

Follow-up information to the January 21, 2025 House Committee on Climate, Energy, and Environment meeting from the Oregon Department of Environmental Quality

Here is information responsive to the questions from Representative Gamba, and the follow-up information on activities in the Lower Umatilla Basin Groundwater Management Area.

Representative Gamba Questions

Can the new “real time” air monitors measure anything beyond particulate matter?

DEQ continuously monitors the levels of all six federally-designated criteria air pollutants. These include the gases – Ozone (O₃), Nitrogen Oxides (NO_x, or NO & NO₂), Carbon Monoxide (CO), and Sulfur Dioxide (SO₂), which are measured as frequently as every 1-5 seconds. Of the other criteria air pollutants, PM_{2.5} estimates are measured every second, and regulatory grade PM_{2.5} data is measured every hour.

These data are rolled up into 1-hour averages available on the [Air Quality Index](#) website and smartphone app. Some air toxics data is also measured continuously – black carbon (a subcategory of PM_{2.5}) is measured every minute, and like the other pollutants, made available in the form of hourly averages. The new federal PAMS program (an ozone precursor monitoring network operated by state and local agencies) will result in measuring a list of about 55 volatile organic compounds which are measured on an hourly basis during June-August.

If so can they measure methane levels? If they can’t, do we have any way of measuring methane?”

DEQ does not monitor methane in the ambient environment, as it not regulated in the same way as criteria pollutants. There is no EPA mandate or program to measure methane concentrations in the ambient environment. As methane breaks down, it can contribute to the formation of ground-level ozone, which DEQ does monitor continuously.

Methane is a powerful greenhouse gas, it comes from both natural sources, such as wetlands, and human activities, including landfills, livestock, and burning fossil fuels. Once methane is released into the air, it reacts with other chemicals and breaks down into carbon dioxide (CO₂) and water vapor (H₂O). Methane is exponentially more potent in terms of heat-trapping than CO₂, but only stays in the atmosphere for 7 to 12 years.

There are two areas where monitoring emissions of methane at a source is required:

- Oregon's Landfill Gas Emissions rules (OAR 340-239) require surface monitoring of methane at certain landfills. The requirement for monitoring is derived from landfill volumes and estimated emissions.
- EPA's Greenhouse Gas Reporting requirements for Natural Gas Systems, require direct measurement of blowdown vents and equipment leaks.

Activities in the Lower Umatilla Basin groundwater Management Area

The complete Nitrate Reduction Plan for the Lower Umatilla Basin Groundwater Management Area is available here: <https://www.oregon.gov/deq/wq/Documents/GWP-OregonNitrateReductionPlan-2024.pdf>

With regards to failing onsite septic systems, please note the following sections:

- Section 4.1.1 (Page 28) summarizes the relative contribution of all sources of nitrate in the basin.

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- Section 4.6.3.2 (Page 74) describes the regulatory strategies related to onsite septic systems.
- Section 4.6.3.3 (Page 76) describes the strategies for providing homeowners with affordable financing options to repair or replace failing septic systems.

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