State of Oregon
DEQ Department of Environmental Quality

2026 Oregon Annual Ambient Criteria Pollutant Air Monitoring Network Plan

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Document information

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Executive summary

This annual criteria pollutant network plan is required by U.S. Environmental Protection Agency and discusses changes to Oregon's criteria pollutant monitoring network.

In 2026/2027, DEQ plans the following changes to the criteria monitoring network.

PM_{10}

In the 2025 Annual Network Plan, EPA granted Lane Regional Air Protection Agency a waiver to use particulate matter$_{2.5}$ as a surrogate for particulate matter$_{10}$ in Medford. DEQ shut the Medford PM_{10} monitor down in January 2026 and will use $PM_{2.5}$ as a surrogate going forward.

Near-road nitrogen dioxide site

DEQ installed the second near-road site along Interstate 5 in Portland, between the Interstate 84 Interchange and the Fremont Bridge Interchange in late 2025 and is now monitoring NO_2.

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Acronyms

Table 1. Air quality monitoring acronyms

Acronym	Definition
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	Sulfur dioxide
SPM	Special Purpose Sites (Informational)
TSP	Total Suspended Particulates
VOC	Volatile Organic Compounds
Concentrations	**Types**
ppm	Parts per million
ppb	Parts per billion
$\mu g/m^3$	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, NO_2, CO, SO_2, and meteorology updates on the ODEQ Air Quality Index web page and phone app.
- Access to all past continuous or hourly 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 concentration 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 2. Appropriate spatial scales for each criteria pollutant and applicable site types.

Scale	SO_2	CO	O_3	NO_2	Pb	PM_{10}	$PM_{2.5}$	Site Types
Micro	x	x	x	x	x	x	x	High concentration, source impact
Middle	x	x	x	x	x	x	x	High concentration, source impact
Neighborhood	x	x	x	x	x	x	x	High concentration, source impact, general/background
Urban	x		x	x	n/a	n/a	x	High concentration, source impact, general/background, regional transport, welfare-related impacts.
Regional	x		x		n/a	n/a	x	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 transition 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 helped 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 3.

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).

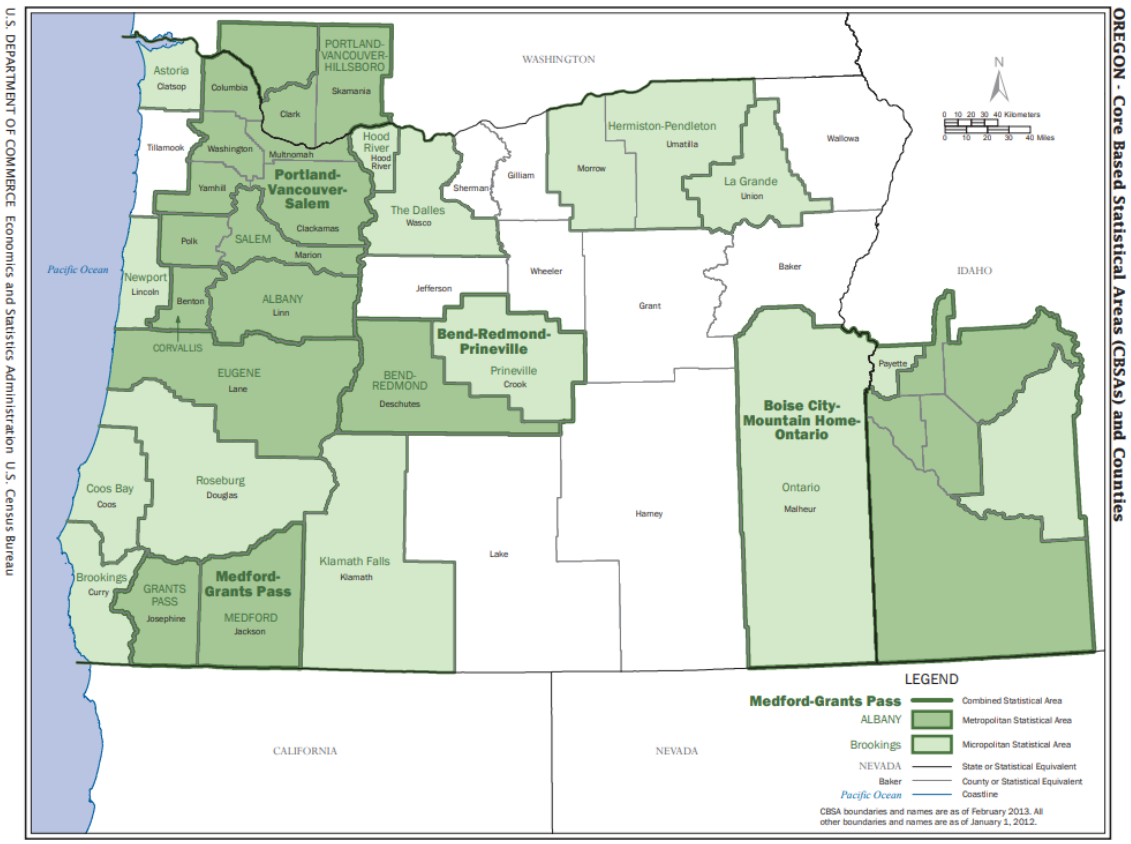

Figure 1. Oregon 2020 CBSA map
(US. Census Bureau)

Table 3. 2025 Oregon Population estimates

CBSA Name	CBSA Type	CBSA Population
Portland-Vancouver-Hillsboro, OR-WA	Metropolitan Statistical Area	2,542,282
Salem	Metropolitan Statistical Area	445,814
Eugene-Springfield (Lane County)	Metropolitan Statistical Area	381,584
Bend	Metropolitan Statistical Area	266,376
Medford (Jackson County)	Metropolitan Statistical Area	221,795
Albany (Linn County)	Metropolitan Statistical Area	132,843
Roseburg (Douglas County)	Micropolitan Statistical Area	111,951
Corvallis (Benton County)	Metropolitan Statistical Area	97,728
Hermiston-Pendleton	Micropolitan Statistical Area	93,721
Grants Pass (Josephine County)	Metropolitan Statistical Area	87,867
Klamath Falls (Klamath County)	Micropolitan Statistical Area	70,274
Coos Bay-North Bend (Coos County)	Micropolitan Statistical Area	63,992
Ontario, OR-ID	Micropolitan Statistical Area	60,085
Newport (Lincoln County)	Micropolitan Statistical Area	50,636
Astoria (Clatsop County)	Micropolitan Statistical Area	40,926
Woodburn	No MSA, PSU-PRC	30,843
Prineville (Crook County)	Micropolitan Statistical Area	27,564
The Dalles (Wasco County)	Micropolitan Statistical Area	26,310
La Grande (Union County)	Micropolitan Statistical Area	25,900
Hood River (Hood County)	Micropolitan Statistical Area	23,720
Brookings (Curry County)	Micropolitan Statistical Area	22,621
Baker City (Baker County)	Micropolitan Statistical Area	16,658
St. Helens	No MSA, PSU-PRC	14,552
Sweet Home	No MSA, PSU-PRC	10,116
Lakeview (Lake County)	No MSA, PSU-PRC	8,297
Burns/Hines (Harney County)	No MSA, PSU-PRC	7,401
John Day (Grant County)	No MSA, PSU-PRC	7,221

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 AQ maintenance areas web page or EPA's Nonattainment/maintenance status 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 – O_3, CO, NO_2, SO_2, $PM_{2.5}$, PM_{10}, 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.

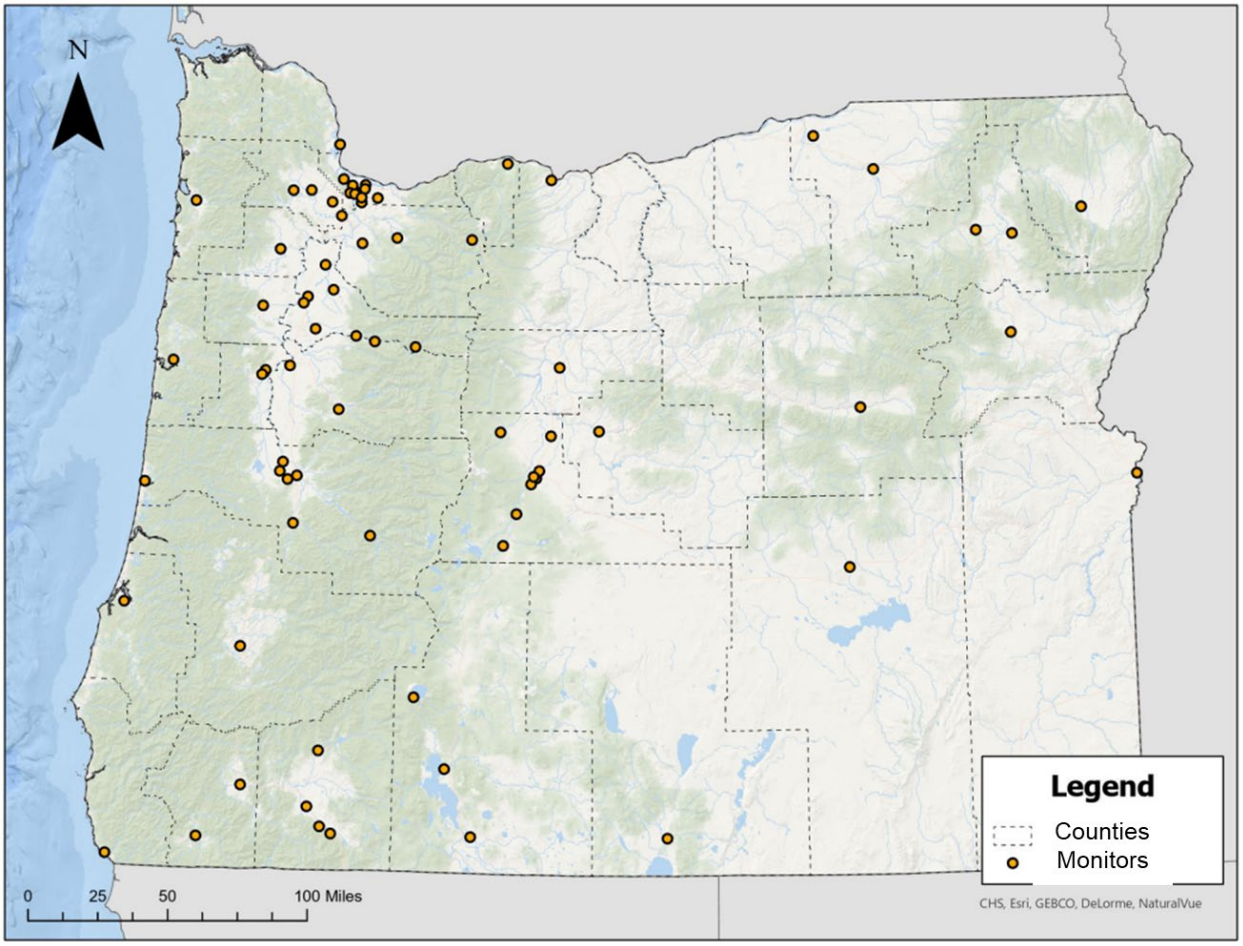

Figure 2. ODEQ and LRAPA Ambient Air Monitoring Network

Table 4. 2025 ODEQ and LRAPA SLAMS Criteria Pollutant Ambient Air Monitoring Network

City	Address	Site Cod	EPA#	SO_2	CO	NO_2	O_3	$PM_{2.5}$	PM_{10}	WS/ WD
Burns	Washington Street	BWS	410250003	-	-	-	-	x	-	x
Cottage Grove	City Shops	CGC	410399004	-	-	-	-	x	-	-
Eugene	Pacific Hwy 99N	E99	410390059	-	-	-	-	x	x	-
Eugene	Amazon Park	AMZ	410390060	-	-	-	x	x	-	-
Eugene	Saginaw	SAG	410391007	-	-	-	x	-	-	-
Grants Pass	Parkside School	GPP	410330114	-	-	-	-	x	x	x
Hermiston	Municipal Airport	HMA	410591003	-	-	-	x			x
Klamath Falls	Peterson School	KFP	410350004	-	-	-	-	x	x	x
La Grande	Hall and North Streets	LHN	410610123	-	-	-	-		x	x
Lakeview	Center and M Streets	LCM	410370001	-	-	-	-	x	x	x
Medford	Rapp Rd Talent	TAL	410290201	-	-	-	x	-	-	-
Medford	Jackson Park	MJP	410290029	-	-	-	-	x	x	-
Oakridge	School St.	WAC	410392013	-	-	-	-	x	x	x
Portland	57th and SE Lafayette	SEL	410510080	x	x	x	x	x*	x	x
Portland	Cully Neighborhood	PCH	410512011	-	-	-	-	-	x	x
Portland	I-5 N. Commercial and	PCR	410510088	-	-	x	-	-	-	-
Tualatin	I-5 S. Boones Ferry Road	TBC	410670005	-	x	x	x	x	-	x
Canby	Spangler Road	SPR	410050004	-	-	-	x	-	-	x
Hillsboro	NE Grant Street	HHF	410670004	-	-	-	-	x	-	x
Sauvie Island	NW SI	SIS	410090004	-	-	-	x	-	-	x
Prineville	SE Court Street	PDP	410130100	-	-	-	-	x	-	x
Salem	Salem State Hospital	SSH	410470041	-	-	-	x	-	-	
Turner	Cascade Jr. High,	CJH	410470004	-	-	-	x	-	-	x

X : A monitor is located at the site

- : No monitor at the site

* $PM_{2.5}$ speciation also at the site

Key:

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.

