



DEPARTMENT OF
ECOLOGY
State of Washington

2018 Ambient Air Monitoring Network Plan

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2018 Ambient Air Monitoring Network Plan

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Acronyms

AQS	EPA's Air Quality System database
BAM	Beta Attenuation Monitor
BCAA	Benton County Clean Air Agency
CBSA	Core-Based Statistical Area
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CSA	Combined Statistical Area
CSN	Chemical Speciation Network
DV	Design Value
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FDMS	Filter Dynamic Measurement System
FEM	Federal Equivalent Method
FRM	Federal Reference Method
IMPROVE	Interagency Monitoring of Protected Visual Environments
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standard
NATTS	National Air Toxics Trends Station
NCore	National Core
NO	Nitrogen Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
NO _y	Total Reactive Oxides of Nitrogen
NWCAA	Northwest Clean Air Agency
O ₃	Ozone
ORCAA	Olympic Region Clean Air Agency
Pb	Lead
PM _{2.5}	Particulate matter ≤ 2.5 micrometers in diameter
PM ₁₀	Particulate matter ≤ 10 micrometer in diameter
PM _{10-2.5}	Particulate matter ≤10 microns and > 2.5 micrometers in diameter
ppb	parts per billion
ppm	parts per million
PAMS	Photochemical Assessment Monitoring Station
PQAO	Primary Quality Assurance Organization
PSCAA	Puget Sound Clean Air Agency
PSD	Prevention of Significant Deterioration
QA	Quality Assurance
QA	Quality Control
SLAMS	State or Local Air Monitoring Station
SO ₂	Sulfur Dioxide
SPMS	Special Purpose Monitoring Site
SRCAA	Spokane Region Clean Air Agency
SWCAA	Southwest Clean Air Agency
STN	Speciation Trends Network
TEOM	Tapered Element Oscillating Microbalance
TSP	Total Suspended Particulate
µg/m ³	micrograms per cubic meter
VOC	Volatile Organic Compound
YRCAA	Yakima Region Clean Air Agency

Executive Summary

Purpose

In accordance with the requirements described in 40 C.F.R. § 58.10, Ecology reviews its ambient air monitoring network each year to ensure that it collects adequate, representative, and useful air quality data on which to base policy decisions. This report summarizes the results of the 2018 review. The annual review process includes:

- Documenting Ecology's ambient air quality monitoring needs, goals and priorities;
- Identifying modifications to Ecology's ambient air monitoring network since the 2017 annual network plan; and
- Identifying proposed modifications to the network in the upcoming 18 months.

Network modifications

Recent modifications

PM₁₀ (81102)

PM₁₀ reporting at standard conditions under parameter code 81102 resumed at Seattle-Beacon Hill (530330080) on January 1, 2018.

PM_{2.5} (88101)

The previous Bellingham-Yew St site (530730015) was discontinued on December 31, 2017 and replaced with the Bellingham-Pacific St site (530730019) on January 1, 2018. Bellingham-Yew St was a second-story rooftop site with a ladder that did not meet safety requirements for staff access. The Northwest Clean Air Agency, which operated the site, attempted to resolve the safety concern with the building owner but was unsuccessful. Since the safety issue was not resolvable, the agency then secured a replacement site 0.68 mile west of the previous site.

The collocated FEM TEOM at Marysville-7th Ave (530611007; 88101 POC 4) was discontinued in March 2017. This collocation site was no longer needed due to the reduced number of FEM TEOMs in the Washington Network. Marysville will continue to run the primary FEM TEOM (88101 POC 3).

Nephelometer PM_{2.5} (88502)

Monitoring at the Lake Forest Park site (530330024) resumed on 12/12/2017. Puget Sound Clean Air Agency, the monitoring agency, lost the lease at the site in 2016. In December 2017, they reestablished the site on the same property approximately 800 feet east of the former rooftop location. The new monitoring site is integrated into a park bench at ground level with a public display showing PM_{2.5} concentrations. It retained the same AQS number, but the scale of representativeness was changed to middle scale.

A new correlated nephelometer monitoring site was established at Tukwila-Allentown (530330069) in July 2017. This site was chosen based on the results of a study conducted by the Puget Sound Clean Air Agency of highly impacted communities within its jurisdiction. Tukwila was identified as a priority community for monitoring due to its high scores for air pollution sources, socioeconomic barriers and poor health outcomes.

A correlated nephelometer was added to the Ellensburg-Ruby St site (530370002) in April 2018. This site will provide ongoing paired data from the FEM PM_{2.5} BAM-1020 and the nephelometer in order to support correlation development and evaluation.

Planned modifications

PM₁₀ (88502)

The temporary Special Purpose Monitoring Site (SPMS) for PM₁₀ at Burbank-Maple St (530710006) will be reclassified a permanent State and Local Air Monitoring Station (SLAMS) site effective January 1, 2018. This monitor will represent the Wallula Maintenance Area, which was previously represented by the Kennewick-Metaline monitor (530050002).

PM_{2.5} (88101)

A second BAM-1020 will be added to the Tacoma-S 36th St site (530530024) in 2018 to fulfill the unmet collocation requirement for method code 170.

Chemical Speciation Network (CSN)

Ecology proposes to relocate the Tacoma-L St (530530029) speciation monitor to the Tacoma-S 36th St (530530024) near-road monitoring site. Speciation monitoring has been conducted at Tacoma-L St since 2006. Relocating the monitor to Tacoma-S 36th would provide new information about particulate matter composition in the Tacoma near-road environment and provide a valuable comparison to the existing Seattle 10th & Weller (530330030) near-road speciation site.

With the passage of the Washington State 2018 supplemental operating budget (Engrossed Substitute Senate Bill 6032), Ecology was directed to use state funding to conduct a multiyear source apportionment study at the monitoring site closest to the Port of Tacoma. Ecology's plan to achieve the goals of this study is to conduct PM_{2.5} speciation monitoring at the Tacoma-Alexander Ave (530530031) monitoring site. The Puget Sound Clean Air Agency plans to conduct a parallel speciation study at the Seattle-Duwamish monitoring site (530330057) concurrently with the Tacoma study. Ecology plans to work with EPA Region 10 to establish these as supplemental speciation monitoring sites. The sites will operate on a 1/6 schedule from approximately August 6, 2018 – August 5, 2021.

Photochemical Assessment Monitoring Stations (PAMS)

Starting June 1, 2019, Washington will be required to collect and report Photochemical Assessment Monitoring Station (PAMS) measurements at the Seattle Beacon Hill NCore Site. Paragraph 5(a) of 40 C.F.R. § 58 Appendix D requires the addition of PAMS monitoring at NCore sites in a CBSA with population 1,000,000 or more, based on the latest available census figures. Ecology plans to use the existing Seattle-Beacon Hill monitoring site and trailer for

PAMS measurements. Ecology staff have been actively coordinating with EPA to plan for the PAMS implementation, and Ecology anticipates that all required parameters will be fully operational by June 1, 2019.

Special Purpose Monitoring Site changes

The temporary Quincy-3rd Ave NE Special Purpose Monitoring Site (SPMS) was established in August 2017 for a 1-year multi-pollutant study. It will be discontinued in quarter 4 of 2018.

Two temporary nephelometer PM_{2.5} monitoring SPMS sites were established in Okanogan and Pomeroy in order to evaluate the need for ongoing monitoring in these previously unmonitored areas. The Okanogan monitor will be relocated to White Salmon (530390006) during 2018. There are no plans to relocate the Pomeroy monitor at this time, but it may be relocated during 2018.

Introduction

This document summarizes Ecology's annual review of the Washington Ambient Air Monitoring Network (Washington Network) in accordance with 40 C.F.R. § 58.10.

EPA's ambient air quality surveillance regulations in 40 C.F.R. § 58 require states to establish air quality surveillance systems in their State Implementation Plans (SIPs). An air quality surveillance system consists of a network of State and Local Air Monitoring Stations (SLAMS). These stations measure ambient concentrations of those air pollutants for which 40 C.F.R. § 50 sets standards. SLAMS must meet the requirements of 40 C.F.R. § 58 contained in:

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

States determine if they conform to Appendices A and C in part through periodic system and performance audits. States conform to Appendices D and E by conducting an annual network review of their air quality surveillance systems. This review is documented in an annual network plan that meets the following requirements:

- The plan describes any network modifications planned in the upcoming 18 months. Network modifications are subject to approval of the EPA Regional Administrator.
- For each existing and proposed monitoring site, the plan includes the following information:
 - The AQS site number
 - Geographic information, including street address, geographic coordinates, and the represented MSA, CBSA, CSA or other area
 - The monitoring objective, special scale, sampling and analysis method, and operating schedule for each monitor
- The plan outlines the state's approach to implementing Photochemical Assessment Monitoring Stations (PAMS) monitoring requirements where required at National Core (NCore) network sites by June 1, 2019.
- The plan must be made available for public inspection and comment for at least 30 days prior to submission to the EPA. The final plan includes and addresses comments received through the public notification process.

Background Information

Monitoring Objectives

The Washington Network was designed to meet the three monitoring objectives defined in 40 C.F.R. § 58 Appendix D:

1. **Provide air pollution data to the public in a timely manner.** Ecology provides timely air quality data to the public in a variety of ways, including:
 - Near-real-time data are available on Ecology’s monitoring website.
 - Ecology conducts public outreach and issues alerts and bulletins when air quality is compromised.
2. **Support compliance with National Ambient Air Quality Standards (NAAQS) and development of pollution control strategies.** Ambient air quality data are used to:
 - Determine compliance with the NAAQS
 - Determine the location of maximum pollutant concentrations
 - Track the progress of State Implementation Plans (SIPs)
 - Determine the effectiveness of air pollution control programs
 - Develop responsible and cost-effective emission control strategies
 - Assist with permitting work
3. **Support air pollution research.** Ecology and its partners use ambient air quality data to improve our understanding of air pollution and its consequences. Research applications of air quality include:
 - Improving air quality forecasting
 - Evaluating the effects of air pollution on public health
 - Informing dispersion models
 - Identifying air quality trends and emerging pollution issues
 - Analyzing pollution episodes

In order to meet these three objectives, 40 C.F.R. § 58 Appendix D calls for the design of SLAMS networks to include several different types of monitors. These general types are sites that:

1. Determine the highest pollutant concentrations expected in the area covered by the network.
2. Determine representative pollutant concentrations in areas of high population density.
3. Determine the impact of significant sources or source categories on pollutant concentrations in the ambient air.
4. Determine general background pollutant concentrations.

5. Determine the regional extent of pollutant transport between populated areas.
6. Determine the impacts on visibility or vegetation (welfare impacts) in more rural and remote areas.

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

1. **Microscale:** Area dimensions between several and 100 meters.
2. **Middle scale:** Areas between 100 and 500 meters, typically several city blocks.
3. **Neighborhood scale:** Areas between 0.5 and 4 kilometers with relatively uniform land use.
4. **Urban scale:** Areas with city-like dimensions between 4 and 50 kilometers. Urban and neighborhood scales can overlap considerably. Heterogeneous urban areas may not have a single representative site.
5. **Regional scale:** Areas from tens to hundreds of kilometers with relatively homogeneous geography and no large sources.
6. **National and global scales:** Scales representing the nation or globe as a whole.

Table 1 summarizes the appropriate spatial scales for each criteria pollutant and applicable site types.

Table 1. Summary of applicable spatial scales for criteria pollutants and monitoring objectives

Scale	SO ₂	CO	O ₃	NO ₂	Pb	PM ₁₀	PM _{2.5}	Site Types
Micro	✓	✓		✓	✓		✓	Highest concentration; source impact
Middle	✓	✓		✓	✓	✓	✓	Highest concentration; source impact
Neighborhood	✓	✓	✓	✓	✓	✓	✓	Highest concentration; population; source impact; general/background
Urban	✓		✓	✓			✓	Highest concentration; population; general/background; regional transport; welfare-related impacts
Regional	✓		✓				✓	General/background; regional transport; welfare-related impacts

Other ambient monitoring data needs

In addition to its network of criteria pollutant monitoring sites, Ecology also uses nephelometers throughout Washington to estimate PM_{2.5} concentrations and inform the public of air quality conditions in communities where criteria pollutant monitoring is not required. Typically, nephelometer monitoring sites use site-specific PM_{2.5} correlations developed from collocated Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitor data. Lower concentration sites may use generalized regional correlations developed at sites with similar geographic and source characteristics. These sites are operated in accordance with 40 C.F.R. § 58 Appendix A requirements for quality assurance and quality control. At nephelometer sites where PM_{2.5} concentrations are consistently measured at or greater than 80 percent of the NAAQS, Ecology transitions to FEM monitoring.

Network Evaluation

Ecology uses a variety of tools to evaluate how well its monitoring network is meeting these goals and objectives. These tools include:

- EPA minimum monitoring requirements in 40 C.F.R. § 58 Appendix D
- Results of Ecology's most recent 5-year Ambient Air Quality Monitoring Network Assessment
- Analyses of historic monitoring data
- Census data on population density and demographics
- Dispersion and air quality forecast models
- Planning requirements, including SIPs and maintenance plans
- Jurisdictional boundaries
- Results of special monitoring studies

The suitability of individual monitoring sites is evaluated according to the probe and monitoring path siting criteria described in 40 C.F.R. § 58 Appendix E.

Washington Core-Based Statistical Areas

The minimum monitoring requirements listed in 40 C.F.R. § 58 Appendix D are based on the core-based statistical areas (CBSAs) defined by the U.S. Office of Management and Budget. Washington's CBSAs are shown in the map in Figure 1 (U.S. Census Bureau, 2013). Population estimates throughout this document are based on the latest available census figures in these CBSAs (2017 Annual Estimates of the Resident Population, U.S. Census Bureau, 2017). The populations of CBSAs in Washington over 50,000 people are listed in Table 2.



Figure 1. Washington's Core-Based Statistical Areas (CBSAs), U.S. Census Bureau 2013

Table 2. Washington's CBSA populations over 50,000 (U.S. Census Bureau)

Core-Based Statistical Area	2017 Estimated Population
Seattle-Tacoma-Bellevue, WA	3,867,046
Portland-Vancouver-Hillsboro, OR-WA	2,453,168
Spokane-Spokane Valley, WA	564,236
Kennewick-Richland, WA	290,296
Olympia-Tumwater, WA	280,588
Bremerton-Silverdale, WA	266,414
Yakima, WA	250,193
Bellingham, WA	221,404
Mount Vernon-Anacortes, WA	125,619
Wenatchee, WA	118,478
Longview, WA	106,910
Moses Lake, WA	95,158
Oak Harbor, WA	83,159
Centralia, WA	78,200
Port Angeles, WA	75,474
Aberdeen, WA	72,697
Walla Walla, WA	64,614
Shelton, WA	63,710
Lewiston, ID-WA	62,920

Washington shares the Portland-Vancouver-Hillsboro CBSA with the state of Oregon. The minimum monitoring requirements for PM₁₀, PM_{2.5} and ozone in this CBSA are met through a combination of monitors operated by Ecology and the Oregon Department of Environmental Quality (DEQ). However, Ecology and Oregon DEQ currently do not have an interagency agreement to this effect. Ecology plans to consult with Oregon DEQ in 2018 and coordinate to develop a Memorandum of Understanding documenting joint responsibility for maintaining minimum monitoring requirements.

Maintenance Areas

Washington has ten maintenance areas for criteria pollutants. Maintenance areas demonstrate continued attainment of the NAAQS through a variety of ways. Some demonstrate NAAQS attainment through monitoring and some through EPA-approved alternate methods. These methods are summarized in Table 3.

Table 3. Washington PM₁₀ maintenance areas and methods of demonstrating NAAQS attainment

Maintenance Area (Pollutant)	End of Maintenance Period	NAAQS Attainment Method
Seattle (PM ₁₀)	5/14/2021	Estimated PM ₁₀ from Seattle-Duwamish PM _{2.5} (530330057)

Maintenance Area (Pollutant)	End of Maintenance Period	NAAQS Attainment Method
Kent (PM ₁₀)	5/14/2021	Estimated PM ₁₀ from Kent-Central & James PM _{2.5} (530332004)
Tacoma (PM ₁₀)	5/14/2021	Estimated PM ₁₀ from Tacoma-Alexander nephelometer PM _{2.5} (530530031)
Thurston County (PM ₁₀)	12/4/2020	Estimated PM ₁₀ from Lacey-College St nephelometer PM _{2.5} (530670013)
Wallula (PM ₁₀)	9/26/2025	Kennewick-Metaline PM ₁₀ monitor (530050002) until 2017; Burbank-Maple St PM ₁₀ monitor (530710006) as of January 1, 2018
Spokane (PM ₁₀)	8/30/2025	Spokane-Augusta PM ₁₀ monitor (530630021)
Yakima (PM ₁₀)	3/10/2025	Yakima-4 th Ave S PM ₁₀ monitor (530770009)
Tacoma (PM _{2.5})	3/12/2035	Tacoma-L St PM _{2.5} monitor (530530029)
Yakima (CO)	12/31/2022	Modeled CO vehicle emissions
Spokane (CO)	8/30/2025	Modeled onroad, nonroad and residential wood combustion CO emissions

Washington has several maintenance areas that fall within the jurisdiction of local air agencies. In accordance with the maintenance plans, the local air agencies submitted design values to Ecology for the maintenance areas in their jurisdiction. These design values and their underlying calculations can be found in the document “Verification of Continued Attainment in Limited Maintenance Areas (2018)” submitted concurrently with this plan.

Monitoring Network Design

On January 1, 2018, Ecology and its partners operated 74 monitoring sites that were part of the Washington Network. Those sites are shown on the map in Figure 2, and the parameters monitored are summarized in Table 4. Detailed site information is provided in Appendix D. All monitoring sites described in this plan are operated under the Ecology Primary Quality Assurance Organization (PQAO). Other monitoring sites, such as IMPROVE sites, are operated in Washington as part of separate PQAOs, but those networks are outside the scope of this document.

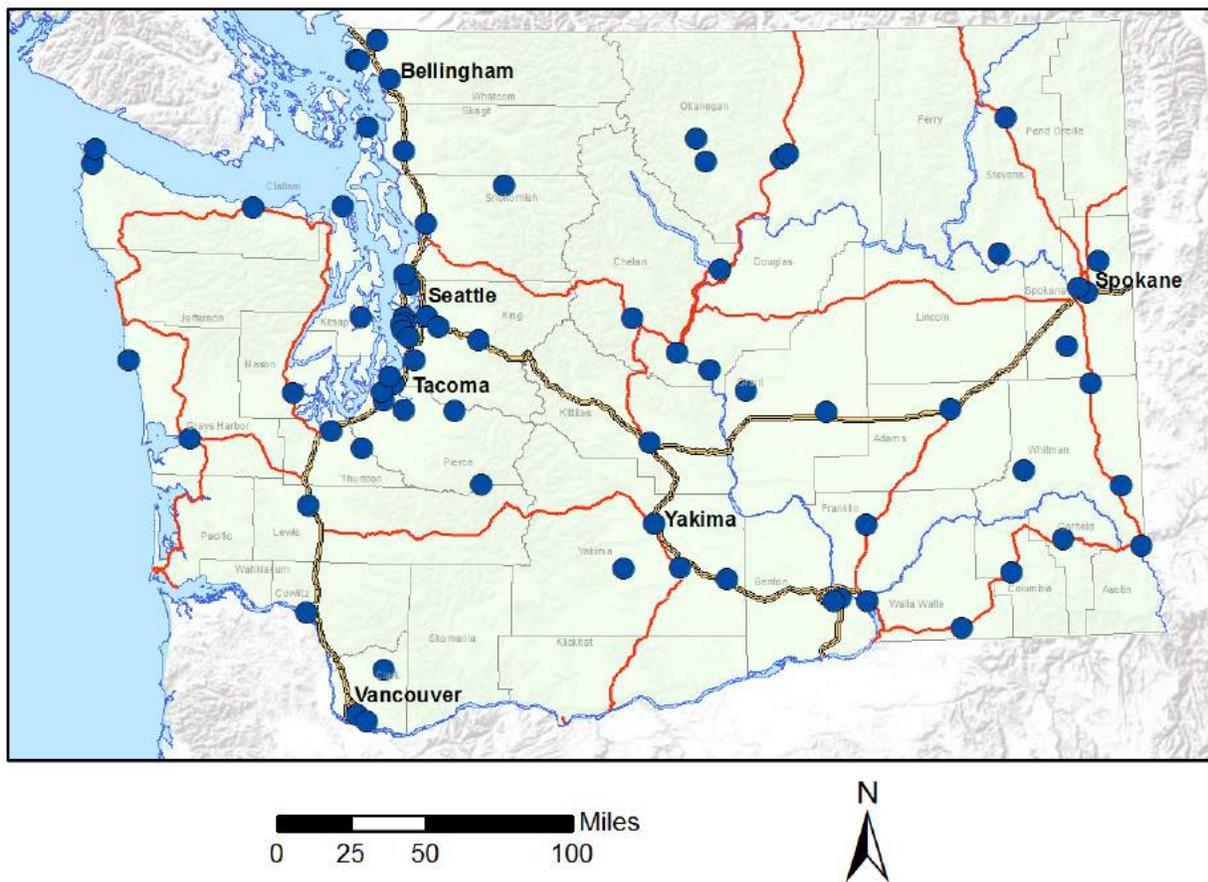


Figure 2. Map of all Washington Network monitoring sites.

