

2017 Oregon Annual Ambient Criteria Pollutant Air Monitoring Network Plan

Air Quality

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maintaining and enhancing
the quality of Oregon's air,
land and water.*



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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	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
WAQR	Wildfire Air Quality Rating - wildfire smoke health internet page

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

Executive Summary

This annual criteria pollutant network plan is required by EPA and discusses changes to the criteria pollutant monitoring network. DEQ also has an ambient air toxics monitoring network that includes trend sites, neighborhood assessment sites, and source assessment sites. The planning for air toxics monitoring is conducted separately from the criteria pollutant network plan.

In 2017/2018 the following changes will be made to the criteria monitoring network upon approval from EPA.

Salem Ozone

Another ozone monitor may be added to Salem prior to the summer 2018 ozone monitoring season. This is required by EPA because of the large population. The monitor would be added in town to go along with the downwind monitor currently southeast of Salem in Turner. The monitor may be located at our current PM2.5 monitoring site near the Salem State Hospital. The need for and possible location of the monitor are still being discussed with EPA.

PM2.5 Speciation

DEQ will reduce the non trend speciation sampling from annually to winter only. This will reduce costs and still provide PM2.5 speciation information during the months with the highest anthropogenic particulate matter concentrations.

PM2.5 AQI

DEQ is attempting to increase the number of PM2.5 monitored locations on the air quality index to help fill gaps in airshed monitoring across the state. There are currently large populations with no monitors in sections of large cities like the Portland Metro Area, Salem, Medford, and Bend. Eugene has good representation thanks to work done at the local level. We also want to represent communities which currently have no monitoring, such as Redmond. This monitoring would not be used for official attainment designation, but is meant for real time health information.

1. Introduction

The Oregon Department of Environmental Quality's (ODEQ) 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 CFR requirements.

Code of Federal regulations, 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 <http://www.deq.state.or.us/aq/forms/annrpt.htm>

2. Monitoring background

2.1 National Monitoring Strategy

The National Monitoring Strategy directs state and local agencies to operate more continuous monitors and to collect real time air quality data. The real time information is available through EPA's AIRNow and ODEQ's Air Quality Index (AQI) web pages. In particular, EPA encouraged states to use continuous PM_{2.5} monitors instead of the filter base 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. ODEQ'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 (PM₁₀-PM_{2.5}=PM_c), PM_{2.5} Speciation, visibility, and meteorology. The NCORE site is at SE Lafayette, Portland.

2.1.1 State and Local Support

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

2.1.2 AQ Maintenance and Non-attainment support

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

2.2 Non-attainment and Maintenance Areas

Areas are designated attainment or non-attainment a few years after a standard is issued. If an area exceeds the standard a State Implementation Plan (SIP) is written to bring the area into attainment. After monitoring shows a non-attainment area has reached attainment, a maintenance plan is created to keep it there. Oregon's non-attainment and maintenance areas are below.

2.2.1 Non-attainment Areas:

PM_{2.5} Klamath Falls Urban Growth Boundary (moving to maintenance designation)
 Oakridge Urban Growth Boundary

2.2.2 Maintenance Areas in Oregon (formerly non-attainment areas):

CO: Grants Pass Central Business District
 Portland Metropolitan Service District Boundary
 Klamath Falls Urban Growth Boundary Medford
 Urban Growth Boundary
 Salem-Kaiser Area Transportation Study

PM₁₀: Grants Pass Urban Growth Boundary
 Klamath Falls Urban Growth Boundary
 Medford-Ashland Air Quality Maintenance Area
 La Grande Urban Growth Boundary
 Lakeview Urban Growth Boundary
 Eugene/Springfield Urban Growth Area
 Oakridge Urban Growth Boundary

Ozone (1hr): Portland/Vancouver AQMA

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 basic 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 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 Among 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

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. Tribal lands are sovereign and do not fall under DEQ's jurisdiction. Several of the tribes operate their own monitoring networks. The USFS and BLM also conduct their own monitoring in some areas.

2017 Oregon Air Quality Index Network



Table 2 Table of ODEQ and LRAPA Criteria Pollutant Ambient Air Monitoring Network

City	Site	SO ₂	CO	NO ₂	O ₃	PM Estimate	PM ₁₀	PM _{2.5}	Spec	Lead	WS/WD	Temp	DT	BP	RH	SR
Albany	Calapooia School					X										
Applegate Vly	Provolt					X										
Ashland	Fired Department					X										
Bend	Bend Rd Dept										X	X		X	X	X
	Bend Pump Station					X										
Baker City	Forest Service					X										
Burns	E. Washington St.					X		X			X	X		X	X	X
Cave Junction	Forest Service					X										
Corvallis	Intermediate School					X										
Cottage Grove	City Shops					X		X								
Cove	City Hall					X					X	X				
Crater Lake	Maintenance Area					X										
Detroit Lakes	Forest Service					X										
Enterprise	Forest Service					X										
Eugene Saginaw Springfield	Pacific Hwy 99N					X	X	X		X						
	Amazon Park				X	X		X		X						
	Wilkes Drive					X					X	X				
	Delight Valley Sch Rd				X											
	City Hall					X		X			X					
Grants Pass	Parkside School					X		X			X	X		X		
Hermiston	Municipal Airport				X						X	X				
John Day	Davidson Street					X										
Klamath Falls	Clinton St, Peterson Sch					X		X	X		X	X	X	X	X	
La Grande	Ash Street					X	X			X	X	X		X	X	
Lakeview	Center & M Streets					X		X			X	X		X		
Lyons	Marilynn School					X										
Madras	Westside School					X										
Medford	Welch & Jackson Sts						X									
	Grant & Belmont Sts					X		X								
	Talent				X	X										
	Rossanley Drive										X	X	X	X	X	X
Mill City	Mill City School					X										
Eagle Cap	Mt Fanny					X										
Mt. Hood	Multopor					X										
Oakridge	School Street					X	X	X			X	X				
Pendleton	SW Marshall Place					X					X	X		X		

City	Site	SO ₂	CO	NO ₂	O ₃	VI/S/PM	PM ₁₀	PM _{2.5}	Spec	TSP Pb	WS/WD	Temp	DT	BP	RH	SR
Portland	N. Stafford St.						X				X	X	X			
	St. Johns, Sitton Elementary						X				X					
	SE Lafayette & 58 th Sts	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	Near Roadway Site		X	X	X			X			X	X			X	
	N Roselawn															
	N Kirby, Jefferson High										X					
	Beaverton Highland Park School					X										
	Carus Spangler Road				X	X					X	X				
	Hillsboro NE Grant St.					X		X	X							
	Gresham Gresham					X	X				X	X				
Sauvie Is	Route 1 Box 442				X	X					X	X				
Sherwood	SW Lasich Lane				X						X	X		X	X	X
Prineville	SE Court Street					X		X	X		X	X		X	X	X
Roseburg	NW Garden Valley Blvd					X										
Salem	Salem State Hospital					X										
Turner	Cascade Jr. High				X						X	X				
Silverton	James & Western Sts.					X					X	X				
Sisters	Forest Service					X										
Shady Cove	Shady Cove School					X										
Sweet Home	Fire Department					X										
The Dalles	Cherry Heights					X										

* The roadway site's HAP monitoring is only black carbon monitoring (used as a diesel PM surrogate).

Key:

Gasses:

SO₂ = Sulfur dioxide CO = Carbon Monoxide NO₂ = Nitrogen dioxide O₃ = ozone

Particulates:

PM Estimate = PM_{2.5} estimated using nephelometers

PM₁₀ = Particulate Matter 10 microns in diameter or smaller

PM_{2.5} = Particulate Matter 2.5 microns in diameter or smaller

Spec = PM_{2.5} chemical speciation,

Lead = PM₁₀ lead,

Meteorology monitors:

WS/WD = Wind speed and direction,

Temp = outdoor temperature at 2 meters,

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

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

Other:

HAPS = Hazardous air pollutants or air toxics

3.2.1 Ozone Network

Oregon DEQ and LRAPA have 11 monitoring sites. Five in the Portland-Metro area, one in Salem, Two in Eugene-Springfield, one in the Medford-Ashland area, one in Hermiston, and one in The Dalles. Maps of the network are shown below.

