

2025 Oregon Annual Ambient Criteria Pollutant Air Monitoring Network Plan

Submitted to: EPA Region 10

Date: July 1, 2025



This document was prepared by Anthony Barnack Oregon Department of Environmental Quality Air Quality Monitoring 7202 NE Evergreen Pkwy, Hillsboro, OR 97124 Contact: Anthony Barnack

Phone: 971-806-2223

www.oregon.gov/deg



Translation or other formats

<u>Español</u> | <u>한국어</u> | <u>繁體中文</u> | <u>Pyccкий</u> | <u>Tiếng Việt |</u> <u>I</u>

800-452-4011 | TTY: 711 | <u>deqinfo@deq.oregon.gov</u>

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age or sex in administration of its programs or activities. Visit DEQ's <u>Civil Rights and Environmental Justice page.</u>

Executive summary

This annual criteria pollutant network plan is required by EPA and discusses changes to the Oregon's criteria pollutant monitoring network. DEQ also has an ambient air toxics monitoring network plan.

In 2025/2026 DEQ plans the following changes to the criteria monitoring network.

$PM_{2.5}$

Change the EPA designation of the Prineville and Grants Pass Federal Equivalence Monitors from SLAMS to Special Purpose. This will give DEQ more flexibility in deciding whether to continue to monitor with FEMs in these locations or to relocate them to air sheds with higher PM_{2.5} concentrations. These cities would continue to have nephelometers to track PM_{2.5} levels and to provide hourly AQIs information to the public.

PM₁₀

Use PM_{2.5} a surrogate for PM₁₀ in Oakridge. LRAPA received a waiver to do this, and it will begin January 2026.

DEQ is also requesting that EPA remove the 2003 Grants Pass PM₁₀ Maintenance Plan monitoring Requirement. The maintenance plan has passed its 20-year limit and DEQ is arguing that monitoring is no longer needed.

Near road nitrogen dioxide site

Install the second near road site along Interstate-5 in Portland, between the Interstate 84 interchange and the Fremont Bridge interchange. The site of choice is on I-5 near N Russell St. near Tubman School and the Ronald McDonald House Charities, as shown on the maps below and linked on <u>Google Maps</u>. The site is scheduled to start monitoring by August of 2025.

Meteorology

Install wind speed and direction monitoring at the new near road site.



This document is available on the Oregon Department of Environmental Quality's website at: https://www.oregon.gov/deq/aq/pages/air-quality-monitoring.aspx Key word search: Oregon DEQ Air Quality Monitoring

Table of contents

Executive summary	3
PM _{2.5}	
PM ₁₀	
Near road nitrogen dioxide site	
Meteorology	3
Acronyms	vi
1. Introduction	1
2. Monitoring background	1
2.1 Provide air pollution data to the public in a timely manner	
2.2 Support compliance with National Ambient Air Quality Standards and development of	
pollution control strategies.	
2.3 Support air pollution research	
2.4 Other ambient monitoring data needs	
2.5 Oregon Core-Based Statistical Areas and Population	
2.6 Non-attainment and maintenance areas	
Non-attainment areas awaiting maintenance plans	
Maintenance areas in Oregon	6
3. Overview of Network Operations	7
3.1 Oregon Criteria Pollutant Monitoring Network	
3.1.1 Ozone Network	
3.1.2 Nitrogen dioxide network	
3.1.3 Carbon monoxide network	
3.1.4 PM _{2.5} Network	14
3.1.5 PM ₁₀ Network	
3.1.6 PM _{10-2.5} network	
3.1.7 Criteria pollutant lead network	
3.1.8 Sulfur dioxide network	
3.2 PM _{2.5} and ozone Air Quality Index Network	
3.3 Meteorology network	24
4. Planned changes to network	26
4.1 Criteria pollutant changes	
PM _{2.5} 26 PM ₁₀ 26 NO ₂ 26	
Meteorology	∠6
Appendix A. Minimum monitoring requirements	28
A.1. Oregon national core site (NCore)	
a. 2022 and 2023 does not meet completeness requirements	
A.2. Minimum required ozone sites	29
A.3. Carbon monoxide minimum monitoring requirements	30

A.4. Sulfur dioxide minimum monitoring requirements	30
A.5. Nitrogen dioxide minimum monitoring requirements	
A.6. Lead: minimum monitoring requirements:	32
A.7. PM ₁₀ minimum monitoring requirements:	
A.8. PM ₁₀ maintenance plan contingency triggers	
A.9. PM _{2.5} Minimum Monitoring Requirements	
A.10. PM _{2.5} for AQI (Non-FEM) site information	39
Appendix B. Collocation requirements	40
Appendix C. Detailed site information	41
C.1. Portland, SE Lafayette site information	41
C.2. Portland, Humboldt School site information	48
C.3. Portland Near Roadway site information	49
C.4. Portland Near Roadway site information	51
C.5. Hillsboro, Hare Field site information	52
C.6. Portland, Sauvie Island site information	53
C.7. Portland-Carus site information	54
C.8. Salem – State Hospital information	55
C.9. Salem/Turner site information	
C.10. Eugene – Amazon Park site information	57
C.11. Eugene – Saginaw site information	
C.12. Eugene – Hwy 99 site information	
C.13. Cottage Grove, City Shops site information	60
C.14. Oakridge, Willamette Center site information	
C.15. Grants Pass, Parkside School site information	
C.16. Medford, Jackson Park information	
C.17. Medford - Talent site information	
C.18. Klamath Falls, Petersen School site information	
C.19. Lakeview, Center and M Sts. site information	
C.20. Burns, Washington Street site information	
C.21. Prineville, Davidson Park site information	
C.22. La Grande, Hall and North site information	
C.23. Hermiston Municipal Airport site information	70
Appendix D. Checklist Corrections from last year's Annual Network Pla	n.71
D.1. EPA comments from the 2024 Annual Network Plan and DEQ response	
Appendix E. Waivers and surrogate monitoring	71
1. NCORE PM ₁₀ lead waiver	
Carbon monoxide waivers	
3. PM ₁₀ surrogate monitoring	
4. Actual Monitoring Waivers	
4.1. 2005 Klamath Falls CO Monitoring Waiver Approval	73
4.2. 2011 - Klamath Falls PM ₁₀ , Grants Pass PM ₁₀ , and Medford CO monitoring waiver	
4.3. 2018 - NCore PM ₁₀ lead monitoring waiver request and approval	
4.4. 2023 – Lakeview PM _{2.5} as a surrogate for PM ₁₀ waiver approval	
4.5. 2025 – Waiver to only run two PM ₁₀ monitors in the Eugene MSA	

- 2) Waiving the PM₁₀ minimum monitoring requirement for the Eugene-Springfield Metropolitan Statistical Area (MSA). This MSA has had a minimum monitoring requirement of 3-4 PM₁₀ SLAMS sites since 2022, but only has two sites: one in Eugene by Highway 99 (AQS-ID: 41-039-0059), and one in Oakridge (AQS-ID: 41-039-2013). In the 2023 ANP response, EPA listed the number of PM₁₀ sites in Eugene-Springfield as a network deficiency. In the 2024 ANP, ODEQ requested a waiver for this requirement. ODEQ provided evidence in the 2024 ANP (Appendix H) that the current monitoring network is sufficient to protect public health and characterize regional PM₁₀ air quality trends given PM₁₀ sources in the MSA and the area's geography. Key considerations include:
 - a) The main source of PM₁₀ is wildfire smoke. From 2020 to 2023, the only days exceeding "low" PM₁₀ concentrations in the MSA were due to wildfire smoke, without which the minimum monitoring requirement would be 0-1 sites.
 - b) The proposed PM₁₀ monitoring network meets the requirements set out in the PM₁₀ maintenance plans (MPs). Both Eugene and Oakridge have PM₁₀ maintenance areas. The PM₁₀ SLAMS monitor in Eugene meets the MP commitment to continued operation of a PM₁₀ monitor at the Highway 99 site. See above for more details on the requirements of the Oakridge MP.
 - c) Eugene and Springfield are the largest cities and only urbanized area in the Eugene-Springfield MSA, with a population of ~240,000 people, or 60% of the MSA. In contrast, Oakridge only has a population of 3,500, or 1% of the Eugene-Springfield MSA.

40 C.F.R. Part 58, Subpart D, § 4.6(a) notes, "because sources of pollutants and local control efforts can vary from one part of the country to another[,] some flexibility is allowed in selecting the actual number of stations in any one locale." In addition, that section allows the Regional Administrator to approve modifications from the minimum monitoring requirements. For the reasons stated above and pursuant to 40 C.F.R. Part 58, Appendix D, § 4.6(a), EPA approves ODEQ's request to waive the PM $_{10}$ minimum monitoring requirements from three to one SLAMS sites for the Eugene-Springfield MSA. This PM $_{10}$ network size waiver for reducing the monitoring requirements in the Eugene-Springfield MSA to one station is in

effective for five years. Please request a waiver renewal in the 2029 ANP. Additionally, changes to the air quality concentrations in the Eugene-Springfield MSA may warrant modifying this waiver in the future.

4.6. 2025 – Waiver to use PM_{2.5} as a surrogate for PM₁₀......81

1) Replacing PM₁₀ monitoring with surrogate PM_{2.5} at the Oakridge site (AQS ID: 41-039-2013). Oakridge is a PM₁₀ and PM_{2.5} maintenance area. Its current 10-year Maintenance Plan applies through 2035 (87 FR 51265). The PM₁₀ Maintenance Plan specifies the use of PM_{2.5} as a surrogate for PM₁₀ monitoring to show continued attainment of the PM₁₀ standard, with the stipulation that any modification to the monitoring 81

network would be in accordance with the approved ANP.

The Oakridge $PM_{2.5}$ surrogate justification (ANP Appendix I) demonstrates that this method is adequate to protect human health. ODEQ shows that the concentration of PM_{10} is well correlated with that of $PM_{2.5}$, and that PM_{10} can be estimated from $PM_{2.5}$ measurements using a linear conversion equation. Furthermore, the justification shows that contingency measures in the $PM_{2.5}$ Maintenance Plan are more protective than those for PM_{10} . Both the Oakridge $PM_{2.5}$ and PM_{10} maintenance plan contingency measures are triggered when the design value is above the NAAQS and is not from an exceptional event. For $PM_{2.5}$, the 24-hour NAAQS level is 35 ug/m^3 . For PM_{10} , the NAAQS level is 150 ug/m^3 . Based on the correlation of $PM_{2.5}$ to PM_{10} determined for Oakridge, PM_{10} contingency measures would be triggered when $PM_{2.5}$ reaches concentrations > 100 ug/m^3 . The surrogate justification also demonstrates how ODEQ will estimate the PM_{10} Design Value (DV) from the $PM_{2.5}$ measurements to verify continued attainment. Furthermore, DEQ also committed in the justification to re-initiating PM_{10} monitoring in the area by January 1 of the following calendar year if Oakridge violates the contingency plan trigger per the correlated PM_{10} calculations, from sources other than those demonstrated by ODEQ to be exceptional events.

Using $PM_{2.5}$ as a surrogate for PM_{10} monitoring has been approved for three other PM_{10} maintenance area monitoring locations in Oregon's monitoring network: Grants Pass, Klamath Falls, and Lakeview. The ODEQ ANP includes a section summarizing PM_{10} maintenance plan contingency triggers as well as a section on PM_{10} surrogate monitoring. The surrogate monitoring section summarizes the $PM_{2.5}$ to PM_{10} conversion equations and the estimated number of days PM_{10} exceeded the standard.

Because ODEQ has demonstrated that using $PM_{2.5}$ as a surrogate for PM_{10} in Oakridge is sufficient to protect human health, is allowable per the Oakridge Maintenance Plan, and will be reported on in future ANPs, we approve the use of $PM_{2.5}$ as a surrogate for PM_{10} at this site pursuant to 40 C.F.R. part 58 Appendix D, Section 4.7.1.

Table of tables

Table 1. Appropriate spatial scales for each criteria pollutant and applicable site types	
Table 2. 2023 Oregon Population estimates	
Table 3. 2025 ODEQ and LRAPA SLAMS Criteria Pollutant Ambient Air Monitoring Network	
Table 4. Oregon ozone network and purpose	
Table 5. NO ₂ monitoring network	
Table 6. CO monitoring network	
Table 7. PM _{2.5} monitoring network	
Table 8. PM ₁₀ monitoring network	
Table 9. PMcoarse monitoring network	
Table 10. PM ₁₀ lead monitoring as part of the air toxics network	
Table 11. SO ₂ monitoring network	
Table 12. AQI site list	
Table 13. 2024 Updated PM _{2.5} AQI breakpoints	.23
Table 14. Meteorology Network	.24
Table B.1. Collocation Requirements for PM _{2.5}	
Table B.2. Collocation Requirements for PM ₁₀	
Table B.3. Collocation Requirements for PM ₁₀ lead	.40
Table E.1. CO emission estimates from the Rogue Valley	
Table E.2. Linear regression equations used to estimate PM ₁₀ using PM2.5	
Table E.3. 2013 PM ₁₀ estimates for Klamath Falls and Grants Pass	. 72
Table of figures	
	,
Figure 1. Oregon 2020 CBSA map	
Figure 2. ODEQ and LRAPA Ambient Air Monitoring Network	
Figure 3. Ozone SLAMS Monitoring Network Map	
Figure 4. Portland- Metro Ozone SLAMS Monitoring Sites.	
Figure 5. NO ₂ Monitoring Network	
Figure 6. CO Monitoring Network	
Figure 7. PM _{2.5} FEM Monitoring Network	
Figure 8. PM ₁₀ Monitoring Network	
Figure 9. PM _{10-2.5} Monitoring Network	
Figure 10. SO ₂ Monitoring Network	
Figure 11. PM _{2.5} AQI Network	
Figure 12. DEQ and LRAPA Meteorology Network	
Figure 13. Map showing the new Near-road site starting in 2025	
Figure 14. Example of the 2022 Cedar Creek Fire's Impact on Oakridge's PM10	
Figure 15. Example of wildfire smoke from Southern Oregon and Northern California impacti	_
Grants Pass' PM ₁₀	.36

Acronyms

AQI	Air Quality Index – standardized method of reporting air Quality
AQS	EPA's air quality database
BAM	Beta Attenuation Monitor
CBSA	Core-Based Statistical Area
CFR	Code of Federal Regulations
CO	Carbon monoxide – An odorless, colorless gas
CSN	Chemical Speciation Network
DV	Design Value – the concentration used to compare to the NAAQS
FEM	Federal Equivalence Method (used for comparison to NAAQS)
FRM	Federal Reference Method (Method used for comparison to NAAQS)
HAPs	Hazardous Air Pollutant as defined in Title III of the Clean Air Act
IMPROVE	EPA's PM _{2.5} speciation visibility network
LRAPA	Lane Regional Air Protection Agency (Lane County)
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NATTS	National Air Toxics Trends network
NCore	National Core Monitoring Site
NO	Nitrogen oxide
NO ₂	Nitrogen dioxide
NOx	Oxides of Nitrogen (NO + NO ₂)
NOy	Total reactive Oxides of Nitrogen
O ₃	Ozone
PAMS	Photochemical assessment monitoring stations
Pb	Lead
PM _{2.5}	Particulate Matter 2.5 micrometers in diameter and smaller
PM ₁₀	Particulate Matter 10 micrometers in diameter and smaller
PM _{10-2.5} or PMc	The particle size between 10 and 2.5.
SIP	State Implementation Plan
SLAMS	State and Local Monitoring Sites (used for comparison to the NAAQS)
SO ₂	State Implementation Plan
SPM	Special Purpose Sites (Informational)
TSP	Total Suspended Particulates
VOC	Volatile Organic Compounds
Concentrations	
ppm	Parts per million
ppb	Parts per billion
µg/m ³	Microgram per cubic meter
ng/m ³	Nanograms per cubic meter
LTP or LC	Local temperature and pressure
STP	Standard temperature and pressure (25°C and 1 atmosphere)

1. Introduction

The Oregon Department of Environmental Quality's ambient air quality monitoring network is designed in response to the Environmental Protection Agency's National Monitoring Strategy, state and local needs, the requirements of air quality maintenance plans and the State Implementation Plans for non-attainment areas, and Code of Federal Regulations requirements.

EPA's ambient air quality surveillance regulations in 40 CFR. Part 58 require states to establish air quality monitoring network in their State Implementation Plans. The monitoring network of State and Local Air Monitoring Stations are referred to as SLAMS and are used for comparison to the National Ambient Air Quality Standards. These stations measure ambient concentrations of those air pollutants for which 40 CFR. Part 50 sets standards. SLAMS must meet the requirements of 40 CFR. Part 58 contained in:

- Appendix A (Quality Assurance Requirements)
- Appendix C (Ambient Air Quality Monitoring Methodology)
- Appendix D (Network Design Criteria)
- Appendix E (Probe and Path Siting Criteria)

States determine if they conform to Appendices A and C in part through periodic performance audits. States conform to Appendices D and E by conducting an annual network review and periodic site audits. This review is documented in this annual network plan that meets the following requirements:

- The plan describes any network modifications planned in the upcoming 18 months. NCore or SLAMS network modifications are subject to approval of the EPA Regional Administrator
- For each existing and proposed monitoring site, the plan includes the following information:
 - o The Air Quality Systems (AQS) site number
 - o The represented Metropolitan Statistical Area (MSA) or other geographic area
 - o The special scale, sampling method, and operating schedule
- The plan must be made available for public comment for at least 30 days prior to submission to the EPA. The final plan includes, and addresses comments received through the public notification process.

2. Monitoring background

The Oregon monitoring network is designed to meet the three monitoring objectives defined in 40 CFR. Part 58 Appendix D:

2.1 Provide air pollution data to the public in a timely manner.

ODEQ provides timely air quality data in a variety of ways:

- Hourly PM_{2.5}, ozone, NO₂, CO, SO₂, and meteorology updates on the ODEQ Air Quality Index web page and phone app.
- Access to all past continuous data through the ODEQ Air Quality Index web page.
- Access to hourly data on EPA's AIRNow AQI web page.
- Access to hourly PM_{2.5} data on EPA's fire and smoke map.
- Access to all criteria pollutant, air toxics, and meteorology data through EPA's Air Data.

- Air Quality Health Advisories.
- Agricultural field burning feedback.
- Prescribed burning feedback.
- Visibility information for recreational activities (i.e. Crater Lake visits)

2.2 Support compliance with National Ambient Air Quality Standards and development of pollution control strategies.

- Ambient air quality data are used to:
- Determine compliance with the NAAQS.
- Determine the location of maximum concentrations.
- Track the SIPs and related maintenance plans' progress.
- Support the maintenance plans control advisory programs (i.e. woodstove no-burn days).
- Provide data for legislative key performance measures.
- Provide data for regional haze protection of Class 1 areas.

2.3 Support air pollution research.

- PAMS, PM_{2.5} Chemical Speciation, Near Road data are collected to verify models and evaluate pollution reduction programs.
- Support development of new monitoring methods.
- Evaluating air pollution impacts on public health.
- Track air quality trends.
- Identify emerging air quality issues.
- Analyze impacts of air quality episodes like wildfire impacts.

