



2023 Oregon Annual Ambient Criteria Pollutant Air Monitoring Network Plan

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This document was prepared by
Oregon Department of Environmental Quality
Air Quality Monitoring
7202 NE Evergreen Pkwy, Hillsboro, OR 97124
Contact: Anthony Barnack
Phone: 971-806-2223
www.oregon.gov/deq



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800-452-4011 | TTY: 711 | deqinfo@deq.oregon.gov

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Executive Summary

This annual criteria pollutant network plan is required by EPA and discusses changes to the Oregon Department of Environmental Quality's (DEQ) criteria pollutant monitoring network. DEQ also has an ambient air toxics monitoring network that includes trend sites and neighborhood assessment sites. The planning for air toxics monitoring is conducted separately from the criteria pollutant network plan and can be found on the DEQ Air Quality Monitoring web page at <http://www.oregon.gov/deq/air/Pages/Air-Quality-Monitoring.aspx>

In 2023/2024 DEQ plans the following changes to the criteria monitoring network upon approval from EPA.

PM2.5 Federal Equivalence Monitoring (FEM)

DEQ is adding an FEM monitor to the Salem State Hospital monitoring location. The site currently only has a nephelometer. The Salem CBSA is approaching the population requirement for FRM/FEM monitoring and DEQ received EPA funding to buy an FEM for this purpose. DEQ also received EPA funding to rotate FEMs around the state to calibrate the SensOR network. These calibrations will start in 2023.

In 2021, DEQ received additional funding to place 20 more SensOR sites to provide wildfire smoke health information. DEQ has selected the locations to place the new monitors and will begin putting these out in the summer of 2023. DEQ will post new locations on the [DEQ's Air Quality Monitoring web page](#).

DEQ is planning on moving the Lakeview and Medford PM2.5/PM10 sites to new locations in 2023. The current locations have land use issues and DEQ wants to move the sites to sports fields with no localized emission activity.

PM10 Federal Equivalence Monitoring (FRM)

DEQ is currently running a PM10 FRM in Lakeview to meet the PM10 Maintenance Plan requirements. DEQ is requesting a waiver that will allow the PM2.5 FEM to be used as a surrogate for PM10 monitoring. The waiver request is submitted in this plan.

Photochemical Assessment Monitoring Stations (PAMS)

DEQ is required to install PAMS at our National Core Site (NCore) in Portland. DEQ is in the process of installing a larger shelter to accommodate the added equipment. The current forecast is to have the site up and running by the late summer of 2023.

Second Near Road Site

The Portland –Vancouver- Hillsboro CBSA has over 2.5 million people in 2020, triggering the requirement for a second near road site. DEQ will work with WADOE to identify where this monitoring site should go using EPA siting criteria.



This document is available on the Oregon Department of Environmental Quality's website at:

<https://www.oregon.gov/deq/aq/pages/air-quality-monitoring.aspx>

Key word search: Oregon DEQ Air Quality Monitoring

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Glossary of Air Quality Terms

AQI	Air Quality Index – standardized EPA method of reporting air quality
CO	Carbon monoxide – An odorless, colorless gaseous pollutant
DV	Design Value – the pollutant concentration used to compare to the NAAQS
FEM	Federal Equivalence Method (Method approved for comparison to NAAQS)
FRM	Federal Reference Method (Method approved 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
NAAQS standards	National Ambient Air Quality Standards – federal air quality standards
NATTS	National Air Toxics Trends network
NO	Nitrogen oxide
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxides – reddish brown gaseous pollutant - mainly NO and NO ₂
NO _y	NO _x + HNO ₃ + organic nitrates + inorganic nitrates = NO _x + NO _z
O ₃	Ozone – a gaseous pollutant and a component of smog at ground level
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}	The particle size between 10 and 2.5.
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
TSP	Total Suspended Particulates
VOC	Volatile Organic Compounds
Air Pollutant Concentration Units:	ppm Parts per million
ppb	Parts per billion
µg/m ³	Microgram per cubic meter
ng/m ³	Nanograms per cubic meter

1. Introduction

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

40 CFR 58.10 requires the state and local air quality surveillance agencies to write an annual ambient air quality monitoring network plan. EPA requires the plan to be put out for public comment and submitted to EPA by July 1st. This report is used to determine if the network meets the monitoring objectives defined in Part 58, Appendix D and to propose modifications to the network in the following year. A more detailed air quality data summary is available annually at [Oregon DEQs Air Quality Monitoring web page](#).

2. Monitoring background

2.1 National Monitoring Strategy

The National Monitoring Strategy directs state and local agencies to operate continuous monitors and to collect real time air quality data. The real time information is available through EPA's [AIRNow](#) and DEQ's [Air Quality Index \(AQI\)](#) web pages. In particular, EPA encourages states to use continuous PM_{2.5} monitors instead of the filter based samplers which do not provide real time information. The National Monitoring Strategy also created National Core (NCore) sites which contain a wide array of pollutant monitoring. DEQ's NCore site has monitors for Carbon monoxide (CO), Nitrogen oxides (NO_x), Sulfur dioxide (SO₂), ozone (O₃), particulate matter 2.5 and 10 micrometers in diameter and smaller (PM_{2.5} and PM₁₀), PM coarse (PM_{10-PM2.5}=PM_c), PM_{2.5} Speciation, visibility, and meteorology. The NCore site will also soon house the PAMS monitors which include near real time volatile organic compounds (VOCS) and a ceilometer to measure mixing height. The NCore site is in SE Portland.

2.1.1 State and Local Support

Our monitors support state and local needs by providing data for the Air Quality Index, local residential wood combustion management programs, Air Quality Advisories, the Department of Agriculture's field burning program, the US Forest Service and BLM's forest health programs, and community monitoring. DEQ also operates a visibility network in the Cascades to support Regional Haze requirements protecting pristine Class 1 areas.

2.1.2 AQ Maintenance and Non-attainment support

DEQ monitoring supports the SIPs and maintenance plans developed for many cities. DEQ also has monitors in attainment areas with fast growing populations to support pollution prevention measures.

2.2 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](#).

2.2.1 Non-attainment areas awaiting maintenance plans:

PM2.5 Klamath Falls - Moderate nonattainment of 2006 daily PM2.5 standard.
2012 State implementation Plan.

2.2.2 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

PM2.5: 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 Air Monitoring Network Design

Site Type and Spatial Scale

Federal regulations, specifically 40 CFR Part 58 Appendix D, require that a State and Local Air Monitoring (SLAMS) network be designed to meet a minimum of three basic monitoring objectives: Provide air pollution data to the public in a timely manner, support compliance with the National Ambient Air Quality Standards (NAAQS), and support air pollution research. A variety of site types are needed to support these objectives, including the six general types identified in Appendix D.

1. Sites located to determine the **highest concentrations** expected to occur in the area covered by the network.
2. Sites located to measure typical **concentrations in areas of high population** density.
3. Sites located to determine the **impact of significant sources** or source categories on air quality.
4. Sites located to determine general **background concentration** levels.
5. Sites located to determine the extent of **regional pollutant transport** among populated areas; and in support of secondary standards.
6. Sites located to measure air pollution **impacts on visibility, vegetation damage, or other welfare-based impacts**.

The physical siting of an air monitoring station must conform to 40 CFR Part 58 and its location must achieve a spatial scale of representativeness that is consistent with the monitoring objective and site type. The spatial scale results from the physical location of the site with respect to the pollutant sources and categories. It estimates the size of the area surrounding the monitoring site that experiences uniform pollutant concentrations. The categories of spatial scale are:

1. Microscale-Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
2. Middle scale-Defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
3. Neighborhood scale—Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range. The neighborhood and urban scales listed below have the potential to overlap in applications that concern secondarily formed or homogeneously distributed air pollutants.
4. Urban scale-Defines concentrations within an area of city-like dimensions, on the order of 4 to 50 kilometers. Within a city, the geographic placement of sources may result in there being no single site that can be said to represent air quality on an urban scale.
5. Regional scale-Defines usually a rural area of reasonably homogeneous geography without large sources, and extends from tens to hundreds of kilometers.
6. National and global scales-These measurement scales represent concentrations characterizing the nation and the globe as a whole.

Table 1. Relationship Between Site Type and Scale of Representativeness

Site Type	Appropriate Spatial Scale
Highest Concentration	Micro, Middle, Neighborhood (sometimes urban)
Population Exposure	Middle, Neighborhood, Urban
Source Oriented	Micro, Middle, Neighborhood
General/Background	Neighborhood, Urban, Regional
Welfare-related Impacts	Urban, Regional

3.2 Oregon Criteria Pollutant Monitoring Network

Oregon DEQ operates the ambient monitoring network for the entire state, with the exception of Lane County which is operated by the Lane Regional Air Protection Authority (LRAPA). Tribal lands are sovereign and do not fall under DEQ'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 - ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, 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. 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 networks sites.

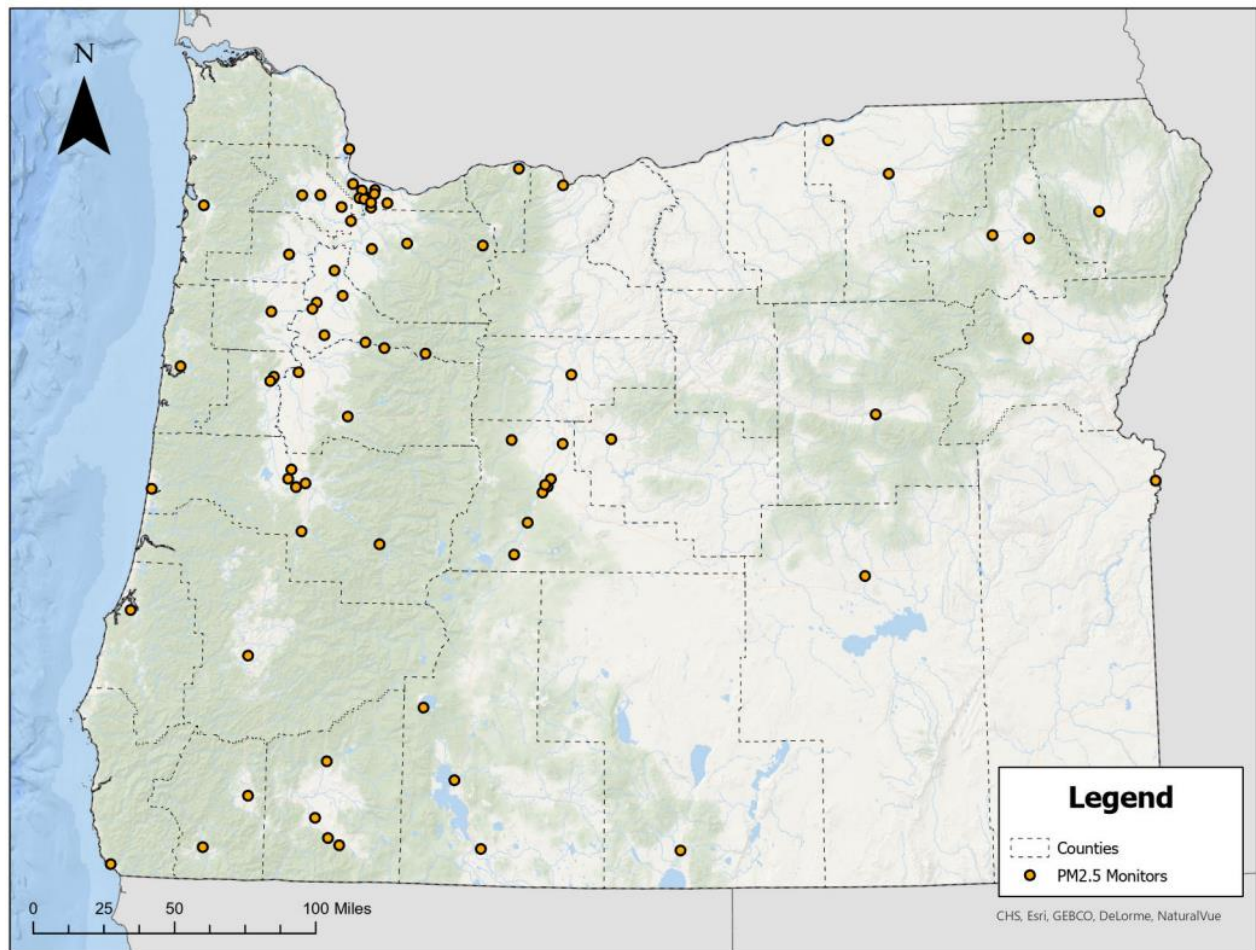


Figure 1. ODEQ and LRAPA Ambient Air Monitoring Network

Table 2. 2023 ODEQ and LRAPA Criteria Pollutant Ambient Air Monitoring Network

City	Address	Site Code	EPA#	SO2	CO	NO ₂	Ozone	PM2.5	PM2.5 Spec	PM10	WS/WD
Burns	Washington Street	BWS	410250003					x			x
Cottage Grove	City Shops	CGC	410399004					x			
Eugene (Saginaw)	Pacific Hwy 99N	E99	410390059					x		x	
	Amazon Park	EAP	410390060				x	x			
	Delight Valley Sch Rd	SAG	410391007				x				
Grants Pass	Parkside School	GPP	410330114				x			x	
Hermiston	Municipal Airport	HMA	410591003				x				x
Klamath Falls	Peterson School	KFP	410350004					x			x
La Grande	Hall and North Sts	LHN	410610123							x	x
Lakeview	Center & M Streets	LCM	410370001					x		x	x
Medford	Rapp Rd Talent	TAL	410290201				x				
	Welch & Jackson	MWJ	410292129					x		x	
Oakridge	School St.	OAK	410392013					x		x	x
Portland	57 th & SE Lafayette	SEL	410510080	x	x	x	x	x	x	x	x
	Humboldt School	PHS	410512010							x	x
	Tualatin – I-5	TBC	410670005		x	x	x	x			x
	Carus	Spangler Rd.	SPR	410050004				x			x
	Hillsboro	NE Grant St.	HHF	410670004					x		x
	Sauvie Island	NW SI	SIS	410090004				x			x
Prineville	SE Court St.	PDP	410130100					x			x
Salem (Turner)	Salem State Hosp.	SSH	410470041				x				
	Cascade Jr. High,	CJH	410470004				x				x

Key:

Gasses:

SO₂ = Sulfur dioxide, CO = Carbon Monoxide, NO₂ = Nitrogen dioxide, ozone

Particulates:

PM₁₀ = Particulate Matter 10 microns in diameter or smallerPM_{2.5} = Particulate Matter 2.5 microns in diameter or smallerSpec = PM_{2.5} chemical speciation,

Lead = no criteria pollutant lead monitors

Meteorology monitors:

WS/WD = Wind speed and direction,

Temp = Outdoor temperature at 2 meters,

DT = Delta (difference) in Temperature at 2 and 10 meters,

BP = Barometric Pressure, RH = Relative Humidity, SR = solar radiation

Other:

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

3.2.1 Ozone Network

Oregon DEQ and LRAPA have 10 monitoring sites for ozone. 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. Maps of the network are shown below.

