



State of Oregon
Department of Environmental Quality

To: Joint Committee on Ways and Means, Natural Resources Subcommittee

From: Oregon Department of Environmental Quality

Subject: Follow-up resulting from phase II hearing on the state's Vehicle Inspection Program

During the Department of Environmental Quality's (DEQ) presentation before the committee on Thursday April 4th, members expressed interest in additional information regarding the following:

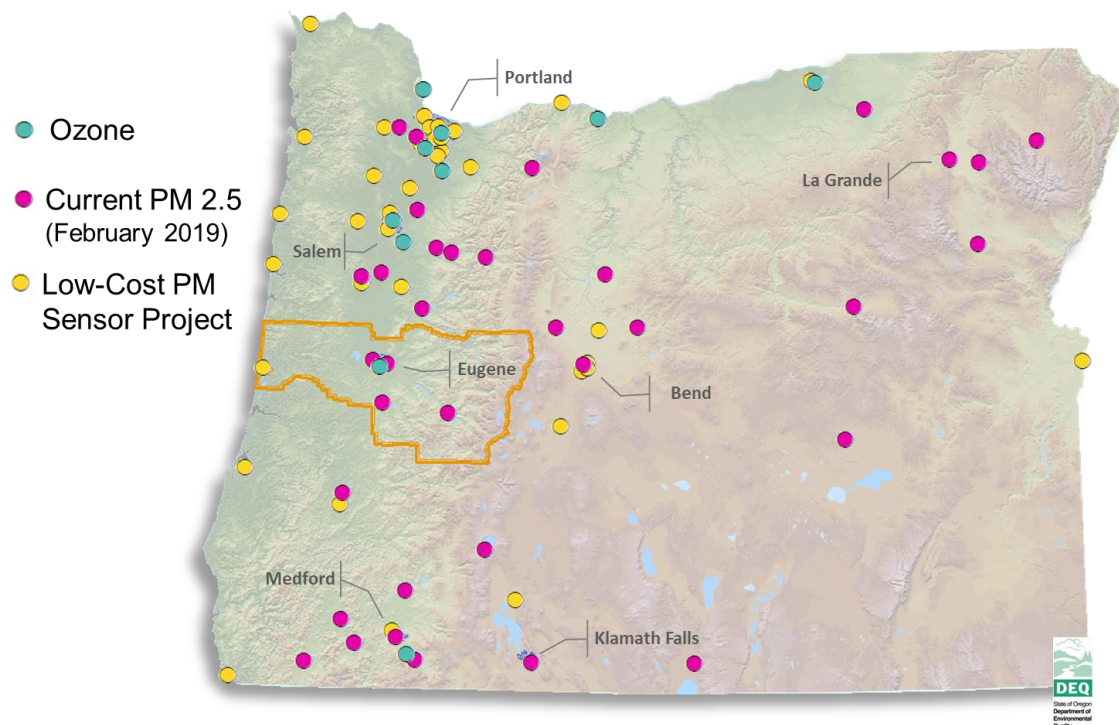
- The department's network of air quality monitors
- Long-term air quality trends in communities across Oregon
- Air quality trends in Lane County
- DEQ Too and qualifying telematics devices

As always, the agency is available and happy to meet with members to further discuss these and any other topics of interest.

Air Quality Monitoring Network

DEQ maintains a robust and statewide network of ambient air quality monitors. The network is designed in response to the US EPA's National Monitoring Strategy as well as state and local needs. The table and map below describes the types of monitors used in the network, how the data they generate are used, and indicate their location.

Air Monitoring Networks	Number of Sites	Purpose
National Ambient Air Quality Standards compliance		
Ozone	11	These monitors are designed to determine community compliance with the national ambient air quality standards.
Carbon Monoxide	2	
Nitrogen Dioxide	2	
Sulfur Dioxide	2	
PM 2.5 (Federal Method)	10	
Air Toxics Monitoring		
National Air Toxics Trend Sites	2	These monitors provide data on air toxics concentrations in small and large communities across the state.
Oregon Long-Term Trend Sites	6	
Oregon Annual Rotating Sites	4	
Real-time Particulate Monitoring (PM)		
Existing sites	43	Data from these monitors track levels of smoke from residential wood burning, prescribed burning and wildfires.
Planned additional sites	30	
Meteorology		
Meteorological stations	22	These monitors collect meteorological data that inform air quality forecasting and modeling.



