



Information Packet

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 202 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 will provide Los Angeles Unified with important information used to protect the health and well-being of Los Angeles Unified's 628,000 students and 73,000 teachers, administrators, and other employees. Parents, students, and others will also have access to 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 will use 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 Los Angeles

Unified will allow for better informed decisions for individual schools.

The Clarity Node-S model sensors measure fine particulate matter (PM_{2.5}) in the air an average of once every 5-6 minutes.

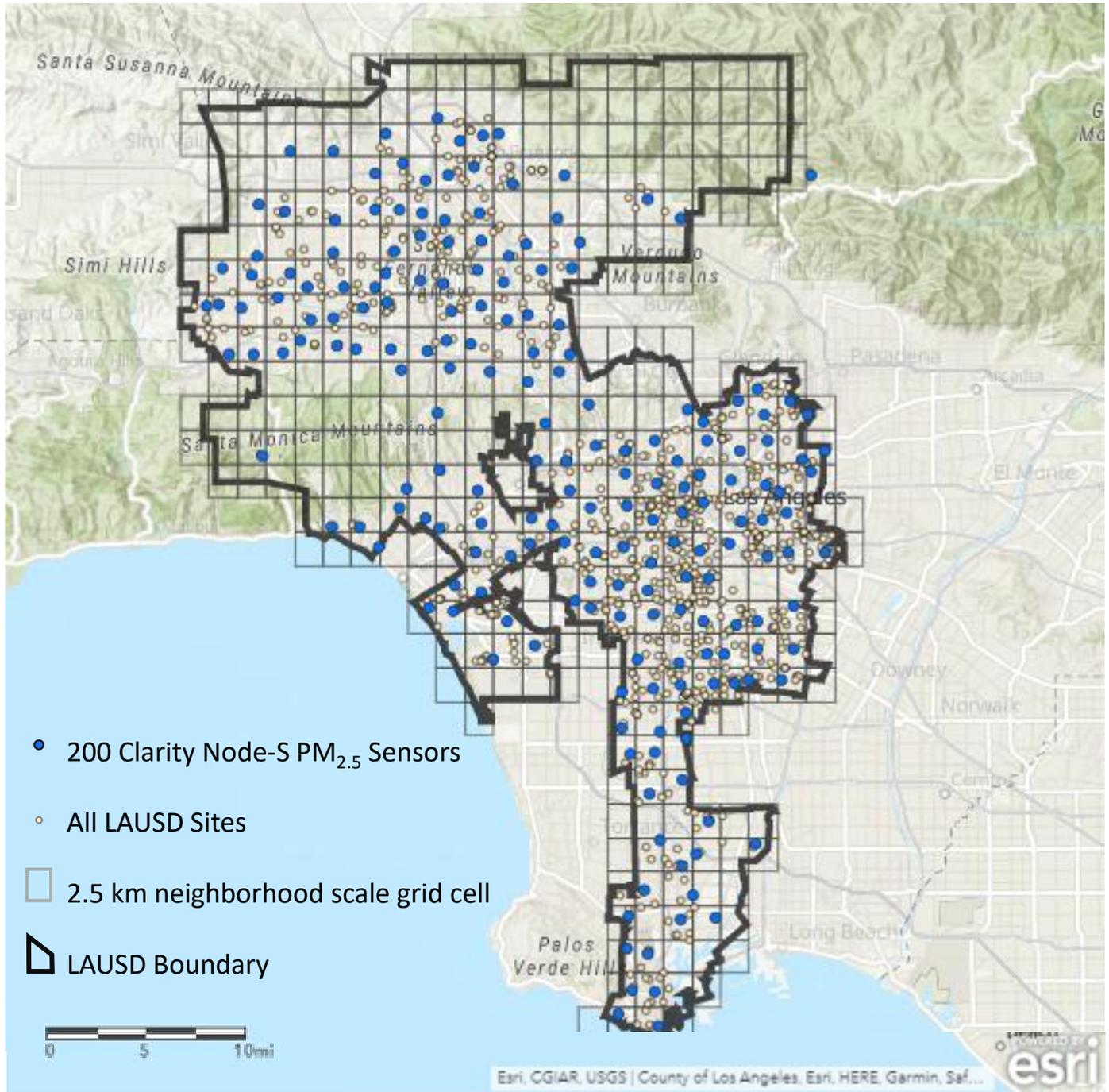
For additional information, visit the Office of Environmental Health and Safety (OEHS) website, achieve.lausd.net/knowyourairnetwork, or call OEHS at (213) 241-3199.



