



General Information Packet

September 2025

The Los Angeles Unified Know Your Air Network



The Los Angeles Unified School District has partnered with the Coalition for Clean Air and Clarity Movement Company to create a network of >230 air quality sensors. Los Angeles Unified has deployed the sensors at school sites and facilities throughout its 710 square-mile district.

Why Create an Air Quality Monitoring Network?

The air quality sensor network provides Los Angeles Unified with important information used to protect the health and well-being of the district's 549,000+ students and over 83,000 staff (based on LAUSD Fingertip Facts 2025-2026). Parents, students, community members, and researchers have access to the data.

Los Angeles Unified has experienced an increase in the frequency and intensity of wildfires during the past several years. These wildfires have, at times, created unsafe air pollution levels at our schools. In addition, despite decades of progress, the Los Angeles region continues to have some of the worst air pollution in the country. Los Angeles Unified uses its air network during emergency events such as wildfires and poor air quality episodes to determine what actions need to be taken. The deployment of the network sensors throughout the district allows for better informed decisions for individual schools.

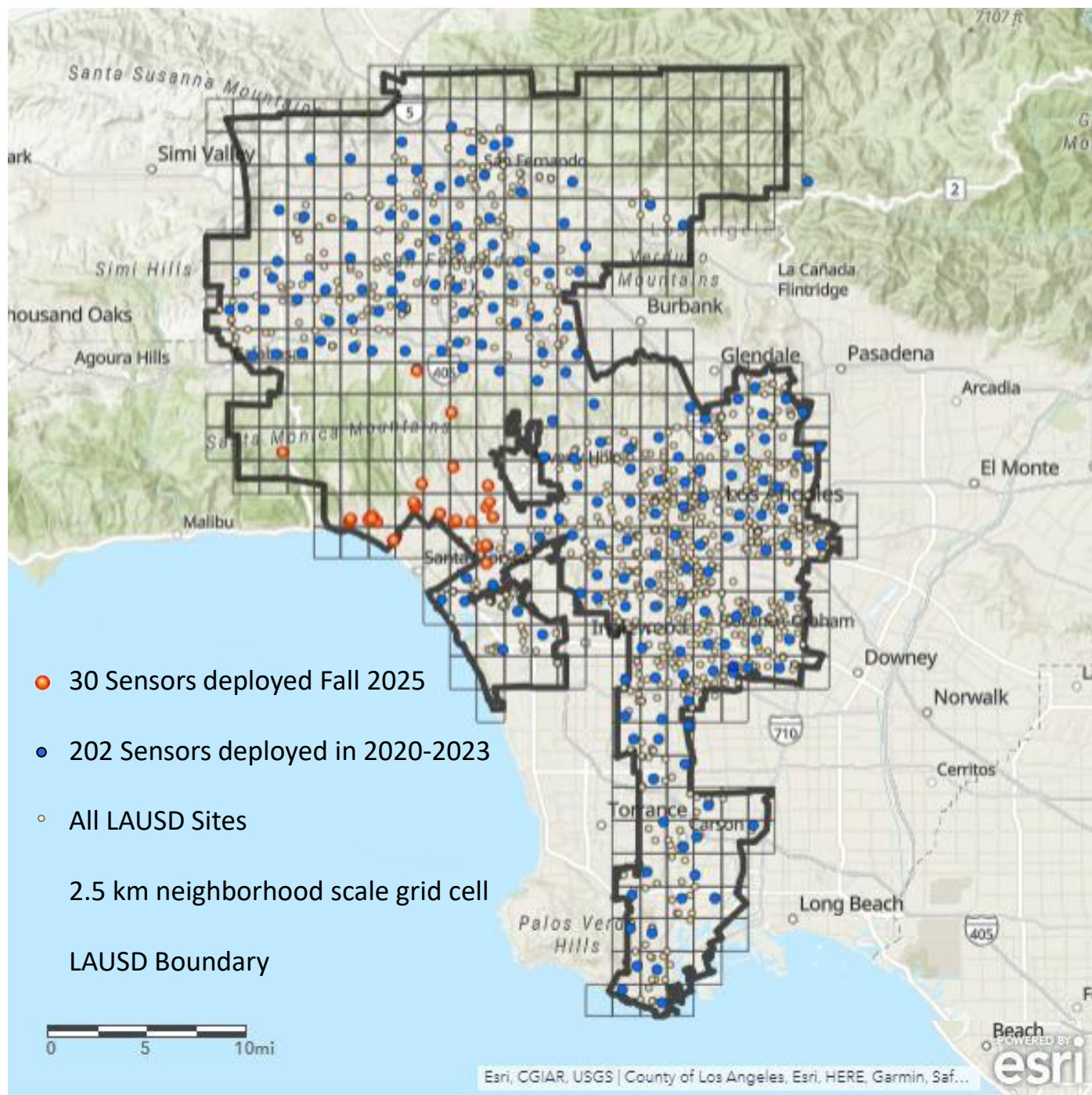


The Clarity sensors measure fine particulate matter ($PM_{2.5}$) in the air every 3-5 minutes. Some sensor locations also have the capacity to measure coarse particulate matter (PM_{10}), nitrogen dioxide (NO_2), and meteorological data like wind speed and direction.

For additional information, visit the Office of Environmental Health and Safety (OEHS) website, oehs.lausd.org/ or call OEHS at (213) 241-3199.

Smoke from Los Angeles area fires, January 2025 (Source: NASA)

The Los Angeles Unified Know Your Air Network





The Los Angeles Unified Know Your Air Network includes >230 Clarity devices. The network is a “neighborhood scale” design, which outlines a uniform 2.5 kilometer (~1.6 mile) grid. The sensors are deployed so that one is at or near every school within Los Angeles Unified.

Air Quality Index (AQI)



