State of Oregon Department of Environmental Quality

2016 Oregon Annual Ambient Criteria Pollutant Air Monitoring Network Plan

Submitted to: Environmental Protection Agency, Region 10.

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DEQ is a leader in restoring, 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
NOx	Nitrogen oxides – redish brown gaseous pollutant - mainly NO and NO_2
NOy	NOx + HNO3 + organic nitrates + inorganic nitrates = NOx + NOz
O_3	Ozone – a gaseous pollutant and a component of smog at ground level
PM2.5	Particulate Matter 2.5 micrometers in diameter and smaller
PM10	Particulate Matter 10 micrometers in diameter and smaller
PM10-2.5	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
$\mu g/m^3$	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. This is not the air toxic network plan that is used to decide where air toxics monitoring should go. That monitoring is very fluid at this time and planning for new sites is being made more often than once per year. See DEQ web site for more information on air toxics monitoring.

The 2015 five year network plan recommends an increase of PM2.5 surveys in cities with existing monitors and assessment of areas without monitors. In 2016, DEQ submitted a proposal to the Oregon Legislature to fund an increase of PM2.5 monitoring in large and small cities to fill in the unmonitored gaps in our network and this provide more geographical measurements within an airshed (same as a survey). Some of these monitors may be used to assess communities without monitors (same as an assessment). If this proposal is not funded, we will continue to try to find resources to accomplish these goals.

In the 2015 five year plan, we also wanted to track and support the increase of citizen monitoring. We continue to work toward this goal by supporting EPA's efforts in this area and to test and use newer, cheaper monitors being developed for our own network. We also work with local academic and private researchers to develop and test new sensors by opening providing quality controlled instrumentation for comparison.

In 2016/2017 the following changes will be made to the criteria monitoring network upon approval from EPA.

Medford PM10 monitoring

Medford PM10 monitoring is required by the Medford/Ashland PM10 Maintenance Plan, however, the values have been less than ½ of the NAAQS for more than 10 years. The monitor will be changed to PM2.5 which will be used as a surrogate for PM10. The PM2.5/PM10 correlation equation has been determined. The changed over PM2.5 monitor will also be moved to a more suitable PM2.5 location in Central Point. This move is supported by past monitoring data and similar demographic and land use as the old area.

Ashland PM2.5

A PM2.5 estimate monitor will be started in Ashland primarily to measure wild fire and prescribed burning smoke impacts. This data will be on the AQI.

The Dalles Ozone

The Bend ozone, special purpose monitor will be moved to The Dalles this year.

Purpose

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 .

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.

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 (NOx), Sulfur dioxide (SO_2), ozone (O_3), particulate matter 2.5 and 10 micrometers in diameter and smaller ($PM_{2.5}$ and PM_{10}), PM coarse (PM_{10}-$PM_{2.5}$=PMc), $PM_{2.5}$ 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

PM_{10}: 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

3.2 Oregon Criteria Pollutant Monitoring Network

Oregon DEQ operates the ambient monitoring network for the entire state with the exception of Lane County which is operated by the Lane Regional Air Protection Authority. 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.

Oregon DEQ's and LRAPA's air quality monitoring networks measure ambient concentrations of the criteria pollutants - ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, lead. The map below shows the Oregon monitoring network. The table below lists the networks sites.

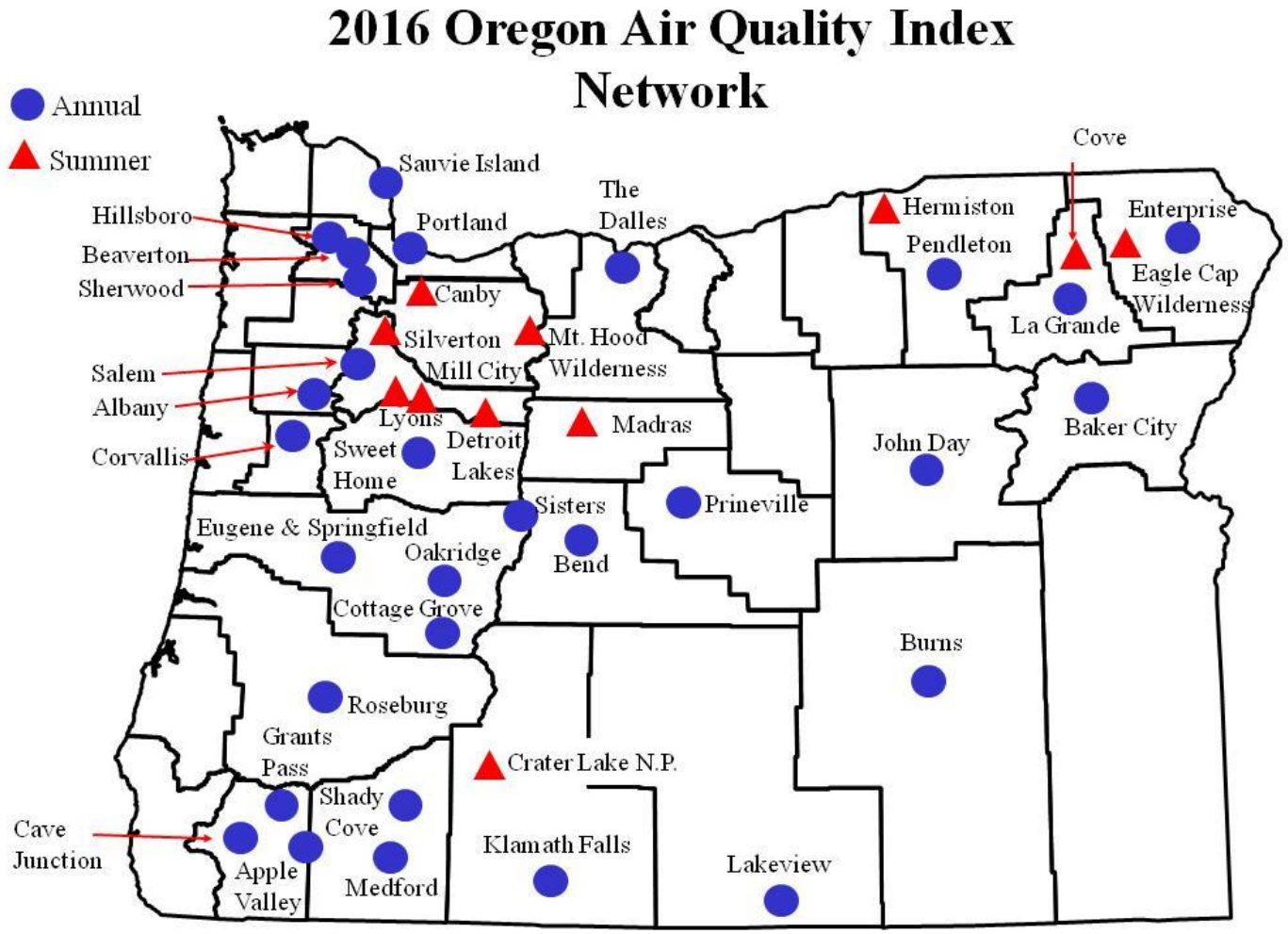


Figure 1. ODEQ and LRAPA Ambient Air Monitoring Network

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										
Bend	Bend Rd Dept				X						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	Pacific Hwy 99N					X	X	X		X						
	Amazon Park				X	X		X		X						
	Wilkes Drive										X	X				
Saginaw	Delight Valley Sch Rd				X											
Springfield	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	VIS/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 & 58th 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				
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 = PM2.5 estimated using nephelometers
PM10 = Particulate Matter 10 microns in diameter or smaller
PM2.5 = Particulate Matter 2.5 microns in diameter or smaller
Spec = PM2.5 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 Bend. Maps of the network are shown below.