Table 4. Summary of parameters monitored at Washington Network monitoring sites

Site Name	AQS ID	CO	NO ₂ / NO _y	O ₃	SO ₂	PM _{2.5} (FRM/FEM)	PM _{2.5} (Non- FRM/FEM)	PM ₁₀	Meteorological	Other
Aberdeen-Division St	530272002						✓			
Anacortes-202 O Ave	530570011			✓	✓	✓				
Bellevue-SE 12th St	530330031						✓			
Bellingham-Pacific St	530730019					✓				

Monitoring Network Design

Site Name	AQS ID	CO	NO ₂ / NO _y	O ₃	SO ₂	PM _{2.5} (FRM/FEM)	PM _{2.5} (Non- FRM/FEM)	PM ₁₀	Meteorological	Other
Bremerton-Spruce Ave	530350007					✓				
Burbank-Maple St	530710006							✓	✓	
Cheeka Peak	530090013	✓	✓	✓	✓		✓		✓	
Chehalis-Market Blvd	530410004						✓			
Chelan-Woodin Ave	530070007						✓			
Cheney-Turnbull	530630001			✓						
Clarkston-13th St	530030004						✓			
Colville-E 1st St	530650005						✓	✓	✓	
Custer-Loomis	530730005			✓						
Darrington-Fir St	530610020					✓				
Dayton-W Main St	530130002						✓			
Ellensburg-Ruby St	530370002					✓	✓			
Enumclaw-Mud Mtn.	530330023			✓					✓	
Ferndale-Kickerville Road	530730013				✓					
Ferndale-Mountain View Rd	530730017				✓				✓	
Issaquah-Lake Sammamish	530330010			✓						
Kennewick-Metaline	530050002						✓	✓	✓	
Kennewick-S Clodfelter Rd	530050003			✓						
Kent-Central & James	530332004					✓				
Lacey-College St	530670013						✓			
LaCrosse-Hill St	530750005						✓			
Lake Forest Park	530330024						✓			
Leavenworth-Evans St	530070010						✓			
Longview-30th Ave	530150015						✓			
Lynnwood-212th	530610005					✓				
Malaga-Malaga Hwy	530070012				✓				✓	
Marysville-7th Ave	530611007					✓				
Mesa-Pepiot Way	530210002						✓			
Moses Lake-Balsam St	530251002						✓			
Mt Rainier-Jackson Visitors Ctr	530530012			✓						
Mt Vernon-S Second St	530570015						✓			
Neah Bay-Makah Tribe	530090015						✓			
North Bend-North Bend Way	530330017			✓			✓		✓	
Okanogan (Temporary)	530470004						✓			
Omak-Colville Tribe	530470013					✓			✓	
Pomeroy (Temporary)	530230001						✓			
Port Angeles- E 5th St	530090017						✓			
Port Townsend-San Juan Ave	530310003						✓			
Pullman-Dexter SE	530750003						✓			
Puyallup-128th St	530531018						✓			
Quincy-3rd Ave NE (Temporary)	530251003		✓				✓		✓	Black carbon
Ritzville-Alder St	530010003						✓			
Rosalia-Josephine St	530750006						✓			
Seattle-10th & Weller	530330030	✓	✓			✓			✓	CSN
Seattle-Beacon Hill	530330080	✓	✓	✓	✓	✓		✓	✓	CSN, NATTS, PAMS planned
Seattle-Duwamish	530330057					✓				
Seattle-South Park	530331011						✓			
Shelton-W Franklin	530450007						✓			
Spokane-Augusta Ave	530630021					✓		✓	✓	
Spokane-Greenbluff	530630046			✓						
Spokane-Monroe St	530630047						✓			
Sunnyside-S 16th St	530770005						✓			
Tacoma- L Street	530530029					✓				CSN
Tacoma-Alexander Ave	530530031						✓			

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Site Name	AQS ID	CO	NO ₂ / NO _y	O ₃	SO ₂	PM _{2.5} (FRM/FEM)	PM _{2.5} (Non- FRM/FEM)	PM ₁₀	Meteorological	Other
Tacoma-S 36th St	530530024		✓			✓			✓	
Tacoma-Tower Dr	530531016								✓	
Taholah-Quinault Tribe	530270011						✓			
Toppenish-Yakama Tribe	530770015					✓			✓	
Tukwila Allentown	530330069						✓			
Twisp-Glover St	530470009						✓			
Vancouver NE 84th Ave	530110020					✓				
Vancouver-Blairmont Dr	530110011			✓					✓	
Walla Walla-12th St	530710005						✓			
Wellpinit-Spokane Tribe	530650002						✓			
Wenatchee-Fifth St	530070011						✓		✓	
White Swan-Yakama Tribe	530770016						✓		✓	
Winthrop-Chewuch Rd	530470010						✓			
Yacolt-Yacolt Rd	530110022						✓			
Yakima-4th Ave	530770009					✓		✓		CSN
Yelm-Northern Pacific	530670005			✓						

Carbon monoxide (CO, 42101)

There are three CO monitoring sites in the Washington Network. All Washington Network CO monitoring sites collect data under method code 593 (Teledyne API 300 EU). For detailed site and monitor information, see Appendix D.

Table 5. Washington Network CO monitoring sites

AQS ID	Site Name	Established	Type	Scale
530090013	Cheeka Peak	05/2006	SLAMS, NCore	Regional
530330030	Seattle-10 th & Weller	04/2014	SLAMS, Near-road	Microscale
530330080	Seattle-Beacon Hill	03/2007	SLAMS, NCore	Urban

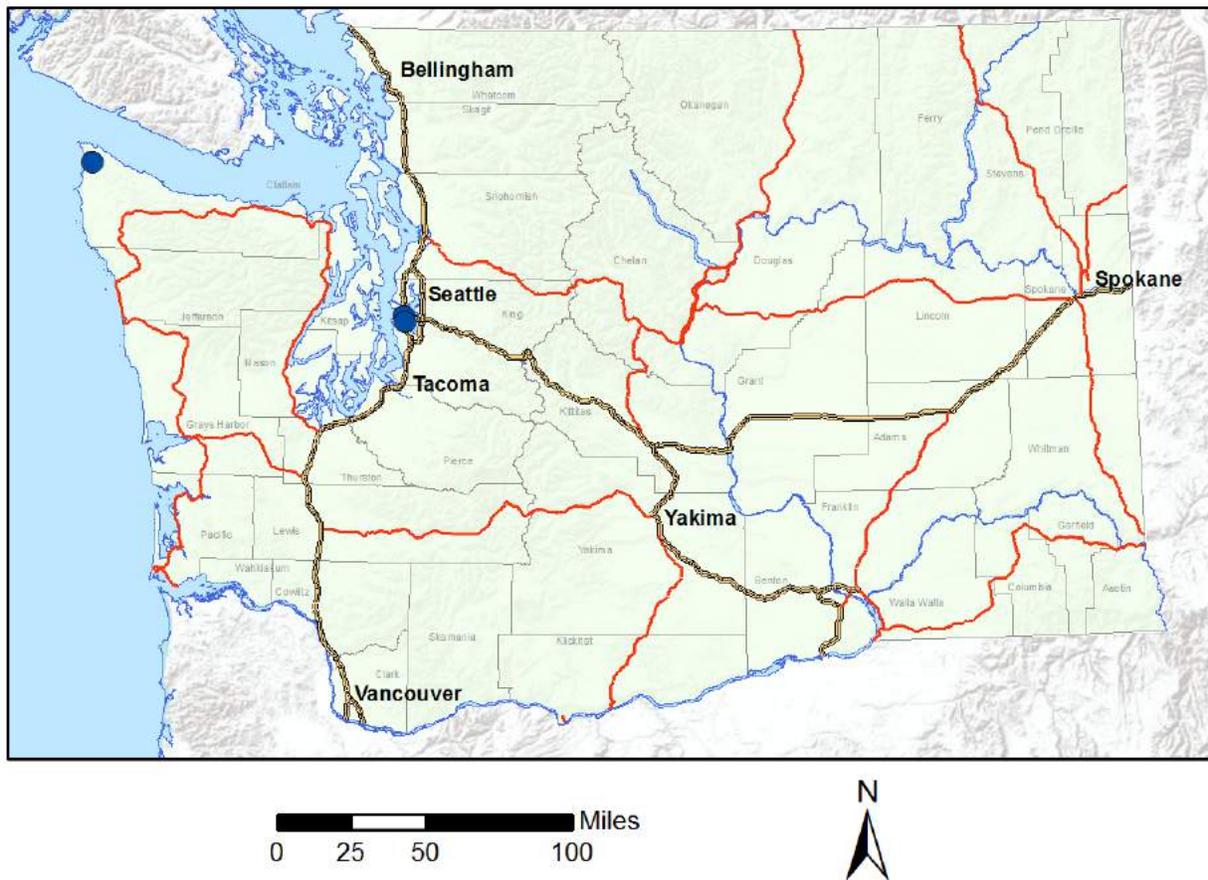


Figure 3. Map of Washington Network CO monitoring sites

Minimum monitoring requirements

Ecology is required to operate a CO monitor collocated with one required near-road NO₂ monitor in CBSAs with a population of 1,000,000 or more. In the Seattle-Tacoma-Bellevue MSA, this requirement is met at the Seattle-10th & Weller near-road monitoring site (530330030).

Recommended/proposed modifications: None.

Nitrogen dioxide (NO₂, 42602/42612)

There are four NO₂ (42602) monitoring sites in the Washington Network and two sites that monitor trace NO_y-NO (42612). Seattle-Beacon Hill monitors both area-wide NO₂ and trace NO_y-NO. For detailed site and monitor information, see Appendix D.

Table 6. Washington Network NO₂ and Trace NO_y-NO monitoring sites

AQS ID	Site Name	NO ₂	Trace NO _y -NO	Established	Type	Scale	Method
530090013	Cheeka Peak		✓	01/2011	SLAMS, NCore	Regional	Teledyne API 200 EU (699)
530251003	Quincy-3 rd Ave NE (Temporary)	✓		06/2018	SPMS	Neighborhood	Teledyne API 200 EU (599)
530330030	Seattle-10 th & Weller	✓		04/2014	SLAMS, Near-road	Microscale	Teledyne API 200 EU (599)
530330080	Seattle-Beacon Hill	✓	✓	08/2013	SLAMS, NCore	Urban	NO ₂ : Teledyne API 200 EU (599); Trace NO _y -NO: Thermo 42C (674)
530530024	Tacoma-S 36 th	✓		01/2016	SLAMS, Near-road	Microscale	Teledyne API 200 EU (599)

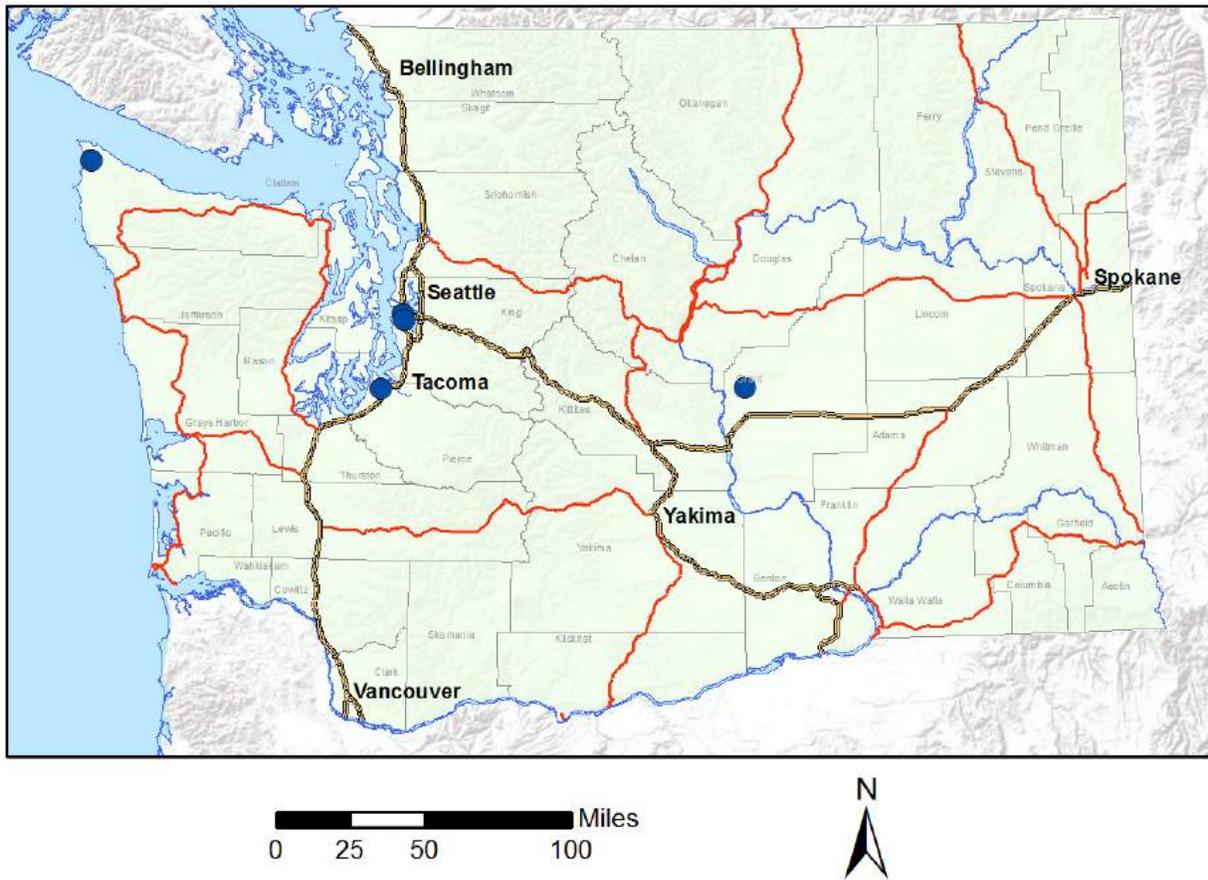


Figure 4. Map of Washington Network NO₂ and Trace NO_y-NO monitoring sites

Minimum monitoring requirements

Ecology is required to monitor both near-road and area-wide NO₂ in each CBSA with a population of 1,000,000 or greater. In CBSAs with a population of 2,500,000 or more, two near-road NO₂ monitoring sites are required. Ecology fulfills the near-road monitoring requirements at the Seattle-10th & Weller (530330030) and Tacoma-S 36th St (530530024) near-road sites. Seattle-Beacon Hill (530330080) fulfills the requirement for area-wide NO₂ monitoring.

Recommended/proposed modifications: The temporary Quincy-3rd Ave NE SPMS was established in August 2017 for a 1-year multi-pollutant study. It will be discontinued in quarter 4 of 2018.

Ozone (O₃, 44201)

There are 13 ozone monitoring sites in the Washington Network. All Washington Network ozone sites collect data under method code 087 (UV Absorbance) using Teledyne API 400 analyzers. For detailed site and monitor information, see Appendix D.

Table 7. Washington Network ozone monitoring sites

AQS ID	Site Name	Established	Type	Scale
530570011	Anacortes-202 O Ave	05/2012	SLAMS	Neighborhood
530090013	Cheeka Peak	05/2006	SLAMS, NCore	Regional
530630001	Cheney-Turnbull	05/1999	SLAMS	Urban
530730005	Custer-Loomis	04/1989	SLAMS	Regional
530330023	Enumclaw-Mud Mtn	07/1998	SLAMS	Urban
530330010	Issaquah-Lake Sammamish	12/1975	SLAMS	Urban
530050003	Kennewick-S Clodfelter Rd	06/2015	SLAMS	Urban
530530012	Mt Rainier-Jackson Visitors Ctr	07/1998	SLAMS	Regional
530330017	North Bend-North Bend Way	06/1998	SLAMS	Neighborhood
530330080	Seattle-Beacon Hill	03/2007	SLAMS, NCore	Urban
530630046	Spokane-Greenbluff	04/1990	SLAMS	Urban
530110011	Vancouver-Blairmont	05/1988	SLAMS	Urban
530670005	Yelm-Northern Pacific	05/2006	SLAMS	Urban

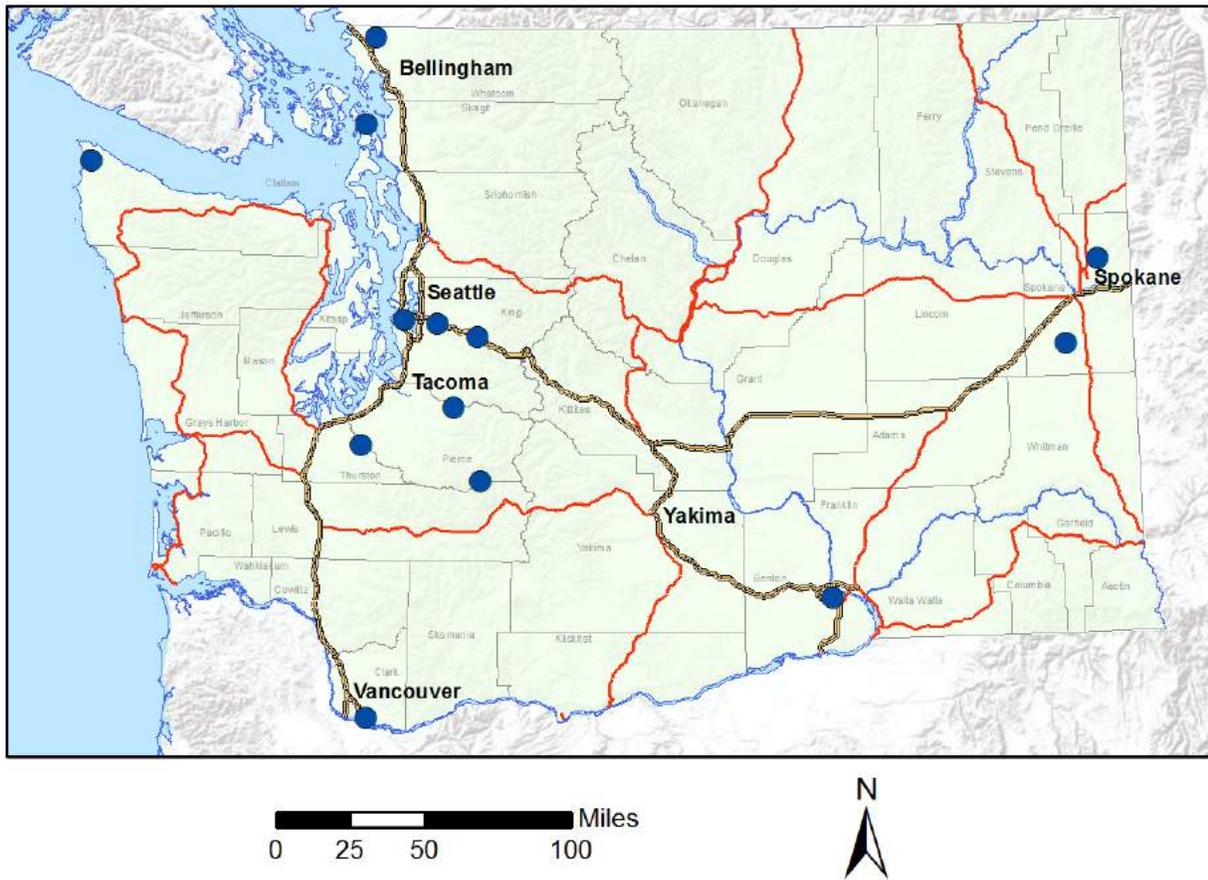


Figure 5. Map of Washington Network ozone monitoring sites

Minimum monitoring requirements

The Washington Network meets the minimum monitoring requirements for ozone defined in 40 C.F.R. § 58 Appendix D. In each CBSA, the number of existing ozone monitors exceeds the number of required monitors, as summarized in Table 8. The design values listed are the maximum valid design value of all sites within the CBSA. For a full list of design values at all ozone sites in the Washington Network, see Appendix A.

Table 8. EPA minimum monitoring requirements for ozone

CBSA	2017 Population Estimate	2017 Design Value (ppm)	Number of Required Monitors	Number of Existing Monitors
Seattle-Tacoma-Bellevue, WA	3,867,046	0.076	2	5
Portland-Vancouver-Hillsboro, OR-WA	2,453,168	0.072	2	6
Spokane-Spokane Valley, WA	564,236	0.062	2	2
Kennewick-Richland, WA	290,296	0.072	1	1

CBSA	2017 Population Estimate	2017 Design Value (ppm)	Number of Required Monitors	Number of Existing Monitors
Olympia-Tumwater, WA	280,588	0.061	1	1
Bellingham, WA	221,404	0.047	0	1
Mount Vernon-Anacortes, WA	125,619	0.046	0	1
Port Angeles, WA	75,474	0.052	0	1

Washington shares the Portland-Vancouver-Hillsboro CBSA with the state of Oregon. Ecology plans to consult with Oregon DEQ in 2018 and coordinate to develop a Memorandum of Understanding documenting joint responsibility for maintaining minimum monitoring requirements for ozone within the Portland-Vancouver-Hillsboro, OR-WA CBSA.