Smoke from Southern California wildfires, Dec. 2017 (Source: NASA)



The Los Angeles Unified Know Your Air Network



The Los Angeles Unified Know Your Air Network includes 202 Clarity Node-S devices. The network is a “neighborhood scale” design, which outlines a uniform grid of 2.5 kilometer (~1.6 mile) squares. 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 a measure 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 will also help school nurses, parents, students, and the surrounding community take preventative action to manage health incidences such as asthma.

Air Pollution Level (AQI Range)	Air Quality Description, Health Impacts, and Recommendations
Good (0 to 50)	Air quality is considered satisfactory, and air pollution poses little or no risk
Moderate (51 – 100)	Air quality is acceptable; however, usually sensitive people should consider limiting prolonged outdoor 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
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
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.
Hazardous (> 301)	This would trigger health warnings of emergency conditions. The entire population is more likely to be affected. Everyone should avoid all physical activity outdoors.

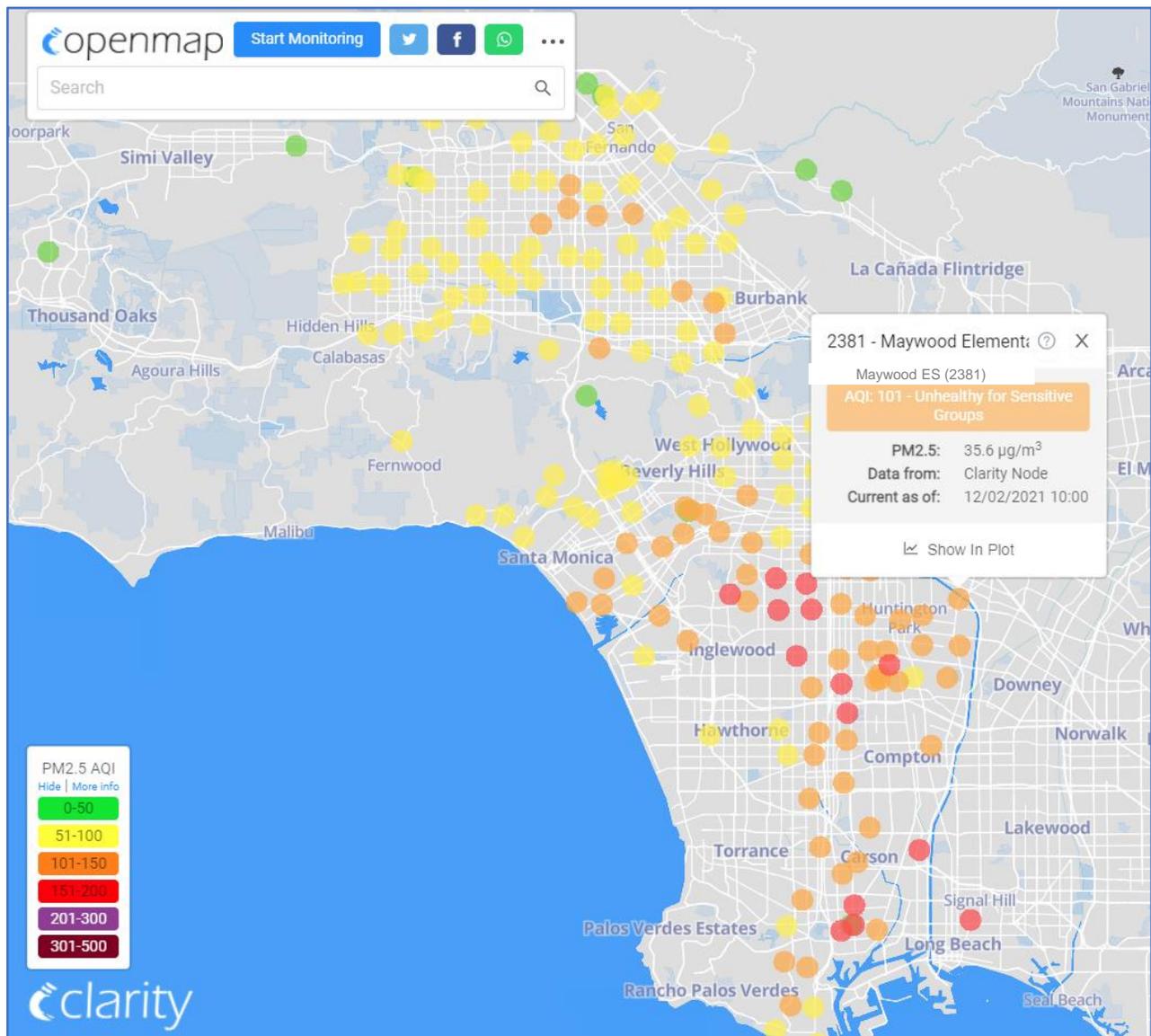


Viewing the Data From Your Sensor



Two 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](#) and using the [AirVisual](#) app. Air quality data can be viewed for sensors throughout Los Angeles Unified.