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

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. A table and maps of the network are shown below.

Table 5. Oregon ozone network and purpose

AQS ID - POC	Site Name	CBSA/ MSA	Scale	Purpose	Start Date
410090004- 1	Sauvie Island	Pdx Metro [a]	Regional	Transport	1/1/1980
410510080- 1	Portland, SE Lafayette	Pdx Metro [a]	Neighborhood	In town	7/10/2003
410670005- 1	Tualatin	Pdx Metro [a]	Middle	Near Road	4/21/2014
410050004 -1	Carus	Pdx Metro [a]	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	Lane Co.	Neighborhood	In town	1/01/1985
410391007- 1	Saginaw	Lane Co.	Urban	Downwind	1/01/1985
410290201- 1	Medford at Talent	Jackson Co.	Urban	Downwind	5/01/1992
410591003- 1	Hermiston Airport	Pendleton-Hermiston	Urban	Downwind	2/27/2007

a. Portland Metro: Portland-Vancouver-Hillsboro

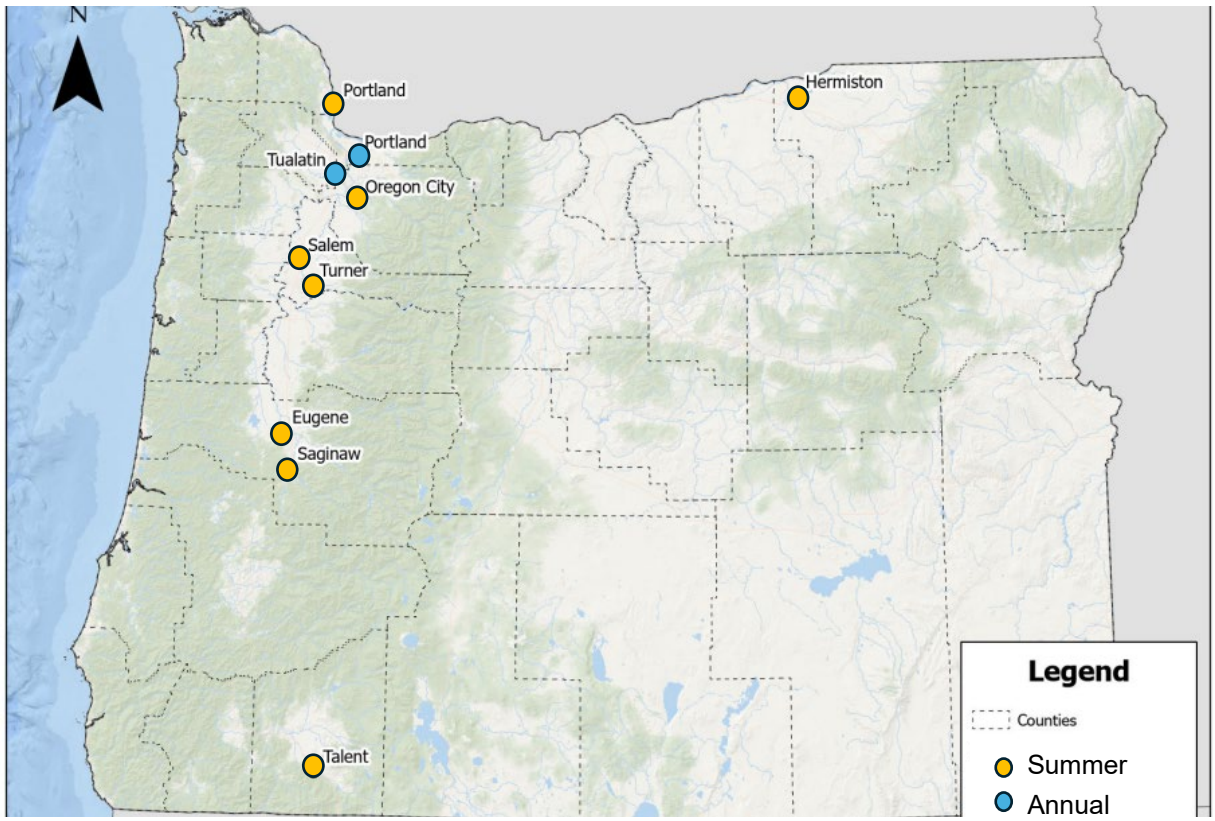

Figure 3. Ozone SLAMS Monitoring Network Map

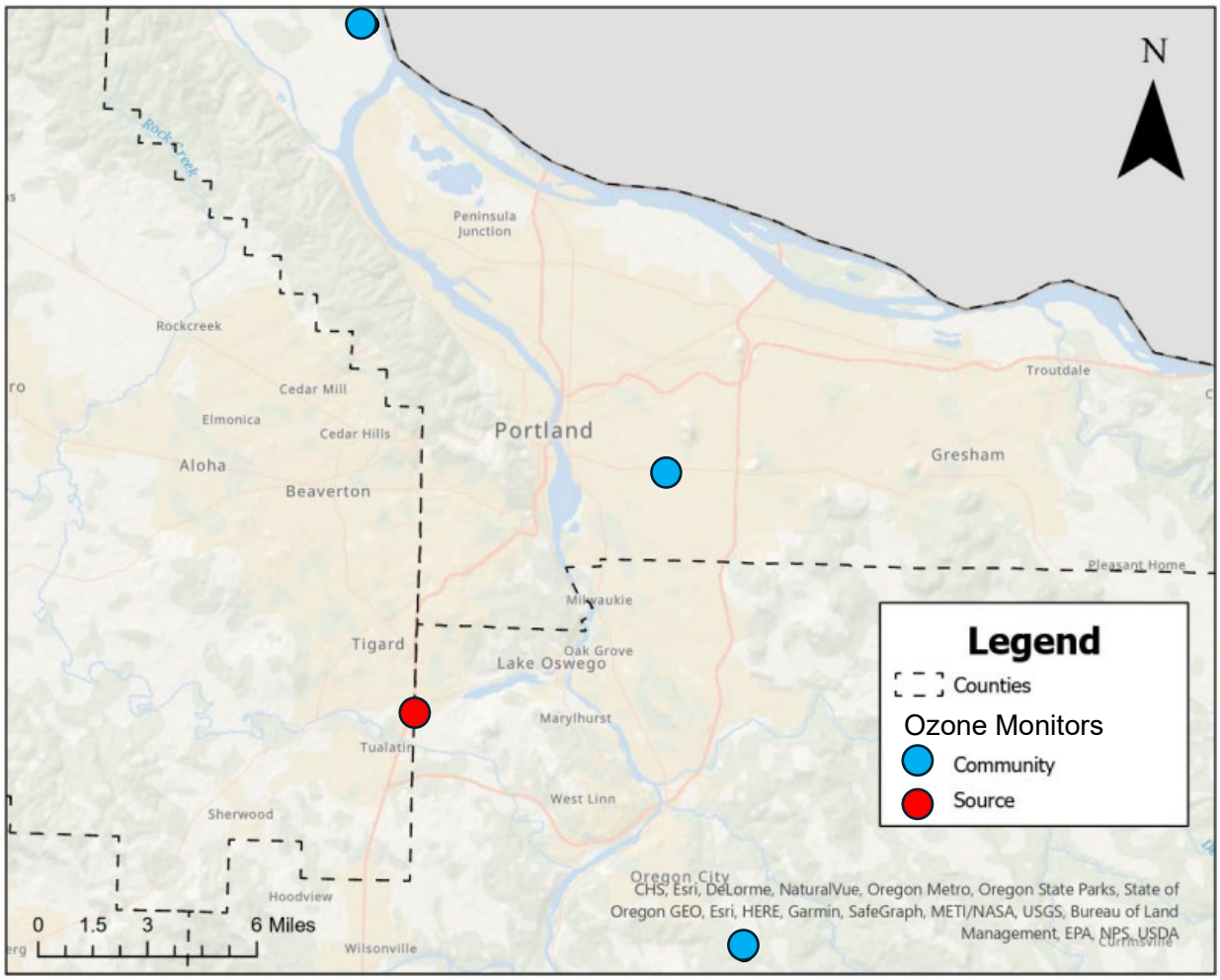

Figure 4. Portland- Metro Ozone SLAMS Monitoring Sites.

Changes to the ozone network in the past year

No changes.

3.1.2 Nitrogen dioxide network

Oregon DEQ has three monitoring sites for NO_2, all in the Portland-Metro area. One is a community scale site, located in SE Portland. The other two are near-roadway sites, located adjacent to I-5. One is in Tualatin, and the other is in Portland. LRAPA has no monitoring sites.

Table 6. NO_2 monitoring network

AQS ID - POC	Site Name	CBSA	Scale	Purpose	Start Date
410510080- 1	Portland, SE Lafayette	Pdx Metro [a]	Neighborhood	NCore	01/01/1984
410670005- 1	Tualatin	Pdx Metro [a]	Middle	Near Road	04/21/2014
410510088- 1	Portland- I-5 and	Pdx Metro [a]	Middle	Near Road	09/01/2025

a. Portland Metro: Portland-Vancouver-Hillsboro

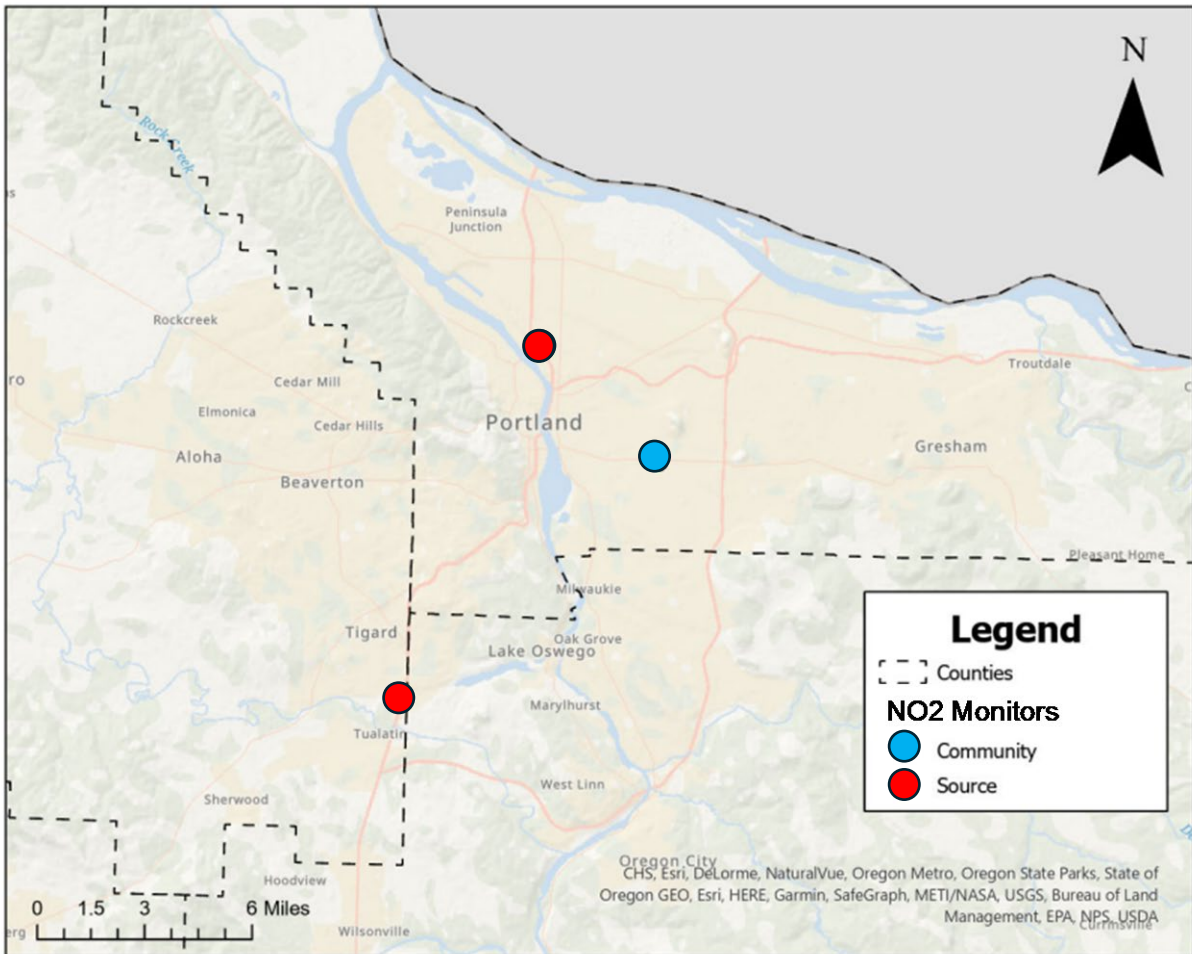

Figure 5. NO_2 Monitoring Network

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

Changes to the NO_2 network in the past year

An NO_2 monitor was added as the second near-road site in Portland in October 2025.

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-road site next to I-5 in Tualatin, which measures vehicle contributions to CO. LRAPA has no CO sites.

