

PM2.5 Attainment Status

Fact Sheet

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) regulates levels of particulate matter in the outdoor air by making sure Michigan is meeting or “attaining” the United States Environmental Protection Agency’s (USEPA) National Ambient Air Quality Standards (NAAQS). The standard protects public health by limiting exposure to fine particulates. When an area is not meeting the standard EGLE takes additional steps to bring that area back into attainment.

What are PM2.5 and fine particulates?

Fine particulate matter is also called PM2.5. It refers to small particles that are less than 2.5 microns in diameter. PM2.5 comes from many sources, such as factories smokestacks, fires, and automobiles.

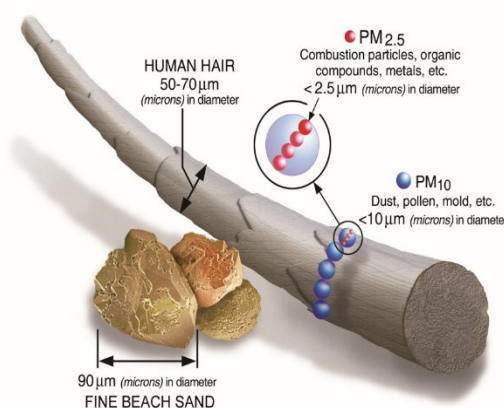


Figure 1: Diagram showing how small PM2.5 is compared to a human hair

Who should be concerned about PM2.5 exposure?

PM2.5 can be harmful. The fine particles can enter deep into the lungs. Some people are at higher risk of health impacts than others. The elderly, specifically elderly women, people with pre-existing conditions such as diabetes, heart disease, lung disease, and asthma, children, infants, and pregnant women can be at increased risk of experiencing harmful effects.

What are the health risks of PM2.5 exposure?

Long- and short-term exposure to elevated levels of PM2.5 can lead to asthma attacks, missed days of school or work, heart attacks, emergency room visits, and premature death.

What does nonattainment mean?

Nonattainment is a term applied to an area with pollutant concentrations above federal air quality standards over a long period. An area may also be considered nonattainment if pollution from that area is contributing to poor air quality in another area. Areas that are meeting the air quality standards are considered attainment areas.

How are nonattainment areas determined?

The USEPA and EGLE work together to determine whether an area is in attainment or nonattainment. When a new standard is created, available data is reviewed by both agencies to determine what areas should be considered nonattainment. Nonattainment is based on air quality measurements, pollutant emissions information, and various other analyses which provide insight into how air pollution is dispersed, and weather patterns.

What is the National Ambient Air Quality Standard for PM2.5?

The USEPA revised the primary NAAQS for PM2.5 in February of 2024. The new annual primary standard was based on the three-year average of the annual average concentrations. This sounds complicated, but it is simply how we look at PM2.5 levels in the air over time. The level can be described as the concentration of PM2.5 in the outdoor air. The level was lowered from 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 9 $\mu\text{g}/\text{m}^3$. An example of how the new standard looks compared to data from the Kalamazoo air monitor is shown in Figure 2.

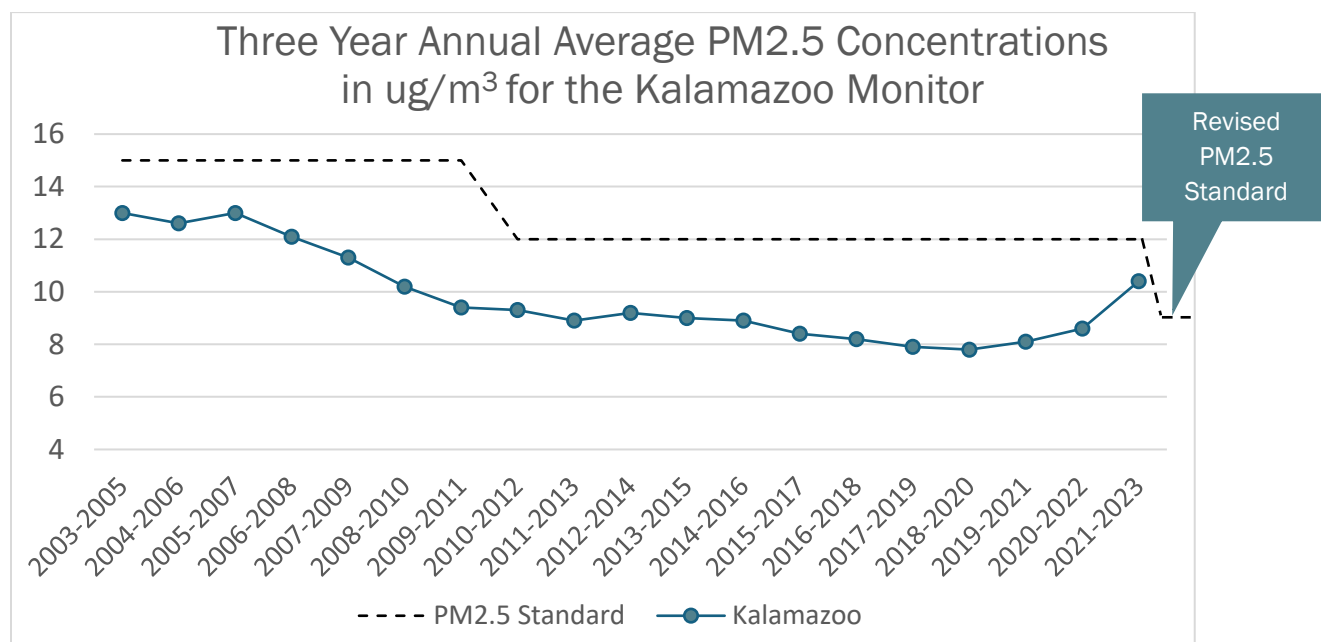


Figure 2: PM2.5 concentrations measured at the Kalamazoo air monitoring station over time.

