

PurpleAir Air Quality Sensor

What is the PurpleAir air quality sensor?



The PurpleAir air quality sensor is one of many commercially available low-cost air quality sensors. These low-cost sensors are a relatively new technology that measure specific air pollutants, typically particulate matter (PM), and some gaseous pollutants, and cost much less than traditional air quality monitors. In the United States, air quality has traditionally been measured according to standards established by the United States Environmental Protection Agency (EPA) using regulatory air monitors that are designated as federal reference method (FRM) or federal equivalent method (FEM). These monitors cost tens of thousands of dollars and require significant infrastructure and trained personnel to operate, whereas, a low-cost sensor may only cost a few hundred dollars and can be simple to operate.

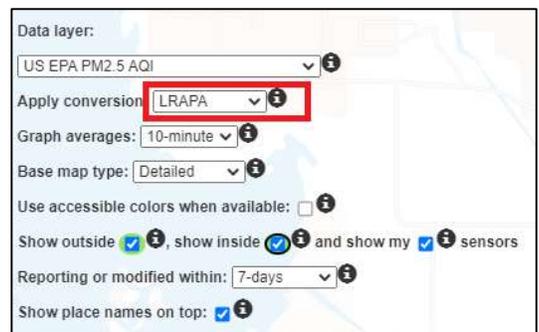
The PurpleAir air quality sensor is designed to detect PM in ambient air. PM describes solid particles suspended in air including dust, smoke, and other organic and inorganic particles. A more detailed description of PM can be found at the US EPA website, www.epa.gov/pm-pollution/particulate-matter-pm-basics. [Lane Regional Air Protection Agency \(LRAPA\)](#), and private citizens, have currently installed over 90 of the PurpleAir sensors in Lane county. Currently a majority of the PurpleAir sensors are owned by LRAPA, but there are many sensors installed by private citizens and other public and private entities.



How do I access the PurpleAir sensor data?

The PurpleAir sensor data can be accessed on a map at the PurpleAir website, www.purpleair.com.

- Once at the PurpleAir website you can select **View Map** and zoom into the area of interest.
- On the PurpleAir map, in the top right-hand corner, click on the **Map Data Layer** box and select the **Conversion** drop down menu and then select **LRAPA** (highlighted in red). This conversion, also called a correction or calibration, adjusts the raw PurpleAir values so that they match regulatory air monitors more closely. For information on how and why this correction factor was developed visit www.lrapa.org



The color scheme on the PurpleAir website corresponds to the [EPA's Air Quality Index or AQI](#). The data displayed on the map defaults to the last 10 minutes of averaged data. The averaging period and other parameters can be adjusted using the **Map Data Layer** drop down menus. If you want to look at a specific PurpleAir sensor, click on the colored circle representing the site and it will display other averaging periods to show what has been happening over the last few hours and days. The pop-up data box will show different average levels, from the most current to the last week. Clicking on a circle will also open a data graph that will show a historical graph of the averaging period currently selected. More detailed information is available at the LRAPA website, www.lrapa.org.