To meet these three objectives, 40 CFR Part 58 Appendix D calls for the design of SLAMS networks to include several different types of monitors. These general types are sites that:

- 1. Determine the highest concentrations in an area.
- 2. Determine representative concentrations in high population areas.
- 3. Determine the impact of significant sources or source categories on pollutant concentrations in the ambient air.
- 4. Determine background concentrations.
- 5. Determine pollutant transport between populated areas.
- 6. Determine the impacts on visibility or vegetation in more rural and remote areas.

Appendix D of 40 CFR Part 58 also provides guidance on spatial scales of representativeness for the SLAMS network. Ideally, the station is located so that its sample represents the air quality across the scale that the station is intended to represent. Appendix D defines the following spatial scales:

- 1. Microscale: Dimensions between several and 100 meters.
- 2. Middle scale: Between 100 and 500 meters, typically several city blocks.

- 3. **Neighborhood scale:** Between 0.5 and 4 kilometers with relatively uniform land use.
- 4. **Urban scale:** City-like dimensions between 4 and 50 kilometers. Urban and neighborhood scales can overlap considerably. Heterogeneous urban areas may not have a single representative site.
- 5. **Regional scale:** From tens to hundreds of kilometers with relatively homogeneous geography and no large sources.
- 6. National and global scales: Scales representing the nation or globe as a whole.

Table 1. Appropriate spatial scales for each criteria pollutant and applicable site types.

Scale	SO ₂	СО	O ₃	NO ₂	Pb	PM ₁₀	PM _{2.5}	Site Types
Micro	Х	Х	Χ	Х	Х	Х	Х	High concentration, source
Middle	Х	Х	Χ	Х	Х	Х	Х	impact
Neighborhood	х	х	х	х	х	х	х	High concentration, source impact, general/background
Urban	х		х	х			х	High concentration, source impact, general/background, regional transport, welfare-related impacts.
Regional	х		х				х	General/background, regional transport, welfare-related impacts.

2.4 Other ambient monitoring data needs

In addition to the SLAMS criteria pollutant monitoring sites, ODEQ and LRAPA employ nephelometers and DEQ SensORs to estimate PM_{2.5} concentrations and inform the public of air quality conditions in communities where criteria pollutant monitoring is not required. Typically, nephelometer monitoring sites use site-specific PM_{2.5} correlations developed from collocated Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitor data. Lower concentration sites may use generalized regional correlations developed at sites with similar geographic and source characteristics. These sites are operated in accordance with 40 CFR Part 58 Appendix A requirements for quality assurance and quality control. At nephelometer sites where PM_{2.5} concentrations are consistently measured at or greater than 80 percent of the NAAQS, ODEQ will often transitions to FEM monitoring. ODEQ has added PM_{2.5} sensors at all the ozone sites These sensors serve as an important public information tool during summer wildfire smoke events and have help reduce public confusion around conflicting AQI information from ozone-only monitoring sites during periods of elevated PM_{2.5}.

The ODEQ SensOR is a non-FEM light scattering monitor developed by ODEQ to measure $PM_{2.5}$ estimates without the need for the nephelometer. The SensOR is easier to install, less expensive, and comparable to the nephelometer. More information on the ODEQ SensOR is available on ODEQ's Air Quality Monitoring website.

2.5 Oregon Core-Based Statistical Areas and Population

The minimum monitoring requirements listed in 40 CFR Part 58 Appendix D are based on the core-based statistical areas (CBSAs) defined by the U.S. Office of Management and Budget. Oregon's CBSAs are shown in Figure 1 (U.S. Census Bureau, 2020). The 2023 population estimates of CBSAs in Oregon over 50,000 people are listed in Table 2. The table also includes areas with populations less than 50,000 people as estimated by the Portland State University, Population Research Center. Oregon's population is mainly centered in the Portland Metro Area down through the Willamette Valley. These areas account for nearly 70% of the state's population. The largest population areas outside the Willamette Valley are in the Rogue Valley (Medford) and in Deschutes County (Bend).

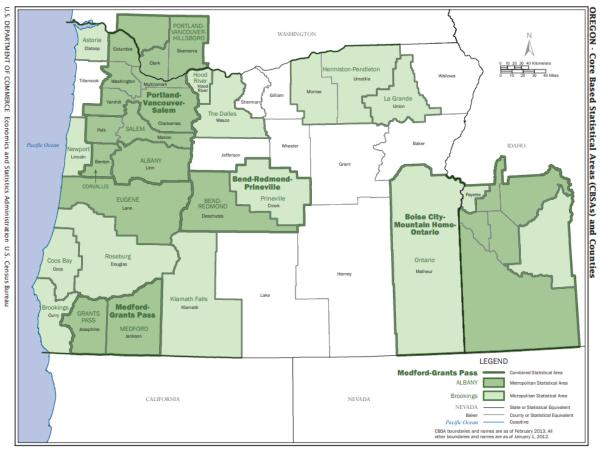


Figure 1. Oregon 2020 CBSA map

(US. Census Bureau)

Table 2. 2023 Oregon Population estimates

CBSA Name	CBSA Type	Year	CBSA Population
Portland-Vancouver-Hillsboro, OR-WA	Metropolitan Statistical Area	2024	2,537,904
Salem	Metropolitan Statistical Area	2024	443,416
Eugene-Springfield	Metropolitan Statistical Area	2024	382,396
Bend	Metropolitan Statistical Area	2024	264,407
Medford	Metropolitan Statistical Area	2024	221,331
Albany	Metropolitan Statistical Area	2024	132,474
Roseburg	Micropolitan Statistical Area	2024	112,255
Corvallis	Metropolitan Statistical Area	2024	98,899
Hermiston-Pendleton	Micropolitan Statistical Area	2024	92,851
Grants Pass	Metropolitan Statistical Area	2024	88,276
Klamath Falls	Micropolitan Statistical Area	2024	70,438
Coos Bay-North Bend	Micropolitan Statistical Area	2024	64,326
Ontario, OR-ID	Micropolitan Statistical Area	2024	59,977
Newport	Micropolitan Statistical Area	2024	51,212
Astoria	Micropolitan Statistical Area	2024	41,043
The Dalles	Micropolitan Statistical Area	2024	26,507
La Grande	Micropolitan Statistical Area	2024	26,058
Hood River	Micropolitan Statistical Area	2024	23,764
Brookings	Micropolitan Statistical Area	2024	22,774
Baker City	Micropolitan Statistical Area	2024	16,750
Woodburn	No MSA, PSU-PRC	2024	27,044
St. Helens	No MSA, PSU-PRC	2024	15,009
Prineville	No MSA, PSU-PRC	2024	11,598
Baker City	No MSA, PSU-PRC	2024	10,102
Sweet Home	No MSA, PSU-PRC	2024	10,028
Hood River	No MSA, PSU-PRC	2024	9,977
Burns/Hines	No MSA, PSU-PRC	2024	4,435
Lakeview	No MSA, PSU-PRC	2024	2,476

Sources:

US Census Bureau Portland State University, Population Research Center

2.6 Non-attainment and maintenance areas

Maintenance areas are those geographic areas that had a history of non-attainment but are now consistently meeting the National Ambient Air Quality Standard. Maintenance areas have been re-designated by EPA from "nonattainment" to "attainment with a maintenance plan,". Legal descriptions of these areas are listed in Oregon Administrative Rules, Chapter 340, Division 204-0010.

Non-attainment areas awaiting maintenance plans

PM_{2.5} Klamath Falls - Moderate nonattainment of 2006 daily PM_{2.5} standard.

2012 State implementation Plan.

Maintenance areas in Oregon

CO: Grants Pass Central Business District – Limited maintenance plan - 2015

Portland Metropolitan Service District Boundary – Maintenance plan - 2004

Klamath Falls Urban Growth Boundary - Maintenance plan - 2000 Medford Urban Growth Boundary - Limited maintenance plan - 2015 Salem-Kaiser Area Limited Maintenance plan - Maintenance plan - 2007

PM₁₀: Grants Pass Urban Growth Boundary - Limited maintenance plan - 2015

Klamath Falls Urban Growth Boundary - Maintenance plan - 2000

Medford-Ashland Air Quality Maintenance Area - Maintenance plan - 2005

La Grande Urban Growth Boundary - Maintenance plan - 2006 Lakeview Urban Growth Boundary - Maintenance plan - 2006 Eugene/Springfield Urban Growth Area - Maintenance plan - 2013

Oakridge Urban Growth Boundary - Maintenance plan - 2022

Ozone (1hr): Portland-Vancouver Air Quality Maintenance Area (Oregon Portion) and Salem-

Keizer Area Ozone Maintenance Plan - 2007

PM_{2.5}: Oakridge - Urban Growth Boundary - Maintenance plan - 2022

More information on these maintenance areas is available on DEQ's <u>AQ maintenance areas</u> web page or EPA's <u>Nonattainment/maintenance status</u> page.

3. Overview of Network Operations

3.1 Oregon Criteria Pollutant Monitoring Network

Oregon DEQ operates the ambient monitoring network for the entire state, except for Lane County, which is operated by the Lane Regional Air Protection Authority (LRAPA). Tribal lands are sovereign and do not fall under ODEQ's jurisdiction. Several of the tribes operate their own monitoring networks.

Oregon DEQ's and LRAPA's air quality monitoring networks measure ambient concentrations of the criteria pollutants - O₃, CO, NO₂, SO₂, PM_{2.5}, PM₁₀, PMcoarse, and lead (through the air toxics program). The map below shows Oregon's criteria pollutant monitoring network including the large light scattering network used for the AQI PM_{2.5} estimates. Note that the particulate sites used for the NAAQS will also be shown in the respective pollutant's tables below. The table below the map lists the SLAMS networks sites.

Oregon DEQ and Washington Department of Ecology have a monitoring MOU for the Portland -Vancouver-Hillsboro CBSA that distributes monitoring responsibilities. The MOU is in Appendix F of this plan.

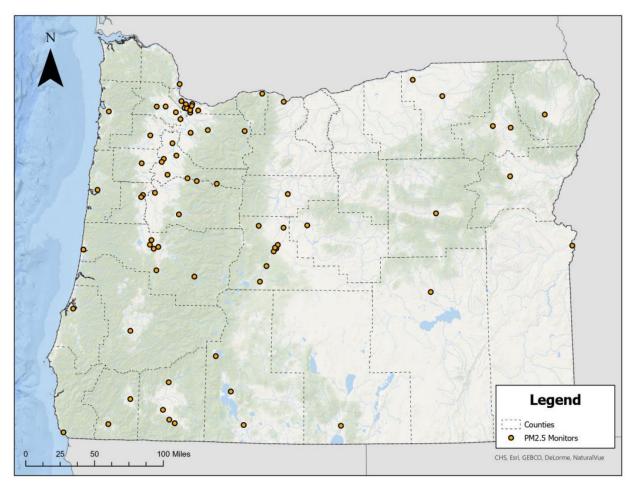


Figure 2. ODEQ and LRAPA Ambient Air Monitoring Network

Table 3. 2025 ODEQ and LRAPA SLAMS Criteria Pollutant Ambient Air Monitoring Network

City	Address	Site Code	EPA#	SO ₂	CO	NO ₂	Ozone	PM _{2.5}	PM _{2.5} Spec	PM ₁₀	WS/WD
Burns	Washington Street	BWS	410250003					Х			Х
Cottage Grove	City Shops	CGC	410399004					Х			
Eugene	Pacific Hwy 99N	E99	410390059					Х		Х	
	Amazon Park	AMZ	410390060				Х	Х			
(Saginaw)	Delight Valley Sch	SAG	410391007				Х				
Grants Pass	Parkside School	GPP	410330114					Х		Х	Х
Hermiston	Municipal Airport	HMA	410591003				Х				Х
Klamath	Peterson School	KFP	410350004					Х		Х	Х
La Grande	Hall and North Sts.	LHN	410610123							Х	Х
Lakeview	Center & M Streets	LCM	410370001					Х		Х	Х
Medford	Rapp Rd Talent	TAL	410290201				Х				
	Jackson Park	MJP	410290029					Х		Х	
Oakridge	School St.	WAC	410392013					Х		Х	Х
Portland	57th &SE Lafayette	SEL	410510080	Х	Х	Х	Х	Х	Х	Х	Х
	Humboldt School	PHS	410512010							Х	Х
Tualatin	Tualatin – I-5	TBC	410670005		Х	Х	Х	Х			Х
Carus	Spangler Rd.	SPR	410050004				Х				Х
Hillsboro	NE Grant St.	HHF	410670004					Х			Х
Sauvie	NW SI	SIS	410090004				Х				Х
Prineville	SE Court St.	PDP	410130100					Х			Х
Salem	Salem State Hosp.	SSH	410470041				Х	Х			
(Turner)	Cascade Jr. High,	CJH	410470004				Х				Х

Key:

Gasses:

 SO_2 = sulfur dioxide, CO = carbon monoxide, NO_2 = nitrogen dioxide

Particulates:

 PM_{10} = particulate matter 10 microns in diameter or smaller

PM_{2.5} = particulate matter 2.5 microns in diameter or smaller

Spec = $PM_{2.5}$ chemical speciation,

Lead = no criteria pollutant lead monitors, only air toxics lead monitors.

Meteorology monitors:

WS/WD = wind speed and direction,

Temp = outdoor temperature at 2 meters,

DT = delta (difference) in temperature at 2 and 10 meters,

BP = barometric pressure, RH = relative humidity, SR = solar radiation

Other

HAPS = hazardous air pollutants or air toxics, includes lead. Not shown here.

3.1.1 Ozone Network

Oregon DEQ and LRAPA have 10 ozone SLAMS monitoring sites. Four in the Portland-Metro area (Southwest Clean Air Agency also has an additional one in Vancouver), two in Salem, Two in Eugene-Springfield, one in the Medford-Ashland area, and one in Hermiston. Three temporary Special Purpose Monitoring sites are running during the summer of 2025 to evaluate ozone levels. One each in Silverton (upwind of Salem), in Bend, and in Madras. The Madras site is operating to measure the impact from a nearby animal confined feeding lot. A table and maps of the network are shown below.

Table 4. Oregon ozone network and purpose

AQS ID - POC	Site Name	CBSA/MSA	Scale	Purpose	Start Date
410090004- 1	Sauvie Island		Regional	Transport	1/01/1980
410510080- 1	Portland, SE Lafayette	Portland-	Neighborhood	In town	7/10/2003
410670005- 1	Tualatin	Vancouver- Hillsboro	Middle	Near Road	4/21/2014
410050004 -1	Carus		Urban	Downwind	7/23/1976
410470041- 1	Salem State Hospital	Salem	Neighborhood	In town	5/01/2018
410470004- 1	Turner	Salem	Urban	Downwind	6/23/1995
410390060- 1	Eugene Amazon Park	Eugopo	Neighborhood	In town	1/01/1985
410391007- 1	Saginaw	Eugene	Urban	Downwind	1/01/1985
410290201- 1	Medford at Talent	Medford	Urban	Downwind	05/01/1992
410591003- 1	Hermiston Airport	Pendleton- Hermiston	Urban	Downwind	2/27/2007
410470007- 1	Silverton (SPM)	Salem	Regional	Upwind	4/1/2024
410170122- 1	Bend (SPM)	Bend	Urban	Downwind	4/1/2024
410310007- 1	Madras (SPM)	Jefferson Co	Middle	Downwind	4/1/2025

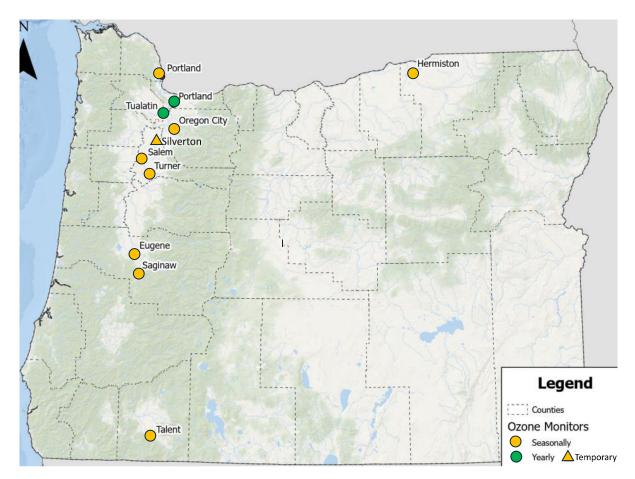


Figure 3. Ozone SLAMS Monitoring Network Map

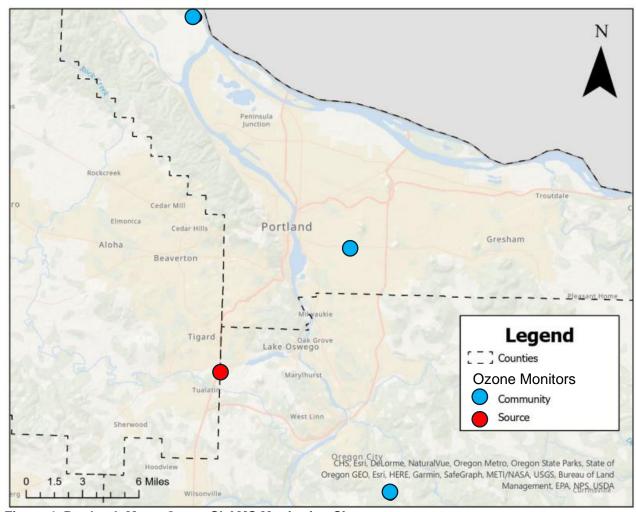


Figure 4. Portland- Metro Ozone SLAMS Monitoring Sites.

Changes to the ozone network in the past year

- 1. Temporary ozone sites were set up for the 2024 & 2025 summers in Bend and in Silverton to access the current ozone levels.
- 2. A third temporary site was set up in Madras in 2025 to measure the impact of a new confined area feeding lot nearby. This site is only expected to operate for one year.

There is no long-term funding to operate these monitors.

3.1.2 Nitrogen dioxide network

Oregon DEQ has two monitoring sites for NO₂, both in the Portland-Metro area. One is a community scale site, located in SE Portland. The other a near roadway site, located adjacent to I-5 in Tualatin. LRAPA has no monitoring sites. ODEQ is required to add another near-road site because the Portland-Vancouver-Hillsboro population meets the 2.5 million population threshold for a tier 2 site. The site will be in downtown Portland, along I-5.