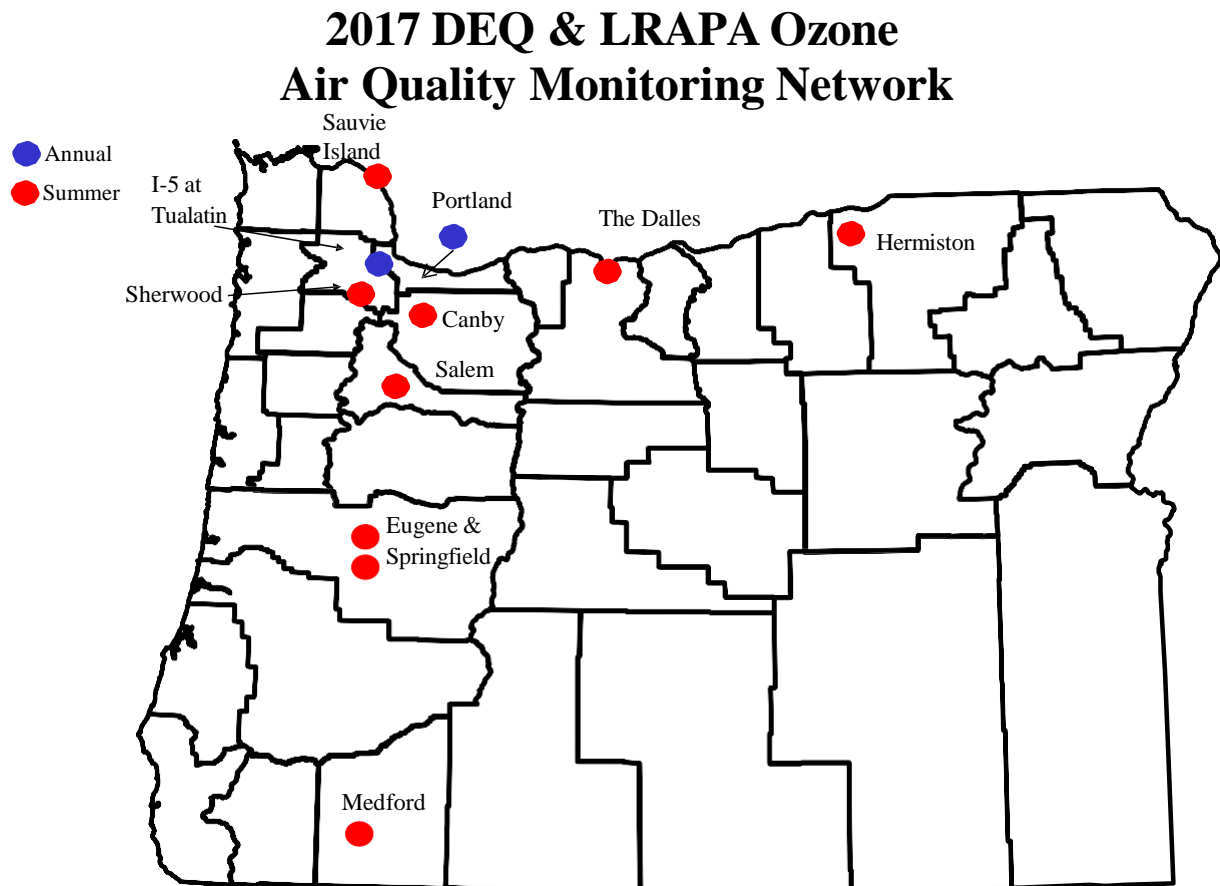


Figure 2. Ozone Monitoring Network

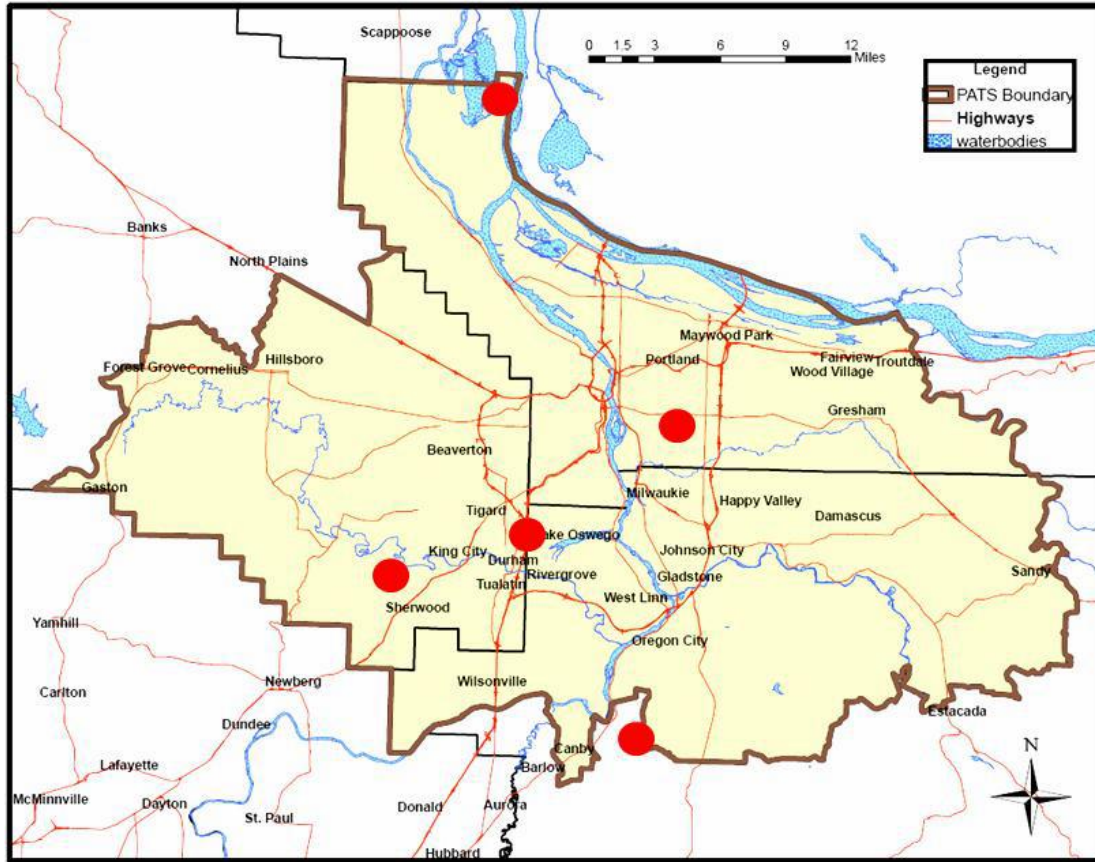


Figure 3. Portland- Metro Ozone Monitoring Sites.

Changes to the Ozone network in the past year

There were no changes to the ozone network

3.2.2 Nitrogen Dioxide Network

Oregon DEQ has two monitoring sites 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.

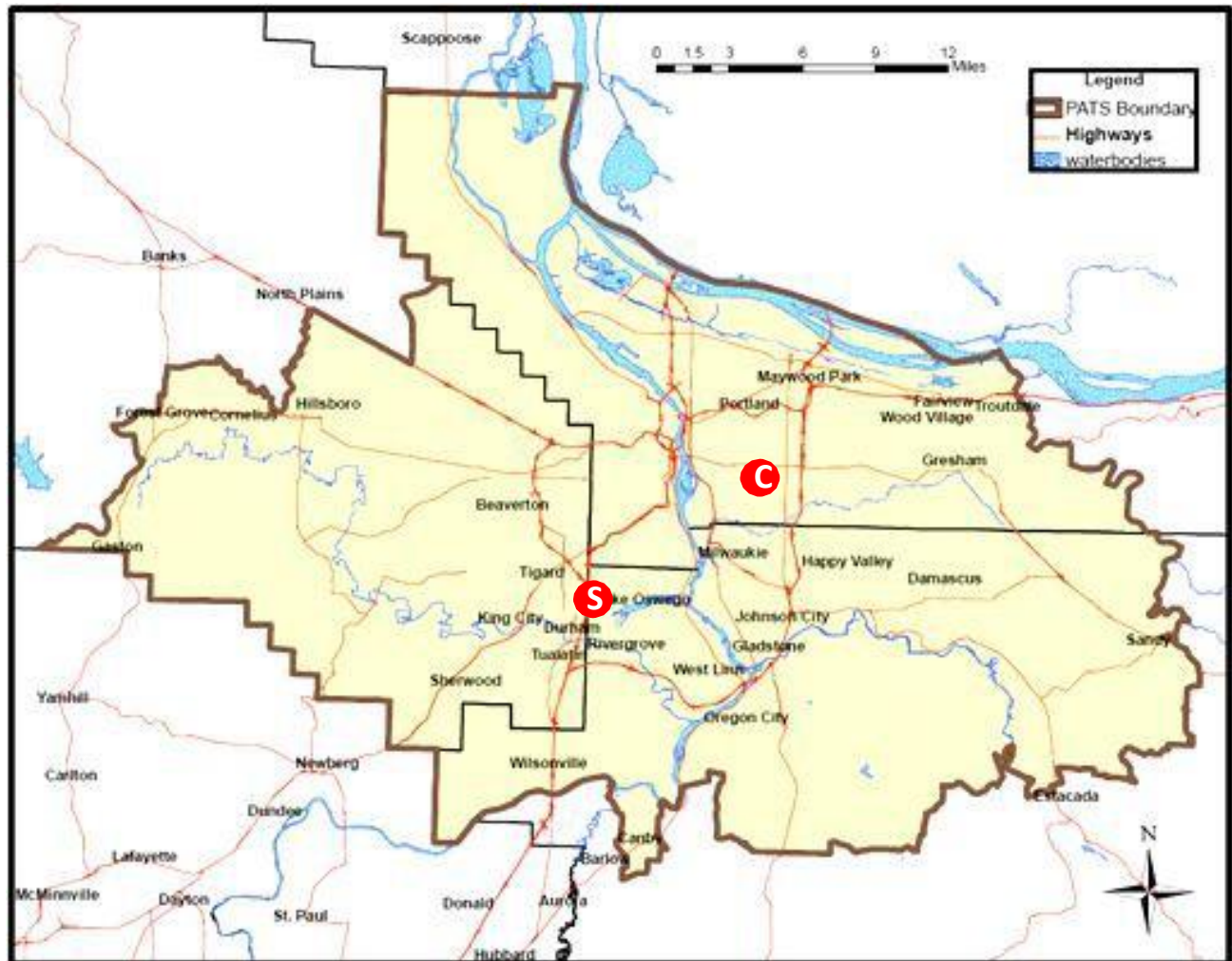


Figure 4. NO₂ Monitoring Network

S = Source monitor (measuring I-5)

C = Community monitor (Measuring in neighborhood)

Changes to the NO₂ network in the past year

1) No changes.

3.2.3 Carbon monoxide Network

Oregon DEQ has two monitoring sites 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.

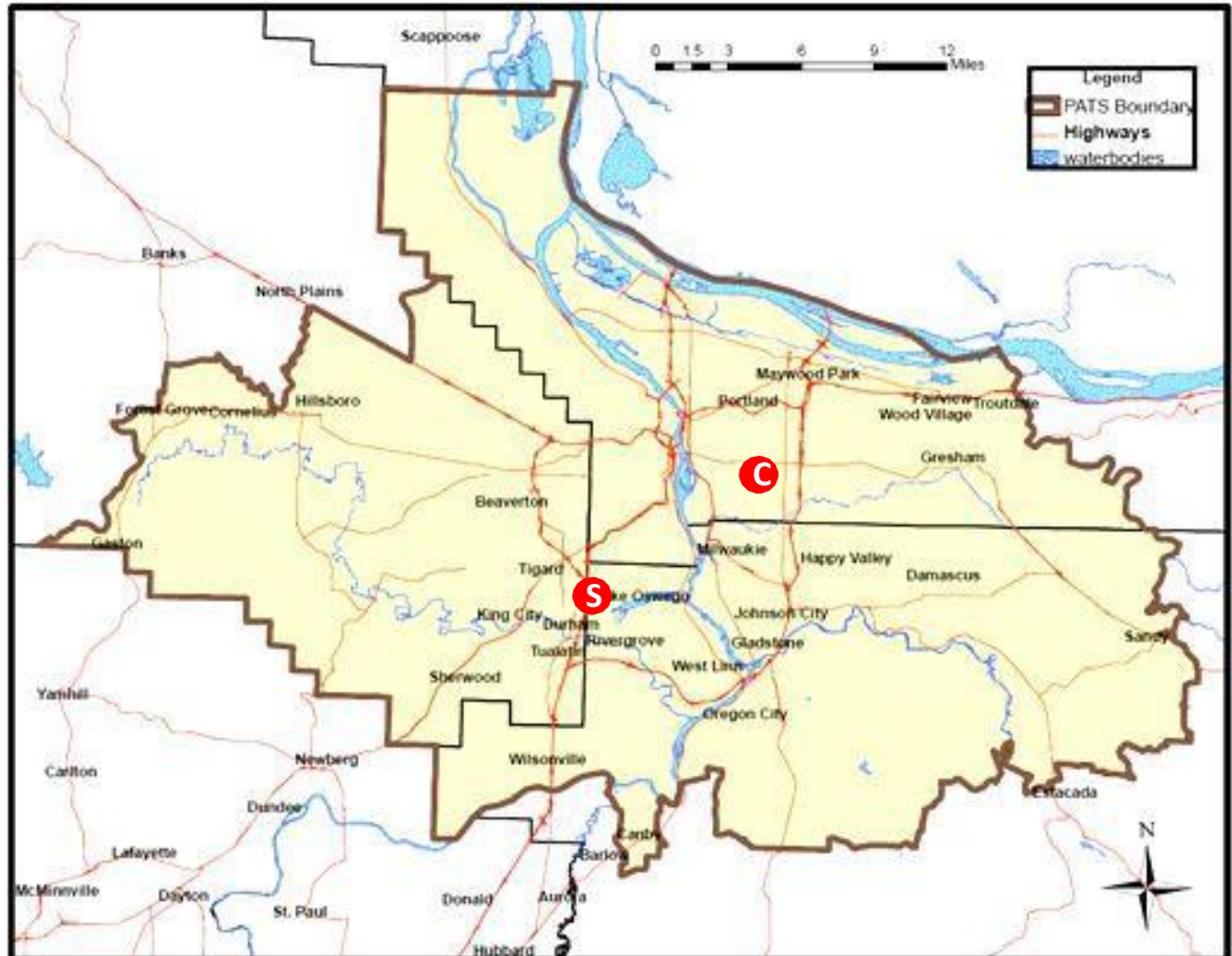


Figure 5. CO Monitoring Network

S = Source monitor (measuring I-5)

C = Community monitor (Measuring in neighborhood)

Changes to the CO network in the past year

- 1) No changes.

3.2.4 PM2.5 Network

Oregon DEQ and LRAPA have 1 NCORE and 11 SLAMS Federal Reference Monitoring (FRM) sites. Three in the Portland-Metro area, two in Eugene, and one each in Oakridge, Cottage Grove, Grants Pass, Medford, Klamath Falls, Lakeview, and Prineville. LRAPA operates one special purpose FRM site in Springfield. DEQ has three PM2.5 speciation sites, one in SE Portland (the trend site), one in Hillsboro, and one in Prineville. The speciation site that was in Klamath Falls is being discontinued because we have around 10 years of data and need to cut costs.