Does the new standard mean the air is unhealthy?

This does not mean air quality has worsened or that emissions of air pollutants increased. USEPA continues to look at the standard and all available health-based science to minimize

health risks for the most vulnerable populations. Information from the Clean Air Scientific Advisory Committee indicated that fine particulate matter may negatively impact sensitive population groups at lower concentrations than previously thought. In the most recent round of analysis, USEPA found that risks may be present at lower pollution levels than previously believed. This research led to the standard being lowered.

What nonattainment areas are being recommended?

Many different types of information and data were used to develop the designation recommendation. These included air quality data from the [state's air monitoring network](#), pollutant emissions data from industrial sources, meteorology, geography, and jurisdictional boundaries. The map below outlines the areas that are being recommended as being in nonattainment with the new standard.

Can companies still get permits to emit PM2.5 with the new standard?

Air permits issued across the state for emissions of PM2.5 have permitting requirements associated with the lower standard. Once the attainment designations are final, the main difference between companies in attainment areas and companies in nonattainment areas is the process they go through to request an increase in emissions. For large increases in emissions requiring permitting, companies in nonattainment areas must meet additional requirements, including the requirement to get offsets. This means any proposed emission increase within a nonattainment area will need to be offset with slightly greater emission reductions from the area. The goal of offsets is to move towards lower overall emission levels in an area.

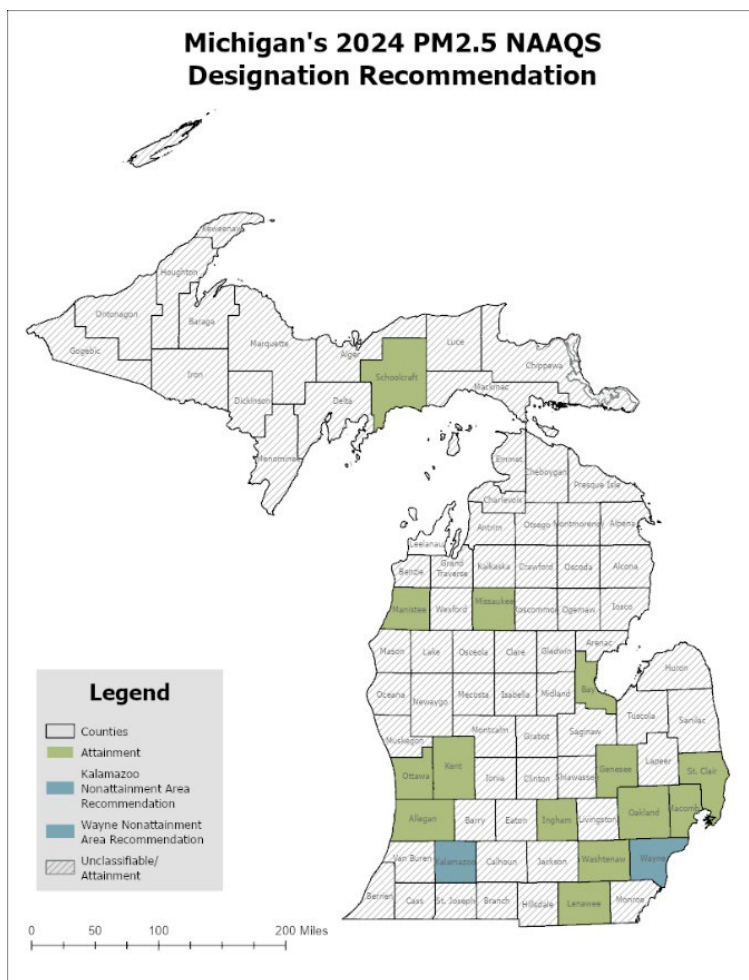


Figure 3 Map of the 2024 PM2.5 nonattainment area recommendation

Timeline

When a new or revised National Ambient Air Quality Standard is put in place, many steps are taken to determine what areas of the state may be designated as nonattainment. A high-level list of these steps for the PM2.5 standard is below.

- New standard announced on February 7, 2024
 - Annual PM_{2.5} standard lowered from 12 µg/m³ (2012) to 9 µg/m³ (2024)
 - 24-hour PM_{2.5} standard is unchanged at 35 µg/m³ (2006)
- USEPA published the new standard on March 6, 2024
- The new standard became effective on May 6, 2024
- EGLE must submit recommended designations within 1 year of the revised standard, February 7, 2025.
- The USEPA issues designations within 2 years of the revised standard, February 7, 2026 (the USEPA has an option for a 1-year extension).

Resources:

USEPA

- [Air Quality Designations for Particulate Pollution](#)
- [Particle pollution designation process](#)
- [Basis for air quality designations](#)
- [State and Tribal designations for the 2024 NAAQS](#)
- [Basic information on particulate pollution](#)

EGLE

- [State Implementation Plan Page](#), choose PM2.5
- [PM2.5 Timeline](#)
- [Air Monitoring and Attainment Status map](#)

Contact:

Questions on EGLE's PM2.5 designation recommendation may be sent to: Marissa Vaerten at VaertenM@Michigan.gov or 517-582-3601.

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