The Air Quality Index (AQI) is an hourly measurement of overall air quality safety created by the United States Environmental Protection Agency (EPA). AQI values range from good to hazardous. EPA provides information for each level about the relative safety for sensitive groups and the general public.

OEHS considers AQI values when deciding whether to issue air quality alerts to schools. Administrators may use data from a sensor at or near their school to decide whether to restrict outdoor activities or take other precautionary measures during wildfires and other poor air quality events. The data also help school nurses, parents, students, and community members take preventative action to manage health incidences such as asthma.

Air Pollution Level (AQI Range)	Air Quality Description, Health Impacts, & Recommendations
 Good (0 to 50)	Air quality is considered satisfactory, and air pollution poses little or no risk. It's a great day to be outside!
 Moderate (51 – 100)	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution. Unusually sensitive people should consider limiting prolonged outdoor exertion or play outside games that limit exertion.
 Unhealthy for Sensitive Groups (101 – 150)	The following groups should limit prolonged or heavy outdoor exertion: People with heart disease, pregnant women, children and older adults, people with lung disease, such as asthma. Shorten outside activities.
 Unhealthy (151 – 200)	Everyone may begin to experience some adverse health effects (e.g., difficulty breathing and throat irritation), and members of the sensitive groups may experience more serious effects. The following groups should avoid prolonged time outdoors: People with heart disease, pregnant women, children and older adults, people with lung disease, such as asthma. Consider indoor activity.
 Very Unhealthy (201 – 300)	This would generate a health alert suggesting that everyone may experience more serious health effects. The following groups should avoid all outdoor physical activity: People with heart disease, pregnant women, children and older adults, people with lung disease, such as asthma. Everyone else should avoid prolonged or heavy outdoor activity. Consider indoor activity.
 Hazardous (> 301)	This would trigger health warnings of emergency conditions. The entire population is more likely to be affected. <u>Everyone</u> should avoid all physical activity outdoors.