Note: Monitors located within the gold boundary are operated by the Lane Regional Air Protection Agency.

Air Toxics and PM monitoring sites are funded through a combination of federal and general funds. DEQ receives various federal grants to support monitoring networks including PM_{2.5} and National Air Toxics Trend Sites, as well as Performance Partnership Grants under the 105 Clean Air Act, equating to approximately \$3.3 million dollars for the 19-21 biennium. In order to maintain the current service level of monitoring work, federal funds are supplemented with general funds as necessary due to federal funds remaining relatively flat over multiple past biennia. Flexibility in funding between PM and Air Toxic monitoring is critical due to the many shared activities between the two types of monitoring.

In recent biennia the legislature has invested in expansions of the network. Specifically:

- In February 2016, the Oregon Legislature provided funding to investigate concerns about air toxics through additional air monitoring. The resources provided were for two metals monitoring sites, additional moss studies, data analysis and two full air toxics monitoring sites for rotation around the state. Funding included \$350,000 for capital outlay purchases. The Legislature subsequently approved emergency funds of \$225,000 for additional metals monitors to replace equipment on loan from EPA.
- During the 2017-2019 session, the Legislature approved \$2.5 million in general fund for an additional six full air toxics trend sites and 30 particulate monitors (low-cost sensor project).

The locations and data generated by the monitors can be viewed in real-time at www.oraqi.deq.state.or.us or by downloading the “OregonAIR” app on your smart phone.