2017 Oregon PM2.5 NAAQS Compliance Surveillance Network

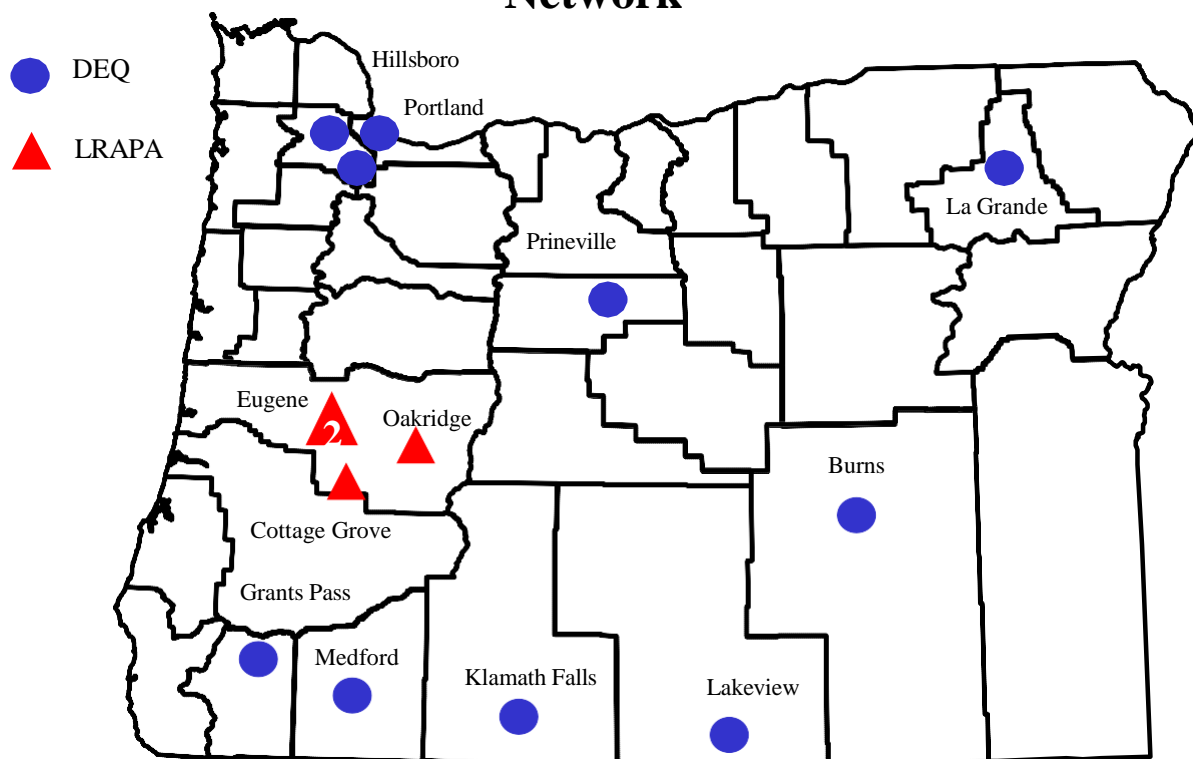


Figure 6. PM2.5 Monitoring Network

Changes to the PM2.5 network in the past year

No changes.

3.2.5 PM10 Network

Oregon DEQ and LRAPA have seven Federal Reference monitoring sites. Two are in the Portland-Metro area, one each in Eugene-Springfield, Oakridge, Medford, and La Grande. Three additional PM10 sites are in the Portland Metro area as a benefit from running Air Toxics.

2017 Oregon PM10 NAAQS Compliance Surveillance Network

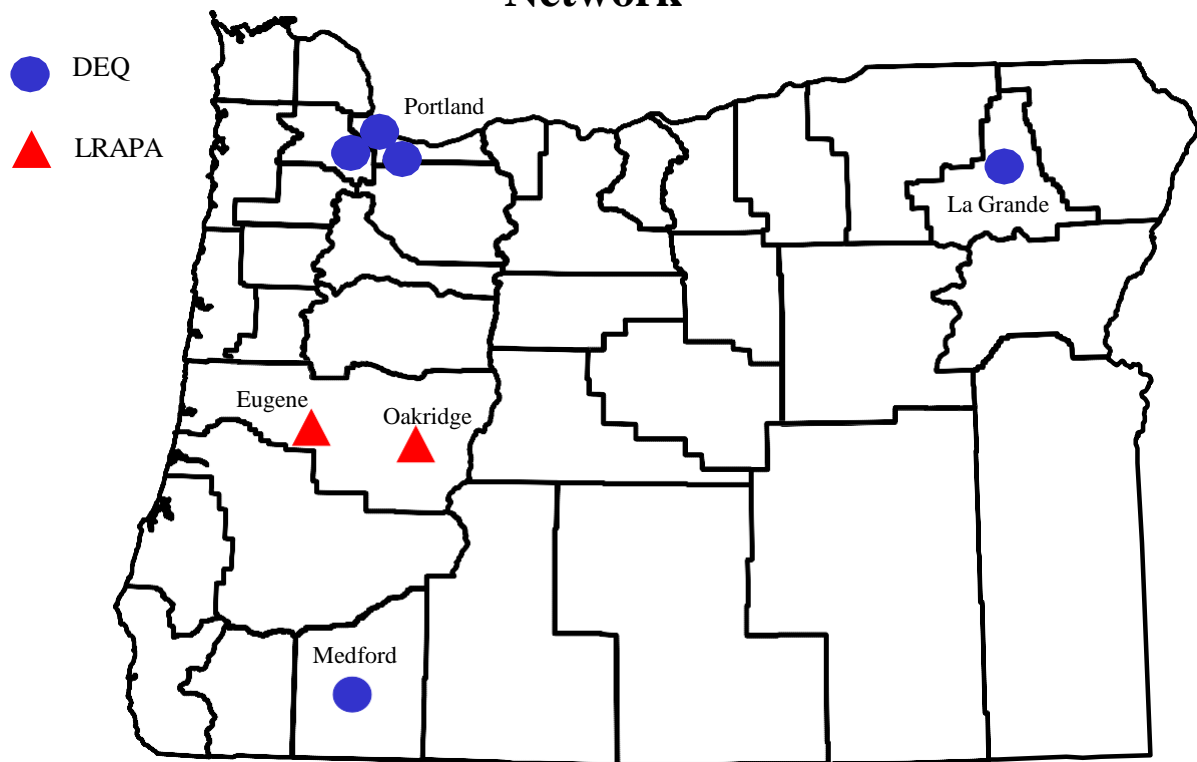


Figure 7. PM10 Monitoring Network

Changes to the PM10 network in the past year

1) Last year the La Grande PM10 moved across town to Hall and N. Street. In Portland the PM10 site moved about 0.2 Km to the SE to Jefferson High School. These moves were made because the old sites no longer met the siting criteria.

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.

2017 Oregon PM10-2.5 NAAQS Compliance Surveillance Network

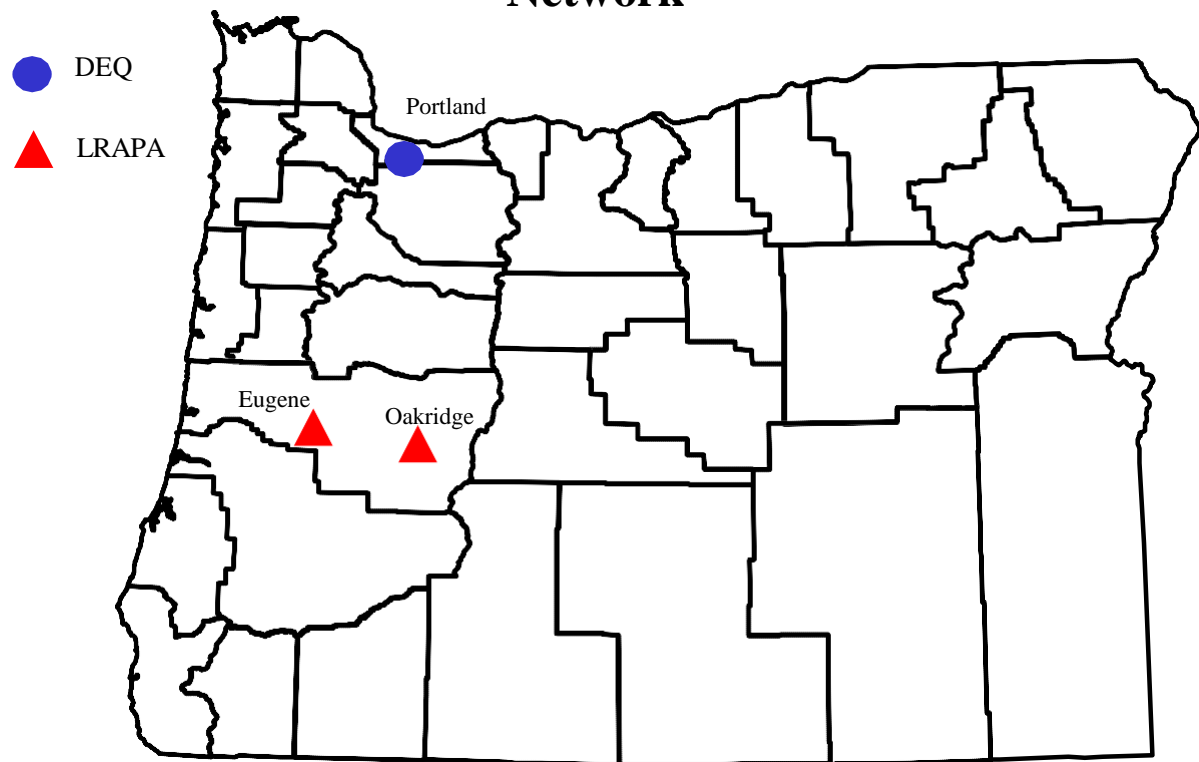


Figure 8. PM10-2.5 Network

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

3.2.7 PM10 Lead Network

Oregon has one Federal Reference monitoring site, and it is in Portland at the NCORE site.

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

3.2.8 Sulfur Dioxide (SO₂) Network

Oregon has one SO₂ site, and it is in Portland. The site is for community monitoring. There are no sources in Oregon that require SO₂ monitoring at this time.

Oregon has one point source that meets the threshold that requires monitoring or modeling. That is the PGE Boardman coal power plant. The coal plant will shut down in 2020 but the EPA requires monitoring or modeling to be performed from 2017 to 2020. DEQ will opt to model for this period.

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. 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 28 annual PM2.5 AQI sites and an additional nine summer AQI sites. DEQ partners with other government agencies to provide AQI information and sharing resources. Around 10 of these sites are funded by the USFS and BLM. Three of these summer sites are funded by the Oregon Dept. of Ag. for field burning. One summer site each is funded by Jefferson and Union Counties for field burning. DEQ does not need to request EPA approval for changes to non-EPA funded AQI sites but will submit any changes in the Annual Network Plan for public comment and input.