Table 5. NO₂ monitoring network

AQS ID - POC	Site Name	CBSA	Scale	Purpose	Start Date
410510080- 1	Portland, SE Lafayette	Dortland	Neighborhood	NCore	01/01/1984
410670005- 1	Tualatin	Portland- Vancouver-	Middle	Near Road	04/21/2014
TBD	Portland – I-5 & Russell	Hillsboro	Middle	Near Road	TBD

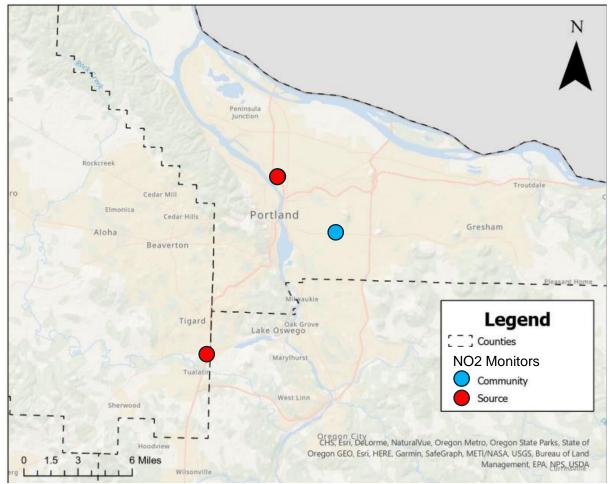


Figure 5. NO₂ Monitoring Network

Source monitor (measuring I-5 emissions) Community monitor (Measuring in neighborhood)

Changes to the NO₂ network in the past year

An NO₂ monitor was added at the second near road site in Portland.

3.1.3 Carbon monoxide network

Oregon DEQ has two monitoring sites for carbon monoxide (CO), both in the Portland-Metro area. One is a community scale site located in SE Portland. The other is the near roadway site next to I-5 in Tualatin, which measures vehicle contributions to CO. LRAPA has no CO sites.

Table 6. CO monitoring network

AQS ID - POC	Site Name	CBSA	Scale	Purpose	Start Date
410510080- 1	Portland, SE Lafayette	Portland-	Neighborhood	NCore	12/24/1980
410670005- 1	Tualatin	Vancouver- Hillsboro	Middle	Near Road	04/21/2014

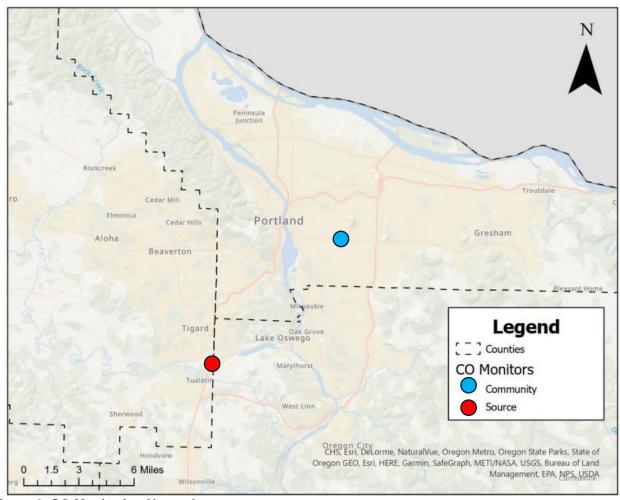


Figure 6. CO Monitoring Network

Source monitor (measuring I-5 emissions) Community monitor (Measuring in neighborhood)

Changes to the CO network in the past year

No changes

3.1.4 PM_{2.5} Network

Oregon DEQ and LRAPA have one NCore and 12 SLAMS Federal Equivalence Method (FEM) sites for $PM_{2.5}$. Three in the Portland-Metro area, two in Eugene, and one each in Oakridge, Cottage Grove, Grants Pass, Medford, Klamath Falls, Lakeview, Burns, and Prineville. DEQ only has one $PM_{2.5}$ speciation site and it is in SE Portland (the trend site). ODEQ has added three special purpose FEM sites in 2025, to help correlate the nephelometer and ODEQ SensOR network discussed in the Section 3.3 below. LRAPA has two SPM sites. ODEQ's background and transport site is at Sauvie Island, along the lower Columbia River. It is a previously correlated nephelometer site used to make a $PM_{2.5}$ estimate.

Table 7. PM_{2.5} monitoring network.

AQS ID - POC	Site Name	CBSA	Scale	Category	Start Date
410670004 -1	Hillsboro		Neighborhood	SLAMS	01/28/2005
410510080- 1	SE Portland	Portland-	Neighborhood	NCore/SLAMS	01/01/1999
410670005- 1	Tualatin	Vancouver- Hillsboro	Neighborhood	SLAMS	04/21/2014
410090004- 3	Sauvie Island		Regional	SPM Transport	/ Background
410470041- 1	Salem State Hospital	Salem	Neighborhood	SPM	01/01/2024
410390060- 1	Eugene Amazon Park		Neighborhood	SLAMS	01/01/1999
410390059- 1	Eugene – Hwy 99 W		Neighborhood	SLAMS	07/01/2011
410390101 -1	Eugene – Wilkes Dr.	Eugene-	Neighborhood	SPM	01/01/2022
410391013 -1	Springfield	Springfield	Neighborhood	SPM	01/01/2024
410392013- 1	Oakridge		Neighborhood	SLAMS	01/01/1999
410399004 -1	Cottage Grove		Neighborhood	SLAMS	01/01/2008
410330114 -1	Grants Pass	Grants Pass	Neighborhood	SLAMS	06/15/2002
410290029- 1	Medford	Medford	Neighborhood	SLAMS	07/21/2023
410170120 -1	Bend	Bend	Neighborhood	SPM	01/01/2024
410130100 -1	Prineville	Prineville	Neighborhood	SLAMS	01/01/2009
410250003 -1	Burns	Burns	Neighborhood	SLAMS	09/16/2009
410350004 -1	Klamath Falls	Klamath Falls	Neighborhood	SLAMS	01/01/1999
410370001 -1	Lakeview	Lakeview	Neighborhood	SLAMS	01/01/1999

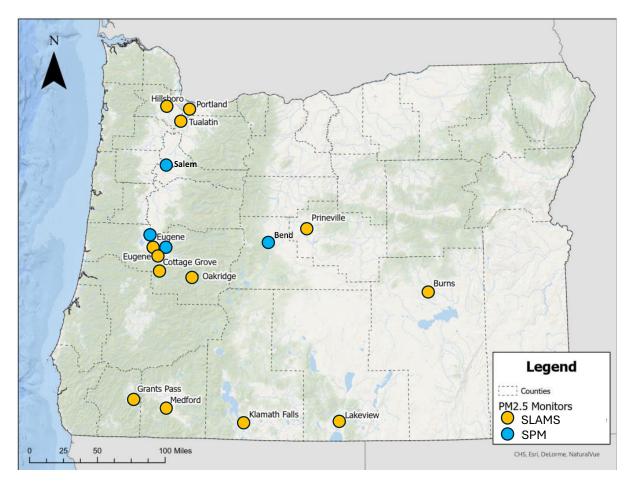


Figure 7. PM_{2.5} FEM Monitoring Network

Changes to the PM_{2.5} network in the past year

1. LRAPA placed an FEM in Springfield (41-039-0023) and it is collocated with the nephelometer for the AQI. This is a Special Purpose Monitor, and the data is being loaded to AQS.

3.1.5 PM₁₀ Network

Oregon DEQ and LRAPA have six FRM monitoring sites for PM_{10} . Two in the Portland-Metro area, one each in Eugene-Springfield, La Grande, Medford, and Oakridge. ODEQ is using $PM_{2.5}$ as a surrogate for PM_{10} in Grants Pass, Klamath Falls, and Lakeview.

Table 8. PM₁₀ monitoring network.

AQS ID-POC	Site Name	CBSA	Scale	Category	Start Date
410512010-7	N. Portland	Portland-	Neighborhood	SLAMS	02/01/2017
410510080-1	SE Portland	Vancouver- Hillsboro	Neighborhood	NCore/SLAMS	01/01/1984
410390059-7	Eugene –Hwy99W	Eugene-	Neighborhood	SLAMS	04/01/2018
410392013-1	Oakridge	Springfield	Neighborhood	SLAMS a	11/01/1989
410290029-7	Medford	Medford	Neighborhood	SLAMS	07/21/2023
410610123-7	La Grande	La Grande	Neighborhood	SLAMS	09/01/2016
410330114-1	Grants Pass	Grants Pass	Neighborhood	PM _{2.5}	06/15/2002
410350004-1	Klamath Falls	Klamath Falls	Neighborhood	surrogate SLAMS	01/01/1986
410370001-1	Lakeview	Lakeview	Neighborhood	SLAIVIS	10/01/1991

a. Oakridge is allowed to use PM_{2.5} as a surrogate starting in January 2026.

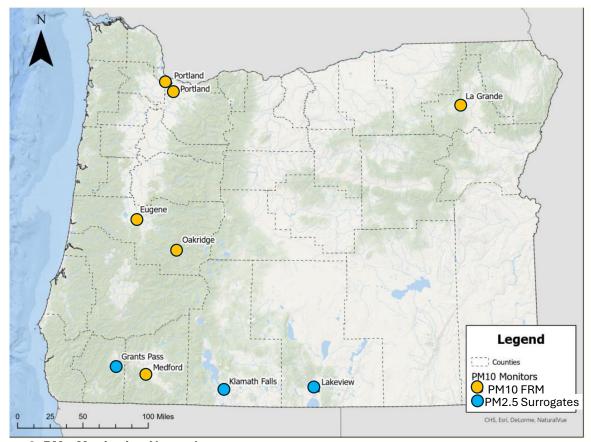


Figure 8. PM₁₀ Monitoring Network

Changes to the PM₁₀ network in the past year

b. LRAPA will continue PM₁₀ sampling in Oakridge even though they received a waiver to

use the $PM_{2.5}$ FEM as a surrogate. This is to provide data to address the concern of a new rock crushing facility planned for the eastside of town. LRAPA will address wheterh to continue PM_{10} monitoring again in the 2026 Annual network plan.

3.1.6 PM_{10-2.5} network

Oregon DEQ has one PM_{10-2.5} monitoring site, and it is at the Portland NCore site.

Table 9. PMcoarse monitoring network

AQS ID - POC	Site Name	CBSA	Scale	Category	Start Date
410510080- 1	SE Portland	Portland-Vancouver- Hillsboro	Neighborhood	NCore/SLAMS	01/01/2010

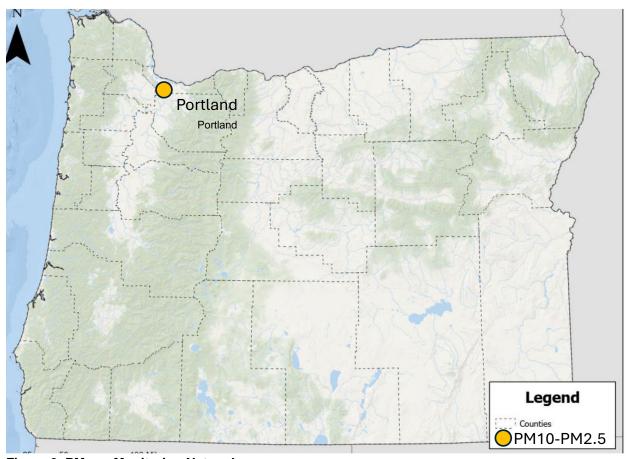


Figure 9. PM_{10-2.5} Monitoring Network

Changes to the PM_{10-2.5} network in the past year

No changes.

3.1.7 Criteria pollutant lead network

Oregon was required to operate one community level lead site at the NCore site. In 2018, DEQ received a waiver to discontinue this monitoring because the data was well below the NAAQS.

Note: DEQ is still monitoring for lead in the air toxics monitoring program which currently has eight sites. See the DEQ Air Quality Monitoring web page for more information.

Table 10. PM₁₀ lead monitoring as part of the air toxics network.

AQS ID - POC	Site Name	CBSA	Scale	Category	Start Date
410512010 -7 & 9	N. Portland– Humboldt	Portland-	Neighborhood	NATTS/SPM	02/01/2017
410512011-7	NE. Portland – Cully	Vancouver- Hillsboro	Neighborhood	SPM	05/10/2018
410670005 -7	Tualatin		Neighborhood	Near Rd/SPM	01/01/2019
410390059- 7	Eugene – Hwy 99W	Eugene-	Neighborhood	SPM	04/01/2018
410391013 -7	Springfield	Springfield Neighborhood		SPM	01/01/2024
410290029- 7	Medford	Medford	Neighborhood	SPM	07/21/2023
410610123 -7	La Grande	La Grande	Neighborhood	NATTS/SPM	09/01/2016
410170123 -7	Bend	Bend	Neighborhood	SPM	07/01/2020

Changes to the Criteria Pollutant Lead network in the past year

Hillsboro air toxics site shut down in January 2025 due to staff shortages. Lead and other metals were discontinued.

3.1.8 Sulfur dioxide network

The Portland-Vancouver-Hillsboro CBSA is the only area in Oregon where SO_2 monitoring is required. Its population weighted emission index is between 5K and 100K. This is considered an SO_2 community monitoring site and is at the NCore site. There are no sources in Oregon that require SO_2 monitoring currently.

Table 11. SO₂ monitoring network

AQS ID - POC	Site Name	CBSA	Scale	Purpose	Start Date
410510080- 1	Portland, SE Lafayette	Portland- Vancouver- Hillsboro	Neighborhood	In town	02/01/2005

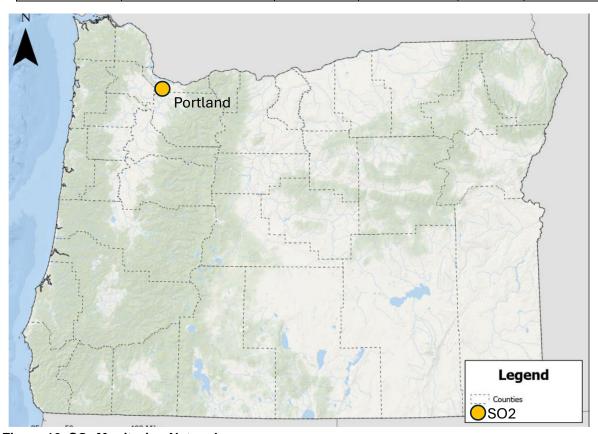


Figure 10. SO₂ Monitoring Network

Changes to the SO₂ network in the past year

No changes

3.2 PM_{2.5} and ozone Air Quality Index Network

Oregon has a network of $PM_{2.5}$ real time monitors that are used for hourly reporting of air quality for the <u>Air Quality Index</u>. Oregon also includes ozone, NO_2 , CO, and SO_2 on the AQI, although they rarely have the highest levels. Ozone and $PM_{2.5}$ are nearest to the NAAQS and therefore, usually have the highest AQIs.

The AQI is used by health officials, forestry mangers, agricultural field burning managers, and the public to get timely information about air quality health levels. Recently, Oregon Occupational Safety and Health Administration developed rules regarding employee exposure to wildfire smoke with the AQI as a primary source of $PM_{2.5}$ information. The data is also sent to EPA's AIRNow AQI web page which combines all the states and tribal AQIs in one place. The AQI data is also loaded to the Oregon Smoke Blog which provides emergency information during forest fire smoke inundations.

Oregon and LRAPA have around 70 AQI sites. The table and map below show the AQI network at the time of this report.

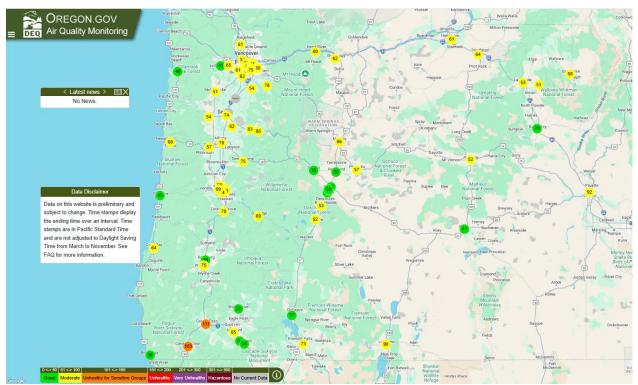


Figure 11. PM_{2.5} AQI Network

Table 12. AQI site list

City	Address	Site Code	EPA#	Ozone	PM _{2.5}	Comment
Albany	Calapooia School	ACS	410430009		Х	
Bend	Bend Pump Station	BPS	410170120		Х	
	Ponderosa Elementary	BPE	410170115		Х	
	Pine Ridge Elementary	BPR	410170116		Х	
	Sun River Elementary	SRE	410170117		Х	
	Bend High School	BEE	410170123		Х	
	La Pine Fire Dept.	LFD	410172002		Х	
Baker City	Forest Service	BFS	410010004		Х	
Brookings	Forestry Center	BDF	410150002		Х	
Burns	Washington St.	BWS	410250003		Х	
Cave	USFS Station	CJFS	410330036		Х	
Coos Bay	Marshfield HS	СВМ	410110003		Х	
Corvallis	North Corvallis	ССВ	410030013		Х	
	South Corvallis	CJT	410030014		Х	
Cottage Grove	City Shops	CGC	410399004		х	
Crater Lake	Rim	CLP	410351001		Х	Summer only
Dallas	Le Creole Middle	DLM	410530004		Х	-
Detroit Lake	USFS Station	DFS	410470123		Х	Summer only
Eugene	Pacific Hwy 99N	E99	410390059		Х	
	Amazon Park	EAP	410390060	Х	Х	
	Wilkes Drive	EWD	410390101		Х	
Springfield	Food for Youth Farm	SYF	410390013		Х	
(Saginaw)	Delight Valley School	SAG	410391007	Х		
Enterprise	Forest Service	EFS	41063000		Х	
Estacada	Clackamas River	ECR	41005001		Х	
Florence	Forestry Department	FFD	41039010		Х	
Grants Pass	Parkside School	GPP	41033011		Х	
Hermiston	Municipal Airport	HMA	41059100	Х	Х	
Hood River	Westside FD #2	HRF	41027000		Х	
John Day	Davidson St.	JDD	41023000		Х	
Klamath Falls	Peterson School	KFP	41035000		Х	
Chiloquin	Duke Drive	CDD	41035204		Х	
La Grande	Hall and North	LHN	41061012		Х	
Cove	City Hall	ССН	41061012		Х	
Lakeview	Center & M Streets	LCM	41037000		Х	
Lyons	Marylynn School	LMS	41043200		Х	
Madras	Westside School	MWS	41031000		Х	
McMinnville	McMinnville HS	MHS	41071100		Х	
Medford	Rapp Rd Talent	TAL	41029020	х	Х	
	Jackson Park	MPJ	41029002		Х	
Ashland	Fire Department	AFD	41029020		Х	
Shady Cove	School	SCS	41029001		Х	

City	Address	Site Code	EPA#	O ₃	PM _{2.5}	Comment
Mill City	High School	MCS	41043010		Х	
Mt. Hood	Ski Bowl at Multopor	MUL	41005010		Х	Summer only
Oakridge	School St.	OAK	41039201		Х	
Ontario	May Roberts School	OMR	41045000		Х	
Pendleton	SW Marshall PI	PMC	41059012		Х	
Portland	57 th &SE Lafayette	SEL	410510080	х	Х	
	Humboldt School	PHS	410512010		Х	
	Cully	PNS	410512011		Х	
	McDaniel High School	PMH	410510039		Х	
	SE 12th and Main	VIP	410510035		Х	
	Lincoln High School	PLH	410510034		Х	
	Lane Middle School	PLM	410510032		Х	
	Roosevelt High School	PRH	410510003		Х	
Beaverton	Highland Park Sch	BHP	410670111		Х	
Carus	Spangler Rd.	SPR	410050004	Х	Х	
Forest Grove	Pacific University	FGP	410670006		Х	
Gresham	Centennial HS	GCH	410510031		Х	
Hillsboro	NE Grant St.	HHF	410670004		Х	
Sauvie Island	NW SI	SIS	410090004	х	Х	
Tualatin	Tualatin – I-5	TBC	410670005	х	Х	
Prineville	SE Court St.	PDP	410130100		Х	
Redmond	Redmond HS	RHS	410171001		Х	
Danahaan	Roseburg High School	RWH	410190005		х	
Roseburg	Green Elementary School	RGE	410190006		х	
Salem	Salem State Hosp.	SSH	410470041	х	х	
(Turner)	Cascade Jr. High,	CJH	410470004	х	Х	
East Salem	Salem Chemeketa	SCC	410470022		Х	
Silverton	James & Western St	SJW	410470007		Х	
Sisters	USFS Office	SFS	410170004		Х	
Sweet Home	Fire Department	SFD	410432002		х	
The Dalles	Cherry Heights	TDC	410650007		х	
Tillamook	Tillamook Jr. HS	TJH	410570002		Х	
Toledo	Police Station	TPD	410410004		Х	
Woodburn	Chemeketa CC	WCC	410470023		х	

Key:

Gasses: Sulfur dioxide, carbon Monoxide, and nitrogen dioxide are collected at SEL, TBC, and the new near road site.