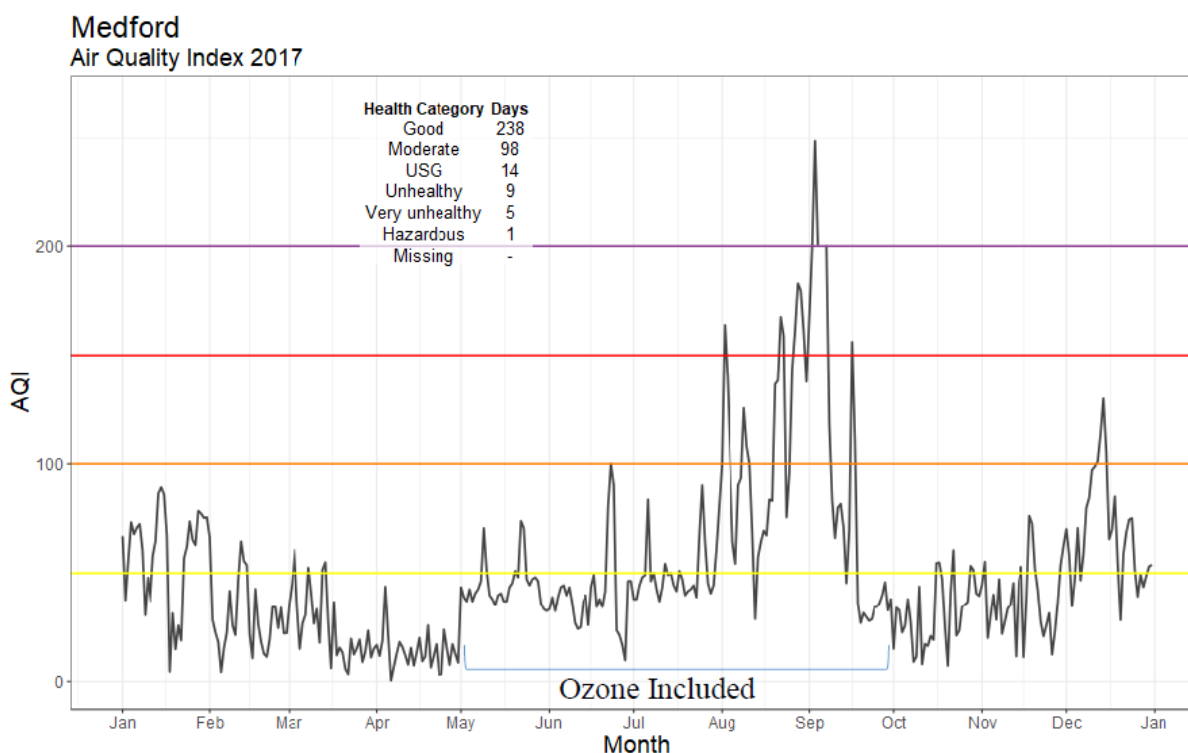
Long-term Air Quality Trends in Oregon

DEQ reports long-term trends in air quality annually through the publication of our [Ambient Air Quality Monitoring Report](#)¹. Air quality trends are unique to specific pollutants and rely on a variety of complex and dynamic factors. The report provides community-specific information on the following:

- The daily air quality index for the previous calendar year. This illustrates the intensity and duration of poor air quality events.
- Long-term trends in ambient levels of criteria air pollutants (pollutants subject to National Ambient Air Quality Standards).

Below are examples of the type of information available in the full report referenced above. DEQ is happy to meet with members to assist in interpreting the data or discuss particular pollutants or communities in greater detail.

Air Quality Index

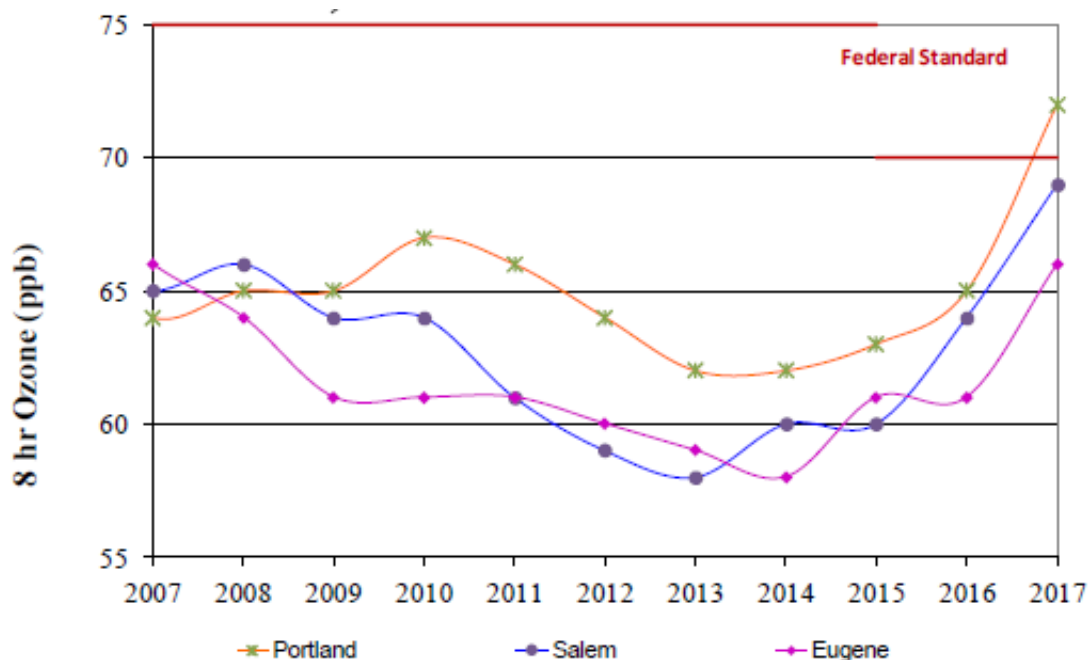


This figure shows the air quality index (AQI) over the course of the 2017 calendar year. The color-coded thresholds align with AQI categories; good, moderate, unhealthy for sensitive groups, unhealthy for all groups, etc. For most of the year the air quality index is primarily influenced by levels of PM. Ground-level ozone can also influence the AQI, particularly in the summer months.

The full report includes AQI figures for 38 communities across Oregon.

¹ Full link: <https://www.oregon.gov/deq/FilterDocs/2017aqannualreport.pdf>

Long-term Trends



Long-term trend figures show how levels of criteria pollutants have tended over time relative to the National Ambient Air Quality Standards. The report includes data on PM and Ozone trends for communities across Oregon.