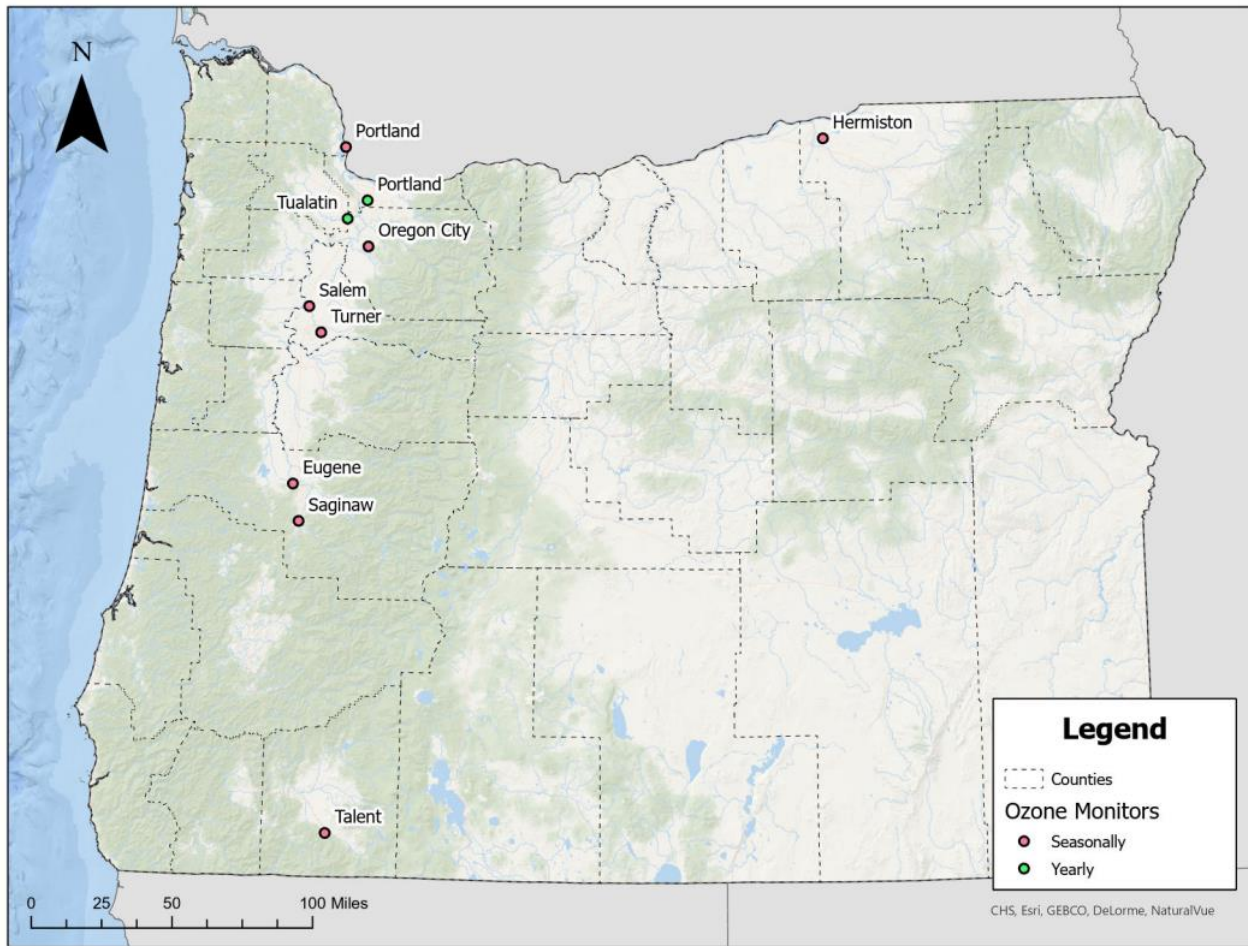


Figure 2. Ozone Monitoring Network

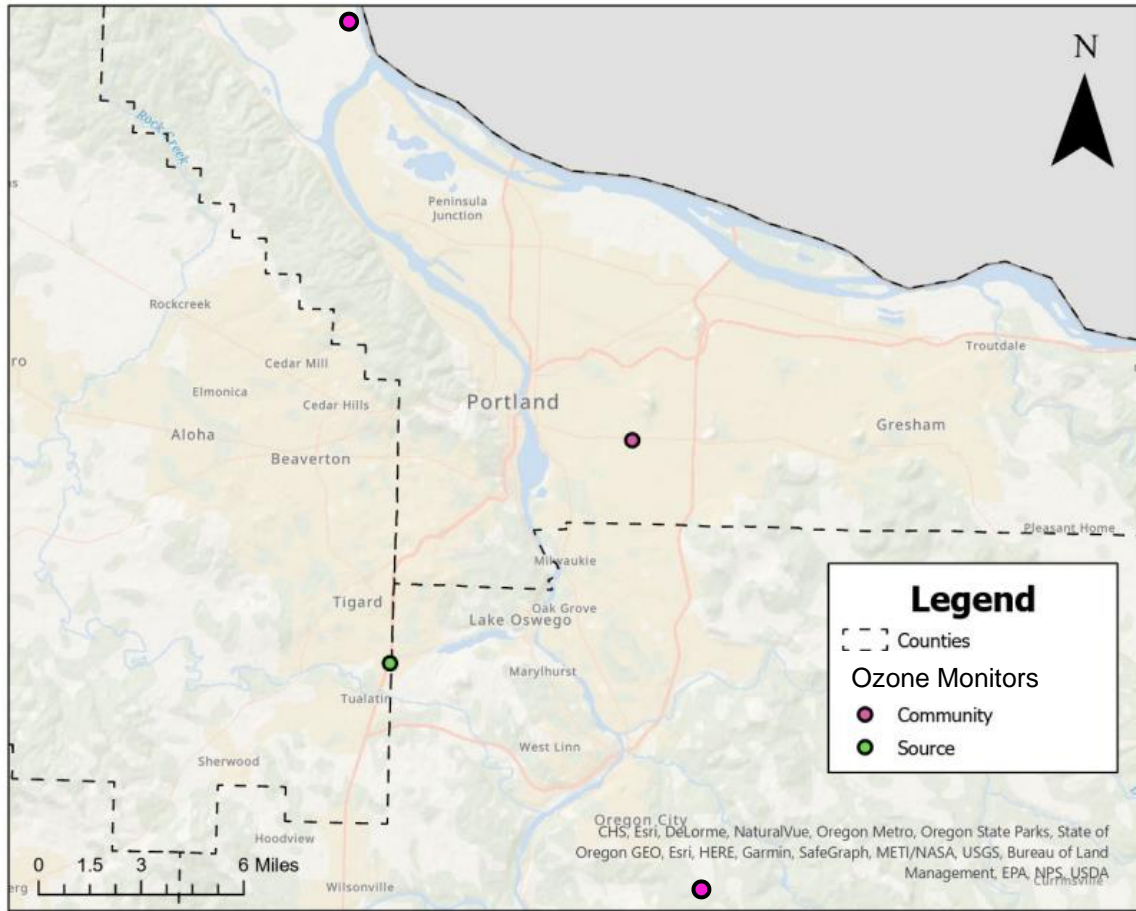


Figure 3. Portland- Metro Ozone Monitoring Sites.

Changes to the Ozone network in the past year

No changes

3.2.2 Nitrogen Dioxide Network

Oregon DEQ has two monitoring sites for NO₂, both in the Portland-Metro area. One is a community scale site located in SE Portland. The other is the near roadway site which measures vehicle contributions to NO₂. LRAPA has no monitoring sites.

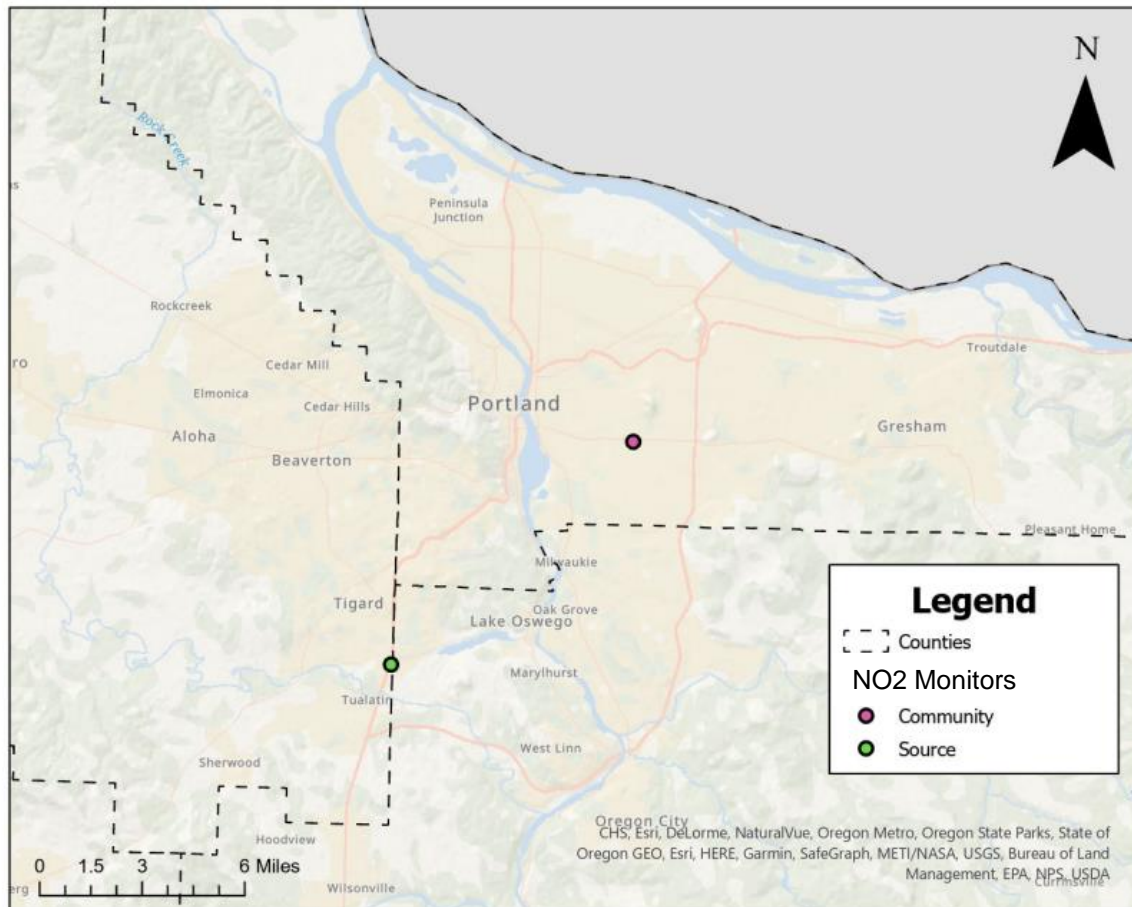


Figure 4. NO₂ Monitoring Network

Source monitor (measuring I-5 emissions)

Community monitor (Measuring in neighborhood)

Changes to the NO₂ network in the past year

No changes

3.2.3 Carbon Monoxide Network

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

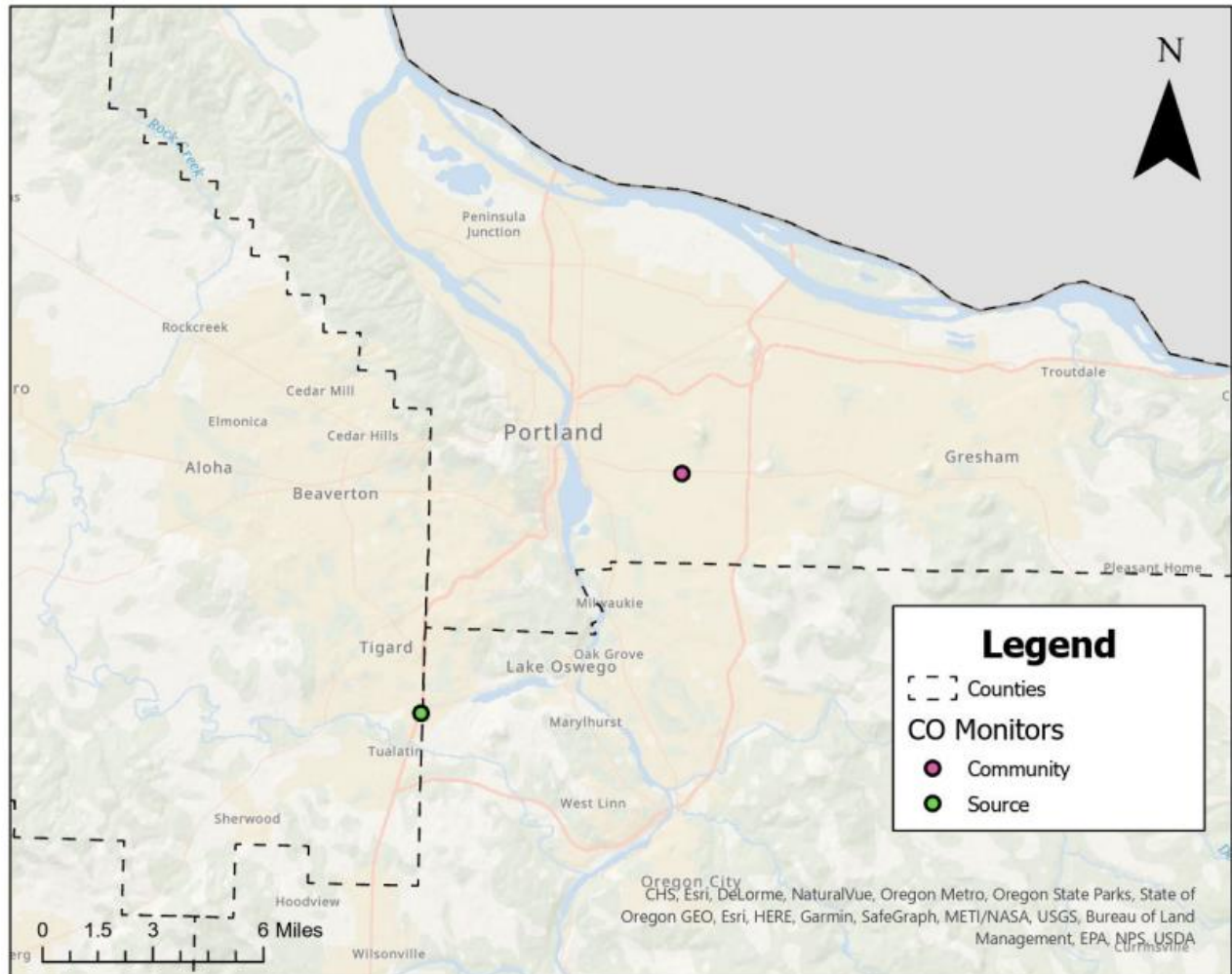


Figure 5. CO Monitoring Network

Source monitor (measuring I-5 emissions)

Community monitor (Measuring in neighborhood)

Changes to the CO network in the past year

No changes

3.2.4 PM2.5 Network

Oregon DEQ and LRAPA have one NCore and 12 SLAMS Federal Equivalence Method (FEM) sites for PM2.5. 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 PM2.5 speciation site and it is in SE Portland (the trend site).

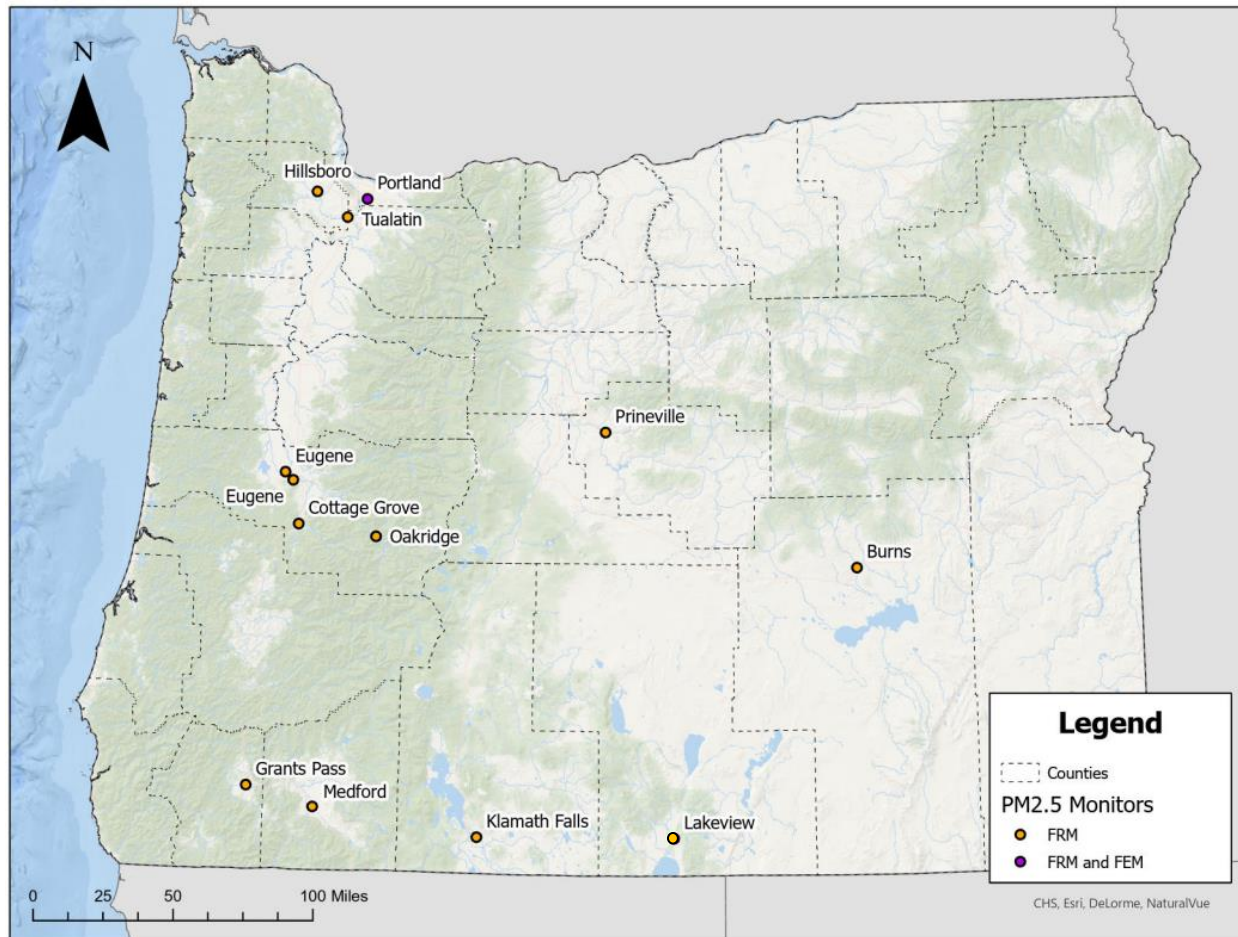


Figure 6. PM2.5 FEM Monitoring Network

Changes to the PM2.5 network in the past year

- In January 2023 DEQ started using BAM1022 continuous FEM monitors at all the remaining FRM filter sampling sites and discontinued filter sampling except for on required collocated FRM filter sampler. DEQ also has one site collocated with another BAM1022. The collocated samplers are used to determine precision. Specifically, SE Lafayette (41-051-0080) is collocated with an FRM and Klamath Falls (41-035-0004) is collocated with another BAM1022.