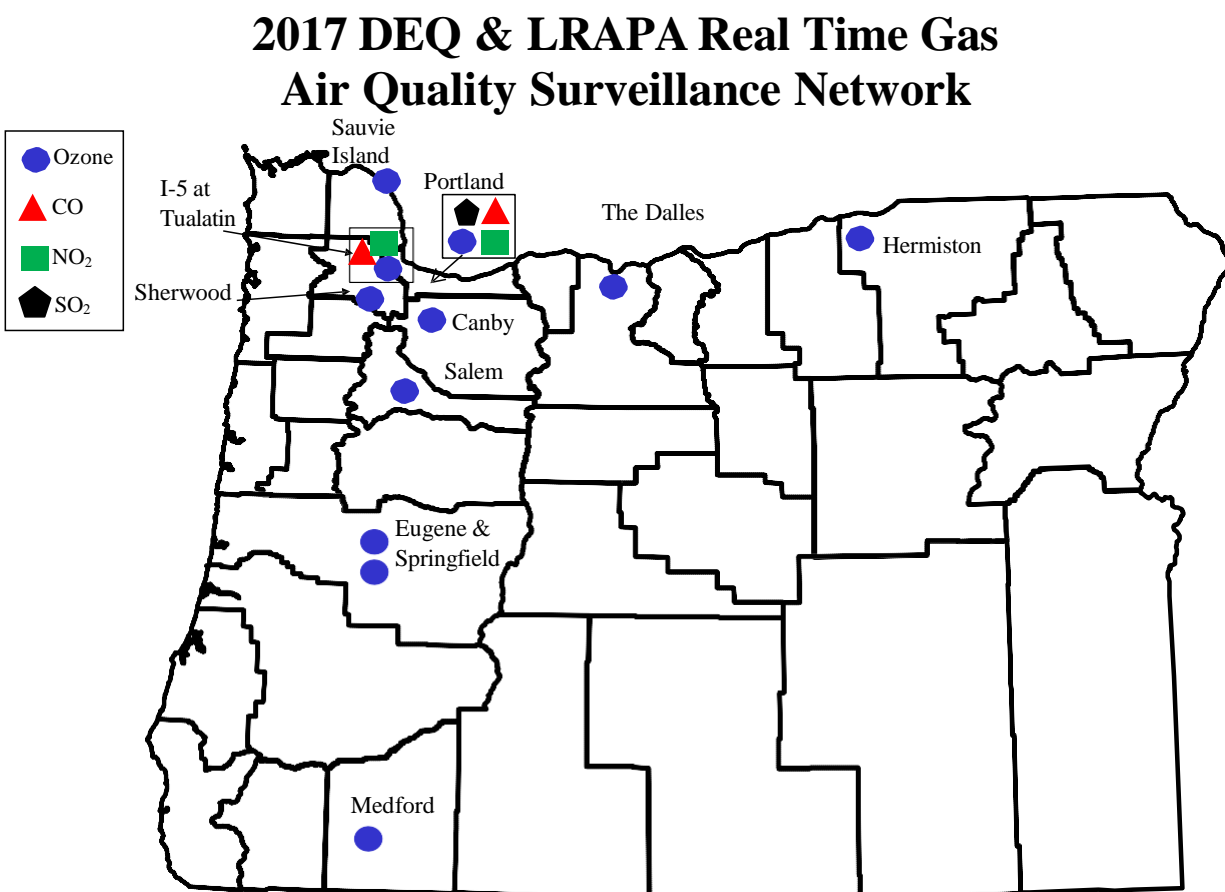


Figure 9. PM2.5 AQI Network

Changes to the PM2.5 AQI Network in the past year: No changes.

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 met network sites but will submit any changes in the Annual Network Plan for public comment and input.

2017 DEQ & LRAPA Meteorology Network

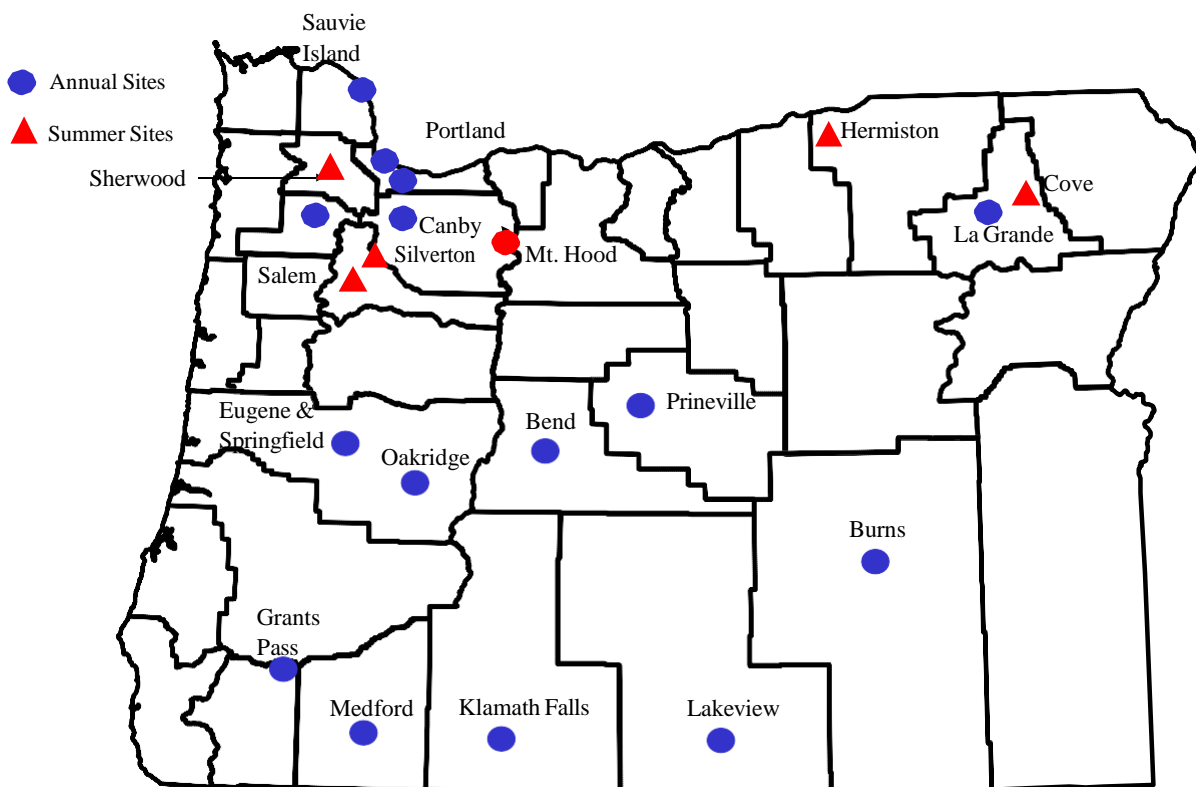


Figure 10. Meteorology Network

Changes to the Meteorological Network in the past year: Temporary met systems were set up to support air toxics monitoring in SE Portland, near Hayden Island, in NE Portland, in The Dalles, [H](#) and in Gresham. These are not required by EPA and not subject to their approval.

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

Ozone

The only change in the criteria pollutant network in the upcoming year may be the need to add an additional ozone monitoring site to the Salem area. Salem may need at least two monitoring sites because of population and it currently only has one downwind site. The second site would likely be located in Salem. This will be the same type of network that Eugene and Portland have. One site in the city and one downwind of the city. DEQ and EPA are currently discussing the need for this monitor and where it would go. Any new ozone monitoring would not happen until May of 2018.

PM2.5

No changes will be made to the PM2.5 SLAMS network but DEQ may add additional PM2.5 nephelometer sites for the Air Quality Index if funding is approved by the state legislature. New sites would be included in large communities like Portland, Salem, Medford, and Bend to fill in the gaps where there are large populations and not monitors in our current network. Communities with no monitors, like Redmond, may also get monitors and be on the Air Quality Index. These new monitors would not be of sufficient quality for official comparison to the NAAQS but would be good for real time health information.

PM2.5 speciation will be cut back from all year to winter time only to save resources. PM2.5 is particulate matter that is 2.5 micrometers in diameter or smaller. These could be made up of organic carbon, elemental carbon, metals, ammonium sulfate aerosols, ammonium nitrate aerosols, and crustal material in varying ratios. PM2.5 speciation is used to identify the proportional makeup of the particulate. It is relatively expensive, but it helps determine the source of the health impact and source of the particle. This process is most useful during days that exceed the NAAQS. Since the days that exceed occur during the winter, DEQ has decided to only do speciation during these months. Forest fire smoke can also lead to NAAQS exceedances, but can be excused as exceptional events and not count against a community's attainment status.

Appendix A. Minimum Monitoring Requirements

DEQ and LRAPA meet the minimum monitoring requirements for all criteria pollutants measured as established in 40 CFR 58 with the exception of the need for a second ozone monitor in Salem. This will be added before the summer of 2018. 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 57 th Avenue and SE Lafayette St., Portland, OR MSA – Portland-Vancouver, OR-WA (#6440) Counties represented – (OR) Multnomah, Clackamas, Washington, (WA) Clark MSA Population (2016)* - 2,409,884								
Pollutant	Std Type	Std	DV	Units	Years	# of Monitors		
						Minimum required	Active	needed
PM _{2.5}	Daily	35	26.8	µg/m ³	2013-15	1	1	0
	Annual	12	7.4	µg/m ³	2013-15			
PM _{2.5} Speciation	N/A	-	-	-	-	1	1	0
PM _{2.5} Continuous estimate	N/A	-	-	-	-	0	1	0
PM ₁₀	Daily	150	32	µg/m ³	2013-15	1	1	0
PM _{10-2.5}	N/A	-	-	-	-	1	1	0
PM ₁₀ lead	Annual	0.15	0.01	µg/m ³	2013-15	1	1	0
Ozone	8 hr Ave	75	55	ppb	2013-15	1	1	0
NO ₂	1 hour	100	35	ppb	2013-15	1	1	0
	Annual	53	9	ppb	2013-15			
NOx (substituted for NOy - EPA waiver)	N/A	-	-	-	-	1	1	0
Trace SO ₂	1 hour	75	4	ppb	2013-15	1	1	0
Trace CO	8 hour	9 ppm	<1exceden	cd/yr	2013-15	1	1	0
Wind Direction	N/A	-	-	-	-	1	1	0
Wind Speed	N/A	-	-	-	-	1	1	0
Relative Humidity	N/A	-	-	-	-	1	1	0
Solar Radiation	N/A	-	-	-	-	0	1	0
Barometric Press	N/A	-	-	-	-	0	1	0
Outdoor Temp	N/A	-	-	-	-	1	1	0
Delta Temp	N/A	-	-	-	-	0	1	0

*MSA Population (2013) from Portland State University, College of Urban and Public Affairs, Population Research Center

Table A 2. Ozone Minimum Monitoring Requirements

MSA	County	Population	Design Value (ppb)	Site name	Season	Years	# of Monitors		
							Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington,	2,409,884	65	Carus (41-005-0004)	May-Sept	2014-16	2	5 in OR, 1 in WA	0
Salem (#7080)	Marion	413,680	64	Cascade Sch. Turner (41-047-0004)	May-Sept	2014-16	2	1	1
Eugene-Springfield (#2400)	Lane	365,940	61	Saginaw (41-039-1007)	May-Sept	2014-16	1	2	0
The Dalles (0000)	Wasco	14,625	56 ^a	Cherry Heights (41-065-0007)	May-Sept	2016	0	1	0
Medford-Ashland (#4890)	Jackson	213,765	58	Talent (41-029-0201)	May-Sept	2014-16	0	1	0
Hermiston (0000)	Umatilla	17,730	65	Airport (41-059-1003)	May-Sept	2014-16	0	1	0
Albany (CBSA#24420)	Linn	122,315	-	-	-	-	0	0	0
Bend (CBSA#13460)	Deschutes	83,500	60 ^b	-	-	2013-15	0	0	0
Corvallis (#1890)	Benton	91,320		-	-	-	0	0	0
Grants Pass (CBSA#10540)	Josephine	84,675	-	-	-	-	0	0	0

a. Only one year of data available.

b. No 2016 ozone monitoring, so the 2015 DV was used.