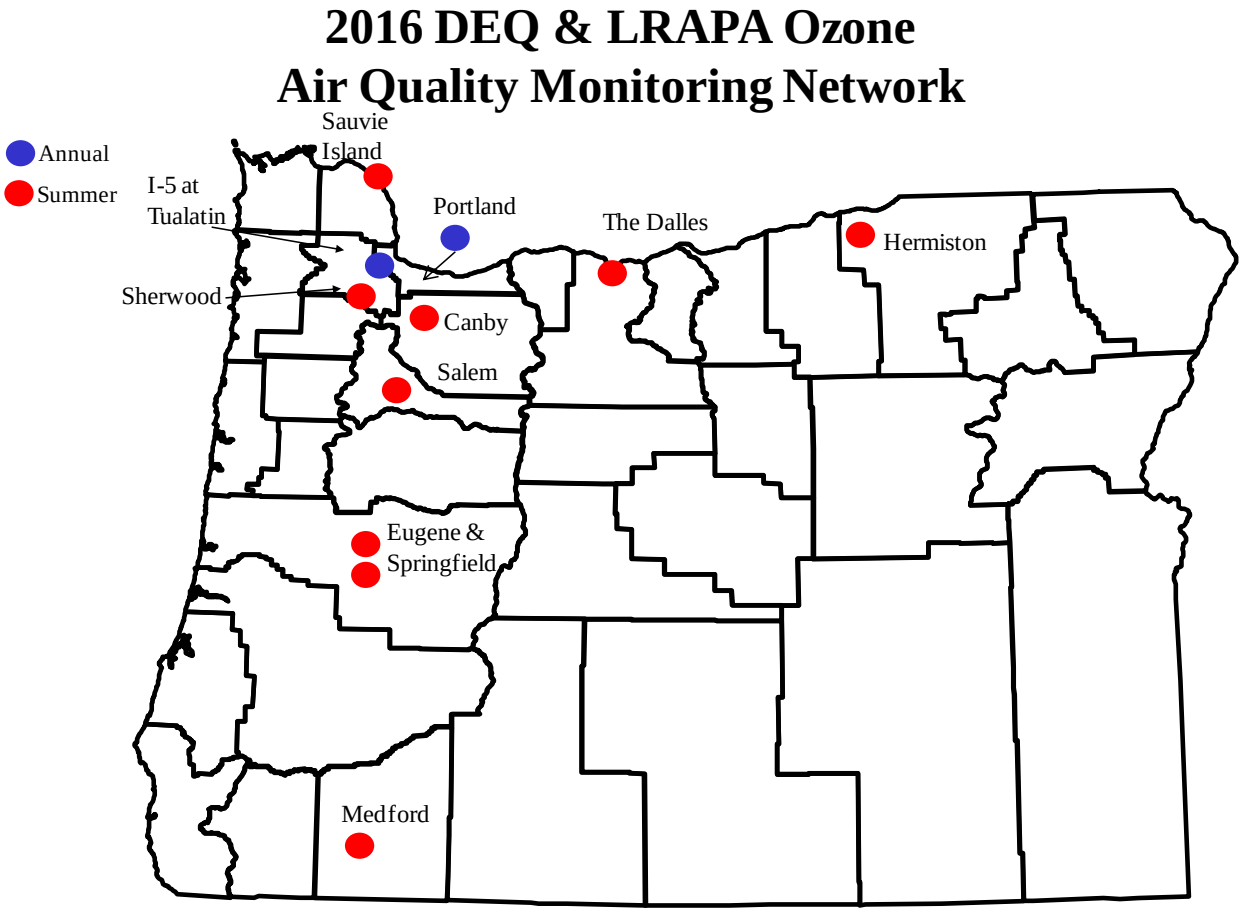


Figure 2. Ozone Monitoring Network

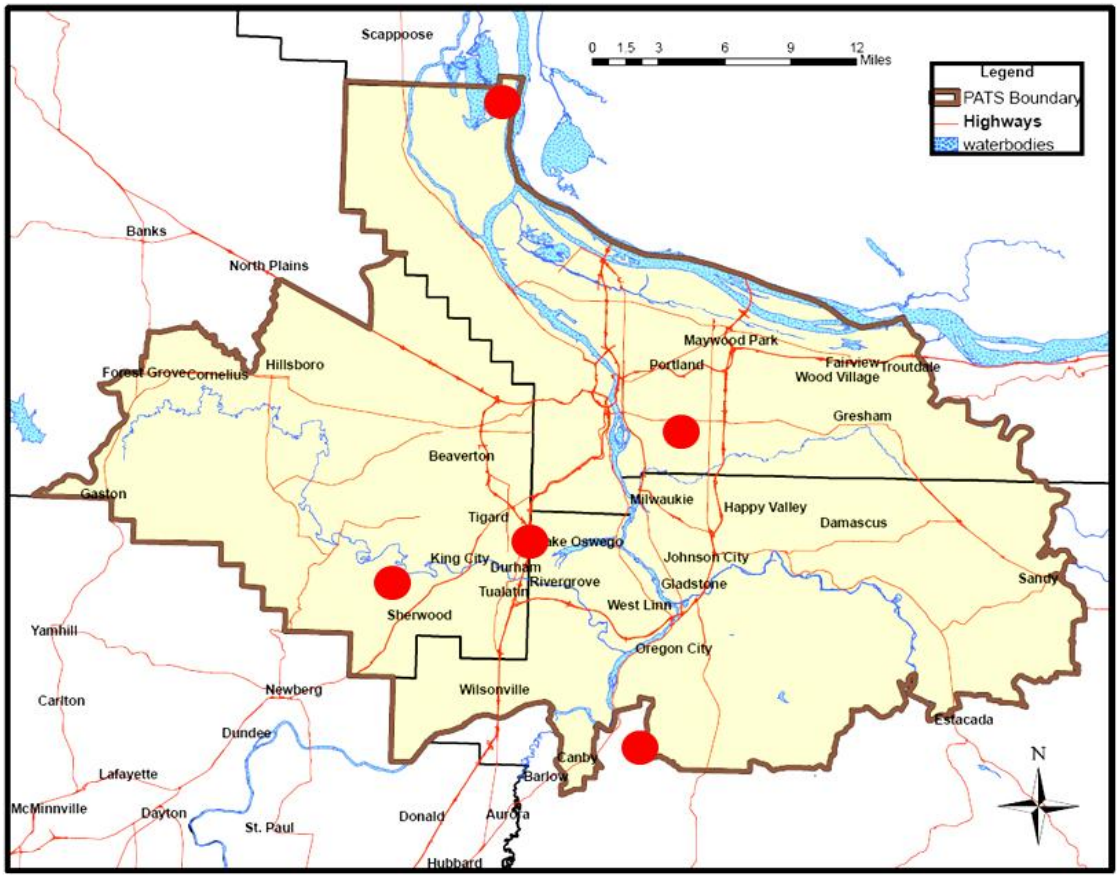


Figure 3. Portland- Metro Ozone Monitoring Sites.

Changes to the Ozone network in the past year

1) The Bend ozone monitoring site was relocated to The Dalles to assess ozone in the Gorge. Bend ozone has been measured for that past five years and there is enough information now to adequately show that the area does not violate the NAAQS.

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.

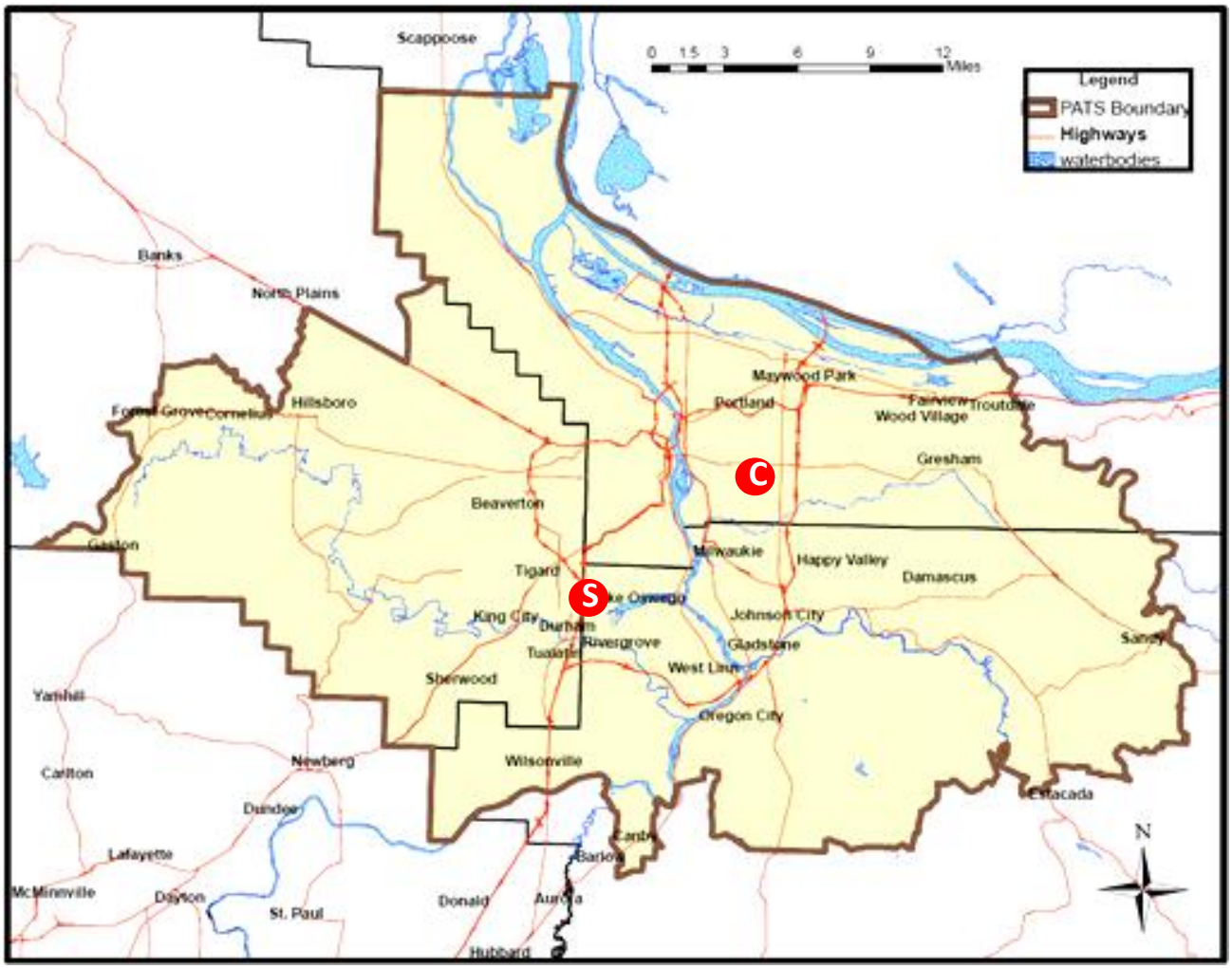


Figure 4. NO2 Monitoring Network
S = Source monitor (measuring I-5)
C = Community monitor (Measuring in neighborhood)

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.