The $PM_{2.5}$ estimates are from the DEQ SensOR or from nephelometers. See DEQ's Air Quality Monitoring web page for more detail.

Changes to the PM_{2.5} AQI network in the past year

A new site is planned at Roseburg High School in 2024. Roseburg FD was relocated to the nearby Elementary School in south Roseburg.

In 2024, EPA strengthened the $PM_{2.5}$ Annual Average standard and the AQI breakpoints. The old and new breakpoints are in the EPA provided table below.

Table 13. 2024 Updated PM_{2.5} AQI breakpoints

AQI Category and Index Value	Previous AQI Category Breakpoints (µg/m³)	Updated AQI Category Breakpoints (µg/m³)	What Changed?
Good (0 - 50)	0.0 to 12.0	0.0 to 9.0	EPA updated the breakpoint between Good and Moderate to reflect
Moderate (51 – 100)	12.1 to 35.4	9.1 to 35.4	the updated annual standard of 9 (µg/m³)
Unhealth for Sensitive Groups (101 – 150)	35.5 to 55.4	35.5 to 55.4	No change, because EPA retained the 24 – hour fine PM standard of 32 (µg/m³)
Unhealthy (151 – 200)	55.5 to 150.4	55.5 to 125.4	EPA updated the breakpoints at the upper end of the unhealthy, very
Very Unhealthy (201 – 300)	150.5 to 250.4	125.5 to 225.4	unhealthy, and hazardous categories based on scientific evidence about particle pollution and health. The Agency also combined two sets of
Hazardous (301+)	250.5 to 350.4 and 350.5 to 500	225.5 +	breakpoints for the Hazardous category into one.

 $\mu g/m^3$ – concentration unit of micrograms per meters cubed

3.3 Meteorology network

Oregon DEQ and LRAPA operate a meteorology (met) network in support of the criteria and air toxics pollutant networks. The met network provides modelers, forecasters, and local health officials with information on the origin of pollutant emissions and pollutant movement. DEQ does not need to request EPA approval for changes to meteorology network sites but will submit any changes in the Annual Network Plan for public comment and input. The table and map below show the current meteorology network.

Table 14. Meteorology Network

Address	Site Code	EPA#	Wind	Temp	Delta T	RH	BP	SR	Precip, UV, Mixing Heights
Bend	BRD	410140121	Х	Х		Х	Х	Х	
Burns	BWS	410250003	Х	Х			Х		
N. Eugene	E99	410390059	Х						
NE Eugene	EWD	410390101	Х	Х			Х		
Springfield	SCH	410391009	Х						
Florence	FFD	410390100	Х	Х		Х	Х		
Grants Pass	GPP	410330114	Х	Х			Х		
Hermiston	HMA	410591003	Х						
Klamath Falls	KFP	410350004	Х	Х	Х	Х	Х		
La Grande	LHN	410610123	Х	Х		Х	Х		
Cove	CCH	410610120	Х						
Lakeview	LCM	410370001	Х	Х			Х		
Medford	MTV	410291002	Х	Х	Х	Х	Х	Х	
Oakridge	OAK	410392013	Х	Х			х		
SE Portland	SEL	410510080	Х	Х		х	х	х	X
N. Portland	PJH	410511191	Х						
NE Portland	PNS	410512011	Х						
N Portland - I-5 in	TBD	TBD	Х						
Canby	SPR	410050004	Х	Х			Х		
Hillsboro	HHF	410670004	Х						
Sauvie Island	SIS	410090004	Х	Х					
Tualatin – I-5	TBC	410670005	Х	Х		Х			
Prineville	PDP	410130100	Х	Х		Х	Х	Х	
Salem-Turner	CJH	410470004	Х						
Silverton	SJW	410470007	Х						

Key:

Wind = Wind speed and direction, Temp = Outdoor temperature at 2 meters, DT = Delta (difference) in Temperature at 2 and 10 meters, BP = Barometric Pressure, RH = Relative Humidity, SR = solar radiation, UV ultra-violet radiation, Precip - precipitation

Changes to the Meteorological Network in the past year

No changes.

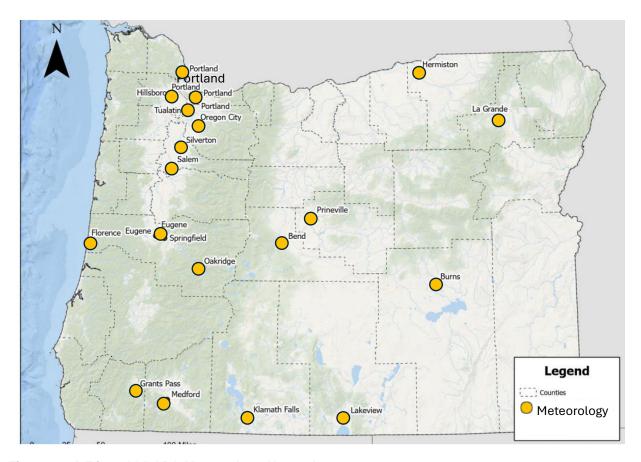


Figure 12. DEQ and LRAPA Meteorology Network

4. Planned changes to network

All major modifications to the ambient air quality monitoring network required by EPA are submitted to the regional administrator for review and approval in the network assessment. Changes that do not require EPA approval are also mentioned for informational purposes.

4.1 Criteria pollutant changes

PM_{2.5}

- Grants Pass PM_{2.5} (41-033-0114) will be changed from a SLAMS site to a Special Purpose Monitoring site to give DEQ the flexibility to perform non-FEM monitoring or move monitors in the future. Grants Pass has a 2022-2024 daily design value of 36 μg/m3 and an annual design value of 9.0 μg/m3 with wildfire smoke impacted data included. When the wildfire smoke impacted data is removed, the 2022-2024 daily design value is 22 μg/m3 and the annual average design value is 6.7 μg/m3.
- Prineville PM_{2.5} (41-013-0100) will be changed from SLAMS site to a Special Purpose
 Monitoring site to give DEQ the flexibility to perform non-FEM monitoring or move monitors in
 the future. Prineville has a 2022-2024 daily design value of 35 μg/m3 and an annual design
 value of 7.3 μg/m3 with wildfire smoke impacted data included. When the wildfire smoke
 impacted data is removed, the Prineville daily design value is 20 μg/m3 and the annual
 average design value is 6.0 μg/m3.

PM₁₀

- EPA approved a waiver to allow LRAPA to use PM_{2.5} as a surrogate for PM₁₀ in Oakridge. LRAPA had planned to start using PM_{2.5} as a surrogate in January of 2026, but will continue monitoring PM10 through 2026 because of a proposed rock crushing operation on the east side of Oakridge.
- End the required surrogate PM_{2.5} monitoring waver for the 2003 <u>Grants Pass PM₁₀</u> <u>Maintenance Plan</u>. The Grants Pass PM₁₀ levels are 1/3 of the NAAQS unless there are wildfire smoke impacts. The PM₁₀ levels consists primarily of PM_{2.5} and PM_{2.5} SLAMS monitoring will continue. To do this, the EPA will have to approve the end of PM₁₀ monitoring after the maintenance plan has been in place for 20 years.

NO_2

ODEQ is installing the second near road site along Interstate-5 in Portland, between the Interstate 84 interchange and the Fremont Bridge interchange. The site of choice is on I-5 near N Russell St near Tubman School and the Ronald McDonald House Charities, as shown on the maps below and linked on Google Maps. The site is scheduled to start in August of 2025.

Meteorology

DEQ is going to add wind speed and direction monitoring at the new near road site.

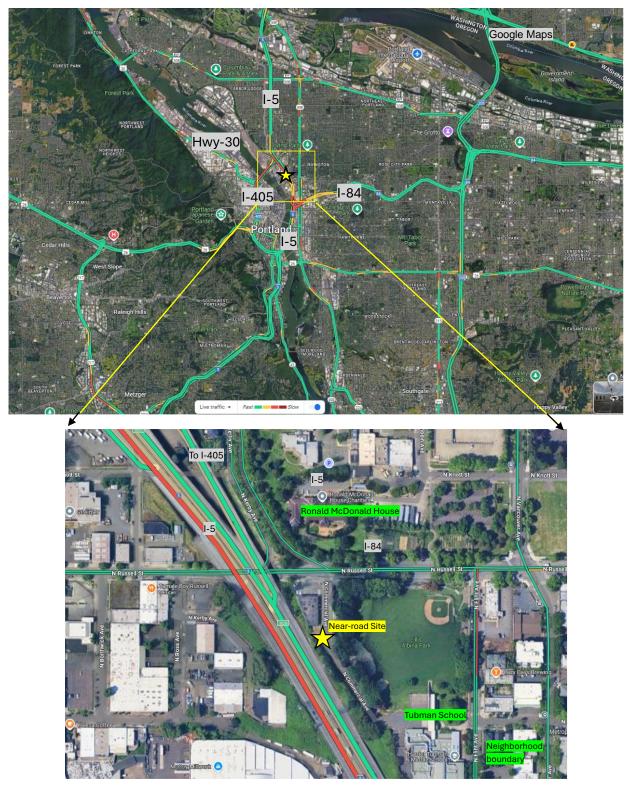


Figure 13. Map showing the new Near-road site starting in 2025

Appendix A. Minimum monitoring requirements

DEQ and LRAPA meet the minimum monitoring requirements for all criteria pollutants measured as established in 40 CFR 58. The tables in Appendix A list the criteria used to determine compliance with federal regulations.

A.1. Oregon national core site (NCore)

Oregon has one NCore site, in Portland which operates all criteria pollutants, shown in Table A.1.

NCore Site: SE Lafayette (SEL), AQS# 41-051-0080, Address <u>57th Avenue and SE Lafayette St., Portland, OR</u>
MSA – Portland-Vancouver, OR-WA (#6440) Counties represented – (OR) Multnomah, Clackamas, Washington, WA) Clark
MSA. Population (2024) - 2,537,904 (US Census)

							# of Mo	nitors
						Minimum		
Pollutant	Std Type	Std	DV	Units	Years	required	Active	Needed
PM _{2.5}	Daily	35	20	μg/m ³	22-24			
1 1412.5	Annual	9	6.2	μg/m ³	22-24	1	1	0
PM _{2.5} Speciation	N/A	-	-	-	-	1	1	0
PM ₁₀	Daily	150	0 exc	eedances	22-24	1	1	0
PM _{10-2.5}	N/A	1	1	•	-	1	1	0
Ozone	8 hr Ave	70	66ª	ppb	22-24	1	1	0
NO ₂	1 hour	100	32	ppb	22-24	1	1	0
	Annual	53	8.2	ppb	22-24	ı	I	U
NOx (substituted for NOy - EPA waiver)	N/A	1	1	•	-	1	1	0
Trace SO ₂	1 hour	75	3	ppb	22-24	1	1	0
5 Minute Trace SO ₂ -	N/A	-		-	-	-	1	1
Trace CO	8 hr Ave	9 ppm	0 exc	eedances	22-24	1	1	0
Wind Direction (15 m)	N/A	-	-	-	-	1	1	0
Wind Speed (15 m)	N/A	-	-	-	-	1	1	0
Relative Humidity (2 m)	N/A	-	-	-	-	1	1	0
Solar Radiation (2 m)	N/A	-	-	-	-	1	1	1
Barometric Press (2 m)	N/A	-	-	-	-	0	1	0
Outdoor Temp (2 m)	N/A	-	-	-	-	1	1	0
Delta Temp (2 and 10 m)	N/A	-	-	-	-	0	0	0
PAMS – NOy, VOC, Aldehyde, Ceilometer	N/A	-	-	-	-	1	1	0
CSN PM _{2.5} Speciation	N/A	-	1	1	-	1	1	0

a. 2022 and 2023 does not meet completeness requirements.

A.2. Minimum required ozone sites

Oregon DEQ and LRAPA have an ambient ozone monitoring network with 10 permanent sites. There is also one site in Vancouver Washington operated by the Southwest Clean Air Agency. The table below lists the sites.

							#	of Monitors	3
MSA	County	Population 2024	Design Value (ppb)	max design value site name	Season	Years	Minimum required	Active	Needed
Portland- Vancouver- Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,537,904	69	<u>Carus</u> (41-005-0004)	Annual for NCore and Roadway sites. May-Sept for upwind and downwind sites	22-24	2	4 in OR, 1 in WA	0
Salem (41420)	Marion	443,416	67	<u>Turner</u> (41-047-0004)	May-Sept	22-24	2	2	0
Eugene- Springfield (21660)	Lane	382,396	60	Amazon Pk. (41-039-0060)	May-Sept	22-24	1	2	0
Medford (32780)	Jackson	221,331	63	Talent (41-029-0201)	May-Sept	22-24	1	1	0
Pendleton- Hermiston (37820)	Umatilla	92,851	64	Airport (41-059-1003)	May-Sept	22-24	1	1	0

A.3. Carbon monoxide minimum monitoring requirements

Oregon DEQ and LRAPA have discontinued most of the CO monitoring sites years ago, because the levels were less than 1/5th the standard. See the table below for required monitoring sites.

			Standard			# c	f Monitor	s
MSA (Maintenance areas)	County	Population 2024 estimate	Exceeded more than once per year	Site name	Last Year	Minimum required	Active	needed
Portland- Vancouver- Hillsboro, OR- WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,537,904	No	SE Lafayette, Portland (41-051-0080)	Active	2	2	0

A.4. Sulfur dioxide minimum monitoring requirements

EPA devised the Population Weighted Emissions Index to determine where SO₂ monitoring is needed. This combines population and SO₂ emission estimates. Oregon only had one MSA with a PWEI which required monitoring, Portland - Vancouver. The location measures population exposure in the CBSA which meets the minimum spatial siting requirement. The NCore site also requires trace SO₂ monitoring. The NCore site is also the PWEI site and operates with a trace SO₂ monitor meeting both criteria. The table below shows the current monitoring status.

		Population		Design						# of Mo	nitors
CBSA	County	2024 estimate	PWEI	Value (ppb)	% of Std	Site name	Season/ Frequency	Years	Minimum required	Active	Need
Portland- Vancouver- Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,537,904	SO ₂ PWEI = 7,880	3	4	Portland, SE Lafayette (41-005- 0080)	Annual, Hourly	22-24	1 For NCore site	1 at NCore site	0

A.5. Nitrogen dioxide minimum monitoring requirements

EPA requires two NO₂ near roadway monitors in CBSAs above 2,500,000. One monitor is to be next to a freeway at a location with the highest annual average daily traffic and highest heavy duty diesel traffic. The other monitor is located next to a busy freeway in an area with vulnerable receptors nearby. Portland-Vancouver is the only CBSA in Oregon required to have near road NO₂ monitoring.

In addition, EPA requires one neighborhood or larger spatial scale monitor in CBSA's above one million. The Portland-Vancouver area is the only CBSA in Oregon required to have community scale monitoring. The NCore site is required to have NO₂, NO, NOx, and NOy monitoring. The NCore site is in Portland and doubles as the community scale site for NO₂. The table below shows the current monitoring status.

								# of	Monitors	
CBSA	County	Population 2024 estimate	NO ₂ Design Value (ppb)	% of Std	Site name	Season/ Frequency	Years	Minimum required	Active	need
Portland-	Multnomah,		1hr = 32 ppb Annual= 8.2 ppb	1hr = 32% Annual= 15%	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	22-24	1	1	0
Vancouver- Hillsboro, OR- WA (38900)	Clackamas, Washington, Clark (WA)	2,537,904	1hr = 30 ppb Annual= 12.2 ppb	1hr = 30% Annual= 22%	Tualatin Bradbury Ct. (Near Roadway site) (41-067-0005)	Annual, Hourly	22-24	1	1	0
			No data	No data	2 nd Near Roadway site	Annual, Hourly	-	1	0	1

A.6. Lead: minimum monitoring requirements:

EPA requires TSP lead monitoring at any source with an annual plant site emission limit of over 1/2 ton/year. In Oregon there are no sources that meet this criterion. Cascade Rolling Mills in McMinnville did in the past but has since change their Plant Site Emission Limit for lead below 0.5 tons/year.

EPA requires monitoring at airports with emission estimates greater than 1 tons/year CFR40 Part 58 Appendix D, Section 4.5(iii). No airports in Oregon have estimated lead emissions of over 1 ton/yr. EPA is working with the FAA to find a safe substitute for lead in aviation fuel so all airports no matter how small will be free from lead in aviation fuel.

								# o	f Monitors	6
		Population 2023	Design	% of	Site	Season/		Minimum		
City	County	estimate	Value	Std	name	Frequency	Years	required	Active	Need
NA								0	0	0

A.7. PM₁₀ minimum monitoring requirements:

 PM_{10} has dropped significantly since the 1980s when numerous Oregon communities were in non-attainment. These communities are now all under maintenance plans and many have EPA waivers to discontinue PM_{10} and use $PM_{2.5}$ as a surrogate. This was done because PM_{10} is mostly comprised of $PM_{2.5}$ and the PM_{10} levels are far below the standard.