Recommended/proposed modifications: None.

Sulfur dioxide (SO₂, 42401)

There are six SO₂ monitoring sites in the Washington Network. For detailed site and monitor information, see Appendix D.

Table 9. Washington Network SO₂ monitoring sites

AQS ID	Site Name	Established	Type	Scale	Method
530570011	Anacortes-202 O Ave	01/2013	SLAMS	Neighborhood	TAPI 100 EU (600)
530090013	Cheeka Peak	05/2006	SLAMS, NCore	Regional	TAPI 100 EU (600)
530730013	Ferndale-Kickerville Rd	01/2017	SLAMS	Microscale	TAPI 100 (077)
530730017	Ferndale-Mountain View Rd	01/2017	SLAMS	Microscale	TAPI 100 (077)
530070012	Malaga-Malaga Hwy	01/2017	SLAMS	Microscale	TAPI 100 (077)
530330080	Seattle-Beacon Hill	03/2007	SLAMS, NCore	Urban	TAPI 100 EU (600)

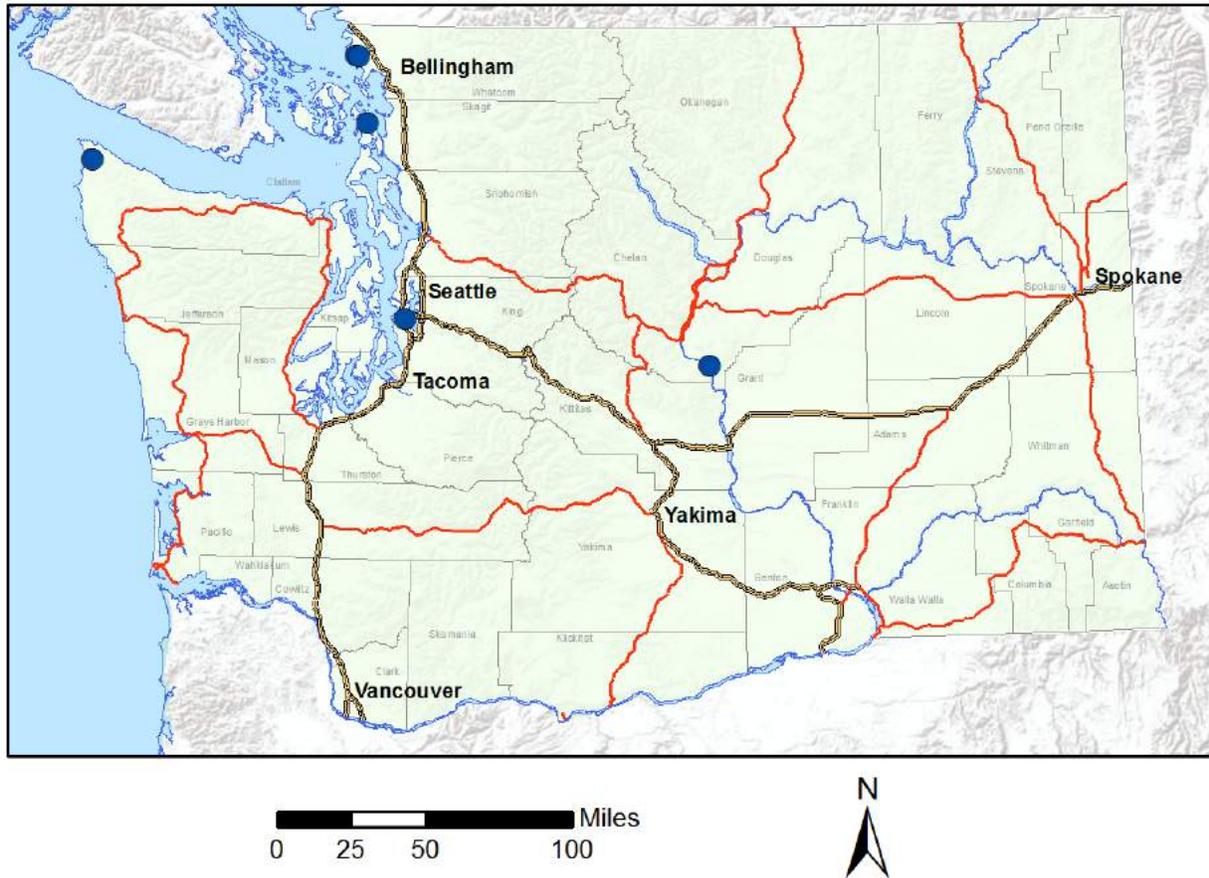


Figure 6. Map of Washington Network SO₂ monitoring sites

Minimum monitoring requirements

The Seattle-Beacon Hill NCore site (530330080) is used to satisfy the minimum monitoring requirement for a CBSA with minimally required monitors based on the Population Weighted Emissions Index.

Recommended/proposed modifications: None.

Particulate matter 10 (PM₁₀, 81102)

There are five PM₁₀ monitoring sites in the Washington Network. PM₁₀ data collected at the Seattle-Beacon Hill NCore station was previously only submitted in local conditions under parameter code 85101. Reporting at standard conditions under parameter code 81102 resumed on January 1, 2018. For detailed site and monitor information, see Appendix D.

Table 10. Washington Network PM₁₀ monitoring sites

AQS ID	Site Name	Established	Type	Scale	Method
530710006	Burbank-Maple St	08/2017	SPMS (2017); SLAMS (2018)	Neighborhood	TEOM-Gravimetric (079)
530650005	Colville-E 1 st St	10/2015	SLAMS	Neighborhood	TEOM-Gravimetric (079)
530050002	Kennewick-Metaline	10/1994	SLAMS	Neighborhood	TEOM-Gravimetric (079)
530330080	Seattle-Beacon Hill	03/2003	SLAMS, NCore	Urban	R&P 2025 (127)
530630021	Spokane-Augusta Ave	03/2009	SLAMS	Neighborhood	TEOM-Gravimetric (079)
530770009	Yakima-4 th Ave S	04/2000	SLAMS	Neighborhood	TEOM-Gravimetric (079)

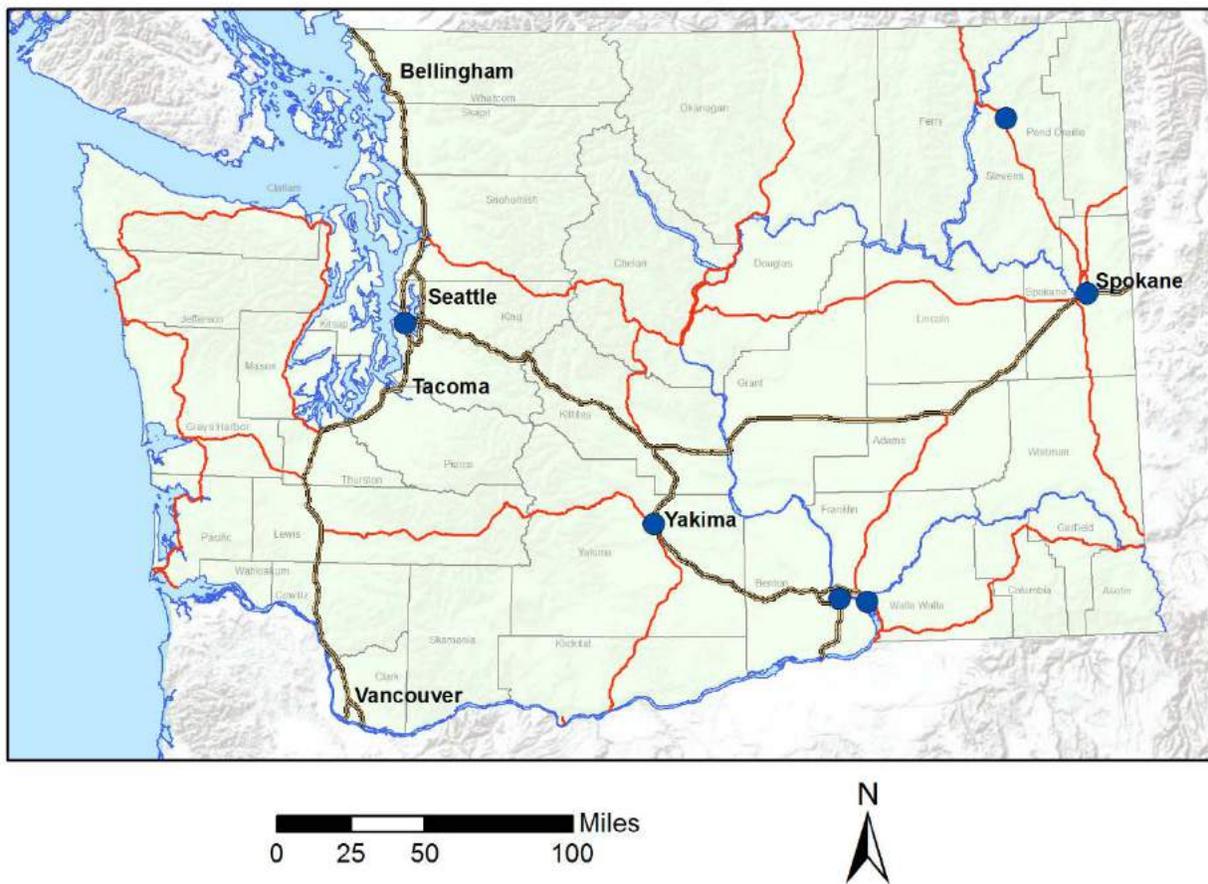


Figure 7. Map of Washington Network PM₁₀ monitoring sites

The Washington Network is currently not meeting the minimum monitoring requirements defined in 40 C.F.R. § 58 in five metropolitan areas, as summarized in Table 11.

Table 11. EPA minimum monitoring requirements for PM₁₀

Metropolitan/Micropolitan Statistical Area	2017 Population Estimate	Annual Average Expected Exceedances (2015-2017)	Number of Required Monitors	Number of Existing Monitors
Seattle-Tacoma-Bellevue, WA	3,867,046	0	2	1
Portland-Vancouver-Hillsboro, OR-WA	2,453,168	0	2	1
Spokane-Spokane Valley, WA	564,236	1.3	4	2
Kennewick-Richland, WA	290,296	1.7	3	1
Yakima, WA	250,193	1.6	3	1

In two of these metropolitan areas (Kennewick-Richland and Yakima), the days on which PM₁₀ exceeded 120% of the NAAQS were days influenced by exceptional events (EEs), as summarized in Table 12. These events were flagged by Ecology, and EPA concurred with Ecology's exceptional event demonstration on the 8/14/2015 event. An exceptional event demonstration is currently in process for the 9/5-9/7/2017 wildfire event at Kennewick and Yakima.

Table 12. Summary of days 20% above PM₁₀ NAAQS and flagging status

Date	Exceptional Event Type	Spokane-Spokane Valley	Kennewick-Richland	Yakima	Flagging status
2/17/2015	N/A	✓			Not an EE
8/14/2015	High winds		✓		Ecology flagged (RJ); EPA concurred with EE demonstration
10/30/2015	High winds		✓		Ecology flagged (RJ)
11/17/2015	High winds		✓		Ecology flagged (RJ)
9/5/2017	Wildfire smoke	✓ (Not included in EE demo)	✓	✓	Ecology flagged (IT); EE demonstration in process for Kennewick and Yakima
9/6/2017	Wildfire smoke	✓ (Not included in EE demo)	✓	✓	Ecology flagged (IT); EE demonstration in process for Kennewick and Yakima
9/7/2017	Wildfire smoke	✓ (Not included in EE demo)	✓	✓	Ecology flagged (IT); EE demonstration in process for Kennewick and Yakima

Given that concentrations on these days were influenced by exceptional events, Ecology is reluctant to greatly expand the PM₁₀ monitoring network based on data that are not typical of PM₁₀ conditions in these areas. Ecology plans to consult with EPA Region 10 and pursue the option of waivers for the minimum PM₁₀ monitoring requirements that are currently unmet.

In the Spokane-Spokane Valley MSA, aside from the exceptional event days, PM₁₀ concentrations were recorded above 120% of the PM₁₀ NAAQS on a single day in the small community of Colville. Ecology plans to consult with EPA Region 10 to determine if additional PM₁₀ monitors are warranted. The Spokane Regional Clean Air Agency (SRCAA) plans to establish 1-2 temporary PM₁₀ monitoring sites in the city of Spokane in the next year to evaluate alternative monitoring locations in the event that the Spokane-Augusta monitoring site (530630021) needs to be relocated due to an upcoming construction project. The results of this study will provide information on the spatial gradient of PM₁₀ concentrations in Spokane and the utility of additional monitoring sites within the MSA. Ecology plans to pursue waivers for the unmet minimum monitoring requirements if Ecology, EPA and SRCAA determine that two monitoring sites are adequate to characterize PM₁₀ trends and spatial patterns in the Spokane-Spokane Valley MSA.

Washington shares the Portland-Vancouver-Hillsboro CBSA with the state of Oregon. Ecology plans to consult with Oregon DEQ in 2018 and coordinate to develop a Memorandum of Understanding documenting joint responsibility for maintaining minimum monitoring requirements for PM₁₀ within the Portland-Vancouver-Hillsboro, OR-WA CBSA.

Recommended/proposed modifications: The temporary Special Purpose Monitoring Site (SPMS) for PM₁₀ at Burbank-Maple St (530710006) will be reclassified a permanent State and Local Air Monitoring Station (SLAMS) site effective January 1, 2018. This monitor will represent the Wallula Maintenance Area, which was previously represented by the Kennewick-Metaline monitor (530050002).

PM₁₀ reporting at standard conditions under parameter code 81102 resumed at Seattle-Beacon Hill (530330080) on January 1, 2018.

Particulate matter 2.5 (PM_{2.5}, 88101/88502)

FRM/FEM PM_{2.5} (88101)

There are 18 sites in the Washington Network that monitor PM_{2.5} with Class I or Class III Federal Equivalent Method (FEM) monitors. Sites operated with EPA funding through the Section 103 grant for PM_{2.5} are noted in the table below. For detailed site and monitor information, see Appendix D.

Table 13. Washington Network PM_{2.5} monitoring sites

AQS ID	Site Name	Est.	Type	Scale	Method	PM _{2.5} Grant Funded
530570011	Anacortes-202 O Ave	10/2011	SLAMS	Neighborhood	Met One BAM-1020 (170)	
530730019	Bellingham-Pacific St	01/2018	SLAMS	Neighborhood	Met One BAM-1020 (170)	✓
530350007	Bremerton-Spruce Ave	05/2012	SLAMS	Neighborhood	8500 TEOM (181)	
530610020	Darrington-Fir St	12/2010	SLAMS	Neighborhood	8500 TEOM (181)	✓
530370002	Ellensburg-Ruby St	10/2007	SLAMS	Neighborhood	Met One BAM-1020 (170)	
530332004	Kent-Central & James	12/2010	SLAMS	Neighborhood	8500 TEOM (181)	✓
530610005	Lynnwood-212th	01/2011	SLAMS	Neighborhood	8500 TEOM (181)	✓
530611007	Marysville-7th Ave	02/2010	SLAMS	Neighborhood	1405F TEOM (581)	✓
530470013	Omak-Colville Tribe	10/2010	Tribal	Neighborhood	Met One BAM-1020 (170)	
530330030	Seattle-10th & Weller	06/2014	SLAMS, Near-road	Microscale	Met One BAM-1020 (170)	✓
530330080	Seattle-Beacon Hill	02/2010	SLAMS, NCore	Urban	8500 TEOM (Primary) (181); R&P 2025 (Collocated) (145)	✓
530330057	Seattle-Duwamish	12/2009	SLAMS	Neighborhood	1405F TEOM (581)	✓
530630021	Spokane-Augusta Ave	03/2013	SLAMS	Neighborhood	Met One BAM-1020 (170)	✓
530530029	Tacoma- L Street	01/2010	SLAMS	Neighborhood	R&P 2025 (Primary and Collocated) (145); 1405F TEOM (581)	✓
530530024	Tacoma-S 36th St	01/2016	SLAMS, Near-road	Microscale	Met One BAM-1020 (170)	
530770015	Toppenish-Yakama Tribe	08/2008	Tribal	Neighborhood	Met One BAM-1020 (170)	
530110020	Vancouver NE 84th Ave	12/2014	SLAMS	Neighborhood	Met One BAM-1020 (170)	✓
530770009	Yakima-4th Ave	05/2011	SLAMS	Neighborhood	Met One BAM-1020 (Primary) (170); R&P 2025 (Collocated) (145)	✓

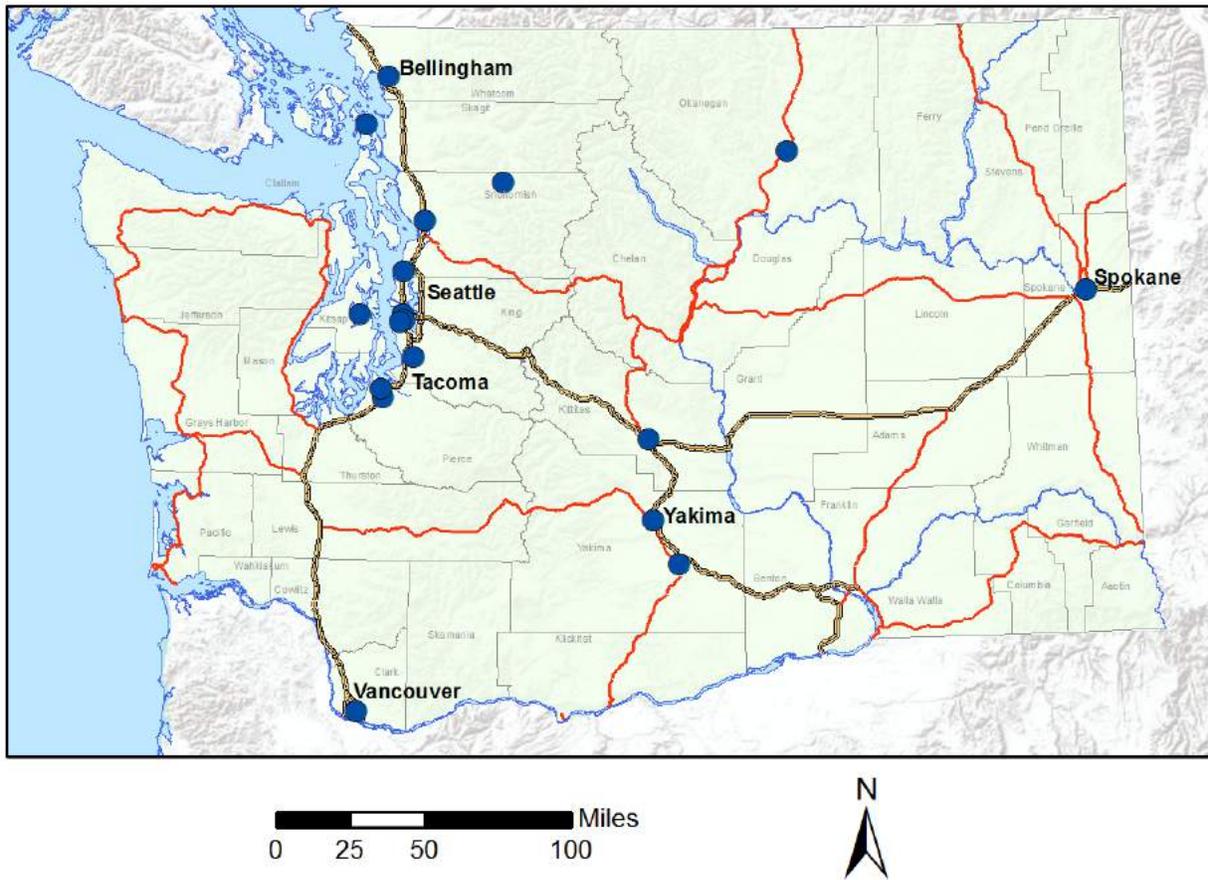


Figure 8. Map of Washington Network PM_{2.5} monitoring sites

Minimum monitoring requirements

The Washington Network meets the minimum monitoring requirements defined in 40 C.F.R. § 58. In each CBSA, the number of existing monitors exceeds the number of required monitors, as summarized in Table 16. The design values listed are the maximum valid design value of all sites within the CBSA. For a full list of design values at all Washington Network PM_{2.5} monitoring sites, see Appendix A.