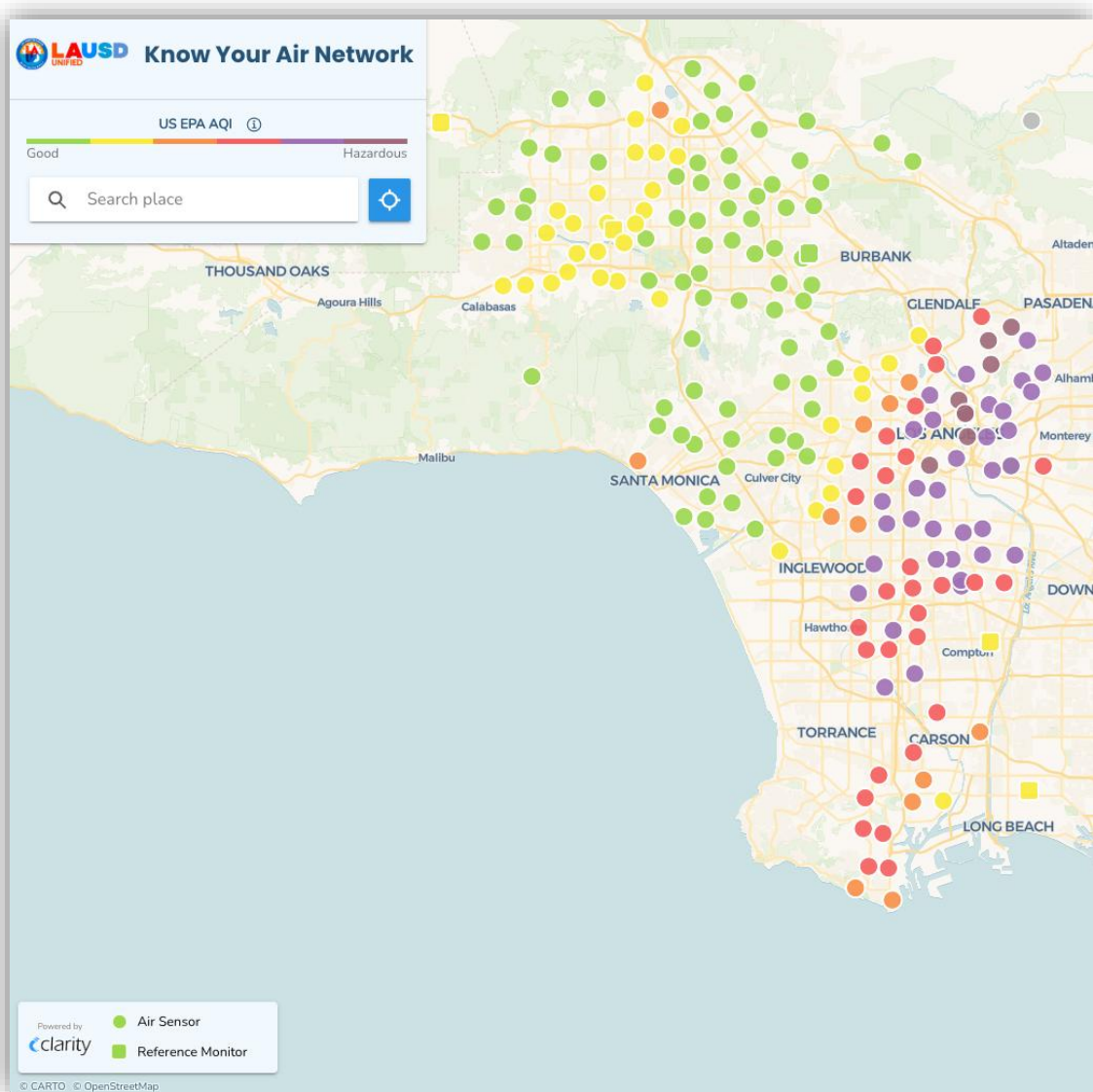


Viewing the Data From Your Sensor



Multiple Ways to Access the Los Angeles Unified Know Your Air Network Data

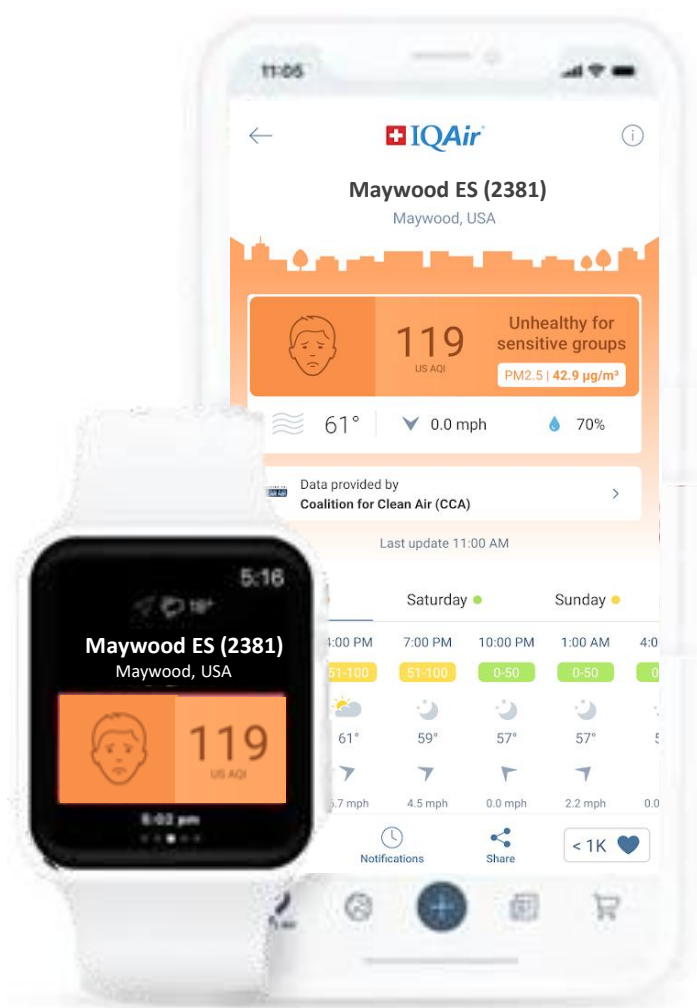
Anyone can access the Los Angeles Unified Know Your Air Network online at the [OEHS website](#), [Clarity's LAUSD OpenMap](#), and using the [AirVisual app](#). Air quality data can be viewed for sensors throughout Los Angeles Unified and from other PM_{2.5} sensors deployed throughout the United States on the [AirNow Fire and Smoke Map](#), and from around the world on around the world on [Clarity's OpenMap \(World View\)](#) and [IQAir's Air Quality Map](#).