Table 7. CO monitoring network

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

a. Portland Metro: Portland-Vancouver-Hillsboro

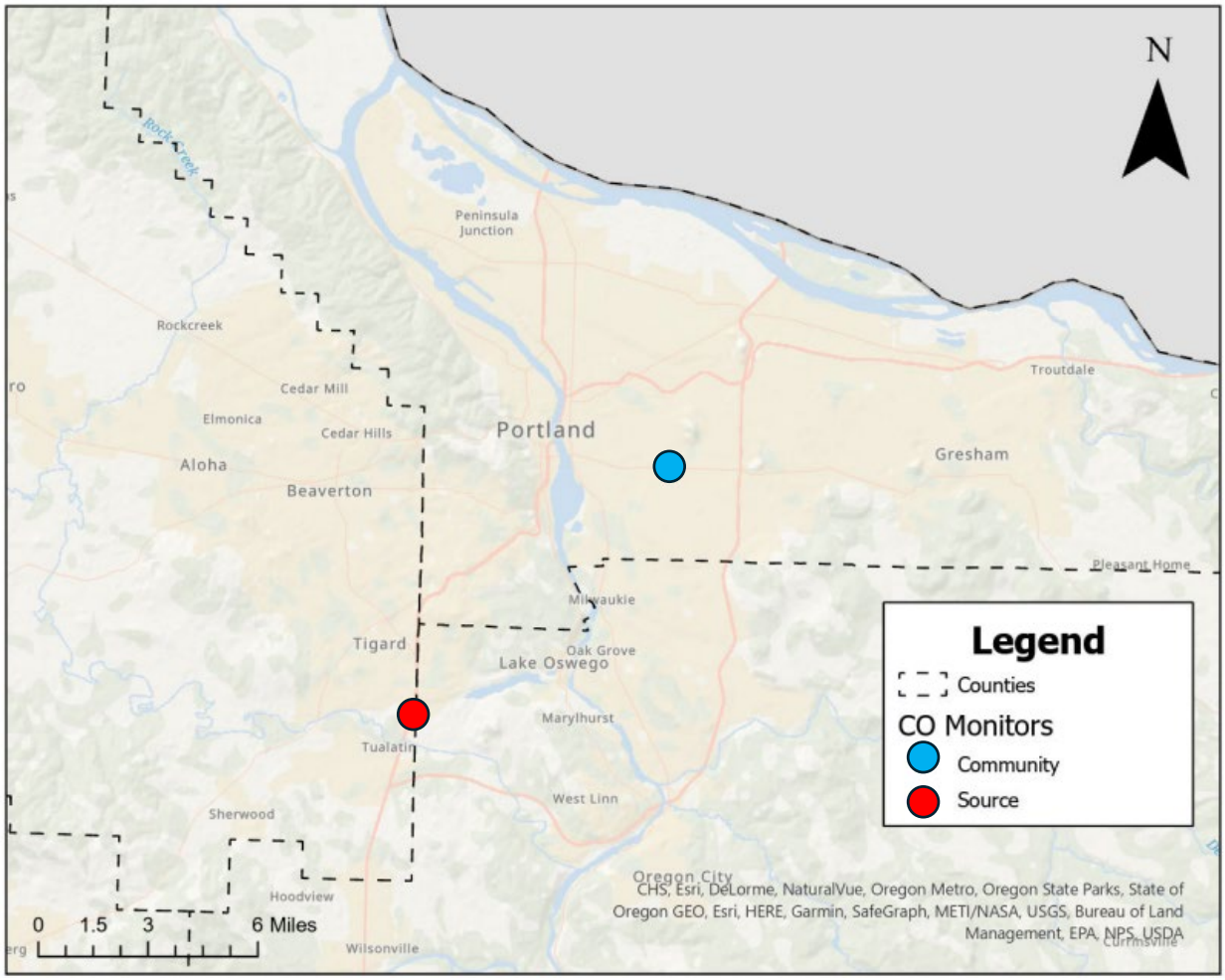

Figure 6. CO Monitoring Network

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 also has three special purpose FEM to help correlate the nephelometer and ODEQ SensOR network discussed in 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 8. $PM_{2.5}$ monitoring network.

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

a. Portland Metro: Portland-Vancouver-Hillsboro
b. Collocated sites. SE Portland: FEM/FRM, Klamath Falls: FEM/FEM, Oakridge: FEM/FRM
c. DEQ uses a nephelometer which was correlated with an FRM as the background site.

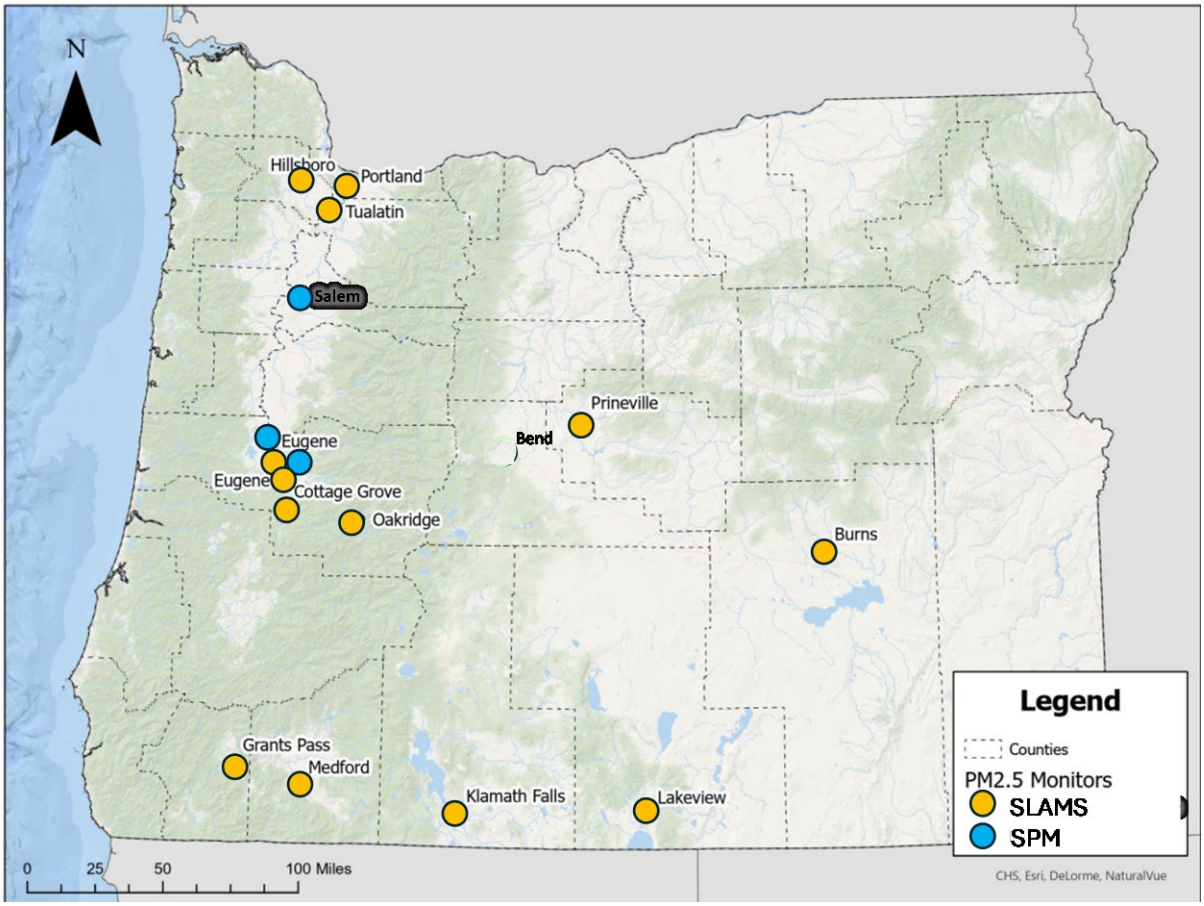

Figure 7. $PM_{2.5}$ FEM Monitoring Network

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

Bend's $PM_{2.5}$ FEM was changed to a non-FEM monitor but is still operating to calibrate the nephelometer and SensOR network in the area.

3.1.5 PM_{10} Network

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

Table 9. PM_{10} monitoring network.

AQS ID-POC	Site Name	CBSA	Scale	Category	Start Date
410510080-1	SE Portland	Pdx Metro [a]	Neighborhood	NCore/SLAMS	01/01/1984
410512011-7	N. Portland	Pdx Metro [a]	Neighborhood	SLAMS	02/01/2017
410610123-7	La Grande	La Grande	Neighborhood	SLAMS	09/01/2016
410390059-7	Eugene –Hwy 99W	Eugene-Springfield	Neighborhood	SLAMS	04/01/2018
410392013-1	Oakridge [b]		Neighborhood	SLAMS	11/01/1989
410290029-1	Medford [b]	Medford	Neighborhood	SLAMS	07/21/2023
410330114-1	Grants Pass [b]	Grants Pass	Neighborhood	SLAMS	06/15/2002
410350004-1	Klamath Falls [b]	Klamath Falls	Neighborhood	SLAMS	01/01/1986
410370001-1	Lakeview [b]	Lakeview	Neighborhood	SLAMS	10/01/1991

a. Portland Metro: Portland-Vancouver-Hillsboro
b. The $PM_{2.5}$ monitor used as a surrogate for PM_{10}

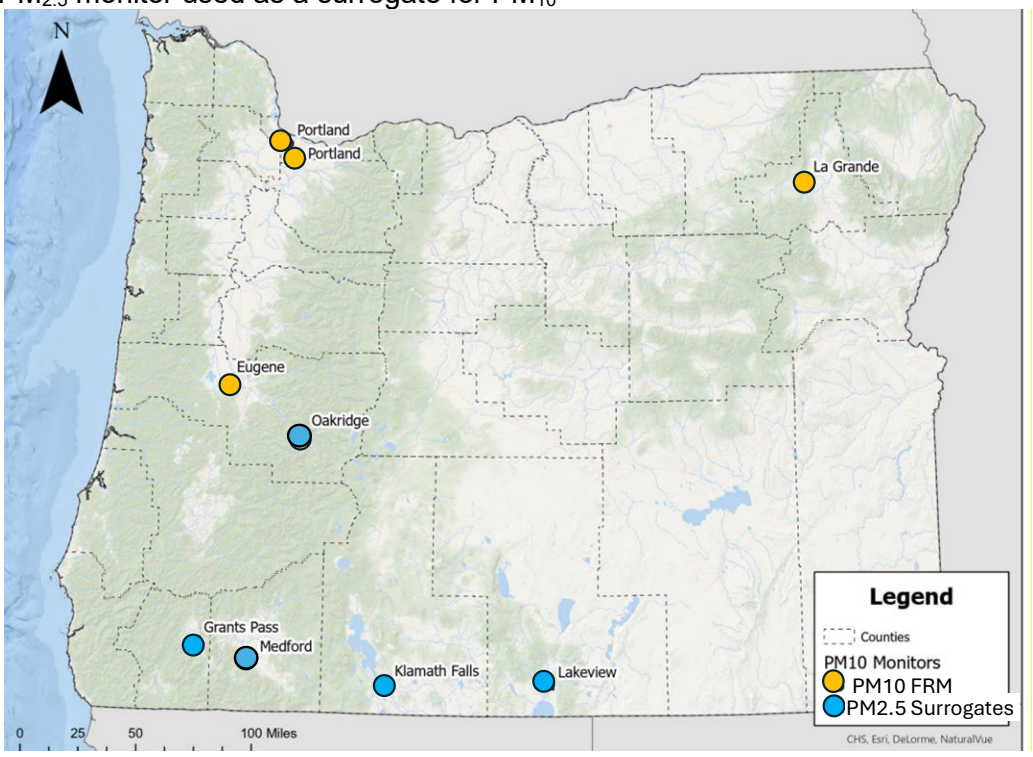

Figure 8. PM_{10} Monitoring Network

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

Medford changed to $PM_{2.5}$ monitoring as a surrogate for PM_{10} with EPA approval.
Portland PM_{10} moved from Humboldt School to the Cully Neighborhood with EPA approval.

The PM_{10} FRMs at Eugene, Portland Humboldt, and La Grande changed to the Tisch Wilbur (method 216). The Portland SE Lafayette site changed to a T640x.

