



ECOLOGY
CENTER

What is Air Pollution and How Does It Affect My Health?

AIR POLLUTION is a mix of solid particles and gasses in the air that can cause harm to people. Ozone and particulate matter are two dangerous types of air pollution. OZONE is produced when oxygen, nitrous oxides, and Volatile Organic Compounds (VOCs) combine in the presence of sunlight. The sources of nitrous oxide and VOCs come from car engine exhaust, industrial emissions and combustion, gasoline vapors, paints, and chemical solutions.

PARTICULATE MATTER (PM) is the small, solid material suspended in the air that is able to enter our airways when breathing. PM is classified based on the size of the particles. PM2.5 is small enough to be carried into the bloodstream through the delicate lungs. The larger PM10 settles in our sinuses and air passages because the particles are too big to pass through lung tissue. Major sources of PM pollution are fires, burning waste, exhaust, industrial processes, and windblown particles in dry environments, such as dust from agricultural fields.

AIR POLLUTION HARMS HUMAN HEALTH

- damage to lung tissue
- respiratory infections
- inflammation of airways
- asthma and bronchitis
- chronic lung disease, COPD
- premature death
- lung cancer
- heart disease
- stroke
- cognitive aging
- type II diabetes

Children exposed to air pollution are particularly sensitive to decreased lung function.



WHAT CAN I DO ABOUT AIR POLLUTION?

You can be a champion for clean air!

1. If you see or smell air pollution, call the **24-hour Pollution Emergency Alerting System (PEAS) at 800-292-4706** to report concerns.
2. **Contact cleanair@ecocenter.org, (313) 288-0613.** We can connect you with local organizations taking action for clean air or help you get involved with monitoring:
 - **"Adopt a Monitor":** Visually check-in on a monitor and let us know if a problem arises.
 - **Host a gathering:** Host friends and neighbors to discuss and learn more about air quality.
 - **Learn more:** Learn how to interpret the monitor data and share with your community.

WHY HAVE COMMUNITY MONITORS?

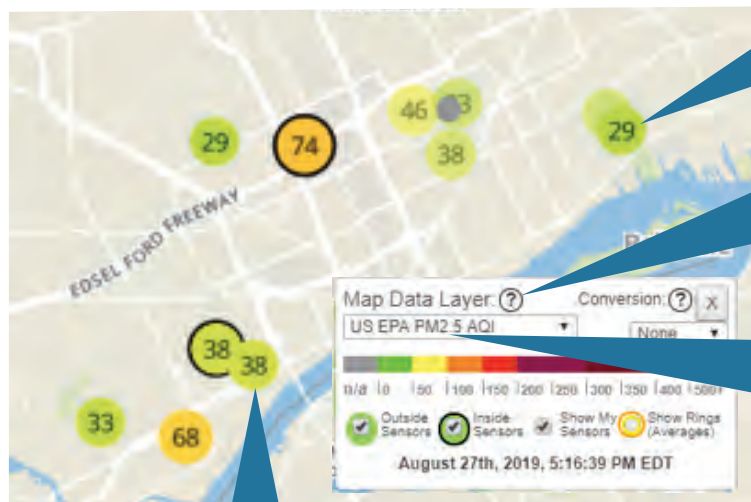
- Air pollution has health impacts and some communities suffer more from poor air quality.
- Current air pollution standards and monitoring requirements are inadequate to protect health. Community monitors help to document how current policies are failing to protect health.
- Official air monitors are spaced too far apart to provide information at neighborhood-level and miss "hotspots" of concern.
- Local residents are better able to:
 - Ask questions about the air affecting everyday life.
 - Raise community awareness and advocate for improved air quality policies.



Ecology Center Community-Based Air Monitoring Project

The Ecology Center is establishing a network of community monitors to give local residents easy access to real-time information on air quality. The monitors measure levels of particulate matter (PM), one type of air pollution. The data are freely available to the public at www.ecocenter.org/air-quality.

HOW DO I READ THE ONLINE DATA?



WHAT DO MONITORS LOOK LIKE?

Purple Air brand PM sensors are mounted on structures. Monitors are about the size of a softball and communicate information about air conditions wirelessly to an online database.

The Purple Air monitors, pictured here, are not calibrated to meet legal monitoring standards, but do provide high quality information to identify issues of concern and opportunities for community-led action.

The Ecology Center project is placing some Purple Air monitors at established government monitoring stations to measuring how our data compares to official air pollution readings.



WHERE CAN I FIND MORE INFORMATION?

Information about this project can be found at www.ecocenter.org/air-quality or contact us at cleanair@ecocenter.org, (313) 288-0613.

Establishing and maintaining this network is a collaborative effort of the Ecology Center, Detroit Health Department, and local leaders. Program is supported by Worthington Family Foundation, WSU CURES, and the Erb Family Foundation.