3.2.5 PM10 Network

Oregon DEQ and LRAPA have seven Federal Reference monitoring sites for PM10. Two in the Portland-Metro area, one each in Eugene-Springfield, La Grande, Medford, Lakeview, and Oakridge. Grants Pass, Klamath Falls are using PM2.5 as a surrogate for PM10.

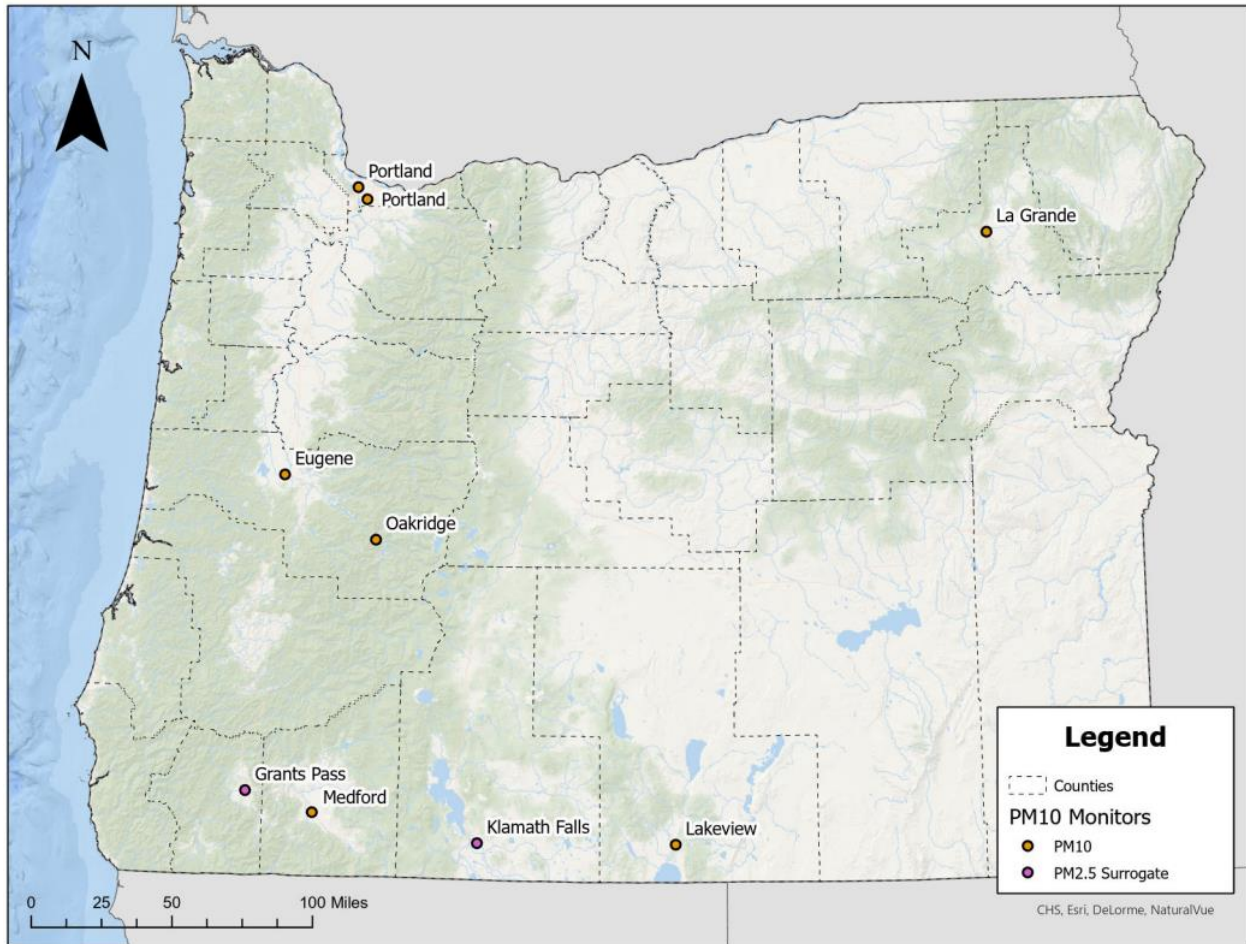


Figure 7. PM10 Monitoring Network

Changes to the PM10 network in the past year

PM10 was added to Lakeview in 2022 to collect a full year of data alongside of the collocated PM2.5 sampler.

3.2.6 PM10-2.5 Network

Oregon DEQ has one PM10-2.5 Federal Reference monitoring site, and it is at the Portland NCore site.

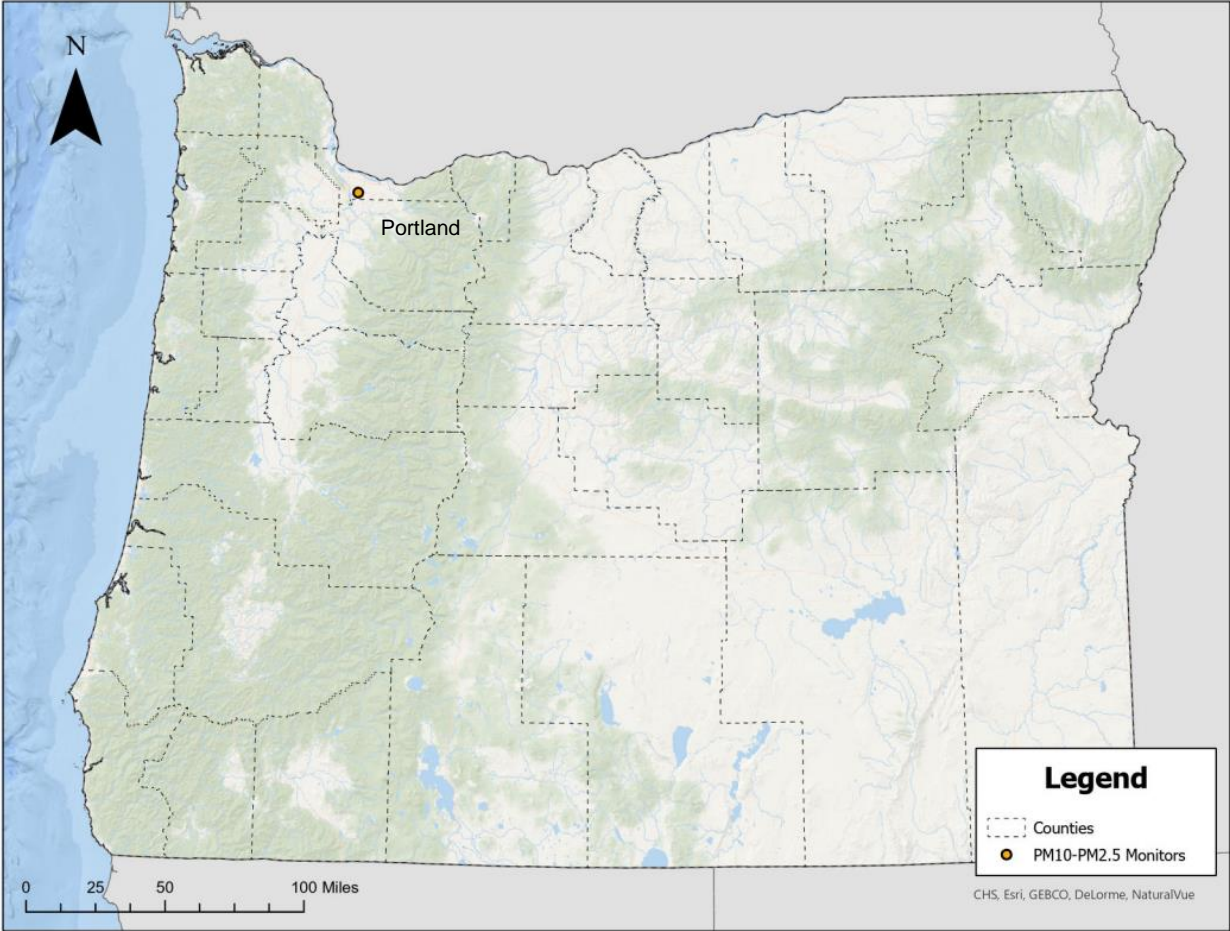


Figure 8. PM10-PM2.5 Monitoring Network

Changes to the PM10-2.5 network in the past year:
No changes.

3.2.7 Criteria Pollutant Lead Network

In 2009, Oregon was required to operate a TSP lead monitor outside Cascade Rolling Mills in McMinnville because it's Plant Site Emission Limit was > 0.5 tons per year. In 2013, DEQ received a five-year waiver to discontinue monitoring because the values were well below the NAAQS. In 2018, EPA renewed the five-year waiver. The waiver is due for renewal in 2023, however, Cascade Rolling Mills' PSEL is now below 0.5 tons/year and DEQ is no longer required to monitor on its fence line. DEQ will not renew the waiver.

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 10 sites. See the [DEQ Air Quality Monitoring](#) web page for more information.

Changes to the Criteria Pollutant Lead network in the past year: No changes.

3.2.8 Sulfur Dioxide (SO₂) Network

The Portland-Vancouver-Hillsboro CBSA is the only area in Oregon where SO₂ monitoring is required. Its population weighted emission index (PWEI) is between 5K and 100K. This is considered an SO₂ community monitoring site and is at the NCore site. There are no sources in Oregon that require SO₂ monitoring at this time.

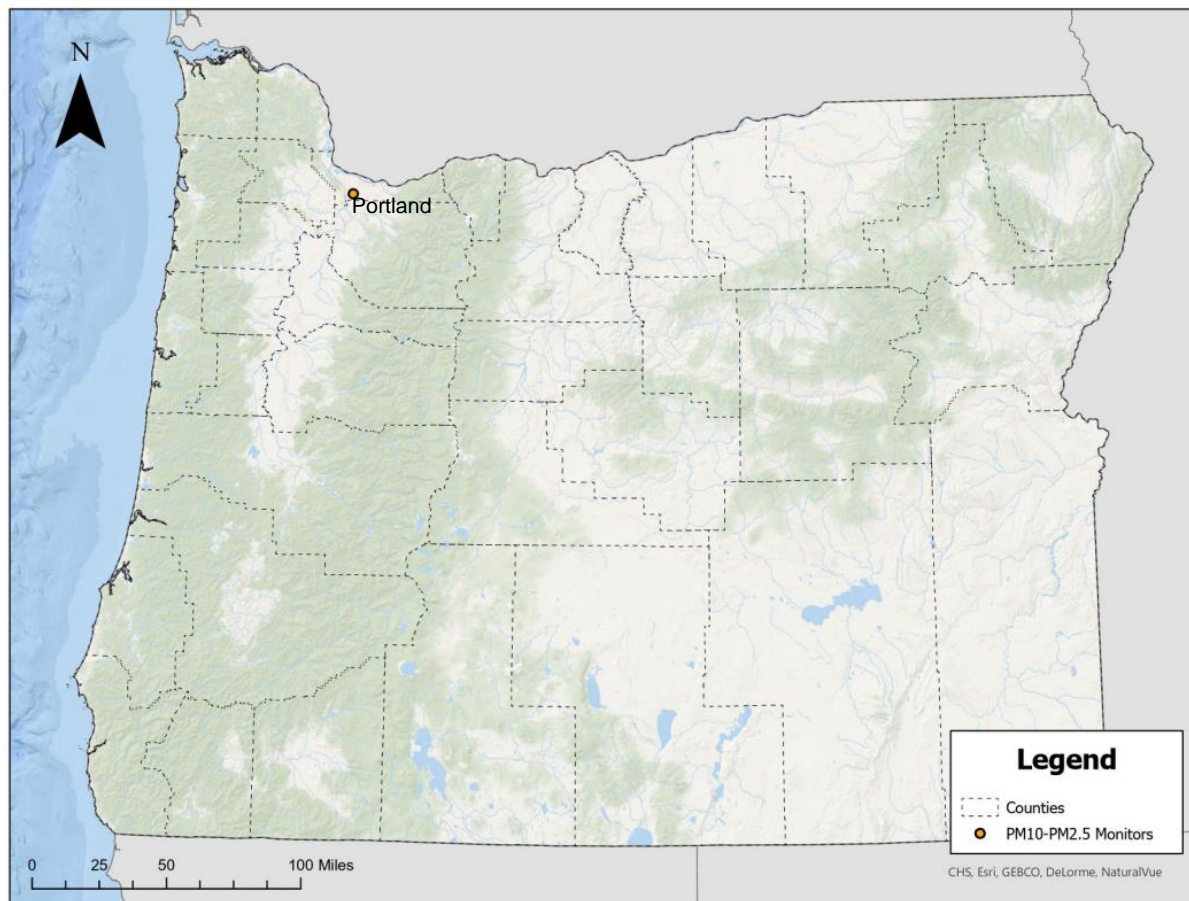


Figure 9. SO₂ Monitoring Network

Changes to the SO₂ network in the past year:
No changes

3.3 PM2.5 Air Quality Index Network

Oregon has a network of PM2.5 real time monitors that are used for hourly reporting of air quality for the [Air Quality Index](#) (AQI). The AQI is used by health officials, forestry 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 PM2.5 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 75 PM2.5 AQI sites but the network may keep growing pending state funding, and in the next few years, there may be around 90 sites. The plan for the additional sites will be posted on the DEQ [AQ Monitoring](#) web page. The table below the map shows the AQI network at the time of this report.

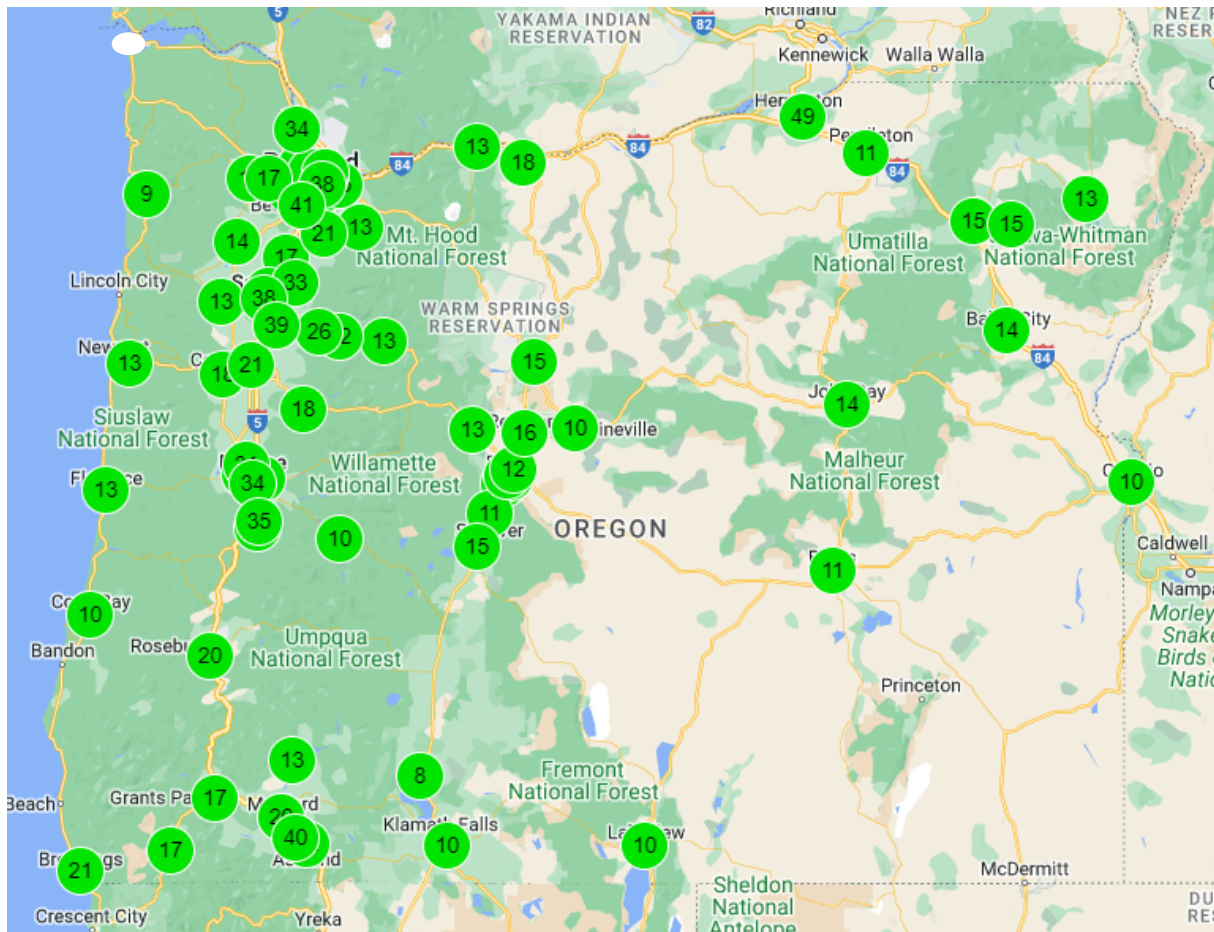


Figure 10. PM2.5 AQI Network

Table 3. AQI site list

City	Address	Site Code	EPA#	Ozone	PM2.5	
Albany	Calapooia School	ACS	410430009		x	
Bend	Bend Pump Station	BPS	410170120		x	
	Ponderosa Elementary	BPE	410170115		x	
	Pine Ridge Elementary	BPR	410170116		x	
	Sun River Elementary	SRE	410170117		x	
	Bend High School	BEE	410170123		x	
	La Pine Fire Department	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	North Corvallis	CCB	410030013		x	
	South Corvallis	CJT	410030014		x	
Cottage Grove	City Shops	CGC	410399004		x	
Crater Lake	Rim	CLP	410351001		x	Summer only
Dallas	Le Creole Middle School	DLM	410530004		x	
Detroit Lake	USFS Station	DFS	410470123		x	Summer only
Eugene	Pacific Hwy 99N	E99	410390059		x	
	Amazon Park	EAP	410390060	x	x	
	Wilkes Drive	EWD	410390101		x	
	City Hall	SCH	410391009		x	
	Delight Valley School	SAG	410391007	x		
Enterprise	Forest Service	EFS	410630001		x	
Estacada	Clackamas River School	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 Cove	Hall and North	LHN	410610123		x	
	City Hall	CCH	410610120		x	
Lakeview	Center & M Streets	LCM	410370001		x	
Lyons	Marylynn School	LMS	410432003		x	Summer only
Madras	Westside School	MWS	410310007		x	
McMinnville	McMinnville HS	MHS	410711003		x	
Medford	Rapp Rd Talent	TAL	410290201	x	x	
	Welch & Jackson	MWJ	410292129		x	
	Fire Department	AFD	410290203		x	
	School	SCS	410290019		x	