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 10. 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

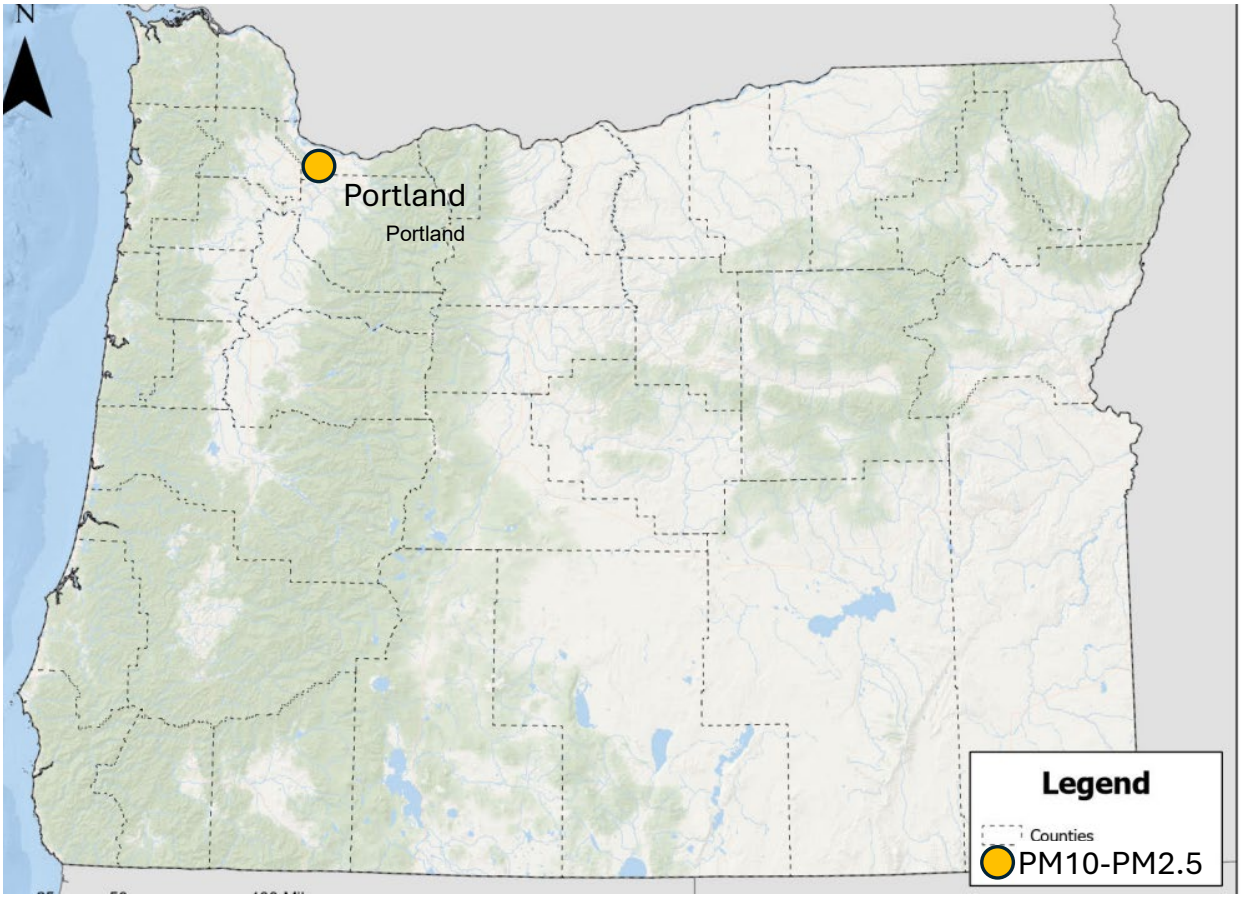

Figure 9. $PM_{10-2.5}$ Monitoring Network

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

The PM_{10} monitors changed from every third day using PM_{10} and $PM_{2.5}$ FRMs to hourly using the Teledyne T640x FEM.

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 five sites. See the DEQ Air Quality Monitoring web page for more information. The same method is used for criteria pollutant monitoring and analysis.

Table 11. PM_{10} lead monitoring as part of the air toxics network.

AQS ID - POC	Site Name	CBSA	Scale	Category	Start Date
410512011-7 and 9	NE. Portland – Cully	Pdx Metro [a]	Neighborhood	SPM	05/10/2018
410670005 -7	Tualatin	Pdx Metro [a]	Neighborhood	Near Rd/SPM	01/01/2019
410290029- 7	Medford	Medford	Neighborhood	SPM	07/21/2023
410390059- 7	Eugene – Hwy 99W	Eugene-Springfield	Neighborhood	SPM	04/01/2018
410610123 -7	La Grande	La Grande	Neighborhood	NATTS/SPM	09/01/2016

a. Portland Metro: Portland-Vancouver-Hillsboro

Changes to the Criteria Pollutant Lead network in the past year

Bend, Springfield, and Portland Humboldt air toxics site shut down in January 2026 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 12. SO_2 monitoring network

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

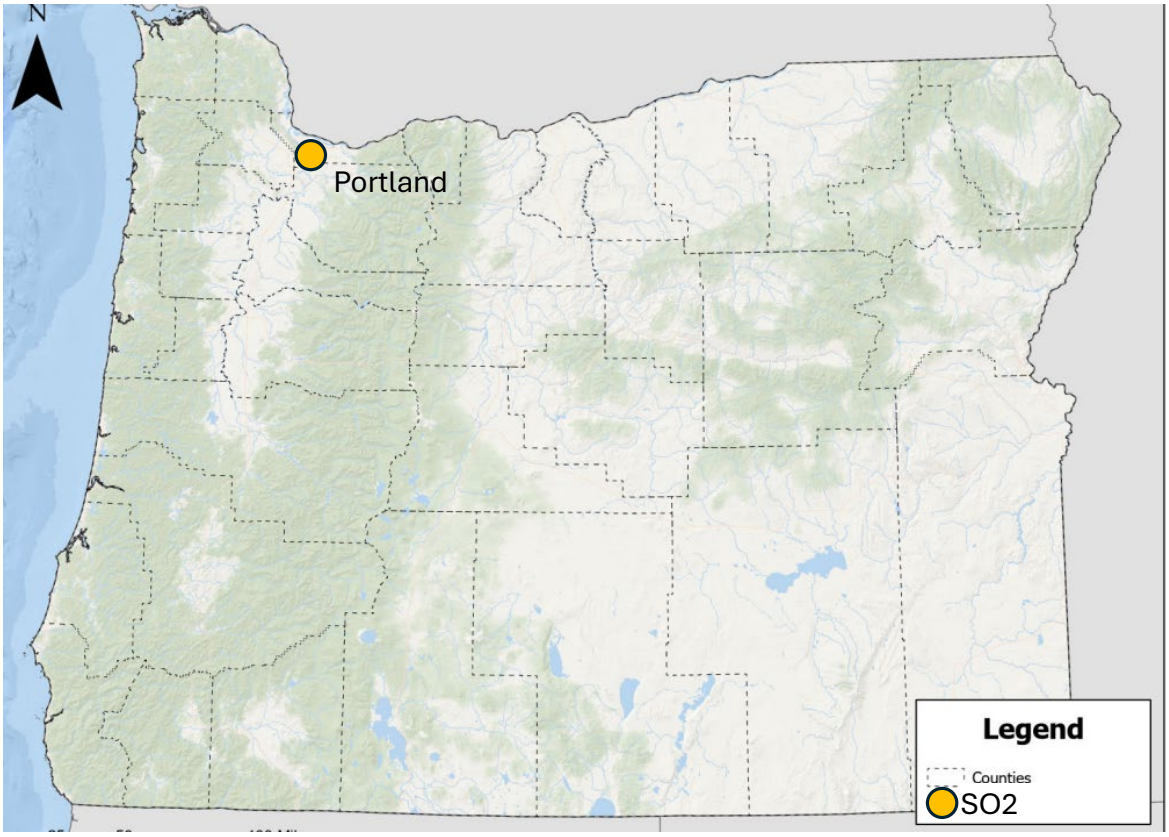

Figure 10. SO_2 Monitoring Network

Changes to the SO_2 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 Air Quality Index. 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 managers, 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.

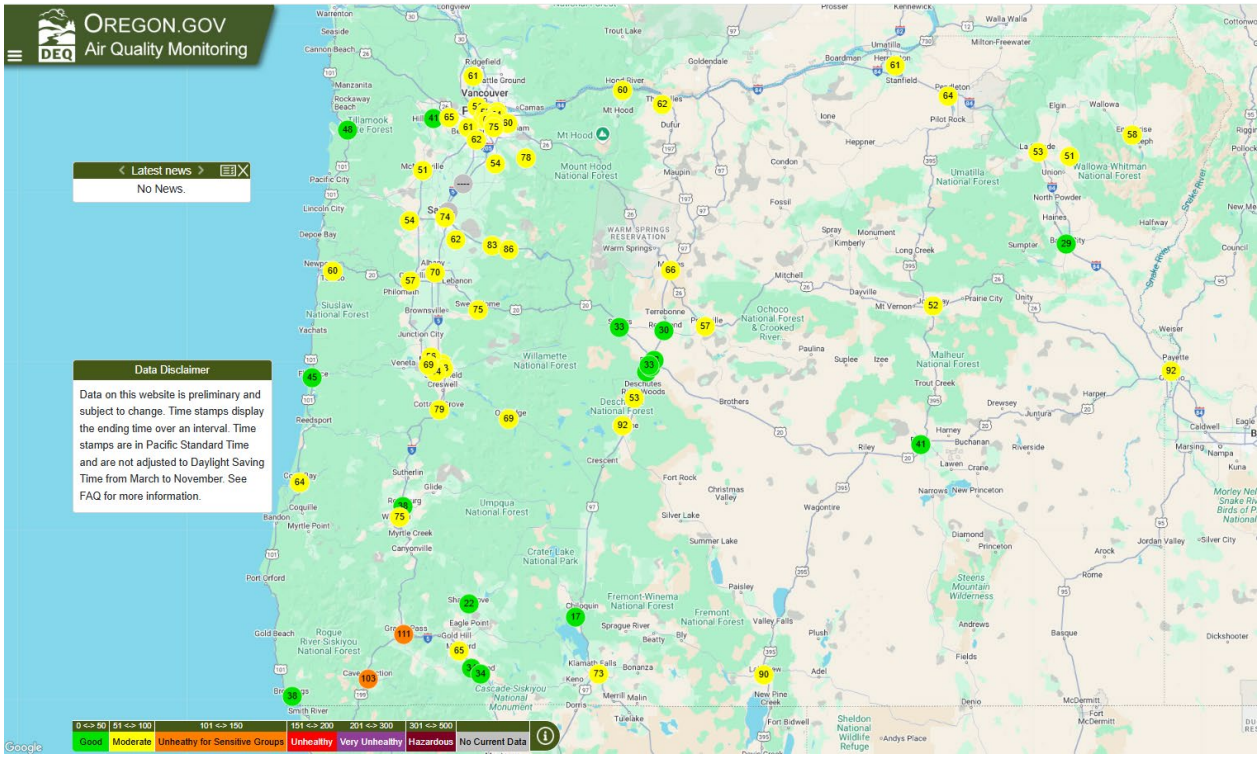

Figure 11. $PM_{2.5}$ AQI Network

Table 13. AQI site list

City	Address	Site Code	EPA#	O_3	$PM_{2.5}$	Comment
Albany	Calapooia School	ACS	410430009	-	x	-
Bend	Bend Pump Station	BPS	410170120	-	x	-
Bend	Ponderosa Elementary	BPE	410170115	-	x	-
Bend	Pine Ridge Elementary	BPR	410170116	-	x	-
Bend	Sun River Elementary	SRE	410170117	-	x	-
Bend	Bend High School	BEE	410170123	-	x	-
Bend	La Pine Fire	LFD	410172002	-	x	-
Baker City	Forest Service	BFS	410010004	-	x	-
Brookings	Forestry Center	BDF	410150002	-	x	-
Burns	Washington St.	BWS	410250003	-	x	-
Cave Junction	USFS Station	CJFS	410330036	-	x	-
Coos Bay	Marshfield HS	CBM	410110003	-	x	-
Corvallis	EPA office	CJT	410030014	-	x	-
Cottage Grove	City Shops	CGC	410399004	-	x	-
Crater Lake	Rim	CLP	410351001	-	x	Summer only
Dallas	Le Creole Middle	DLM	410530004	-	x	-
Detroit Lake	USFS Station	DFS	410470123	-	x	Summer only
Eugene	Pacific Hwy 99N	E99	410390059	-	x	-
Eugene	Amazon Park	EAP	410390060	x	x	-
Eugene	Wilkes Drive	EWD	410390101	-	x	-
Springfield	Food for Youth Farm	SYF	410390013	-	x	-
Eugene	Saginaw	SAG	410391007	x	-	-
Enterprise	Forest Service	EFS	410630001	-	x	-
Estacada	Clackamas River	ECR	410050011	-	x	-
Florence	Forestry Department	FFD	410390100	-	x	-
Grants Pass	Parkside School	GPP	410330114	-	x	-
Hermiston	Municipal Airport	HMA	410591003	x	x	-
Hood River	Westside FD #2	HRF	410270001	-	x	-
John Day	Davidson St.	JDD	410230002	-	x	-
Klamath Falls	Peterson School	KFP	410350004	-	x	-
Chiloquin	Duke Drive	CDD	410352040	-	x	-
La Grande	Hall and North	LHN	410610123	-	x	-
Cove	City Hall	CCH	410610120	-	x	-
Lakeview	Center and M Streets	LCM	410370001	-	x	-
Lyons	Marylynn School	LMS	410432003	-	x	-
Madras	Westside School	MWS	410310007	-	x	-
McMinnville	McMinnville HS	MHS	410711003	-	x	-
Medford	Rapp Rd Talent	TAL	410290201	x	x	-
Medford	Jackson Park	MPJ	410290029	-	x	-
Ashland	Fire Department	AFD	410290203	-	x	-
Shady Cove	School	SCS	410290019	-	x	-

City	Address	Site Code	EPA#	O_3	$PM_{2.5}$	Comment
Mill City	High School	MCS	410430104	-	x	-
Mt. Hood	Ski Bowl at Multorpor	MUL	410050102	-	x	
Oakridge	School St.	OAK	410392013	-	x	-
Ontario	May Roberts School	OMR	410450001	-	x	-
Pendleton	SW Marshall Pl	PMC	410590121	-	x	-
Portland	57th andSE Lafayette	SEL	410510080	x	x	-
Portland	Cully Neighborhood	PNS	410512011	-	x	-
Portland	McDaniel High School	PMH	410510039	-	x	-
Portland	SE 12th and Main	VIP	410510035	-	x	-
Portland	Lincoln High School	PLH	410510034	-	x	-
Portland	Lane Middle School	PLM	410510032	-	x	-
Portland	Roosevelt High School	PRH	410510003	-	x	-
Beaverton	Highland Park Sch	BHP	410670111	-	x	-
Carus	Spangler Rd.	SPR	410050004	x	x	-
Forest Grove	Pacific University	FGP	410670006	-	x	-
Gladstone	Gladstone HS	GHS	410052003	-	x	-
Gresham	Centennial HS	GCH	410510031	-	x	-
Hillsboro	NE Grant St.	HHF	410670004	-	x	-
Sauvie Island	NW SI	SIS	410090004	x	x	-
Tualatin	Tualatin – I-5	TBC	410670005	x	x	-
Prineville	SE Court St.	PDP	410130100	-	x	-
Redmond	Redmond HS	RHS	410171001	-	x	-
Roseburg	Roseburg High School	RWH	410190005	-	x	-
Roseburg	Green Elementary	RGE	410190006	-	x	-
Salem	Salem State Hosp.	SSH	410470041	x	x	-
Turner	Cascade Jr. High,	CJH	410470004	x	x	-
East Salem	Salem Chemeketa	SCC	410470022	-	x	-
Silverton	James and Western St	SJW	410470007	-	x	-
Sisters	USFS Office	SFS	410170004	-	x	-
Sweet Home	Sweet Home	SJH	410432004	-	x	-
The Dalles	Cherry Heights	TDC	410650007	-	x	-
Tillamook	Tillamook Jr. HS	TJH	410570002	-	x	-
Toledo	Police Station	TPD	410410004	-	x	-
Woodburn	Chemeketa CC	WCC	410470023	-	x	-

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

Portland Humboldt School's PM2.5 AQI site shut down. A PM2.5 AQI site was added in Gladstone The Sweet Home PM2.5 AQI site was moved from the FD to the Sweet Home Junior high school.