Table A 3. Carbon Monoxide Minimum Monitoring Requirements:

MSA (Maintenance areas)	County	Population	Standard Exceeded more than once per year	Site name	Last Year	# of Monitors		
						Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440) (Portland Metropolitan Service District Boundary)	Multnomah, Clackamas, Washington, Clark (WA)	2,409,884	No	SE Lafayette, Portland (41-051-0080)	2015	2	2	0
Salem (#7080) (Salem-Kaiser Transportation Area)	Marion	413,680	No	-	2005	0	0	0
Medford-Ashland (#4890) (Medford Urban Growth Boundary)	Jackson	213,765	No	Monitor CO with modeling	2009	0	0	0
Klamath Falls (#0000) (Klamath Falls Urban Growth Boundary)	Klamath	21,640	No	-	2004	0	0	0
Grants Pass (CBSA#10540) (Grants Pass Central Business District)	Josephine	84,675	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, NO, NOx Minimum Monitoring Requirements:

MSA	County	Population	Design Value (ppb)	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington,	2,409,884	1hr = 35ppb Annual= 8.7 ppb	1hr= 35% Annual= 16%	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	2014-16	1	1	0
			1hr = 36ppb Annual= 12.6 ppb	1hr = 36% Annual= 24%	Near Roadway Site (41-067-0005)	Annual, Hourly	2014-16	1	1	0

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:

MSA	County	Population	Design Value (ppb)	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington	2,409,884	3	4	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	2014-16	1	1	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 only one source meets this criterion, Cascade Rolling Mills in McMinnville. DEQ did fence line monitoring at Cascade Rolling Mills for three years (2010-2012) and determined the levels were less than 1/2 the standard. With these low values and other resource needs, DEQ asked for and received a waiver under CFR40 Part 58 Appendix D, Section 4.5(i) from EPA to suspend monitoring. This waiver will need to be renewed in 2017.

EPA requires monitoring at airports with emission estimates greater than 1 ton/yr 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 from aviation fuel .

CFR40 Part 58 Appendix D, Section 4.5(b) requires one non-source oriented lead monitor at the NCORE site in CBSAs of over 500,000. Oregon has one site. The table below shows the current monitoring status.

Table A 6. Lead Minimum Monitoring Requirements:

MSA	County	Population	Design Value µg/m ³	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington	2,409,884	0.003 ¹	2%	Portland, SE Lafayette (41-005-0080)	Annual, 1/3 at NCORE	2014-16	0	1	0
McMinnville ²	Yamhill	32,510	0.045	30%	Hwy 99 (41-039-0059)	1/6	2010-12	0	0	0

1. This is the PM10 lead from the NCORE site and not the lead measured near art glass manufacturers. That lead was not monitored for over one year so the annual average cannot be calculated at the time of this report.
2. EPA granted a waiver to discontinue McMinnville lead because its three year average was less than 1/2 the NAAQS and the operating funds were needed at the NO2 roadway site. The Portland lead monitoring is not eligible for a waiver even though it is only 3% of the NAAQS. La Grande lead is sampled as part of the NATTS suite.

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.

Table A 7. PM10 Minimum Monitoring Requirements:

MSA	County	Population	Exceed ence/yr	Site name	Season/ Frequency	Years	# of Monitors		
							Minimum required	Active	needed
Portland- Vancouver, OR- WA (#6440)	Multnomah, Clackamas, Washington,	2,409,884	0	SE Lafayette (41-005-0080) N. Roselawn (41-051-0246)	Annual, 1/3 at NCORE & 1/6 other sites	2014- 16	2-4	2	0
Eugene- Springfield (#2400)	Lane	365,940	0	Hwy 99 (41-039-0059)	Annual 1/6	2014- 16	1	3	0
La Grande (#0000)	Union	16,910	0	Hall & North Sts. (41-067-0123)	Annual, 1/6	2014- 16	1	1	0
Oakridge (#0000)	Lane	3,255	0	Oakridge (41-039-2013)	Annual 1/6	2014- 16	1	1	0
Medford- Ashland (#4890)	Jackson	213,765	0	Grant & Belmont (41-029-2129)	Annual, 1/6	2014- 16	1	1	0
Grants Pass (CBSA#10540)	Josephine	84,675	0	Parkside School (41-033-0114)	PM2.5 as surrogate	2014- 16	1	0	0*
Klamath Falls (#0000)	Klamath	21,640	0	Klamath Falls Petersen Sch. (41-035-0004)	PM2.5 as surrogate	2014- 16	1	0	0*

* PM2.5 is used as a surrogate for PM10

Table A 8. PM2.5 (FRM) Minimum Monitoring Requirements:

MSA	County	Population	Design Value Daily & Annual ($\mu\text{g}/\text{m}^3$)	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington	2,409,884	25 7.0	70 58	Hillsboro Hare Field (41-067-0004)	Annual 1/3	2014- 16	3	3	0
Eugene-Springfield (#2400)	Lane	365,940	26 6.7	73 56	Hwy 99 (41-039-0059)	Annual 1/3	2014- 16	1	3	0
Cottage Grove (#0000)	Lane	9,890	20 6.7	56 56	City Shops (41-039-9004)	Annual 1/3	2014- 16	0	1	0
Oakridge (#0000)	Lane	3,255	31 8.5	86 65	Oakridge (41-039-2013)	Annual 1/3	2014- 16	0	1	0
Medford-Ashland (#4890)	Jackson	213,765	33 ^a 9.5	92 79	Medford, Grant & Belmont (41-029-2129)	Annual 1/3	2014- 16	1	1	0
Grants Pass (CBSA#10540)	Josephine	84,675	20 7.2	56 60	Parkside Sch. (41-033-0114)	Annual 1/6	2014- 16	0	1	0
Klamath Falls (#0000)	Klamath	21,640	32 ^b 8.6	90 72	Petersen Sch. (41-035-0004)	Annual 1/3	2014- 16	0	1	0
Lakeview (#0000)	Lake	8,015	31 7.8	89 65	Lakeview (41-037-0001)	Annual 1/3	2014- 16	0	1	0
Burns-Hines (#0000)	Harney	4,390	28 8.5	79 71	Washington Park (41-025-0003)	Annual 1/3	2014- 16	0	1	0
Prineville (#0000)	Crook	9,645	38 8.6	106 72	Davidson Park (41-013-0100)	Annual 1/3	2014- 16	0	1	0

a. Medford 2014 and 2015 include forest fire data that impact the 98th percentile. If this has regulatory significance in the future, DEQ will request exceptional event concurrence from EPA. The non-forest fire DV is $28\mu\text{g}/\text{m}^3$.

b. DEQ is requesting exceptional event concurrence from EPA for forest fire impacts in 2015. If these are approved the DV will be $28\mu\text{g}/\text{m}^3$.

AAQI (Non-FRM – Informational data). There is no minimum requirement but this type of 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 9. PM2.5 for AQI (Non-FRM) site information

MSA	County	Population	Design Value $\mu\text{g}/\text{m}^3$	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								required	Active	needed
Salem-Kaiser (#7080)	Marion	399,945	21 6.2	59 52	State Hospital (41-047-0041)	Annual, Hourly	2014- 16	0	1	0
Bend (CBSA#13460)	Deschutes	83,500	17 5	47 41	Bend Rd Dept (41-017-0121)	Annual, Hourly	2014- 16	0	1	0
Albany (CBSA#24420)	Linn	122,315	22 6.2	62 51	Calapooia Sch. (41-043-0009)	Annual, Hourly	2014- 16	0	1	0
Corvallis (#1890)	Benton	91,320	17 5.2	48 43	Intermediate Sch. (41-003-0013)	Annual, Hourly	2014- 16	0	1	0
Roseburg (#0000)	Douglas	36,255	16 6.0	46 50	Forest Service Off (41-019-0002)	Annual, Hourly	2014- 16	0	1	0
The Dalles (#0000)	Wasco	14,625	18 6.3	51 52	Cherry Heights (41-065-0007)	Annual, Hourly	2014- 16	0	1	0
La Grande (#0000)	Union	16,910	30 8.5	84 70	Ash St. (41-061-0119)	Annual, Hourly	2014- 16	0	1	0
Baker City (#0000)	Baker	9,890	18 6.9	50 57	Forest Service Off (41-001-0003)	Annual, Hourly	2014- 16	0	1	0
Sweet Home (#0000)	Linn	9,090	19 5.6	53 47	Fire Dept (41-043-2002)	Annual, Hourly	2014- 16	0	1	0
Sisters (#0000)	Deschutes	2,390	12 4.5	34 38	Forest Service Off (41-017-0004)	Annual, Hourly	2014- 16	0	1	0
Enterprise (#0000)	Wallowa	1,985	16 6.0	46 50	Forest Service Off (41-063-0001)	Annual, Hourly	2014- 16	0	1	0
Cave Junction (#0000)	Josephine	1,915	22 6.8	62 57	Forest Service Off (41-033-0036)	Annual, Hourly	2014- 16	0	1	0
John Day (#0000)	Grant	2,440	23 8.6	66 72	Forest Service Off (41-063-0001)	Annual, Hourly	2014- 16	0	1	0

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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 PQAO for Oregon. DEQ and LRAPA use method 118 and 145 for SLAMS, PM2.5 FRM samplers. LRAPA has one collocated site for 145 and DEQ has one for 118. DEQ and LRAPA use method 127 and 063 for PM10 samplers. DEQ has one collocated site for each of these methods. PM10 lead monitoring is only done at one site, and DEQ has one collocated monitor for this.

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)
145	11	2	2	0

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)
041	2	0	0	0
127	2	1	1	0
063	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	1	1	1	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 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)	AADT = 26,000, Yr= 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA,)	Portland-Vancouver (#6440)	
Pollutant	PM2.5	PM10
Parameter code, POC	88101,1	85101,1 & 81102,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS, NCORE, AQI	
Monitoring Objective	Population, Non-source	Population, Max Non-source
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS/NCORE	SLAMS/NCORE
Instrument type and model	R&P 2025 w/VSCC	R&P 2025
Instrument parameter occurrence code	Primary	Primary
Method number	145	127
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1999	1/1/1984
Current sampling frequency	1/3	1/3
Sampling season	Annual	Annual
Probe height (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)	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?	No	No
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)	AADT = 26,000 yr = 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	PM10	PM10-2.5, 1
Parameter code, POC	85101,2 & 81102,2	86101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS	NCORE
Monitoring Objective	Urban Population, Max concentration, Non-source	Urban, Population, Non-source
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS/NCORE	NCORE
Instrument type and model	R&P 2025	R&P 2025
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 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?	No	No
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)	AADT = 26,000, Yr= 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	PM10 Lead	Ozone
Parameter code, POC	85129, 1	44201, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS, NCORE, AQI	NAAQS, AQI
Monitoring Objective	Population, Non-source oriented, NCORE	Population, Non-source
Spatial scale of Representativeness	Neighborhood	Urban
Monitoring types	SLAMS/NCORE	SLAMS/NCORE
Instrument type and model	R&P 2025	TECO 49C
Instrument parameter occurrence code	Primary	Primary
Method number	811	047
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/2012	7/10/2003
Current sampling frequency	1/3	Hourly
Sampling season	Annual	Annual
Probe height (meters)	6	5
Distance from supporting structure (meters)	No supports	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)	22	24
Distance from to furnace or incinerator flue (meters)	7	9
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Aluminum	Teflon
Residence time for reactive gases (seconds)	NA	3.5
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, 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)	AADT = 26,000, Yr= 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	NO2	NOx
Parameter code, POC	42602, 1	42603, 1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS, NCORE	Information, NCORE
Monitoring Objective	Population, Urban, Non-source	Population, Urban, Non-source
Spatial scale of Representativeness	Urban	Urban
Monitoring types	SLAMS/NCORE	NCORE
Instrument type and model	Ecotech – EC9841A	Ecotech – EC9841A
Instrument parameter occurrence code	Primary	Primary
Method number	590	590
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	01/01/1984
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)	4.9	4.9
Will there be changes with the next 18 months?	No	No
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)	AADT = 26,000, Yr= 2015 ODOT	
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	NAAQS, NCORE	NAAQS, NCORE
Monitoring Objective	Population, Non-source	Population, Non-source
Spatial scale of Representativeness	Micro	Urban
Monitoring types	SLAMS/NCORE	SLAMS/NCORE
Instrument type and model	ECO Tech EC9830T	ECO Tech EC9850T
Instrument parameter occurrence code	Primary	Primary
Method number	588	592
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?	No	No
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)	AADT = 26,000, Yr= 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	SO2 5min aver.	PM2.5 Estimate
Parameter code, POC	42401, 4	88502,3
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS, NCORE	AQI
Monitoring Objective	Population, Non-source	Population, Non-source
Spatial scale of Representativeness	Urban	Neighborhood
Monitoring types	SLAMS/NCORE	Special purpose
Instrument type and model	ECO Tech EC9850T	Radiance M97 Nephelometer
Instrument parameter occurrence code	Primary	Primary
Method number	592	011
FRM/FEM/FRM/other	FRM	PM2.5 Surrogate
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	10/1/2005	
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	6.3	6
Distance from supporting structure (meters)	2.7	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)	24	24
Distance from to furnace or incinerator flue (meters)	9	9
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Glass, Teflon	PVC tubing
Residence time for reactive gases (seconds)	3.6	8
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	No