Table 14. EPA minimum monitoring requirements for FRM/FEM PM_{2.5}

CBSA	2017 Population Estimate	2017 Design Value (µg/m ³)	Number of Required Monitors	Number of Existing Monitors
Seattle-Tacoma-Bellevue, WA	3,867,046	34	3	9
Portland-Vancouver-Hillsboro, OR-WA	2,453,168	28	2	4
Spokane-Spokane Valley, WA	564,236	NA	1	1
Bremerton-Silverdale, WA	266,414	16	0	1
Yakima, WA	250,193	38	1	2
Bellingham, WA	221,404	20	0	1
Mount Vernon-Anacortes, WA	125,619	13	0	1
Ellensburg, WA	46,205	NA	0	1

Washington shares the Portland-Vancouver-Hillsboro CBSA with the state of Oregon. Ecology plans to consult with Oregon DEQ in 2018 and coordinate to develop a Memorandum of Understanding documenting joint responsibility for maintaining minimum monitoring requirements for PM_{2.5} within the Portland-Vancouver-Hillsboro, OR-WA CBSA.

Collocation requirements

The monitoring sites listed in Table are used to fulfill the collocation requirements described in 40 C.F.R. § 58 Appendix A.

Table 15. PM_{2.5} collocation requirements

Method Code	# Primary Monitors	# Required Collocated Monitors	# Active Collocated Monitors	Site
118	1	1	1	Tacoma-L St (530530029)
170	10	2	1	Yakima-4 th Ave S (530770009)
181/581	7	1	1	Seattle-Beacon Hill (530330080)

A second BAM-1020 will be added to the Tacoma – S 36th St site (530530024) in 2018 to fulfill the unmet collocation requirement for method code 170. All other PM_{2.5} collocation requirements are currently met.

Recommended/proposed modifications: The previous Bellingham-Yew St site (530730015) was discontinued on December 31, 2017 and replaced with the Bellingham-Pacific St site (530730019) on January 1, 2018. Bellingham-Yew St was a second-story rooftop site with a ladder that did not meet safety requirements for staff access. The Northwest Clean Air Agency, which operated the site, attempted to resolve the safety concern with the building owner but was unsuccessful. Since the safety issue was not resolvable, the agency then secured a replacement site approximately 2/3 mile west of the previous site. For further information on the site relocation, see Appendix B.

A second BAM-1020 will be added to the Tacoma-S 36th St site (530530024) in 2018 to fulfill the unmet collocation requirement for method code 170.

The collocated FEM TEOM at Marysville-7th Ave (530611007; 88101 POC 4) was discontinued in March 2017. This collocation site was no longer needed due to the reduced number of FEM TEOMs in the Washington Network. Marysville will continue to run the primary FEM TEOM (88101 POC 3).

Nephelometer PM_{2.5} (88502)

Ecology and its partners operate 42 monitoring sites with correlated nephelometers used to report estimated PM_{2.5} concentrations and provide timely information on air quality conditions to the public. Sites operated with EPA funding through the Section 103 grant for PM_{2.5} are noted in Table 18.

Table 16. Washington Network nephelometer monitoring sites

AQS ID	Site Name	Est.	Type	Scale	Method	PM _{2.5} Grant Funded
530272002	Aberdeen-Division St	08/2002	SLAMS	Neighborhood	Radiance Research M903 (771)	✓
530330031	Bellevue-SE 12th St	12/2016	SLAMS	Neighborhood	Radiance Research M903 (771)	✓
530090013	Cheeka Peak	05/2006	SLAMS, NCore	Regional	Radiance Research M903 (771)	
530410004	Chehalis-Market Blvd	12/2009	SLAMS	Neighborhood	Radiance Research M903 (771)	
530070007	Chelan-Woodin Ave	12/2002	Non-EPA Federal	Neighborhood	Radiance Research M903 (771)	
530030004	Clarkston-13th St	03/2007	SLAMS	Neighborhood	Radiance Research M903 (771)	
530650005	Colville-E 1st St	10/2015	SLAMS	Neighborhood	Radiance Research M903 (771)	
530130002	Dayton-W Main St	02/2009	SLAMS	Neighborhood	Radiance Research M903 (771)	✓
530050002	Kennewick-Metaline	08/2004	SLAMS	Neighborhood	Radiance Research M903 (771)	✓
530670013	Lacey-College St	09/1990	SLAMS	Neighborhood	Radiance Research M903 (771)	
530750005	LaCrosse-Hill St	10/2002	SLAMS	Neighborhood	Radiance Research M903 (771)	✓
530330024	Lake Forest Park	10/2003	SLAMS	Neighborhood	Ecotech M9003 (812)	✓
530070010	Leavenworth-Evans St	07/2005	Non-EPA Federal	Neighborhood	Radiance Research M903 (771)	
530150015	Longview-30th Ave	03/2003	SLAMS	Neighborhood	Radiance Research M903 (771)	✓

AQS ID	Site Name	Est.	Type	Scale	Method	PM _{2.5} Grant Funded
530210002	Mesa-Pepiot Way	01/2003	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530251002	Moses Lake-Balsam St	01/2004	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530570015	Mt Vernon-S Second St	07/2005	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530090015	Neah Bay-Makah Tribe	02/2010	Tribal	Neighborhood	Radianc Research M903 (771)	
530330017	North Bend-North Bend Way	03/2003	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530470004	Okanogan (Temporary)	06/2017	SPMS	Neighborhood	Radianc Research M903 (771)	
530230001	Pomeroy (Temporary)	05/2017	SPMS	Neighborhood	Radianc Research M903 (771)	
530090017	Port Angeles- E 5th St	04/2015	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530310003	Port Townsend-San Juan Ave	10/2002	SLAMS	Neighborhood	Radianc Research M903 (771)	
530750003	Pullman-Dexter SE	10/2002	SLAMS	Neighborhood	Ecotech M9003 (812)	✓
530531018	Puyallup-128th St	10/2003	SLAMS	Neighborhood	Ecotech M9003 (812)	✓
530251003	Quincy-3rd Ave NE	06/2017	SPMS	Neighborhood	Radianc Research M903 (771)	
530010003	Ritzville-Alder St	03/2001	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530750006	Rosalia-Josephine St	10/2002	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530331011	Seattle-South Park	10/2003	SLAMS	Microscale	Ecotech M9003 (812)	
530450007	Shelton-W Franklin	04/2011	SLAMS	Neighborhood	Radianc Research M903 (771)	
530630047	Spokane-Monroe St	05/2004	SLAMS	Neighborhood	Radianc Research M903 (771)	✓
530770005	Sunnyside-S 16th St	09/2015	SLAMS	Neighborhood	Radianc Research M903 (771)	
530530031	Tacoma-Alexander Ave	10/2003	SLAMS	Neighborhood	Ecotech M9003 (812)	✓
530270011	Taholah-Quinault Tribe	04/2004	Tribal	Neighborhood	Ecotech M9003 (812)	
530330069	Tukwila Allentown	07/2017	SLAMS	Neighborhood	Ecotech M9003 (812)	
530470009	Twisp-Glover St	11/2003	Non-EPA Federal	Neighborhood	Radianc Research M903 (771)	
530710005	Walla Walla-12th St	10/2002	SLAMS	Neighborhood	Radianc Research M903 (771)	✓

AQS ID	Site Name	Est.	Type	Scale	Method	PM _{2.5} Grant Funded
530650002	Wellpinit-Spokane Tribe	10/2008	Tribal	Neighborhood	Radianc Research M903 (771)	
530070011	Wenatchee-Fifth St	11/2012	SLAMS	Neighborhood	Radianc Research M903 (771)	
530770016	White Swan-Yakama Tribe	10/2009	Tribal	Neighborhood	Radianc Research M903 (771)	
530470010	Winthrop-Chewuch Rd	11/2003	Non-EPA Federal	Neighborhood	Radianc Research M903 (771)	
530110022	Yacolt-Yacolt Rd	07/2003	SLAMS	Neighborhood	Radianc Research M903 (771)	

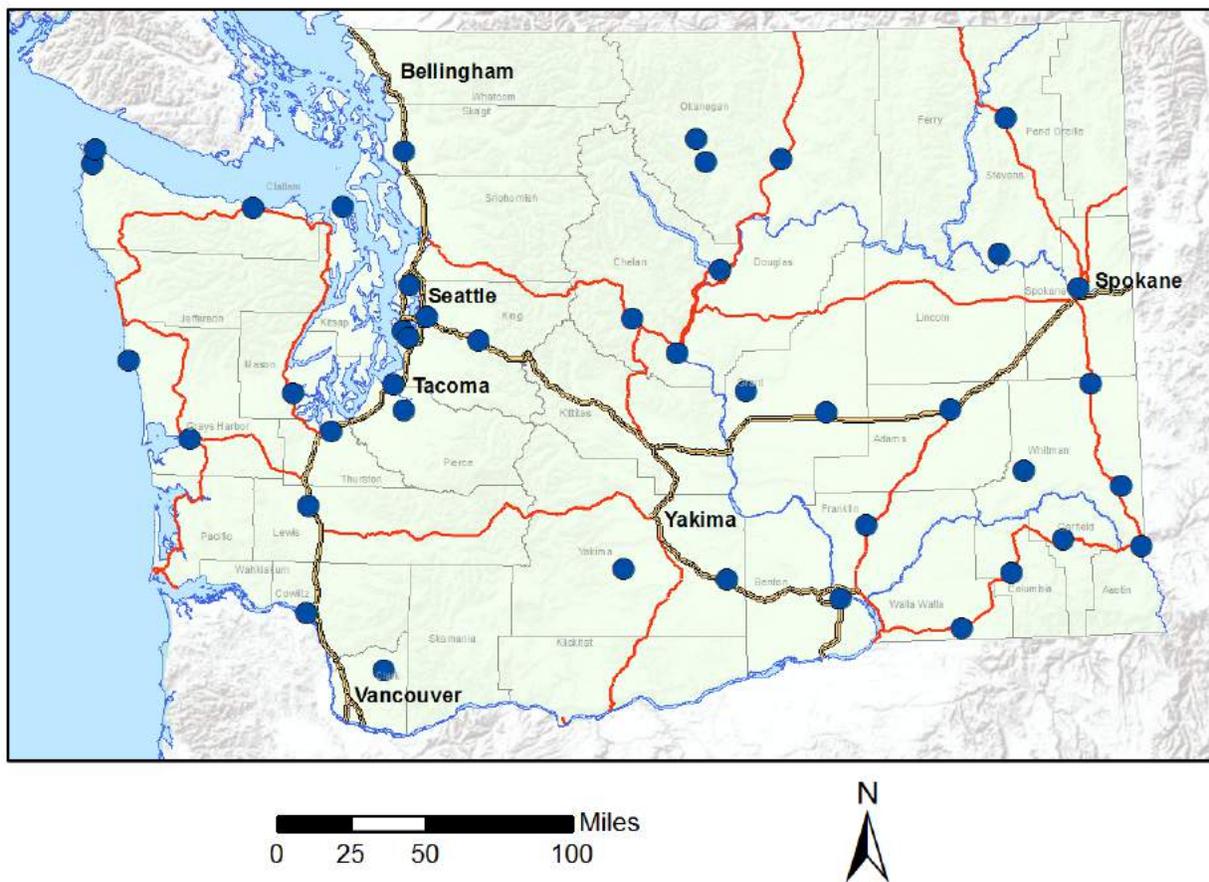


Figure 9. Map of Washington Network nephelometer monitoring sites

Recommended/proposed modifications: Monitoring at the Lake Forest Park site (530330024) resumed on 12/12/2017. Puget Sound Clean Air Agency, the monitoring agency, lost the lease at the site in 2016. In December 2017, they reestablished the site on the same property approximately 800 feet east of the former rooftop location. The new monitoring site is integrated

into a park bench at ground level with a public display showing PM_{2.5} concentrations. It retained the same AQS number, but the scale of representativeness was changed to middle scale.

A new correlated nephelometer monitoring site was established at Tukwila-Allentown (530330069) in July 2017. This site was chosen based on the results of a study conducted by the Puget Sound Clean Air Agency of highly impacted communities within its jurisdiction. Tukwila was identified as a priority community for monitoring due to its high scores for air pollution sources, socioeconomic barriers and poor health outcomes.

The temporary Quincy-3rd Ave NE SPMS was established in August 2017 for a 1-year multi-pollutant study. It will be discontinued in quarter 4 of 2018.

Two temporary nephelometer monitoring sites were established in Okanogan and Pomeroy in order to evaluate the need for ongoing monitoring in these previously unmonitored areas. The Okanogan monitor will be relocated to White Salmon (530390006) during 2018. There are no plans to relocate the Pomeroy monitor at this time, but it may be relocated during 2018.

A correlated nephelometer was added to the Ellensburg-Ruby St site (530370002) in April 2018. This site will provide ongoing paired data from the FEM BAM and the nephelometer in order to support correlation development and evaluation.

Meteorological monitoring (61101/61102/61103/61104/62101)

There are 18 meteorological monitoring sites in the Washington Network. All Washington Network meteorological monitoring sites collect scalar and vector wind speed and direction using RM Young Sonic Anemometers (method code 062) and ambient temperature under method code 040 (electronic or machine average). All Washington Network meteorological sites follow EPA's monitoring guidelines for prevention of significant deterioration (PSD). For detailed site and monitor information, see Appendix D.

Table 17. Washington Network meteorological monitoring sites

AQS ID	Site Name	Established	Type	Scale
530090013	Cheeka Peak	08/2007	SLAMS, NCore	Regional
530650005	Colville-E 1st St	05/2016	SLAMS	Neighborhood
530330023	Enumclaw-Mud Mtn.	02/2004	SLAMS	Urban
530730017	Ferndale-Mountain View Rd	01/2017	SLAMS	Microscale
530050002	Kennewick-Metaline	08/2012	SLAMS	Neighborhood
530070012	Malaga-Malaga Hwy	01/2017	SLAMS	Microscale
530330017	North Bend-North Bend Way	01/2000	SLAMS	Neighborhood
530470013	Omak-Colville Tribe	10/2010	Tribal	Neighborhood
530251003	Quincy-3rd Ave NE	06/2017	SPMS	Neighborhood
530330030	Seattle-10th & Weller	04/2014	SLAMS, Near-road	Microscale

AQS ID	Site Name	Established	Type	Scale
530330080	Seattle-Beacon Hill	01/1991	SLAMS, NCore	Urban
530630021	Spokane-Augusta Ave	07/2009	SLAMS	Neighborhood
530530024	Tacoma-S 36th St	02/2016	SLAMS, Near-road	Microscale
530531016	Tacoma-Tower Dr	01/1991	SLAMS	Urban
530770015	Toppenish-Yakama Tribe	06/2009	Tribal	Neighborhood
530110011	Vancouver-Blairmont Dr	12/2007	SLAMS	Urban
530070011	Wenatchee-Fifth St	11/2012	SLAMS	Neighborhood
530770016	White Swan-Yakama Tribe	11/2009	Tribal	Neighborhood

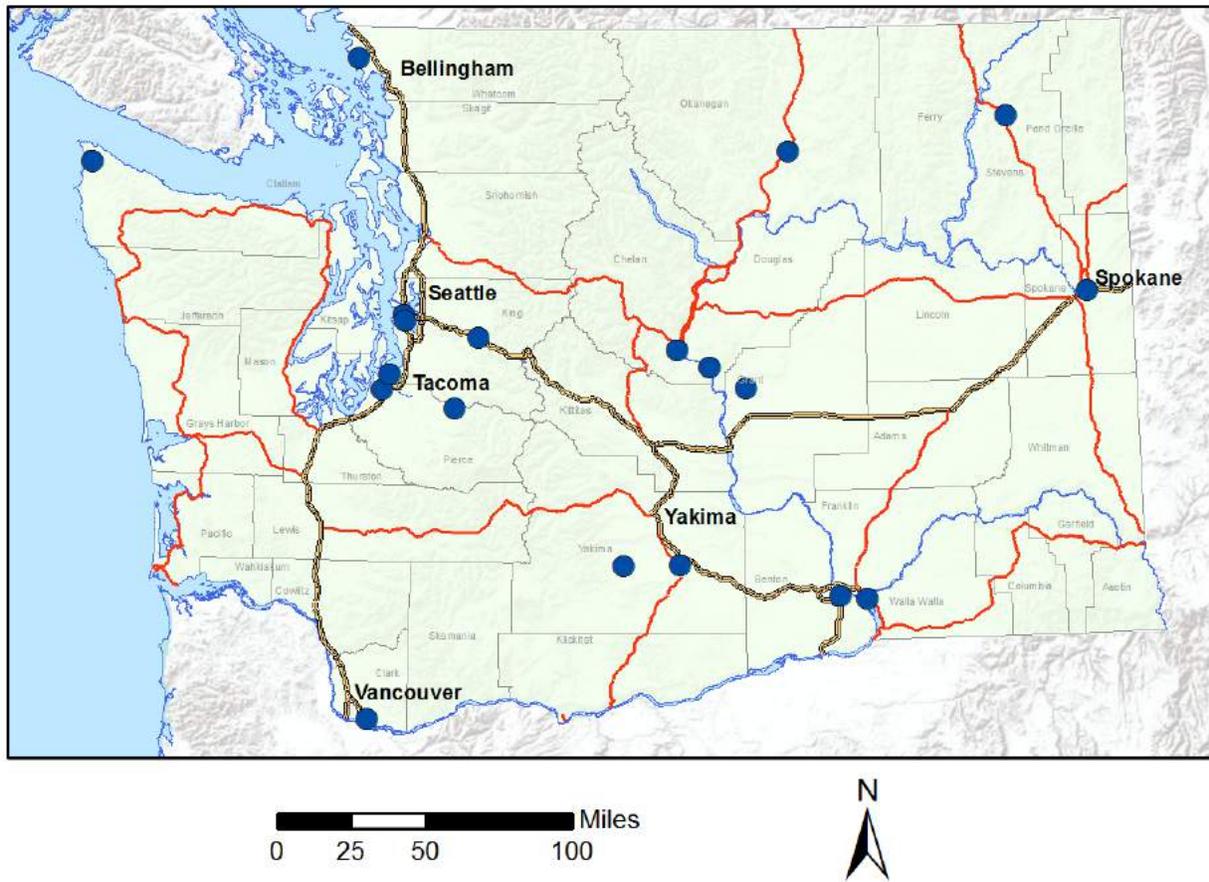


Figure 10. Map of Washington Network meteorological monitoring sites

Recommended/proposed modifications: None.

Lead (Pb)

Ecology submits Pb in PM₁₀ data at local conditions under parameter code 85129 POC 6 from Seattle-Beacon Hill (530330080). Seattle-Beacon Hill is both an NCore site and a National Air Toxics Trends Site (NATTS). Monitoring for Pb is no longer required at NCore sites, but Ecology continues to submit this data because PM₁₀ filters are analyzed for lead as part of the NATTS program. In 2017, at the request of EPA Region 10, Ecology redesignated the monitor a “NAAQS-exclusion” type monitor. It is no longer used to demonstrate compliance with the NAAQS.

Recommended/proposed modifications: None.

Chemical Speciation Network (CSN)

Ecology and its partners operate 4 speciation monitoring sites as part of the national Chemical Speciation Network (CSN).