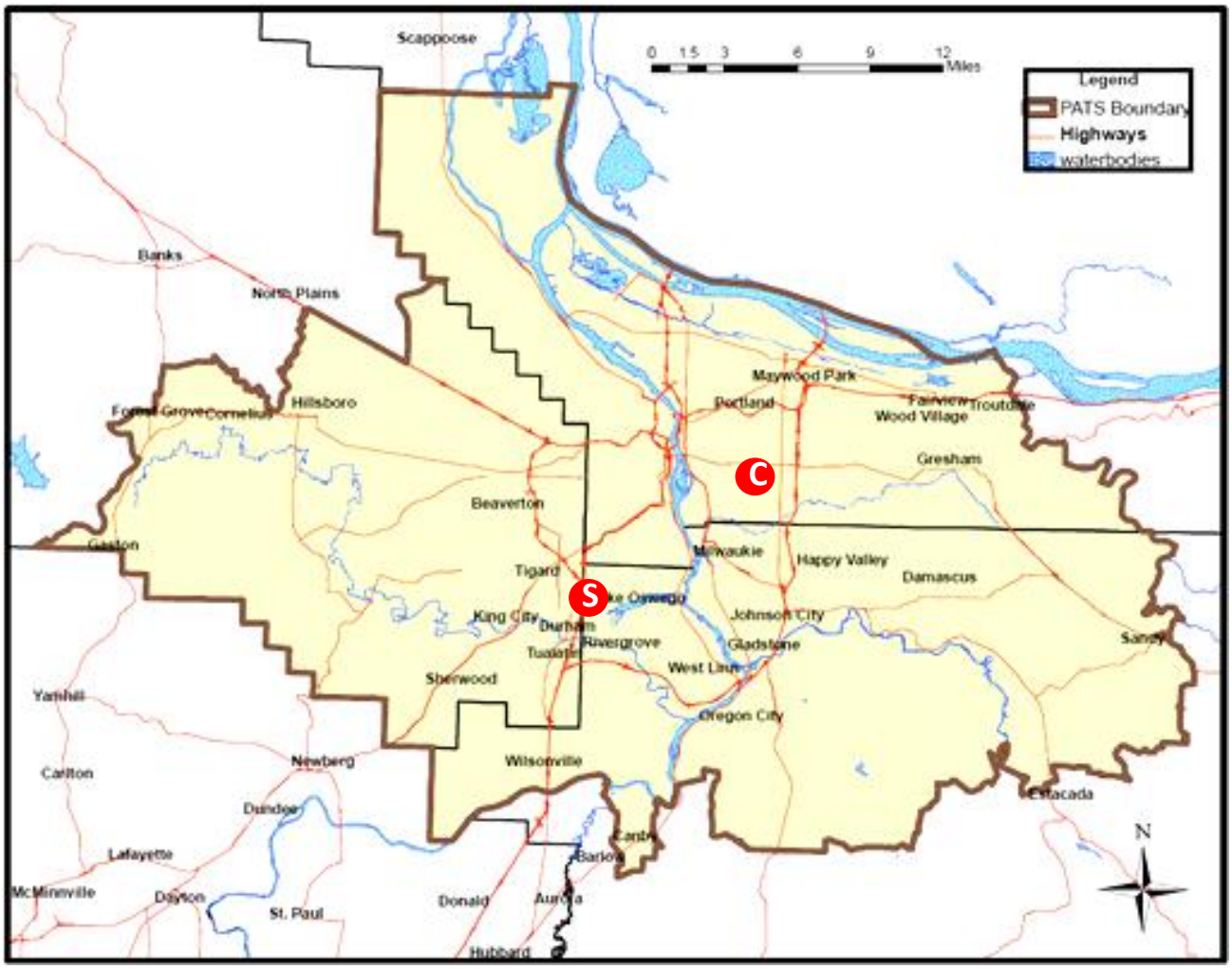


Figure 5. CO Monitoring Network
S = Source monitor (measuring I-5)
C = Community monitor (Measuring in neighborhood)

<u>Changes to the CO network in the past year</u>

1) No changes.

3.2.4 PM2.5 Network

Oregon DEQ and LRAPA have 1 NCORE or an 11 SLAMS Federal Reference Monitoring (FRM) sites. Two 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 four PM2.5 speciation sites. One in SE Portland (the trend site), one in Hillsboro, one in Prineville, and one in Klamath Falls.

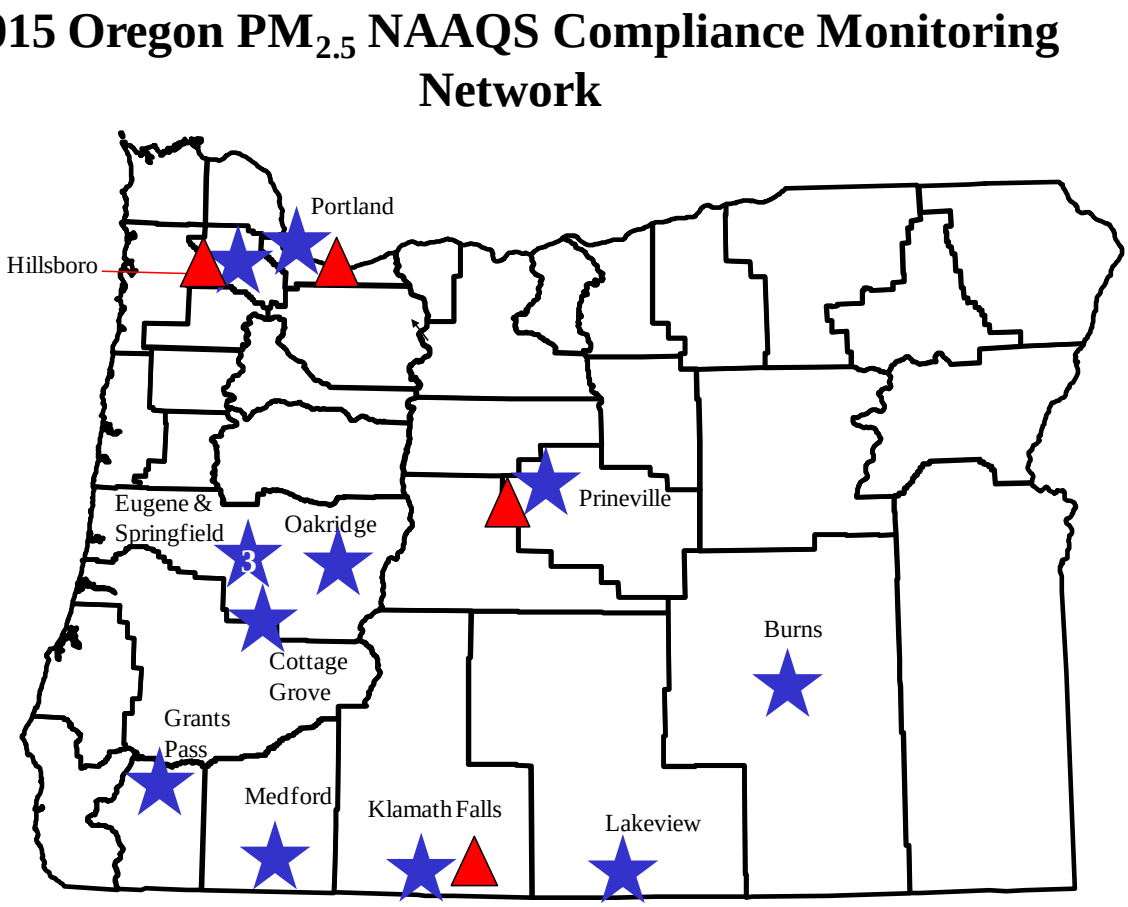


Figure 6. PM2.5 Monitoring Network

Changes to the PM2.5 network in the past year

1) EPA suggested that the 2013-15 Klamath Falls (41-035-0004) design value would be within 5% of the NAAQS and would require daily sampling. DEQ and EPA are currently coordinating on getting concurrence on 2014 and 2015 forest fire exceptional events. If these exceptional events are concurred with the design value would be 32.9 µg/m^3 or 93% of the NAAQS. If not, daily sampling still not be required because the design value would be 40 µg/m^3 or 113% of the NAAQS. Neither is within 5% of the NAAQS.

2) Medford will get another PM2.5 FRM sampler at the request of the city. This sampling will be done by converting the existing PM10 FRM sampler and moving the site about a mile north. The current PM10 site has been shown to be redundant for PM2.5 with the other Medford PM2.5 site at Grant and Belmont (41-029-0133)

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.