City	Address	Site Code	EPA#	Ozone	PM2.5	
Mill City	High School	MCS	410430104		x	
Mt. Hood	Ski Bowl at Multopor	MUL	410050102		x	Summer only
Oakridge	School St.	OAK	410392013		x	
Ontario	May Roberts School	OMR	410450001		x	
Pendleton	SW Marshall Pl	PMC	410590121		x	
Portland	57 th & SE Lafayette	SEL	410510080	x	x	
	Humboldt School	PHS	410512010		x	
	Cully	PNS	410512011		x	
Beaverton	Highland Park Sch	BHP	410670111		x	
Carus	Spangler Rd.	SPR	410050004	x	x	
Forest Grove	Pacific University	FGP	410670006		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	Fire Department	RFD	410190004		x	
Salem (Turner)	Salem State Hosp.	SSH	410470041	x	x	
	Cascade Jr. High,	CJH	410470004	x	x	
East Salem	Salem Chemeketa	SCC	410470022		x	
Silverton	James & Western St	SJW	410470007		x	
Sisters	USFS Office	SFS	410170004		x	
Sweet Home	Fire Department	SFD	410432002		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 and TBC. The PM2.5 estimates are from the DEQ SensOR or from nephelometers. See DEQ's Air Quality Monitoring Web page for more detail.

Changes to the PM2.5 AQI Network in the past year:

A DEQ SensOR was started at McMinnville High School in September 2022. The Tillamook ODF SensOR site was relocated to Tillamook High School in July 2022.

3.4 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 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.

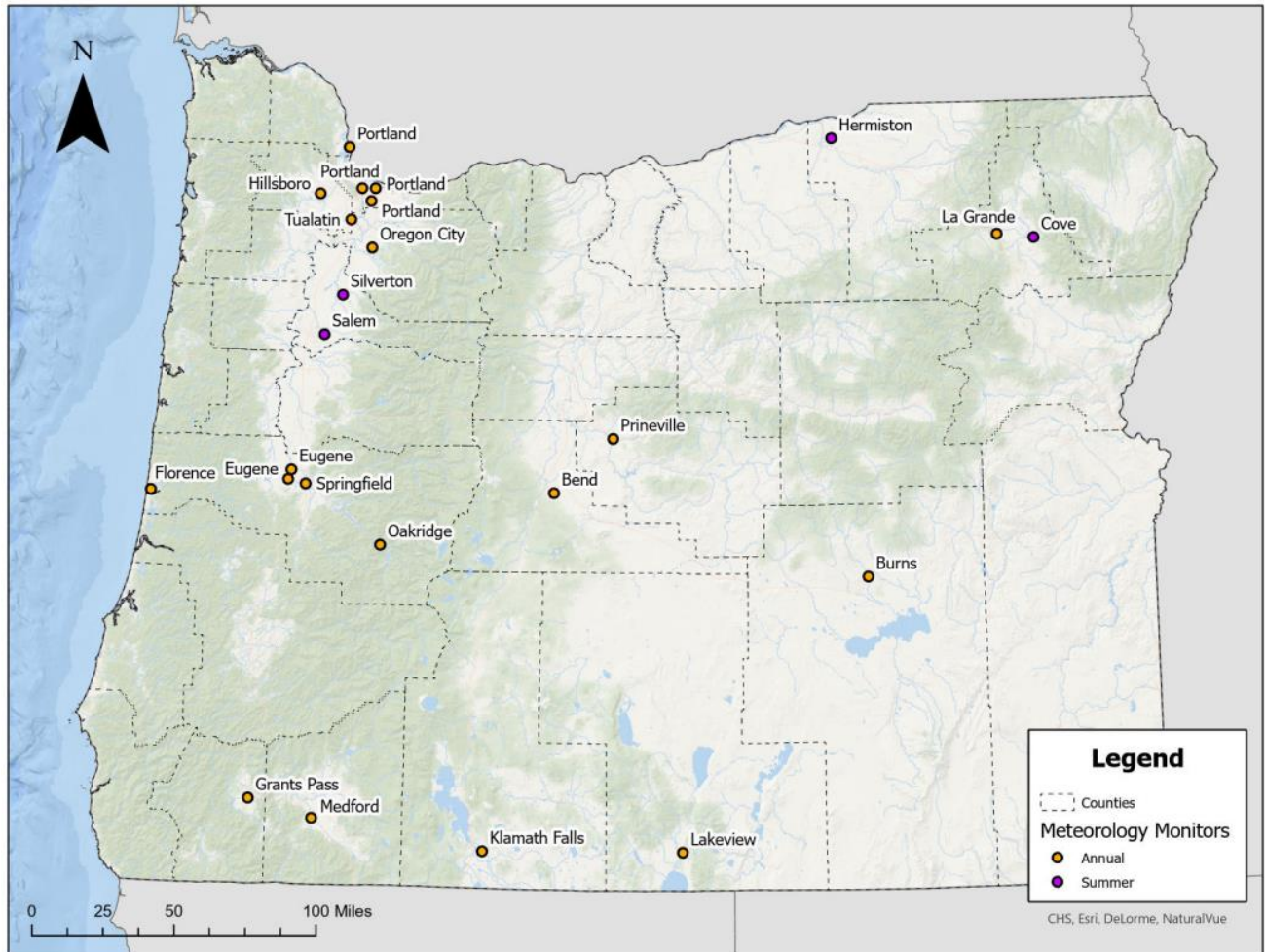


Figure 11. DEQ and LRAPA Meteorology Network

Table 4. Meteorology Network

City	Address	Site Code	EPA#	Wind	Temp	Delta T	RH	BP	SR
Bend	Road Department	BRD	410140121	x	x		x	x	x
Burns	Washington St.	BWS	410250003	x	x			x	
Eugene	Hwy 99	E99	410390059	x					
	Wilkes Drive	EWD	410390101	x	x			x	
Springfield	City Hall	SCH	410391009	x					
Florence	Forestry Department	FFD	410390100	x	x		x	x	
Grants Pass	Parkside School	GPP	410330114	x	x			x	
Hermiston	Municipal Airport	HMA	410591003	x					
Klamath Falls	Peterson School	KFP	410350004	x	x	x	x	x	
La Grande	Hall and North	LHN	410610123	x	x		x	x	
Cove	City Hall	CCH	410610120	x					
Lakeview	Center & M Streets	LCM	410370001	x	x			x	
Medford	Rossanley Drive	MTV	410291002	x	x	x	x	x	x
Oakridge	School St.	OAK	410392013	x	x			x	
Portland	57 th & SE Lafayette	SEL	410510080	x	x		x	x	x
	Jefferson High School	PJH	410511191	x					
	Cully	PNS	410512011	x					
Carus	Spangler Rd.	SPR	410050004	x	x			x	
Hillsboro	NE Grant St.	HHF	410670004	x					
Sauvie Island	NW SI	SIS	410090004	x	x				
Tualatin	Tualatin – I-5	TBC	410670005	x	x		x		
Prineville	SE Court St.	PDP	410130100	x	x		x	x	x
Salem-Turner	Cascade Jr. High,	CJH	410470004	x					
Silverton	James & Western Streets	SJW	410470007	x					

Met:

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

Changes to the Meteorological Network in the past year: No changes

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

PM2.5

- DEQ will move the Lakeview Center and M Street PM2.5 site to a new location. The current location is on a privately held mixed land use lot and is subject to very localized emission sources outside DEQ's or the City of Lakeview's control. The new site will be on the City of Lakeview land adjacent to Lakeview High School's sport fields and will not have very localized emission sources. See Appendix H.
- DEQ will move the Medford Welch and Jackson site 0.6kms to the west to Jackson Elementary. The new site will be in the middle of a sports complex so it will represent where people exercise and breath more heavily. The new site is also on public property and less susceptible to land use changes, like the old site. See Appendix I.
- DEQ will start an FEM at the Salem State Hospital site next to the existing nephelometer. The Salem CBSA is nearing a population of 250K which is the trigger for a minimum of one FRM/FEM site. DEQ ran an FRM at this site previously and it was only discontinued for budgetary reasons.
- DEQ may start an FEM at the Bend Pump Station site next to the existing nephelometer. Bend has the largest population in Eastern Oregon and has a network of nephelometers and DEQ SensORs that need to be correlated with an FEM for accuracy.

PM10

- DEQ is submitting a waiver request to EPA to use PM2.5 as a surrogate for PM10 in Lakeview to meet the PM10 maintenance plan monitoring requirements. See Appendix J.
- Lakeview PM10 site will move. See discussion in PM2.5 section.
- Medford PM10 site will move. See discussion in PM2.5 section.

Photochemical Assessment Monitoring Stations (PAMS)

Based on 40 CFR part 58, Appendix D, State air monitoring agencies are required to begin making PAMS measurements at their NCore location(s) with a USEPA extension to the start date of June 1, 2021. EPA requires the addition of NOy, near real time VOC, aldehyde, and mixing heights monitoring. DEQ is two years behind in starting this site because we have to replace the existing shelter with a larger building to accommodate all the NCore equipment. The city permitting process has exceeded our time estimates. Our current estimate is that we will begin making PAMS measurements at the NCore site (Portland SE Lafayette, 51-051-0080) in late summer 2023 following the installation of a new shelter.

NO2

The Portland – Vancouver – Hillsboro CBSA is estimated to have a 2023 population over 2.5 million people, triggering the requirement for a second near road site. In 2023/2024, DEQ will work with Washington DOE to determine where that monitoring site should be. Funding for site installment and operation will need to be determined. Establishing this site is a low priority site because the main NO2 roadway site has values well below the NAAQS.

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. Minimum Monitoring Requirements for NCore Site.

NCore Site: SE Lafayette (SEL), AQS# 41-051-0080, Address 57th Avenue and SE Lafayette St., Portland, OR MSA – Portland-Vancouver, OR-WA (#6440) Counties represented – (OR) Multnomah, Clackamas, Washington, (WA) Clark MSA Population (2021) - 2,511,612 (US Census)								
Pollutant	Std Type	Std	DV	Units	Years	# of Monitors		
						Minimum required	Active	Needed
PM2.5	Daily	35	24	µg/m ³	20-22	1	1	0
	Annual	12	8.1	µg/m ³	20-22			
PM2.5 Speciation	N/A	-	-	-	-	1	1	0
PM10	Daily	150	0 exceedances		20-22	1	1	0
PM10-2.5	N/A	-	-	-	-	1	1	0
Ozone	8 hr Ave	70	58	ppb	20-22	1	1	0
NO2	1 hour	100	31	ppb	20-22	1	1	0
	Annual	53	6.6	ppb	20-22			
NOx (substituted for NOy - EPA waiver)	N/A	-	-	-	-	1	1	0
Trace SO2	1 hour	75	2	ppb	20-22	1	1	0
Trace CO	8 hour	9 ppm	0 exceedances		20-22	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	-	-	-	-	0	0	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

a. With wildfire data included b. without wildfire data included

Table A. 2. Ozone Minimum Monitoring Requirements

MSA	County	Population 2021*	Design Value (ppb)	Site name	Season	Years	# of Monitors		
							Minimum required	Active	Need ed
Portland- Vancouver- Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,511,612	66	Carus (41-005-0004)	May-Sept	20-22	2	4 in OR, 1 in WA	0
Salem (41420)	Marion	436,283	63	Cascade Sch. Turner (41-047-0004)	May-Sept	20-22	2	2	0
Eugene- Springfield (21660)	Lane	383,189	58	Amazon Pk. (41-039- 0060)	May-Sept	20-22	1	2	0
Medford (32780)	Jackson	223,734	65	Talent (41-029-0201)	May-Sept	20-22	1	1	0
Pendleton-Hermiston (37820)	Umatilla	92,291	61	Airport (41-059-1003)	May-Sept	20-22	1	1	0
Albany-Lebanon (10540)	Linn	129,839	-	-	-	-	0	0	0
Corvallis (18700)	Benton	96,017	-	-	-	-	0	0	0
Bend-Redmond (13460)	Deschutes	204,801	-	-	-	-	0	0	0

Table A. 3. Carbon Monoxide Minimum Monitoring Requirements:

MSA (Maintenance areas)	County	Population 2021 estimate	Standard Exceeded more than once per year	Site name	Last Year	# of Monitors		
						Minimum required	Active	needed
Portland-Vancouver- Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,511,612	No	SE Lafayette, Portland (41-051- 0080)	2021	2	2	0
Salem (41420)	Marion	436,283	No	-	2005	0	0	0
Medford (32780)	Jackson	223,734	No	Monitor CO with modeling	2009	0	0	0
Klamath Falls (28900)	Klamath	70,164	No	-	2004	0	0	0
Grants Pass (MSA 24420)	Josephine	88,728	No	-	2005	0	0	0

NO2 Minimum Monitoring Requirements:

EPA requires NO2 near roadway monitoring in CBSAs above 500,000. The monitoring is to be next to a freeway at a location with the highest annual average daily traffic and highest heavy duty diesel traffic. Portland-Vancouver is the only CBSA in Oregon required to have near road NO2 monitoring. In addition, EPA requires one neighborhood or larger spatial scale monitoring in CBSA's above one million. The Portland-Vancouver area is the only CBSA in Oregon required to have community scale monitoring. The NCore site is required to have NO2, NO, NOx, and NOy monitoring. The NCore site is in Portland and doubles as the community scale site for NO2. EPA granted a waiver under CFR40 Part 58 Appendix D, Section 3 (b.1) to allow NOx to substitute for NOy because DEQ showed there was minimal difference between the two. The table below shows the current monitoring status.

Table A. 4. NO2 Minimum Monitoring Requirements:

CBSA	County	Population 2021 estimate*	Design Value (ppb)	% of Std	Site name	Season/Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,511,612	1hr = 30 ppb Annual= 6.8 ppb	1hr = 30% Annual = 13%	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	20-22	1	1	0
			1hr = 30 ppb Annual= 10.2 ppb	1hr = 30% Annual = 17%	Tualatin Bradbury Ct. (Near Roadway site) (41-067-0005)	Annual, Hourly	20-22	1	1	0
					2 nd Near Roadway site	Annual, Hourly				

SO2 Minimum Monitoring Requirements:

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

Table A. 5. SO2 Minimum Monitoring Requirements:

CBSA	County	Population 2021 estimate*	PWEI	Design Value (ppb)	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
									Minimum required	Active	Need ed
Portland- Vancouver- Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,511,612	SO2 PWEI = 7,880	3	4	Portland, SE Lafayette (41-005- 0080)	Annual, Hourly	20-22	1 For NCore site	1 at NCore site	0

Lead: Minimum Monitoring Requirements:

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

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

Table A. 6. Lead Minimum Monitoring Requirements:

City of	County	Population 2021 estimate	Design Value $\mu\text{g}/\text{m}^3$	% of Std	Site name	Season/Frequency	Years	# of Monitors		
								Minimum required	Active	Needed
NA								0	0	0

PM10 Minimum Monitoring Requirements:

PM10 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 PM10 and use PM2.5 as a surrogate. This was done because PM10 is mostly comprised of PM2.5 and the PM10 levels are far below the standard. Continuous PM10 samplers will be placed at these sites in the future.