Table 14. 2024 Updated $PM_{2.5}$ AQI breakpoints

AQI Category and Index Value	Updated AQI Category Breakpoints (µg/m^3)
Good (0 - 50)	0.0 to 9.0
Moderate (51 – 100)	9.1 to 35.4
Unhealth for Sensitive Groups (101 – 150)	35.5 to 55.4
Unhealthy (151 – 200)	55.5 to 125.4
Very Unhealthy (201 – 300)	125.5 to 225.4
Hazardous (301+)	225.5 +

µg/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 15. Meteorology Network

Address	Site Code	EPA#	Wind	Temp	Delta T	RH	BP	SR	Precip, UV, Mixing Heights
Bend	BRD	410140121	x	x	-	x	x	x	-
Burns	BWS	410250003	x	x	-	-	x	-	-
N. Eugene	E99	410390059	x	-	-	-		-	-
NE Eugene	EWD	410390101	x	x	-	-	x	-	-
Springfield	SCH	410391009	x	-	-	-		-	-
Grants Pass	GPP	410330114	x	x	-	-	x	-	-
Hermiston	HMA	410591003	x	-	-	-	-	-	-
Klamath Falls	KFP	410350004	x	x	x	x	x		-
La Grande	LHN	410610123	x	x	-	x	x		-
Cove	CCH	410610120	x	-	-	-	-	-	-
Lakeview	LCM	410370001	x	x			x		-
Medford	MTV	410291002	x	x	x	x	x	x	-
Oakridge	OAK	410392013	x	x	-		x		-
SE Portland	SEL	410510080	x	x	-	x	x	x	x
N. Portland	PCR	410510088	x	-	-	-	-	-	-
NE Portland	PCH	410512011	x	-	-	-	-	-	-
Canby	SPR	410050004	x	x	-		x		-
Hillsboro	HHF	410670004	x	-	-	-	-	-	-
Sauvie Island	SIS	410090004	x	x	-	-	-	-	-
Tualatin – I-5	TBC	410670005	x	x	-	x	-	-	-
Prineville	PDP	410130100	x	x	-	x	x	x	-
Salem-Turner	CJH	410470004	x	-	-	-	-	-	-
Silverton	SJW	410470007	x	-	-	-	-	-	-

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

Jefferson High School wind speed/wind direction was shut down as part of the Portland New wind speed/wind direction at Portland Commerce and Russell near-road site.

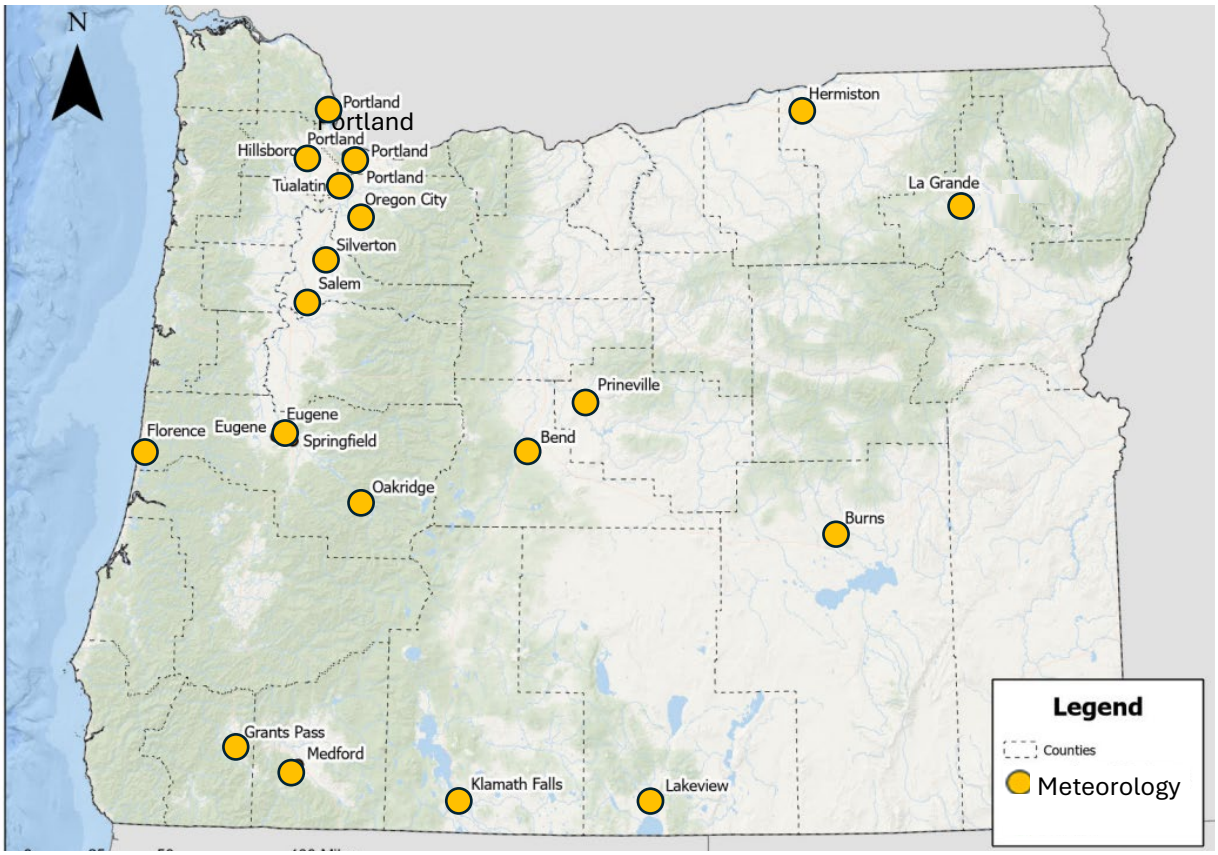

Figure 12. DEQ and LRAPA Meteorology Network

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

$PM_{2.5}$

No changes for July 2026 to June 2027.

PM_{10}

No changes for July 2026 to June 2027.

Ozone, NO2, CO, SO2

No changes for July 2026 to June 2027.

Meteorology

No changes for July 2026 to June 2027.

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.

Table A.1. Oregon national core site (NCore)

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

The NCore Site is SE Lafayette (SEL), AQS# 41-051-0080, Address 57th Avenue and SE Lafayette St., Portland, OR
The MSA is Portland-Vancouver, OR-WA (#6440) and includes the Oregon Counties of Multnomah, Clackamas, and Washington and Clark County in Wasington. The 2025 MSA Population estimate is 2,542,282 people (US Census).

Pollutant	Std type	Std	DV	Units	Years	Number of monitors required	Number of active monitors	Number of monitors needed
$PM_{2.5}$	Daily	35	20	µg/m³	23-25	1	1	0
$PM_{2.5}$	Annual	9	5.9	µg/m³	23-25	1	1	0
$PM_{2.5}$ Speciation	N/A	-	-	-	-	1	1	0
PM_{10}	Daily	150	No exceedances	-	23-25	1	1	0
$PM_{10-2.5}$	N/A	-	-	-	-	1	1	0
Ozone	8 hr Ave	70	59	ppb	23-25	1	1	0
NO_2	1 hour	100	31	ppb	23-25	1	1	0
NO_2	Annual	53	5.8	ppb	23-25	1	1	0
NOx	N/A	-	-	-	-	1	1	0
Trace SO_2	1 hour	75	2	ppb	23-25	1	1	0
5 Minute Trace SO_2 -	N/A	-	-	-	-	1	1	0
Trace CO	8 hr Ave	9 ppm			23-25	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	0
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

Table 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.

CBSA or MSA	Population 2025	County	Design value (ppb)	max design value site name	Season	Years	Number of monitors required	Number of active monitors	Number of monitors needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Multnomah, Clackamas, Washington, Clark (WA)	69	Carus (41-005-0004)	Annual for NCore and Roadway sites. May-Sept for upwind and downwind sites	23-25	2	4 in OR, 1 in WA	0
Salem (41420)	445,814	Marion	62	Turner (41-047-0004)	May-Sept	23-25	2	2	0
Eugene-Springfield (21660)	381,584	Lane	60	Amazon Pk. (41-039-0060)	May-Sept	23-25	1	2	0
Medford (32780)	221,795	Jackson	61	Talent (41-029-0201)	May-Sept	23-25	0	1	0
Pendleton-Hermiston (37820)	93,721	Umatilla	63	Airport (41-059-1003)	May-Sept	23-25	0	1	0

Table 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.

CBSA	CBSA population 2025 estimate	County	Standard exceeded more than once per year	Site name	Season/ Frequency	Number of monitors required	Number of active monitors	Number of monitors needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Multnomah	No	SE Lafayette, Portland (41-051-0080) NCORE Site	Annual, Hourly	1	1	0
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Washington	No	Tualatin Bradbury Court (41-051-0080) Near-road Site	Annual, Hourly	1	1	0

Table A.4. Sulfur dioxide minimum monitoring requirements

EPA devised the Population Weighted Emissions Index to determine where SO_2 monitoring is needed. This combines population and SO_2 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 SO_2 monitoring. The NCore site is also the PWEI site and has a PWEI of 7,880. The site has a trace SO_2 monitor meeting both criteria. The table below shows the current monitoring status.

CBSA	CBSA Population 2025 estimate	County	Design value (ppb)	% of Std	Site name	Season/ Frequency	Years	Number of monitors required	Number of active monitors	Number of monitors needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Multnomah, Clackamas, Washington, Clark (WA)	2	3	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	23-25	1 For NCore site	1 at NCore site	0

Table A.5. Nitrogen dioxide minimum monitoring requirements

EPA requires two NO_2 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 NO_2 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 NO_2, NO, NOx, and NOy monitoring. The NCore site is in Portland and doubles as the community scale site for NO_2. The table below shows the current monitoring status.

CBSA	CBSA Population 2025 estimate	County	NO_2 Design Value (ppb)	% of Std	Site name	Season/ Frequency	Years	Number of monitors required	Number of active monitors	Number of monitors needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Multnomah, Clackamas, Washington, Clark (WA)	1hr = 31 ppb Annual= 5.8 ppb	1hr = 31% Annual= 11%	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	23-25	1	1	0
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Multnomah, Clackamas, Washington, Clark (WA)	1hr = 30 ppb Annual= 8.9 ppb	1hr = 30% Annual= 11%	Tualatin Bradbury Ct. (Near-roadway site) (41-067-0005)	Annual, Hourly	23-25	1	1	0
Portland-Vancouver-Hillsboro, OR-WA (38900)	2,542,282	Multnomah, Clackamas, Washington, Clark (WA)	No data [a]	No data [a]	Portland Commercial and Russel 2nd Near-roadway site (41-051-0088)	Annual, Hourly	-	1	1	0

a. Sampling started in the fall of 2025.

Table 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 ton/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.

City	Population 2025 estimate	County	Design Value	% of Std	Site name	Season/ Frequency	Years	Number of monitors required	Number of active monitors	Number of monitors needed
NA	-	-	-	-	-	-	-	0	0	0

Table A.7. PM_{10} 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.

CBSA or MSA	County	Population 2025 estimate	PM_{10} rating	Site name	Season/ Frequency	Years	Number of monitors required	Number of active monitors	Number of monitors needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,542,282	Low	Portland SE Lafayette (41-005-0080) Portland Humboldt (41-051-2010)	Annual/ 3rd day 6th day	23-25	2	2	0
Eugene-Springfield (21660)	Lane	381,584	Low Low	Eugene Hwy 99W (41-039-0059) Oakridge (41-039-2013)	Annual/ 6th day Daily	23-25	2[d]	2	0
Medford [b] (32780)	Jackson	221,795	Low	Jackson Park (41-029-0029)	Annual/ 6th day	23-25	1[d]	0	0
Grants Pass [b] (24420)	Josephine	87,867	Low	Parkside School (41-033-0114)	$PM_{2.5}$ as a surrogate	23-25	1[d]	0	0
Klamath Falls [b] (28900)	Klamath	70,274	Low	Peterson School (41-035-0004)	$PM_{2.5}$ as a surrogate	23-25	1[d]	0	0
La Grande (29260)	Union	25,900	Low	Hall and North Sts. (41-067-0123)	Annual/ 6th day	23-25	1[d]	1	0
Lakeview [b] (00000)	Lake	8,297[c]	Low	Center and M (41-037-0001)	$PM_{2.5}$ as a surrogate	23-25	1[d]	0	0

a. If the level is high, it is because of wildfire smoke.
b. $PM_{2.5}$ is used as a surrogate for PM_{10} for Grants Pass, Klamath Falls, Lakeview, Medford, and Oakridge.
c. The US Census Bureau did not have estimates. Used Portland State Population Research Center's 2023 estimates.
d. These sites are only required because of their PM_{10} maintenance plans, not because of population.