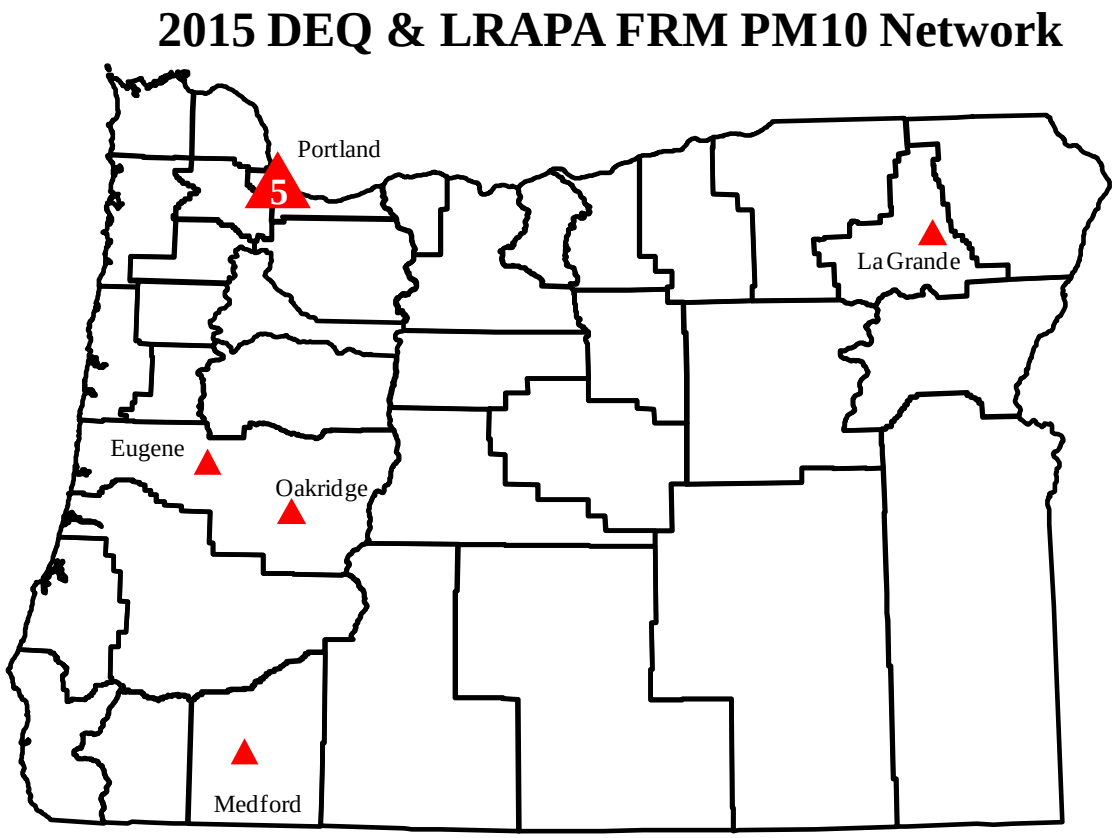


Figure 7. PM10 Monitoring Network

Changes to the PM10 network in the past year

1) The Medford PM10 sampler at Welch and Jackson will be converted to a PM2.5 sampler. Medford PM10 will be determined by using the PM2.5 sampler as a surrogate. This is currently being done in Grants Pass and Klamath Falls. The conversion equation is calculated using the collocated data

3.2.6 PM10-2.5 Network

Oregon DEQ has one PM10-2.5 Federal Reference monitoring site, and it is in Portland. LRAPA has two collocated PM10 and PM2.5 monitors that are used for PM10-2.5 for informational purposes, one in Eugene and one in Oakridge. LRAPA PM10-2.5 is not required by EPA and changes to these data are not subject to EPA approval. The LRAPA sites are not required by EPA and not subject to their approval.

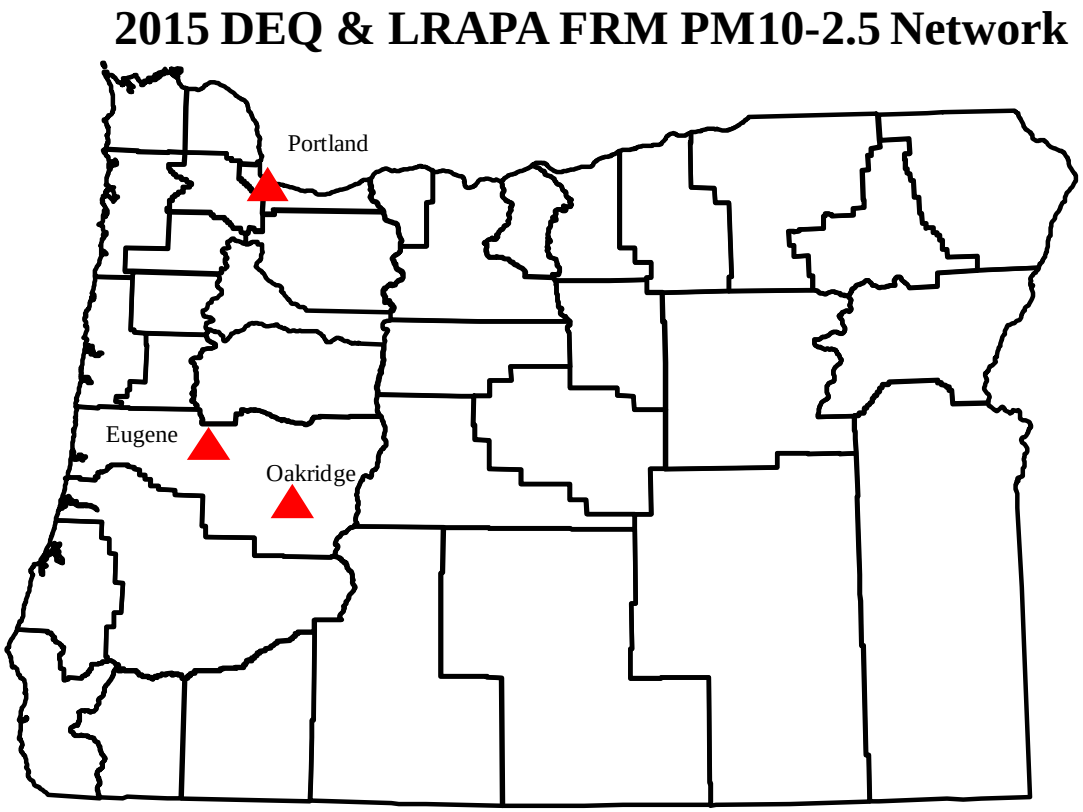


Figure 8. PM10-2.5 Network

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.

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 mangers, 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.

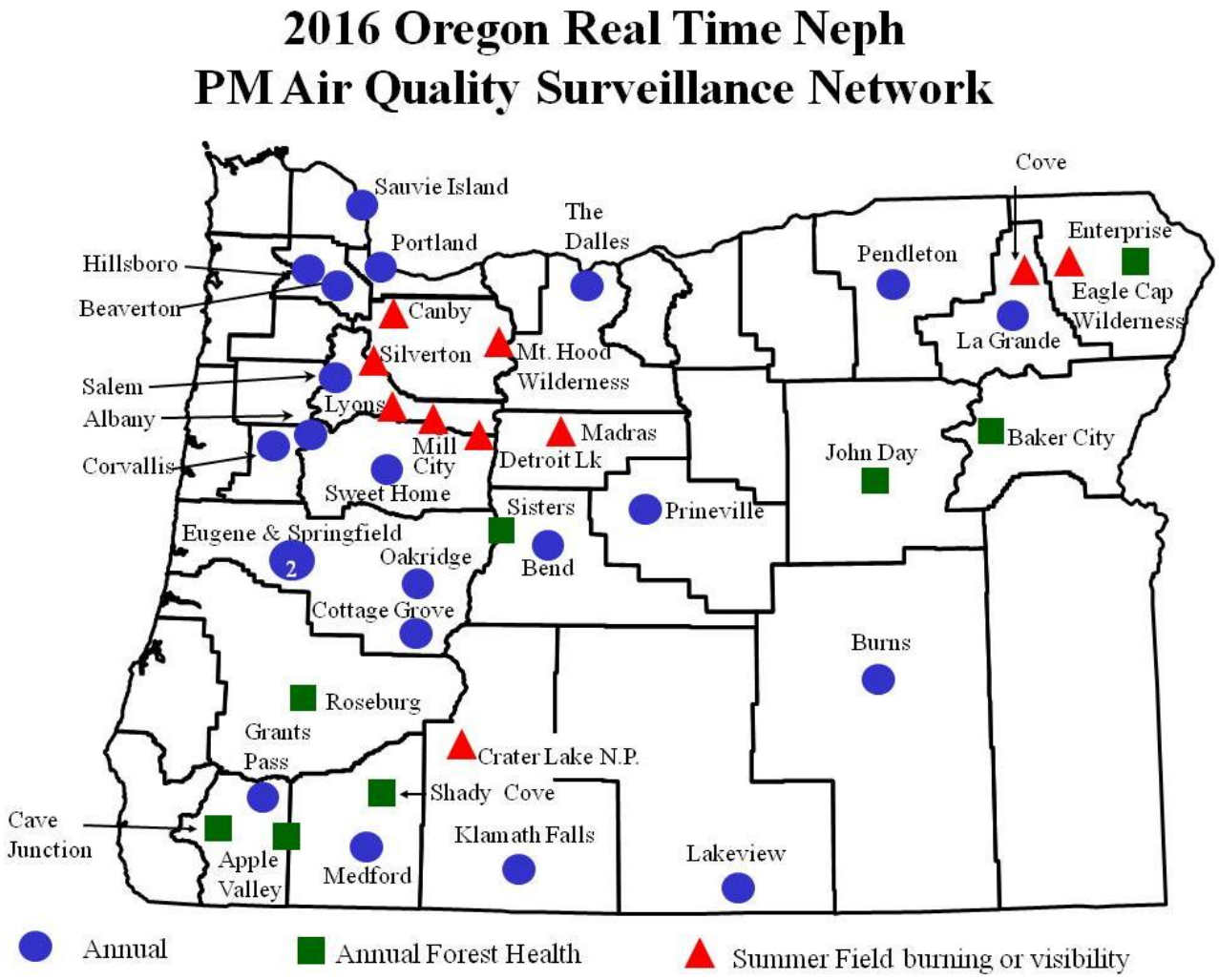


Figure 9. PM2.5 AQI Network

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

3.4 Air Toxics Network

Oregon also has an ambient air toxics monitoring network that includes trend sites, neighborhood assessment sites, and source assessment sites. The trend sites stay in one location and are used to see the differences in air toxics over time in urban and rural communities. These sites are funded by EPA.

The neighborhood assessment sites move from one community neighborhood to another and determine the air quality where people live and go to school. These sites are located in parks or schools and are used to measure the ambient air in the neighborhoods.

The source assessment sites are located outside of potential air toxic sources such as large industry, commercial areas, or heavy roadways. These are used to determine the amount of air toxics coming from the source and are informative in providing feedback to reducing their emissions.

Oregon DEQ has two National Air Toxics Trends sites, one in N. Portland and one in La Grande.

In 2016 Oregon DEQ started a more comprehensive air toxics source monitoring program that is still in the planning stages. DEQ has already monitored in Portland near Swan Island, in SE Portland near Bullseye Glass, in N. Portland near Uroburos Glass, in SE Portland and Milwaukie near Precision Cast Parts, in The Dalles near Ameri Ties, and near in N. Portland near Hayden Island.