Viewing the Data From Your Sensor



The Los Angeles Unified Know Your Air Network has been added to IQAir's free [AirVisual app](#), which also includes air quality sensors located throughout the Los Angeles region. Anyone can install the AirVisual app for free on an Apple or Android mobile device. Once installed, the app can provide air quality alerts, forecasts, and health recommendations for the locations selected by the user. Data can also be viewed on [IQAir's website](#).



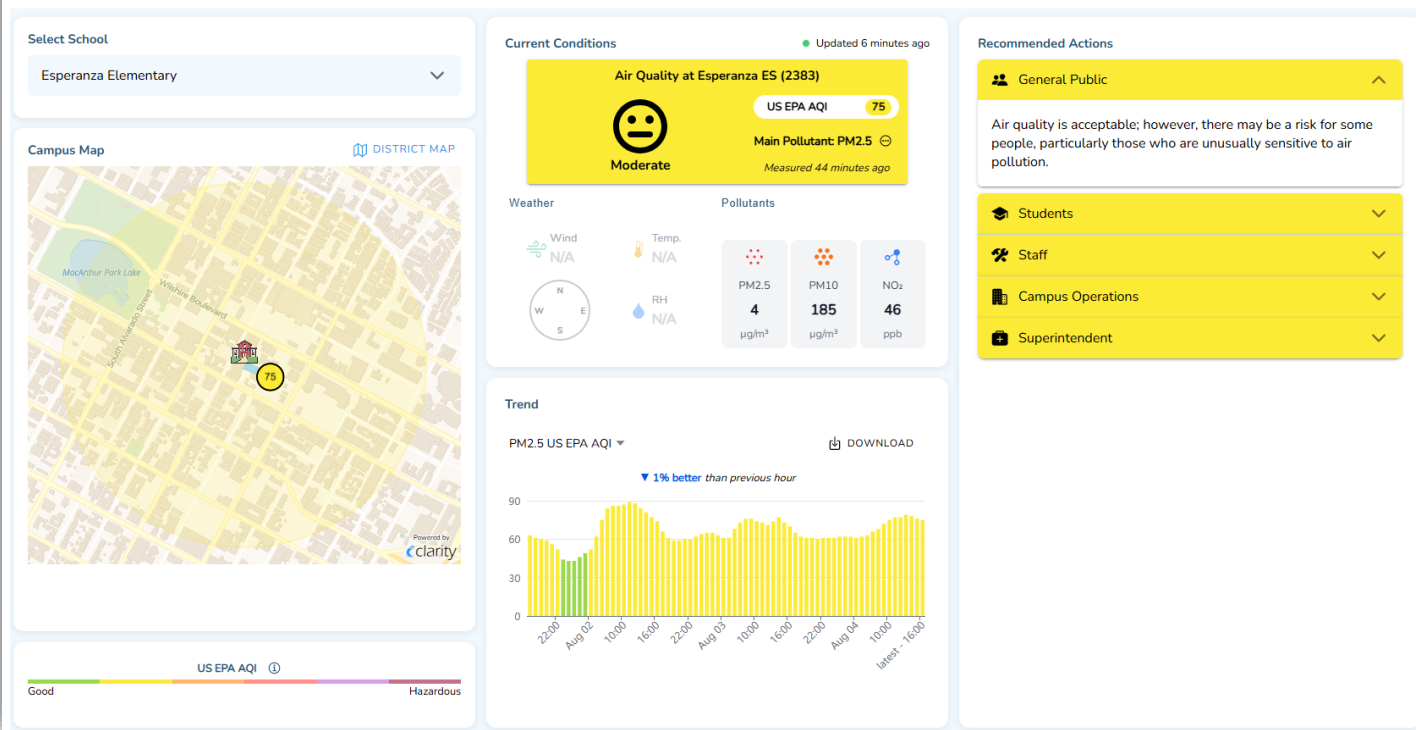
<https://www.iqair.com/air-quality-monitors/air-quality-app>