		Population	Max				#	of Monito	rs
CBSA or MSA	County	2024 estimate	PM ₁₀ & rating	Site name	Sea son/	Years	Minimum required	Active	need
Portland- Vancouver- Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,537,904	89 Low	Portland SE Lafayette (41-005-0080) Portland Humboldt (41-051-2010)	Annual/ 3 rd day 6 th day		2	2	0
Eugene- Springfield (21660)	Lane	382,396	Low High ^a	Eugene Hwy 99W (41-039-0059) Oakridge (41-039-2013)	Annual/ 6th day Daily	22-24	2 ^{bde}	2	0
La Grande (29260)	Union	26,058	Low	Hall & North Sts. (41-067-0123)	Annual/ 6th day		1 ^e	1	0
Medford (32780)	Jackson	221,331	Low	<u>Jackson Park</u> (41-029-0029)	ourday		1 e	1	0
Grants Pass ^b (24420)	Josephine	88,276	Low	Parkside School (41-033-0114)	PM _{2.5}		1 e	0	0
Klamath Falls ^b (28900)	Klamath	70,438	Low	Peterson School (41-035-0004)	FRM/ FEM as		1 e	0	0
Lakeview b (00000)	Lake	2,476 ^c	Low	<u>Center & M</u> (41-037-0001)	surrogate		1 e	0	0

a. The level is High because of wildfire smoke.

b. PM_{2.5} is used as a surrogate for PM₁₀ for Grants Pass, Klamath Falls, Lakeview, and starting in 2026 - Oakridge.

c. The US Census Bureau did not have estimates. Used Portland State Population Research Center's 2023 estimates.

d. The MSA is required to have three monitors because wildfire smoke put Oakridge over the High Concentration requirements in for a Table D-4 of CFR 40 Part 58 Appendix D. LRAPA has received a waiver to allow for only two monitors in the MSA because the non-wildfire smoke PM10 levels are low enough that a third monitor is not required.

e. These sites are only required because of their PM₁₀ maintenance plans, not because of population.

Oregon had 24 violations (Table A.8) of the PM₁₀ maintenance areas in the 2022–2024 period, but all the violations were caused by summer wildfire smoke. Aside from La Grande and Klamath Falls, the PM₁₀ maintenance plan don't addresses contingencies triggered by natural events. The contingency section of the plans is in the Table below. DEQ and LRAPA address the contingencies trigger by wildfires with the <u>wildfire smoke</u> <u>protocol</u> which addresses real time responses to wildfire smoke to protect public health and the <u>Smoke Management plan</u> which balances forest prescribed burning with impacts on nearby smoke sensitive receptor areas.

A.8. PM₁₀ maintenance plan contingency triggers

CBSA or MSA	2022	2023	2024	2022–24 Exceedance/yr	Triggers	Cause	Contingency Requirements
Eugene- Springfield	0	0	0	0	≥ 150 µg/m3		Woodstove curtailment program which is already in place. There is no contingency for exceedances caused by wildfire smoke.
Oakridge	19	0	0	6.7	≥ 150 µg/m3	Wildfire Smoke	Woodstove curtailment program which is already in place. There is no contingency for exceedances caused by wildfire smoke.
Medford	0	0	0	0	≥ 120 µg/m3	Wildfire Smoke	PM10 Maintenance Plan, Section 4.14.90.0 - Contingency Measures. (PM10 Part8.PDF) states: Phase 2: Measured Violation If a violation of PM10 standards occurs, the Department and Committee will determine the probable emissions and meteorological events contributing to the violation, and will implement additional emission reduction strategies as needed to return the AQMA to compliance. The Clean Air Act also requires that all nonattainment area strategies be reinstated until the violation can be resolved and the maintenance plan revised. This 2004 maintenance plan already continues all previous nonattainment strategies. Therefore, should a violation occur, the Department will work to identify the new strategies necessary to ensure compliance.
Grants Pass	0	5	0	1.7	≥ 120 µg/m3	Wildfire Smoke	Grant Pass PM10 Limited Maintenance Plan, Section 8 Contingency Measures. DEQ would reinstate the New Source Review requirement for Lowest Achievable Emission Rate for new and expanding industry, and remove the offsets exemption.
Klamath Falls	0	0	0	0	≥ 135 µg/m3		Klamath Falls PM10 Maintenance Plan, Section 4.56.3.3 Contingency Plan, Phase 1 states: The County and DEQ will reconvene a planning group to develop an action plan if ambient concentrations (actual or estimated) equal or exceed 90% of the NAAQS concentration of PM10 (135 μg/m3) If the high PM10 concentration was determined to be a natural event based on EPA's policy or an exceptional event, no further action may be needed.
La Grande	0	0	0	0	≥ 135 µg/m3		If the high PM10 concentration were determined to be based on a natural event per EPA's policy or an exceptional event , no further action may be needed other than a discussion of the elements of a Natural Events Action Plan.
Lakeview	0	0	0	0	≥ 140 µg/m3		The air quality committee and DEQ will evaluate the cause of the exceedance and recommend strategies to be considered for implementation.

All of the PM₁₀ exceedances mentioned above occurred during wildfire smoke intrusions. These same smoke intrusions resulted in exceptional event demonstrations for Oakridge and Grants Pass for the new Annual Average PM_{2.5} NAAQS. Examples of the intrusions are shown below.

Oakridge 2022

The 2022 Cedar Creek fire was within 10 miles of Oakridge and burned for several months. The smoke levels were often in the Hazardous AQI range, and smoke advisories were issued throughout the summer. At one time, the community was asked to evacuate as the fire moved close to town. An example of the satellite photo during an impact day is shown below.

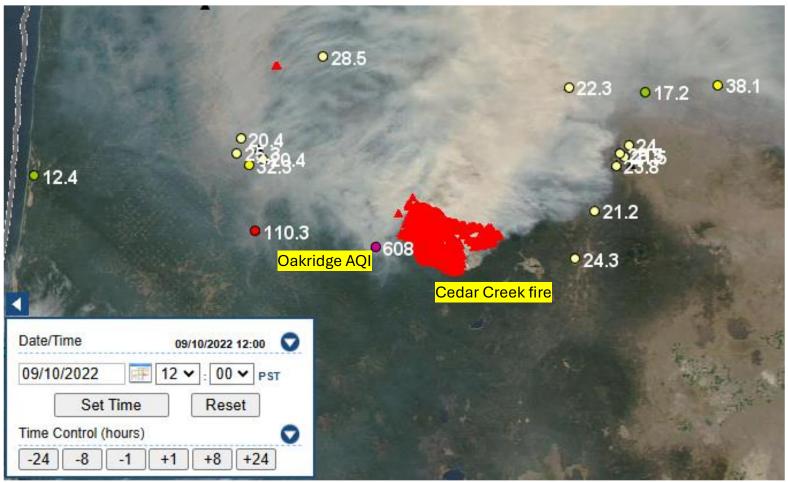


Figure 14. Example of the 2022 Cedar Creek Fire's Impact on Oakridge's PM10

Grants Pass 2023

In 2023, massive wildfires in Northern California and Southwest Oregon burned for months just south of Grants Pass. The smoke levels were often in the Unhealthy AQI range, and smoke advisories were issued throughout the summer. An example of the satellite photo during an impact day is shown below.

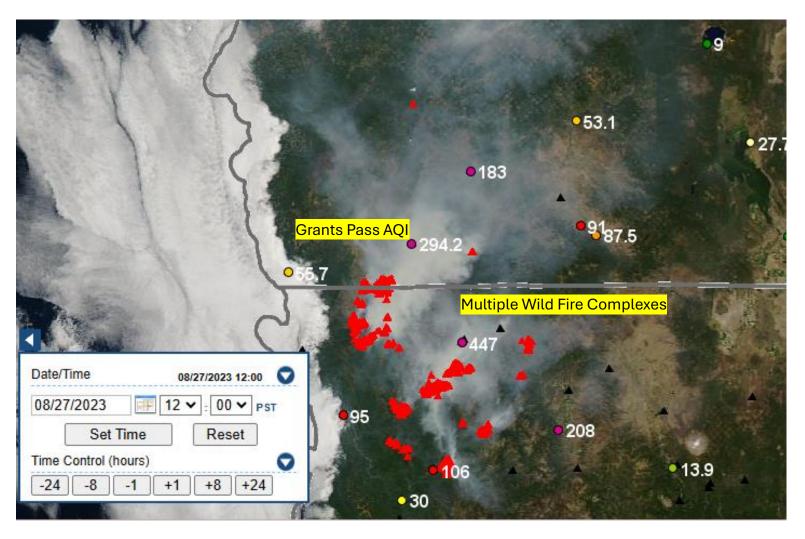


Figure 15. Example of wildfire smoke from Southern Oregon and Northern California impacting Grants Pass' PM₁₀.

A.9. PM_{2.5} Minimum Monitoring Requirements

DEQ and LRAPA operate an PM_{2.5} federal reference network largely based on EPA required sites, and areas known to have elevated PM_{2.5} levels from past monitoring. The network sites are shown in the table below.

			Design Value (µg/m³) Daily Std = 35.5		Site name			# of	Monitor	s
MSA	County	Population 2023 estimate	Excluding wildfire days	Including All days ^a	Max concentration site indicated for multiple site MSAs. Singe site MSA's are max sites.	Season/ Frequenc v		Minimum required	Active	need
Portland- Vancouver-	Multnomah, Clackamas, Washington, Clark (WA)	2,537,904	19 6.0	24 6.2	Max Site - Hillsboro (410670004) NCore- SE Lafayette (410510080) Near Rd Site: Tualatin (410670005)	Annual/ Every 3 rd day		3	3	0
Lakeview (00000)	Lake	2,476 °	28 6.8	31 7.5	<u>Lakeview</u> (41-037-0001)	hafara	22-24	0	1	0
Medford (32780)	Jackson	220,999	23 ^d 8.8 ^d	45 ^d 10.0 ^{bd}	Welch &Jackson (41-029-2129) <u>Jackson Park</u> (41-029-0029)	then Daily		0	1	0
Prineville (39260)	Crook	11,466 ^c	20 6.0	35 7.3	<u>Davidson Park</u> (41-013-0100)			0	1	0
Grants Pass (24420)	Josephine	87,416	22 6.7	36 ^b 9.0	Parkside Sch. (41-033-0114)			0	1	0
Salem-Kaizer	Marion	433,416	Neph 22- 23, FEM 2024	24 6.5	Salem State Hospital (41-047-0043)		2024	0	1	0
Eugene-				28 7.7	Max Site- Hwy 99 (410390059) Neighborhood site: Amazon Park (41-039-0060)			0	2	0
Springfield (21660)	Lane	382,396	24 7.1	111 13.9 ^b	<u>Oakridge</u> (41-039-2013)	Annual/ Daily		1	1	0
			20 6.4	29 7.1	Cottage Grove (41-039-9004)	,	22-24	0	1	0
Klamath Falls (28900)	Klamath	70,438	26 7.4	34 8.7	Petersen Sch. (41-035-0004)			1	1	0
Burns-Hines (Harney Co.	Harney	4,435 °	26 8.7	55 11.4 ^b	<u>Washington Park</u> (41-025-0003)			0	1	0

a. If DV with wildfire data has regulatory significance, DEQ will request exceptional event concurrence from EPA.

b. DEQ is requesting exceptional event concurrence from EPA for forest fire impacts. Note: **Bolded** design values exceed the NAAQS.

- c. The US Census Bureau did not have estimates. Used Portland State Population Research Center's 2023 estimates.
- d. Site moved in July 2023, design values are combined between the sites.

A.10. PM_{2.5} for AQI (Non-FEM) site information

Most of DEQ's PM_{2.5} monitoring is done using non-FEM nephelometers and DEQ's own SensOR. These monitors are cheaper to operate and correlate very closely to the FEM monitors. Using these allows DEQ to have many more AQI sites for public use. If a design value of one of these sites is near or above the NAAQS, DEQ considers placing a FEM sampler at the site for comparison to the NAAQS. An abbreviated site list is in the table below.

		Population	Design Va (µg/m³) Dailv Std =				#	f of Mon	itors
		2024	Excluding	Including					
MSA	County	estimate	wildfire	All days	Site name	Years	required	Active	need
Bend-Redmond (CBSA 13460)	Deschutes	004 407	21 5.9	49 9.4	Bend Pump Station (41-017-0120)	22-24	0	1	0
(Neph 22-23, FÉM 2024)		264,407	20 5.2	58 7.8	<u>Sisters USFS</u> (41-017-0004)	22-24	0	1	0
Albany-Lebanon	Linn	132,474		20 5.5	Albany (41-043-0009)	22-24	0	1	0
(CBSA 10540)	LIIIII	132,474		19 5.9	Sweet Home FD (41-043-2002)	22-24	0	1	0
Corvallis (MSA 18700)	Benton	98,899		14 4.4	Corvallis FD 3 (41-003-0013)	22-24	0	1	0
Roseburg (County Pop. 40700)	Douglas	112,255	20 7.8	32 9.7	Fire Department (41-019-0004)	22-24	0	1	0
The Dalles (County Pop. 17180)	Wasco	26,507		21 5.9	<u>Cherry Heights</u> (41-065-0007)	22-24	0	1	0
La Grande (County Pop. 29260)	Union	26,058		22 6.3	<u>Hall & North</u> (41-061-0123)	22-24	0	1	0
Baker City - Ontario (County Pop. 36620)	Baker	16,750	19 6.4	25 7.1	Baker City USFS (41-001-0003)	22-24	0	1	0
Enterprise/Joseph (00000)	Wallowa	3,326	19 5.9	26 6.5	Forest Service Off (41-063-0001)	22-24	0	1	0
Cave Junction – (24420)	Josephine	2,163	24 8.0	73 11.5	Cave Junction USFS (41-033-0036)	22-24	0	1	0
John Day/Canyon City a (00000)	Grant	1,866	25 9.3	47 11.0	Forest Service Off (41-023-0002)	22-24	0	1	0
Pendleton (37820)	Umatilla	92,851		21 6.2	McKay Creek (41-059-0121)	22-24	0	1	0

a. The annual design value est. is > the NAAQS. DEQ is considering adding an FEM but has not decided yet. DEQ is working with the community to address their elevated PM_{2.5}.

2023 Oregon Annual Ambient Air Monitoring Network Plan

Appendix B. Collocation requirements

PM₁₀, PM_{2.5}, and lead are subject to the collocation requirements described in 40 CFR Part 58, Appendix A, Section 3. These requirements apply at the Primary Quality Assurance Organization levels and DEQ is the PQAO for Oregon. DEQ and LRAPA use the FEM method 209 for PM_{2.5} SLAMS sites. DEQ has one FRM/FEM collocated site and one FRM/FRM site. LRAPA has one FEM/FRM collocated site.

DEQ and LRAPA use methods 127 and 122 for PM₁₀ samplers. DEQ has one collocated site for method 127. 122 is the Continuous BAM 1020 and does not require collocation.

Table B.1. Collocation Requirements for PM_{2.5}

		# of	# of Required	# Active	# Active Collocated FEM
	Method	Primary	Collocated	Collocated	monitors (Same method
	Code	monitors	Monitors	Monitors	designation as primary)
SLAMS	209	14	1FRM, 1FEM	1FRM	1FEM
SPM	209	5	1 FRM	1FRM	

Table B.2. Collocation Requirements for PM₁₀

	# of	# of Required	# Active	# Active Collocated FEM
Method	Primary	Collocated	Collocated	monitors (Same method
Code	monitors	Monitors	Monitors	designation as primary)
122	1	0	0	0
127	5	1	1	0

Table B.3. Collocation Requirements for PM₁₀ lead

Method Code	# of Primary monitors	# of Required Collocated Monitors	# Active Collocated Monitors	# Active Collocated FEM monitors (Same method designation as primary)
811	0	0	0	0

Appendix C. Detailed site information This appendix present detailed site information required by 40CFR Part 58.

C.1. Portland, SE Lafayette site information

Local Site Name	Portland, SE Lafayett	е	
AQS ID	41-051-0080		
GPS Coordinates	45.4966, -122.6029		
Street address	5824 SE Lafayette, Portland, OR		
County	Multnomah	•	
Distance from roadways (meters)	80		
Latest Traffic count (AADT, yr)	SE Powell Blvd @ 54th	Ave. westbound AADT =	
		13,490, Yr= 2024 - PBOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass		
Representative statistical area name (CBSA, MSA,)	Portland-Vancouver (#	6440)	
Pollutant	PM _{2.5}	PM _{2.5}	
Parameter code, POC	88101,1	88101,2	
MSA, CBSA, CSA or area represented	6440	-	
Monitor purpose	NAAQS, AQI, NCore, F	PAMS, Research	
Monitoring Objective	Population, non-source		
Spatial scale of Representativeness	Neighborhood		
Monitoring types	SLAMS/NCore, AQI		
Instrument type and model	Beta attenuation	Gravimetric, R&P 2025	
7, 2 3.13	BAM,1022		
Instrument parameter occurrence code	Primary	Collocate	
Method number	209	145	
FRM/FEM/FRM/other	FRM	FEM	
Collecting agency	ODEQ (0821)	ODEQ (0821)	
Analytical lab	NA	ODEQ (0821)	
Reporting agency	ODEQ	ODEQ	
Monitoring start date	1/1/2023	1/1/2023	
Current sampling frequency	1/1	1/3	
Sampling season	Annual		
Probe height (meters)	5.4	5.4	
Distance from Collocated monitor	1	1	
Distance from supporting structure (meters)	2		
Distance from obstructions on roof (meters)	No obstructions		
Distance from obstructions not on roof (meters)	No obstructions		
Distance from trees (meters)	10.2	10.2	
Distance from to furnace or incinerator flue (meters)	14	14	
Unrestricted airflow (degrees)	360°	360°	
Probe material for reactive gases	Aluminum	Aluminum	
Residence time for reactive gases (seconds)	NA	NA	
Will there be changes with the next 18 months?	No	No	
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes	
Is it suitable for comparison against the standard?	Yes	Yes	

Local Site Name	Portland, SE Lafay	ette
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver	(#6440)
Pollutant	PM ₁₀	PM _{10-2.5}
Parameter code, POC	85101,2 & 81102,2	86101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Urban Population, Max concentration, non-source	NCore, Urban, Population, Non- source
Monitoring Objective	NAAQS, AQI	Required
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS/NCore	NCore, Research
Instrument type and model	Gravimetric, R&P 2025	Gravimetric, R&P 2025s
Instrument parameter occurrence code	Collocated	Primary
Method number	127	176
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1984	1/1/2010
Current sampling frequency	1/3	1/3
Sampling season	Annual	Annual
Probe height (meters)	5.4	5.4
Distance from Collocated monitor (meter)	1	1
Distance from supporting structure (meters)	2	2
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	10.2	10.2
Distance from to furnace or incinerator flue (meters)	14	14
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum	Aluminum
Residence time for reactive gases (seconds)	NA	NA
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
		1

Local Site Name	Portland, SE Lafayette	
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	NO ₂	Ozone
Parameter code, POC	42602, 1	44201, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, non-sou	irce, NCore
Monitoring Objective	NAAQS, AQI	·
Spatial scale of Representativeness	Urban	Urban
Monitoring types	SLAMS/NCore	SLAMS/NCore
Instrument type and model	Cavity Attenuated	UV absorption,
••	Phase Shift,	Teledyne T400
	Teledyne T500U	
Instrument parameter occurrence code	Primary	Primary
Method number	212	087
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	01/01/1984	7/10/2003
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	4.6	4.6
Distance from supporting structure (meters)	1.2	1.2
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	12.7	12.7
Distance from to furnace or incinerator flue (meters)	14	14
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	Teflon
Residence time for reactive gases (seconds)	3.7	5.1
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