Oregon has one neighborhood source assessment monitor that will monitor in Gresham starting this year. Other monitoring sites are planned around Oregon but are not included in this plan.

3.5 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.

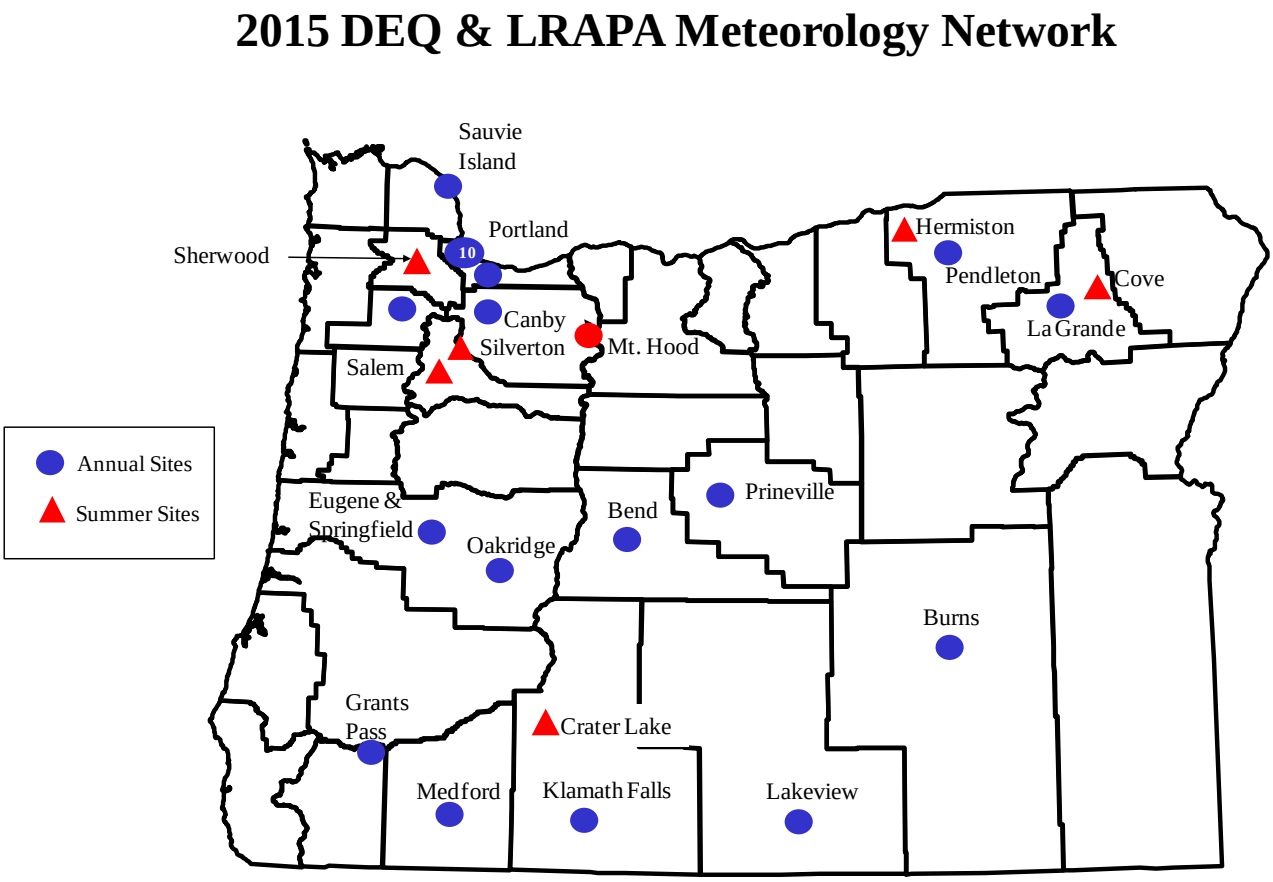


Figure 10. Meteorology Network

Changes to the Meteorological Network in the past year: Seven wind direction and wind speed sensors were place around Swan Island in Portland as part of the Swan Island air toxics monitoring project. One met system was placed in Portland St. Johns as part of the St. Johns air toxics metals monitoring project. These are not required by EPA and not subject to their approval.

4. Planned Changes to Network

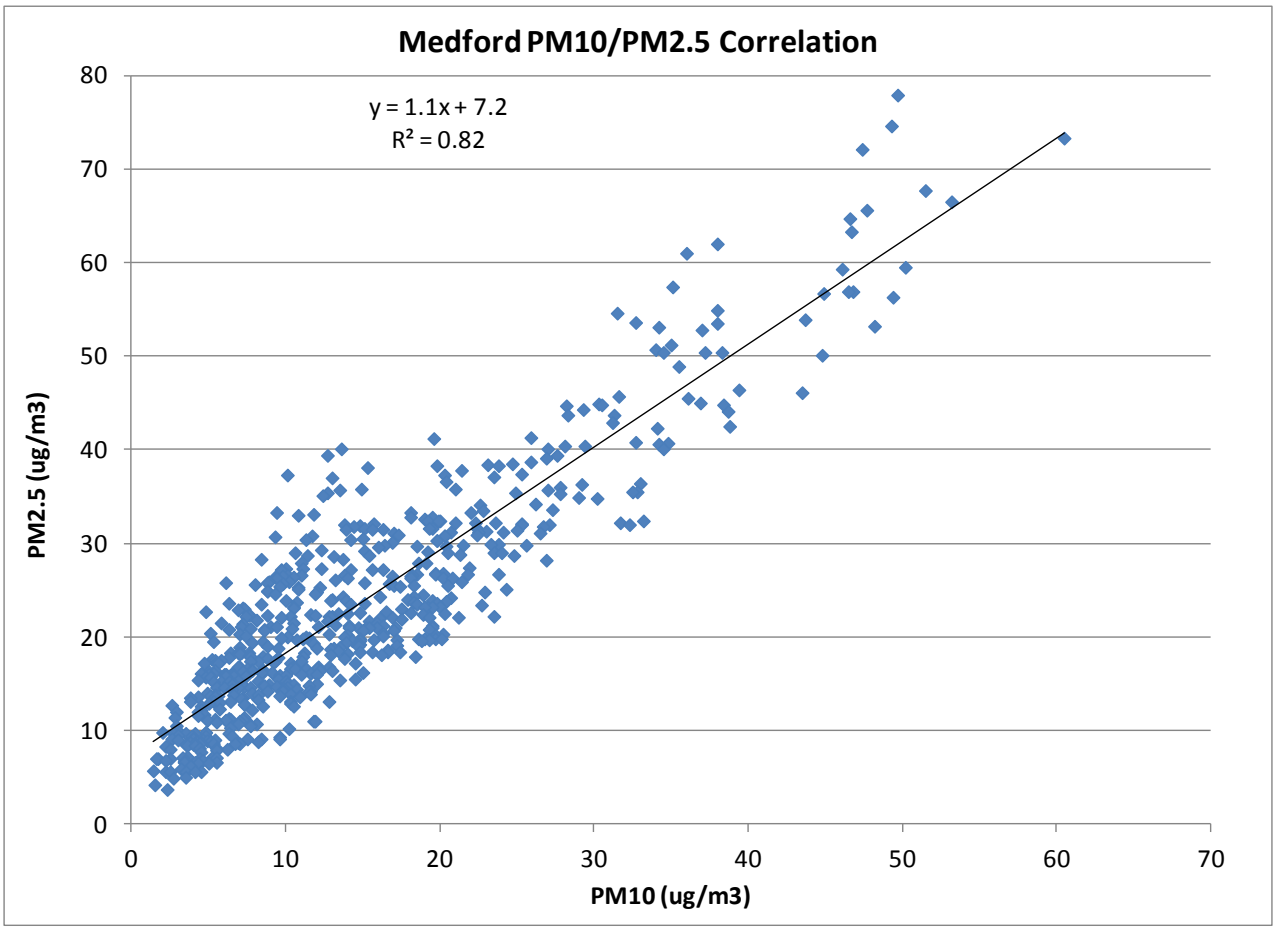
All major modifications to the ambient air quality monitoring network required by EPA are submitted to the regional administrator for review and approval in the network assessment. Changes that do not require EPA approval are also mentioned for informational purposes.

4.1 Criteria Pollutant Changes

4.1.1 PM10

The PM10 monitor at Medford Welch & Jackson (41-029-2129) is required by the Medford/Ashland PM10 Maintenance plan but PM10 has been less than 1/2 of the NAAQS for the past decade.

In other cities with PM10 maintenance plans, DEQ has discontinued this monitoring to redirect funds to PM2.5. Then we use PM2.5 as a surrogate for PM10. In Medford we want to discontinue PM10 monitoring and add a PM2.5 monitoring. The funding for both types of monitoring is equivalent.



The surrogate equation is PM10 = (PM2.5 * 1.1) + 7.2

The percent of PM10 that is PM2.5 averages out to be 60% ±19%.
At the 95th percentile,92% of PM10 is PM2.5.
N = 600
Date range 1999- 2004.

This monitor may be moved to Central Point or Ashland which are still in the airshed because the current PM10 site (Medford Welch and Jackson 41-029-2129) was previously a PM2.5 site and was found to be redundant with the PM2.5 at the Medford Grant and Belmont site (41-029-0133). There is a demand for PM2.5 in Ashland because

of the annual smoke intrusion from forest slash burning and this area has grown and has not been monitored in a decade.