Find Out More



LA Unified Know Your Air Network

Los Angeles Unified has partnered with the Coalition for Clean Air and Clarity Movement Company to create a network of 200 air quality sensors. These sensors have been deployed at school sites and facilities throughout the entire 710 square-mile district to show local conditions† in real time. Every school in Los Angeles Unified has a network sensor nearby (within approximately 1.6 miles), allowing all schools to determine air quality by looking at the nearest sensors. For instruction on using the network, please view the "How-To" video below.



Learn how to access air quality information at or near your school. Watch the **how-to video** on the OEHS website at:

<https://oehs.lausd.org/KnowYourAirNetwork/>

Also visit the OEHS website for additional details about the Los Angeles Unified Know Your Air Network, air pollution, how sensors work, and air quality educational resources.

Frequently Asked Questions



What do the air quality sensors measure and what don't they measure?

The Los Angeles Unified Know Your Air Network includes more than 230 Clarity air sensors that measure **fine particulate matter (PM_{2.5})** — tiny particles in the air that can come from wildfire smoke, vehicle exhaust, and industrial pollution. These particles are 2.5 microns or smaller and can affect breathing and overall health.

As part of the launch of the “**Know Your Air Network 2.0**,” Los Angeles Unified has added new sensor modules at selected schools to measure additional pollutants, including:

- **Coarse particulate matter (PM₁₀):** These are larger particles like dust, ash, and debris — especially important after wildfires or during construction activities.
- **Nitrogen dioxide (NO₂):** A gas linked to diesel truck and traffic emissions, which can also impact air quality near schools.
- **Weather conditions:** Wind speed and direction, temperature, and humidity are now being measured at select sites to help understand how pollution moves around campuses.

While the expanded sensors provide a more complete picture of air quality, they do not measure greenhouse gases (like carbon dioxide), ozone (smog), or certain industrial chemicals known as toxic air contaminants which all pose their own health and environmental risks.

Know Your Air Network



Deployed Clarity Node-S sensors to over 200 schools throughout the district to measure PM_{2.5}

Know Your Air Network 2.0



In Fall 2025 Los Angeles Unified expanded to Network, adding Clarity Node-S sensors equipped with Dust Modules and Wind Modules to measure PM_{2.5}, PM₁₀, NO₂, and weather conditions at over 30 high risk locations



What are the health problems associated with PM_{2.5} exposure?

Researchers have found prolonged exposure to PM_{2.5} air pollution to be associated with a variety of adverse health impacts including aggravated asthma, decreased lung function, irritation of the airways, coughing, difficulty breathing, irregular heartbeat, heart attacks, and premature death for people with heart or lung disease.

Will a short-term spike in PM_{2.5} cause health problems?

