



Particulate Matter and Health in Detroit

The Issue and Action Steps for Community Members

What is Particulate Matter (PM)?

When you see a “haze” or “soot” in the air, sometimes it is particulate matter (PM). PM is not a single pollutant, but a mix of particles. It can be as big as dust, or much smaller—up to about three times smaller than a human hair.

PM₁₀

Larger forms of PM include dust from roads, farms, and construction sites.



PM_{2.5}

Smaller forms of PM come from vehicle exhaust, especially from older cars, and burning wood and coal.



How does PM affect my health?

All PM can be harmful.

When we breathe in PM_{2.5}, these smaller particles can pass through our body’s protective defenses in our nose and throat. The particles can travel deep into our lungs and bloodstream.

This can cause or worsen many health issues, including:

- Chest pain, wheezing, coughing, or difficulty breathing
- Irregular heartbeat or heart attacks
- Cancer
- Death



Who is most likely to be exposed?

People who live, work, or spend time near major highways or industrial sites are more likely to breathe in PM_{2.5}. Fumes or exhaust from trucks, especially trucks that use diesel gas, contain PM_{2.5}.

Who is most likely to experience health impacts?

Those living or working near industrial sources and other sensitive groups, including:

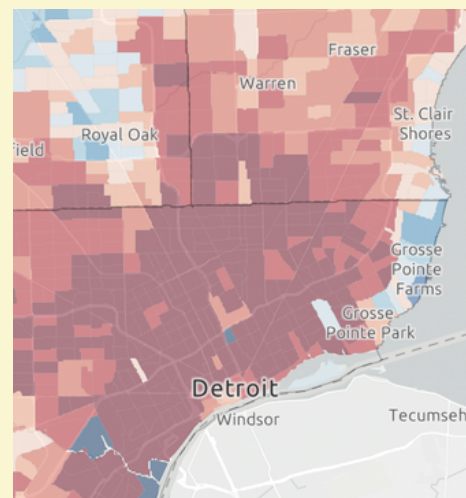
- Children
- Adults older than 65 years of age
- People with heart or lung disease, asthma, and other breathing problems



Why is particulate matter a concern in Detroit?

Many areas in Detroit have levels of air pollution that are too high—higher than the standards set by the EPA to keep us safe. This is due to the large number of highways, industrial sites, waste facilities, and other exposures in Detroit, which create high PM levels.

On the map to the right, you can see that, compared to other surrounding areas in Michigan, Tri-county (Wayne, Oakland, and Macomb) is darker red. This means that these communities have a large number of **vulnerable individuals**, such as those with chronic diseases, and have a **high proximity to environmental pollutants** like PM.



How can I protect myself from PM exposure?

- Check the air quality index regularly on airnow.gov
- If you can, on days with high PM levels:
 - Stay indoors with windows shut
 - Use an air purifier
 - Use an N95 face mask outside
 - Use your furnace in cool weather and air conditioner in hot weather
 - Change air filters regularly in air purifiers and air conditioners.

There are many types of filters. Learn more here.



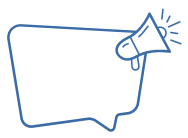
Protect yourself and your community:



Scan this QR code or go to: <https://linktr.ee/airpollutionresources>

How can I support my community?

- Stay informed about EPA rules for state and federal air quality by scanning the QR code or visiting <https://bit.ly/EPAregu>
- Educate decision makers about ways to improve air quality rules and enforcement. For help finding and contacting your representative, scan the QR code or visit <https://mea.org/mylegislators/>
 - Ask how they will protect Detroiters and their health.
 - Inform about protective measures, such as reducing diesel emissions, supporting upgrades for old engines, and using particulate filters.
- Speak at local city council, planning, commission, or zoning meetings. Share your concerns about new industrial areas and highways, especially if there are plans for construction near schools and residential areas.



Please see http://mleead.umich.edu/Coec_Fact_Sheets.php for the citations included in this factsheet. This research was supported by the National Institute of Environmental Health Sciences (NIEHS) (#R01ES022616, #R01ES032389) and the Fred A. and Barbara M. Erb Family Foundation, with additional support provided by the Michigan Center on Lifestage Environmental Exposures and Disease (M-LEEaD) (NIEHS #P30ES017885).