Table A. 7. PM10 Minimum Monitoring Requirements:

CBSA or MSA	County	Population 2021 estimate*	Exceedence/yr	Site name	Season/Frequency	Year	# of Monitors		
							Minimum required	Active	needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,511,612	0	SE Lafayette (41-005-0080) Humboldt	Annual. 1/3 at NCore & 1/6 other sites	20-22	2-4	2	0
Eugene-Springfield (21660)	Lane	383,189	3.3 ^a 10.3 ^a	Eugene Hwy 99 (41-039-0059) Oakridge (41-039-2013)	Annual 1/1 1/1	20-22	3 ^c	2	0
La Grande (29260)	Union	26,212	0	Hall & North Sts. (41-067-0123)	Annual, 1/6	20-22	1	1	0
Medford (32780)	Jackson	223,734	2.0 ^a	Welch & Jackson (41-029-2129)	Annual, 1/6	20-22	1	1	0
Grants Pass (24420)	Josephine	88,728	2.0 ^{ab}	Parkside School (41-033-0114)	PM2.5 FRM/FEM as surrogate	20-22	1	0	0
Klamath Falls (28900)	Klamath	70,164	2.0 ^{ab}	Klamath Falls Petersen Lakeview (41-037-0001)	PM2.5 FRM/FEM as surrogate	20-22	1	0	0
Lakeview (Lake County - 00000)	Lake	8,177	No data			-	1	0	1

a. DV is not zero because of wildfire smoke.

b. PM2.5 is used as a surrogate for PM10.

c. Normally only 2 sites are required but wildfire smoke in Oakridge in 2020 and 2022 has put the Eugene–Springfield CBSA over the NAAQS and now three are required. LRAPA and DEQ will be requesting a waiver in the 2024 ANP to not run a third monitor.

Oregon had five violations (Table A. 7b) of the PM10 maintenance areas in the 2020–2022 period, but all the violations were caused by summer wildfire smoke. Klamath Falls is the only maintenance plan that directly addresses contingencies triggered by natural event, and it states: “no further action may be needed”. DEQ does have the [wildfire smoke protocol](#) which addresses real time responses to wildfire smoke to protect public health. The USFS, ODF, and DEQ also have a [Smoke Management plan](#) which balances forest prescribed burning with impacts on nearby smoke sensitive receptor areas. Both plans address the current PM10 maintenance area violations.

Table A. 8. PM10 Maintenance Plan Contingency Triggers:

CBSA or MSA	2020	2021	2022	2020–22 Exceedance/yr	Triggers	Cause	Contingency Requirements
Eugene-Springfield	10	0	0	3.3	≥ 150 µg/m3	Wildfire Smoke	Woodstove curtailment program which is already in place. There is no contingency for exceedances caused by wildfire smoke.
Oakridge	11	1	19	10.3	≥ 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	1 (6 expected)	0	2.0	≥ 120 µg/m3	Wildfire Smoke	PM10 Maintenance Plan, Section 4.14.90.0 - Contingency Measures. (PM10_Part8.PDF) states: <u>Phase 2: Measured Violation</u> 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	1 (6 expected)	0	0	2.0	≥ 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	1 (6 expected)	0	0	2.0	≥ 135 µg/m3	Wildfire Smoke	Klamath Falls PM10 Maintenance Plan, Section 4.56.3.3 Contingency Plan, Phase 1 states: The County and DEQ will reconvene a planning group to develop an action plan if ambient concentrations (actual or estimated) equal or exceed 90% of the NAAQS concentration of PM10 (135 µg/m3) ... If the high PM10 concentration was determined to be a natural event based on EPA’s policy or an exceptional event, no further action may be needed.
La Grande	0	0	0	0	≥ 135 µg/m3		If the high PM10 concentration were determined to be based on a natural event per EPA’s policy or an exceptional event , no further action may be needed other than a discussion of the elements of a Natural Events Action Plan.
Lakeview	No data	No data	No data	No data	≥ 140 µg/m3		The air quality committee and DEQ will evaluate the cause of the exceedance and recommend strategies to be considered for implementation.

All of the PM10 exceedances over the past three years occurred during wildfire smoke intrusions and in the case of Oakridge the 2020 year values had regulatory significance. LRAPA submitted and exceptional event demonstration for Oakridge. For Klamath Falls, the PM10 is calculated using the PM2.5 as a surrogate. DEQ submitted a 2020 and 2021 PM2.5 exceptional event demonstration for

Klamath Falls because of regulatory significance. These verify the intrusion of wildfire smoke caused the exceedances. Medford had one exceedance in 2021 but samples every sixth day so the expected exceedance is 6. The exceedance occurred on August 14th, 2021. The Hysplit model from AIRNow Tech shows that winds at 500 meters were coming from the complex of fires to the north. The PM2.5 concentration was 151 $\mu\text{g}/\text{m}^3$ at the Medford Welch and Jackson monitoring site (41-029-2129) on the day of the PM10 exceedance.

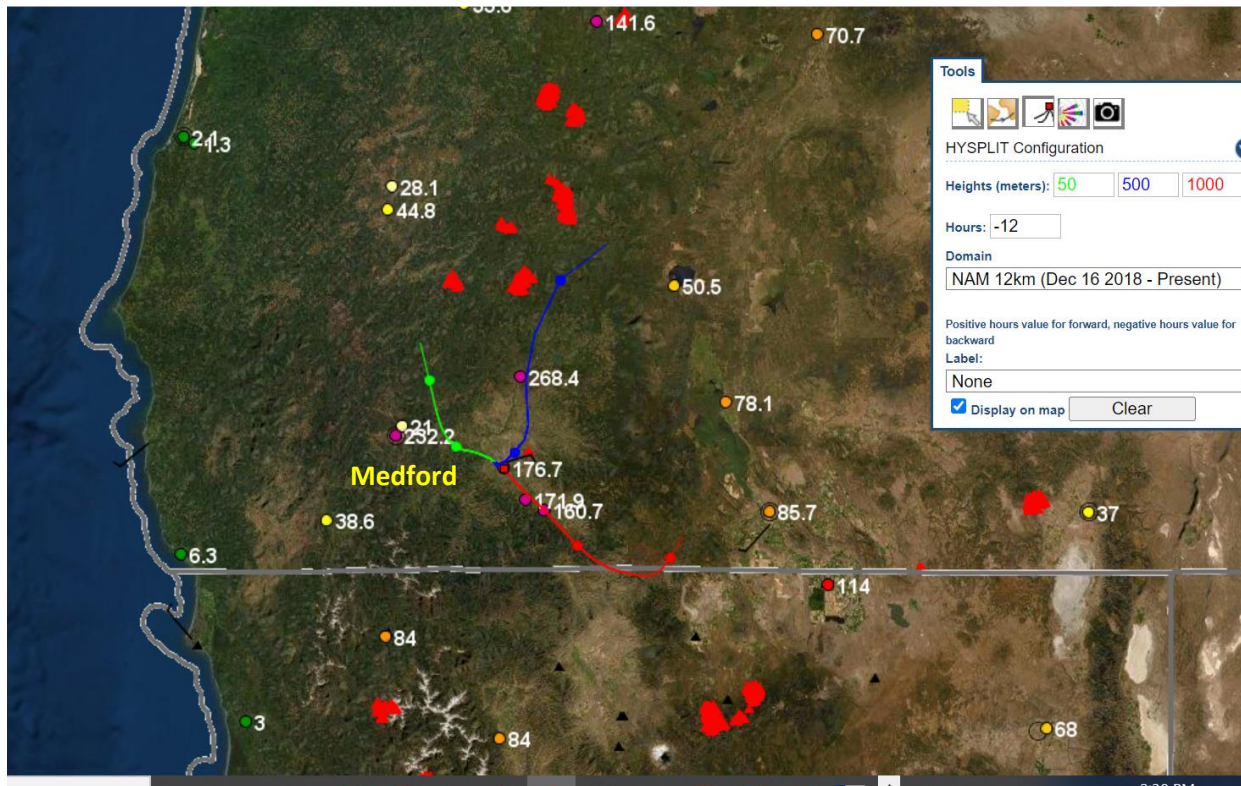


Figure 12. August 14th, 2021 Hysplit 12 hour back trajectory showing the source of PM2.5 at different elevations.

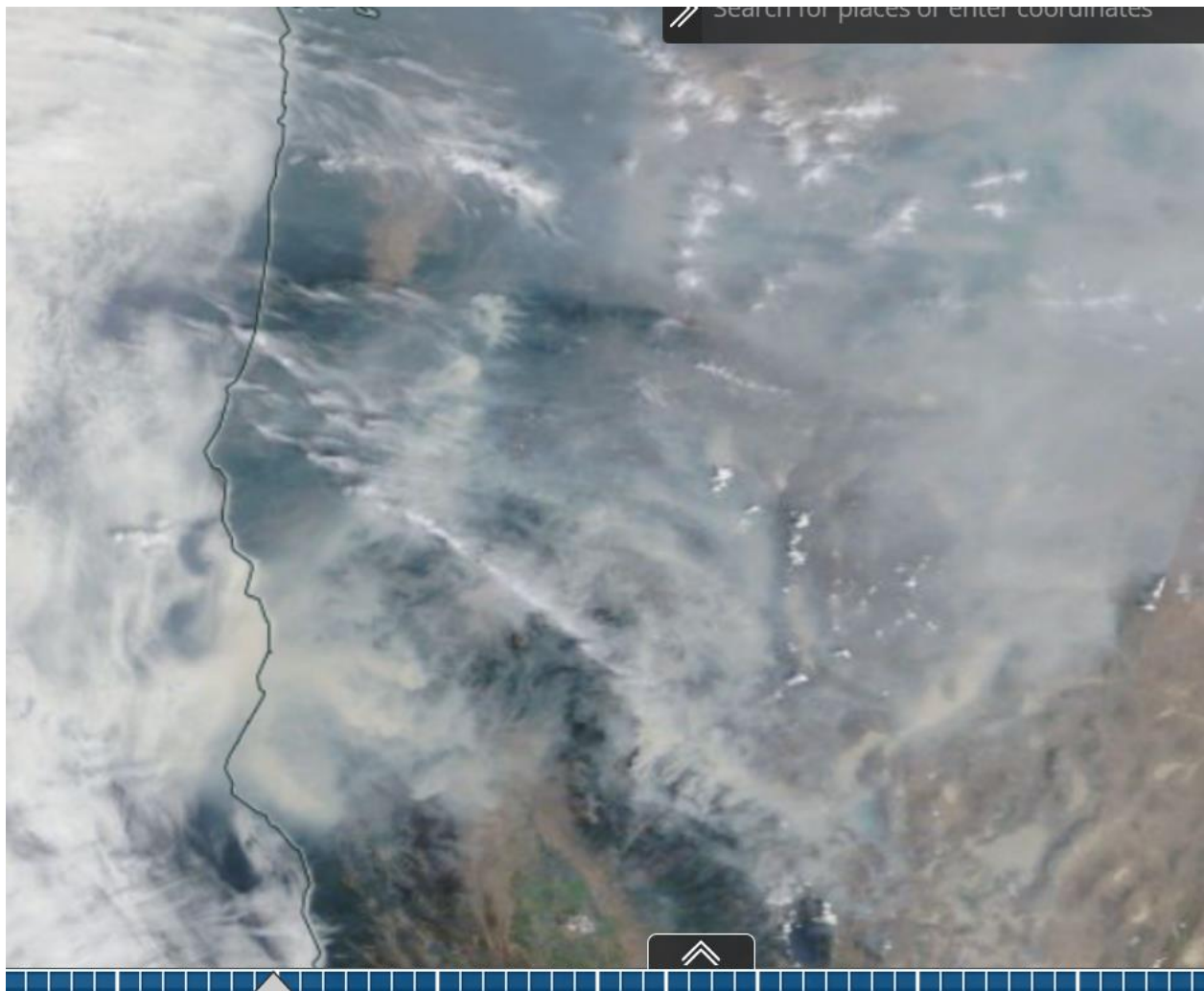


Figure 13. August 14th, 2021 Satellite photo showing wildfire smoke over Southern Oregon and Northern California.

Most of Oregon's PM10 maintenance plans were written 10 to 20 years ago before wildfire smoke became such a huge problem in Oregon. Some plans included exemptions from triggering contingency plans if the violation was due to wildfires. The plans that don't have this language, should also follow the same procedure. DEQ works with the USFS, ODF, and EPA to identify wildfire smoke intrusions that cause violations. DEQ has a [smoke management program](#) that is working with partners to mitigate smoke incursions from wildfires through prescribed burning, fuels removal, and public outreach. Oregon also has an emergency smoke response which is outlined in the [Oregon Wildfire Smoke Protocol](#).

PM2.5 Minimum Monitoring Requirements:

Table A. 9. PM2.5 (FRM) Minimum Monitoring Requirements:

MSA	County	Population 2021 estimate*	Design Value (µg/m ³) Daily Std = 35.5 Annual = 12.1		Site name Max concentration site indicated for multiple site MSAs. Single site MSA's are max sites.	Season/ Frequency	Years	# of Monitors		
			Excluding wildfire days	Including wildfire days ^a				Minimum required	Active	needed
Portland-Vancouver-Hillsboro, OR-WA (38900)	Multnomah, Clackamas, Washington, Clark (WA)	2,511,612	20 7.1	25 8.8	Max Site - Hillsboro (410670004) NCore- SE Lafayette (410510080) Near Rd Site: Tualatin (410670005)	Annual 1/3 before 1/1/23, then 1/1	20-22	3	3	0
Eugene-Springfield (21660)	Lane	383,189	23 7.2	98 10.1	Max Site- Hwy 99 (410390059) Neighborhood site: Amazon Park (410390060)	Annual 1/1	20-22	1	2	0
			26 7.2	116 14.7	Oakridge (41-039-2013)	Annual 1/1	20-22	0	1	0
			18 6.0	24 9.2	Cottage Grove (41-039-9004)	Annual 1/1	20-22	0	1	0
Medford (32780)	Jackson	223,734	23 9.5	72 13.4	Welch & Jackson (41-029-2129)	Annual. 1/3 before 1/1/23, then 1/1	20-22	1	1	0
Grants Pass (24420)	Josephine	88,728	24 7.9	160 12.2	Parkside Sch. (41-033-0114)	Annual 1/3 before 1/1/23, then 1/1	20-22	0	1	0
Klamath Falls (28900)	Klamath	70,164	37 8.6	67^b 15.6	Petersen Sch. (41-035-0004)	Annual, 1/1	20-22	0	1	0
Lakeview (00000)	Lake	8,177	28 7.9	47 9.9	Lakeview (41-037-0001)	Annual. 1/3 before 1/1/23, then 1/1	20-22	0	1	0
Burns-Hines (Harney County 00000)	Harney	7,537	27 9.3	45 10.8	Washington Park (41-025-0003)	Annual 1/1	20-22	0	1	0
Prineville (Crook County 39260)	Crook	25,739	21 6.9	61 10.0	Davidson Park (41-013-0100)	Annual. 1/3 before 1/1/23, then 1/1	20-22	0	1	0

- a. If DV with wildfire data has regulatory significance, DEQ will request exceptional event concurrence from EPA.
- b. DEQ is requesting exceptional event concurrence from EPA for forest fire impacts in 2020, 2021, and 2022 for Klamath Falls.
- Note: **Bolded** design values exceed the NAAQS.

PM2.5 for AQI (Non-FRM) site information

AQI (Non-FRM – Informational data). This monitoring allows DEQ to monitor the rest of the state. If a design value is near or above the NAAQS, DEQ considers placing a FRM sampler at the site for comparison to the NAAQS.