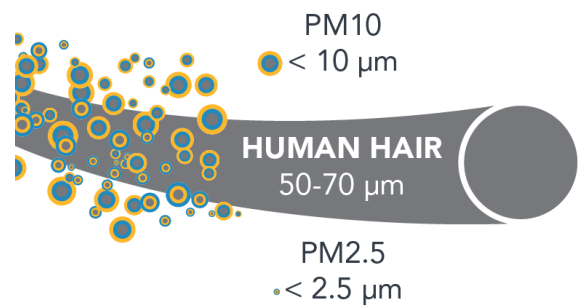
Monitoring data can show short-term spikes of PM_{2.5} of a few minutes. Health-based PM_{2.5} air quality exposure standards consider exposure rates averaged over one hour to one year. Regulators have not established health-based standards for exposure periods of less than one hour, which is one of the reasons why AQI is only reported as hourly averages. Those with pre-existing health conditions, the very young, and the elderly tend to be most vulnerable to the adverse health impacts of exposure to PM_{2.5}. Air quality can change slowly or rapidly depending upon the weather, wind direction, time of day, inversion layer conditions, and other factors. Given the variability in air quality conditions, it is important to be aware but also prudent in how to respond in different situations. In general, it is important to minimize exposure to PM_{2.5} air pollution at all times, however, it is most important to take precautionary measures when PM_{2.5} levels are especially high and air quality regulators, such as the South Coast Air Quality Management District, have issued alerts.

Frequently Asked Questions



What is PM_{10} , and how is it different from $PM_{2.5}$?

Particulate Matter 10 (PM_{10}) refers to inhalable particles with diameters of 10 micrometers or less. These “coarse” particles are larger than fine particulate matter 2.5 ($PM_{2.5}$, which is 2.5 μm or smaller), meaning $PM_{2.5}$ is actually a subset of PM_{10} . Both PM_{10} and $PM_{2.5}$ can be breathed in, but their behavior in the body differs – $PM_{2.5}$ particles are smaller and can penetrate deeper into the lungs, whereas coarser PM_{10} particles tend to deposit in the upper airways (nose and throat). PM_{10} includes many types of particles (dust, ash, pollen, etc.) that are bigger than $PM_{2.5}$, and now that Los Angeles Unified’s network measures both $PM_{2.5}$ and PM_{10} , you might see data for each size range.



Particulate Size Comparison ([CARB 2025](#))

Why is PM_{10} a concern??

While fine particles ($PM_{2.5}$) often garner more attention for penetrating deep into the lungs, coarse PM_{10} pollution is also regulated because it can also enter the respiratory tract and cause significant health impacts on the respiratory system. Because PM_{10} can inflame and damage the airways, children, the elderly, and individuals with pre-existing heart or lung conditions are especially vulnerable to its effects.

Short-term exposure to high levels of PM_{10} can lead to immediate irritation and symptoms like coughing, difficulty breathing, and irritation of the eyes, nose, or throat. In people with asthma or other lung conditions, spikes in PM_{10} can aggravate asthma or COPD, potentially causing wheezing, asthma attacks, and even hospital visits. Over the long term, or with heavy exposure, PM_{10} has been linked to more serious outcomes – for example, studies have noted increases in respiratory hospitalizations and even premature death among people with chronic lung diseases who are exposed to high PM_{10} .

Where does PM_{10} come from?

PM_{10} particles originate from a [wide variety of sources](#). In the Los Angeles area, windblown dust (especially during dry, windy conditions) and traffic-related dust are significant contributors to ambient PM_{10} levels, in addition to occasional wildfire smoke or local construction activity. Common sources of PM_{10} include:

- **Dust from roads, construction, agriculture, and open lands** – wind or vehicles can kick up soil and dust, creating airborne particles.
- **Industrial and mining activities** – processes like cement manufacturing, quarrying, or demolition produce coarse dust particles.
- **Smoke and ash** – wildfires, controlled burns, and the burning of wood or waste release particles in the PM_{10} size range (along with finer $PM_{2.5}$ particles).
- **Natural biological sources** – pollen from plants, mold spores, and fragments of bacteria are all PM_{10} -sized and can become airborne.
- **Urban pollution and vehicle emissions** – tailpipe emissions are mostly $PM_{2.5}$, but road dust (resuspended by traffic), tire wear, and brake dust contribute to PM_{10} in urban air.

