

Oregon Department of Environmental Quality  
2025-2027 Budget Hearing  
Response to Member Questions

Day 3 - April 9 2025

**Please share the status of the Air Quality Monitoring network, including the use of lower-cost “mobile” monitors. What is the network like around the Interstate 5 corridor as it passes through the Rose Quarter?**

DEQ is responsible for monitoring ambient air quality across Oregon. The agency collects samples, measures air pollutants continuously and makes that data available to the public on an hourly basis through the Air Quality Index (AQI) website and mobile apps. The agency maintains air monitoring stations across the entire state, except for Lane county, where Lane Regional Air Protection Agency (LRAPA) maintains air monitoring stations.

DEQ is charged with meeting DEQ’s monitoring obligations under the Clean Air Act, and implementing investments made by the Oregon legislature. The increased incidence of wildfires and other emerging air contaminants has resulted in the legislature expanding and improving on air monitoring efforts significantly over the last ten years. This includes making data more accessible. During periods of heightened air pollution, the agency’s Air Quality Index website and smartphone app can receive up to a million visits per day, and it is one of the most common ways that Oregonians interact with DEQ.

DEQ monitors at 72 locations across Oregon. Not including monitoring performed by LRAPA, this includes:

- 11 regulatory PM<sub>2.5</sub> sites
- 8 ozone sites (of which 6 are only monitored seasonally)
- 7 active air toxics sites
- 33 formal stations with informational PM<sub>2.5</sub> monitoring (nephelometers)
- 40 SensOR sites (sensor monitoring only, merely a module rather than a full station)
  - NOTE: These are the new, lower cost monitors. While not fully “mobile” they are significantly easier to site and deploy than full air quality monitoring stations. As you can see by the numbers, they have allowed DEQ to nearly double the number of monitors across Oregon.
- 17 meteorology monitoring sites

DEQ implements the following air quality monitoring activities:

- **Federal NAAQS particulate monitoring - PM<sub>10</sub> and PM<sub>2.5</sub>** This is particulate air monitoring using the specialized federal reference or equivalent methods in accordance with strict federal regulations, to establish compliance with EPA’s National Ambient Air Quality Standards (NAAQS).
- **State PM<sub>2.5</sub> monitoring** This is particulate air monitoring with nephelometers and low cost sensors. Unlike methods employed for reference grade monitoring, these optical methods regenerate near real-time data and used in Oregon DEQ’s AQI for public information purposes.

- **State low-cost PM<sub>2.5</sub> monitoring – SensOR™ program** This newer program employs low-cost particulate sensors in the DEQ-built SensOR™. Unlike other monitoring stations, these monitoring sites only have a SensOR™ module, rather than a shelter and other infrastructure. This data is used for the AQI for public information purposes.
- **Federal NAAQS gas monitoring – Ozone, Nitrogen Dioxide, Carbon Monoxide, Sulfur Dioxide** Ozone monitoring is the only concern for criteria gas pollutants, and the majority of ozone monitoring occurs during Oregon’s ozone season (May-September).
- **Federal NATTS air toxics monitoring** The federal National Ambient Air Toxics Trends Sites (NATTS) program includes the collection and analysis of 188 air pollutants in the following categories: metals, carbonyls (includes formaldehyde), polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs). Samples are collected over a 24 hour period, once every 6 days, then analyzed at DEQ’s lab.
- **State Air Toxics trends monitoring** As air toxics are an ongoing health concern, but monitoring is not required by federal programs, DEQ implemented a legislative program to perform state monitoring along similar lines as the NATTS program, but include additional monitoring in the form of continuous black carbon analysis to better understand forms of particulate pollution.
- **PAMS monitoring** Photochemical Assessment Monitoring Stations (PAMS) is a newer EPA program to understand ozone concentrations by measuring precursor compounds; the most significant component is measuring hourly speciated VOCs concentrations with an automatic gas chromatograph. This represents the most elaborate, complicated monitoring DEQ has performed to date, and DEQ has just started the monitoring.
- **Meteorological Monitoring** Understanding meteorological conditions is necessary to characterize pollutant transport and for forecasting poor air quality days; forecasting is an important part of providing air quality advisories for the public. DEQ collects meteorological data at multiple locations, including wind speed and direction, temperature, humidity, barometric pressure, solar radiation, and mixing layer height.

With regards to Interstate 5 at the Rose Quarter, the two nearest monitors are stationed at Benson High School, and Boise Eliot / Humboldt Elementary School. Both measure fine particulate matter.

**Please share information regarding the air quality impacts from the use of leaded racing fuel at the Portland International Raceway facility in NE Portland.**

Portland International Raceway is a municipally owned and operated racetrack located in and adjacent to the Kenton neighborhood in North Portland. While the use of leaded gas was generally phased out in the 1980s and 90s, those phaseouts exempted certain “nonroad” uses, including racing vehicles. Leaded fuel is no longer supplied at PIR, but it is used during certain races.

In response to community concerns, Oregon DEQ partnered with the Oregon Health Authority to evaluate potential exposures to lead in the ambient air around the facility. Center to this investigation was a study to model concentrations of lead in the air under a variety of “worst case” scenarios. Modeling concentrations of pollutants is generally regarded as more conservative, or health protective, than monitoring because it can simulate worst case scenarios and generate a more comprehensive understanding of pollutant concentrations across time and space. This compares to monitoring where you generate data at a single point (i.e. the location of the monitor).

Based on the results of that work, OHA found that while there is no “safe” level of lead exposure the “levels of lead emissions modeled did not pose immediate health risks to residential areas around the track.”

This [letter to the Kenton community](#) summarizes that work, and provides additional information and resources regarding elevated blood lead levels.