Oregon had 5 violations (Table A.8) of the PM_{10} maintenance areas in the 2023–2025 period, but all the violations were caused by summer wildfire smoke. Aside from La Grande and Klamath Falls, the PM_{10} maintenance plan doesn't address 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 wildfire smoke protocol which addresses real time responses to wildfire smoke to protect public health and the Smoke Management plan which balances forest prescribed burning with impacts on nearby smoke sensitive receptor areas.

Table A.8. PM_{10} maintenance plan contingency triggers

CBSA or MSA	2023	2024	2025	2023–25 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	0	0	0	0	≥ 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	5	0	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

CBSA or MSA	2023	2024	2025	2023–25 Exceedance/yr	Triggers	Cause	Contingency Requirements
							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 the PM_{10} exceedances mentioned above occurred during wildfire smoke intrusions. Examples of the intrusions are shown below.

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.

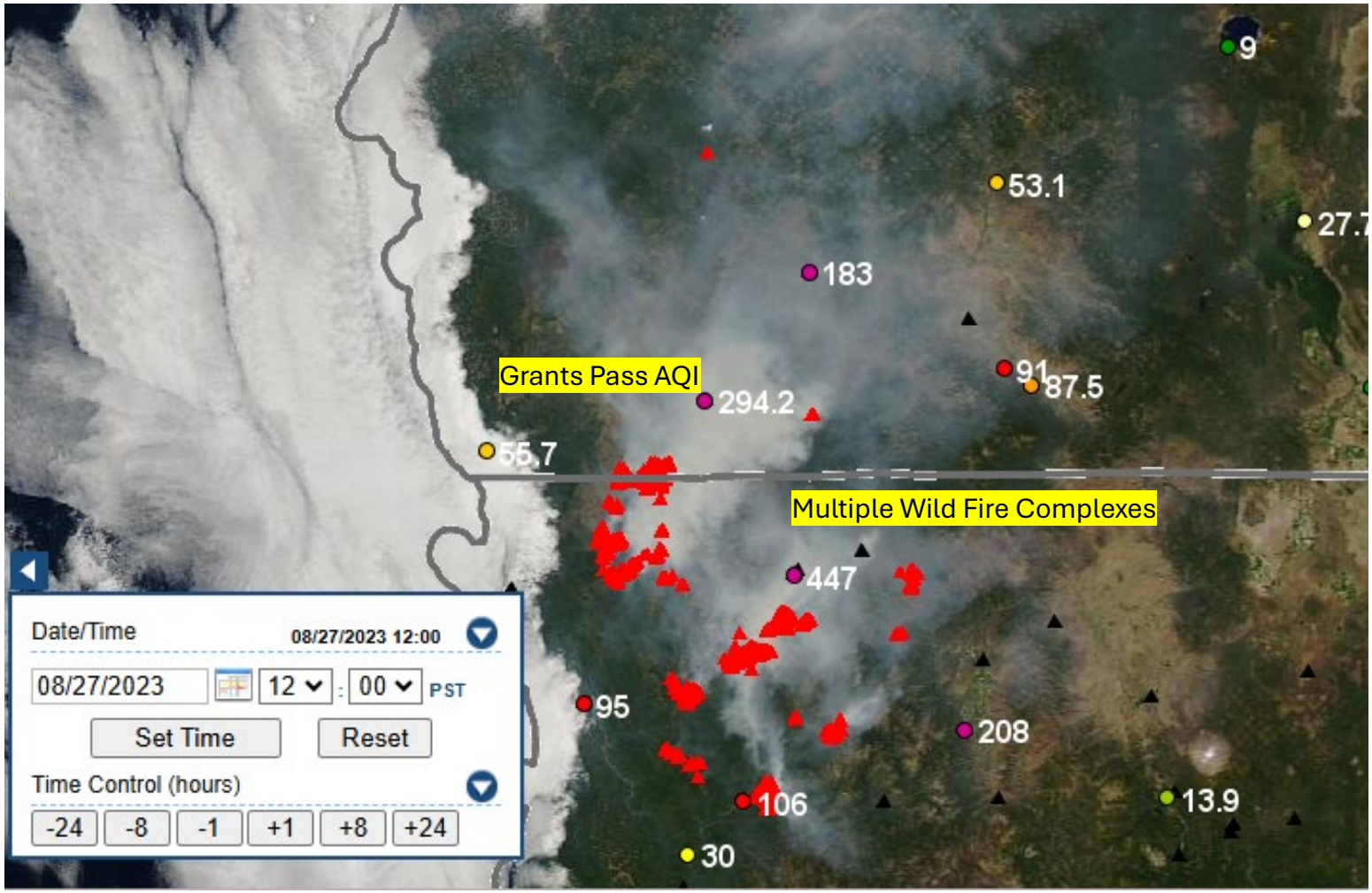

Figure 13. Example of wildfire smoke from Southern Oregon and Northern California impacting Grants Pass' PM_{10}.

Table 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.

CBSA or MSA	County	Pop. 2025 estimate	Design value excluding wildfire days Daily/Annual ($\mu g/m^3$)	Design value including all days Daily/Annual ($\mu g/m^3$)	Site name	Season/ Frequency	Years	Number of monitors required	Number of active monitors	Number of monitors needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,542,282	-	20/5.9	Hillsboro (410670004) SE Lafayette (410510080) Tualatin (410670005)	Annual/ Hourly	23-25	3	3	0
Salem-Kaizer (41420)	Marion	445,814	-	18/5.4 [b]	Salem State Hospital (41-047-0043)	Annual/ Hourly	23-25	0	1	0
Eugene-Springfield (21660)	Lane	381,584	-	24/7.0	Hwy 99 (410390059) Amazon Pk (41-039-0060)	Annual/ Hourly	23-25	0	2	0
Eugene-Springfield (21660)	Lane	381,584	24/6.2	39/8.1	Oakridge (41-039-2013)	Annual/ Hourly	23-25	1	1	0
Eugene-Springfield (21660)	Lane	381,584	20/6.2	25/6.5	Cottage Grove (41-039-9004)	Annual/ Hourly	23-25	0	1	0
Medford (32780)	Jackson	221,795	22/7.2	42/9.2	Jackson Park (41-029-0029)	Annual/ Hourly	23-25	0	1	0
Klamath Falls (28900)	Klamath	70,274	25/7.6	32/8.7	Petersen Sch. (41-035-0004)	Annual/ Hourly	23-25	1	1	0
Grants Pass (24420)	Josephine	87,867	22/6.5	35/8.3	Parkside Sch. (41-033-0114)	Annual/ Hourly	23-25	0	1	0
Prineville (39260)	Crook	27,564 [a]	21/6.0	35/7.5	Davidson Park (41-013-0100)	Annual/ Hourly	23-25	0	1	0
Lakeview (00000)	Lake	8,297 [a]	25/6.2	27/6.8	Lakeview (41-037-0001)	Annual/ Hourly	23-25	0	1	0
Burns-Hines (Harney Co. 00000)	Harney	7,401[a]	22/7.9	51/10.4	Washington Park (41-025-0003)	Annual/ Hourly	23-25	0	1	0

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

b. This is still a special purpose site and the FEM started in 2024. The design values averages the nephelometer data from 2023 and the FEM data from 2024 and 2025 for the three-year averages.

Table 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 well to the FEM monitors. This allows DEQ to have 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.

MSA	County	Pop. 2025 estimate	Design value excluding wildfire days Daily/Annual ($\mu g/m^3$)	Design value including all days Daily/Annual ($\mu g/m^3$)	Site name	Years	Number of monitors required	Number of active monitors	Number of monitors needed
Bend-Redmond (CBSA 13460)	Deschutes	266,376	19/5.2	47/7.7	Bend Pump Station (41-017-0120)	23-25	0	1	0
Bend-Redmond (CBSA 13460)	Deschutes	266,376	21/4.8	59/7.6	Sisters USFS (41-017-0004)	23-25	0	1	0
Albany-Lebanon (CBSA 10540)	Linn	132,843	-	19/5.8	Albany (41-043-0009)	23-25	0	1	0
Albany-Lebanon (CBSA 10540)	Linn	132,843	-	17/5.1	Sweet Home FD (41-043-2002)	23-25	0	1	0
Roseburg (County Pop. 40700)	Douglas	111,951	17/5.9	25/6.8	Fire Department (41-019-0004)	23-25	0	1	0
Corvallis (MSA 18700)	Benton	97,728	-	11/3.3	Corvallis FD 3 (41-003-0013)	23-25	0	1	0
Pendleton (37820)	Umatilla	93,721	-	19/5.8	McKay Creek (41-059-0121)	23-25	0	1	0
The Dalles (County Pop. 17180)	Wasco	26,310	-	18/5.8	Cherry Heights (41-065-0007)	23-25	0	1	0
La Grande (County Pop. 29260)	Union	25,900	-	20/5.9	Hall and North (41-061-0123)	23-25	0	1	0
Baker City - Ontario (County Pop. 36620)	Baker	16,658	18/6.0	21/6.7	Baker City USFS (41-001-0003)	23-25	0	1	0
Enterprise/Joseph (00000)	Wallowa	7,952 [a]	19/5.7	21/5.9	Enterprise (41-063-0001)	23-25	0	1	0
John Day/Canyon City (00000)	Grant	7,221	24/8.8	45/10.4	John Day (41-023-0002)	23-25	0	1	0
Cave Junction – (24420)	Josephine	2,111	25/7.1	67/10.1	Cave Junction (41-033-0036)	23-25	0	1	0

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

Appendix B. Collocation requirements

PM_{10}, $PM_{2.5}$, 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 Federal Equivalence Method monitor (FEM), method 209, for the $PM_{2.5}$ SLAMS sites. DEQ has one FEM/FRM collocated site and one FEM/FEM collocated site. LRAPA has one FEM/FRM collocated site. An FRM is a filter based Federal Reference Method.

For PM_{10} samplers DEQ and LRAPA use methods 216 (Tisch Wilbur) and 640 (Teledyne T640x). DEQ has one collocated site for method 216. Method 640 is the Continuous BAM T640x and does not require collocation.

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

	Method Code	# of Primary monitors	# of Required Collocated Monitors	# Active Collocated FRM Monitors	# Active Collocated FEM monitors (Same method designation as primary)
SLAMS	219	13	1FRM, 1FEM	1FRM	1FEM
SPM	219	3	1 FRM	1FRM	-

Table B.2. Collocation Requirements for PM_{10}

Method Code	# of Primary monitors	# of Required Collocated Monitors	# Active Collocated Monitors	# Active Collocated FEM monitors (Same method designation as primary)
216	3	1	1	0
640	1	0	0	0

Table B.3. Collocation Requirements for PM_{10} 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 presents detailed site information required by 40 CFR Part 58.

Table C.1. Portland, SE Lafayette site information

Site Category	Site specifications
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
Latest Traffic count (AADT, yr)	SE Powell Blvd 54th Ave. westbound AADT = 13,445 westbound, Yr= 9/25/2024 - PBOT
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA,)	Portland-Vancouver-Hillsboro (38900)
Monitor purpose	NAAQS, AQI, NCore, PAMS, Research
Monitoring Objective	Population, non-source

Table C.2. Portland, SE Lafayette $PM_{2.5}$ monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**$PM_{2.5}$**	**$PM_{2.5}$**
Monitoring types	SLAMS, AQI	SLAMS, QC
Spatial scale of representativeness	Neighborhood	Neighborhood
Parameter code, POC	88101,1	88101,2
Instrument type and model	Beta attenuation1022	Gravimetric, Tisch Wilbur
Instrument parameter occurrence code	**Primary**	**Collocate**
Method number	209	219
FRM/FEM/FRM/other	FEM	FRM
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	Hourly	Every 6th day
Sampling season	Annual	Annual
Probe height (meters)	5.4	5.4
Distance from Collocated monitor	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 within 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

Table C.3. Portland, SE Lafayette PM_{10} and PM coarse monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**PM_{10}**	**$PM_{10-2.5}$**
Monitoring types	SLAMS, AQI	SLAMS
Spatial scale of representativeness	Neighborhood	Neighborhood
Parameter code, POC	81102,1	86101,1
Instrument type and model	Teledyne T640x	Teledyne T640x
Instrument parameter occurrence code	**Primary**	**Primary**
Method number	639	640
FRM/FEM/FRM/other	FEM	FEM
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	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	5.4	5.4
Distance from Collocated monitor (meter)	NA	NA
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
Is it suitable for comparison against the standard?	Yes	N/A

Table C.4. Portland, SE Lafayette NO_2 and Ozone monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**NO_2**	**Ozone**
Monitoring types	SLAMS, AQI	SLAMS, AQI
Spatial scale of representativeness	Urban	Urban
Parameter code, POC	42602, 1	44201, 1
Instrument type and model	Cavity Attenuated Phase Shift, Teledyne T500U	UV absorption, Teledyne T400
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