Table 18. Washington Network Chemical Speciation Network monitoring sites

AQS ID	Site Name	Established	Type	Scale
530330030	Seattle-10 th & Weller	11/2014	SLAMS, Near-road	Microscale
530330080	Seattle-Beacon Hill	02/2000	SLAMS, NCore	Urban
530530029	Tacoma-L St	01/2006	SLAMS	Neighborhood
530770009	Yakima-4 th Ave S	11/2007	SLAMS	Neighborhood

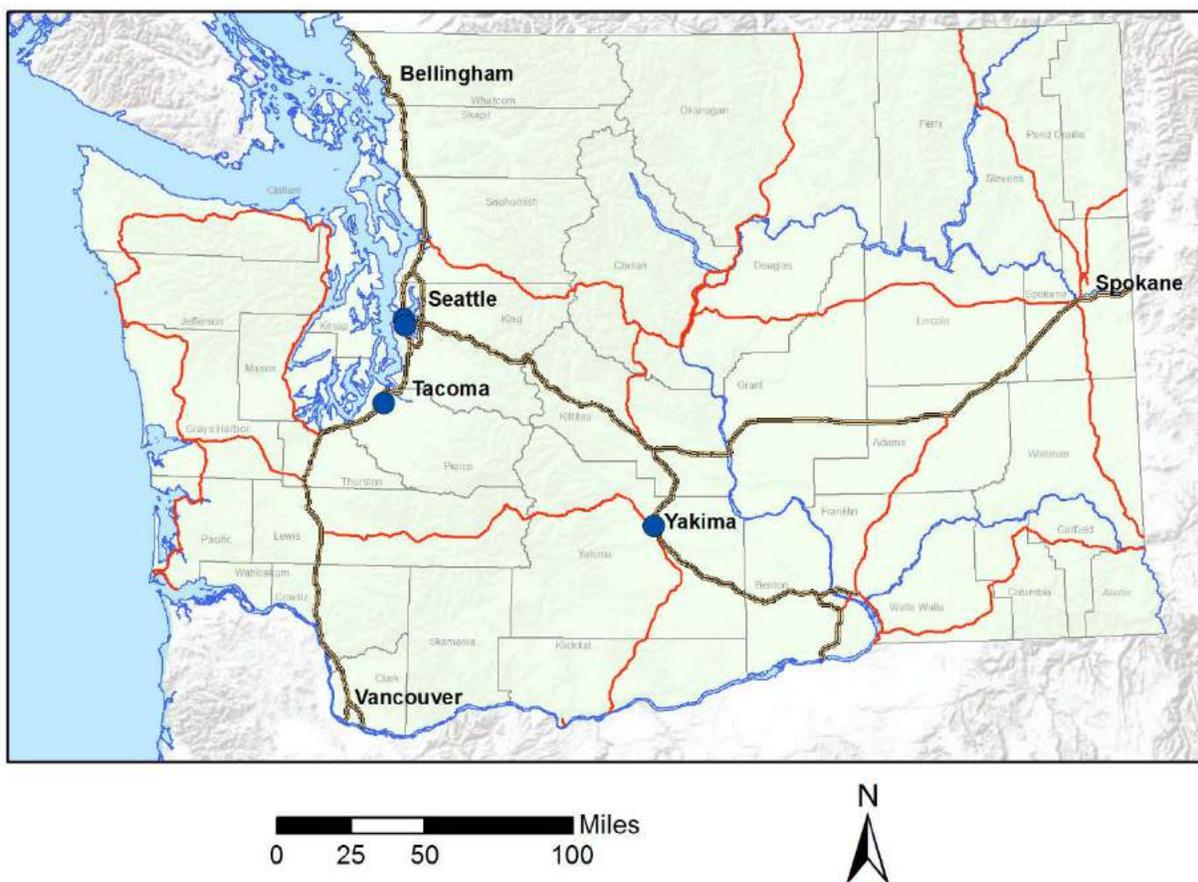


Figure 11. Map of Washington Chemical Speciation Network monitoring sites

Each speciation site samples the following parameters:

Table 19. Chemical Speciation Network monitoring parameters

Code	Parameter	Code	Parameter	Code	Parameter	Code	Parameter
88102	Antimony	88126	Iron	88167	Zinc	88370	OC CSN Rev Unadjusted
88103	Arsenic	88128	Lead	88168	Strontium	88374	OC1 CSN Rev Unadjusted
88104	Aluminum	88131	Indium	88169	Sulfur	88375	OC2 CSN Rev Unadjusted
88107	Barium	88132	Manganese	88176	Rubidium	88376	OC3 CSN Rev Unadjusted
88109	Bromine	88136	Nickel	88180	Potassium	88377	OC4 CSN Rev Unadjusted
88110	Cadmium	88140	Magnesium	88184	Sodium	88378	OP CSN Rev Unadjusted
88111	Calcium	88152	Phosphorus	88185	Zirconium	88380	EC CSN Rev Unadjusted
88112	Chromium	88154	Selenium	88301	Ammonium Ion	88383	EC1 CSN Rev Unadjusted
88113	Cobalt	88160	Tin	88302	Sodium Ion	88384	EC2 CSN Rev Unadjusted
88114	Copper	88161	Titanium	88303	Potassium Ion	88385	EC3 CSN Rev Unadjusted
88115	Chlorine	88164	Vanadium	88306	Total Nitrate	88388	OP CSN Rev Unadjusted
88117	Cerium	88165	Silicon	88355	OC CSN Rev Unadjusted	88403	Sulfate
88118	Cesium	88166	Silver	88357	EC CSN Rev Unadjusted	88502	PM _{2.5} Speciation Mass

Recommended/proposed modifications: In 2017, Ecology conducted a statewide evaluation of its speciation network and developed a plan to minimize redundancies and expand the coverage of speciation sites in different parts of the state. Ecology proposes to relocate the Tacoma-L St (530530029) speciation monitor to the Tacoma-S 36th St (530530024) near-road monitoring site. Speciation monitoring has been conducted at Tacoma-L St since 2006. Relocating the monitor to Tacoma-S 36th would provide new information about particulate matter composition in the Tacoma near-road environment and provide a valuable comparison to the existing Seattle 10th & Weller (530330030) near-road speciation site.

If the relocation is approved, Ecology plans to analyze and compare the speciation data from both near-road sites. If Tacoma-S 36th St is sufficiently representative of near-road impacts in the greater Seattle-Tacoma area, Ecology would consider relocating the Seattle-10th & Weller speciation monitor to another high-priority area of the state. The Tacoma-S 36th St site would be retained to provide ongoing near-road speciation data and to continue speciation monitoring within the Tacoma-Pierce County PM_{2.5} maintenance area.

With the passage of the Washington State 2018 supplemental operating budget (Engrossed Substitute Senate Bill 6032), Ecology was directed to use state funding to conduct a multiyear source apportionment study at the monitoring site closest to the Port of Tacoma. Ecology's plan to achieve the goals of this study is to conduct PM_{2.5} speciation monitoring at PSCAA's Tacoma-Alexander Ave (530530031) monitoring site. Puget Sound Clean Air Agency plans to conduct a parallel speciation study at the Seattle-Duwamish monitoring site (530330057) concurrently with the Tacoma study. Ecology plans to work with EPA Region 10 to establish these as supplemental speciation monitoring sites. The sites will operate on a 1/6 schedule from approximately August 6, 2018 - August 5, 2021.

National Core (NCore)

There are two NCore sites in the Washington Network: Seattle-Beacon Hill (530330080) is an urban NCore site, and Cheeka Peak (530090013) is a rural NCore site. The parameters monitored at each site are summarized in Table 22.

Table 20. NCore parameters monitored at Cheeka Peak and Seattle-Beacon Hill

Parameter	Cheeka Peak	Seattle-Beacon Hill
Trace CO (42101)	✓	✓
Trace NO _y (42600)	✓	✓
Area-wide NO ₂ (42602)		✓
Ozone (44201)	✓	✓
Trace SO ₂ (42401)	✓	✓
Filter-based PM ₁₀ (81102)		✓
Filter-based PM _{2.5} (88101)		✓
Continuous FEM PM _{2.5} (88101)		✓
Nephelometer PM _{2.5} (88502)	✓	
Meteorological (61101/61102/61103/61104/62101/64101/62201)	✓	✓
PM _{2.5} speciation		✓
PM _{10-2.5} (86101)		✓

Recommended/proposed modifications: None.

National Air Toxics Trends Station (NATTS)

Seattle-Beacon Hill (530330080) is a National Air Toxics Trends Station (NATTS) as well as a CSN, NCore and SLAMS site.

Recommended/proposed modifications: None.

Photochemical Assessment Monitoring Station (PAMS)

Starting June 1, 2019, Washington will be required to collect and report Photochemical Assessment Monitoring Station (PAMS) measurements at the Seattle Beacon Hill NCore Site. Paragraph 5(a) of 40 C.F.R. § 58 Appendix D requires the addition of PAMS monitoring at NCore sites in a CBSA with population 1,000,000 or more, based on the latest available census figures.

Ecology plans to use the existing Seattle-Beacon Hill monitoring site and trailer for PAMS measurements. Ecology staff have been actively coordinating with EPA to plan for the PAMS implementation, and Ecology anticipates that all required parameters will be fully operational by June 1, 2019. Below is a summary of the equipment acquisitions that have been completed or are planned in order to fulfill the PAMS monitoring requirements:

- Ecology worked with EPA to purchase a Markes Unity-XR Thermal Desorber with Agilent 7890B Auto-Gas Chromatograph with Flame Ionization Detection, which currently is scheduled to be delivered in summer 2018.
- Carbonyl sampling is already conducted at Seattle-Beacon Hill as part of the NATTS program, though daily samples are currently collected on a 1/6 day schedule. Ecology has made arrangements to modify the carbonyl sampling schedule to collect three 8-hour averaged carbonyl samples per day on a 1/3 schedule starting June 1, 2019.

- Ecology installed a Teledyne API T500U CAPS analyzer at Seattle-Beacon Hill in April 2018 in order to fulfill the requirement for true NO₂ measurement.
- Ecology already operates a precipitation gauge at Seattle-Beacon Hill. This parameter will be validated and submitted to AQS starting in 2019.
- Ecology is working with EPA to purchase a Vaisala CL51 ceilometer as well as necessary equipment for monitoring solar radiation and ultraviolet radiation. EPA anticipates that these purchases will be made in federal fiscal year 2019 or 2020. If equipment is not available for purchase until fiscal year 2020, EPA has indicated an intent to waive monitoring requirements for those parameters until equipment is available.
- The remaining required parameters are already monitored as part of Seattle-Beacon Hill's SLAMS, NCore, CSN, and/or NATTS monitoring.

Table 23 summarizes the required PAMS parameters and Ecology's schedule for implementing new monitoring requirements. Parameters that are already monitored at Seattle-Beacon Hill are marked "existing."

Table 21. Required PAMS parameters and implementation schedule

Parameter	Implementation Schedule
Hourly averaged VOCs	Equipment purchased; awaiting delivery
Three 8-hour averaged carbonyl samples per day on a 1/3 schedule	Carbonyl sampling is already conducted; Ecology has arranged to modify sampling schedule to meet PAMS requirements starting June 1, 2019
Hourly averaged O ₃	Existing
Hourly averaged NO, true nitrogen dioxide (NO ₂), and total reactive nitrogen (NO _y)	Existing; true NO ₂ monitoring was implemented in April 2018
Hourly averaged ambient temperature	Existing
Hourly vector-averaged wind direction	Existing
Hourly vector-averaged wind speed	Existing
Hourly average atmospheric pressure	Existing
Hourly averaged relative humidity	Existing
Hourly precipitation	Existing; data will be validated and submitted to AQS starting in 2019
Hourly averaged mixing height	Equipment purchase is pending; planned for federal fiscal year 2019 or 2020
Hourly averaged solar radiation	Equipment purchase is pending; planned for federal fiscal year 2019 or 2020
Hourly averaged ultraviolet radiation	Equipment purchase is pending; planned for federal fiscal year 2019 or 2020

References

Ambient Air Monitoring Reference and Equivalent Methods, 40 C.F.R. § 53, 2015.

Ambient Air Quality Surveillance, 40 C.F.R. § 58, 2015.

Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), EPA-450/4-87-007, May 1987.

National Primary and Secondary Ambient Air Quality Standards, 40 C.F.R. § 50, 2015.

United States Census Bureau. “Metropolitan and Micropolitan Statistical Areas Population Totals: 2010-2017.” <https://www.census.gov/data/datasets/2017/demo/pepstat/total-metro-and-micro-statistical-areas.html> (April 27, 2018).

United States Census Bureau. “State-based Metropolitan and Micropolitan Statistical Areas Maps.” <https://www.census.gov/geo/maps-data/maps/statecbsa.html> (February 2013).

Appendices

Appendix A. Criteria Pollutant Design Values

Tables 24-30 show criteria pollutant design values for all sites in the Washington Network.

Table 22. Carbon monoxide (CO) 2017 design values

Site	AQS ID	2017 Exceedances
Cheeka Peak	530090013	0
Seattle 10th & Weller	530330030	0
Seattle Beacon Hill	530330080	0

Table 23. Nitrogen dioxide (NO₂) 2017 design values (ppb)

Site	AQS ID	2015 98 th Percentile	2016 98 th Percentile	2017 98 th Percentile	2017 Design Value
Seattle 10th & Weller	530330030	65.1	58.8	NA	NA
Seattle Beacon Hill	530330080	NA	49.2	42.2	NA
Tacoma S 36th	530530024	NA	45.5	43.8	NA

Table 24. Ozone (O₃) 2017 design values (ppm)

Site	AQS ID	2015 4th Highest D8M*	2016 4th Highest D8M	2017 4th Highest D8M	2017 Design Value
Anacortes 202 Avenue	530570011	0.045	0.054	0.041	0.046
Cheeka Peak	530090013	0.051	0.051	0.056	0.052
Cheney Turnbull	530630001	0.066	0.053	0.065	0.061
Custer Loomis	530730005	0.048	0.045	0.050	0.047
Enumclaw Mud Mtn	530330023	0.074	0.061	0.094	0.076
Issaquah Lake Sammamish	530330010	0.059	0.054	0.076	0.063
Kennewick S Clodfelter	530050003	0.075	0.068	0.074	0.072
Mt Rainier Jackson Visitors Ctr	530530012	0.062	0.058	0.069	0.063
North Bend North Bend Way	530330017	0.061	0.054	0.073	0.062
Seattle Beacon Hill	530330080	0.048	0.046	0.047	0.047
Spokane Greenbluff	530630046	0.063	0.056	0.068	0.062
Vancouver Blairmont Dr	530110011	0.065	0.055	0.071	0.063
Yelm Northern Pacific	530670005	0.058	0.058	0.067	0.061

*D8M is the daily maximum 8-hour average concentration.

Table 25. Sulfur dioxide (SO₂) 2017 design values (ppb)

Site	AQS ID	2015 99 th Percentile	2016 99 th Percentile	2017 99 th Percentile	2017 Design Value
Anacortes 202 Ave	530570011	5	4	3	4
Cheeka Peak	530090013	NA	NA	NA	NA
Ferndale-Kickerville Rd	530730013	NA	NA	70	NA
Ferndale-Mountain View Rd	530730017	NA	NA	114	NA
Malaga-Malaga Hwy	530070012	NA	NA	1	NA
Seattle-Beacon Hill	530330080	NA	NA	NA	NA

Table 26. PM₁₀ 2017 design values (µg/m³)

Site	AQS ID	2015 Expected Exceedances	2016 Expected Exceedances	2017 Expected Exceedances	3-Year Estimated Exceedances
Colville Combined Oak St & E 1 st St	530650005	2	1	1	1.3
Kennewick Metaline	530050002	2	0	3	1.7
Seattle Beacon Hill	530330080	0	0	0	0
Spokane Augusta	530630021	0	0	4	1.3
Yakima 4th Ave S	530770009	0	0	4.7	1.6

Table 27. PM_{2.5} 2017 24-hour design values and pseudo-design values (µg/m³)

Design values from FRM and FEM monitoring sites are shaded. Pseudo-design values from nephelometer sites are estimates only and cannot be used to determine compliance with the NAAQS.

Site	AQS ID	98 th Percentile 2015	98 th Percentile 2016	98 th Percentile 2017	24-Hour Design Value 2017
Aberdeen Division St	530272002	12.6	10.3	14.5	12
Anacortes 202 Avenue	530570011	14.0	12.6	13.5	13
Bellevue SE 12th	530330031	15.2	7.8	22.8	15
Bellingham Yew St	530730015	19.0	12.1	27.7	20
Bremerton Spruce Ave	530350007	13.3	9.8	24.0	16
Cheeka Peak	530090013	7.1	4.6	35.3	16
Chehalis Market Blvd	530410004	19.4	12.9	25.2	19
Chelan Woodin Ave	530070007	NA	NA	24.6	NA
Clarkston 13th St	530030004	NA	16.9	63.8	NA
Colville E 1st St**	530650005	NA	NA	41.8	NA
Darrington Fir St	530610020	28.3	31.0	44.0	34
Dayton W Main St	530130002	14.1	10.7	37.8	21
Ellensburg Ruby St	530370002	18.0***	25.2***	47.8	30***
Kennewick Metaline	530050002	22.5	16.5	35.8	25
Kent Central & James	530332004	26.2	18.4	36.0	27

Site	AQS ID	98th Percentile 2015	98th Percentile 2016	98th Percentile 2017	24-Hour Design Value 2017
Lacey College St	530670013	19.4	16.9	28.2	22
LaCrosse Hill St	530750005	36.0	9.6	NA	NA
Leavenworth Evans St	530070010	26.2	16.4	24.4	22
Longview 30th Ave	530150015	18.3	13.9	16.4	16
Lynnwood 212	530610005	21.4	17.6	NA	NA
Marysville 7th Ave	530611007	34.7	22.3	30.8***	29***
Mesa Peplot Way	530210002	23.6	12.3	45.9	27
Moses Lake Balsam St	530251002	28.9	13.1	38.6	27
Mt Vernon S Second St	530570015	14.0	8.2	NA	NA
Neah Bay 2 Makah Tribe	530090015	8.1	6.3	11.2	9
North Bend North Bend Way	530330017	14.4	7.5	43.0	22
Omak Colville Tribe	530470013	227.1	NA	NA	NA
Port Angeles E 5th St	530090017	18.0	16.2	27.1	20
Port Townsend San Juan Ave	530310003	13.1	10.3	15.5	13
Pullman Dexter SE	530750003	17.1	10.8	30.7	20
Puyallup 128th St	530531018	21.6	16.4	51.1	30
Ritzville Alder St	530010003	32.6	9.0	39.0	27
Rosalia Josephine St	530750006	28.0	10.9	37.1	25
Seattle 10th & Weller	530330030	20.7	17.0	34.4	24
Seattle Beacon Hill	530330080	17.6	13.5	29.9	20
Seattle Duwamish	530330057	22.5	18.0	35.0	25
Seattle South Park	530331011	22.7	NA	50.1	NA
Shelton W Franklin	530450007	15.0	13.3	20.1	16
Spokane Augusta Ave	530630021	NA	17.3	48.2	NA
Spokane Monroe St	530630047	45.6	15.6	54.4	39
Sunnyside S 16th	530770005	NA	25.7	48.2	NA
Tacoma Alexander Ave	530530031	20.0	17.7	23.5	20
Tacoma L Street	530530029	32.8	22.2	37.9	31
Tacoma S 36th	530530024	NA	15.1	30.0	NA
Taholah Quinault Tribe	530270011	NA	NA	21.6	NA
Toppenish Yakama Tribe	530770015	42.3***	38.8***	54.6	45***
Twisp Glover St	530470009	57.8	22.1	67.5	49
Vancouver NE 84th Ave	530110024	33.3***	23.6***	35.1	31***
Walla Walla 12th St	530710005	27.7	16.2	38.1	27
Wellpinit Spokane Tribe	530650002	37.1	10.7	39.7	29
Wenatchee Fifth St	530070011	17.2	17.2	74.3	36
White Swan Yakama Tribe	530770016	25.6	18.6	46.1	30
Winthrop Chewuch Rd	530470010	NA	NA	69.8	NA
Yacolt Yacolt Rd	530110022	NA	13.5	30.8	NA
Yakima 4th Ave	530770009	32.3	30.6	52.2	38

Table 28. PM_{2.5} 2017 annual design values and pseudo-design values

Site	AQS ID	Annual Mean 2015	Annual Mean 2016	Annual Mean 2017	Annual Design Value 2017
Aberdeen Division St	530272002	5.2	4.8	5.4	5.2
Anacortes 202 Avenue	530570011	6.6	5.3	5.7	5.9
Bellevue SE 12th	530330031	5.2	3.4	4.1	4.2
Bellingham Yew St	530730015	6.5	4.8	5.2	5.5

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Site	AQS ID	Annual Mean 2015	Annual Mean 2016	Annual Mean 2017	Annual Design Value 2017
Bremerton Spruce Ave	530350007	4.9	4.2	4.9	4.7
Cheeka Peak	530090013	2.3	1.9	3.4	2.6
Chehalis Market Blvd	530410004	6.3	5.1	6.5	5.9
Chelan Woodin Ave	530070007	NA	NA	5.5	NA
Clarkston 13th St	530030004	NA	7.1	11.7	NA
Colville E 1st St**	530650005	NA	NA	11.0	NA
Darrington Fir St	530610020	6.7	5.5	8.3	6.8
Dayton W Main St	530130002	4.2	4.1	7.4	5.2
Ellensburg Ruby St	530370002	5.5	6.2	11.0	7.6
Kennewick Metaline	530050002	6.8	5.6	8.5	6.9
Kent Central & James	530332004	6.7	5.5	7.7	6.7
Lacey College St	530670013	6.0	5.6	6.5	6.0
LaCrosse Hill St	530750005	6.0	3.6	NA	NA
Leavenworth Evans St	530070010	8.1	5.6	6.2	6.7
Longview 30th Ave	530150015	6.0	5.0	6.0	5.7
Lynnwood 212	530610005	5.7	4.0	NA	NA
Marysville 7th Ave	530611007	8.1	6.0	8.0	7.4
Mesa Pepiot Way	530210002	6.5	3.9	7.5	6.0
Moses Lake Balsam St	530251002	7.2	4.8	8.1	6.7
Mt Vernon S Second St	530570015	5.1	3.1	NA	NA
Neah Bay 2 Makah Tribe	530090015	4.2	3.4	3.9	3.9
North Bend North Bend Way	530330017	4.6	3.0	5.5	4.4
Omak Colville Tribe	530470013	18.2	NA	NA	NA
Port Angeles E 5th St	530090017	8.0	7.0	8.6	7.8
Port Townsend San Juan Ave	530310003	5.6	4.7	5.5	5.3
Pullman Dexter SE	530750003	4.0	3.7	6.6	4.8
Puyallup 128th St	530531018	5.5	4.7	7.1	5.8
Ritzville Alder St	530010003	6.9	3.7	6.5	5.7
Rosalia Josephine St	530750006	6.0	4.1	6.8	5.7
Seattle 10th & Weller	530330030	9.3	7.8	8.1	8.4
Seattle Beacon Hill	530330080	6.5	5.5	7.1	6.4
Seattle Duwamish	530330057	9.8	6.5	9.7	8.7
Seattle South Park	530331011	9.1	NA	9.5	NA
Shelton W Franklin	530450007	6.0	5.3	6.3	5.9
Spokane Augusta Ave	530630021	NA	7.5	10.9	NA
Spokane Monroe St	530630047	8.1	5.5	10.3	8.0
Sunnyside S 16th	530770005	NA	8.3	14.0	NA
Tacoma Alexander Ave	530530031	7.5	5.9	7.4	7.0
Tacoma L Street	530530029	7.3	6.8	8.2	7.4
Tacoma S 36th	530530024	NA	6.9	8.4	NA
Taholah Quinault Tribe	530270011	NA	NA	4.7	NA
Toppenish Yakama Tribe	530770015	12.0***	9.7***	13.5	12.6***
Twisp Glover St	530470009	11.0	7.3	12.5	10.2
Vancouver NE 84th Ave	530110024	8.5***	6.3***	8.9***	7.9***
Walla Walla 12th St	530710005	6.4	5.2	8.2	6.6
Wellpinit Spokane Tribe	530650002	6.0	4.5	7.6	6.0
Wenatchee Fifth St	530070011	5.4	5.4	12.0	7.6
White Swan Yakama Tribe	530770016	6.9	5.4	6.2	6.1
Winthrop Chewuch Rd	530470010	NA	NA	9.4	NA
Yacolt Yacolt Rd	530110022	NA	4.0	6.2	NA
Yakima 4th Ave	530770009	9.6	8.6	10.3	9.5

** Colville pseudo-DVS are based on combined data from Oak St and E 1st St sites.

***These DVs are unofficial due to incomplete data. Sites do not pass the maximum quarterly value substitution test.

Appendix B. Bellingham Site Relocation

The previous Bellingham-Yew St site (530730015) was discontinued on December 31, 2017 and replaced with the Bellingham-Pacific St site (530730019) on January 1, 2018. Bellingham-Yew St was a second-story rooftop site with a ladder that did not meet safety requirements for staff access. The Northwest Clean Air Agency (NWCAA), which operated the site, attempted to resolve the safety concern with the building owner but was unsuccessful. Since the safety issue was not resolvable, the agency then secured a replacement site 0.68 mile west of the previous site.