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)	AADT = 26,000, Yr= 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Wind Speed	Wind Direction
Parameter code, POC	61101,1	61104,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NCORE, Information	NCORE, Information
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Urban	Urban
Monitoring types	NCORE	NCORE
Instrument type and model	Climatronics	Climatronics
Instrument parameter occurrence code	Primary	Primary
Method number	050	020
FRM/FEM/FRM/other	Other	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	7/15/1992	7/15/1992
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	16	16
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)	30	30
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	NA	NA
Residence time for reactive gases (seconds)	NA	NA
Will there be changes with the next 18 months?	No	No

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)	AADT = 26,000, Yr= 2015 ODOT	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Outdoor Temp	Relative Humidity
Parameter code, POC	62101,1	62201,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Information	NAAQS
Monitoring Objective	NCORE, Information	NCORE, Information
Spatial scale of Representativeness	Neighborhood	Urban
Monitoring types	NCORE	NCORE
Instrument type and model	Climatronics	Climatronics
Instrument parameter occurrence code	Primary	Primary
Method number	040	012
FRM/FEM/FRM/other	Other	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	7/15/1992	11/1/2001
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	2	3
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)	30	24
Distance from to furnace or incinerator flue (meters)	9	9
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	NA	NA
Residence time for reactive gases (seconds)	NA	NA
Will there be changes with the next 18 months?	No	No

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)	AADT = 26,000, Yr= 2015 ODOT
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, NCORE
Monitoring Objective	Population,
Spatial scale of Representativeness	Neighborhood
Monitoring types	NCORE, STN
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?	No
Is it suitable for comparison against the standard?	No

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	
Traffic count (AADT, yr)	AADT = 5774 (N Alberta St E Of Kerby Ave), yr =2012 PBOT AADT = 254 (N Blandena St E of Haight Ave), yr =2015 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	NAAQS,	NAAQS,
Monitoring Objective	Population, Non-source oriented	Population, Non-source oriented
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	Tisch PM10 HV+	Tisch PM10 HV+
Instrument parameter occurrence code	Primary	Collocated
Method number	063	063
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 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, -122.7455	
Street address	6745 SW Bradbury Ct, Tualatin, OR	
County	Washington	
Distance from roadways (meters)	27	
Traffic count (AADT, yr)	AADT = 164,420 yr = 2015 ODOT MP 290.14	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	NO₂	NO_x
Parameter code, POC	42602,1	42603,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS	Information
Monitoring Objective	Source (Freeway)	Source (Freeway)
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	Ecotech, Serinus 40	Ecotech, Serinus 40
Instrument parameter occurrence code	Primary	Primary
Method number	186	186
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	04/21/2014	04/21/2014
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	4	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	Glass, Teflon	Glass, Teflon
Residence time for reactive gases (seconds)	3.5	3.5
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)	AADT = 164,420 yr = 2015 ODOT MP 290.14	
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	NAAQS	NAAQS
Monitoring Objective	Source (Freeway)	Source (Freeway)
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	Teledyne API 400e	Ecotech 9830T
Instrument parameter occurrence code	Primary	Primary
Method number	087	588
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	04/21/2014	04/21/2014
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

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)	AADT = 164,420 yr = 2015 ODOT MP 290.14	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	PM2.5	Wind Speed
Parameter code, POC	88101,1	61101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS	Information
Monitoring Objective	Source (Freeway)	Support Source Monitoring
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	R&P 2025 w/VSCC	Climatronics, Sonic Anemometer
Instrument parameter occurrence code	Primary	Primary
Method number	145	050
FRM/FEM/FRM/other	FRM	other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	04/21/2014	04/21/2014
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	4	10
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	Glass tubing	Glass tubing
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	NA

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)	AADT = 164,420 yr = 2015 ODOT MP 290.14	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Wind Direction	Temperature
Parameter code, POC	61104,1	62101,1
MSA, CBSA, CSA or area represented	6440	64404
Monitor purpose	Information	Information
Monitoring Objective	Support Source Monitoring	Support Source Monitoring
Spatial scale of Representativeness	Microscale	Microscale
Monitoring types	SLAMS	SLAMS
Instrument type and model	Climatronics, Sonic Anemometer	Climatronics,
Instrument parameter occurrence code	Primary	Primary
Method number	020	040
FRM/FEM/FRM/other	other	other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	04/21/2014	06/21/2014
Current sampling frequency	Hourly	Hourly
Sampling season	Annual	Annual
Probe height (meters)	10	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)	35	35
Distance from to furnace or incinerator flue (meters)	58	58
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	NA	NA
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?	NA	NA

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 = 27,090 (Cornell & Grant), Yr = 2015 (5/26/2013) WA Co.	
Groundcover (e.g. asphalt, dirt, grass)	Asphalt	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	PM2.5	Chemical Speciation
Parameter code, POC	88101,1	Numerous POC 5
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS, AQI	Informational
Monitoring Objective	Population	Population,
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	STN
Instrument type and model	R&P 2025 w/VSCC	Super SASS & URG3000N Quartz filter Cyclone Inlet
Instrument parameter occurrence code	Primary	Primary
Method number	145	810,811,812,826 831,838,839,840 841,842
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/28/2005	9/1/2002
Current sampling frequency	1/3	Hourly
Sampling season	Annual	Annual
Probe height (meters)	2	6
Distance from supporting structure (meters)	No supports	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)	125	24
Distance from to furnace or incinerator flue (meters)	150	9
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	No

Table C 5. Portland, Sauvie Island Site Information

Local Site Name	Portland, Sauvie Island
AQS ID	41-009-0004

GPS Coordinates	45.7685, -122.7721	
Street address	Social Security Beach, Sauvie Island, 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	Wind Speed
Parameter code, POC	44201,1	61101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	Upwind of Urban, Transport	Information
Monitoring Objective	Urban Scale	Population
Spatial scale of Representativeness	Rural	Urban
Monitoring types	SLAMS	SPM
Instrument type and model	Teledyne API 400 – Ultraviolet	Climatronics 100243
Instrument parameter occurrence code	Primary	Primary
Method number	087	050
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1980	1/1/1999
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	Annual
Probe height (meters)	4.3	10
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	10
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	NA
Residence time for reactive gases (seconds)	7.1	NA
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	NA

Local Site Name	Portland, Sauvie Island
AQS ID	41-009-0004
GPS Coordinates	45.7685, -122.7721
Street address	Social Security Beach, Sauvie Island, 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	Wind Direction
Parameter code, POC	61104,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Information
Monitoring Objective	Population
Spatial scale of Representativeness	Urban
Monitoring types	SPM
Instrument type and model	Climatronics 100243
Instrument parameter occurrence code	Primary
Method number	020
FRM/FEM/FRM/other	Other
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	1/1/1999
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	10
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)	10
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	NA
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?	NA

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 = 550 yr = 2015 Clackamas Co.	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Ozone	Wind Speed
Parameter code, POC	44201,1	61101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS	Information
Monitoring Objective	Downwind of Urban, Maximum Concentration	Population
Spatial scale of Representativeness	Urban Scale	Urban
Monitoring types	SLAMS	SPM
Instrument type and model	Dasibi 1003– Ultraviolet	Climatronics WM-III
Instrument parameter occurrence code	Primary	Primary
Method number	019	050
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	7/23/1976	7/23/1976
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	Annual
Probe height (meters)	6.4	10
Distance from supporting structure (meters)	2.7	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)	250	10
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	NA
Residence time for reactive gases (seconds)	2.8	NA
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	NA

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 = 550 yr = 2015 Clackamas Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	Wind Direction
Parameter code, POC	61104,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Information
Monitoring Objective	Population
Spatial scale of Representativeness	Urban
Monitoring types	SPM
Instrument type and model	Climatronics WM-III
Instrument parameter occurrence code	Primary
Method number	020
FRM/FEM/FRM/other	Other
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	7/23/1976
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	10
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)	10
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	NA
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?	NA

Table C 7. Portland – Sherwood Site Information

Local Site Name	Portland – Sherwood	
AQS ID	41-067-1004	
GPS Coordinates	45.4024, -122.8544	
Street address	17180 SW Lasich Ln, Sherwood, OR	
County	Washington	
Distance from roadways (meters)	210	
Traffic count (AADT, yr)	ADT = 24,935 Roy Rogers & Scholls Ferry Rd. yr = 2016 (03/31/2016) WA Co.	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)	
Pollutant	Ozone	Wind Speed
Parameter code, POC	44201,1	61101,1
MSA, CBSA, CSA or area represented	6440	6440
Monitor purpose	NAAQS	Information
Monitoring Objective	Downwind of Urban, Max concentration, Non-source oriented	Downwind of Urban, Max concentration, Non-source oriented
Spatial scale of Representativeness	Urban Scale	Urban
Monitoring types	SLAMS	SPM
Instrument type and model	TECO 49C–Ultraviolet	Climatronics 100243
Instrument parameter occurrence code	Primary	Primary
Method number	047	050
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	8/1/2008	8/1/2008
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	Annual
Probe height (meters)	3	10
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)	115	115
Distance from to furnace or incinerator flue (meters)	NA	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	NA
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	NA

Local Site Name	Portland – Sherwood.
AQS ID	41-067-1004
GPS Coordinates	45.4024, -122.8544
Street address	17180 SW Lasich Ln, Sherwood, OR
County	Washington
Distance from roadways (meters)	210
Traffic count (AADT, yr)	ADT = 24,935 Roy Rogers & Scholls Ferry Rd. yr = 2016 (03/31/2016) WA Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Portland-Vancouver (#6440)
Pollutant	Wind Direction
Parameter code, POC	61104,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Information
Monitoring Objective	Downwind of Urban, Max concentration, Non-source oriented
Spatial scale of Representativeness	Urban
Monitoring types	SPM
Instrument type and model	Climatronics 100243
Instrument parameter occurrence code	Primary
Method number	020
FRM/FEM/FRM/other	Other
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	8/1/2008
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	10
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)	115
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	NA
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?	NA

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 = 1584, Yr = 2016 (9/20/2016) Shaff Rd & W Stayton Rd. Marion Co.	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Salem	
Pollutant	Ozone	Wind Speed
Parameter code, POC	44201,1	61101,1
MSA, CBSA, CSA or area represented	7080	6440
Monitor purpose	NAAQS, AQI	Information
Monitoring Objective	Downwind of Urban, Max concentration, Non-source oriented	Downwind of Urban, Max concentration, Non-source oriented
Spatial scale of Representativeness	Urban Scale	Urban
Monitoring types	SLAMS	SPM
Instrument type and model	Dasibi 1003H–Ultraviolet	Climatronics F-460
Instrument parameter occurrence code	Primary	Primary
Method number	019	050
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ (0821)	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	6/23/1995	6/23/1995
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	Annual
Probe height (meters)	4.5	10
Distance from supporting structure (meters)	1.5	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)	620	620
Distance from to furnace or incinerator flue (meters)	45	NA
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	NA
Residence time for reactive gases (seconds)	2.8	NA
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	NA