Local Site Name	Portland, SE Lafay	ette
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver	(#6440)
Pollutant	СО	SO ₂
Parameter code, POC	42101, 1	42401, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, Non-sou	ırce, NCore
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Micro	Urban
Monitoring types	SLAMS/NCore, AQI	
Instrument type and model	IR Absorption,	UV absorption,
	Teledyne T300	Teledyne T100u
Instrument parameter occurrence code	Primary	Primary
Method number	093	100
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	10/1/2005	2/1/2005
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	4.6	4.6
Distance from supporting structure (meters)	1.2	1.2
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	12.7	12.7
Distance from to furnace or incinerator flue (meters)	14	14
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Glass, Teflon	Glass, Teflon
Residence time for reactive gases (seconds)	2.3	6.3
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of	Yes	Yes
40 CFR Part 58 Appendices A, B, C, D and E?		
Is it suitable for comparison against the standard?	Yes	Yes

Local Site Name	Portland, SE Lafayette
AQS ID	41-051-0080
GPS Coordinates	45.4966, -122.6029
Street address	5824 SE Lafayette, Portland, OR
County	Multnomah
Distance from roadways (meters)	80
Traffic count (AADT, yr)	See above
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	Chemical Speciation
Parameter code, POC	Numerous parameters, POC 6
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Trend information, Population, NCore
Monitoring Objective	NAAQS support, CSN, Research
Spatial scale of Representativeness	Neighborhood
Monitoring types	NCore, STN, Research
Instrument type and model	Super SASS & URG 3000N w/Pall Quartz filter and Cyclone Inlet
Instrument parameter occurrence code	Primary
Method number	810,811,812,826 831,838,
	839,840 841,842
FRM/FEM/FRM/other	Other
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	9/1/2002
Current sampling frequency	Every third day
Sampling season	Annual
Probe height (meters)	5.4
Distance from supporting structure (meters)	2
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	10.2
Distance from to furnace or incinerator flue (meters)	14
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of	This monitor is a SPM, in support of the
40 CFR Part 58 Appendices A, B, C, D and E?	criterial pollutant network. It is not required to meet Appendices A, B, C, D, and E, but it has an EPA approved QAPP and meets the STN requirements.
Is it suitable for comparison against the standard?	NA

Local Site Name	Portland, SE Lafay	rette
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	NOy	VOC
Parameter code, POC	42101, 1	42401, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, non-sou	irce, NCore
Monitoring Objective	PAMS	
Spatial scale of Representativeness	Urban	Urban
Monitoring types	NCore	
Instrument type and model	IR Absorption,	UV absorption,
	Teledyne T300	Teledyne T100u
Instrument parameter occurrence code	Primary	Primary
Method number	093	100
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	6/1/2024	6/1/2024
Current sampling frequency	Hourly	Hourly
Sampling season	June-Sept	June-Sept
Probe height (meters)	10	4.9
Distance from supporting structure (meters)	1.2	1.5
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	12.7	11.2
Distance from to furnace or incinerator flue (meters)	14	14
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	316 grade Stainless
		Steel
Residence time for reactive gases (seconds)	11.1	16.6
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of	These monitors are	
40 CFR Part 58 Appendices A, B, C, D and E?	the criterial pollutan	-
	-	t Appendices A, B, C,
	D, and E, but have	
	QAPP and meet the	PAMS requirements.
Is it suitable for comparison against the standard?	N/A	N/A

Local Site Name	Portland, SE Lafayette	
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	,
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Carbonyls	Mixing Height
Parameter code, POC	42101, 1	42401, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, non-source, N	
Monitoring Objective	PAMS	
Spatial scale of Representativeness	Urban	Urban
Monitoring types	NCore	
Instrument type and model	IR Absorption, Teledyne	UV absorption,
	T300	Teledyne T100u
Instrument parameter occurrence code	Primary	Primary
Method number	093	100
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	6/1/2024	2/1/2005
Current sampling frequency	Hourly	Hourly
Sampling season	June-Sept	June-Sept
Probe height (meters)	4.9	
Distance from supporting structure (meters)	1.5	
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	11.2	11.2
Distance from to furnace or incinerator flue (meters)	14	14
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	316 grade Stainless Steel	No probe
Residence time for reactive gases (seconds)	16.6	NA
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	These monitors are SPM, criterial pollutant network. to meet Appendices A, B, an EPA approved QAPP a requirements.	They are not required C, D, and E, but have and meet the PAMS
Is it suitable for comparison against the standard?	N/A	N/A

C.2. Portland, Humboldt School site information

Local Site Name	Portland, Humbold	t School
AQS ID	41-051-2010	
GPS Coordinates	45.558081, -122.670985	
Street address	4915 N Gantenbein Ave, Portland	
County	Multnomah	
Distance from roadways (meters)	12 from minor road,	108 from major
Latest Traffic count (AADT, yr)	AADT = 4079 (N Alberta St E Of	
	7 th Ave), yr =2018 F	
	AADT = 372 (N Blan	
	Kerby Ave), yr =202	22 PBO I
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver	r (#6440)
Pollutant	PM ₁₀	PM ₁₀
Parameter code, POC	81102, 7	81102, 9
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, non-sou	urce oriented
Monitoring Objective	NAAQS	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	SLAMS
Instrument type and model	Gravimetric, Tisch PM ₁₀ HV+	
Instrument parameter occurrence code	Primary	Collocated
Method number	141	141
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/04/2005	1/1/2013
Current sampling frequency	1/6	1/12
Sampling season	Annual	Annual
Probe height (meters)	6	6
Distance between Primary and Collocate (meters)	1	1
Distance from supporting structure (meters)	No supports	No supports
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	25	25
Distance from to furnace or incinerator flue (meters)	15	15
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum	Aluminum
Residence time for reactive gases (seconds)	NA	NA
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the annual pm ₁₀ ?	Yes	Yes

C.3. Portland Near Roadway site information

Local Site Name	Tualatin Near Road	lway	
AQS ID	41-067-0005		
GPS Coordinates	45.8992, -		
Street address	6745 SW Bradbury Ct, Tualatin, OR		
County	Washington		
Distance from roadways (meters)	27		
Traffic count (AADT, yr)	I-5 at MP 290.14. 157	7,973, 2023 ODOT	
	https://www.oregon.g		
	/Traffic-Counting.asp	<u>X</u>	
Groundcover (e.g. asphalt, dirt, grass)	Grass		
Representative statistical area name (CBSA, MSA)	Portland-Vancouver	(#6440)	
Pollutant	NO ₂	PM _{2.5}	
Parameter code, POC	42602,1	88101,1	
MSA, CBSA, CSA or area represented	6440	6440	
Monitor purpose	Source (Freeway)		
Monitoring Objective	NAAQS, AQI, Resea	rch	
Spatial scale of Representativeness	Microscale	Microscale	
Monitoring types	SLAMS	SLAMS	
Instrument type and model	Cavity Attenuated	Beta Attenuation, Met	
	Phase Shift,	One BAM1022	
	Teledyne T500U		
Instrument parameter occurrence code	Primary	Primary	
Method number	212	209	
FRM/FEM/FRM/other	FRM	FEM	
Collecting agency	ODEQ (0821)	ODEQ (0821)	
Analytical lab	ODEQ	ODEQ	
Reporting agency	ODEQ	ODEQ	
Monitoring start date	04/21/2015	1/1/2023	
Current sampling frequency	Hourly	1/1	
Sampling season	Annual		
Probe height (meters)	3.7	2.5	
Distance from collocated monitor(meters)	NA	NA	
Distance from supporting structure (meters)	1	2.1	
Distance from obstructions on roof (meters)	No obstructions		
Distance from obstructions not on roof (meters)	No obstructions		
Distance from trees (meters)	35	35	
Distance from to furnace or incinerator flue (meters)	58	58	
Unrestricted airflow (degrees)	360°	360°	
Probe material for reactive gases	Glass, Teflon	Aluminum	
Residence time for reactive gases (seconds)	3.7	NA	
Will there be changes with the next 18 months?	No	No	
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes	
Is it suitable for comparison against the standard?	Yes	Yes	

Local Site Name	Tualatin Near Roadway	
AQS ID	41-067-0005	
GPS Coordinates	45.8992, -122.7455	
Street address	6745 SW Bradbury	/ Ct, Tualatin, OR
County	Washington	
Distance from roadways (meters)	27	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouve	er (#6440)
Pollutant	Ozone	CO
Parameter code, POC	44201,1	42101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Source (Freeway)	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	UV absorption,	IR Absorption,
	Teledyne T400	Teledyne T300
Instrument parameter occurrence code	Primary	Primary
Method number	087	093
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	04/21/2015	04/21/2015
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	3.7	3.7
Distance from supporting structure (meters)	1	1
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	35	35
Distance from to furnace or incinerator flue (meters)	58	58
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	Glass, Teflon
Residence time for reactive gases (seconds)	3.7	3.2
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

C.4. Portland Near Roadway site information

Local Site Name	Portland Near Roadway
AQS ID	41-051-xxxx
GPS Coordinates	45.54048, -122.67095
Street address	
County	Multnomah
Distance from roadways (meters)	27
Traffic count (AADT, yr)	I-5 at MP 300.37. 142,915 2023 ODOT
,,,,	https://www.oregon.gov/odot/Data/Pages
	/Traffic-Counting.aspx
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	NO ₂
Parameter code, POC	42602,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Source (Freeway)
Monitoring Objective	NAAQS, AQI, Research
Spatial scale of Representativeness	Microscale
Monitoring types	SLAMS
Instrument type and model	Cavity Attenuated Phase Shift, Teledyne
	T500U
	Britan
Instrument parameter occurrence code	Primary
Method number	212
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	July 2025
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	3
Distance from collocated monitor(meters)	NA
Distance from supporting structure (meters)	1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	26
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Glass, Teflon
Residence time for reactive gases (seconds)	3.7
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of	Yes
40 CFR Part 58 Appendices A, B, C, D and E?	
Is it suitable for comparison against the standard?	Yes

C.5. Hillsboro, Hare Field site information

Local Site Name	Hillsboro, Hare Field
AQS ID	41-067-0004
GPS Coordinates	45.5285, -122.9724
Street address	1151 NE Grant St, Hillsboro, OR
County	Washington
Distance from roadways (meters)	88
Traffic count (AADT, yr)	AADT = 24,087 (Cornell & Grant), Yr 2024
Groundcover (e.g. asphalt, dirt, grass)	Asphalt
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	PM _{2.5}
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation, Met One BAM1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	1/1/2023
Current sampling frequency	1/1
Sampling season	Annual
Probe height (meters)	3
Distance from collocated monitor (meters)	2
Distance from supporting structure (meters)	2.1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	125
Distance from to furnace or incinerator flue (meters)	150
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

C.6. Portland, Sauvie Island site information

Local Site Name	Portland, Sauvie	Island
AQS ID	41-009-0004	
GPS Coordinates	45.7685, -122.7721	
Street address	Social Security Beach, Sauvie Is,OR	
County	Columbia	
Distance from roadways (meters)	94	
Traffic count (AADT, yr)	AADT = No Data, rural area	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Ozone	PM _{2.5}
Parameter code, POC	44201,1	88502,3
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Upwind of Urban, Transport	Urban background
Monitoring Objective	AQI, NAAQS	AQI
Spatial scale of Representativeness	Rural	Rural
Monitoring types	SLAMS	SPM
Instrument type and model	UV absorption,	Light Scattering
Instrument parameter occurrence code	Primary	Primary
Method number	087	771
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1980	
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	Annual
Probe height (meters)	4.3	2.5
Distance from supporting structure (meters)	1	1
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	105	105
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	PVC
Residence time for reactive gases (seconds)	7.1	38 (L 10', D 2", Flow 16 lpm
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	No
Is it suitable for comparison against the standard?	Yes	No
		•

^{*}EPA approved the discontinuation of the FRM background site at Medford Dodge Road in THE 2010 Annual Network Plan because of budget cuts from the "great recession". EPA has not provided funds to restart the background site. DEQ uses correlated FRM- nephelometers to meet this purpose. If EPA deems a background FRM/FEM is required to be reinstalled, the I03 grant funding to operate the site will need to be increased.

C.7. Portland-Carus site information

Local Site Name	Portland - Carus - Spangler Rd.	
AQS ID	41-005-0004	
GPS Coordinates	45.2593, -122.5882	
Street address	13575 Spangler Rd., Carus, OR	
County	Clackamas	
Distance from roadways (meters)	12	
Traffic count (AADT, yr)	ADT = 645 yr = 2021 Spangler Rd.	
,,,,	Clackamas Co. N 45 15.853 W	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Ozone	
Parameter code, POC	44201,1	
MSA, CBSA, CSA or area represented	6440	
Monitor purpose	Downwind of Urban, Maximum	
	Concentration	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Urban Scale	
Monitoring types	SLAMS	
Instrument type and model	UV absorption, Teledyne	
Instrument parameter occurrence code	Primary	
Method number	087	
FRM/FEM/FRM/other	FRM	
Collecting agency	ODEQ (0821)	
Analytical lab	ODEQ	
Reporting agency	ODEQ	
Monitoring start date	7/23/1976	
Current sampling frequency	Hourly	
Sampling season	May-Sept	
Probe height (meters)	6.4	
Distance from supporting structure (meters)	2.7	
Distance from obstructions on roof (meters)	No obstructions	
Distance from obstructions not on roof (meters)	No obstructions	
Distance from trees (meters)	250	
Distance from to furnace or incinerator flue (meters)	NA	
Unrestricted airflow (degrees)	360°	
Probe material for reactive gases	Teflon	
Residence time for reactive gases (seconds)	2.8	
Will there be changes with the next 18 months?	No	
Does the monitor meet the requirements of	Yes	
40 CFR Part 58 Appendices A, B, C, D and E?	V	
Is it suitable for comparison against the standard?	Yes	

C.8. Salem – State Hospital information

Local Site Name	Salem State	
AQS ID	41-047-0041	
GPS Coordinates	44.9431, -123.0059	
Street address	867 Medical Center	
County	Marion	
Distance from roadways (meters)	30 meters	
Latest Traffic count (AADT, yr)	ADT = 4,295 1/14/	2021. City of Salem.
	at D Street NE: Ea	st of Evergreen Ave.
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Salem	
Pollutant	Ozone	PM _{2.5}
Parameter code, POC	44201,1	88101,1
MSA, CBSA, CSA or area represented	6440	100.0.,.
Monitor purpose	In urban core	Population
Monitoring Objective	NAAQS, AQI	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale	Neighborhood
Monitoring types	SLAMS	SLAMS
	UV absorption,	Beta Attenuation,
Instrument type and model	Teledyne T400	Met One BAM1022
	Tolouyllo 1400	Wet One BAWTOZZ
Instrument parameter occurrence code	Primary	Primary
Method number	087	209
FRM/FEM/FRM/other	FRM	FEM
Collecting agency	ODEQ (0821)	LRAPA
Analytical lab	ODEQ	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	5/1/2018	Jan 1, 2024
Current sampling frequency	Hourly	1/1
Sampling season	May-Sept	Annual
Probe height (meters)	3	2.5
Distance from supporting structure (meters)	1	2.1
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	18	18
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	Aluminum
Residence time for reactive gases (seconds)	3.5	NA
Will there be changes with the next 18 months?	No	Yes - Install
Does the monitor meet the requirements of	Yes	Does the monitor
40 CFR Part 58 Appendices A, B, C, D and E?		meet the
Is it suitable for comparison against the standard?	Yes	Yes, but SPM

C.9. Salem/Turner site information

Local Site Name	Salem/Turner - Cascade Jr. High
AQS ID	41-047-0004
GPS Coordinates	44.8103, -122.9151
Street address	10226 Marion Rd SE, Turner, OR
County	Marion
Distance from roadways (meters)	60
Traffic count (AADT, yr)	ADT = 1705, Yr = (9/15/2021)
,,,,	Jct of Marion Rd (928) & 70 th Ave SE to
	West Stayton Rd., Marion Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Salem
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	7080
Monitor purpose	Downwind of Urban, Max
Monitoring Objective	NAAQS, AQI.
Spatial scale of Representativeness	Urban Scale
Monitoring types	SLAMS
Instrument type and model	UV absorption, Teledyne T400
Instrument parameter occurrence code	Primary
Method number	087
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	6/23/1995
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	4.5
Distance from supporting structure (meters)	1.5
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	620
Distance from to furnace or incinerator flue (meters)	45
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	2.8
Will there be changes with the next 18 months?	Yes, new updated shelter
Does the monitor meet the requirements of	Yes
40 CFR Part 58 Appendices A, B, C, D and E?	
Is it suitable for comparison against the standard?	Yes

C.10. Eugene – Amazon Park site information

Local Site Name	Eugene – Amazon	Park
AQS ID	41-039-0060	
GPS Coordinates	44.0263, -123.0837	7
Street address	E. 29 th Amazon Par	k, Eugene, OR
County	Lane	-
Distance from roadways (meters)	61	
Traffic count (AADT, yr)	2022 AADT = 12,90	02 Patterson St.
	Central Lane MPO	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Eugene-Springfield	
Pollutant	Ozone	PM _{2.5}
Parameter code, POC	44201,1	88101,1
MSA, CBSA, CSA or area represented	2400	2400
Monitor purpose	Urban Population	NAAQS
Monitoring Objective	NAAQS, AQI	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	Teledyne API 400	Beta Attenuation,
	Ultraviolet	Met One BAM1022
Instrument parameter occurrence code	Primary	Primary
Method number	087	209
FRM/FEM/FRM/other	FRM	FEM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1985	1/1/1999
Current sampling frequency	Hourly	1/3
Sampling season	May-Sept	Annual
Probe height (meters)	4	5
Distance from supporting structure (meters)	1	2.1
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	29	29
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	Aluminum
Residence time for reactive gases (seconds)	NA	NA
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of	Yes	Yes
40 CFR Part 58 Appendices A, B, C, D and E?		
Is it suitable for comparison against the standard?	Yes	Yes
Toobsically the Eugene Caringfield MCA should have a Di	M	wildfings salisseest to

Technically, the Eugene-Springfield MSA should have a PM₁₀ monitor here because wildfires adjacent to Oakridge and the Eugene -Springfield population put the MSA over the requirement to have three monitors ODEQ and LRAPA are asking EPA R10 to use the discretion afforded to them in the PM₁₀ minimum monitoring section of CFR 40 Part 58 Appendix A.