Table C.5. Portland, SE Lafayette CO and SO_2 monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**CO**	**SO_2**
Monitoring types	SLAMS, AQI	SLAMS, AQI
Spatial scale of representativeness	Micro	Urban
Parameter code, POC	42101, 1	42401, 1
Instrument type and model	IR Absorption, Teledyne	UV absorption,
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	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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

Table C.6. Portland, SE Lafayette $PM_{2.5}$ chemical speciation monitor information

Monitoring Category	Monitor Information
Monitor purpose	Trend information, Population, NCore
Monitoring objective	NAAQS support, CSN, Research
Pollutant	**Chemical Speciation**
Monitoring types	NCore, STN, Research
Spatial scale of representativeness	Neighborhood
Parameter code, POC	Numerous parameters, POC 6
Instrument type and model	Super SASS and 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 3rd 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	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 40 CFR Part 58 Appendices A, B, C, D and E?	This monitor is a SPM, in support of the 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

Table C.7. Portland, SE Lafayette NO_y and VOC monitor information

Monitoring Category	Monitor Info	Monitor Info
Monitor purpose	Population, non-source, NCore	Population, non-source, NCore
Monitoring objective	PAMS	PAMS
Monitoring types	NCore	NCore
Pollutant	**NOy**	**VOC**
Parameter code, POC	42101, 1	42401, 1
Spatial scale of representativeness	Urban	Urban
Instrument type and model	IR Absorption, Teledyne T300	UV absorption, 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	No obstructions	No obstructions
Distance from trees (meters)	12.7	11.2
Distance from to furnace or incinerator flue	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	No	No
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	These monitors are SPM, in support of the criterial pollutant network. They are not required to meet Appendices A, B, C, D, and E, but have an EPA approved QAPP and meet the PAMS requirements.	These monitors are SPM, in support of the criterial pollutant network. They are not required to meet Appendices A, B, C, D, and E, but have an EPA approved QAPP and meet the PAMS requirements.
Is it suitable for comparison against the	N/A	N/A

Table C.8. Portland, SE Lafayette Carbonyls and mixing heights monitor information

Monitoring Category	Monitor Info	Monitor Info
Monitor purpose	Population, non-source, NCore	Population, non-source, NCore
Monitoring objective	PAMS	PAMS
Monitoring types	NCore	NCore
Pollutant	**Carbonyls**	**Mixing Height**
Parameter code, POC	42101, 1	42401, 1
Monitor purpose	Population, non-source,	Population, non-source,
Monitoring objective	PAMS	PAMS
Monitoring types	NCore	NCore
Spatial scale of representativeness	Urban	Urban
Instrument type and model	IR Absorption, Teledyne	UV absorption, Teledyne
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	No obstructions	No obstructions
Distance from trees (meters)	11.2	11.2
Distance from to furnace or incinerator flue	14	14
Unrestricted airflow (degrees)	360˚	360˚
Does the monitor meet the requirements of 40 CFR Part 58 Appendices A, B, C, D and E?	These monitors are SPM, in support of the criterial pollutant network. They are not required to meet Appendices A, B, C, D, and E, but have an EPA approved QAPP and meet the PAMS requirements.	These monitors are SPM, in support of the criterial pollutant network. They are not required to meet Appendices A, B, C, D, and E, but have an EPA approved QAPP and meet the PAMS requirements.
Is it suitable for comparison against the	N/A	N/A

Table C.9. Portland, Helensview School site information

Site Category	Site specifications
Local Site Name	**Portland, Cully Helensview School**
AQS ID	**41-051-2011**
GPS Coordinates	45.5625, -122.575278
Street address	8678 NE Sumner St., Portland
County	Multnomah
Distance from roadways (meters)	40 from major road, 16 from minor
Latest Traffic count (AADT, yr)	AADT = 12,848 West Bound on NE LOMBARD ST E OF NE 82ND AVE. 12/9/2024 to 12-13,2024
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver-Hillsboro (38900)
Monitor purpose	Population, non-source oriented

Table C.10. Portland, Helensview School monitor information

Monitoring Category	Monitor Info	Monitor Info
Monitoring objective	NAAQS	NAAQS
Monitoring types	SLAMS, AQI	SLAMS, QC
Spatial scale of representativeness	Neighborhood	Neighborhood
Pollutant	**PM_{10}**	**PM_{10}**
Parameter code, POC	81102, 7	81102, 9
Instrument type and model	Gravimetric, Tisch Wilbur (low volume)	Gravimetric, Tisch Wilbur (low volume)
Instrument parameter occurrence code	**Primary**	**Collocated**
Method number	216	216
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	Every 6th day	Every 12th day
Sampling season	Annual	Annual
Probe height (meters)	4	4
Distance between Primary and Collocate (meters)	2	2
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)	17	17
Distance from to furnace or incinerator flue (meters)	NA	NA
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

Table C.11. Portland/Tualatin Near-roadway site information

Site Category	Site specifications
Local Site Name	**Tualatin Near-roadway**
AQS ID	**41-067-0005**
GPS Coordinates	45.8992, -122.7451
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. 159,610, 2024 ODOT Data and Maps web page
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver-Hillsboro (38900)
Monitor purpose	Source (Freeway)

Table C.12. Portland/Tualatin Near-roadway NO2 and PM2.5 monitor information

Monitoring Category	Monitor Info	Monitor Info
Monitoring objective	NAAQS, AQI,	NAAQS, AQI,
Monitoring types	SLAMS	SLAMS
Spatial scale of representativeness	Microscale	Microscale
Pollutant	**NO_2**	**$PM_{2.5}$**
Parameter code, POC	42602,1	88101,1
Instrument type and model	Cavity Attenuated Phase Shift, Teledyne T500U	Beta Attenuation, Met One BAM1022
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	Hourly
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

Table C.13. Portland/Tualatin Near-roadway ozone and CO monitor information

Monitoring Category	Monitor Info	Monitor Info
Monitoring Objective	NAAQS, AQI	NAAQS, AQI
Monitoring types	SLAMS	SLAMS
Spatial scale of representativeness	Microscale	Microscale
Pollutant	**Ozone**	**CO**
Parameter code, POC	44201,1	42101,1
Instrument type and model	UV absorption, Teledyne T400	IR Absorption, 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

Table C.14. Portland/Tualatin Near-roadway NO_2 monitor information

Monitoring Category	Monitor Information
Monitoring objective	NAAQS, AQI, Research
Monitoring types	SLAMS
Spatial scale of representativeness	Microscale
Pollutant	**NO_2**
Parameter code, POC	42602,1
Instrument type and model	Cavity Attenuated Phase Shift, Teledyne
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	Oct 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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

Table C.15. Hillsboro, Hare Field site and monitor information

Site and Monitoring Category	Site and Monitor 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 and Grant), Yr 2024
Groundcover (e.g. asphalt, dirt, grass)	Asphalt
Representative statistical area name (CBSA, MSA)	Portland-Vancouver-Hillsboro (38900)
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
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	Hourly
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

Table C.16. Portland-Sauvie Island site information

Site Category	Site specifications
Local Site Name	**Portland, Sauvie Island**
AQS ID	**41-009-0004**
GPS Coordinates	45.7685, -122.7721
Street address	Social Security Beach, Sauvie Is,
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-Hillsboro (38900)

*EPA approved the discontinuation of the FRM background site at Medford Dodge Road in the 2010 Annual Network Plan because of budget cuts. DEQ uses correlated FRM- nephelometers to meet this purpose.

Table C.17. Portland - Sauvie Island monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**Ozone**	**$PM_{2.5}$**
Parameter code, POC	44201,1	88502,3
Monitor purpose	Transport	Urban
Monitoring objective	AQI, NAAQS	AQI
Monitoring types	SLAMS	SPM
Spatial scale of representativeness	Rural	Rural
Instrument type and model	UV absorption, Teledyne T400	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	1/1/1999
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
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

Table C.18. Portland-Carus site and monitor information

Site and Monitoring Category	Site and Monitor 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 Clackamas Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver-Hillsboro (38900)
Spatial scale of representativeness	Urban Scale
Pollutant	**Ozone**
Parameter code, POC	44201,1
Monitor purpose	Downwind of Urban, Maximum
Monitoring Objective	NAAQS, AQI
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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

Table C.19. Salem – State Hospital site information

Site Category	Site Specifications
Local Site Name	**Salem State Hospital**
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: East of Evergreen Ave.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Salem 41420

Table C.20. Salem – State Hospital monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**Ozone**	**$PM_{2.5}$**
Parameter code, POC	44201,1	88101,1
Monitor purpose	In urban core	Population
Monitoring objective	NAAQS, AQI	NAAQS, AQI
Monitoring types	SLAMS	SPM
Spatial scale of representativeness	Urban Scale	Neighborhood
Instrument type and model	UV absorption, Teledyne T400	Beta Attenuation, Met One BAM1022
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	Hourly
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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

Table C.21. Salem/Turner site and monitor information

Site and Monitoring Category	Site and Monitor 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) and 70th Ave SE to West Stayton Rd., Marion Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Salem 41420
Pollutant	**Ozone**
Parameter code, POC	44201,1
Monitor purpose	Downwind of Urban, Max
Monitoring objective	NAAQS, AQI.
Monitoring types	SLAMS
Spatial scale of representativeness	Urban Scale
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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

Table C.22. Eugene – Amazon Park site information

Site Category	Site Specifications
Local Site Name	**Eugene – Amazon Park**
AQS ID	**41-039-0060**
GPS Coordinates Street address	44.0263, -123.0837 E. 29th Amazon Park, Eugene, OR
County	Lane
Distance from roadways (meters)	61
Traffic count (AADT, yr)	2022 AADT = 12,902 Patterson St. Central Lane MPO
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield 2400

Table C.23. Eugene – Amazon Park monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**Ozone**	**$PM_{2.5}$**
Parameter code, POC	44201,1	88101,1
Monitor purpose	Urban Population	NAAQS
Monitoring Objective	NAAQS, AQI	NAAQS, AQI
Monitoring types	SLAMS	SLAMS
Spatial scale of representativeness	Urban Scale	Neighborhood
Instrument type and model	Teledyne API 400 Ultraviolet	Beta Attenuation, 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	Hourly
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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes	Yes
Is it suitable for comparison against the standard?	Yes	Yes

Table C.24. Eugene – Saginaw site and monitor information

Site and Monitoring Category	Site and Monitor 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)	2024 AADT = 38,225. 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 2400
Monitor purpose	Downwind of Urban, Highest Concentration
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Urban Scale
Pollutant	**Ozone**
Parameter code, POC	44201,1
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 40 CFR Part 58 Appendices A, B, C, D and E?	Yes
Is it suitable for comparison against the standard?	Yes

Table C.25. Eugene – Hwy 99 site information

Site Category	Site Specifications
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= 22,625, Hwy 99W (Hwy # 91) and Irving Road. yr = 2024
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield 2400
Monitor purpose	Population
Spatial scale of representativeness	Neighborhood

Table C.26. Eugene – Hwy 99 monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**$PM_{2.5}$**	**PM_{10}**
Monitoring objective	NAAQS, AQI	NAAQS, AQI
Monitoring types	SLAMS	SLAMS
Parameter code, POC	88101,1	81102,1
Instrument type and model	Beta Attenuation, Met	Tisch Wilbur
Instrument parameter occurrence code	**Primary**	**Primary**
Method number	209	216
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	Every 6th day
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

Table C.27. Cottage Grove, City Shops site information

Site and Monitoring Category	Site and Monitor Information
Local Site Name	**Cottage Grove, City Shops**
AQS ID	**41-039-9004**
GPS Coordinates	43.7995, -123.0535
Street address	Harvey Lane and 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)	Eugene-Springfield 2400
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
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

Table C.28. Oakridge, Willamette Center site information

Site and Monitoring Category	Site and Monitor Information
Local Site Name	**Oakridge, Willamette Center**
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 Recorder, Willamette Hwy Mile Post 37.36 Sta. 20-017, 0.10 mile east of Kitson Springs Road AADT = 3532, yr =2024
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield 2400
Monitor purpose	Population
Spatial scale of representativeness	Neighborhood

Table C.29. Oakridge, Willamette Center monitor information

Pollutant	**$PM_{2.5}$**	**$PM_{2.5}$**
Monitoring objective	NAAQS, AQI	NAAQS, AQI
Monitoring types	SLAMS	SPM
Parameter code, POC	88101,1	88101,2
Instrument type and model	Beta Attenuation, Met One BAM1022	Tisch Wilbur PM2.5 filter sampler
Instrument parameter occurrence code	**Primary**	**Collocate**
Method number	209	
FRM/FEM/FRM/other	FEM	FRM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	DEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1999	1/1/2025
Current sampling frequency	Hourly	Every 6th day
Sampling season	Annual	Annual
Probe height (meters)	5	5
Distance between Primary and Collocate (meters)	1	1
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)	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 within 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

Table C.30. Grants Pass, Parkside School site and monitor information

Site and Monitoring Category	Site and Monitor 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,
County	Josephine
Distance from roadways (meters)	85
Traffic count (AADT, yr)	AADT = 466, yr = 3/8/2022 Cottonwood St, between Bridge St and Dan Circle, facing southerly
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Grants Pass 24420
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
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
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

Table C.31. Medford, Jackson Park site and monitor information

Site and Monitoring Category	Site and Monitor 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. Columbus Ave. (Jackson to McAndrews. 2024)
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Medford 32780
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
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	7/21/2023
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)	34
Distance from to furnace or incinerator flue (meters)	132
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