The new site is located at 2221 Pacific Ave., on the roof of the City of Bellingham Public Works Department. The new site is located between an area of medium-to-high density multi-family residential zoning to the north and industrial zoning to the south. The previous site was located in a small pocket of commercial zoning within a medium-density multi-family residential area. The vicinity of the new Pacific Ave site contains more light industrial activity, but no significant point sources of PM_{2.5} were identified. Ecology and NWCAA expect PM_{2.5} concentrations to be comparable between the two sites. Due to the urgency of the safety concern at the old site, there was not sufficient time to run the monitors concurrently.

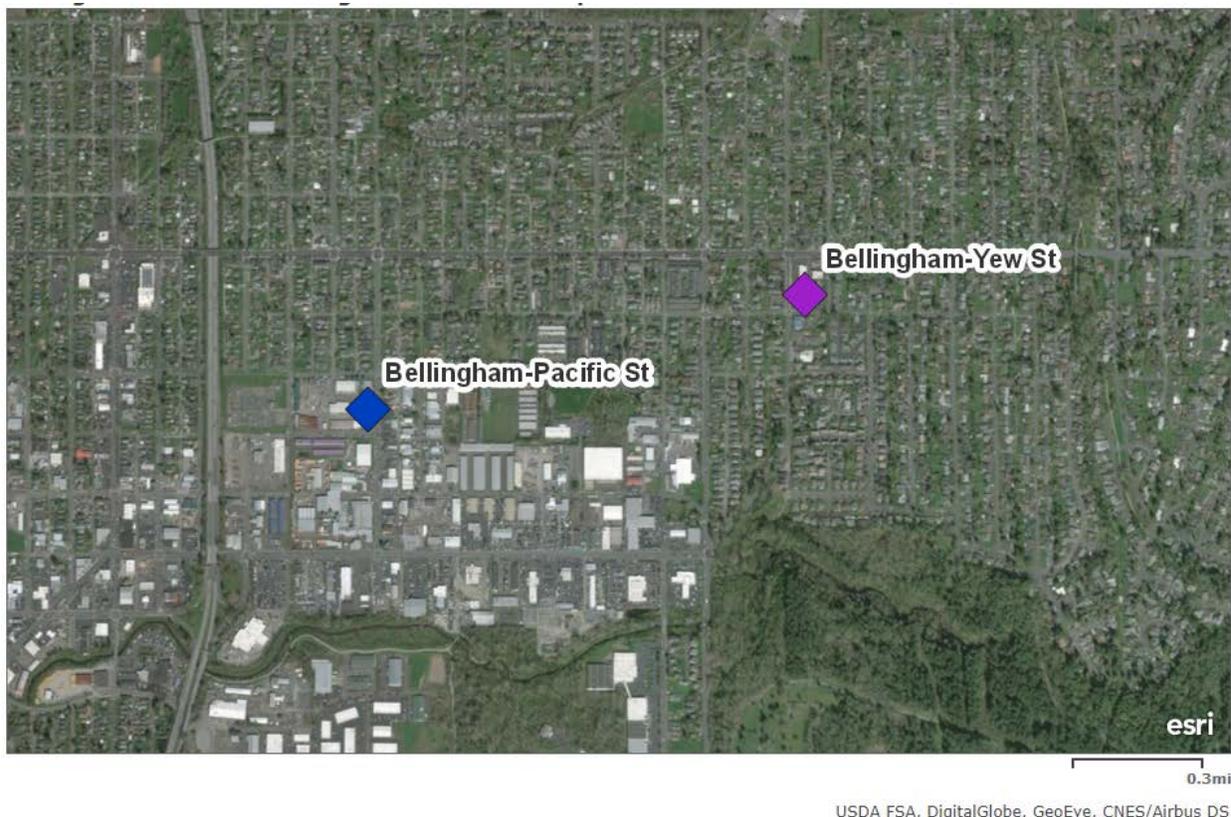


Figure 12. Map of old and new Bellingham PM_{2.5} sites

Appendix C. Monitoring Waivers

Lead (Pb)

In 2014, EPA approved the use of lead in PM₁₀ measurements as a surrogate for lead in TSP at Seattle-Beacon Hill (530330080). Ecology met this requirement through lead analysis of low-vol PM₁₀ filters analyzed through the NATTS program. In 2016, EPA discontinued the requirement for lead monitoring at NCore sites. Ecology continues to report measurements of lead in PM₁₀ at Seattle-Beacon Hill as a NATTS parameter. In 2017, at the request of EPA Region 10, Ecology redesignated the Seattle-Beacon Hill lead monitor a “NAAQS-exclusion” type monitor. It is no longer used to demonstrate compliance with the NAAQS.

Yakima CO

In 2006, EPA approved the discontinuation of the Yakima CO monitor based on the low concentrations measured at the monitor and predicted reductions in onroad mobile source emissions in Yakima. Below is the approval letter from EPA approving discontinuation of the monitor.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

MAR 03 2006

Reply to
Attn Of: OAWT-107

Mr. Mike Ragan
Air Monitoring Coordinator
Air Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

Re: Approval of the Washington 2006 Ambient Monitoring Network

Dear Mr. Ragan:

We have evaluated the Washington 2005 Ambient Air Monitoring Network Assessment and Ecology's proposed monitoring network for 2006. As you know, in December 2005 EPA proposed a lower 24-hour PM_{2.5} monitoring standard of 35 ug/m³, and a new 24-hour PM_{coarse} standard of 70 ug/m³ to replace the current PM₁₀ standard. The implementation of these new standards will have a significant effect on the future number and locations of PM monitors in the State's monitoring network. This should be a major consideration in your 2006 annual monitoring network assessment. In order to ensure continued PM_{2.5} monitoring at sites required by population (40 CRF Part 58), and at sites reporting values near or above the proposed PM_{2.5} standard, Region 10 developed a list of monitoring priorities for a "core" PM_{2.5} monitoring network (Attachment 1). In response to these monitoring priorities, Ecology has proposed to discontinue PM_{2.5} FRM monitors at the following sites:

<u>Monitoring Site</u>	<u>AIRS#</u>
1. Moose Lodge -- Vancouver	530110013
2. Benton County -- Kennewick	530050002
3. Monroe Street - Spokane	530630047

The PM_{2.5} design values for these sites, based on monitoring data collected over the past 3 years, are below the current PM_{2.5} and proposed PM_{2.5} standards. Therefore, I approve the discontinuation of these PM_{2.5} FRM monitors. Ecology is authorized to operate all PM_{2.5} "core" monitors for 2006 including:

1. PM_{2.5} FRMs (or FEMs, if approved) at the Beacon Hill, Duwamish (primary and co-located), Crown Zellerbach (primary and co-located), and Tacoma/L Street sites.
2. PM_{2.5} speciation monitors located at the following sites:
 - a. Beacon Hill
 - b. Spokane
 - c. Duwamish
 - d. Tacoma



e. Lake Forest Park

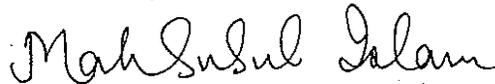
3. Pre-cursor gas monitors operated at the Beacon Hill site

Operation of any additional PM2.5 monitors, in addition to the PM2.5 “core” network, are authorized as funding permits. Ecology is authorized to operate all ozone, SO₂, NO_x, other CO, and PM10 monitors identified in the 2005 Washington Ambient Air Monitoring Network Review.

The Yakama Regional Clean Air Authority has requested permission to discontinue operations of its CO monitor at the Tattoo Parlor site in Yakama. The rationale for discontinuing this monitor is that CO 8-hour design values at this site have decreased from a value of 5.1 ppm in 1998-1999, to a value of 3.5 ppm in 2002-2003. In addition, EPA’s MOBILE6.2 model predicts that on-road mobile source emissions of CO in Yakama will decrease by 12.4% compared to the 1999 mobile source emissions. This should ensure that the 8-hour CO design values remain substantially below the CO standard of 9 ppm. Therefore, I approve the discontinuation of this CO monitor.

If you have any questions about our approval of the WA monitoring network, please contact Keith Rose at (206) 553-1949.

Sincerely,



Mahbubul Islam, Manager
State and Tribal Program Unit
Office of Air, Waste and Toxics

cc: William Puckett, OEA

Spokane CO

On July 14, 2016, Federal Register #81 FR 45417, the EPA approved an alternate method of verification of attainment of the CO NAAQS in Spokane and qualification for the limited maintenance plan option under 40 C.F.R. § 58.14(c) in the Spokane Maintenance Area. Under this alternative, EPA considers the limited maintenance plan criteria met and continued verification of attainment of the CO NAAQS if the total of the three predominant CO emission source categories calculated as part of the triennial emissions inventory (onroad mobile, nonroad, and residential wood combustion) remain below the corresponding total of the 2002 emission

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inventory source categories approved at the time the Spokane area was redesignated to attainment. SRCAA and Ecology will compare future year 2017, 2020 and 2023 triennial emission analysis results to the baseline 2002.

Appendix D. Detailed Site and Monitor Information

The tables below describe the detailed site and monitor information for each monitoring site in the Washington Network. This information demonstrates compliance with the probe and monitoring path siting criteria described in 40 C.F.R. § 58 Appendix E.

Aberdeen-Division St	Site Information	
	AQS ID	530272002
	Street Address	359 N Division St (Harbor High School)
	Zip Code	98520
	Latitude	46.97228
	Longitude	-123.83173
	Date Site Established	20021001
	MSA/CBSA/CSA Represented	Aberdeen
	County	Grays Harbor
	Distance from roadway (m)	12
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20021001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	5
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
Changes in next 18 months?	No	
Suitable for NAAQS comparison?	No	

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Anacortes-202 Ave	Site Information	
	AQS ID	530570011
	Street Address	202 O Ave
	Zip Code	98221
	Latitude	48.52059
	Longitude	-122.61428
	Date Site Established	20120501
	MSA/CBSA/CSA Represented	Mount Vernon-Anacortes
	County	Skagit
	Distance from roadway (m)	6
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, gravel
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	20111012
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Northwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	May-Oct
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Tygon
	Residence time (sec) (sec)	9.5
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
PM_{2.5} (88101, POC 5)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20111012
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Northwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A

	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
Sulfur Dioxide (42401, POC 2)	Sampling/Analysis Method	TAPI 100 EU (600)
	Parameter Begin Date	20111012
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Northwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec) (sec)	9.5
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Bellevue-SE 12th	Site Information	
	AQS ID	530330031
	Street Address	14310 SE 12th St
	Zip Code	98007
	Latitude	47.600863
	Longitude	-122.148397
	Date Site Established	20161201
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	33
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, concrete, grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20161201
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	2
	Distance from supporting structure (m)	2
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	30
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Bellingham-Pacific St	Site Information	
	AQS ID	530730019
	Street Address	2221 Pacific Street
	Zip Code	98229
	Latitude	48.760036
	Longitude	-122.456463
	Date Site Established	20180102
	MSA/CBSA/CSA Represented	Bellingham
	County	Skagit
	Distance from roadway (m)	N/A
	Traffic count (AADT)	N/A
	Ground cover	Roof
PM_{2.5} (88101, POC 5)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20180102
	Monitor Type Begin Date	20180102
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Northwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Monitoring start date	20180101
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Bremerton-Spruce	Site Information	
	AQS ID	530350007
	Street Address	3250 Spruce Ave
	Zip Code	98310
	Latitude	47.592675
	Longitude	-122.627397
	Date Site Established	20120501
	MSA/CBSA/CSA Represented	Bremerton-Silverdale
	County	Kitsap
	Distance from roadway (m)	8
	Traffic count (AADT)	N/A
	Ground cover	Grass
PM_{2.5} (88101, POC 3)	Sampling/Analysis Method	8500 TEOM (181)
	Parameter Begin Date	20120501
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	150
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Burbank-Maple St Site Information		
	AQS ID	530710006
	Street Address	755 Maple Street (Columbia High School)
	Zip Code	99323
	Latitude	46.199901
	Longitude	-119.008329
	Date Site Established	20021105
	MSA/CBSA/CSA Represented	Walla Walla
	County	Walla Walla
	Distance from roadway (m)	80
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
PM₁₀ (81102, POC 3)	Sampling/Analysis Method	TEOM-Gravimetric (079)
	Parameter Begin Date	20170815
	Monitor Type Begin Date	20170815
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SPMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	N/A
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Temporary site will be discontinued in September 2018.
	Suitable for NAAQS comparison?	No

Statement of Purpose: The Burbank-Maple St SPM site was established to evaluate PM₁₀ concentrations within the Wallula maintenance area and verify that the permanent Kennewick-Metaline SLAMS PM₁₀ monitor accurately represents the maintenance area. Ecology established the site in August 2017 for a 1-year study.

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Cheeka Peak	Site Information	
	AQS ID	530090013
	Street Address	Located In A Tree Farm (Cheeka Peak)
	Zip Code	98381
	Latitude	48.29786
	Longitude	-124.62491
	Date Site Established	20060517
	MSA/CBSA/CSA Represented	Port Angeles
	County	Clallam
	Distance from roadway (m)	6
	Traffic count (AADT)	N/A
	Ground cover	Shrubs, grass, gravel/dirt
Trace NO_y (42600/42601/42612, POC 2)	Sampling/Analysis Method	TAPI 200 EU (699)
	Parameter Begin Date	20110101
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	8
	Distance from supporting structure (m)	0.3
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	21
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	175
	Probe material	Teflon
	Residence time (sec)	1.6
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No
Carbon Monoxide (42101, POC 2)	Sampling/Analysis Method	TAPI 300 EU (593)
	Parameter Begin Date	20080101
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A

	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	0.3
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	21
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	175
	Probe material	Teflon
	Residence time (sec)	1.9
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20110101
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	40
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20060517
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale
	Monitor type	SLAMS, NCore

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	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	0.3
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	21
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	175
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	20101217
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	0.3
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	21
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	175
	Probe material	Teflon
	Residence time (sec)	1.9
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
Sulfur Dioxide (42401, POC 2)	Sampling/Analysis Method	TAPI 100 EU (600)
	Parameter Begin Date	20110101
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale

	Monitor type	SLAMS, NCore
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	0.3
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	21
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	175
	Probe material	Teflon
	Residence time (sec)	5.8
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Chehalis-Market Blvd	Site Information	
	AQS ID	530410004
	Street Address	350 N Market Blvd
	Zip Code	98532
	Latitude	46.66409
	Longitude	-122.96732
	Date Site Established	20091229
	MSA/CBSA/CSA Represented	Centralia
	County	Lewis
	Distance from roadway (m)	6
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20091229
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	0.3
	Distance from obstruction on roof (m)	11
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	25
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Chelan-Woodin Ave	Site Information	
	AQS ID	530070007
	Street Address	428 W Woodin Ave. , Chelan, WA (Chelan Ranger Station)
	Zip Code	98816
	Latitude	47.83861
	Longitude	-120.023076
	Date Site Established	20020915
	MSA/CBSA/CSA Represented	Wenatchee
	County	Chelan
	Distance from roadway (m)	6
	Traffic count (AADT)	N/A
	Ground cover	Grass, dirt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20160906
	Monitor Objective	General/Background
	Measurement Scale	Neighborhood
	Monitor type	Non-EPA federal
	Collecting agency	USDA Forest Service
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	10
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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Cheney-Turnbull Site Information		
	AQS ID	530630001
	Street Address	S 26010 Smith Road (Turnbull Slough National Wildlife Refuge)
	Zip Code	99004
	Latitude	47.41645
	Longitude	-117.52997
	Date Site Established	19710701
	MSA/CBSA/CSA Represented	Spokane-Spokane Valley
	County	Spokane
	Distance from roadway (m)	40
	Traffic count (AADT)	N/A
	Ground cover	Grass, dirt
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19990501
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	May-Oct
	Probe height (m)	4
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	70
	Distance from trees (m)	100
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	3.8
	Changes in next 18 months?	No
Suitable for NAAQS comparison?	Yes	

Clarkston-13th St	Site Information	
	AQS ID	530030004
	Street Address	13Th St And Port Way (Clarkston Stp)
	Zip Code	99403
	Latitude	46.425416
	Longitude	-117.060445
	Date Site Established	19930616
	MSA/CBSA/CSA Represented	Lewiston
	County	Asotin
	Distance from roadway (m)	100
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20070307
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Colville-E 1st St	Site Information	
	AQS ID	530650005
	Street Address	261 E 1St St
	Zip Code	99114
	Latitude	48.544448
	Longitude	-117.903425
	Date Site Established	20151025
	MSA/CBSA/CSA Represented	Spokane-Spokane Valley
	County	Spokane
	Distance from roadway (m)	22
	Traffic count (AADT)	N/A
	Ground cover	Roof
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20160520
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	50
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20151025
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round

	Probe height (m)	15
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	50
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No
PM₁₀ (81102, POC 3)	Sampling/Analysis Method	TEOM-Gravimetric (079)
	Parameter Begin Date	20151025
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	15
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	50
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Custer-Loomis	Site Information	
	AQS ID	530730005
	Street Address	1330 Loomis Trail Rd
	Zip Code	98240
	Latitude	48.95074
	Longitude	-122.55441
	Date Site Established	19890413
	MSA/CBSA/CSA Represented	Bellingham
	County	Whatcom
	Distance from roadway (m)	33
	Traffic count (AADT)	N/A
	Ground cover	Grass
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	20090606
	Monitor Objective	Regional Transport
	Measurement Scale	Regional Scale
	Monitor type	SLAMS
	Collecting agency	Northwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	130
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	9
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Darrington-Fir St	Site Information	
	AQS ID	530610020
	Street Address	1085 Fir St
	Zip Code	98241
	Latitude	48.2469
	Longitude	-121.6031
	Date Site Established	20060721
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Snohomish
	Distance from roadway (m)	3
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
PM_{2.5} (88101, POC 3)	Sampling/Analysis Method	8500 TEOM (181)
	Parameter Begin Date	20101228
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	25
	Distance from trees (m)	200
	Distance from furnace or incinerator flue (m)	200
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Dayton-W Main	Site Information	
	AQS ID	530130002
	Street Address	206 W Main St
	Zip Code	99328
	Latitude	46.318
	Longitude	-117.985
	Date Site Established	20090205
	MSA/CBSA/CSA Represented	Walla Walla
	County	Walla Walla
	Distance from roadway (m)	33
	Traffic count (AADT)	N/A
	Ground cover	Gravel, asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20090205
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Ellensburg-Ruby St	Site Information	
	AQS ID	530370002
	Street Address	201 N. Ruby
	Zip Code	98926
	Latitude	46.99364
	Longitude	-120.545
	Date Site Established	19951104
	MSA/CBSA/CSA Represented	Ellensburg
	County	Kittitas
	Distance from roadway (m)	33
	Traffic count (AADT)	N/A
	Ground cover	Roof
PM_{2.5} (88101, POC 5)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20141001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Will add nephelometer PM _{2.5} in 2018.
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Enumclaw-Mud Mtn	Site Information	
	AQS ID	530330023
	Street Address	30525 Se Mud Mountain Road
	Zip Code	98022
	Latitude	47.1411
	Longitude	-121.9379
	Date Site Established	19980708
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	15
	Traffic count (AADT)	N/A
	Ground cover	Gravel, dirt, grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20040201
	Monitor Objective	Regional Transport
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19980708
	Monitor Objective	Regional Transport
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	May-Oct
	Probe height (m)	3
	Distance from supporting structure (m)	0.5
	Distance from obstruction on roof (m)	N/A

