



Oregon DEQ Air Quality Monitoring 2023 Annual Report

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Term	Meaning
AQI	Air Quality Index
BP	Barometric pressure
CAA	Clean Air Act
CO	Carbon monoxide
Comm	Community
DEQ	Department of Environmental Quality
DT	Differential temperature
EPA	Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
HAP	Hazardous air pollutant
LRAPA	Lane Regional Air Protection Agency
NAAQS	National Ambient Air Quality Standard
NO ₂	Nitrogen dioxide
O ₃	Ozone
PB	Lead
PM	Particulate matter
PM ₁₀	Particulate matter less than 10 micrometers (or microns) in diameter
PM _{2.5}	Particulate matter less than 2.5 micrometers (or microns) in diameter
PM _{2.5} Estimate	Estimate of PM _{2.5} from a light-scattering air monitoring method
PM _{2.5} Spec	Speciation of PM _{2.5} , characterization of PM _{2.5} chemical components
PPB	Parts per billion
PPM	Parts per million
RH	Relative humidity
SO ₂	Sulfur dioxide
SR	Solar radiation
Temp	Temperature
USG	Unhealthy for sensitive groups
µg/m ³	Micrograms per cubic meter
VOC	Volatile organic compound
WF	Wildfire
WS/WD	Wind speed/wind direction

Executive summary

In 2023 Oregon communities experienced poor air quality from wildfire smoke in central and southern Oregon, and the fire season went into September. Communities around Bend, Grants Pass, and Oakridge experienced the most severe impacts due to their proximity to the fires. More information on the fire impacts is available in the [Oregon DEQ Wildfire Smoke Trends Report](#).

In Oregon, PM_{2.5} and ozone are the criteria pollutants of primary concern as they degrade ambient air quality most frequently. Because of this, Oregon DEQ and the Lane Regional Air Protection Agency extensively monitor these pollutants. Also, DEQ monitors for PM₁₀, carbon dioxide, nitrogen dioxide and sulfur dioxide in select locations, as these pollutants have had minimal impact on air quality. All of them have trended downward, but PM_{2.5} and ozone sometimes exceed national standards.

Oregon also monitors for air toxics, and these data are summarized in the Air Toxics Report. The latest air toxics summary report is the [Air Toxics Summary for 2022](#).

Air quality data is available through EPA's [AQS database](#) and DEQ's [AQI website](#). Oregon air quality data requests and questions can be emailed to aqm.questions@deq.oregon.gov.

Background

Passed by Congress in 1970, the Clean Air Act established National Ambient Air Quality Standards for six pollutants and required states to adopt enforceable plans to meet and maintain these standards. The six pollutants are collectively known as criteria pollutants and include carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter and sulfur dioxide. Later in 1976, the EPA created the Air Quality Index to communicate air quality information to the public. It associates concentrations of each criteria pollutant in ambient air (outdoor air) to six categories of health risks.

The Oregon Department of Environmental Quality is responsible for implementing the CAA, maintaining compliance within the state. In Lane County, the Lane Regional Air Protection Agency is the local air authority responsible for monitoring Lane County's air and administering programs that protect and improve air quality. DEQ serves as the primary quality assurance organization with oversight of LRAPA's activities. Since the inception of the CAA, DEQ and LRAPA have implemented air quality improvement programs, and have observed steady decreases in concentrations for all criteria pollutants in the ambient air. However, PM_{2.5} and ozone remain as pollutants of primary concern.

PM_{2.5} and PM₁₀ are specific categories of particulate matter (PM) pollution. Particulate matter describes a mixture of solid particles and liquid droplets found in the air. PM₁₀ includes all particulate matter less than 10 micrometers (or microns) in diameter; PM_{2.5} includes all particulate matter less than 2.5 micrometers (or microns) in diameter. Particulate matter can be emitted directly from a source or produced as byproduct of chemical reactions with sulfur dioxide and nitrogen dioxide. Common particulate matter sources include wildfires, agriculture fields and construction sites. In Oregon, PM pollution frequently comes from large wildfires in the summer months and wood-burning stoves in the winter months.

Ozone is a chemical compound that has different impacts depending on its location in the atmosphere. In the upper layers of the atmosphere, ozone protects living organisms from ultraviolet radiation, but at ground level, ozone can negatively impact human health. Ground-level ozone is formed through a chemical reaction of nitrogen dioxide and volatile organic compounds under high temperatures and in the presence of sunlight. Elevated ground-level ozone concentrations are often observed during the summer months.