The new location

A new location will be found in Central Point, just north of the Welch and Jackson site. The new location is:

a) still in the same airshed (Medford/Ashland AQMA),
b) has a similar demographics (low income)
c) Similar land use – Combined industrial/commercial/residential with I-5 and the rail road next to it.
d) Same monitoring scale - neighborhood scale.
e) Same objective - population oriented.
f) Has the same topography (valley floor)

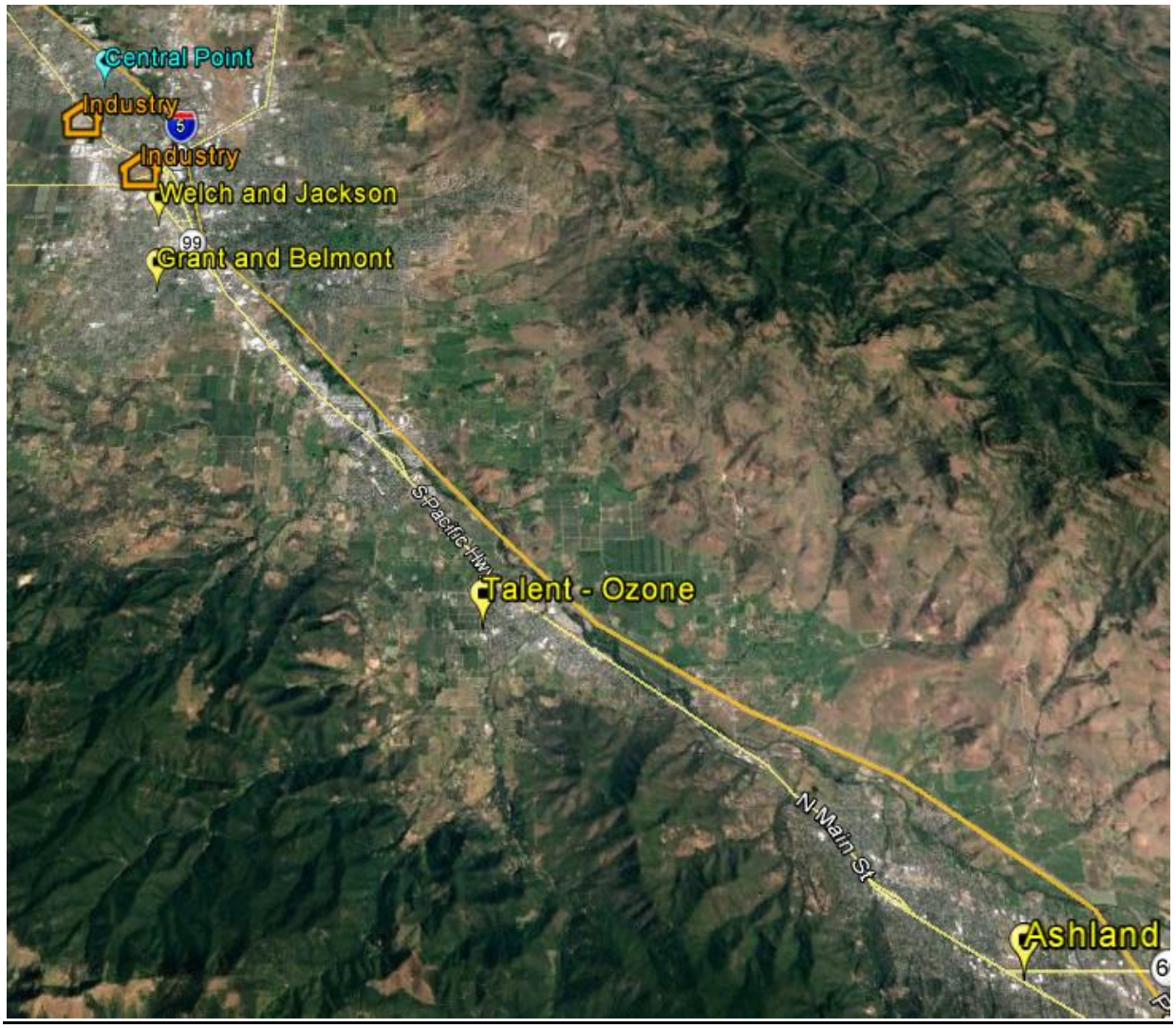


Figure 11. Medford/Ashland Air Quality Maintenance Area monitoring
The yellow labels are existing monitors. The blue label is proposed monitoring.

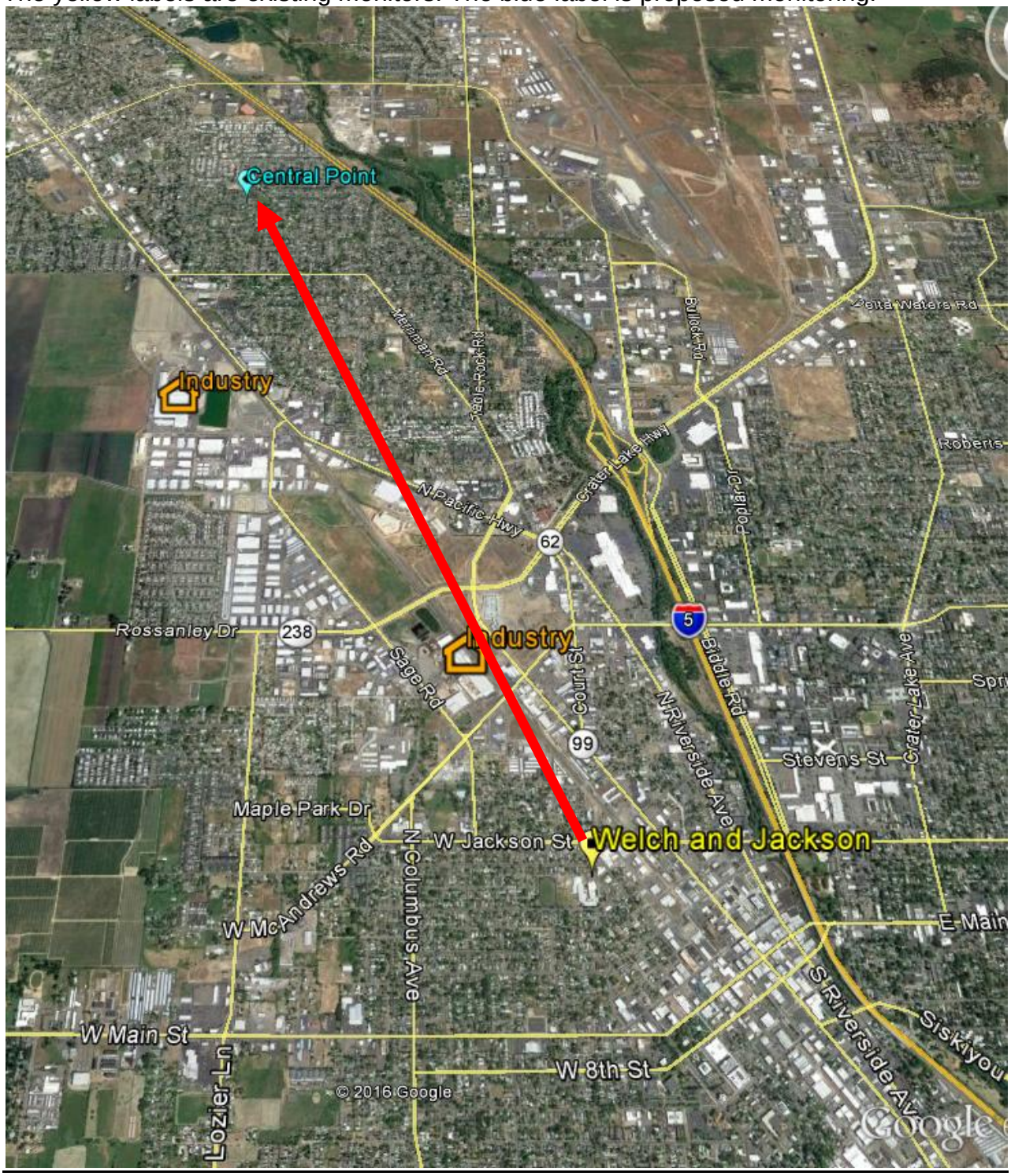


Figure 12. The proposed Medford monitor move.
From Welch and Jackson, north to Central Point.

Why move?
DEQ and the Medford commissioners want more PM2.5 monitoring in the Rogue Valley. This can be accomplished without additional funding by changing the Welch and Jackson PM10 sampler to PM2.5, without reducing protection for the air quality in the valley because PM10 is so far below the NAAQS.

The PM2.5 site should be moved to a new location because Welch and Jackson has already been shown to be redundant with the Grant and Belmont site years ago when they both monitored for PM2.5. A 2005 PM2.5 survey conducted by DEQ showed that Central Point had sufficiently high particulate levels to have a monitor. At the time, we decided to use the Grant and Belmont site as representative for the whole valley to save resources. We now have a way to increase monitoring in the valley and satisfy all the local, state, and federal needs and requirements, while not increasing costs.

4.1.2 Ozone

The Bend ozone monitor (41-017-0121) was moved to The Dalles (41-065-0007) in the Columbia River Gorge to measure the ozone transport. Bend has five years of ozone data which shows the area is well below the NAAQS. The Dalles has no recent ozone data.

4.1.3 PM2.5 estimated monitor

Ashland will get a permanent, year round nephelometer which will be used to estimate PM2.5 for the AQI.