	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	5.7
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Ferndale-Kickerville Rd Site Information		
	AQS ID	530730013
	Street Address	6036 Kickerville Road
	Zip Code	98248
	Latitude	48.855274
	Longitude	-122.7047
	Date Site Established	20170101
	MSA/CBSA/CSA Represented	Bellingham
	County	Whatcom
	Distance from roadway (m)	25
	Traffic count (AADT)	N/A
	Ground cover	Grass, gravel
Sulfur Dioxide (42401, POC 2)	Sampling/Analysis Method	TAPI 100 (077)
	Parameter Begin Date	20170101
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS
	Collecting agency	Intalco
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	15
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

**Ferndale-Mountain
View Rd**

Site Information		
	AQS ID	530730017
	Street Address	4050 Mountain View Rd
	Zip Code	98248
	Latitude	48.848065
	Longitude	-122.688888
	Date Site Established	20170101
	MSA/CBSA/CSA Represented	Bellingham
	County	Whatcom
	Distance from roadway (m)	10
	Traffic count (AADT)	N/A
	Ground cover	Grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20170101
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS
	Collecting agency	Intalco
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	55
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Sulfur Dioxide (42401, POC 2)	Sampling/Analysis Method	TAPI 100 (077)
	Parameter Begin Date	20170101
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS
	Collecting agency	Intalco
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1

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	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	55
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	15
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

**Issaquah-Lake
Sammamish**
Site Information

	AQS ID	530330010
	Street Address	2000 NW Sammamish Rd
	Zip Code	98027
	Latitude	47.5525
	Longitude	-122.064722
	Date Site Established	19751201
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	70
	Traffic count (AADT)	N/A
	Ground cover	Gravel, grass
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19810101
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	May-Oct
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	2.8
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Kennewick-Metaline	Site Information	
	AQS ID	530050002
	Street Address	5929 W Metaline (Kennewick Skills Center)
	Zip Code	99336
	Latitude	46.21835
	Longitude	-119.204153
	Date Site Established	19941001
	MSA/CBSA/CSA Represented	Kennewick-Richland
	County	Benton
	Distance from roadway (m)	88
	Traffic count (AADT)	N/A
	Ground cover	Roof
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20120807
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	18
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	66
	Distance from furnace or incinerator flue (m)	
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20051019
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Benton Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round

Kennewick-Metaline	Site Information	
	Probe height (m)	7
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	18
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	66
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No
PM₁₀ (81102, POC 3)	Sampling/Analysis Method	TEOM-Gravimetric (079)
	Parameter Begin Date	20041001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Benton Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	7
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	18
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	66
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

**Kennewick-S
Clodfelter**

Site Information	
AQS ID	530050003
Street Address	526 S Clodfelter Rd
Zip Code	99336
Latitude	46.204582
Longitude	-119.243743
Date Site Established	20150610
MSA/CBSA/CSA Represented	Kennewick-Richland
County	Benton
Distance from roadway (m)	100
Traffic count (AADT)	N/A
Ground cover	Grass, asphalt
Ozone (44201, POC 1)	Sampling/Analysis Method
	UV Absorption (087)
	Parameter Begin Date
	20150610
	Monitor Objective
	Population Exposure
	Measurement Scale
	Neighborhood
	Monitor type
	SLAMS
	Collecting agency
	Benton Clean Air Agency
	Analytical lab
	N/A
	Reporting agency
	Washington State Department of Ecology (1136)
	Sampling frequency
	Continuous
	Sampling season
	May-Oct
	Probe height (m)
	15
	Distance from supporting structure (m)
	N/A
	Distance from obstruction on roof (m)
	N/A
	Distance from obstruction not on roof (m)
	N/A
	Distance from trees (m)
	N/A
	Distance from furnace or incinerator flue (m)
	N/A
	Unrestricted airflow (deg)
	360
	Probe material
	Teflon
	Residence time (sec)
	9
	Changes in next 18 months?
	No
	Suitable for NAAQS comparison?
	Yes

Kent-James & Central Site Information

	AQS ID	530332004
	Street Address	614 Railroad Ave N, Kent
	Zip Code	98030
	Latitude	47.386111
	Longitude	-122.230278
	Date Site Established	19870702
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	37
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
PM_{2.5} (88101, POC 3)	Sampling/Analysis Method	8500 TEOM (181)
	Parameter Begin Date	20101217
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	120
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Lacey-College St	Site Information	
	AQS ID	530670013
	Street Address	1900 College St Se (Mountain View Elementary School)
	Zip Code	98503
	Latitude	47.029396
	Longitude	-122.821548
	Date Site Established	19840401
	MSA/CBSA/CSA Represented	Olympia-Tumwater
	County	Thurston
	Distance from roadway (m)	100
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20140401
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	2
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

LaCrosse-Hill St	Site Information	
	AQS ID	530750005
	Street Address	111 Hill Street, Lacrosse, WA
	Zip Code	99143
	Latitude	46.8153
	Longitude	-117.8739
	Date Site Established	20020719
	MSA/CBSA/CSA Represented	Pullman
	County	Whitman
	Distance from roadway (m)	100
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20021001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

Lake Forest Park	Site Information	
	AQS ID	530330024
	Street Address	17171 Bothell Way NE
	Zip Code	98155
	Latitude	47.7550
	Longitude	-122.2806
	Date Site Established	20171211
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	60
	Traffic count (AADT)	N/A
	Ground cover	Grass, asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20171211
	Monitor Objective	Population Exposure
	Measurement Scale	Middle
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	8
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Leavenworth-Evans St	Site Information	
	AQS ID	530070010
	Street Address	330 Evans St (Cascade School District)
	Zip Code	98826
	Latitude	47.598863
	Longitude	-120.664702
	Date Site Established	20050202
	MSA/CBSA/CSA Represented	Wenatchee
	County	Chelan
	Distance from roadway (m)	1.5
	Traffic count (AADT)	N/A
	Ground cover	Grass, dirt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20050701
	Monitor Objective	General/Background
	Measurement Scale	Neighborhood
	Monitor type	Non-EPA federal
	Collecting agency	USDA Forest Service
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	12
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	5
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	25
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

Longview-30th Ave	Site Information	
	AQS ID	530150015
	Street Address	1324 30th Ave (Olympic Elementary School)
	Zip Code	98632
	Latitude	46.139444
	Longitude	-122.961944
	Date Site Established	20010401
	MSA/CBSA/CSA Represented	Longview
	County	Cowlitz
	Distance from roadway (m)	15
	Traffic count (AADT)	N/A
	Ground cover	Grass, asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20030306
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Southwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	20
	Distance from supporting structure (m)	0.5
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Malaga-Malaga Hwy	Site Information	
	AQS ID	530070012
	Street Address	8100 Malaga Alcoa Highway
	Zip Code	98831
	Latitude	47.911111
	Longitude	-120.095544
	Date Site Established	20170101
	MSA/CBSA/CSA Represented	Wenatchee
	County	Chelan
	Distance from roadway (m)	8
	Traffic count (AADT)	N/A
	Ground cover	Grass, gravel
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20170101
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS
	Collecting agency	Intalco
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Sulfur Dioxide (42401, POC 2)	Sampling/Analysis Method	TAPI 100 (077)
	Parameter Begin Date	20170101
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS
	Collecting agency	Intalco
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A

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	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	15
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Marysville-7th Ave	Site Information	
	AQS ID	530611007
	Street Address	1799 7th St
	Zip Code	98270
	Latitude	48.054315
	Longitude	-122.171529
	Date Site Established	19910927
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Snohomish
	Distance from roadway (m)	10
	Traffic count (AADT)	N/A
	Ground cover	Grass
PM_{2.5} (88101, POC 3)	Sampling/Analysis Method	1405F TEOM (581)
	Parameter Begin Date	20110106
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	75
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Mesa-Pepiot Way	Site Information	
	AQS ID	530210002
	Street Address	200 Pepiot Way (Mesa Elementary School)
	Zip Code	99343
	Latitude	46.5754
	Longitude	-119.0021
	Date Site Established	20030115
	MSA/CBSA/CSA Represented	Kennewick-Richland
	County	Franklin
	Distance from roadway (m)	305
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20030115
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	33
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Moses Lake-Balsam St	Site Information	
	AQS ID	530251002
	Street Address	412 S Balsam St, Moses Lake, WA
	Zip Code	98837
	Latitude	47.1303
	Longitude	-119.2737
	Date Site Established	20030119
	MSA/CBSA/CSA Represented	Moses Lake-Othello, WA
	County	Grant
	Distance from roadway (m)	15
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20040101
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	2
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	25
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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**Mt Rainier-
Jackson Visitor
Ctr**

Site Information

	AQS ID	530530012
	Street Address	Jackson Visitor's Center Mt Rainier, WA
	Zip Code	98321
	Latitude	46.7841
	Longitude	-121.740367
	Date Site Established	19980710
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Pierce
	Distance from roadway (m)	9
	Traffic count (AADT)	506 (706, 2012 WSDOT)
	Ground cover	Asphalt, rock, snow
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19980710
	Monitor Objective	General/Background
	Measurement Scale	Regional Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)/National Park Service
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	1
	Distance from trees (m)	35
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	180
	Probe material	Teflon
	Residence time (sec)	4
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Mt Vernon-Second Ave	Site Information	
	AQS ID	530570015
	Street Address	1600 South Second Street
	Zip Code	98273
	Latitude	48.4102
	Longitude	-122.3376
	Date Site Established	20020807
	MSA/CBSA/CSA Represented	Mount Vernon-Anacortes
	County	Skagit
	Distance from roadway (m)	1.5
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20050701
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Northwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
Unrestricted airflow (deg)	360	
Changes in next 18 months?	No	
Suitable for NAAQS comparison?	No	

2018 Ambient Air Monitoring Network Plan

Neah Bay 2-Makah Tribe	Site Information	
	AQS ID	530090015
	Street Address	1321 Bay View Avenue, Neah Bay
	Zip Code	98381
	Latitude	48.366058
	Longitude	-124.610045
	Date Site Established	20100216
	MSA/CBSA/CSA Represented	Port Angeles
	County	Clallam
	Distance from roadway (m)	30
	Traffic count (AADT)	N/A
	Ground cover	Grass, dirt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20100216
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Makah Nation
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	9
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	270
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

North Bend-North Bend Way Site Information

	AQS ID	530330017
	Street Address	42404 Se North Bend Way
	Zip Code	98045
	Latitude	47.49022
	Longitude	-121.77278
	Date Site Established	19980601
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	183
	Traffic count (AADT)	N/A
	Ground cover	Grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20000111
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20030310
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round

2018 Ambient Air Monitoring Network Plan

	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19980601
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	May-Oct
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	2.8
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Okanogan (Temporary)	Site Information	
	AQS ID	530470004
	Street Address	1331 2nd Ave N
	Zip Code	98840
	Latitude	48.374739
	Longitude	-119.568756
	Date Site Established	20170615
	MSA/CBSA/CSA Represented	NA
	County	Okanogan
	Distance from roadway (m)	6
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20170620
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SPMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	2
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Temporary site will be discontinued in 2018.
	Suitable for NAAQS comparison?	

Statement of Purpose: This temporary nephelometer SPMS monitoring site was established in 2017 in order to evaluate the need for ongoing monitoring in a previously unmonitored community. The Okanogan SPMS site is approximately 5 miles south of the permanent Omak tribal monitoring site, and Ecology plans to analyze data from both sites to determine the spatial distribution of PM_{2.5} pollution in the Okanogan valley.

2018 Ambient Air Monitoring Network Plan

**Omak-Colville
Tribe**

Site Information		
	AQS ID	530470013
	Street Address	Corner of 8th Ave & Omak Okanogan E
	Zip Code	98841
	Latitude	48.39999
	Longitude	-119.51896
	Date Site Established	20101020
	MSA/CBSA/CSA Represented	NA
	County	Okanogan
	Distance from roadway (m)	110
	Traffic count (AADT)	N/A
	Ground cover	Grass, dirt
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20101020
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
Changes in next 18 months?	No	
Suitable for NAAQS comparison?	N/A	
PM_{2.5} (88101, POC 5)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20161011
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Colville Tribe
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
Probe height (m)	2	
Distance from supporting structure (m)	N/A	

	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	100
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Pomeroy (Temporary)	Site Information	
	AQS ID	530230001
	Street Address	572 Pataha St
	Zip Code	99347
	Latitude	46.474438
	Longitude	-117.614764
	Date Site Established	20170504
	MSA/CBSA/CSA Represented	NA
	County	Garfield
	Distance from roadway (m)	8
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20170504
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SPMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Temporary site will be discontinued in 2018.
	Suitable for NAAQS comparison?	No

Statement of Purpose: This temporary nephelometer monitoring SPMS monitoring site was established in 2017 to evaluate the need for ongoing monitoring in a previously unmonitored community.

Port Angeles-5th St	Site Information	
	AQS ID	530090017
	Street Address	102 E 5th St
	Zip Code	98362
	Latitude	48.115
	Longitude	-123.436434
	Date Site Established	20150406
	MSA/CBSA/CSA Represented	Port Angeles
	County	Clallam
	Distance from roadway (m)	5
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20150406
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	15
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

Port Townsend-San Juan	Site Information	
	AQS ID	530310003
	Street Address	3939 San Juan Ave (Blue Heron Middle School)
	Zip Code	98368
	Latitude	48.12919
	Longitude	-122.77897
	Date Site Established	20000113
	MSA/CBSA/CSA Represented	NA
	County	Jefferson
	Distance from roadway (m)	15
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20021001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	12
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Pullman-Dexter Ave	Site Information	
	AQS ID	530750003
	Street Address	240 SE Dexter (Pullman Administration Building)
	Zip Code	99163
	Latitude	46.72447
	Longitude	-117.18014
	Date Site Established	20000119
	MSA/CBSA/CSA Represented	Pullman
	County	Whitman
	Distance from roadway (m)	37
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20150101
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	5
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	20
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

Puyallup-128th St	Site Information	
	AQS ID	530531018
	Street Address	9616 128th St E
	Zip Code	98373
	Latitude	47.14
	Longitude	-122.3003
	Date Site Established	19911207
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Pierce
	Distance from roadway (m)	1.5
	Traffic count (AADT)	N/A
	Ground cover	Gravel, grass
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20051116
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	80
	Distance from furnace or incinerator flue (m)	100
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Quincy-3rd Ave NE		Site Information
	AQS ID	530251003
	Street Address	330 3rd Ave NE
	Zip Code	98848
	Latitude	47.241153
	Longitude	-119.847824
	Date Site Established	20170601
	MSA/CBSA/CSA Represented	Moses Lake-Othello, WA
	County	Grant
	Distance from roadway (m)	41
	Traffic count (AADT)	N/A
	Ground cover	Grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20170601
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SPMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Temporary site will be discontinued in September 2018.
	Suitable for NAAQS comparison?	N/A
Nitrogen Dioxide (42602, POC 1)	Sampling/Analysis Method	TAPI 200 EU (599)
	Parameter Begin Date	20170601
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SPMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous

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	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	4.3
	Changes in next 18 months?	Temporary site will be discontinued in September 2018.
	Suitable for NAAQS comparison?	No
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20170601
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SPMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Temporary site will be discontinued in September 2018.
	Suitable for NAAQS comparison?	No

Statement of Purpose: The Quincy SPMS was established for a 1-year study to evaluate markers of diesel exhaust pollution. The small town of Quincy has a number of diesel exhaust sources, including two state highways, an active rail line, and a number of data centers with diesel-powered generators. Ecology is conducting a multi-pollutant study to evaluate the impact of these diesel exhaust sources on air quality in Quincy. The study will conclude in quarter 3 of 2018.

Ritzville-Alder	Site Information	
	AQS ID	530010003
	Street Address	109 W Alder, Ritzville, WA
	Zip Code	99169
	Latitude	47.12
	Longitude	-118.3819
	Date Site Established	20001021
	MSA/CBSA/CSA Represented	Moses Lake-Othello, WA
	County	Adams
	Distance from roadway (m)	1.5
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, gravel
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20021001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	8
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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Rosalia-Josephine	Site Information	
	AQS ID	530750006
	Street Address	906 South Josephine Avenue (Rosalia Elementary School)
	Zip Code	99170
	Latitude	47.23136
	Longitude	-117.36856
	Date Site Established	20020619
	MSA/CBSA/CSA Represented	Pullman
	County	Whitman
	Distance from roadway (m)	25
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20021001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	2
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	15
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Seattle-10th & Weller	Site Information	
	AQS ID	530330030
	Street Address	10th & Weller
	Zip Code	98104
	Latitude	47.597222
	Longitude	-122.319722
	Date Site Established	20140401
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	6
	Traffic count (AADT)	149,000 (I-5, WSDOT 2015)
	Ground cover	Concrete, grass
Carbon Monoxide (42101, POC 2)	Sampling/Analysis Method	TAPI 300 EU (593)
	Parameter Begin Date	20140401
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	3
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	1.6
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20140416
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous

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	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Nitrogen Dioxide (42602, POC 1)	Sampling/Analysis Method	TAPI 200 EU (599)
	Parameter Begin Date	20140401
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
Unrestricted airflow (deg)	360	
Probe material	Teflon	
Residence time (sec)	3.2	
Changes in next 18 months?	No	
Suitable for NAAQS comparison?	Yes	
PM_{2.5} (88101, POC 5)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20140519
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
Sampling season	Year-round	

	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Seattle-Beacon Hill	Site Information	
	AQS ID	530330080
	Street Address	4103 Beacon Hill S
	Zip Code	98108
	Latitude	47.568236
	Longitude	-122.308628
	Date Site Established	19790604
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	9
	Traffic count (AADT)	12700 (2012 WSDOT)
	Ground cover	Grass, gravel
Trace NO_y (42600/42601/42612, POC 2)	Sampling/Analysis Method	Thermo 42C (674)
	Parameter Begin Date	20100801
	Monitor Objective	General/Background
	Measurement Scale	Urban Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	10
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	5.5
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No
Carbon Monoxide (42101, POC 2)	Sampling/Analysis Method	TAPI 300 EU (593)
	Parameter Begin Date	20070207
	Monitor Objective	General/Background
	Measurement Scale	Urban Scale
	Monitor type	SLAMS, NCore

	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	20
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	15
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20110101
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A

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Nitrogen Dioxide (42602)	Sampling/Analysis Method	TAPI 200 EU (599)
	Parameter Begin Date	20120801
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	20
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	3.7
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
Ozone (44201)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	20080208
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS, NCore
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	20
	Distance from trees (m)	20

	Distance from furnace or incinerator flue (m)	N/A	
	Unrestricted airflow (deg)	360	
	Probe material	Teflon	
	Residence time (sec)	15	
	Changes in next 18 months?	No	
	Suitable for NAAQS comparison?	Yes	
PM_{2.5} (88101)		Primary (POC 3)	Collocated (POC 1)
	Sampling/Analysis Method	8500 TEOM (181)	R & P 2025 (145)
	Parameter Begin Date	19981101	19981101
	Monitor Objective	General/Background	General/Background
	Measurement Scale	Urban Scale	Urban Scale
	Monitor type	SLAMS, NCore	SLAMS, NCore
	Collecting agency	Washington State Department of Ecology (1136)	Washington State Department of Ecology (1136)
	Analytical lab	N/A	Washington State Department of Ecology (1136)
	Reporting agency	Washington State Department of Ecology (1136)	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous	1/3
	Sampling season	Year-round	Year-round
	Probe height (m)	4	2
	Distance from supporting structure (m)	N/A	2
	Distance from obstruction on roof (m)	N/A	N/A
	Distance from obstruction not on roof (m)	N/A	N/A
	Distance from trees (m)	N/A	N/A
	Distance from furnace or incinerator flue (m)	N/A	N/A
	Unrestricted airflow (deg)	360	360
	Changes in next 18 months?	No	No
	Suitable for NAAQS comparison?	Yes	Yes
Sulfur Dioxide (42401, POC 2)	Sampling/Analysis Method	TAPI 100 EU (600)	
	Parameter Begin Date	20000214	
	Monitor Objective	General/Background	
	Measurement Scale	Urban Scale	
	Monitor type	SLAMS, NCore	
	Collecting agency	Washington State Department of Ecology (1136)	
	Analytical lab	N/A	