Local Site Name	Salem /Turner - Cascade Jr. High
AQS ID	41-047-0004
GPS Coordinates	45.8103, -122.9151
Street address	10226 Marion Rd SE, Turner, OR
County	Marion
Distance from roadways (meters)	60
Traffic count (AADT, yr)	ADT = 1584, Yr = 2016 (9/20/2016) Shaff Rd & W Stayton Rd. Marion Co.
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Salem
Pollutant	Wind Direction
Parameter code, POC	61104,1
MSA, CBSA, CSA or area represented	6440
Monitor purpose	Information
Monitoring Objective	Downwind of Urban, Max concentration, Non-source oriented
Spatial scale of Representativeness	Urban
Monitoring types	SPM
Instrument type and model	Climatronics F-460
Instrument parameter occurrence code	Primary
Method number	020
FRM/FEM/FRM/other	Other
Collecting agency	ODEQ (0821)
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	6/23/1995
Current sampling frequency	Hourly
Sampling season	Annual
Probe height (meters)	10
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)	620
Distance from to furnace or incinerator flue (meters)	NA
Unrestricted airflow (degrees)	360°
Probe material for reactive gases	NA
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?	NA

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)	AADT = 1700, Yr = 2013 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	NAAQS, AQI	NAAQS, AQI
Monitoring Objective	Urban Population	Urban Population
Spatial scale of Representativeness	Urban Scale	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	Teledyne API 400 – Ultraviolet	R&P 2025 w/ VSCC
Instrument parameter occurrence code	Primary	Primary
Method number	087	145
FRM/FEM/FRM/other	FRM	FRM
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

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)	AADT = 1700, Yr = 2013 Central Lane MPO
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield
Pollutant	PM2.5
Parameter code, POC	88101,2
MSA, CBSA, CSA or area represented	2400
Monitor purpose	NAAQS
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	R&P 2025 w/ VSCC
Instrument parameter occurrence code	Collocated
Method number	145
FRM/FEM/FRM/other	FRM
Collecting agency	LRAPA
Analytical lab	LRAPA
Reporting agency	ODEQ
Monitoring start date	1/2/2002
Current sampling frequency	1/12
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)	29
Distance from to furnace or incinerator flue (meters)	NA
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 10. Springfield Site Information

Local Site Name	Springfield
AQS ID	41-039-1009
GPS Coordinates	44.0467, -123.0177
Street address	Springfield, OR
County	Lane
Distance from roadways (meters)	55
Traffic count (AADT, yr)	AADT = 13,700, Yr = 2004 Central Lane MPO
Groundcover (e.g. asphalt, dirt, grass)	Grass
Representative statistical area name (CBSA, MSA)	Eugene-Springfield
Pollutant	PM2.5
Parameter code, POC	88101,1
MSA, CBSA, CSA or area represented	2400
Monitor purpose	NAAQS
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SPM
Instrument type and model	R&P 2000 w/ VSCC
Instrument parameter occurrence code	Primary
Method number	143
FRM/FEM/FRM/other	FRM
Collecting agency	LRAPA
Analytical lab	LRAPA
Reporting agency	ODEQ
Monitoring start date	1/4/2004
Current sampling frequency	1/6
Sampling season	Annual
Probe height (meters)	9
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)	53
Distance from to furnace or incinerator flue (meters)	NA
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 11. Eugene – Saginaw Site Information

Local Site Name	Eugene – Saginaw
AQS ID	41-039-1007
GPS Coordinates	43.8345, -123.0353
Street address	Delight Villy Sch Rd., Saginaw, OR
County	Lane
Distance from roadways (meters)	140
Traffic count (AADT, yr)	No data available
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	NAAQS, AQI
Monitoring Objective	Downwind of Urban, Highest Concentration
Spatial scale of Representativeness	Urban Scale
Monitoring types	SLAMS
Instrument type and model	Teledyne API 400 – Ultraviolet
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 12. Eugene – Hwy 99 Site Information

Local Site Name	Eugene – Hwy 99	
AQS ID	41-039-0059	
GPS Coordinates	44.0672, -123.1414	
Street address	450 Pacific Hwy 99, Eugene, OR	
County	Lane	
Distance from roadways (meters)	75	
Traffic count (AADT, yr)	AADT= 29,000, yr = 2013 Central Lane MPO	
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 & 85101,1
MSA, CBSA, CSA or area represented	2400	2400
Monitor purpose	NAAQS, AQI	NAAQS
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	R&P 2025 w/ VSCC	R&P 2025
Instrument parameter occurrence code	Primary	Primary
Method number	145	127
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	1/3	1/6
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 13. Cottage Grove, City Shops Site Information

Local Site Name	Cottage Grove, City Shops
AQS ID	41-039-9004
GPS Coordinates	43.7995, -123.0535
Street address	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	NAAQS,AQI
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	R&P 2025 w/VSCC
Instrument parameter occurrence code	Primary
Method number	145
FRM/FEM/FRM/other	FRM
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 14. 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)	AADT = 6600, yr =2012	
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 & 85101,1
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	NAAQS, AQI	NAAQS
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	R&P 2025 w/ VSCC	R&P 2025
Instrument parameter occurrence code	Primary	Primary
Method number	145	145
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	LRAPA	LRAPA
Analytical lab	LRAPA	LRAPA
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/1999	11/1/1989
Current sampling frequency	1/3	1/6
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)	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 15. Grants Pass, Parkside School Site Information

Local Site Name	Grants Pass, Parkside School
AQS ID	41-035-0114
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	NAAQS, AQI
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	R&P 2025 w/VSCC
Instrument parameter occurrence code	Primary
Method number	145
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	8/31/1999
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)	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 16. Medford, Grant & Belmont Site Information

Local Site Name	Medford, Grant & Belmont	
AQS ID	41-029-0133	
GPS Coordinates	42.3141, -122.8792	
Street address	695 Belmont Street, Medford, OR	
County	Jackson	
Distance from roadways (meters)	13	
Traffic count (AADT, yr)	AADT = 1500, yr = 2012	
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	NAAQS, AQI	NAAQS
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	SLAMS
Instrument type and model	R&P 2025 W/VSCC	R&P 2025 W/VSCC
Instrument parameter occurrence code	Primary	Collocated
Method number	145	145
FRM/FEM/FRM/other	FRM	FRM
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	10/21/1998	
Current sampling frequency	1/3	1/12
Sampling season	Annual	Annual
Probe height (meters)	3	3
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)	29	29
Distance from to furnace or incinerator flue (meters)	21	21
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 17. Medford - Talent Site Information

Local Site Name	Medford - Talent	
AQS ID	41-029-0201	
GPS Coordinates	42.2299, -122.7877	
Street address	7120 Rapp Ln, Talent, OR	
County	Jackson	
Distance from roadways (meters)	220	
Traffic count (AADT, yr)	AADT = 764, yr = 2006	
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	NAAQS, AQI	
Monitoring Objective	Downwind of Urban, Highest Concentration	
Spatial scale of Representativeness	Urban Scale	
Monitoring types	SLAMS	
Instrument type and model	Dasibi 1003	
Instrument parameter occurrence code	Primary	
Method number	019	
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 18. Klamath Falls, Petersen School Site Information

Local Site Name	Klamath Falls, Petersen School	
AQS ID	41-035-0004	
GPS Coordinates	42.1903, -121.7314	
Street address	4856 Clinton Ave, Klamath Falls, OR	
County	Klamath	
Distance from roadways (meters)	8	
Traffic count (AADT, yr)	AADT = 9090 (Clinton & Summers) , Yr = 2011	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM2.5	PM2.5 Speciation,
Parameter code, POC	88101,1	POC 5
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	NAAQS, AQI	Special Purpose
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	Special Purpose
Instrument type and model	R&P 2025 w/ VSCC	Super SASS & URG 3000N w/Pall Quartz filter and Cyclone Inlet
Instrument parameter occurrence code	Primary	Primary
Method number	145	810,811,812,826 831,838, 839,840 841,842
FRM/FEM/FRM/other	FRM	other
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/5/1998	7/6/2009
Current sampling frequency	1/3	1/6
Sampling season	Annual	Annual
Probe height (meters)	3	3
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	No

Table C 19. 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
Traffic count (AADT, yr)	AADT = 3100 (Hwy 20 & L St., 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	NAAQS, AQI
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	R&P 2025 W/VSCC
Instrument parameter occurrence code	Primary
Method number	145
FRM/FEM/FRM/other	FRM
Collecting agency	ODEQ
Analytical lab	ODEQ
Reporting agency	ODEQ
Monitoring start date	1/5/1998
Current sampling frequency	1/3
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)	19
Distance from to furnace or incinerator flue (meters)	19
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. 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=3200 (Hwy20 & A St.), 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	NAAQS, AQI
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	R&P 2025 W/VSCC
Instrument parameter occurrence code	Primary
Method number	145 W/VSCC
FRM/FEM/FRM/other	FRM
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 21. Prineville, Davidson Park Site Information

Local Site Name	Prineville, Davidson Park	
AQS ID	41-013-0100	
GPS Coordinates	44.2998, -120.8448	
Street address	251 SE Court St, Prineville, OR	
County	Crook	
Distance from roadways (meters)	10	
Traffic count (AADT, yr)	8800 (Hwy 26 & OR 27), 2012	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Other	
Pollutant	PM2.5	Chemical Speciation
Parameter code, POC	88101,1	Numerous POC 5
MSA, CBSA, CSA or area represented	0000	6440
Monitor purpose	NAAQS, AQI	Informational
Monitoring Objective	Population	Population,
Spatial scale of Representativeness	Neighborhood	Neighborhood
Monitoring types	SLAMS	STN
Instrument type and model	R&P 2025 W/VSCC	Super SASS & URG3000N Quartz filter Cyclone Inlet
Instrument parameter occurrence code	Primary	Primary
Method number	145	810,811,812,826 831,838,839,840 841,842
FRM/FEM/FRM/other	FRM	Other
Collecting agency	ODEQ	ODEQ (0821)
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	1/1/2009	9/1/2002
Current sampling frequency	1/3	Hourly
Sampling season	Annual	Annual
Probe height (meters)	3	6
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)	37	24
Distance from to furnace or incinerator flue (meters)	39	9
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	No

Table C 22. 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	81102,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	NAAQS, AQI
Monitoring Objective	Population
Spatial scale of Representativeness	Neighborhood
Monitoring types	SLAMS
Instrument type and model	Tisch PM10 HV+
Instrument parameter occurrence code	Primary
Method number	063
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 23. Hermiston Municipal Airport Site Information

Local Site Name	Hermiston Municipal Airport	
AQS ID	41-059-1003	
GPS Coordinates	45.8290, -119.2630	
Street address	1498 Airport Way, Hermiston, OR	
County	Umatilla	
Distance from roadways (meters)	888,	
Traffic count (AADT, yr)	AADT = 7300 (MP 8.7, US395 or Hwy 54), Yr = 2012	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Hermiston (0000)	
Pollutant	Ozone	Wind Speed
Parameter code, POC	44201,1	61101,1
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	NAAQS, AQI	Information
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Urban	Urban
Monitoring types	SLAMS	SLAMS
Instrument type and model	Dasibi 1003 – Ultraviolet	R M Young
Instrument parameter occurrence code	Primary	Primary
Method number	019	050
FRM/FEM/FRM/other	FRM	other
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	2/27/2007	2/27/2007
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	May-Sept
Probe height (meters)	4	10
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)	134	134
Distance from to furnace or incinerator flue (meters)	72	72
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	NA
Residence time for reactive gases (seconds)	2.8	NA
Will there be changes with the next 18 months?	No	No
Is it suitable for comparison against the standard?	Yes	NA