Air Quality in Lane County

Air quality in Lane County is managed by the Lane Regional Air Protection Agency (LRAPA). DEQ's annual report described above includes information on air quality in Lane County, using data from an air quality monitoring network managed by LRAPA. LRAPA also publishes an [annual report](#)², long-term air quality trends can be viewed on pages 24-. 31

In addition to annual reporting, LRAPA maintains an online [data clearinghouse](#)³ where policymakers and the public can view real-time air quality and explore past data through an interactive graphing tool.

For additional information regarding air quality in Lane County, please contact:

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² Full link: <http://www.lrpa.org/ArchiveCenter/ViewFile/Item/449>

³ Full link: <http://www.lrpa.org/222/Air-Quality-Home>

DEQ Too and Telematics Device

As discussed in the hearing, DEQ is in the process of implementing a new approach that allows motorists to have their vehicles tested at a variety of convenient locations. This service, known as DEQ Too, allows host sites (such as gas stations, or service/repair shops) to collect and transmit data from a vehicle's On-Board Diagnostics (OBD) system to DEQ via a "telematics" device. DEQ then reviews the data to make a pass/fail determination.

The DEQ Too program welcomes any device provider that agrees with the program's terms and conditions and uses a device that conforms to the programs technical specifications. Among with the required conditions, the companies and devices need to adhere to the following to comply.

- Shared Type Device (S-Type): An S-type device is an aftermarket plug-in device that can be shared for use by *multiple vehicles*; one vehicle at a time. S-Type providers need to show they "...have met specific, technical and sustained demand for the use of OBD plug-in equipment for the last 12 months." This is designed to ensure that devices have been sufficiently tested by stable companies that will provide needed technical support.
- Constantly Connected Device (C-Type): A C-Type device is one that is continuously connected, 24/7 to *one vehicle*. C-Type device providers have to meet the same technical requirement mentioned above, as well as showing that their device "provide at least one primary service that has shown specific and sustained demand for the service for the last 12 months." Example, Automatic Labs' device has the ability to alert emergency services in the case of a crash, give the vehicle owner maintenance reminders, and provide a driving history for business expense tracking. These are just a few examples of what the device can do, as an idea of what we are looking for.

The current list of participating companies includes:

- Applus technologies
- Automatic Labs Inc.
- Azuga Inc.
- BanaLogic Corporation
- Jiffy Lube International/Shell

Our relationships with the current five DEQ Too Partners were established following our marketing and stakeholder engagement activities beginning in 2016. DEQ reached out to thirty-eight telematics providers across the nation to provide details of the program and device requirements. DEQ Too has provided information to telematics providers at industry conferences such as IM Solutions as well as provided presentations and demonstrations at lunch and learn events hosted by National Automotive Trades Association and Portland Community College's automotive trades programs. Although the decision to participate is made independently by each business entity, DEQ has worked to ensure that players in the automotive service industry and related fields are aware of the opportunity.

There are many companies that exist in the market today that may be good partner candidates in the DEQ Too program. Potential C-Type device providers include insurance companies that provide customers with telematic devices for usage based insurance and fleet maintenance systems that store data ranging from fuel usage to individual vehicle components (e.g. brake use to anticipate when a vehicle needs brake service before components fail). We currently have partnerships with 3 C-Type

providers, Azuga, Jiffy Lube which distributes Fitcar and Automatic Labs. Azuga is currently partnering with the Oregon Department of Transportation to implement OReGO, a road usage program that lets vehicle owners only pay taxes for the miles they drive. Jiffy Lube International has developed Fitcar, which currently lets customers know when their vehicle needs maintenance. Azuga, Fitcar and Automatic customers have the ability to send their vehicle's emissions status, using mobile applications, to the DEQ when it's time to renew their registration.

All device providers enroll with DEQ online and, as part of the enrollment, must agree to adhere to established terms and conditions. They are also required to submit their "...telematics device(s) and any other required equipment and a description of our test process so DEQ can verify everything functions as we have described."

After the initial enrollment process, the applicant company must provide the DEQ with a device for compliance testing. We then run the device through a test program to confirm the device complies with the program's technical specifications. Once the company demonstrates that its device complies with the terms and conditions, we approve the company as a participant. While the above information describes the enrollment process, it is up to each individual company to decide whether they want to participate in the program.