C.11. Eugene – Saginaw site information

Local Site Name	Eugene – Saginaw
AQS ID	41-039-1007
GPS Coordinates	43.8345, -123.0353
Street address	2021 Delight Valley School Road, Saginaw,
	OR
County	Lane
Distance from roadways (meters)	140
Traffic count (AADT, yr)	2023 AADT = 38,497. 0.30 mile south of
	Saginaw Interchange MP 176.46
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	2400
Monitor purpose	Downwind of Urban, Highest Concentration
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale
Monitoring types	SLAMS
Instrument type and model	UV Absorption, Teledyne API 400
Instrument parameter occurrence code	Primary
Method number	087
FRM/FEM/FRM/other	FRM
Collecting agency	LRAPA
Analytical lab	LRAPA
Reporting agency	ODEQ
Monitoring start date	5/1/1994
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	5
Distance from supporting structure (meters)	1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	43
Distance from to furnace or incinerator flue (meters)	36
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	3.5
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of	Yes
40 CFR Part 58 Appendices A, B, C, D and E?	
Is it suitable for comparison against the standard?	Yes

C.12. Eugene – Hwy 99 site information

Local Site Name	Eugene – Hwy 99	
AQS ID	41-039-0059	
GPS Coordinates	44.0672, -123.1414	
Street address	450 Pacific Hwy 99, Eugene, OR	
County	Lane	
Distance from roadways (meters)	75	
Traffic count (AADT, yr)	AADT= 21,585, Hwy	y 99W (Hwy # 91) &
	Irving Road. $yr = 20$	<u>)21</u>
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Eugene-Springfield	
Pollutant	PM _{2.5}	PM ₁₀
Parameter code, POC	88101,1	81102,1
MSA, CBSA, CSA or area represented	2400	2400
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	NAAQS
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	Beta Attenuation,	Tisch HV PM ₁₀ +
	Met One BAM1022	
Instrument parameter occurrence code	Primary	Primary
Method number	209	141
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	7/1/2011	1/1/2012
Current sampling frequency	Hourly	1/6
Sampling season	Annual	Annual
Probe height (meters)	5	5
Distance from supporting structure (meters)	2.1	2
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	19	19
Distance from to furnace or incinerator flue (meters)	19	19
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum	Aluminum
Residence time for reactive gases (seconds)	NA	NA
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

C.13. Cottage Grove, City Shops site information

Local Site Name	Cottage Grove, City Shops
AQS ID	41-039-9004
GPS Coordinates	43.7995, -123.0535
Street address	Harvey Lane & N 14th St., Cottage
	Grove, OR
County	Lane
Distance from roadways (meters)	177
Traffic count (AADT, yr)	No Data Available
Groundcover (e.g. asphalt, dirt, grass)	Dirt
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM _{2.5}
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta ray attenuation Met One, BAM1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	LRAPA
Analytical lab	LRAPA
Reporting agency	ODEQ
Monitoring start date	1/1/2008
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	5
Distance from supporting structure (meters)	2.1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	36
Distance from to furnace or incinerator flue (meters)	60
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

C.14. Oakridge, Willamette Center site information

Local Site Name	Oakridge, Willamette Cente	er
AQS ID	41-039-2013	
GPS Coordinates	43.7443, -122.4805	
Street address	School St., Oakridge, OR	
County	Lane	
Distance from roadways (meters)	115	
Traffic count (AADT, yr)	Oakridge Automatic Traffic Re	ecorder, Sta. 20-017,
	0.10 mile east of Kitson Sprin	gs Road
	AADT = 3200, yr = 2019	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM _{2.5}	PM ₁₀
Parameter code, POC	88101,1	81102,1
MSA, CBSA, CSA or area represented	0000	,
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	
Instrument type and model	Beta Attenuation, Met One	Beta Attenuation,
	BAM1022	Met One BAM1020
Instrument parameter occurrence code	Primary	Primary
Method number	209	122
FRM/FEM/FRM/other	FEM	FEM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1999	11/1/1989
Current sampling frequency	Hourly	Continuous
Sampling season	Annual	Annual
Probe height (meters)	5	4
Distance from supporting structure (meters)	2.1	2
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	20	20
Distance from to furnace or incinerator flue (meters)	63	63
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum	Aluminum
Residence time for reactive gases (seconds)	NA NA	
Will there be changes with the next 18 months?	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

C.15. Grants Pass, Parkside School site information

Local Site Name	Grants Pass, Parkside School
AQS ID	41-033-0114
GPS Coordinates	42.4342, -123.3485
Street address	735 SW Wagner Meadows Dr.,
	Grants Pass, OR
County	Josephine
Distance from roadways (meters)	85
Traffic count (AADT, yr)	AADT = 4900, yr = 2012
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM _{2.5}
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation
	BAM 1022
Instrument parameter occurrence code	Primary
Method number	145
FRM/FEM/FRM/other	209
Collecting agency	FEM
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	8/31/1999
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	3
Distance from collocated monitor (meters)	NA
Distance from supporting structure (meters)	2.1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	27
Distance from to furnace or incinerator flue (meters)	87
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
<u>-</u>	
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes

C.16. Medford, Jackson Park information

Local Site Name	Medford, Jackson Park	
AQS ID	41-029-0029	
GPS Coordinates	42.3324, -122.8891	
Street address	750 N Columbus Ave	
County	Jackson	
Distance from roadways (meters)	86 meters	
Traffic count (AADT, yr)	AADT 9,500 N. Col	umbus Ave.
,,,,	(Jackson to McAndi	
Groundcover (e.g. asphalt, dirt, grass)	Grass	·
Representative statistical area name (CBSA, MSA)	Medford	
Pollutant	PM _{2.5}	PM ₁₀
Parameter code, POC	88101,1	81102,7
MSA, CBSA, CSA or area represented	32780	01102,1
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	NAAQS
Monitoring Objective	NAAQS, AQI	NAAQS
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	SLAMS
inclined types		
Instrument type and model	Beta Attenuation,	Gravimetric Tisch
	Met One BAM1022	HV PM ₁₀ +
Instrument parameter occurrence code	Primary	Primary
Method number	209	141
FRM/FEM/FRM/other	FEM	FRM
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	7/21/2023 7/21/2023	
Current sampling frequency	Hourly 1/6	
Sampling season	Annual	Annual
Probe height (meters)	3	3
Distance for a sufficient bounds ()	NA	NA
Distance from collocated monitor (meters)	,	1 47 1
	2.1	2
Distance from collocated monitor (meters) Distance from supporting structure (meters) Distance from obstructions on roof (meters)		
Distance from supporting structure (meters)	2.1	2
Distance from supporting structure (meters) Distance from obstructions on roof (meters)	2.1 No obstructions	2 No obstructions
Distance from supporting structure (meters) Distance from obstructions on roof (meters) Distance from obstructions not on roof (meters)	2.1 No obstructions No obstructions	2 No obstructions No obstructions
Distance from supporting structure (meters) Distance from obstructions on roof (meters) Distance from obstructions not on roof (meters) Distance from trees (meters)	2.1 No obstructions No obstructions 34	No obstructions No obstructions 34
Distance from supporting structure (meters) Distance from obstructions on roof (meters) Distance from obstructions not on roof (meters) Distance from trees (meters) Distance from to furnace or incinerator flue (meters)	2.1 No obstructions No obstructions 34 132	No obstructions No obstructions 34 132
Distance from supporting structure (meters) Distance from obstructions on roof (meters) Distance from obstructions not on roof (meters) Distance from trees (meters) Distance from to furnace or incinerator flue (meters) Unrestricted airflow (degrees)	2.1 No obstructions No obstructions 34 132 360°	No obstructions No obstructions 34 132 360°
Distance from supporting structure (meters) Distance from obstructions on roof (meters) Distance from obstructions not on roof (meters) Distance from trees (meters) Distance from to furnace or incinerator flue (meters) Unrestricted airflow (degrees) Probe material for reactive gases	2.1 No obstructions No obstructions 34 132 360° Aluminum	No obstructions No obstructions 34 132 360° Aluminum
Distance from supporting structure (meters) Distance from obstructions on roof (meters) Distance from obstructions not on roof (meters) Distance from trees (meters) Distance from to furnace or incinerator flue (meters) Unrestricted airflow (degrees) Probe material for reactive gases Residence time for reactive gases (seconds)	2.1 No obstructions No obstructions 34 132 360° Aluminum NA	No obstructions No obstructions 34 132 360° Aluminum NA

C.17. Medford - Talent site information

Local Site Name	Medford - Talent	
AQS ID	41-029-0201	
GPS Coordinates	42.2299, -122.7877	
Street address	7120 Rapp In, Talent, OR	
County	Jackson	
Distance from roadways (meters)	220	
Traffic count (AADT, yr)	AADT = 8400 Rogue Valley Hwy, yr = 2019	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Medford-Ashland	
Pollutant	Ozone	
Parameter code, POC	44201,1	
MSA, CBSA, CSA or area represented	32780	
Monitor purpose	Downwind of Urban, Highest	
	Concentration	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Urban Scale	
Monitoring types	SLAMS	
Instrument type and model UV Absorption, Teledyne T40		
Instrument parameter occurrence code Primary		
Method number 087		
FRM/FEM/FRM/other	FRM	
Collecting agency	ODEQ (0821)	
Analytical lab	ODEQ	
Reporting agency	ODEQ	
Monitoring start date	5/12/1992	
Current sampling frequency	Hourly	
Sampling season	May-Sept	
Probe height (meters)	7	
Distance from supporting structure (meters)	1	
Distance from obstructions on roof (meters)	No obstructions	
Distance from obstructions not on roof (meters)	No obstructions	
Distance from trees (meters)	49	
Distance from to furnace or incinerator flue (meters) NA		
Unrestricted airflow (degrees) 360°		
Probe material for reactive gases Teflon		
Residence time for reactive gases (seconds) 2.8		
Will there be changes with the next 18 months?		
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	
Is it suitable for comparison against the standard?	Yes	

C.18. Klamath Falls, Petersen School site information

Local Site Name	Klamath Falls, Petersen School	
AQS ID	41-035-0004	
GPS Coordinates	42.1903, -121.7314	
Street address	4856 Clinton Ave, Klamath Falls, OR	
County	Klamath	
Distance from roadways (meters)	8	
Traffic count (AADT, yr)	AADT = <u>7985</u> (Clinton & Summers), Yr = 4/25/2018.	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM _{2.5}	PM _{2.5}
Parameter code, POC	88101,1	88101,2
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	
Instrument type and model	Beta Attenuation, Met On	e BAM1022
Instrument parameter occurrence code	Primary	Collocate
Method number	209	209
FRM/FEM/FRM/other	FEM	FEM
Collecting agency	ODEQ	
Analytical lab	ODEQ	
Reporting agency	ODEQ	
Monitoring start date	1/1/2019	1/1/2023
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	3	3
Distance from collocated monitor (meters)	2	2
Distance from supporting structure (meters)	2.1	2.1
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	43	43
Distance from to furnace or incinerator flue (meters)	46	46
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum Aluminum	
Residence time for reactive gases (seconds)	NA NA	
Will there be changes with the next 18 months?	No No	
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes Yes	
Is it suitable for comparison against the standard?	Yes	Yes

C.19. Lakeview, Center and M Streets site information

Local Site Name	Lakeview, Center and M Sts
AQS ID	41-037-0001
GPS Coordinates	42.1892, -120.3540
Street address	8 South M St., Lakeview, OR
County	Lake
Distance from roadways (meters)	25 meters
Traffic count (AADT, yr)	AADT = 2963 ODOT (Hwy 20 & L St.)
	yr = 2023 MP 96.03
Groundcover (e.g. asphalt, dirt, grass)	Dirt
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM _{2.5}
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation, Met One BAM1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	1/5/1998
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	3
Distance from supporting structure (meters)	NA
Distance from supporting structure (meters)	2.1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	43
Distance from to furnace or incinerator flue (meters)	46
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	Site relocation
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes
	•

C.20. Burns, Washington Street site information

Local Site Name	Burns, Washington Street
AQS ID	41-025-0003
GPS Coordinates	43.5892, -119.0487
Street address	E. Washington St., Burns, OR
County	Harney
Distance from roadways (meters)	16
Traffic count (AADT, yr)	AADT= 3049 (Steens Hwy 442 and Alder
	Ave), Yr = 2023 MP 0.05
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM _{2.5}
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor Objective	NAAQS, AQI
Monitoring purpose	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation, Met One BAM1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	9/19/2009
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	3
Distance from supporting structure (meters)	2.1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	80
Distance from to furnace or incinerator flue (meters)	41
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
,	1

C.21. Prineville, Davidson Park site information

Local Site Name	Prineville, Davidson Park
AQS ID	41-013-0100
GPS Coordinates	44.2998, -120.8448
Street address	251 SE Court St, Prineville, OR
County	Crook
Distance from roadways (meters)	10
Traffic count (AADT, yr)	11,307 (Ochoco HW No. 41 MP 19. (Fairview St), 2023
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM _{2.5}
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS. AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation, Met One BAM1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	ODEQ
Analytical lab	ODE
Reporting agency	ODEQ
Monitoring start date	1/1/2023
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	3
Distance from collocated monitor (meters)	NA
Distance from supporting structure (meters)	2.1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	37
Distance from to furnace or incinerator flue (meters)	39
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

C.22. La Grande, Hall and North site information

Local Site Name	La Grande, Hall and North Street	
AQS ID	41-061-0123	
GPS Coordinates	45.32363, -118.07806	
Street address 1305 N Willow St, La Gra		
County	Union	
Distance from roadways (meters)	18	
Traffic count (AADT, yr)	No data	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM ₁₀	
Parameter code, POC	81102,7	
MSA, CBSA, CSA or area represented	0000	
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	
Instrument type and model	Gravimetric, Tisch PM ₁₀ HV+	
Instrument parameter occurrence code	Primary	
Method number	141	
FRM/FEM/FRM/other	FRM	
Collecting agency ODEQ		
Analytical lab	ODEQ	
Reporting agency	ODEQ	
Monitoring start date	9/1/2017	
Current sampling frequency	1/6	
Sampling season	Annual	
Probe height (meters)	3	
Distance from supporting structure (meters)	2	
Distance from obstructions on roof (meters)	No obstructions	
Distance from obstructions not on roof (meters)	No obstructions	
Distance from trees (meters)	26	
Distance from to furnace or incinerator flue (meters) 39		
Unrestricted airflow (degrees) 360°		
obe material for reactive gases Aluminum		
Residence time for reactive gases (seconds)	NA	
Will there be changes with the next 18 months?	No	
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	
Is it suitable for comparison against the standard?	Yes	

C.23. Hermiston Municipal Airport site information

Local Site Name	Hermiston Municipal Airport
AQS ID	41-059-1003
GPS Coordinates	45.8290, -119.2630
Street address	1498 Airport Way, Hermiston, OR
County	Umatilla
Distance from roadways (meters)	888,
Traffic count (AADT, yr)	AADT = 7799 (MP 8.7, US395 or Hwy
	54), Yr = 2023
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Hermiston (CBSA 25840)
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Urban
Monitoring types	SLAMS
Instrument type and model	UV Absorption, Teledyne T400
Instrument parameter occurrence code	Primary
Method number	087
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	2/27/2007
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	4
Distance from supporting structure (meters)	1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	134
Distance from to furnace or incinerator flue (meters)	72
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	2.8
Will there be changes with the next 18 months?	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
1 1 1 1 1	Voc
Is it suitable for comparison against the standard?	Yes

Appendix D. Checklist Corrections from last year's Annual Network Plan

This section is for EPA Region 10 reviewers. The table below addresses EPA comments from the 2023 Annual Network Plan.

D.1. EPA comments from the 2024 Annual Network Plan and DEQ response

EPA notes	DEQ comment
No notes	

Appendix E. Waivers and surrogate monitoring

EPA Region 10 has granted DEQ and LRAPA waivers to discontinue required monitoring that was of lower value to keep higher value monitors operational and start up new required monitoring. The tables below show the monitoring sites with waivers and their required reported values from surrogate sources.

1. NCORE PM₁₀ lead waiver

In 2019 EPA approved DEQ's request to discontinue PM₁₀ lead monitoring at DEQ's NCORE site at Portland, SE Lafayette.

2. Carbon monoxide waivers

The Medford is a CO maintenance area, but its monitoring site was discontinued in 2010 because of very low concentrations and funding cuts. The maintenance plan requires monitoring however, so EPA and DEQ agreed upon an alternative method to track CO. The Metropolitan Planning Organization periodically updates their transportation plan and runs a CO emission model. This model is used to track CO. The model is not run every year, so the latest result is reported in the table below.

Table E.1. CO emission estimates from the Rogue Valley.

Analysis Year Medford Area Estimated CO Emissions (tons/yr)		
2015	3,485	
2020	3,650	
2026	3,559	
2034	3,871	

3. PM₁₀ surrogate monitoring

In 2010 the Grants Pass PM₁₀ monitor was discontinued because its values had dropped far below the NAAQS and funding was cut. The PM₁₀ maintenance plans for this site required continued

monitoring so EPA and DEQ agreed upon an alternate method to track PM_{10} . EPA allowed DEQ to discontinue PM_{10} monitoring if we used $PM_{2.5}$ monitoring as a surrogate. In the 2010 network plan, we showed that the PM_{10} consisted predominantly of $PM_{2.5}$. We developed correlation equations and calculated 2015 PM_{10} estimates for these sites based on $PM_{2.5}$. The PM_{10} standard is $150\mu g/m3$.

Table E.2. Linear regression equations used to estimate PM₁₀ using PM2.5.

	Grants Pass	Klamath Falls	Lakeview	Oakridge
Linear Regression Equation	y = 1.2x + 2.6	y = 1.4x + 3.2	Q1&4: $y = 1.5x + 3.0$ Q2&3: $y = 2.9x + 0.6$ Wildfire smoke: y = 1.1x+15.6	y = 1.6x + 7.8

 $Y = PM_{10}, X = PM_{25}$

Table E.3. 2013 PM₁₀ estimates for Klamath Falls and Grants Pass.

	Klamath Falls	Grants Pass	Lakeview
Date	PM ₁₀ estimate. Number of days >150 (μg/m ³)		
2022-24 Average	0	1.7	0
2022	0	0	0
2023	0	5 ^a	0
2024	0	0	0

a. All days from wildfire smoke

4. Actual Monitoring Waivers

- 4.1 2005 Klamath Falls CO monitoring waiver approval
- 4.2 2011 Klamath Falls PM₁₀, Grants Pass PM₁₀, and Medford CO monitoring waiver request and approval
- 4.3 2018 NCore PM₁₀ lead waiver request and approval.
- 4.4 2023 Lakeview PM₁₀ monitoring waiver request and approval.
- 4.5 2025 Eugene MSA PM₁₀ monitoring waiver request and approval.
- 4.6 2025 Oakridge PM₁₀ monitoring waiver request and approval.

4.1. 2005 Klamath Falls CO Monitoring Waiver Approval



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue Seattle, WA 98101

Reply to

Attn Of: AWT-107

2 0 JUL 2005

David Collier, Manager Program Operations Division Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390

Subject: Removal of Klamath Falls Carbon Monoxide Monitor

Dear Mr. Collier:

Thank you for your letter of July 11, 2005 explaining your decision to discontinue CO monitoring in Klamath Falls, Oregon. Current CO levels have been about one half of the standard and future trends suggest that CO concentrations will decrease further as the local motor vehicles and fuels continue to be replaced by cleaner vehicles and fuels.

Periodic review of area growth rates and emission inventory estimates for CO in Klamath Falls, as part of the 3-year periodic statewide emission inventory cycle, will assure that CO levels continue to remain below the CO standard. In the unlikely event that CO emissions in Klamath Falls increase significantly, ODEQ agrees that the monitor will be restarted. This approach will ensure that CO monitoring will resume before CO levels reach the 8-hour CO standard and is acceptable to EPA.

Sincerely,

Mahbubul Islam, Manager

State and Tribal Air Programs Unit

c: ∀.

