's Air by June 2026.
- DEQ's monitoring data is also displayed on the EPA AirNow Fire & Smoke map site along with PurpleAir sensor data and smoke plumes.



Annual Wildfire Acres Burned



To access real-time air quality data or for more information, use the following links or QR codes.

DEQ Today's Air website
<http://todaysair.mtdeq.us/>



EPA AirNow Fire & Smoke Map
<https://fire.airnow.gov/>



PurpleAirs in Schools
<https://deq.mt.gov/air/Programs/monitoring>



Please direct questions to Air Quality Bureau Chief, Bo Wilkins: 444-0286, bo.wilkins@mt.gov

We aim to empower all Montanans with air quality information that can be used to make informed decisions regarding exposure to, and health effects associated with, smoke and other pollutants.

Air Quality Index (AQI)

- AQI is the main way air quality information is communicated to the public.
- It connects measured pollutant concentrations to health concern levels.
- EPA has established AQI breakpoints for all major air pollutants regulated by the Clean Air Act:
 - Ground-level ozone (O₃)
 - Particle pollution (PM_{2.5} and PM₁₀)
 - Carbon monoxide (CO)
 - Sulfur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
- The AQI scale is 0 to 500 and is the same for all pollutants.
- Lower AQI value = better air quality.
- AQI values above 150 indicate the air quality is unhealthy for all people.
- Key AQI breakpoints occur at 100 and 150. The breakpoints between yellow/orange and orange/red health concern levels are standardized to these values for all pollutants.

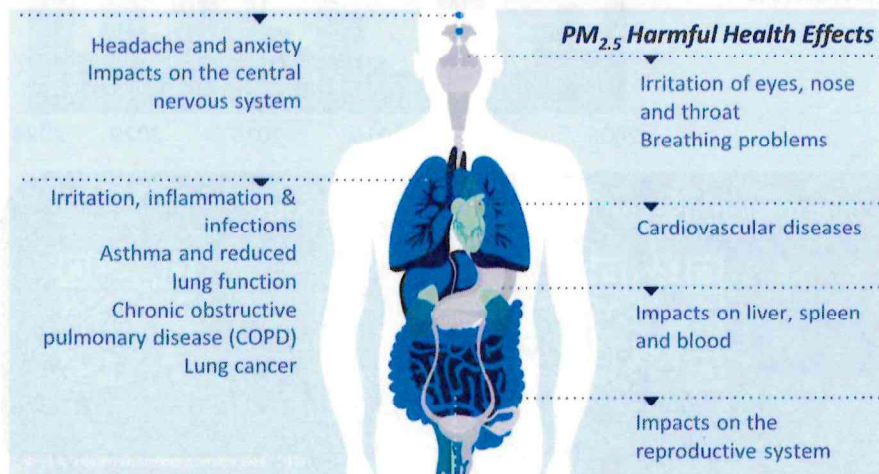
Levels of Concern	Description of Air Quality
Good (0-50)	Air quality is good.
Moderate (51-100)	Air quality is acceptable. People unusually sensitive to air pollution may begin to notice health impacts.
Unhealthy for Sensitive Groups (101-150)	Members of sensitive groups may experience adverse health effects. The general public is less likely to be affected. Sensitive groups include people with heart or lung conditions, older adults, children, pregnant women, and people who work outdoors.
Unhealthy (151-200)	Air pollution levels are unhealthy for all people. Health effects on sensitive populations can be serious.
Very Unhealthy (201-300)	The risk of negative health effects is increased for the entire population.
Hazardous (301+)	Air pollution levels are harmful to all people. Anyone could experience serious health effects.

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 ambient 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 is Montana's Pollutant of Greatest Concern

PM_{2.5} is airborne particulate matter <2.5 μm in diameter. It is a primary constituent in wildfire smoke and used as a surrogate for tracking it.



Mean Smoke PM_{2.5} 2006 - 2018

