



THE AIR QUALITY INDEX

What is the Air Quality Index?

The Air Quality Index, or AQI, is an easy way to understand how clean the outside air is. It is a simple tool that provides a color coded “picture” of current air pollution levels and health effects. People can use the AQI to adjust daily activities in order to protect their health when there is more air pollution than there should be.



What air pollution is reported by the AQI?

AQI pollutants include fine particles, ground-level ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide. Fine particles or ground-level ozone are the pollutants most likely to control the AQI. Air monitor data is collected and analyzed by an automated computer program that determines how clean the air is. The AQI tells people whether the air they breathe is currently **“good”**, **“moderate”**, **“unhealthy for sensitive groups”**, **“unhealthy”**, **“very unhealthy”** or **“hazardous”**. Values are reported in near real-time via the **MIair** webpage.

How clean is our air? Has the AQI ever reached “hazardous” levels in Michigan?

Michigan’s air quality usually falls in the **“good”** or **“moderate”** air quality range. Sometimes, the AQI will reach the orange **“unhealthy for sensitive groups”** level. Michigan hardly ever experiences air quality concentrations in the **“unhealthy”** range. The AQI here has never reached hazardous levels.

How does the AQI work?

Air monitors analyze air samples. Each sample is given a numerical value. If more than one kind of air pollutant is monitored at a location, the one with the highest value (worst air measured) becomes the AQI. An AQI number above 100 means a pollutant has reached unhealthy levels.

Why report the AQI?

The AQI is a federally mandated program. Since 1976, the Clean Air Act has required state and local communities to communicate air quality information in a consistent manner. The index was revised in 1999 to provide better information about health risks linked with air pollution. Today’s air quality is reported the same way across the country. As air quality health standards change to better protect sensitive population groups, the AQI scale breakpoints are adjusted to reflect the new, more protective standard.

How is the current index different from the old one?

In 1999, the EPA added the AQI category called **“unhealthy for sensitive groups”** to better protect children, people with lung disease or asthma, and others who are more sensitive to air pollution than the general public. An AQI forecast has also been added so air agencies can notify the public ahead of time when poor air quality is predicted. These improvements help people to better protect their health – they can avoid prolonged, strenuous activity or reduce physical exertion when there is too much pollution in the air. People can also reduce air pollution levels by driving less and using products that conserve energy.

How can I find out what today’s AQI is?

The current AQI is available on the DEQ “Air” webpage. Go to www.michigan.gov/deqair and select the **MIair** icon. The color-coded map shows monitor locations across the state. Index values are updated every hour during the day. You can view a detailed summary of AQI numerical values and the controlling pollutant for each monitor location. If you don’t have convenient access to the Internet, you can call the DEQ Environmental Assistance Center during office hours at 1-800-662-9278. National AQI maps and information are available via EPA’s AIRNow webpage at www.airnow.gov. AQI forecasts are often reported with weather information in the news.

EnviroFlash is a free service that automatically sends out e-mail or text messages of tomorrow’s AQI forecasts. Participants receive air quality messages at the health level they select. (Most people choose the **“orange”** level.) Messages also include information when air quality **“Action! Day”** advisories are issued. For more information and to enroll, go to the **MIair** webpage and select the “Air Quality Notification” tab.

THE AIR QUALITY INDEX COLORS AND HEALTH STATEMENTS

AQI Color, Category & Value	PARTICULATE MATTER ($\mu\text{g}/\text{m}^3$) 24-hour	OZONE (ppm) 8-hour / 1-hr	CARBON MONOXIDE (ppm) 8-hour	SULFUR DIOXIDE (ppm) 24-hour	NITROGEN DIOXIDE (ppm) 1-hour
GREEN: Good 1- 50	None	None	None	None	None
YELLOW: Moderate 51- 100	People who are unusually sensitive to air pollution should consider reducing prolonged or heavy exertion.	People who are unusually sensitive to air pollution should consider limiting prolonged outdoor exertion.	None	None	None
ORANGE: Unhealthy For Sensitive Groups 101- 150	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion.	Active children and adults, and people with lung disease, such as asthma, should reduce prolonged or heavy outdoor exertion.	People with cardiovascular disease, such as angina, should limit heavy exertion and avoid sources of CO, such as heavy traffic.	People with asthma should consider limiting outdoor exertion.	None
RED: Unhealthy 151- 200	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged or heavy outdoor exertion; everyone else, especially children, should reduce prolonged outdoor exertion.	People with cardiovascular disease, such as angina, should limit moderate exertion and avoid sources of CO, such as heavy traffic.	Children, asthmatics, and people with heart or lung disease should limit outdoor exertion.	None
PURPLE: Very Unhealthy 201- 300	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children should limit outdoor exertion.	People with cardiovascular disease, such as angina, should avoid exertion and sources of CO, such as heavy traffic.	Children, asthmatics, and people with heart or lung disease should avoid outdoor exertion; everyone else should limit outdoor exertion.	Children and people with respiratory disease, such as asthma, should limit heavy outdoor exertion.
MAROON: Hazardous 301- 500	Everyone should avoid all outdoor exertion; people with heart or lung disease, older adults, and children should remain indoors.	Everyone should avoid all outdoor exertion.	People with cardiovascular disease, such as angina, should avoid exertion and sources of CO, such as heavy traffic; everyone else should limit heavy exertion.	Children, asthmatics, and people with heart or lung disease should remain indoors; everyone else should avoid outdoor exertion.	Children and people with respiratory disease, such as asthma, should limit moderate or heavy outdoor exertion.

FOR MORE INFORMATION ON THE AQI, GO TO www.michigan.gov/air AND SELECT THE "MIair" ICON
OR CONTACT THE AIR QUALITY DIVISION