Concentrations of carbon monoxide, nitrogen dioxide and sulfur dioxide in the ambient air have significantly decreased but are still monitored—albeit to a lesser degree. These chemical compounds primarily come from burning fossil fuels through internal combustion engines in cars, trucks, off-road vehicles, construction equipment and machinery. Industrial facilities may also emit these compounds.

The presence of lead in the ambient air has decreased so much that EPA has waived the lead monitoring requirement for DEQ in 2003. Lead is a chemical that was primarily emitted from internal combustion engines burning fuel that contained lead. Removing it from fuel is the principal reason for the reduction of lead in the ambient air. Lead is also emitted from ore and metals processing plants, lead smelters and some industrial facilities.

Ambient air monitoring network

Together, DEQ and LRAPA operate and maintain an extensive ambient air monitoring network within Oregon. The pollutants monitored at each site vary based on CAA requirements and resources within each agency.

In 2023, the ambient air monitoring network consisted of 74 sites. Nearly all sites monitor for PM_{2.5}, but only a handful of sites monitor for additional pollutants. Figure 1 shows a map of all the ambient air monitoring sites and Table 1 lists the number of sites for each criteria pollutant. More information about the ambient air monitoring network can be found in Appendix 1: Ambient Air Monitoring Network Data.

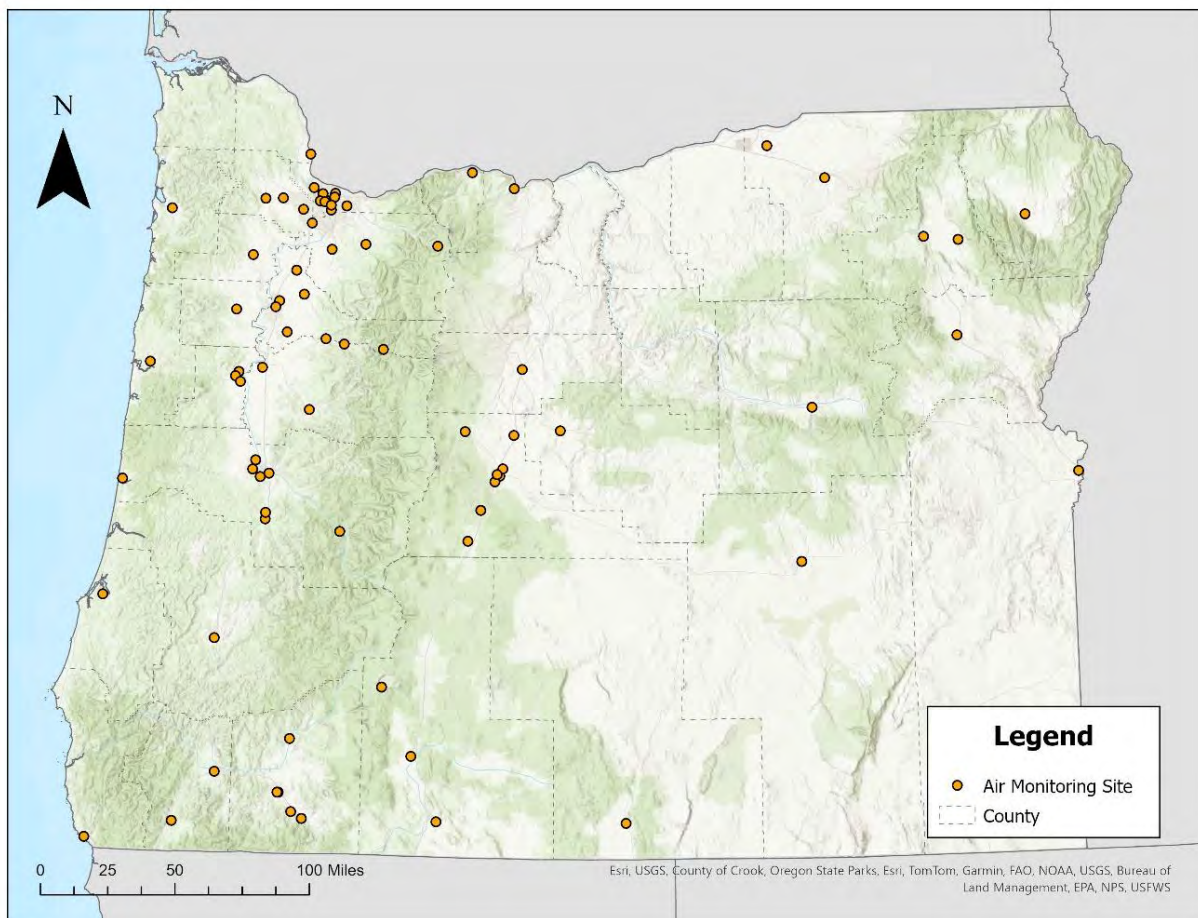


Figure 1: Ambient Air Monitoring in Oregon in 2023

Table 1: Number of Monitoring Sites by Pollutant

Pollutant	Number of Monitoring Sites
PM _{2.5}	74
PM ₁₀	7
Ozone	10
Carbon Monoxide	2
Nitrogen Dioxide	2
Sulfur Dioxide	1

The monitoring network has two tiers of monitors: regulatory and informational. Regulatory monitors are known as federal reference method monitors or federal equivalent method monitors. These higher-grade instruments must be operated in accordance with federal guidelines and regulations. EPA accepts data from these monitors to make regulatory determinations about air quality; official data used to make these decisions must be measured by regulatory monitors.

Most of the PM_{2.5} monitoring network uses informational monitors. DEQ and LRAPA will use data from these monitors (and regulatory monitors) to inform air quality management programs, issue advisories, and provide more data and information to the public. EPA will *not* use data from these monitors to make regulatory determinations. This data may inform future decisions to install regulatory monitors.

National Ambient Air Quality Standards