Table A. 10. PM2.5 for AQI (Non-FRM) site information

MSA	County	2021 Population – PSU Pop. Research Center	Design Value ($\mu\text{g}/\text{m}^3$) Daily Std = 35.5 Annual = 12.1		Site name	Season / Frequency	Years	# of Monitors		
			Excluding wildfire days	Including wildfire days				required	Active	needed
Salem (CBSA 41420)	Marion	436,283	20 6.4	94 8.7	State Hospital (41-047-0041)	Annual, Hourly	20-22	0	1	0
Bend-Redmond (CBSA 13460)	Deschutes	204,801	20 5.7	92 9.8	Bend Pump Station (41-017-0120)	Annual, Hourly	20-22	0	1	0
			17 5.3	77 8.9	Sisters USFS (41-017-0004)	Annual, Hourly	20-22	0	1	0
Albany-Lebanon (CBSA 10540)	Linn	129,839	18 5.6	80 8.1	Albany (41-043-0009)	Annual, Hourly	20-22	0	1	0
			16 6.2	72 9.0	Sweet Home FD (41-043-2002)	Annual, Hourly	20-22	0	1	0
Corvallis (CBSA 18700)	Benton	96,017	15 5.2	64 7.3	Corvallis FD 3 (41-003-0013)	Annual, Hourly	20-22	0	1	0
Roseburg (County Pop. 40700)	Douglas	111,978	20 7.1	73 10.3	Fire Department (41-019-0004)	Annual, Hourly	20-22	0	1	0
The Dalles (County Pop. 17180)	Wasco	26,726	18 5.5	23 6.9	Cherry Heights (41-065-0007)	Annual, Hourly	20-22	0	1	0
La Grande (County Pop. 29260)	Union	26,212	18 6.0	42 7.4	Hall & North (41-061-0123)	Annual, Hourly	20-22	0	1	0
Baker City - Ontario (County Pop. 36620)	Baker	16,860	19 6.9	31 7.9	Baker City USFS (41-001-0003)	Annual, Hourly	20-22	0	1	0
Enterprise (County Pop. 00000)	Wallowa	7,433	18 6.3	37 7.9	Forest Service Off (41-063-0001)	Annual, Hourly	20-22	0	1	0
Cave Junction – (24420)	Josephine	2,149	23 8.2	68 12.8	Cave Junction USFS (41-033-0036)	Annual, Hourly	20-22	0	1	0
John Day (County Pop. 00000)	Grant	7,226	27 9.9	42 11.3	Forest Service Off (41-023-0002)	Annual, Hourly	20-22	0	1	0
Pendleton (37820)	Umatilla	92,291	19 6.0	54 8.3	McKay Creek (41-059-0121)	Annual, Hourly	20-22	0	1	0

2023 Oregon Annual Ambient Air Monitoring Network Plan

Appendix B. Collocation Requirements

PM10, PM2.5, 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 PQA for Oregon. DEQ and LRAPA use the FEM method 209 for PM2.5 SLAMS sites. DEQ has one FRM/FEM collocated site and one FRM/FRM site. DEQ and LRAPA use methods 127, 122, and 141 for PM10 samplers. DEQ has one collocated site for each of methods 127 and 141.

Table B 1. Collocation Requirements for PM2.5

Method Code	# of Primary monitors	# of Required Collocated Monitors	# Active Collocated Monitors	# Active Collocated FEM monitors (Same method designation as primary)
209	13	1FRM, 1FEM	1FRM	1FEM

Table B 2. Collocation Requirements for PM10

Method Code	# of Primary monitors	# of Required Collocated Monitors	# Active Collocated Monitors	# Active Collocated FEM monitors (Same method designation as primary)
122	2	0	0	0
127	2	1	1	0
141	3	1	1	0

Table B 3. Collocation Requirements for PM10 lead

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

Appendix C. Detailed Site Information

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

Table C 1. Portland, SE Lafayette Site Information

Local Site Name	Portland, SE		
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 @ 79th Ave. AADT = 28,416, Yr= 2018 west, 2019 East - PBOT		
Groundcover (e.g. asphalt, dirt, grass)	Grass		
Representative statistical area name (CBSA, MSA,)	Portland-Vancouver (#6440)		
Pollutant	PM2.5	PM2.5	PM10
Parameter code, POC	88101,1	88101,2	85101,1 & 81102,1
MSA, CBSA, CSA or area represented	6440		
Monitor purpose	NAAQS, AQI, NCore, PAMS, Research		
Monitoring Objective	Population, Non-source		
Spatial scale of Representativeness	Neighborhood		
Monitoring types	SLAMS/ NCore, AQI	SLAMS/ NCore, AQI	SLAMS/ NCore, AQI
Instrument type and model	Beta ray attenuation BAM 1022P 2025	Gravimetric, R&P 2025 w VSCC	Gravimetric, R&P 2025
Instrument parameter occurrence code	Primary	Collocate	Primary
Method number	209	145	127
FRM/FEM/FRM/other	FRM	FEM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)	ODEQ (0821)
Analytical lab	NA	ODEQ (0821)	ODEQ
Reporting agency	ODEQ	ODEQ	ODEQ
Monitoring start date	1/1/2023	1/1/2023	1/1/1984
Current sampling frequency	1/1	1/3	1/3
Sampling season	Annual		
Probe height (meters)	6	6	6
Distance from Collocated monitor	2	2	2
Distance from supporting structure (meters)	No supports		
Distance from obstructions on roof (meters)	No obstructions		
Distance from obstructions not on roof (meters)	No obstructions		
Distance from trees (meters)	22	22	22
Distance from to furnace or incinerator flue (meters)	7	7	7
Unrestricted airflow (degrees)	360°	360°	360°
Probe material for reactive gases	Aluminum	Aluminum	Aluminum
Residence time for reactive gases (seconds)	NA	NA	NA
Will there be changes with the next 18 months?	New shelter & deck	Yes-install	New shelter & deck
Is it suitable for comparison against the standard?	Yes	SPM but meet	Yes

Local Site Name	Portland, SE Lafayette	
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	PM10	PM10-2.5
Parameter code, POC	85101,2 & 81102,2	86101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Urban Population, Max concentration, Non-source	NCore, Urban, Population, Non- source
Monitoring Objective	NAAQS, AQI	Required
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS/NCore	NCore, Research
Instrument type and model	Gravimetric, R&P 2025	Gravimetric, R&P 2025s
Instrument parameter occurrence code	Collocated	Primary
Method number	127	176
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	7/1/2013	1/1/2010
Current sampling frequency	1/3	1/3
Sampling season	Annual	Annual
Probe height (meters)	6	6
Distance from Collocated monitor (meter)	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)	22	22
Distance from to furnace or incinerator flue (meters)	7	7
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?	New shelter & deck	New shelter & deck
Is it suitable for comparison against the standard?	Yes	NA

Local Site Name	Portland, SE Lafayette	
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	NO2	Ozone
Parameter code, POC	42602, 1	44201, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, Non-source, NCore	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Urban	Urban
Monitoring types	SLAMS/NCore	SLAMS/NCore
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)	6.3	5
Distance from supporting structure (meters)	2.7	1.5
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	24	24
Distance from to furnace or incinerator flue (meters)	9	9
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Glass, Teflon	Teflon
Residence time for reactive gases (seconds)	4.9	3.5
Will there be changes with the next 18 months?	New shelter	New shelter
Is it suitable for comparison against the standard?	Yes	Yes

Local Site Name	Portland, SE Lafayette	
AQS ID	41-051-0080	
GPS Coordinates	45.4966, -122.6029	
Street address	5824 SE Lafayette, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	80	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	CO	SO2
Parameter code, POC	42101, 1	42401, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, Non-source, NCore	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Micro	Urban
Monitoring types	SLAMS/NCore, AQI	
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	10/1/2005	2/1/2005
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	6.3	6.3
Distance from supporting structure (meters)	2.7	2.7
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)	24	24
Distance from to furnace or incinerator flue (meters)	9	9
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Glass, Teflon	Glass, Teflon
Residence time for reactive gases (seconds)	3.6	3.6
Will there be changes with the next 18 months?	New shelter	New shelter
Is it suitable for comparison against the standard?	Yes	Yes

Local Site Name	Portland, SE Lafayette
AQS ID	41-051-0080
GPS Coordinates	45.4966, -122.6029
Street address	5824 SE Lafayette, Portland, OR
County	Multnomah
Distance from roadways (meters)	80
Traffic count (AADT, yr)	See above
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	Chemical Speciation
Parameter code, POC	Numerous parameters, POC 6
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Trend information, Population, NCore
Monitoring Objective	NAAQS support, CSN, Research
Spatial scale of Representativeness	Neighborhood
Monitoring types	NCore, STN, Research
Instrument type and model	Super SASS & URG 3000N w/Pall Quartz filter and Cyclone Inlet
Instrument parameter occurrence code	Primary
Method number	810,811,812,826 831,838, 839,840 841,842
FRM/FEM/FRM/other	Other
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	9/1/2002
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	6
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)	24
Distance from to furnace or incinerator flue (meters)	9
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?	New shelter & deck
Is it suitable for comparison against the standard?	NA

Table C 2. Portland, Humboldt School Site Information

Local Site Name	Portland, Humboldt School	
AQS ID	41-051-2010	
GPS Coordinates	45.558081, -122.670985	
Street address	4915 N Gantenbein Ave, Portland	
County	Multnomah	
Distance from roadways (meters)	12 from minor road, 108 from major	
Latest Traffic count (AADT, yr)	AADT = 4079 (N Alberta St E Of 7 th Ave), yr =2018 PBOT AADT = 372 (N Blandena St E at Kerby Ave), yr =2022 PBOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	PM10	PM10
Parameter code, POC	81102, 7 85101,7	81102, 9 85101,9
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Population, Non - source oriented	
Monitoring Objective	NAAQS	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	SLAMS
Instrument type and model	Gravimetric, Tisch PM10 HV+	Gravimetric, Tisch PM10 HV+
Instrument parameter occurrence code	Primary	Collocated
Method number	141	141
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/04/2005	1/1/2013
Current sampling frequency	1/6	1/12
Sampling season	Annual	Annual
Probe height (meters)	6	6
Distance between Primary and Collocate (meters)	6	6
Distance from supporting structure (meters)	No supports	No supports
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	25	25
Distance from to furnace or incinerator flue (meters)	15	15
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum	Aluminum
Residence time for reactive gases (seconds)	VOC/Carb= 1.2s	NA
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the annual pm10?	Yes	Yes

Table C 3. Portland Near Roadway Site Information

Local Site Name	Portland Near Roadway	
AQS ID	41-067-0005	
GPS Coordinates	45.8992, -	
Street address	6745 SW Bradbury Ct, Tualatin, OR	
County	Washington	
Distance from roadways (meters)	27	
Traffic count (AADT, yr)	I-5 at MP 290.14. 153,822, 2021 ODOT https://www.oregon.gov/odot/Data/Pages/Traffic-Counting.aspx	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	NO2	PM2.5
Parameter code, POC	42602,1	88101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Source (Freeway)	
Monitoring Objective	NAAQS, AQI, Research	
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	Cavity Attenuated Phase Shift, Teledyne T500U	Beta ray attenuation Met One, BAM 1022
Instrument parameter occurrence code	Primary	Primary
Method number	212	209
FRM/FEM/FRM/other	FRM	FEM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	04/21/2015	1/1/2023
Current sampling frequency	Hourly	1/1
Sampling season	Annual	
Probe height (meters)	4	4
Distance from collocated monitor(meters)	NA	tbd
Distance from supporting structure (meters)	1	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)	3.5	NA
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	Yes

Local Site Name	Portland – Near Roadway Site	
AQS ID	41-067-0005	
GPS Coordinates	45.8992, -122.7455	
Street address	6745 SW Bradbury Ct, Tualatin, OR	
County	Washington	
Distance from roadways (meters)	27	
Traffic count (AADT, yr)	See above	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Ozone	CO
Parameter code, POC	44201,1	42101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Source (Freeway)	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	UV absorption, 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)	3.8	4
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)	7.1	3.7
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	Yes

Table C 4. Hillsboro, Hare Field Site Information

Local Site Name	Hillsboro, Hare Field
AQS ID	41-067-0004
GPS Coordinates	45.5285, -122.9724
Street address	1151 NE Grant St, Hillsboro, OR
County	Washington
Distance from roadways (meters)	88
Traffic count (AADT, yr)	AADT = 24,580 (Cornell & Grant), Yr 2/28/2019
Groundcover (e.g. asphalt, dirt, grass)	Asphalt
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	PM2.5
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta ray attenuation Met One, BAM 1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	1/1/2023
Current sampling frequency	1/1
Sampling season	Annual
Probe height (meters)	2
Distance from collocated monitor (meters)	2
Distance from supporting structure (meters)	No supports
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
Is it suitable for comparison against the standard?	Yes

Table C 5. Portland, Sauvie Island Site Information

Local Site Name	Portland, Sauvie	
AQS ID	41-009-0004	
GPS Coordinates	45.7685, -122.7721	
Street address	Social Security Beach, Sauvie Is,OR	
County	Columbia	
Distance from roadways (meters)	94	
Traffic count (AADT, yr)	AADT = No Data, rural area	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Ozone	PM2.5
Parameter code, POC	44201,1	88502,3
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Upwind of Urban, Transport	Urban background
Monitoring Objective	AQI, NAAQS	AQI
Spatial scale of Representativeness	Rural	Rural
Monitoring types	SLAMS	SPM
Instrument type and model	UV absorption,	Light Scattering
Instrument parameter occurrence code	Primary	Primary
Method number	087	771
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1980	
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	Annual
Probe height (meters)	4.3	2.5
Distance from supporting structure (meters)	1	1
Distance from obstructions on roof (meters)	No obstructions	No obstructions
Distance from obstructions not on roof (meters)	No obstructions	No obstructions
Distance from trees (meters)	105	105
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	PVC
Residence time for reactive gases (seconds)	7.1	38 (L 10", D 2", Flow 16 lpm
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	No

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

Table C 6. Portland - Carus – Spangler Rd. Site Information

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

Table C 7. Salem – State Hospital Information

Local Site Name	Salem State	
AQS ID	41-047-0041	
GPS Coordinates	44.9431, -123.0059	
Street address	867 Medical Center	
County	Marion	
Distance from roadways (meters)	30 meters	
Latest Traffic count (AADT, yr)	ADT = 4295 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	
Pollutant	Ozone	PM2.5
Parameter code, POC	44201,1	88101,1
MSA, CBSA, CSA or area represented	6440	
Monitor purpose	In urban core	Population
Monitoring Objective	NAAQS, AQI	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	UV absorption, Teledyne T400	Beta ray attenuation Met One, BAM 1022
Instrument parameter occurrence code	Primary	Primary
Method number	087	209
FRM/FEM/FRM/other	FRM	FEM
Collecting agency	ODEQ (0821)	LRAPA
Analytical lab	ODEQ	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	5/1/2018	Jan 1, 2024
Current sampling frequency	Hourly	1/1
Sampling season	May-Sept	Annual
Probe height (meters)	3	2
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)	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
Is it suitable for comparison against the standard?	Yes	Yes, but SPM

Table C 8. Salem/Turner - Cascade Jr. High Site Information

Local Site Name	Salem/Turner - Cascade Jr. High
AQS ID	41-047-0004
GPS Coordinates	44.8103, -122.9151
Street address	10226 Marion Rd SE, Turner, OR
County	Marion
Distance from roadways (meters)	60
Traffic count (AADT, yr)	ADT = 2248, Yr = 2016 (9/21/2021) Shaff Rd & W Stayton Rd. Marion Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Salem
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	7080
Monitor purpose	Downwind of Urban, Max concentration,
Monitoring Objective	NAAQS, AQI.
Spatial scale of Representativeness	Urban Scale
Monitoring types	SLAMS
Instrument type and model	UV absorption, Teledyne T400
Instrument parameter occurrence code	Primary
Method number	087
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	6/23/1995
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	4.5
Distance from supporting structure (meters)	1.5
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	620
Distance from to furnace or incinerator flue (meters)	45
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	2.8
Will there be changes with the next 18 months?	No
Is it suitable for comparison against the standard?	Yes

Table C 9. Eugene – Amazon Park Site Information

Local Site Name	Eugene – Amazon Park	
AQS ID	41-039-0060	
GPS Coordinates	44.0263, -123.0837	
Street address	E. 29 th Amazon Park, Eugene, OR	
County	Lane	
Distance from roadways (meters)	61	
Traffic count (AADT, yr)	2021 AADT = 12,902 Patterson St. Central Lane MPO	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Eugene-Springfield	
Pollutant	Ozone	PM2.5
Parameter code, POC	44201,1	88101,1
MSA, CBSA, CSA or area represented	2400	2400
Monitor purpose	Urban Population	NAAQS
Monitoring Objective	NAAQS, AQI	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	Teledyne API 400 – Ultraviolet	Beta ray attenuation Met One, BAM
Instrument parameter occurrence code	Primary	Primary
Method number	087	209
FRM/FEM/FRM/other	FRM	FEM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1985	1/1/1999
Current sampling frequency	Hourly	1/3
Sampling season	May-Sept	Annual
Probe height (meters)	4	5
Distance from supporting structure (meters)	1	2
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
Is it suitable for comparison against the standard?	Yes	Yes

Table C 10. Eugene – Saginaw Site Information

Local Site Name	Eugene – Saginaw
AQS ID	41-039-1007
GPS Coordinates	43.8345, -123.0353
Street address	2021 Delight Valley School Road, Saginaw, OR
County	Lane
Distance from roadways (meters)	140
Traffic count (AADT, yr)	AADT = 39,073. 0.30 mile south of Saginaw
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	2400
Monitor purpose	Downwind of Urban, Highest Concentration
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale
Monitoring types	SLAMS
Instrument type and model	UV Absorption, Teledyne API 400
Instrument parameter occurrence code	Primary
Method number	087
FRM/FEM/FRM/other	FRM
Collecting agency	LRAPA
Analytical lab	LRAPA
Reporting agency	ODEQ
Monitoring start date	5/1/1994
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	5
Distance from supporting structure (meters)	1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	43
Distance from to furnace or incinerator flue (meters)	36
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	3.5
Will there be changes with the next 18 months?	No
Is it suitable for comparison against the standard?	Yes