√ Jeff Smith, ODEQ Connie Robinson Keith Rose

4.2. 2011 - Klamath Falls PM_{10} , Grants Pass PM_{10} , and Medford CO monitoring waiver

Request and approval

Waiver request

Justification for Discontinuation of Monitoring in Carbon Monoxide and PM₁₀ Maintenance Areas (This document is too large to post here and is available upon request)

Waiver approval

Note that page two is missing but the page one has the approval of the waiver.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue, Suite 900 Seattle, WA 98101-3140

JAN 0 8 2012

OFFICE OF AIR, WASTE AND TOXICS

Mr. Anthony Barnack Air Monitoring Program Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, Oregon 97204-1390 Deptot Environmentary yearry Air Challey Physion

JAN 09 2012

RECEIVED

Dear Mr. Barnack:

We have evaluated the 2011 Oregon Ambient Air Monitoring Network Plan, which describes changes to the OR monitoring network for 2011-12. The proposed changes, and EPA's responses, are listed below:

Discontinued Monitors:

- Discontinued PM2.5 FRM sampling at Bend, Pump Station (41-017-0120).
 This site has been consistently below 75% of the NAAQS. A nephelometer remains at the site for the woodstove advisory program. EPA approves this change.
- 2) Discontinued PM2.5 FRM duplicate sampling at Hillsboro, Hare Field (41-067-0004). The reductions in PM2.5 FRM samplers in 2011 resulted in a lowering of the requirement duplicate sites from three to two. EPA approves this change.
- 3) Discontinued air toxics monitoring at Salem, State Hospital (41-047-0041). Site was deemed to have enough data. Resources were moved to support an air toxics site in Klamath Falls. EPA approves this change.
- 4) Discontinued the Halsey field burning meteorology site. EPA approves this change.
- Discontinued monitoring for wet Mercury Deposition January 1, 2011 at Beaverton Highland Park (41-067-0111). The grant's funding ended. EPA approves this change.
- 6) Discontinued PM10 FRM sampling at Eugene, Lane Community College (41-039-0013). This site was redundant as discussed in the five year plan. EPA approves this change.
- 7) Discontinue CO monitors in Eugene, at the Lane Community College site (41-039-0013), and in Medford, the Rogue Valley Mall site (41-029-0018). EPA approves discontinuing these monitors, and the justification for discontinuing these monitors provided in the ODEQ report "Justification for Discontinuing of Monitoring in Carbon Monoxide and PM10 Maintenance Areas" (October 2011).

- a) Portland/SE/Lafayette in (1997-1994) in all amond after those in 1996 and the latest and the continues in the continues in
- b) Eugene/Amazon Park and hose attained and in general resource appears if the fifth that c) Medford/Grant & Belmont in appropriate that on the selection of the first and an expension of the first and the first a
- d) Klamath Fall was a self-transfer of the self-tra
- 3. Pre-cursor gas monitors at the Portland/SE Lafayette NCore site

"Core" monitors are those monitors in the network that must be operated with available PM2.5 monitoring funds. The "non-core" PM2.5 monitors in the State's network can be operated at ODEQ's discretion with any remaining federal funds or State funds. If you have any questions about our approval of the Oregon monitoring network, please contact Keith Rose at (206) 553-1949.

Sincerely,

Debra Suzuki, Manager (State and Tribal Program Unit

4.3. 2018 - NCore PM_{10} lead monitoring waiver request and approval

Waiver request



Department of Environmental Quality Laboratory and Environmental Assessment Division 7202 NE Evergreen Parkway, Suite 150

Hillsboro, OR 97124 Voice & TTY (503) 693-5700 FAX (503) 693-4999

November 5th, 2018

Doug Jager USEPA REGION 10 1200 Sixth Avenue Seattle, WA 98101 206-553-2961

Re: Request to discontinue the PM10 lead NCORE monitor.

Dear Mr. Jager,

Oregon DEQ requests EPA approval to discontinue the SLAMS PM10 lead monitor at Oregon's NCORE site (Portland SE Lafayette, 41-051-0080). We have analyzed lead at this site since Jan, 2012 with no results anyway near the NAAQS. Also, EPA no longer requires lead monitoring at the NCORE sites.

Please let us know if we can discontinue the lead monitoring before the end of the year so we can plan for 2019 analysis work.

Thank you,

Anthony Barnack

Waiver approval



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue, Suite 900 Seattle, WA 98101-3140

DEC 1 9 2010

OFFICE OF AIR AND WASTE

Mr. Anthony Barnack Air Monitoring Program Oregon Department of Environmental Quality 7202 NW Evergreen Parkway, Suite 150 Hillsboro, OR 97124

Dear Mr. Barnack:

This letter is in response to your request received by email on November 5, 2018 to discontinue ambient air Pb monitoring at the Portland NCore station (AQS ID: 41-051-0080). This SLAMS monitoring is not specifically required by NCore, and as such, your request for discontinuation can be approved by Region 10.

Review of the NEI database found no facilities exist in the Portland area that would require that Pb monitoring be performed in this area. Region 10 reviewed the available Pb measurements in AQS from this station (2012 – 2017) and found no ambient air concentrations exceeding the 50% NAAQS threshold specified in 40 CFR Part 58 Appendix D 4.5(a)(ii) that would indicate that Pb monitoring is warranted. As such, Region 10 approves your request to discontinue Pb monitoring at the Portland NCore station.

Please notify Doug Jager by email at jager.doug@epa.gov when the monitoring ceases and when this monitoring shutdown is reflected in AQS. If you have any questions about this approval, please contact me at (206) 553-2970 or Doug Jager at (206) 553-2961.

Sincerely,

Gina Bonifacino, Acting Manager Air Planning Unit

4.4. 2023 – Lakeview PM_{2.5} as a surrogate for PM₁₀ waiver approval

Waiver request

Justification for Discontinuation of Monitoring in Carbon Monoxide and PM₁₀ Maintenance Areas (This document is available upon request)

Waiver approval

EPA approved the use of PM_{2.5} as a surrogate for PM₁₀ for Lakeview in the 2023 Annual Network Plan approval letter. The excerpt from the letter approving the surrogate is:

We approve the following additional network modifications laid out in the ANP:

1) Replacing PM₁₀ monitoring with surrogate PM_{2.5} at the Lakeview site (AQS ID:41-037-0001). Lakeview is a PM₁₀ maintenance area, and its current 10-year Maintenance Plan applies through 2026 (71 FR 14399). ODEQ originally discontinued PM₁₀ monitoring and used PM_{2.5} as a surrogate in 2006 (approved in the 2007 ANP response). However, because the correlation relationship between PM₁₀ and PM_{2.5} was not adequately demonstrated, R10 required ODEQ to reassess their method for demonstrating continued attainment of the PM₁₀ NAAQS.

To evaluate the relationship between PM_{10} and $PM_{2.5}$ at the site, and to establish $PM_{2.5}$ to PM_{10} conversion factors, ODEQ deployed a PM_{10} FRM collocated with the $PM_{2.5}$ FRM at the Lakeview site for all of calendar year 2022. The Lakeview $PM_{2.5}$ surrogate justification (ANP Appendix J) shows the correlation between PM_{10} and $PM_{2.5}$ at the site for three different categories: winter (first and fourth quarters), summer (second and third quarters) and during wildfire smoke events. The surrogate justification also demonstrates how ODEQ will estimate the PM_{10} Design Value (DV) from the $PM_{2.5}$ measurements to verify continued attainment. The surrogate justification shows that $PM_{2.5}$ levels would exceed the 24-hour $PM_{2.5}$ NAAQS before reaching PM_{10} NAAQS levels for all three categories of PM_{10} to $PM_{2.5}$ correlations. In the justification, DEQ committed to re-initiating PM_{10} monitoring in the area by January 1 of the following calendar year if correlated PM_{10} calculations show that concentrations have reached or exceeded 93% of the NAAQS (140 μ g/m³). R10 also notes that the use of $PM_{2.5}$ as a surrogate measure for PM_{10} at this site was previously approved (April 2, 2011 waiver). For all these reasons, we approve the use of $PM_{2.5}$ as a surrogate for PM_{10} at this site pursuant to 40 C.F.R. part 58 Appendix D, Section 4.7.1.

4.5. 2025 – Waiver to only run two PM₁₀ monitors in the Eugene MSA

Waiver request

Justification for Only Two PM10 Monitoring Sites in the Eugene MSA. (This document is part of the 2024 Annual Network Plan and is available upon request)

Waiver approval

From EPA's 2024 Annual Network Plan approval letter:

- Waiving the PM₁₀ minimum monitoring requirement for the Eugene-Springfield Metropolitan Statistical Area (MSA). This MSA has had a minimum monitoring requirement of 3-4 PM₁₀ SLAMS sites since 2022, but only has two sites: one in Eugene by Highway 99 (AQS-ID: 41-039-0059), and one in Oakridge (AQS-ID: 41-039-2013). In the 2023 ANP response, EPA listed the number of PM₁₀ sites in Eugene-Springfield as a network deficiency. In the 2024 ANP, ODEQ requested a waiver for this requirement. ODEQ provided evidence in the 2024 ANP (Appendix H) that the current monitoring network is sufficient to protect public health and characterize regional PM₁₀ air quality trends given PM₁₀ sources in the MSA and the area's geography. Key considerations include:
 - a) The main source of PM₁₀ is wildfire smoke. From 2020 to 2023, the only days exceeding "low" PM₁₀ concentrations in the MSA were due to wildfire smoke, without which the minimum monitoring requirement would be 0-1 sites.
 - b) The proposed PM₁₀ monitoring network meets the requirements set out in the PM₁₀ maintenance plans (MPs). Both Eugene and Oakridge have PM₁₀ maintenance areas. The PM₁₀ SLAMS monitor in Eugene meets the MP commitment to continued operation of a PM₁₀ monitor at the Highway 99 site. See above for more details on the requirements of the Oakridge MP.
 - c) Eugene and Springfield are the largest cities and only urbanized area in the Eugene-Springfield MSA, with a population of ~240,000 people, or 60% of the MSA. In contrast, Oakridge only has a population of 3,500, or 1% of the Eugene-Springfield MSA.

40 C.F.R. Part 58, Subpart D, § 4.6(a) notes, "because sources of pollutants and local control efforts can vary from one part of the country to another[,] some flexibility is allowed in selecting the actual number of stations in any one locale." In addition, that section allows the Regional Administrator to approve modifications from the minimum monitoring requirements. For the reasons stated above and pursuant to 40 C.F.R. Part 58, Appendix D, § 4.6(a), EPA approves ODEQ's request to waive the PM₁₀ minimum monitoring requirements from three to one SLAMS sites for the Eugene-Springfield MSA. This PM₁₀ network size waiver for reducing the monitoring requirements in the Eugene-Springfield MSA to one station is in effective for five years. Please request a waiver renewal in the 2029 ANP. Additionally, changes to the air quality concentrations in the Eugene-Springfield MSA may warrant modifying this waiver in the future.

4.6. 2025 – Waiver to use PM_{2.5} as a surrogate for PM₁₀

Waiver request

Lakeview PM2.5 Surrogate Monitoring for the PM10 Maintenance Plan Requirements (This document is part of the 2024 Annual Network Plan and is available upon request)

Waiver approval

From EPA's 2024 Annual Network Plan approval letter:

1) Replacing PM₁₀ monitoring with surrogate PM_{2.5} at the Oakridge site (AQS ID: 41-039-2013). Oakridge is a PM₁₀ and PM_{2.5} maintenance area. Its current 10-year Maintenance Plan applies through 2035 (87 FR 51265). The PM₁₀ Maintenance Plan specifies the use of PM_{2.5} as a surrogate for PM₁₀ monitoring to show continued attainment of the PM₁₀ standard, with the stipulation that any modification to the monitoring network would be in accordance with the approved ANP.

The Oakridge $PM_{2.5}$ surrogate justification (ANP Appendix I) demonstrates that this method is adequate to protect human health. ODEQ shows that the concentration of PM_{10} is well correlated with that of $PM_{2.5}$, and that PM_{10} can be estimated from $PM_{2.5}$ measurements using a linear conversion equation. Furthermore, the justification shows that contingency measures in the $PM_{2.5}$ Maintenance Plan are more protective than those for PM_{10} . Both the Oakridge $PM_{2.5}$ and PM_{10} maintenance plan contingency measures are triggered when the design value is above the NAAQS and is not from an exceptional event. For $PM_{2.5}$, the 24-hour NAAQS level is 35 ug/m³. For PM_{10} , the NAAQS level is 150 ug/m³. Based on the correlation of $PM_{2.5}$ to PM_{10} determined for Oakridge, PM_{10} contingency measures would be triggered when $PM_{2.5}$ reaches concentrations > 100 ug/m³. The surrogate justification also demonstrates how ODEQ will estimate the PM_{10} Design Value (DV) from the $PM_{2.5}$ measurements to verify continued attainment. Furthermore, DEQ also committed in the justification to re-initiating PM_{10} monitoring in the area by January 1 of the following calendar year if Oakridge violates the contingency plan trigger per the correlated PM_{10} calculations, from sources other than those demonstrated by ODEQ to be exceptional events.

Using $PM_{2.5}$ as a surrogate for PM_{10} monitoring has been approved for three other PM_{10} maintenance area monitoring locations in Oregon's monitoring network: Grants Pass, Klamath Falls, and Lakeview. The ODEQ ANP includes a section summarizing PM_{10} maintenance plan contingency triggers as well as a section on PM_{10} surrogate monitoring. The surrogate monitoring section summarizes the $PM_{2.5}$ to PM_{10} conversion equations and the estimated number of days PM_{10} exceeded the standard.

Because ODEQ has demonstrated that using $PM_{2.5}$ as a surrogate for PM_{10} in Oakridge is sufficient to protect human health, is allowable per the Oakridge Maintenance Plan, and will be reported on in future ANPs, we approve the use of $PM_{2.5}$ as a surrogate for PM_{10} at this site pursuant to 40 C.F.R. part 58 Appendix D, Section 4.7.1.

Appendix F. Interstate Memos of Understanding

F.1 Portland/Vancouver Airshed

Memorandum of Understanding
Between
Oregon Department of Environmental Quality
And
Washington Department of Ecology

I. PURPOSE

This Memorandum of Understanding (MOU) is entered into by and between the Oregon Department of Environmental Quality Air Quality Program, hereinafter referred to as ODEQ, and the Washington Department of Ecology Air Quality Program, hereinafter referred to as WDOE.

The purpose of this MOU is to agree in principle to cooperate with shared resources to collectively meet the United States Environmental Protection Agency (US EPA) minimum monitoring requirements for criteria air pollutants in the Portland-Vancouver-Hillsboro, OR-WA Metropolitan Statistical Area (MSA).

II. STATEMENT OF MUTUAL BENEFITS AND INTEREST

The Portland-Vancouver-Hillsboro, OR-WA MSA consists of Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington. The network design criteria for ambient air quality monitoring described in 40 C.F.R § 58 Appendix D require that in areas where metropolitan statistical areas (MSAs) cross jurisdictional boundaries, "full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator." This MOU establishes an agreement that ODEQ and WDOE cooperatively meet the minimum monitoring requirements in the Portland-Vancouver-Hillsboro, OR-WA MSA.

The Portland-Vancouver-Hillsboro, OR-WA MSA had an estimated population of 2,508,050 as of July 1, 2023. Based on 40 C.F.R § 58 Appendix D, the following minimum monitoring requirements for criteria pollutants apply to an MSA of this population size:

Pollutant	Minimum Number of Required Monitors
Ozone (O ₃)	2
Carbon Monoxide (CO)	1
Nitrogen Dioxide (NO ₂)	3
Sulfur Dioxide (SO ₂)	1
Particulate Matter ≤10µm (PM ₁₀)	2
Fine Particulate Matter (PM _{2.5})	3

As of January 1, 2024, the minimum monitoring requirements were met or exceeded in the Portland-Vancouver-Hillsboro, OR-WA MSA for each of the criteria pollutants listed above with the exception of Nitrogen Dioxide (NO₂). ODEQ is currently working with EPA Region 10 to identify a suitable location and secure funding for the installation of a second near-road NO₂ monitoring site in the Portland Metropolitan area.

III. GENERAL ROLES

ODEQ and WDOE formally agree to collectively provide adequate criteria pollutant monitoring as required by 40 C.F.R § 58 Appendix D. Each agency shall inform the other agency at its earliest convenience via telephone or email of any monitoring changes within the Portland-Vancouver-Hillsboro, OR-WA MSA that impact the minimum monitoring requirements. In the event that new minimum monitoring requirements are imposed after the execution of this MOU, ODEQ and WDOE agree to consult and jointly determine how to meet the new requirements.

IV. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE SAID PARTIES THAT:

- A. This instrument is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between the parties to this instrument will be handled in accordance with applicable laws, regulations, and procedures, including those for government procurement and printing. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the parties, and shall be independently authorized by appropriate statutory authority. This instrument does not provide such authority.
- B. This instrument in no way restricts ODEQ or WDOE from participating in similar activities with other public or private agencies, organizations, and individuals.
- C. Pursuant to Section 22, Title 41, United States Code, no Member of, or Delegate to, Congress shall be admitted to any share or part of this instrument, or any benefits that may arise therefrom.
- D. Nothing in this MOU shall be construed as obligating either party to expend funds or to make any contract or other obligation for the future payment of money in excess of appropriations authorized by law and administratively allocated for this purpose.
- E. Modifications within the scope of this instrument shall be made by mutual consent of the parties, by the issuance of a written modification, signed and dated by both parties.
- F. Either party(s), in writing, may terminate the MOU in whole, or in part, at any time before the date of expiration provided that written notice is sent to the other party at least 120 calendar days prior to the termination date.
- G. This MOU shall be effective upon execution by both parties and shall remain in effect for a period of 5 years unless otherwise modified. This agreement can be extended if mutually agreed to by both parties.

H. The principal contacts for this instrument are:

Oregon Department of Environmental Quality Anthony Barnack, Ambient Monitoring Coordinator 7202 NE Evergreen Parkway, Suite 150 Hillsboro, OR 97124-6166 (971) 806-2223 Washington Department of Ecology Jill Schulte, Air Monitoring Coordinator PO Box 47600 Olympia, WA 98504-7600 (360) 790-6538

In Witness whereof, the parties hereto have executed this MOU as of the last date written below:

Date Matthew Shrensel
Interim Air Quality Monitoring Manager
Oregon Department of Environmental Quality

Date Sean Lundblad
Technical Services Section Manager, Air Quality Program
Washington Department of Ecology

Appendix G. Review of violating monitor changes

DEQ, LRAPA, and EPA may decide that a monitoring location, method, frequency, or other properties needs to be changed to provide more accurate or representative information for an area. Any changes will go through public notice and be approved by Region 10 EPA, Oregon DEQ or (Lane Regional Air Protection Agency depending on the location). Changes will meet the siting criteria in 40 CFR Part 58.

Appendix H. Public notice

The Annual Network Plan was put out for public comment on May 31st for 30 days. The public was informed by Public Notice on the DEQ public notice page https://www.oregon.gov/deq/Get-Involved/Pages/Public-Notices.aspx below which has many subscribers. The page provides a link to subscribe for notices.