Table C.32. Medford - Talent site and monitor information

Site and Monitoring Category	Site and Monitor Information
Local Site Name	**Medford - Talent**
AQS ID	**41-029-0201**
GPS Coordinates	42.2299, -122.7877
Street address	7120 Rapp ln, 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 32780
Monitor purpose	Downwind of Urban, Highest Concentration
Monitoring Objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Urban Scale
Pollutant	**Ozone**
Parameter code, POC	44201,1
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	5/12/1992
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	4.6
Distance from supporting structure (meters)	0.3
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	52
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360˚
Probe material for reactive gases	Teflon (1/4")
Residence time for reactive gases (seconds)	2.8 (probe length 15ft)
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

Table C.33. Klamath Falls, Petersen School site information

Site Category	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 = 7985 (Clinton and Summers) , Yr = 4/25/2018.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Klamath County 28900
Monitor purpose	Population
Spatial scale of representativeness	Neighborhood

Table C.34. Klamath Falls, Petersen School monitor information

Monitoring Category	Monitor Info	Monitor Info
Pollutant	**$PM_{2.5}$**	**$PM_{2.5}$**
Monitoring objective	NAAQS, AQI	NAAQS, QC
Monitoring types	SLAMS	SLAMS
Parameter code, POC	88101,1	88101,2
Instrument type and model	Beta Attenuation, Met One BAM1022	Beta Attenuation, Met
Instrument parameter occurrence code	**Primary**	**Collocate**
Method number	209	209
FRM/FEM/FRM/other	FEM	FEM
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/2019	1/1/2023
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	2.7	2.7
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

Table C.35. Lakeview, Center and M Streets site and monitor information

Site and Monitoring Category	Site and Monitor Information
Local Site Name	**Lakeview, Center and M Streets**
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 = 2960 ODOT (Hwy 20 and L St.) yr = 2024 MP 96.03
Groundcover (e.g. asphalt, dirt, grass)	Dirt
Representative statistical area name (CBSA, MSA)	Lake County 0000
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
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)	2.8
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

Table C.36. Burns, Washington Street site information

Site and Monitoring Category	Site and Monitor 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= 3648 (Steens Hwy 442 and Alder Ave), Yr = 2024 MP 0.03
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Harney County 0000
Monitoring purpose	Population
Monitor objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
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)	2.3
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
Is it suitable for comparison against the standard?	Yes

Table C.37. Prineville, Davidson Park site and monitor information

Site and Monitoring Category	Site and Monitor Information
Local Site Name	**Prineville, Davidson Park**
AQS ID	**41-013-0100**
GPS Coordinates	44.2998, -120.8448 NAD83
Street address	251 SE Court St, Prineville, OR
County	Crook
Distance from roadways (meters)	10
Traffic count (AADT, yr)	12,140 (Ochoco HW No. 41 MP 19. (Fairview St), 2024
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Prineville, OR Micro Area 39260
Monitor purpose	Population
Monitoring objective	NAAQS. AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**$PM_{2.5}$**
Parameter code, POC	88101,1
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)	2.4
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

Table C.38. La Grande, Hall and North site and monitor information

Site and Monitoring Category	Site and Monitor 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 Grande, OR
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)	La Grande 29260
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Neighborhood
Pollutant	**PM_{10}**
Parameter code, POC	81102,7
Instrument type and model	Gravimetric, Wilbur
Instrument parameter occurrence code	**Primary**
Method number	216
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	9/1/2017
Current sampling frequency	Every 6th day
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˚
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

Table C.39. Hermiston Municipal Airport site and monitor information

Site and Monitoring Category	Site and Monitor 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 = 8588 (MP 8.7, US395 or Hwy 54), Yr = 2024
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Hermiston 25840
Monitor purpose	Population
Monitoring objective	NAAQS, AQI
Monitoring types	SLAMS
Spatial scale of representativeness	Urban
Pollutant	**Ozone**
Parameter code, POC	44201,1
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
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.

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

	EPA notes	DEQ comment
	No notes	n/a

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.

E.1 NCORE PM_{10} lead waiver

In 2019 EPA approved DEQ's request to discontinue PM_{10} lead monitoring at DEQ's NCORE site at Portland, SE Lafayette.

E.2 Carbon monoxide waivers

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

E.3 PM_{10} surrogate monitoring

In 2010 the Grants Pass PM_{10} monitor was discontinued because its values had dropped far below the NAAQS and funding was cut. The PM_{10} 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 150µg/m3. Lakeview, Oakridge, and Medford were also approved in a similar way in later annual network plans.

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

2025 PM_{10} estimates	Grants Pass	Klamath Falls	Lakeview	Medford	Oakridge
Linear Regression Equation	y = 1.2x + 2.6	y = 1.4x + 3.2	Q1 and 4: y = 1.5x + 3.0 Q2 and 3: y = 2.9x + 0.6 Wildfire smoke: y = 1.1x+15.6	y = 1.1x + 6.0	y = 1.6x + 7.8

Y = PM_{10}, X = $PM_{2.5}$

Table E.3. PM10 estimates number of days >150 µg/m3

Date	Klamath Falls	Grants Pass	Lakeview	Medford	Oakridge
2023-25 Average	**0**	**1.7**	0	0	0
2023	0	**5**[a]	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0

a. All days from wildfire smoke

E.4 Monitoring Waiver Documents

E.4.1 2005 - Klamath Falls CO monitoring waiver approval

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

E.4.3 2018 – NCore PM_{10} lead waiver request and approval.

E.4.4 2023 – Lakeview PM_{10} monitoring waiver request and approval.

E.4.5 2025 – Eugene MSA PM_{10} monitoring waiver request and approval.

E4.6 2025 – Oakridge PM_{10} monitoring waiver request and approval.

E4.7 2025 – Medford PM_{10} monitoring waiver request and approval.

E.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

20 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

cc: Jeff Smith, ODEQ
Connie Robinson
Keith Rose

E.4.2. 2011 - Klamath Falls PM10, Grants Pass PM10, and Medford CO monitoring waiver

Request and approval

Waiver request

Justification for Discontinuation of Monitoring in Carbon Monoxide and PM_{10} Maintenance Areas (This document is too large to post here and is available upon request)

Waiver approval

Note that page two is missing but 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 06 2012

OFFICE OF
AIR, WASTE AND TOXICS

Dept of Environmental Quality
Air Quality Division

JAN 09 2012

RECEIVED

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

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:

1) 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.

5) 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
b) Eugene/Amazon Park
c) Medford/Grant & Belmont
d) Klamath Fall

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 MSuzuki

Debra Suzuki, Manager
State and Tribal Program Unit

E.4.3. 2018 - NCore PM10 lead monitoring waiver request and approval

Waiver request

Oregon

Kate Brown, Governor

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 19 2018

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

E.4.4. 2023 – Lakeview PM2.5 as a surrogate for PM10 waiver approval

Waiver request

Justification for Discontinuation of Monitoring in Carbon Monoxide and PM_{10} Maintenance Areas (This document is available upon request)

Waiver approval

EPA approved the use of $PM_{2.5}$ as a surrogate for PM_{10} 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 PM_{10} monitoring with surrogate $PM_{2.5}$ at the Lakeview site (AQS ID:41-037-0001). Lakeview is a PM_{10} maintenance area, and its current 10-year Maintenance Plan applies through 2026 (71 FR 14399). ODEQ originally discontinued PM_{10} monitoring and used $PM_{2.5}$ as a surrogate in 2006 (approved in the 2007 ANP response). However, because the correlation relationship between PM_{10} and $PM_{2.5}$ was not adequately demonstrated, R10 required ODEQ to reassess their method for demonstrating continued attainment of the PM_{10} 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 $\mu g/m^3$). 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.

E.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:

2) Waiving the PM_{10} minimum monitoring requirement for the Eugene-Springfield Metropolitan Statistical Area (MSA). This MSA has had a minimum monitoring requirement of 3-4 PM_{10} 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 PM_{10} 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 PM_{10} air quality trends given PM_{10} sources in the MSA and the area's geography. Key considerations include:
   a) The main source of PM_{10} is wildfire smoke. From 2020 to 2023, the only days exceeding "low" PM_{10} concentrations in the MSA were due to wildfire smoke, without which the minimum monitoring requirement would be 0-1 sites.
   b) The proposed PM_{10} monitoring network meets the requirements set out in the PM_{10} maintenance plans (MPs). Both Eugene and Oakridge have PM_{10} maintenance areas. The PM_{10} SLAMS monitor in Eugene meets the MP commitment to continued operation of a PM_{10} 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

E.4.6. 2025 – Waiver to use $PM_{2.5}$ as a surrogate for PM_{10} in Lakeview

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

E.4.7. 2025 – Waiver to use $PM_{2.5}$ as a surrogate for PM_{10} in Medford

Waiver request

Lakeview PM2.5 Surrogate Monitoring for the PM10 Maintenance Plan Requirements

(This document is part of the 2025 Annual Network Plan and is available upon request)

Waiver approval

REGION 10
SEATTLE, WA 98101

March 10, 2026

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

Dear Mr. Barnack:

The U.S. Environmental Protection Agency (EPA), Region 10 (R10) evaluated the Oregon Department of Environmental Quality's (DEQ) Annual Air Monitoring Network Plan (ANP) received on July 1, 2025. DEQ requested three additional network modifications after their ANP submission. R10 also addresses those requests in this letter, and the request documentation are enclosed as appendices to this letter. By this letter, Region 10 documents its findings from the review and approves the State of Oregon's 2025 ANP.

We appreciate the work DEQ is doing to maintain and improve the state's air quality monitoring network, even given budgetary constraints. A notable achievement this past year was establishing the second near-road site in the Portland-Vancouver area. We want to acknowledge the level of effort and dedication DEQ staff exhibited to navigate permitting, procurement, setup and maintenance of this advanced monitoring site. Thank you for including the Memorandum of Understanding (MOU) between DEQ and the Washington State Department of Ecology (Ecology) as Appendix F. This MOU formally establishes that the minimum monitoring requirements for the Portland-Vancouver-Hillsboro core-based statistical area (CBSA) are jointly met by the two agencies. This MOU was approved by R10 in May 2019 and was renewed in April 2024 for another five years, through 2029.

Thank you for including documentation of monitoring waivers for lead (Pb), carbon monoxide (CO), and PM_{10} in Appendix E. We want to note that the waiver for monitoring reactive oxides of nitrogen (NO_y) at NCore that had been in place since 2012 is no longer applicable. DEQ resumed monitoring NO_y at the NCore site in June 2024 as part of the PAMS suite of measurements. We also appreciate the documentation of the verification of continued attainment for PM_{10} maintenance areas using $PM_{2.5}$ as a surrogate measurement for Oakridge, Grants Pass, Klamath Falls, and Lakeview, and the work ODEQ is doing to expand non-regulatory $PM_{2.5}$ monitoring across the state.

We approve the following network modifications requested in the ANP and additional written modification requests (Enclosures 1-4):

The pertinent section is 2) Replacing PM10 monitoring with surrogate PM2.5… :

2) Replacing PM_{10} monitoring with surrogate $PM_{2.5}$ at the Medford, Jackson Park site (AQS ID: 41-029-0029).
The Medford $PM_{2.5}$ surrogate request and justification (Enclosure 2) demonstrates that this method is adequate to protect human health and is a needed efficiency in their monitoring network due to budget shortfalls. The replacement of direct PM_{10} monitoring with surrogate $PM_{2.5}$ would coincide with discontinuation of DEQ's supplemental air toxics monitoring station in Medford, also due to budgetary restrictions.

Medford is a PM_{10} maintenance area and the 20-year maintenance period under CAA 175A applies through August 18, 2026 (i.e., 20 years after the effective date of the redesignation to attainment, see 71 FR 35163). In the justification document, DEQ 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 explains how the area has attained the PM_{10} NAAQS since 1993, due in large part to the adoption of the State Implementation Plan's control measures on sources of PM_{10}. The PM_{10} levels monitored in the area have continued to steadily decline, except for elevated levels due to wildfire smoke in 2017 and 2020. These elevated levels were still below the PM_{10} NAAQS.

The surrogate justification also demonstrates how DEQ will estimate the PM_{10} levels from the $PM_{2.5}$ measurements to verify continued attainment of the PM_{10} NAAQS in Medford. 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 Medford violates the contingency plan trigger from sources other than those demonstrated by DEQ to be exceptional events per the correlated PM_{10} calculations.

Using $PM_{2.5}$ as a surrogate for PM_{10} monitoring has been approved for four other PM_{10} maintenance area monitoring locations in Oregon's monitoring network: Oakridge, Grants Pass, Klamath Falls, and Lakeview. The DEQ ANP includes a section summarizing PM_{10} maintenance plan contingency triggers as well as a section on $PM_{2.5}$ surrogate monitoring. The surrogate monitoring section summarizes the $PM_{2.5}$ to PM_{10} conversion equations and compares the estimated PM_{10} values to relevant maintenance plan thresholds at each site.

Because DEQ has demonstrated that using $PM_{2.5}$ as a surrogate for PM_{10} in Medford is sufficient to protect human health 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. Please note that a revision to the Medford PM_{10} State Implementation Plan (SIP) will be necessary to reflect this change.

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 (NO_2). ODEQ is currently working with EPA Region 10 to

identify a suitable location and secure funding for the installation of a second near-road NO_2 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:

4/5/2024 DocuSigned by: Matthew R. Shrensel 4BA13B50BBA44F8...

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

4/5/2024 DocuSigned by: Sean Lundblad 1F4206C1B9A24A8...

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 web page below which has many subscribers. The page provides a link to subscribe for notices.

H.1 Here is the Public Notice page:

H.2 Gov Delivery

H.3 Public Comments