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	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	20
	Distance from trees (m)	20
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	15
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Seattle-Duwamish	Site Information	
	AQS ID	530330057
	Street Address	4700 East Marginal Way South
	Zip Code	98134
	Latitude	47.55975
	Longitude	-122.338265
	Date Site Established	19710802
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	40
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
PM_{2.5} (88101, POC 3)	Sampling/Analysis Method	1405F TEOM (581)
	Parameter Begin Date	20101227
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Seattle-South Park	Site Information	
	AQS ID	530331011
	Street Address	8201 10th Avenue South
	Zip Code	98108
	Latitude	47.53091
	Longitude	-122.3208
	Date Site Established	20030106
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	1.5
	Traffic count (AADT)	N/A
	Ground cover	Asphalt
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20030106
	Monitor Objective	Population Exposure
	Measurement Scale	Microscale
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	180
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Shelton-W Franklin	Site Information	
	AQS ID	530450007
	Street Address	122 W Franklin
	Zip Code	98584
	Latitude	47.21355
	Longitude	-123.10081
	Date Site Established	20110420
	MSA/CBSA/CSA Represented	Shelton
	County	Mason
	Distance from roadway (m)	15
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20110420
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Olympic Region Clean Air Agency (0815)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	15
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	10
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	320
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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Spokane-Augusta Ave

Site Information	
AQS ID	530630021
Street Address	3104 E Augusta Ave
Zip Code	99207
Latitude	47.672482
Longitude	-117.364852
Date Site Established	20090329
MSA/CBSA/CSA Represented	Spokane-Spokane Valley
County	Spokane
Distance from roadway (m)	23
Traffic count (AADT)	N/A
Ground cover	Roof
Meteorological	
Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
Parameter Begin Date	20090713
Monitor Objective	Population Exposure
Measurement Scale	Neighborhood
Monitor type	SLAMS
Collecting agency	Washington State Department of Ecology (1136)
Analytical lab	N/A
Reporting agency	Washington State Department of Ecology (1136)
Sampling frequency	Continuous
Sampling season	Year-round
Probe height (m)	10
Distance from supporting structure (m)	N/A
Distance from obstruction on roof (m)	N/A
Distance from obstruction not on roof (m)	N/A
Distance from trees (m)	N/A
Distance from furnace or incinerator flue (m)	N/A
Unrestricted airflow (deg)	360
Changes in next 18 months?	Site will be relocated by 2021 due to highway construction.
Suitable for NAAQS comparison?	N/A
PM₁₀ (81102, POC 3)	
Sampling/Analysis Method	TEOM-Gravimetric (079)
Parameter Begin Date	20120620
Monitor Objective	Population Exposure
Measurement Scale	Neighborhood
Monitor type	SLAMS
Collecting agency	Spokane Regional Clean Air Agency
Analytical lab	N/A
Reporting agency	Washington State Department of Ecology (1136)
Sampling frequency	Continuous
Sampling season	Year-round
Probe height (m)	6

	Distance from supporting structure (m)	0.5
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Site will be relocated by 2021 due to highway construction.
	Suitable for NAAQS comparison?	Yes
PM_{2.5} (88101, POC 5)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20090329
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Spokane Regional Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	2
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	Site will be relocated by 2021 due to highway construction.
	Suitable for NAAQS comparison?	Yes

2018 Ambient Air Monitoring Network Plan

Spokane-Greenbluff	Site Information	
	AQS ID	530630046
	Street Address	E 9814 Greenbluff Rd, Greenbluff
	Zip Code	99005
	Latitude	47.82728
	Longitude	-117.27422
	Date Site Established	19900401
	MSA/CBSA/CSA Represented	Spokane-Spokane Valley
	County	Spokane
	Distance from roadway (m)	50
	Traffic count (AADT)	20000 (Hwy 2, WSDOT 2012)
	Ground cover	Grass, gravel
Ozone (44201, POC 1)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19900401
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	5.7
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Spokane-Monroe St	Site Information	
	AQS ID	530630047
	Street Address	N 4601 Monroe St
	Zip Code	99205
	Latitude	47.69978
	Longitude	-117.42635
	Date Site Established	19890101
	MSA/CBSA/CSA Represented	Spokane-Spokane Valley
	County	Spokane
	Distance from roadway (m)	40
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20040517
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	12
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	40
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

Sunnyside-S 16th	Site Information	
	AQS ID	530770005
	Street Address	810 16th St (Harrison Middle School)
	Zip Code	98944
	Latitude	46.31932
	Longitude	-119.999677
	Date Site Established	19980821
	MSA/CBSA/CSA Represented	Yakima
	County	Yakima
	Distance from roadway (m)	55
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20150915
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Yakima Region Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	2
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Tacoma-Alexander Ave	Site Information	
	AQS ID	530530031
	Street Address	2301 Alexander Ave, Tacoma, WA
	Zip Code	98421
	Latitude	47.2656
	Longitude	-122.3858
	Date Site Established	19870101
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Pierce
	Distance from roadway (m)	1.5
	Traffic count (AADT)	N/A
	Ground cover	Grass, gravel
Non-compliance PM_{2.5} (88502, POC 4)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20030101
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

**Tacoma-L
St**

Site Information

	AQS ID	530530029		
	Street Address	7802 South L Street		
	Zip Code	98408		
	Latitude	47.1864		
	Longitude	-122.4517		
	Date Site Established	19991003		
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue		
	County	Pierce		
	Distance from roadway (m)	1.5		
	Traffic count (AADT)	N/A		
	Ground cover	Asphalt, grass		
PM_{2.5} (88101)		Primary (POC 1)	Collocated (POC 2)	Collocated (POC 3)
	Sampling/Analysis Method	R & P 2025 (145)	R & P 2025 (145)	1405F TEOM (581)
	Parameter Begin Date	19991003	19991003	19991003
	Monitor Type Begin Date	19991003		
	Monitor Objective	Population Exposure	Population Exposure	Population Exposure
	Measurement Scale	Neighborhood	Neighborhood	Neighborhood
	Monitor type	SLAMS	SLAMS	SLAMS
	Collecting agency	Puget Sound Clean Air Agency	Puget Sound Clean Air Agency	Puget Sound Clean Air Agency
	Analytical lab	N/A	N/A	N/A
	Reporting agency	Washington State Department of Ecology (1136)	Washington State Department of Ecology (1136)	Washington State Department of Ecology (1136)
	Sampling frequency	1/1	1/12	Continuous
	Sampling season	Year-round	Year-round	Year-round
	Probe height (m)	2	2	3
	Distance from supporting structure (m)	N/A	N/A	N/A
	Distance from obstruction on roof (m)	N/A	N/A	N/A
	Distance from obstruction not on roof (m)	N/A	N/A	N/A
	Distance from trees (m)	60	60	60
	Distance from furnace or incinerator flue (m)	N/A	N/A	N/A
	Unrestricted airflow (deg)	360	360	360
	Changes in next 18 months?	No	No	No
	Suitable for NAAQS comparison?	Yes	Yes	Yes

Tacoma-S 36th	Site Information	
	AQS ID	530530024
	Street Address	1802 S 36Th St
	Zip Code	98408
	Latitude	47.22634
	Longitude	-122.46256
	Date Site Established	20160101
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Pierce
	Distance from roadway (m)	30
	Traffic count (AADT)	134,000 (15, WSDOT 2015)
	Ground cover	Asphalt, grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20160204
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Nitrogen Dioxide (42602, POC 1)	Sampling/Analysis Method	TAPI 200 EU (599)
	Parameter Begin Date	20160101
	Monitor Objective	Source Oriented
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6

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	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	3.2
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes
PM_{2.5} (88101)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20160204
	Monitor Objective	Highest Concentration
	Measurement Scale	Microscale
	Monitor type	SLAMS, Near-road
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Tacoma-Tower Dr	Site Information	
	AQS ID	530531016
	Street Address	5225 Tower Drive Ne
	Zip Code	98422
	Latitude	47.304444
	Longitude	-122.412
	Date Site Established	19910101
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	Pierce
	Distance from roadway (m)	33
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, shrubs
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	19910101
	Monitor Objective	General/Background
	Measurement Scale	Urban
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A

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Taholah-Quinault Tribe	Site Information	
	AQS ID	530270011
	Street Address	Chitwin Drive, Taholah, WA
	Zip Code	98571
	Latitude	47.20637
	Longitude	-124.1722
	Date Site Established	20040428
	MSA/CBSA/CSA Represented	Aberdeen
	County	Grays Harbor
	Distance from roadway (m)	150
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20150818
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Quinault Tribe
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

**Toppenish-Yakama
Tribe**

Site Information

	AQS ID	530770015
	Street Address	141 Ward Rd., Toppenish, WA
	Zip Code	98948
	Latitude	46.38024
	Longitude	-120.33266
	Date Site Established	20060131
	MSA/CBSA/CSA Represented	Yakima
	County	Yakima
	Distance from roadway (m)	400
	Traffic count (AADT)	N/A
	Ground cover	Grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20090608
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
PM_{2.5} (88101)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20151105
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Yakama Tribe
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A

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	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

Tukwila-Allentown	Site Information	
	AQS ID	530330069
	Street Address	11675 44th Ave S, Tukwila
	Zip Code	98168
	Latitude	47.498535
	Longitude	-122.278385
	Date Site Established	20170622
	MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
	County	King
	Distance from roadway (m)	14
	Traffic count (AADT)	N/A
	Ground cover	Grass
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Ecotech M9003 Aurora (812)
	Parameter Begin Date	20170701
	Monitor Type Begin Date	20170701
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Puget Sound Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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Twisp-Glover St	Site Information	
	AQS ID	530470009
	Street Address	118 S Glover St
	Zip Code	98856
	Latitude	48.36451
	Longitude	-120.121113
	Date Site Established	20031105
	MSA/CBSA/CSA Represented	NA
	County	Okanogan
	Distance from roadway (m)	20
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20031105
	Monitor Objective	General/Background
	Measurement Scale	Neighborhood
	Monitor type	Non-EPA federal
	Collecting agency	USDA Forest Service
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	6
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	25
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Vancouver-Blairmont		Site Information
	AQS ID	530110011
	Street Address	1500 SE Blairmont Dr (Mountain View High School)
	Zip Code	98683
	Latitude	45.616667
	Longitude	-122.516667
	Date Site Established	19880501
	MSA/CBSA/CSA Represented	Portland-Vancouver-Hillsboro
	County	Clark
	Distance from roadway (m)	200
	Traffic count (AADT)	N/A
	Ground cover	Grass, asphalt
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20071220
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Ozone (44201)	Sampling/Analysis Method	UV Absorption (087)
	Parameter Begin Date	19880501
	Monitor Objective	Population Exposure
	Measurement Scale	Urban Scale
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	May-Oct
	Probe height (m)	10
	Distance from supporting structure (m)	0.5

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	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	12
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Probe material	Teflon
	Residence time (sec)	15
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

**Vancouver-NE 84th
Ave**
Site Information

	AQS ID	530110024
	Street Address	2722 Ne 84th Ave
	Zip Code	98662
	Latitude	45.64336
	Longitude	-122.58737
	Date Site Established	20140901
	MSA/CBSA/CSA Represented	Portland-Vancouver-Hillsboro
	County	Clark
	Distance from roadway (m)	152
	Traffic count (AADT)	N/A
	Ground cover	Grass
PM_{2.5} (88101)	Sampling/Analysis Method	Met One BAM-1020 (170)
	Parameter Begin Date	20151125
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Southwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3
	Distance from supporting structure (m)	0.5
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	25
	Distance from trees (m)	31
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	Yes

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Walla Walla-12th St	Site Information	
	AQS ID	530710005
	Street Address	200 S 12th, Walla Walla, WA
	Zip Code	99362
	Latitude	46.05881
	Longitude	-118.35147
	Date Site Established	19890501
	MSA/CBSA/CSA Represented	Walla Walla
	County	Walla Walla
	Distance from roadway (m)	41
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20021001
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	2
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Wellpinit-Spokane Tribe	Site Information	
	AQS ID	530650002
	Street Address	6208 Ford Wellpinit Road, Wellpinit, WA
	Zip Code	99040
	Latitude	47.88528
	Longitude	-117.98865
	Date Site Established	20061010
	MSA/CBSA/CSA Represented	Spokane-Spokane Valley
	County	Spokane
	Distance from roadway (m)	30
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, gravel
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20081015
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	Tribal
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	4
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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Wenatchee-Fifth St	Site Information	
	AQS ID	530070011
	Street Address	1300 Fifth Street
	Zip Code	98801
	Latitude	47.43061
	Longitude	-120.34195
	Date Site Established	20121105
	MSA/CBSA/CSA Represented	Wenatchee
	County	Chelan
	Distance from roadway (m)	30
	Traffic count (AADT)	N/A
	Ground cover	Gravel, grass
Meteorological	Sampling/Analysis Method	RM Young Sonic Anemometer 85004 (062)
	Parameter Begin Date	20121105
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	10
	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	N/A
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20170401
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Washington State Department of Ecology (1136)
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	3

	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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**White Swan-Yakama
Tribe**

Site Information	
AQS ID	530770016
Street Address	321 Signal Peak Rd, White Swan
Zip Code	98952
Latitude	46.37543
Longitude	-120.72932
Date Site Established	20091027
MSA/CBSA/CSA Represented	Yakima
County	Yakima
Distance from roadway (m)	10
Traffic count (AADT)	N/A
Ground cover	Grass
Meteorological	RM Young Sonic Anemometer 85004 (062)
Sampling/Analysis Method	
Parameter Begin Date	20091109
Monitor Objective	Population Exposure
Measurement Scale	Neighborhood
Monitor type	Tribal
Collecting agency	Washington State Department of Ecology (1136)
Analytical lab	N/A
Reporting agency	Washington State Department of Ecology (1136)
Sampling frequency	Continuous
Sampling season	Year-round
Probe height (m)	10
Distance from supporting structure (m)	N/A
Distance from obstruction on roof (m)	N/A
Distance from obstruction not on roof (m)	N/A
Distance from trees (m)	N/A
Distance from furnace or incinerator flue (m)	N/A
Unrestricted airflow (deg)	360
Changes in next 18 months?	No
Suitable for NAAQS comparison?	N/A
Non-compliance PM_{2.5} (88502)	Radiance Research M903 Nephelometer (771)
Sampling/Analysis Method	
Parameter Begin Date	20091027
Monitor Objective	Population Exposure
Measurement Scale	Neighborhood
Monitor type	Tribal
Collecting agency	Yakama Tribe
Analytical lab	N/A
Reporting agency	Washington State Department of Ecology (1136)
Sampling frequency	Continuous
Sampling season	Year-round
Probe height (m)	2

	Distance from supporting structure (m)	N/A
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

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Winthrop-Chewuch Rd	Site Information	
	AQS ID	530470010
	Street Address	24 West Chewuch Rd
	Zip Code	98862
	Latitude	48.47724
	Longitude	-120.19057
	Date Site Established	20031106
	MSA/CBSA/CSA Represented	NA
	County	Okanogan
	Distance from roadway (m)	76
	Traffic count (AADT)	N/A
	Ground cover	Roof
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20031106
	Monitor Type Begin Date	20031106
	Monitor Objective	General/Background
	Measurement Scale	Neighborhood
	Monitor type	Non-EPA federal
	Collecting agency	USDA Forest Service
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	5
	Distance from supporting structure (m)	1
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	1
	Distance from trees (m)	7
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	180
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

Yacolt-Yacolt Rd	Site Information	
	AQS ID	530110022
	Street Address	406 W Yacolt Rd
	Zip Code	98675
	Latitude	45.8639
	Longitude	-122.410889
	Date Site Established	20030717
	MSA/CBSA/CSA Represented	Portland-Vancouver-Hillsboro
	County	Clark
	Distance from roadway (m)	112
	Traffic count (AADT)	N/A
	Ground cover	Asphalt, grass
Non-compliance PM_{2.5} (88502)	Sampling/Analysis Method	Radiance Research M903 Nephelometer (771)
	Parameter Begin Date	20070502
	Monitor Objective	Population Exposure
	Measurement Scale	Neighborhood
	Monitor type	SLAMS
	Collecting agency	Southwest Clean Air Agency
	Analytical lab	N/A
	Reporting agency	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous
	Sampling season	Year-round
	Probe height (m)	18
	Distance from supporting structure (m)	0.5
	Distance from obstruction on roof (m)	N/A
	Distance from obstruction not on roof (m)	N/A
	Distance from trees (m)	N/A
	Distance from furnace or incinerator flue (m)	N/A
	Unrestricted airflow (deg)	360
	Changes in next 18 months?	No
	Suitable for NAAQS comparison?	No

2018 Ambient Air Monitoring Network Plan

**Yakima-
4th Ave S**

Site Information

	AQS ID	530770009	
	Street Address	402 South 4Th Ave	
	Zip Code	98901	
	Latitude	46.598056	
	Longitude	-120.499167	
	Date Site Established	20000421	
	MSA/CBSA/CSA Represented	Yakima	
	County	Yakima	
	Distance from roadway (m)	14	
	Traffic count (AADT)	N/A	
	Ground cover	Roof	
PM₁₀ (81102)	Sampling/Analysis Method	TEOM-Gravimetric (079)	
	Parameter Begin Date	20150916	
	Monitor Objective	Population Exposure	
	Measurement Scale	Neighborhood	
	Monitor type	SLAMS	
	Collecting agency	Yakima Region Clean Air Agency	
	Analytical lab	N/A	
	Reporting agency	Washington State Department of Ecology (1136)	
	Sampling frequency	Continuous	
	Sampling season	Year-round	
	Probe height (m)	14	
	Distance from supporting structure (m)	N/A	
	Distance from obstruction on roof (m)	7	
	Distance from obstruction not on roof (m)	N/A	
	Distance from trees (m)	34	
	Distance from furnace or incinerator flue (m)	N/A	
	Unrestricted airflow (deg)	360	
	Changes in next 18 months?	No	
	Suitable for NAAQS comparison?	Yes	
	PM_{2.5} (88101)		Primary (POC 5)
Sampling/Analysis Method		Met One BAM-1020 (170)	R & P 2025 (145)
Parameter Begin Date		20070202	20070202
Monitor Objective		Population Exposure	Population Exposure
Measurement Scale		Neighborhood	Neighborhood
Monitor type		SLAMS	SLAMS
Collecting agency		Yakima Region Clean Air Agency	Yakima Region Clean Air Agency
Analytical lab		N/A	N/A

	Reporting agency	Washington State Department of Ecology (1136)	Washington State Department of Ecology (1136)
	Sampling frequency	Continuous	1/3
	Sampling season	Year-round	Year-round
	Probe height (m)	16	16
	Distance from supporting structure (m)	1	1
	Distance from obstruction on roof (m)	7	7
	Distance from obstruction not on roof (m)	N/A	N/A
	Distance from trees (m)	34	34
	Distance from furnace or incinerator flue (m)	N/A	N/A
	Unrestricted airflow (deg)	360	360
	Changes in next 18 months?	No	No
	Suitable for NAAQS comparison?	Yes	Yes

Yelm-Northern Pacific

Site Information	
AQS ID	530670005
Street Address	931 Northern Pacific Road
Zip Code	98597
Latitude	46.952562
Longitude	-122.59527
Date Site Established	20060501
MSA/CBSA/CSA Represented	Seattle-Tacoma-Bellevue
County	Thurston
Distance from roadway (m)	230
Traffic count (AADT)	N/A
Ground cover	Gravel, grass
Ozone (44201)	
Sampling/Analysis Method	UV Absorption (087)
Parameter Begin Date	20060501
Monitor Objective	Population Exposure
Measurement Scale	Urban Scale
Monitor type	SLAMS
Collecting agency	Washington State Department of Ecology (1136)
Analytical lab	N/A
Reporting agency	Washington State Department of Ecology (1136)
Sampling frequency	Continuous
Sampling season	May-Oct
Probe height (m)	3
Distance from supporting structure (m)	0.7
Distance from obstruction on roof (m)	N/A
Distance from obstruction not on roof (m)	N/A
Distance from trees (m)	50
Distance from furnace or incinerator flue (m)	N/A
Unrestricted airflow (deg)	360
Probe material	Teflon
Residence time (sec)	4.4
Changes in next 18 months?	No
Suitable for NAAQS comparison?	Yes

Appendix E. Public Comment Period

The 2018 Ambient Air Monitoring Network Plan was posted for public comment from May 15-June 15 on Ecology's webpage. No comments were received.