Table C 11. Eugene – Hwy 99 Site Information

Local Site Name	Eugene – Hwy 99	
AQS ID	41-039-0059	
GPS Coordinates	44.0672, -123.1414	
Street address	450 Pacific Hwy 99, Eugene, OR	
County	Lane	
Distance from roadways (meters)	75	
Traffic count (AADT, yr)	AADT= 21,585, Hwy 99W (Hwy # 91) & Irving Road. yr = 2021	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Eugene-Springfield	
Pollutant	PM2.5	PM10
Parameter code, POC	88101,1	81102,1
MSA, CBSA, CSA or area represented	2400	2400
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	NAAQS
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	Met One, BAM1022	Met One, BAM 1020
Instrument parameter occurrence code	Primary	Primary
Method number	209	122
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	Continuous	Continuous
Sampling season	Annual	Annual
Probe height (meters)	5	5
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)	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
Is it suitable for comparison against the standard?	Yes	Yes

Table C 12. Cottage Grove, City Shops Site Information

Local Site Name	Cottage Grove, City Shops
AQS ID	41-039-9004
GPS Coordinates	43.7995, -123.0535
Street address	Harvey Lane & N 14 th St., Cottage Grove, OR
County	Lane
Distance from roadways (meters)	177
Traffic count (AADT, yr)	No Data Available
Groundcover (e.g. asphalt, dirt, grass)	Dirt
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM2.5
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta ray attenuation Met One, BAM 1022
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	1/3
Sampling season	Annual
Probe height (meters)	5
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)	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
Is it suitable for comparison against the standard?	Yes

Table C 13. Oakridge, Willamette Center Site 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, Sta. 20-017, 0.10 mile east of Kitson Springs Road AADT = 3200, yr =2019	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM2.5	PM10
Parameter code, POC	88101,1	81102,1
MSA, CBSA, CSA or area represented	0000	
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	
Instrument type and model	Beta ray attenuation Met One, BAM 1022	Beta ray attenuation Met One, BAM 1020
Instrument parameter occurrence code	Primary	Primary
Method number	209	122
FRM/FEM/FRM/other	FEM	FEM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1999	11/1/1989
Current sampling frequency	continuous	Continuous
Sampling season	Annual	Annual
Probe height (meters)	5	4
Distance from supporting structure (meters)	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 with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	Yes

Table C 14. Grants Pass, Parkside School Site Information

Local Site Name	Grants Pass, Parkside School
AQS ID	41-033-0114
GPS Coordinates	42.4342, -123.3485
Street address	735 SW Wagner Meadows Dr., Grants Pass, OR
County	Josephine
Distance from roadways (meters)	85
Traffic count (AADT, yr)	AADT = 4900, yr = 2012
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM2.5
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation BAM 1022
Instrument parameter occurrence code	Primary
Method number	145
FRM/FEM/FRM/other	209
Collecting agency	FEM
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	8/31/1999
Current sampling frequency	1/1
Sampling season	Annual
Probe height (meters)	3
Distance from collocated monitor (meters)	tbd
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)	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
Is it suitable for comparison against the standard?	Yes

Table C 15. Medford, Welch and Jackson Information

Local Site Name	Medford, Welch and Jackson	
AQS ID	41-029-2129	
GPS Coordinates	42.3315, -122.8803	
Street address	711 Welch St	
County	Jackson	
Distance from roadways (meters)	43 meters	
Traffic count (AADT, yr)	AADT 7900 (Jackson St. from Holy to Central. 2018)	
Groundcover (e.g. asphalt, dirt, grass)	Dirt	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM2.5	PM10
Parameter code, POC	88101,1	81102,7
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	NAAQS
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	SLAMS
Instrument type and model	Beta Attenuation BAM 1022w/VSCC	Gravimetric Tisch HV PM10+
Instrument parameter occurrence code	Primary	Primary
Method number	209	141
FRM/FEM/FRM/other	FEM	FRM
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	4/1/2018	7/20/1989
Current sampling frequency	1/1	1/6
Sampling season	Annual	Annual
Probe height (meters)	3	3
Distance from collocated monitor (meters)	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)	34	34
Distance from to furnace or incinerator flue (meters)	32	32
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
Is it suitable for comparison against the standard?	Yes	Yes

Table C 16. Medford - Talent Site Information

Local Site Name	Medford - Talent
AQS ID	41-029-0201
GPS Coordinates	42.2299, -122.7877
Street address	7120 Rapp In, Talent, OR
County	Jackson
Distance from roadways (meters)	220
Traffic count (AADT, yr)	AADT = 8400 Rogue Valley Hwy, yr = 2019
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Medford-Ashland
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Downwind of Urban, Highest Concentration
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Urban Scale
Monitoring types	SLAMS
Instrument type and model	UV Absorption, Teledyne 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)	7
Distance from supporting structure (meters)	1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	49
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	2.8
Will there be changes with the next 18 months?	No
Is it suitable for comparison against the standard?	Yes

Table C 17. Klamath Falls, Petersen School Site Information

Local Site Name	Klamath Falls, Petersen School	
AQS ID	41-035-0004	
GPS Coordinates	42.1903, -	
Street address	4856 Clinton Ave, Klamath Falls, OR	
County	Klamath	
Distance from roadways (meters)	8	
Traffic count (AADT, yr)	AADT = 7985 (Clinton & Summers) , Yr = 4/25/2018.	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM2.5	PM2.5
Parameter code, POC	88101,1	88101,2
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	
Instrument type and model	Beta Ray Attenuation Met One BAM1022	Beta Ray Attenuation Met One BAM1022
Instrument parameter occurrence code	Primary	Collocate
Method number	209	209
FRM/FEM/FRM/other	FEM	FRM
Collecting agency	ODEQ	
Analytical lab	ODEQ	
Reporting agency	ODEQ	
Monitoring start date	1/1/2019	1/1/2023
Current sampling frequency	1/1	1/1
Sampling season	Annual	Annual
Probe height (meters)	2	2
Distance from collocated monitor (meters)	2	2
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)	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
Is it suitable for comparison against the standard?	Yes	Yes

Table C 18. Lakeview, Center and M Sts Site Information

Local Site Name	Lakeview, Center and M Sts	
AQS ID	41-037-0001	
GPS Coordinates	42.1892, -120.3540	
Street address	8 South M St., Lakeview, OR	
County	Lake	
Distance from roadways (meters)	25 meters	
Traffic count (AADT, yr)	AADT = 2959 ODOT (Hwy 20 & L St.) yr = 2021	
Groundcover (e.g. asphalt, dirt, grass)	Dirt	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM2.5	PM10
Parameter code, POC	88101,1	81102,1
MSA, CBSA, CSA or area represented	0000	
Monitor purpose	Population	
Monitoring Objective	NAAQS, AQI	
Spatial scale of Representativeness	Neighborhood	
Monitoring types	SLAMS	SLAMS
Instrument type and model	Beta Attenuation BAM 1022	Gravimetric R&P 2025
Instrument parameter occurrence code	Primary	Primary
Method number	209	127
FRM/FEM/FRM/other	FEM	FRM
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/5/1998	1/1/2022
Current sampling frequency	1/3	1/6
Sampling season	Annual	Annual
Probe height (meters)	3	3
Distance from supporting structure (meters)	NA	NA
Distance from supporting structure (meters)	2	2
Distance from obstructions on roof (meters)	No obstructions	
Distance from obstructions not on roof (meters)	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?	Site relocation	Site relocation
Is it suitable for comparison against the standard?	Yes	Yes

Table C 19. Burns, Washington Street Site Information

Local Site Name	Burns, Washington Street
AQS ID	41-025-0003
GPS Coordinates	43.5892, -119.0487
Street address	E. Washington St., Burns, OR
County	Harney
Distance from roadways (meters)	16
Traffic count (AADT, yr)	AADT= 3833 (Steens Hwy 442 and US20), Yr = 2021
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM2.5
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor Objective	NAAQS, AQI
Monitoring purpose	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation Met One BAM 1022
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	1/1
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)	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
Is it suitable for comparison against the standard?	Yes

Table C 20. Prineville, Davidson Park Site Information

Local Site Name	Prineville, Davidson Park
AQS ID	41-013-0100
GPS Coordinates	44.2998, -120.8448
Street address	251 SE Court St, Prineville, OR
County	Crook
Distance from roadways (meters)	10
Traffic count (AADT, yr)	12012 (Ochoco HW No. 41 MP 19. (Fairview St) , 2021)
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Other
Pollutant	PM2.5
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS. AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Beta Attenuation BAM 1022
Instrument parameter occurrence code	Primary
Method number	209
FRM/FEM/FRM/other	FEM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	1/1/2023
Current sampling frequency	1/3
Sampling season	Annual
Probe height (meters)	3
Distance from collocated monitor (meters)	NA
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)	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
Is it suitable for comparison against the standard?	Yes

Table C 21. La Grande, Hall and North Site Information

Local Site Name	La Grande, Hall and North Street
AQS ID	41-061-0119
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)	Other
Pollutant	PM10
Parameter code, POC	81102,7
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Gravimetric, Tisch PM10 HV+
Instrument parameter occurrence code	Primary
Method number	141
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	9/1/2017
Current sampling frequency	1/6
Sampling season	Annual
Probe height (meters)	3
Distance from supporting structure (meters)	2
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	26
Distance from to furnace or incinerator flue (meters)	39
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Aluminum
Residence time for reactive gases (seconds)	NA
Will there be changes with the next 18 months?	No
Is it suitable for comparison against the standard?	Yes

Table C 22. Hermiston Municipal Airport Site Information

Local Site Name	Hermiston Municipal Airport
AQS ID	41-059-1003
GPS Coordinates	45.8290, -119.2630
Street address	1498 Airport Way, Hermiston, OR
County	Umatilla
Distance from roadways (meters)	888,
Traffic count (AADT, yr)	AADT = 8089 (MP 8.7, US395 or Hwy 54), Yr = 2021
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Hermiston (CBSA 25840)
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	Population
Monitoring Objective	NAAQS, AQI
Spatial scale of Representativeness	Urban
Monitoring types	SLAMS
Instrument type and model	UV Absorption, Teledyne T400
Instrument parameter occurrence code	Primary
Method number	087
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	2/27/2007
Current sampling frequency	Hourly
Sampling season	May-Sept
Probe height (meters)	4
Distance from supporting structure (meters)	1
Distance from obstructions on roof (meters)	No obstructions
Distance from obstructions not on roof (meters)	No obstructions
Distance from trees (meters)	134
Distance from to furnace or incinerator flue (meters)	72
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases (seconds)	2.8
Will there be changes with the next 18 months?	No
Is it suitable for comparison against the standard?	Yes

Appendix D. Site Evaluation Checklist

Region 10 ANNUAL AIR MONITORING NETWORK PLAN CHECKLIST

Year: 2022

Agency: Oregon DEQ and Lane Regional Air Protection Agency

40 CFR 58.10(a)(1) requires that each Annual Network Plan (ANP) include information regarding the following types of monitors: SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme ozone nonattainment areas, PAMS stations, and SPM monitoring stations.

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? ¹ If yes, page #s. Flag if incorrect? ²	Does the information provided ³ meet the req? ⁴	Notes
GENERAL PLAN REQUIREMENTS					
1.	Submit plan by July 1	CFR 58.10 (a)(1)	Yes		
2.	30-day public comment / inspection period ⁵	58.10 (a)(1); 58.10 (c)	Yes, See Appendix K.	Screenshot of web site posting. Send in public comment posting. Mentioned in the submission email, but please document in future ANPs via a screenshot of the website or other means.	A screen shot and the public notice document are in Appendix K. No comments were received.
3.	Statement of whether the operation of each monitor meets the requirements of appendices A,B,C,D,&E, where applicable.	58.10 (a)(1)	Yes		

1. Response options: NA, Yes, No, Incomplete, Incorrect. The responses “Incomplete” and “Incorrect” assume that some information has been provided.