Frequently Asked Questions



How is PM air pollution monitored and regulated?

$PM_{2.5}$ and PM_{10} are two of the six “criteria air pollutants” regulated under state and federal air quality standards. Air quality agencies continuously monitor $PM_{2.5}$ and PM_{10} using calibrated instruments at stations throughout the region, and now the LAUSD *Know Your Air* Network has $PM_{2.5}$ monitors deployed at the neighborhood level to over 230 locations throughout the district, and in 2025 added PM_{10} Clarity Dust Modules to high-risk locations. Agencies like the South Coast Air Quality Management District (SCAQMD) operate $PM_{2.5}$ and PM_{10} monitors and report data to ensure these standards are met. The data is often reported through the Air Quality Index (AQI), where $PM_{2.5}$ and PM_{10} are factored in. With the addition of the *Clarity* PM sensors, Los Angeles Unified’s network now supplements these regulatory monitors by providing localized, real-time PM readings around schools. This helps school officials and the community see coarse particle levels in their immediate area.

What can be done to reduce exposure to $PM_{2.5}$ and PM_{10} ?

Even though we cannot eliminate outdoor particulate pollution entirely, there are many steps you can take to reduce your and your family’s exposure to PM and protect health, especially on poor air quality days. By staying aware and taking these precautions, you can significantly reduce your exposure to PM and help others stay safe as well.

- **Stay informed about air quality:** Check the daily Air Quality Index (AQI) forecasts (for example, via LAUSD’s [Know Your Air Network Map](#), AirNow’s [Fire and Smoke Map](#), or local air quality apps) and listen for any PM_{10} /dust advisories. If the AQI indicates unhealthy levels of particulate matter, consider adjusting plans – for instance, avoid strenuous outdoor exercise until air quality improves.
- **Limit outdoor activity during high-PM events:** When you see that PM levels are high – such as during a windblown dust storm or heavy smoke event – it’s safest to stay indoors as much as possible. Close windows and doors to prevent outdoor dust from entering, and use your air conditioning on recirculate or an air purifier if available.
- **Keep indoor air clean:** Improving your indoor air can greatly reduce overall PM exposure. Use high-efficiency filters in your home’s HVAC system or run a HEPA air purifier to capture particles. Avoid activities that generate indoor particulates – for example, don’t smoke indoors, limit burning candles or incense, and ensure good ventilation when cooking or cleaning. Regularly cleaning surfaces with a damp cloth or using a vacuum with a HEPA filter can help remove particulate matter that does settle indoors.
- **Use protective gear if necessary:** If you must be outside in very dusty or smoky conditions, consider wearing a properly-fitted N95 respirator mask. An N95 respirator can filter out most $PM_{2.5}$ and PM_{10} particles and provide personal protection – ordinary dust masks or cloth face coverings are not effective for this purpose. Children and those with respiratory issues should be especially careful about outdoor exposure on high PM days.
- **Community and preventative actions:** On a broader level, reducing the sources of PM helps everyone. Simple actions like minimizing driving on dirt roads, obeying speed limits (to reduce kicking up dust), and covering dirt piles or fields can lower local dust levels. Construction sites are usually required to use dust control (such as water sprays) on windy days. Supporting clean-air policies (for cleaner engines, street sweeping, etc.) also contributes to lower PM in the long term.

What should I do if I see high readings?

If you notice high readings of the Air Quality Index (AQI), please refer to the AQI guide included in this information package. Also refer to [OEHS’s Reference Guide 886.4, Air Quality, Weather, and Wildfire Advisory Procedures](#). Note that, in response to high levels of air pollution, principals have the authority to restrict outdoor activities, but only the superintendent has the authority to close a school.

Contacts



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Websites

- **OEHS:** <https://oehs.lausd.org/>
 - **Know Your Air Network:** <https://oehs.lausd.org/KnowYourAirNetwork/>
- **Clarity's:**
 - General Information Page: <https://www.clarity.io/>
 - OpenMap – LAUSD's Know Your Air Network: <https://lausd.map.clarity.io/lausd>
 - OpenMap – World View: <https://map.clarity.io/>
- **Coalition for Clean Air:** <https://www.ccair.org>
- **AirNow's**
 - Air Quality Index (AQI) & Health: <https://www.airnow.gov/aqi-and-health/>
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