Appendix A. Minimum Monitoring Requirements

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

Table A 1. Minimum Monitoring Requirements for **NCORE Site.**

NCORE Site: SE Lafayette (SEL), AQS# 41-051-0080, Address 57th Avenue and SE Lafayette St., Portland, OR MSA – Portland-Vancouver, OR-WA (#6440) Counties represented – (OR) Multnomah, Clackamas, Washington, (WA) Clark MSA Population (2013)* - 2,292,725								
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	<1excedencd/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	DV (ppb)	Site name	Season	Years	# of Monitors		
							Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington,	2,292,725	63	Carus (41-005-0004)	May-Sept	2013-15	2	5 in OR, 1 in WA	0
Salem (#7080)	Marion	399,945	60	Cascade Sch. Turner (41-047-0004)	May-Sept	2013-15	1	1	0
Eugene-Springfield (#2400)	Lane	356,125	61	Saginaw (41-039-1007)	May-Sept	2013-15	1	2	0
Bend-Redmond (0000)	Deschutes	162,525	59	Bend Rd Dept (41-017-0121)	May-Sept	2013-15	0	1	0
Medford-Ashland (#4890)	Jackson	206,310	65	Talent (41-029-0201)	May-Sept	2013-15	0	1	0
Hermiston (0000)	Umatilla	17,240	65	Airport (41-059-1003)	May-Sept	2013-15	0	1	0
Corvallis (#1890)	Benton	87,725	-	-	-	-	0	0	0
Albany (CBSA#24420)	Linn	118,665	-	-	-	-	0	0	0
Grants Pass (CBSA#10540)	Josephine	82,815	-	-	-	-	0	0	0

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)	2,292,725	No	SE Lafayette, Portland (41-051-0080)	2015	2	2	0
Salem (#7080) (Salem-Kaiser Transportation Area)	Marion	399,945	No	-	2005	0	0	0
Medford-Ashland (#4890) (Medford Urban Growth Boundary)	Jackson	206,310	No	Monitor CO with modeling	2009	0	0	0
Klamath Falls (#0000) (Klamath Falls Urban Growth Boundary)	Klamath	21,495	No	-	2004	0	0	0
Grants Pass (CBSA#10540) (Grants Pass Central Business District)	Josephine	82,815	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 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	DV (ppb)	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington,	2,292,725	1hr= 35ppb Annual= 9.1ppb	1hr= 35% Annual= 17%	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	2013-15	1	1	0
			Not three full years of data yet		Near Roadway Site (41-067-0005)	Annual, Hourly	2014-15	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	DV ppb	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington	2,292,725	4	5	Portland, SE Lafayette (41-005-0080)	Annual, Hourly	2013-15	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 criteria, 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 ½ 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	DV µg/m^3	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington	2,292,725	0.005[1]	3%	Portland, SE Lafayette (41-005-0080)	Annual, 1/3 at NCORE	2013-15	1	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 at the various glass manufactures. That lead has not been monitored for over one year yet so the annual average cannot be calculated at this time.
2. EPA granted a waiver to discontinue McMinnville lead because its three year average was less than ½ 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	Excee dence/ yr	Site name	Season/ Frequency	Years	# of Monitors		
							Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington,	2,292,725	0	SE Lafayette (41-005-0080) N. Roselawn (41-051-0246)	Annual, 1/3 at NCORE & 1/6 other sites	2013-15	2-4	2	0
Eugene-Springfield (#2400)	Lane	356,125	0	Hwy 99 (41-039-0059)	Annual 1/6	2013-15	1	3	0
La Grande (#0000)	Union	13,125	0	Ash St. (41-067-0119)	Annual, 1/6	2013-15	1	1	0
Oakridge (#0000)	Lane	3,215	0	Oakridge (41-039-2013)	Annual 1/6	2013-15	1	1	0
Medford-Ashland (#4890)	Jackson	206,310	0	Grant & Belmont (41-029-2129)	Annual, 1/6	2013-15	1	1	0
Grants Pass (CBSA#10540)	Josephine	82,815	0	Parkside School (41-033-0114)	PM2.5 as surrogate	2013-15	1	0	0*
Klamath Falls (#0000)	Klamath	21,495	0	Klamath Falls Petersen Sch. (41-035-0004)	PM2.5 as surrogate	2013-15	1	0	0*

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

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

MSA	County	Population	DV Daily/ Annual µg/m3	% of Std	Site name	Season/ Frequency	Years	# of Monitors		
								Minimum required	Active	needed
Portland-Vancouver, OR-WA (#6440)	Multnomah, Clackamas, Washington	2,292,725	33 8.0	93% 66%	Hillsboro Hare Field (41-067-0004)	Annual 1/3	2013-15	3	3	0
Eugene-Springfield (#2400)	Lane	356,125	32 7.8	90% 64%	Hwy 99 (41-039-0059)	Annual 1/3	2013-15	1	3	0
Cottage Grove (#0000)	Lane	9,785	22 7.2	62% 60%	City Shops (41-039-9004)	Annual 1/3	2013-15	0	1	0
Oakridge (#0000)	Lane	3,215	37 9.6	105% 79%	Oakridge (41-039-2013)	Annual 1/3	2013-15	0	1	0
Medford-Ashland (#4890)	Jackson	206,310	48 11.8	136% 98%	Medford, Grant & Belmont (41-029-2129)	Annual 1/3	2013-15	1	1	0
Grants Pass (CBSA#10540)	Josephine	82,815	27 9.2	76% 76%	Parkside Sch. (41-033-0114)	Annual 1/6	2013-15	0	1	0
Klamath Falls (#0000)	Klamath	21,495	34 10.3	96% 85%	Petersen Sch. (41-035-0004)	Annual 1/3	2013-15	0	1	0
Lakeview (#0000)	Lake	7,940	56 10.6	158% 88%	Lakeview (41-037-0001)	Annual 1/3	2013-15	0	1	0
Burns-Hines (#0000)	Harney	4,395	31 9.1	88% 75%	Washington Park (41-025-0003)	Annual 1/3	2013-15	0	1	0
Prineville (#0000)	Crook	9,270	46 9.9	130% 82%	Davidson Park (41-013-0100)	Annual 1/3	2013-15	0	1	0

Medford 2013, 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 none forest fire DV is 35.4 µg/m^3.

AQI (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	DV ($\mu g/m^3$)	% of Std	Site name	Season/ Frequency	Years	# of Monitors required	Active	needed
Salem-Kaiser (#7080)	Marion	399,945	26	68	State Hospital (41-047-0041)	Annual, Hourly	2013-15	0	1	0
Bend-Redmond (#0000)	Deschutes	162,525	19	56	Bend Rd Dept (41-017-0121)	Annual, Hourly	2013-15	0	1	0
Albany (CBSA#24420)	Linn	118,665	28	67	Calapooia Sch. (41-043-0009)	Annual, Hourly	2013-15	0	1	0
Corvallis (#1890)	Benton	87,725	20	53	Intermediate Sch. (41-003-0013)	Annual, Hourly	2013-15	0	1	0
Roseburg (#0000)	Douglas	35,605	19	53	Forest Service Off (41-019-0002)	Annual, Hourly	2013-15	0	1	0
The Dalles (#0000)	Wasco	14,440	20	56	Cherry Heights (41-065-0007)	Annual, Hourly	2013-15	0	1	0
La Grande (#0000)	Union	13,125	31	84	Ash St. (41-061-0119)	Annual, Hourly	2013-15	0	1	0
Baker City (#0000)	Baker	9,890	20	58	Forest Service Off (41-001-0003)	Annual, Hourly	2013-15	0	1	0
Sweet Home (#0000)	Linn	9,065	22	60	Fire Dept (41-043-2002)	Annual, Hourly	2013-15	0	1	0
Sisters (#0000)	Deschutes	2,115	14	49	Forest Service Off (41-017-0004)	Annual, Hourly	2013-15	0	1	0
Enterprise (#0000)	Wallowa	1,940	21	60	Forest Service Off (41-063-0001)	Annual, Hourly	2013-15	0	1	0
Cave Junction (#0000)	Josephine	1,905	27	66	Forest Service Off (41-033-0036)	Annual, Hourly	2013-15	0	1	0
John Day (#0000)	Grant	1,745	27	83	Forest Service Off (41-063-0001)	Annual, Hourly	2013-15	0	1	0

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)
118	6	1	1	0
145	5	1	1	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)
127	3	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 = 23,500, Yr= 2012	
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	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 2025w/ WINS	R&P 2025
Instrument parameter occurrence code	**Primary**	**Primary**
Method number	118	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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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 = 23,500 yr = 2012	
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, N. Roselawn Site Information

Local Site Name	**Portland, N. Roselawn**	
AQS ID	**41-051-0246**	
GPS Coordinates	45.5614, -122.6679	
Street address	N. Roselawn, Portland, OR	
County	Multnomah	
Distance from roadways (meters)	43	
Traffic count (AADT, yr)	AADT = 2621 (NE Malory & Ainsworth), yr =2012 (Weekday)	
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 = 156,000 yr = 2012	
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	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 = 156,000 yr = 2012	
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 = 156,000 yr = 2012	
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/ WINS	Climatronics, Sonic Anemometer
Instrument parameter occurrence code	**Primary**	**Primary**
Method number	118	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 = 156,000 yr = 2012	
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 = 23,318 (Cornell & Grant), Yr = 2013 (3/19/2013)	
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/ WINS	Super SASS & URG3000N Quartz filter Cyclone Inlet
Instrument parameter occurrence code	**Primary**	**Primary**
Method number	118	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)	AADT = 465 yr = 2011	
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)	AADT = 465 yr = 2011	
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)	AADT = 2635 yr = 2013	
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)	AADT = 2635 yr = 2013	
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)	AADT = 1700, Yr = 2012 (9/4/2012)	
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)	AADT = 1700, Yr = 2012 (9/4/2012)	
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. 29th Amazon Park, Eugene, OR	
County	Lane	
Distance from roadways (meters)	61	
Traffic count (AADT, yr)	AADT = 1700, Yr = 2013	
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. 29th Amazon Park, Eugene, OR	
County	Lane	
Distance from roadways (meters)	61	
Traffic count (AADT, yr)	AADT =1700, Yr = 2013	
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	
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/ WINS	
Instrument parameter occurrence code	**Primary**	
Method number	117	
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 Vlly 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	
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/ WINS	
Instrument parameter occurrence code	**Primary**	
Method number	118	
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/ WINS	
Instrument parameter occurrence code	**Primary**	
Method number	118	
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/ WINS	&P 2025 w/ WINS
Instrument parameter occurrence code	**Primary**	**Collocated**
Method number	118	118
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, KlamathFalls,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/ WINS	
Instrument parameter occurrence code	**Primary**	
Method number	118	
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/ WINS	
Instrument parameter occurrence code	**Primary**	
Method number	118	
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/ WINS	Super SASS & URG3000N Quartz filter Cyclone Inlet
Instrument parameter occurrence code	**Primary**	**Primary**
Method number	118	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, Ash Street Site Information