2. To the best of our knowledge.

3. Assuming the information is correct

4. Response options: NA (Not Applicable) – [reason], Yes, No, Insufficient to Judge.

5. The affected state or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

6. See 58.14(c)

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?1 If yes, page #s. Flag if incorrect?2?	Does the information provided3 meet the req?4	Notes
4.	Modifications to SLAMS network – case when we are not approving actual system modifications (i.e., we will do it outside the ANP process ⁶)	58.10 (a)(2) 58.10(e)	NA		
5.	Modifications to SLAMS network – case when we are approving actual system modifications per 58.14(c)	58.10 (a)(2) 58.10 (b)(5) 58.10(e) 58.14 (c)	1. BAM 1022 Installations across the SLAMS network (Section 3.2.4). 2. Relocation of the Lakeview and Medford PM2.5 and PM10 site (Section 3.2.4 & 3.2.5) 3. Addition of Salem and Bend SPM BAM1022s in 2023 (Section 3.2.4). 4. Waiver for the Lakeview PM10 monitoring. (Section 3.2.5)		
6.	Does plan include documentation for system modifications that have been approved since last ANP approval?		NA		
7.	Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal	58.10 (b)(5)	Relocation of the Lakeview and Medford PM2.5 and PM10 sites (Section 3.2.4 & 3.2.5) Addition of Salem and Bend BAM1022s in 2023 (Section 3.2.4)		
8.	Statement that SPMs operating an FRM/FEM that meet Appendix E also meet either Appendix A or an approved alternative. Documentation for 58.11 any Appendix A approved alternative should be included. ⁵	58.11 (a)(2)	Yes, Section 4.1 and Appendix C.		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?1 If yes, page #s. Flag if incorrect?2?	Does the information provided3 meet the req?4	Notes
9.	SPMs operating FRM/FEM/ARM monitors for over 24 months are listed as comparable to the NAAQS or the agency provided documentation that requirements from Appendices A, C, or E were not met.6	58.20 (c)	Yes, Section 4.1		
GENERAL PARTICULATE MONITORING REQUIREMENTS (PM10, PM2.5, Pb-TSP, Pb-PM10)					
11.	Designation of a primary monitor if there is more than one monitor for a pollutant at a site.	App. A 3.2.3 Y	Yes, ANP Appendix C		
12.	Distance between QA collocated monitors. For low volume PM instruments (flow rate < 200 liters/minute) > 1 m. For high volume PM instruments (flow rate > 200 liters/minute) > 2m.	App. A 3.2.3.4 (c) and 3.3.4.2 (c)	Yes, ANP Appendix C		
PM2.5 –SPECIFIC MONITORING REQUIREMENTS					
13.	Document how states and local agencies provide for the review of changes to a PM2.5 monitoring network that impact the location of a violating PM2.5 monitor.	58.10 (c)	Yes, Section 4.1 and 4.2 and Appendix C.		
14.	Identification of any PM2.5 FEMs and/or ARMs not eligible to be compared to the NAAQS due to poor comparability to FRM(s) [Note 1: must include required data assessment.] [Note 2: Required SLAMS must monitor PM2.5 with NAAQS comparable monitor at the required sample frequency.]	58.10 (b)(13) 58.11 (e)	Appendix C.		
15.	Minimum # of monitoring sites for PM2.5 [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.	App. D 4.7.1(a) & Table D-5	Y; Table A.8		
16.	Requirements for continuous PM2.5 monitoring (number of monitors and collocation)	App. D 4.7.2	Y; Tables A.9; Table B.1, Appendix C		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?¹ If yes, page #s. Flag if incorrect²?	Does the information provided³ meet the req?⁴	Notes
17.	FRM/FEM/ARM PM2.5 QA collocation	Appendix A.2.3	Y; Table B1		
18.	PM2.5 Chemical Speciation requirements for official STN sites	Appendix D 4.7.4	Y; Table C1		
19.	Identification of sites suitable and sites not suitable for comparison to the annual PM2.5 NAAQS as described in Part 58.30	58.10 (b)(7)	Y; tables in ANP App C		
20.	Required PM2.5 sites represent area-wide air quality	Appendix D 4.7.1(b)	Y; tables in ANP App C		
21.	For PM2.5, within each MSA, at least one site at neighborhood or larger scale in an area of expected maximum concentration	Appendix D 4.7.1(b)(1)	Y; Table A 9		
22.	If additional SLAMS PM2.5 is required, there is a site in an area of poor air quality	Appendix D 4.7.1(b)(3)	Y; Table A 9		
23.	States must have at least one PM2.5 regional background and one PM2.5 regional transport site.	Appendix D 4.7.1(b)	N. Table C. 5. Nephelometer is used as background.		
24.	Sampling schedule for PM2.5 - applies to year-round and seasonal sampling schedules (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4); 58.12(d); App. D 4.7	Y; Tables in ANP App C Updated SE Portland, Hillsboro, Tualatin, Grants Pass, Medford, Lakeview, and Prineville to FEM.		
25.	Minimum # of monitoring sites for PM10 [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D, 4.6 (a) and Table D-4	Y; Table A.7		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?¹ If yes, page #s. Flag if incorrect²?	Does the information provided³ meet the req?⁴	Notes
PM10 –SPECIFIC MONITORING REQUIREMENTS					
26.	Manual PM10 method collocation (note: continuous PM10 does not have this requirement)	App. A 3.3.4	Y; Table B.1		
27.	Sampling schedule for PM10	58.10 (b)(4); 58.12(e); App. D 4.6	Y; Table A.7; App C Tables		
Pb –SPECIFIC MONITORING REQUIREMENTS					
28.	Minimum # of monitors for non-NCORE Pb [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.5	Y; Table B3		
29.	Pb collocation: for non-NCORE sites	App A 3.4.4 and 3.4.5	Y; Table B3		
30.	Any source-oriented Pb site for which a waiver has been granted by EPA Regional Administrator	58.10 (b)(10)	Y; Section 3.2.7 and ANP App D; Table D-1 & Section 4.3		
31.	Any Pb monitor for which a waiver has been requested or granted by EPA Regional Administrator for use of Pb-PM10 in lieu of Pb-TSP	58.10 (b)(11)	NA		
32.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	NA		
33.	Sampling schedule for Pb	58.10 (b)(4); 58.12(b); App A 3.4.4.2 (c) & 3.4.5.3 (c)	NA		
34.	Sampling schedule for Pb	58.10 (b)(4); 58.12(b); App A 3.4.4.2 (c) & 3.4.5.3 (c)	NA		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? ¹ If yes, page #s. Flag if incorrect ² ?	Does the information provided ³ meet the req? ⁴	Notes
OZONE –SPECIFIC MONITORING REQUIREMENTS					
35.	Minimum # of monitoring sites for O3 [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.] [Note 3: monitors that do not meet traffic count/distance requirements to be neighborhood or urban scale (40 CFR Appendix E, Table E-1) cannot be counted towards meeting minimum monitoring requirements]	App D 4.1(a) & Table D-2	Y; Table A2		
36.	Identification of maximum concentration O3 site(s)	App D 4.1 (b)	Y; Tables in ANP App C		
37.	An Enhanced Monitoring Plan for O3, if applicable, no later than October 1, 2019 or two years following the effective date of a designation to a classification of Moderate or above O3 nonattainment, whichever is later.	58.10 (a)(11); App D 5 (h)	NA		
NO2 –SPECIFIC MONITORING REQUIREMENTS					
38.	Minimum monitoring requirements for area-wide NO2 monitor in location of expected highest NO2 concentrations representing neighborhood or larger scale	App D 4.3.3	Y; Table A.4		
39.	Identification of required NO2 monitors as either near-road, or area-wide	58.10 (b)(12)	Y; Table A.4		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? ¹ If yes, page #s. Flag if incorrect ² ?	Does the information provided ³ meet the req? ⁴	Notes
NEAR ROAD –SPECIFIC MONITORING REQUIREMENTS					
In CBSAs ≥ 2.5 million, the following near-roadway minimum monitoring requirements apply:					
40.	Two NO2 monitors	App. D 4.3.2(a); 58.13 (c)(3) & (4)	N, p. 1, p. 20		The second NO2 site is pending.
41.	One CO monitor	App. D 4.2.1 (a); 58.13 (e)(2)	Y, p. 11, Table C3		
42.	One PM2.5 monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	Y, Table C3		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?¹ If yes, page #s. Flag if incorrect²?	Does the information provided³ meet the req?⁴	Notes
In CBSAs ≥ 1 million and AADT ≥ 250K, the following near-roadway minimum monitoring requirements apply:					
43.	Two NO ₂ monitors	App. D 4.3.2(a); 58.13 (c)(3) and	N/A		
44.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	N/A		
45.	One PM _{2.5} monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	N/A		
In CBSAs ≥ 1 million and ≤ 2.5 million AND AADT < 250K, the following near-roadway minimum monitoring requirements apply:					
46.	One NO ₂ monitors	App. D 4.3.2(a); 58.13(c)(3)	N/A		
47.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	N/A		
48.	One PM _{2.5} monitor	App. D 4.7.1(b)(2);	N/A		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?¹ If yes, page #s. Flag if incorrect²?	Does the information provided³ meet the req?⁴	Notes
SO2 –SPECIFIC MONITORING REQUIREMENTS					
48.	Minimum monitoring requirements for SO2 based on PWEI and/or RA required monitors under Appendix D 4.4.3 [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.4	Y; Table A. 5.		
SO2 –SPECIFIC MONITORING REQUIREMENTS					
50.	NCore site and all required parameters operational: year-round O3, SO2, CO, NOy, NO, PM2.5 mass, PM2.5 continuous, PM2.5 speciation, PM10-2.5 mass, resultant wind speed at 10m, resultant wind direction at 10m, ambient temperature, relative humidity. NOy waiver, if applicable	App. D 3(b)	Y; Table A.1		
51.	A plan for making Photochemical Assessment Monitoring Stations (PAMS) measurements, if applicable. The plan shall provide for the required PAMS measurements to begin by June 1, 2021	58.10 (a)(10); 58.13 (h)	Y		
SITE OR MONITOR - SPECIFIC REQUIREMENTS (OFTEN INCLUDED IN DETAILED SITE INFORMATION TABLES)					

52.	AQS site identification number for each site	58.10 (b)(1)	App. C		
53.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	App. C		
54.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	App. C		
55.	Parameter occurrence code (POC) for each monitor	Needed to determin	App. C		
56.	Basic monitoring objective for each monitor	App D 1.1; 58.10	App. C		
57.	Site type (designation) for each monitor (e.g. SLAMS, SPM)	App D 1.1.1	App. C		
58.	Monitor type for each monitor, and Network Affiliation(s) as appropriate	Needed to determi	App. C		
59.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b) (6); App D	App. C		
60.	Parameter code for each monitor	Needed to determine if other requirements (e.g.,	App. C		

	ANP requirement	Citation within 40 CFR 58	Was the info submitted?¹ If yes, page #s. Flag if incorrect²?	Does the information provided³ meet the req?⁴	Notes
61.	Method code and description (e.g., manufacturer & model) for each monitor	58.10 (b)(3); App C	Appendix C		
62.	Sampling start date for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Appendix C		
63.	Distance of monitor from nearest road	App E 6	Appendix C		
64.	Traffic count of nearest road	App E	Appendix C		
65.	Groundcover	App E 3(a)	Appendix C		
66.	Probe height	App E 2	Appendix C		
67.	Distance from supporting structure (vertical and horizontal, if applicable, should be provided)	App E 2	Appendix C		
68.	Distance from obstructions on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be	App E 4(b)	Appendix C		
69.	Distance from obstructions not on roof (horizontal distance to the obstruction and vertical height of the obstruction above the	App E 4(a)	Appendix C		
70.	Distance from the drip line of closest tree(s)	App E 5	Appendix C		
71.	Distance to furnace or incinerator flue	App E 3(b)	Appendix C		

⁷ Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements. In addition, ozone monitors that do not meet traffic count/distance requirements to be neighborhood scale (40 CFR 58 Appendix E, Table E-1) cannot be counted towards minimum monitoring requirements.

Appendix E. Waivers and Surrogate Monitoring

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

1. TSP Lead Waiver

In 2012 and 2018 EPA approved ODEQ's request to discontinue TSP lead monitoring at Cascade Mills in McMinnville. The waiver is no longer required in 2023 because Cascade Mills PSEL is now below 0.5 tons/year and DEQ is no longer required to monitor.

2. Carbon monoxide Waivers

The Medford is a CO maintenance areas 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 ODEQ 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 D 1. CO emission estimates from the Rogue Valley.

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

3. PM10 Surrogate Monitoring

In 2010 the Grants Pass PM10 monitor was discontinued because its values had dropped far below the NAAQS and funding was cut. The PM10 maintenance plans for this site required continued monitoring so EPA and ODEQ agreed upon an alternate method to track PM10. EPA allowed ODEQ to discontinue PM10 monitoring if we used PM2.5 monitoring as a surrogate. In the 2010 network plan, we showed that the PM10 consisted predominantly of PM2.5. We developed correlation equations and calculated 2015 PM10 estimates for these sites based on PM2.5. The PM10 standard is 150µg/m3.

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

	Grants Pass	Klamath Falls
Linear Regression Equation	$y = 1.2x + 2.6$	$y = 1.4x + 3.2$

Y = PM10, X = PM2.5

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

Klamath Falls ^a	Grants Pass
PM10 estimate. Number of days >150 (µg/m ³)	
2020-22 Average = 2.0	2020-22 Average = 2.0
2020 - 6 (1 actual day on 1/6 schedule)	2020 - 6 (1 actual day on 1/6 schedule)
2021 - 0	2021 - 0
2022 - 0	2022 - 0

a. All of the PM2.5 days were from wildfire impacts.

4. Existing Monitoring Waivers.

- 4.1 2005 - Klamath Falls CO monitoring waiver approval
- 4.2 2011 - Klamath Falls PM10, Grants Pass PM10, and Medford CO monitoring waiver request and approval
- 4.3 2018 – NCore PM10 lead waiver request and approval.

5. New Monitoring Waiver Request

ODEQ is submitting a waiver request to use PM2.5 monitoring as a surrogate for PM10 in Lakeview.

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,

A handwritten signature in cursive script that reads "Mahbubul Islam".

Mahbubul Islam, Manager
State and Tribal Air Programs Unit

cc: ✓ Jeff Smith, ODEQ
Connie Robinson
Keith Rose

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 PM10 Maintenance Areas

(This document is too large to post here and is available upon request)

Waiver Approval:

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

JAN 0 6 2012

OFFICE OF
AIR, WASTE AND TOXICS

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

Department of Environmental Quality
Air Quality Division

JAN 09 2012

RECEIVED

Dear Mr. Barnack:

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

Discontinued Monitors:

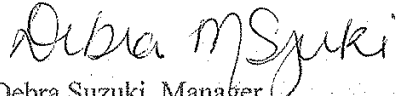
- 1) Discontinued PM2.5 FRM sampling at Bend, Pump Station (41-017-0120). This site has been consistently below 75% of the NAAQS. A nephelometer remains at the site for the woodstove advisory program. EPA approves this change.
- 2) Discontinued PM2.5 FRM duplicate sampling at Hillsboro, Hare Field (41-067-0004). 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 Suzuki, Manager
State and Tribal Program Unit

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,

A handwritten signature in black ink, appearing to read "Gina Bonifacino".

Gina Bonifacino, Acting Manager
Air Planning Unit

Appendix F. Interstate Memos of Understanding

F.1 Portland/Vancouver Airshed.

Memorandum of Agreement
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 2,453,168 as of July 1, 2017. 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)	2
Nitrogen Dioxide (NO ₂)	2*
Sulfur Dioxide (SO ₂)	1
Particulate Matter ≤10µm (PM ₁₀)	2
Fine Particulate Matter (PM _{2.5})	3

* An additional NO₂ monitor will be required if the population of the MSA grows above 2,500,000 people.

As of January 1, 2019, the minimum monitoring requirements were met or exceeded in the Portland-Vancouver-Hillsboro, OR-WA MSA for each of the criteria pollutants listed above.

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 MOA, 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
(503)693-5708

Washington Department of Ecology
Jill Schulte, Air Monitoring Coordinator
PO Box 47600
Olympia, WA 98504-7600
(360) 407-6877

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

Date Tom Roick
Air Quality Monitoring Manager
Oregon Department of Environmental Quality

Date Kathy Taylor
Deputy Program 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. Lakeview PM2.5 & PM10 SLAMS Site Relocation Request.

Attached Document

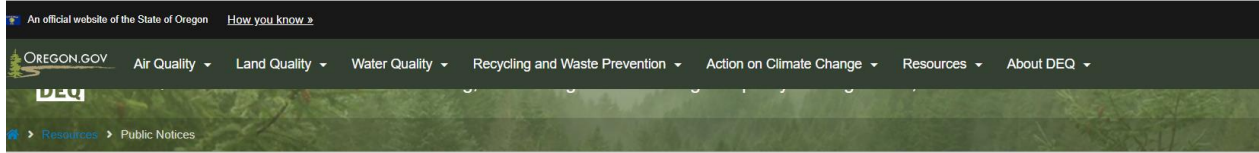
Appendix I. Medford PM2.5 & PM10 SLAMS Site Relocation Request.
Attached Document

Appendix J. Lakeview PM10 Waiver.

Attached Document

Appendix K. Public Notice

The Annual Network Plan was put out for public comment on May 31st for 30 days. The public was informed by Public Notice on the DEQ public notice page below which has many subscribers. The page provides a link to subscribe for notices.



Public Notices

- File a Pollution Complaint
- Calendar
- Public Notices
- Data Systems
- Geographic Information Systems
- Internal Management Directives
- Reports to the Legislature

Public notices are one of many ways DEQ can communicate with Oregonians about current activities and invite the public to be part of the discussion about our environmental issues. [Sign up for text or email notifications via GovDelivery.](#)

Public Notices for Stormwater, UIC and Section 401 permit applications

- Please visit [Your DEQ Online](#) to comment on permit applications issued after Sept. 30, 2021.

[Department of Agriculture Public Notices on Confined Animal Feeding Operations](#)

DEQ public notices

Active Public Notices	Region/County	Notice Type	Description	Due Date for Comments
DEQ Requests Comments on Proposed Categorical Exclusion for Rogue Valley Sewer Services' Cummins Stormwater Quality Facility	Statewide	Request for Comments	DEQ invites the public to comment on a proposed Categorical Exclusion for Rogue Valley Sewer Services' Cummins Stormwater Quality Facility.	8/10/2023 5:00 PM
DEQ Requests Comments on Amazon Data Services Proposed Air Quality Permit Renewal	Umatilla	Request for Comments	DEQ invites the public to submit written comments on the conditions of Amazon Data Services, Inc. - PDX02 proposed air quality permit	8/17/2023 5:00 PM

The ANP link on the public notice page opens the Public Notice fact sheet. The ANP public notice has a link to the ANP posted on the DEQ Air Quality Monitoring website. <https://www.oregon.gov/deq/aq/pages/air-quality-monitoring.aspx>

Public Notice

DEQ requests comments on the - 2023 Annual Ambient Criteria Air Quality Monitoring Network Plan

DEQ invites the public to submit written comments on the 2023 criteria monitoring network plan posted on the [DEQ Air Quality Monitoring](#) web page.

Summary

EPA requires DEQ to submit an annual ambient air quality criteria pollutant monitoring network plan. EPA requires DEQ to submit this plan for public comment.

What is the purpose of our network?

This network measures ambient air quality criteria pollutants to:

- 1) Compare to the EPA's health standards.
- 2) Provide hourly air quality health information through the AQI.
<http://https://aqi.oregon.gov/>
- 3) Provide AQ trending information in the Air Quality Annual Report.
<https://www.oregon.gov/deq/aq/Pages/Air-Quality-Monitoring.aspx>
- 4) Support local health agencies for residential wood burning programs.
- 5) Partner with the ODF, the USFS and BLM for prescribed burning and forest fire smoke impacts.
- 6) Partner with the Oregon Department of Agriculture, Jefferson Co., and Union Co. to monitor field burning impacts.

What Air pollutants are monitored?

Criteria Air Pollutants

- 1) PM_{2.5} - Particulate matter 2.5 microns in diameter
- 2) PM₁₀ - Particulate matter 10 microns in diameter
- 3) Ozone
- 4) Carbon monoxide
- 5) Nitrogen dioxide
- 6) Sulfur dioxide

How do I participate?

Submit your comments for the public record, by mail, fax or email to:

Anthony Barnack
DEQ, Air Quality
7202 NW Evergreen Pkwy #150,
Hillsboro, OR 97124

Fax: (503) 693-4999

Email: Anthony.barnack@deq.oregon.gov

Please get the comments in by 5 p.m., June 30th.

What happens after the public comment period ends?

Criteria pollutant comments will be reviewed by DEQ and forwarded to EPA. These comments will be taken into consideration when planning for the monitoring network along with other factors such as the monitoring budget, EPA requirements, current pollution levels, and unmonitored populations.

Where can I go to review the plans?

The plans are posted at:

<https://www.oregon.gov/deq/aq/Pages/Air-Quality-Monitoring.aspx>

The plan name is:

"Criteria Air Quality Annual Monitoring Annual"

Accessibility information

DEQ is committed to accommodating people with disabilities. Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format.

To make these arrangements, contact DEQ Communications and Outreach in Portland at 503-229-5696 or call toll-free in Oregon at 800-452-4011; fax to 503-229-6762; or email deqinfo@deq.state.or.us.

People with hearing impairments may call 711.



State of Oregon
Department of
Environmental
Quality

Air Quality
Environmental
Solutions Division
7202 NW Evergreen
Parkway, Suite 150
Hillsboro, OR 97124
Phone: 503-693-5700
800-452-4011
Fax: 503-693-4999
Contact: Anthony Barnack
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

DEQ provides documents electronically whenever possible in order to conserve resources and reduce costs.

If you received a hard copy of this notice, please consider receiving updates via e-mail instead. Send your request to: subscriptions@deq.state.or.us

Please include your full name and mailing address so that we can remove you from our print mailing list.