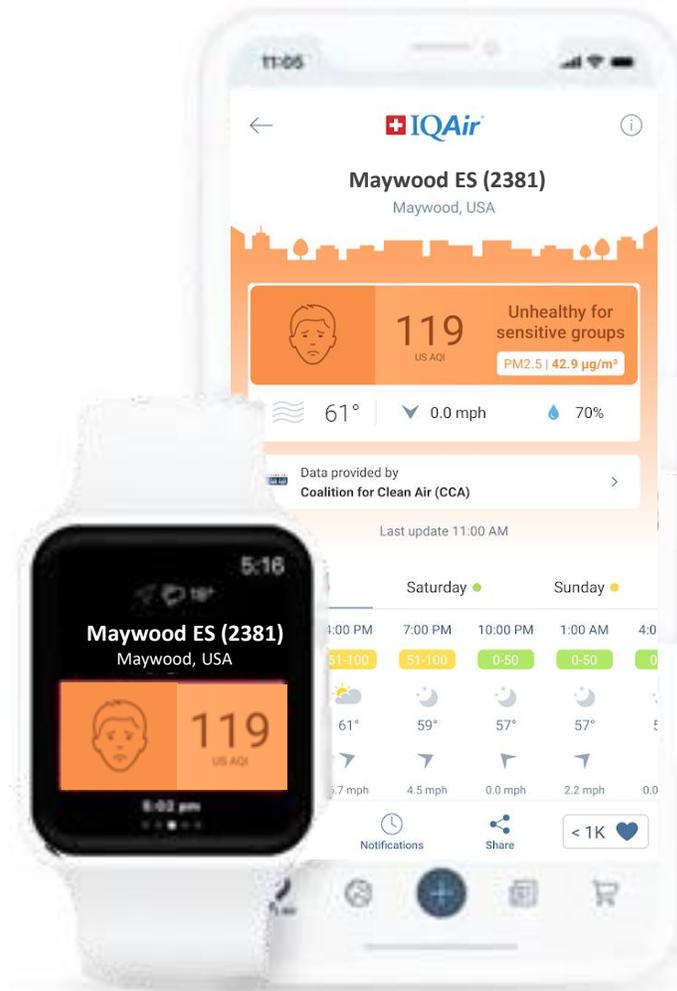
<https://achieve.lausd.net/knowyourairnetwork>



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.



<https://tinyurl.com/LAUSD-AirVisual>



Find Out More



Classic View

LOS ANGELES UNIFIED SCHOOL DISTRICT

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 conditions¹ 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.

Please follow the steps below to view the air quality information from the nearest sensors to your school or location

Step #1

Step #2

Step #3

107th Street Elementary Science/Tech/Eng/Arts/Math Magnet

109th Street Elementary*

10th Street Elementary*

112th Street Early Education Center*

112th Street Elementary*

116th Street Elementary*

openmap Start Monitoring

Search

Active Fires Hide | More Info

Ventura Camarillo Simi Valley San Gabriel Mountains National Monument Phelan Hesper

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

<https://achieve.lausd.net/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 Asks Questions



Frequently Asked Questions

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

The Los Angeles Unified Know Your Air Network consists of 202 Clarity Node-S devices that measure fine particulate matter, known as PM_{2.5} (i.e., the concentration of particles in the air with diameters of 2.5 microns or less). There are several types of air pollution, including greenhouse gases, smog (also known as ground-level ozone), smog precursors, and toxic air contaminants (also referred to as hazardous air pollutants). PM_{2.5} is one of many so-called “criteria air pollutants,” which mainly consist of smog precursors. The Los Angeles Unified sensors do not measure greenhouse gases, such as carbon dioxide (CO₂), toxic air contaminants, or non-PM_{2.5} criteria air pollutants, such as oxides of nitrogen (NO_x) or sulfur dioxide (SO₂).

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

Researchers have found that 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. 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.

What should I do if I see high readings?

If you notice high readings of fine particulate matter (PM_{2.5}) or 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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Email: OEHSQuestions@lausd.net

Websites:

- **OEHS:**

<https://achieve.lausd.net/domain/135/>

- **Know Your Air Network:**

<https://achieve.lausd.net/knowyourairnetwork/>

- **Clarity:**

<https://www.clarity.io/>

- **Coalition for Clean Air:**

<https://www.ccair.org/>

- **Sequoia Foundation:**

<https://scholairproject.org/air-monitoring-tutorial/>