Local Site Name	**La Grande, Ash Street**	
AQS ID	**41-061-0119**	
GPS Coordinates	45.3390, -118.0952	
Street address	N. Ash St., La Grande, OR	
County	Union	
Distance from roadways (meters)	43	
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	1/1/2009	
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)	37	
Distance from to furnace or incinerator flue (meters)	39	
Unrestricted airflow (degrees)	360˚	
Probe material for reactive gases	Aluminum	
Residence time for reactive gases (seconds)	NA	
Will there be changes with the next 18 months?	No	
Is it suitable for comparison against the standard?	Yes	

Table C 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)	Eugene-Springfield	
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)	Eugene-Springfield	
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:
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.

1.	**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 1st	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 38 to 78.	Yes	
3.	30-day public comment / inspection period[5]	58.10 (a)(1), 58.10 (a)(2)	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.

1.	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
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 26	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 38	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 38 to 78.	Yes	
14.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	Yes, pages 38 to 78.	Yes	
15.	Sampling and analysis method(s) for each measured parameter	58.10 (b)(3)	Yes, pages 38 to 78.	Yes	
16.	Any proposals to remove or move a monitoring	58.10 (b)(5)	Yes, page 26	Yes	Two NATTS site moves needed.

[6] See 58.14(c)

1.	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
	station within a period of 18 months following plan submittal				
17.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b)(6); App D	Yes, pages 38 to 78.	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 38 to 78.	Yes	
19.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	Yes, pages 38 to 78.	Yes	
20.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	Yes, page 40.	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 86.	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 40.	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, 41 and 48.*	*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 *(Note 1: must include required data assessment.) (Note 2: Required SLAMS must monitor PM2.5 with NAAQS-comparable monitor at the required sample frequency.)*	*58.10 (b)(13) 58.11 (e)*	*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 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.	*58.20(c)*	Yes, page 63.	Yes	Springfield City Hall PM2.5 FRM
26.	Document how states and local agencies provide for the review of changes to a PM2.5 monitoring	58.10 (c)	No.	Yes	There have been no changes to the PM2.5 monitoring network but DEQ will

1.	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
	network that impact the location of a violating PM2.5 monitor.				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 38 to 78.	Yes	
29.	Instrument monitor type for each monitor	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, pages 36 to 76 and Appendix A.	Yes	
30.	Monitoring objective for each instrument	App D 1.1 58.10 (b)(6)	Yes, pages 38 to 78.	Yes	
31.	Site type for each instrument	App D 1.1.1	Yes, pages 38 to 78.	Yes	
32.	Instrument parameter code for each instrument	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, pages 38 to 78.	Yes	
33.	Instrument parameter occurrence code for each instrument	Required to determine if other req. (e.g., min # and co-lo)	Yes, pages 38 to 78.	Yes	

1.	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
		are met			
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 38 to 78.	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 38 to 78.	Yes	
36.	Sampling schedule for PM10	58.10 (b)(4) 58.12(e) App D 4.6	Yes, pages 38 to 78.	Yes	
37.	Sampling schedule for Pb	58.10 (b)(4) 58.12(b) App D 4.5	Yes, pages 38 to 78.	Yes	
38.	Sampling schedule for PM10-2.5	58.10 (b)(4) 58.12(f) App D 4.8	Yes, pages 38 to 78.	Yes	
39.	Minimum # of monitors for O3 met? [Note: should be supported by MSA ID, MSA population, DV, # monitors, and # required monitors] *(see footnote)*[7]	App D, 4.1(a) and Table D-2	Yes, page 27	Yes	
40.	Identification of max. conc. O3 monitor(s)	App D 4.1 (b)	Yes, pages 38 to 78.	Yes	
41.	Minimum monitoring requirements met for near-road NO2 (2014 start date)	*App D 4.3.2*	Yes, pages 29 to 35.	Yes	
42.	Minimum monitoring requirements met for area-wide NO2	*App D 4.3.3*	Yes, pages 29 to 35.	Yes	
43.	Minimum monitoring requirements met for SO2	App D 4.4	Yes, pages 29 to	Yes	

[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.

1.	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
	[Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]		35.		
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 29 to 35.	*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 29 to 35.	Yes	
46.	Minimum monitoring requirements for continuous PM2.5 met?	App D 4.7.2	Yes, pages 29 to 35.	Yes	These are used for the Air Quality Index only.
47.	Minimum # of monitors for PM10 met?	App D, 4.6 (a) and Table D-4	Yes, pages 29 to 35.		
48.	Minimum monitoring requirements met for PM10-2.5 mass at NCore sites?	App D 4.8 App D 4.7.2	Yes, pages 29 to 35.	Yes	
49.	Distance of site from nearest road	App E 6	Yes, pages 38 to 78.	Yes	
50.	Traffic count of nearest road	App E	Yes, pages 38 to 78.	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 38 to 78.	Yes	
52.	Distance from supporting structure	App E 3(b) App E 2	Yes, pages 38 to 78.	Yes	
53.	Distance from obstructions on roof	App E, 4(a) and 4(b) App E 4(b)	Yes, pages 38 to 78.	Yes	

1.	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
54.	Distance from obstructions not on roof	App E 9 App E 4(a)	Yes, pages 38 to 78.	Yes	
55.	Distance from trees	App E 9 App E 5	Yes, pages 38 to 78.	Yes	
56.	Distance to furnace or incinerator flue	App E 3(b)	Yes, pages 38 to 78.	Yes	
57.	Unrestricted airflow	App E, 4(a) and 4(b)	Yes, pages 38 to 78.	Yes	
58.	Probe material (if applicable)	App E 9	Yes, pages 38 to 78.	Yes	
59.	Residence time (if applicable)	App E 9	Yes, pages 38 to 78.	Yes	

2.

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 and Central Lane County MPOs.

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 PM_{10} monitors were discontinued because their values had dropped far below the NAAQS and funding was cut. The PM_{10} maintenance plans for these sites required continued monitoring so EPA and ODEQ agreed upon an alternate method to track PM_{10}. EPA allowed ODEQ to discontinue PM_{10} monitoring if we used $PM_{2.5}$ monitoring as a

surrogate. In the 2010 network plan, we showed that the PM_{10} consisted predominantly of $PM_{2.5}$. We developed correlation equations and calculated 2014 PM_{10} estimates for these sites based on $PM_{2.5}$. Klamath Falls also has trigger point values which would lead to restarting the monitor. The PM_{10} standard is 150µg/m^3.

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 = PM_{10}, 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)	27	35
Grants Pass (41-033-0114)	34	51

Appendix F. Review of Violating monitor changes.

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

Appendix G 2014 Design Values

Pollutant	Design Value Type	City	Design Value	% of NAAQS
Ozone	8 hour	Bend	59 ppb	79%
		Eugene/Springfield	61 ppb	81%
		Hermiston	65 ppb	87%
		Medford	65 ppb	87%
		Portland Metro	63 ppb	84%
		Salem	60 ppb	80%
CO	8 hour	Portland Metro	ppb	%
NO2	Hourly/Annual	Portland Metro	35/9 ppb	35%/17%
SO2	Hourly	Portland Metro	4 ppb	5%
PM2.5	Daily/Annual	Burns	31/9.1ug/m3	88%/75%
		Cottage Grove	22/7.2ug/m3	62%/60%
		Eugene/Springfield	32/7.8ug/m3	90%/64%
		Grants Pass	27/9.2ug/m3	76%/76%
		Klamath Falls	34/10.3ug/m3	96%/85%
		Lakeview	56/10.6ug/m3	158%/88%
		Medford	48/11.8ug/m3*	136%/98%
		Oakridge	37/9.6ug/m3	105%/79%
		Portland Metro	33/8.0ug/m3	93%/66%
		Prineville	46/9.9ug/m3	130%/82%
		Estimated PM2.5 DV		
		Albany	27ug/m3	67%
		Baker City	20ug/m3	58%
		Bend	19ug/m3	56%
		Cave Junction	27ug/m3	66%
		Corvallis	20ug/m3	53%
		Enterprise	21ug/m3	60%
		John Day	27ug/m3	83%
		La Grande	31ug/m3	84%
		Pendleton	24ug/m3	72%
		Salem	26ug/m3	68%
		Sisters	14ug/m3	49%
		Sweet Home	22ug/m3	60%
		The Dalles	20ug/m3	56%
PM10	Daily – 2nd highest day	Eugene	52ug/m3	35%
		Grants Pass	51ug/m3	34%
		Klamath Falls	35ug/m3	23%
		La Grande	40ug/m3	27%
		Medford	49ug/m3	33%
		Oakridge	33ug/m3	22%
		Portland Metro	45ug/m3	30%
PM10 Lead	3 Month Aver	Portland NCORE site	5ng/m3	3%
		No Air Toxics sites included in this report		

**Includes forest fire data that can have exceptional event status requested if it impact regulatory status. The non-forest fire DV for Medford is 35.4ug/m3 or 99.6%*