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 = 7300 (MP 8.7, US395 or Hwy 54), Yr = 2012	
Groundcover (e.g. asphalt, dirt, grass)	Grass	
Representative statistical area name (CBSA, MSA)	Hermiston (0000)	
Pollutant	Wind Direction	Temperature
Parameter code, POC	61104,1	62101,1
MSA, CBSA, CSA or area represented	0000	0000
Monitor purpose	Information	Information
Monitoring Objective	Population	Population
Spatial scale of Representativeness	Urban	Urban
Monitoring types	SLAMS	SLAMS
Instrument type and model	R M Young	Climatronics –
Instrument parameter occurrence code	Primary	Primary
Method number	020	040
FRM/FEM/FRM/other	other	FRM
Collecting agency	ODEQ	ODEQ
Analytical lab	ODEQ	ODEQ
Reporting agency	ODEQ	ODEQ
Monitoring start date	2/27/2007	2/27/2007
Current sampling frequency	Hourly	Hourly
Sampling season	May-Sept	May-Sept
Probe height (meters)	4	10
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)	134	134
Distance from to furnace or incinerator flue (meters)	72	72
Unrestricted airflow (degrees)	360°	360°
Probe material for reactive gases	Teflon	NA
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?	NA	NA

Table C 24. The Dalles Site Information

Local Site Name	The Dalles Cherry Lane
AQS ID	41-065-0007
GPS Coordinates	45.6024, -122.2034
Street address	1112 Cherry Heights Rd., The Dalles, OR
County	Wasco
Distance from roadways (meters)	22
Traffic count (AADT, yr)	(375 ADT, 2008)
Groundcover (e.g. asphalt, dirt, grass)	Scrubby ground
Representative statistical area name (CBSA, MSA)	The Dalles
Pollutant	Ozone
Parameter code, POC	44201,1
MSA, CBSA, CSA or area represented	0000
Monitor purpose	NAAQS, AQI
Monitoring Objective	Population
Spatial scale of Representativeness	Urban
Monitoring types	SLAMS
Instrument type and model	Teledyne API 400E – uv absorption
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	5/1/2016
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)	39
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)	7.1
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: 2017

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
1. Submit plan by July 1 st	58.10 (a)(1)	No		Competing reporting requirements like AQS certification makes it difficult to finish the plan on time.
2. Statement of purpose for each monitor including SPMs per 58.20(a)	58.10 (a)(1)	Yes, pages 30 to 71.	Yes	
3. 30-day public comment / inspection period ⁵	58.10 (a)(1),	Yes	Yes	

¹ Response options: NA (Not Applicable), 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.

	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
		58.10 (a)(2)			
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)	No	NA – no changes	
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)	Yes, page 18	NA – no changes	
6.	Does plan include documentation (e.g., attached approval letter) for system modifications that have been approved since last ANP approval?		No	NA – no changes	
7.	NCore site operational (by 1/1/2011)	58.10 (a)(3)	Yes, page 30	Yes	
8.	Pb site for 0.5-1.0 tpy sources operational (by 12/27/2011)	58.10 (a)(4)	No	Yes, Appendix E – Waivers	The only Pb source site was discontinued in the 2012 ANP with a waiver granted by EPA.
9.	NO2 plan for area-wide and RA40 sites submitted by 7/1/2012	58.10 (a)(5)	Previously. The site is operating.	NA	
10.	NO2 area-wide and RA40 sites operational by 1/1/2014	58.10 (a)(5)	Previously. The site is operating.	NA	Starting date was 4/15/2014.
11.	NO2 plan for near-road sites submitted by 7/1/2013	58.10 (a)(5)	Previously. The site is operating.	NA	.
12.	SO2 sites operational (by 1/1/2013)	58.10 (a)(6) and 58.13(d)	Previously. The site is operating.	NA	
13.	AQS site identification number for each site	58.10 (b)(1)	Yes, pages 30 to 71.	Yes	
14.	Location of each site: street address and	58.10 (b)(2)	Yes, pages 30 to	Yes	

⁶ See 58.14(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
	geographic coordinates		71.		
15.	Sampling and analysis method(s) for each measured parameter	58.10 (b)(3)	Yes, pages 30 to 71.	Yes	
16.	Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal	58.10 (b)(5)	Yes, page 23	Yes	Two NATTS site moves needed.
17.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b)(6); App D	Yes, pages 30 to 71.	Yes	
18.	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)	Yes, pages 30 to 71.	Yes	
19.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	Yes, pages 30 to 71.	Yes	
20.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	Yes, page 32.	Yes	
21.	Any source-oriented Pb site for which a waiver has been requested or granted by EPA RA	58.10 (b)(10)	Yes, page 79.	Yes	
22.	Any Pb monitor for which a waiver has been requested or granted by EPA RA for use of Pb-PM10 in lieu of Pb-TSP	58.10 (b)(11)	Yes, page 32.	Yes	
23.	Identification of required NO2 monitors as either near-road or area-wide, or vulnerable and susceptible population monitors	58.10 (b)(12)	Yes, 33 and 40.	Yes	One Area wide site, one near-road site
24.	Identification of any PM2.5 FEMs and/or ARMs not eligible to be compared to the NAAQS (<i>Note 1: must include required data assessment.</i>) (<i>Note 2: Required SLAMS must monitor PM2.5 with NAAQS-comparable monitor at the required sample frequency.</i>)	58.10 (b)(13) 58.11 (e)	No	NA	We are not submitting FEMs or ARMs for comparison to the NAAQS. DEQ and LRAPA are running PM2.5 FEMS for informational purposes.
25.	For SPMs listed as non-regulatory, note the start Date of FRM/FEM/ARM at SPM. If > 24	58.20(c)	Yes, page 61.	Yes	Springfield City Hall PM2.5 FRM

	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
	months, and monitor is eligible for comparison to the NAAQS per 58.11 (e) and 58.30, the agency must supply information that App A, C or E requirements were not met.				
26.	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)	No.	Yes	There have been no changes to the PM2.5 monitoring network but DEQ will document how any future changes will be processed.
27.	Does the plan include a request for approval for and alternative to appendix A requirements for SPMs operating a FRM/FEM/ARM which also meets appendix E?	58.11 (a) (2)	NA	NA	No such monitoring sties
28.	Start date for each monitor	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, pages 30 to 71.	Yes	
29.	Instrument monitor type for each monitor	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, pages 30 to 71 and Appendix A.	Yes	
30.	Monitoring objective for each instrument	App D 1.1 58.10 (b)(6)	Yes, pages 30 to 71.	Yes	
31.	Site type for each instrument	App D 1.1.1	Yes, pages 30 to 71.	Yes	
32.	Instrument parameter code for each instrument	Required to determine if	Yes, pages 30 to 71.	Yes	

	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
		other req. (e.g., min # and co-lo) are met			
33.	Instrument parameter occurrence code for each instrument	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, pages 30 to 71.	Yes	
34.	Sampling season for ozone (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4) App D, 4.1(i)	Yes, pages 30 to 71.	Yes	
35.	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	Yes, pages 30 to 71.	Yes	
36.	Sampling schedule for PM10	58.10 (b)(4) 58.12(e) App D 4.6	Yes, pages 30 to 71.	Yes	
37.	Sampling schedule for Pb	58.10 (b)(4) 58.12(b) App D 4.5	Yes, pages 30 to 71.	Yes	
38.	Sampling schedule for PM10-2.5	58.10 (b)(4) 58.12(f) App D 4.8	Yes, pages 30 to 71.	Yes	
39.	Minimum # of monitors for O3 met? [Note: should be supported by MSA ID, MSA	App D, 4.1(a) and	Yes, pages 20 to 28.	Yes	

	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
	population, DV, # monitors, and # required monitors] (<i>see footnote</i>) ⁷	Table D-2			
40.	Identification of max. conc. O3 monitor(s)	App D 4.1 (b)	Yes, pages 30 to 71.	Yes	
41.	Minimum monitoring requirements met for near-road NO2 (2014 start date)	App D 4.3.2	Yes, pages 20 to 28.	Yes	
42.	Minimum monitoring requirements met for area-wide NO2	App D 4.3.3	Yes, pages 20 to 28.	Yes	
43.	Minimum monitoring requirements met for SO2 [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.4	Yes, pages 20 to 28.	Yes	
44.	Minimum monitoring requirements met for Pb [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.5 58.13(a)	Yes, pages 20 to 28.	Yes	
45.	Minimum # of monitors for PM2.5 met? [Note 1: should be supported by MSA ID, MSA population, DV, # monitors, and # required monitors] [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) and Table D-5	Yes, pages 20 to 28.	Yes	
46.	Minimum monitoring requirements for continuous PM2.5 met?	App D 4.7.2	Yes, pages 20 to 28.	Yes	These are used for the Air Quality Index only.
47.	Minimum # of monitors for PM10 met?	App D, 4.6 (a) and	Yes, pages 20 to 28.		

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.

	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
		Table D-4			
48.	Minimum monitoring requirements met for PM10-2.5 mass at NCore sites?	App D 4.8 App D 4.7.2	Yes, pages 20 to 28.	Yes	
49.	Distance of site from nearest road	App E 6	Yes, pages 30 to 71.	Yes	
50.	Traffic count of nearest road	App E	Yes, pages 30 to 71.	Yes	Where traffic counts to the nearest road was unavailable, the traffic count to the nearest road with data was provided.
51.	Probe height	App E 5 App E 2	Yes, pages 30 to 71.	Yes	
52.	Distance from supporting structure	App E 3(b) App E 2	Yes, pages 30 to 71.	Yes	
53.	Distance from obstructions on roof	App E, 4(a) and 4(b) App E 4(b)	Yes, pages 30 to 71.	Yes	
54.	Distance from obstructions not on roof	App E 9 App E 4(a)	Yes, pages 30 to 71.	Yes	
55.	Distance from trees	App E 9 App E 5	Yes, pages 30 to 71.	Yes	
56.	Distance to furnace or incinerator flue	App E 3(b)	Yes, pages 30 to 71.	Yes	
57.	Unrestricted airflow	App E, 4(a) and 4(b)	Yes, pages 30 to 71.	Yes	
58.	Probe material (if applicable)	App E 9	Yes, pages 30 to 71.	Yes	
59.	Residence time (if applicable)	App E 9	Yes, pages 30 to 71.	Yes	

Appendix E. Waivers

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

EPA approved ODEQ's request to discontinue TSP lead monitoring at Cascade Mills in McMinnville. The measured TSP lead levels were far below the standard and the monitoring resources were needed for the new Portland, Near Roadway site monitoring. The table below shows the waiver parameters.

Table D 1. McMinnville, Cascade Steel TSP lead Waiver

	Waiver requirement	TSP Lead levels	Comments
McMinnville, Cascade Steel (41-071-1702)	Three year average is < 50% of std (Std is 0.15ug/m3)	2010 to 2012 three yr average was 0.04ug/m3 or 24% of Std	Waiver approved by EPA

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 2. 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 Waivers

In 2010, Klamath Falls and Grants Pass PM₁₀ monitors were discontinued because their values had dropped far below the NAAQS and funding was cut. The PM₁₀ maintenance plans for these sites 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 PM_{2.5} monitoring as a surrogate. In the 2010 network plan, we showed that the PM₁₀ consisted predominantly of PM_{2.5}. We developed correlation equations and calculated 2014 PM₁₀ estimates for these sites based on PM_{2.5}. Klamath Falls also has trigger point values which would lead to restarting the monitor. The PM₁₀ standard is 150µg/m³.

Table D 3. Linear regression equations used to estimate PM10 using PM2.5.

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

Y = PM₁₀, X = PM_{2.5}

Table D 4. 2013 PM10 estimates for Klamath Falls and Grants Pass.

	PM2.5 98th percentile (µg/m ³)	PM10 Estimate (µg/m ³)
Klamath Falls (41-035-0004)	23	35
Grants Pass (41-033-0114)	15	21

Appendix F. 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.