With the passage of the CAA, EPA established methodologies and thresholds to assess air quality quantitatively and uniformly. These methodologies and thresholds are collectively known as the National Ambient Air Quality Standards. Because of the unique characteristics and impacts of each criteria pollutant, each one has its own NAAQS. The NAAQS are reviewed periodically, and revised as needed as more knowledge about pollutants and their public health impacts are obtained through scientific research. The NAAQS for 2023 are listed in Table 2.

Table 2: National Ambient Air Quality Standards

Pollutant	Averaging Time	Form	Level	
			Primary	Secondary
Carbon Monoxide	1 hour	Not to be exceeded more than once per year, averaged over two years	35 ppm	N/A
	8 hours		9 ppm	N/A
Lead	3 months	Rolling three-month average	0.15 µg/m ³	0.15 µg/m ³
Nitrogen Dioxide	1 hour	Annual 98 th percentile of daily maximums of one-hour concentrations, averaged over three years	100 ppb	N/A
	1 year	Annual mean of one-hour concentrations	53 ppb	53 ppb
Ozone	8 hours	Annual fourth-highest daily maximum eight-hour concentration, averaged over three years	0.070 ppm	0.070 ppm
PM _{2.5}	24 hours	Annual 98 th percentile of daily concentrations, averaged over three years	35 µg/m ³	35 µg/m ³
	1 year	Annual mean of quarterly means, averaged over three years	12.0 µg/m ³	15.0 µg/m ³
PM ₁₀	24 hours	Not to be exceeded more than once per year, averaged over three years	150 µg/m ³	150 µg/m ³
Sulfur Dioxide	1 hour	Annual 99 th percentile of daily maximums of one-hour concentrations, averaged over three years	75 ppb	N/A
	3 hours	Not to be exceeded more than once per year	N/A	0.5 ppm

The averaging times for the NAAQS pollutants are listed in Table 2. Air quality monitors can report pollutant concentration values over many different time domains, so the average time sets a uniform time to evaluate the data. For example, the daily PM_{2.5} averaging time is 24 hours but many PM_{2.5} monitors can report PM_{2.5} concentrations every hour. So, every reported value within the averaging time of 24 hours must be averaged together to obtain one value.

National Ambient Air Quality Standards

The NAAQS form lists how to evaluate an averaged pollutant concentration value. Using $\text{PM}_{2.5}$ again, several steps must be performed. First, one must find the daily average for each day of one year. Next, one must find the reported value for which 98% of the daily data will be less than that value. These two steps then also must be performed for two previous years. Lastly, the 98th percentiles for the three years are averaged. The resulting value from the calculation specified in the form is known as a design value. In this case, it is called the 24-hour or daily $\text{PM}_{2.5}$ design value.

The NAAQS level lists the maximum design value for compliance with the CAA. With $\text{PM}_{2.5}$, if the 24-hour design value of a monitoring area is less than or equal to $35 \mu\text{g}/\text{m}^3$, it is compliant with the CAA. However, if the design value is greater than $35 \mu\text{g}/\text{m}^3$, the monitoring area will be out of compliance. Many NAAQS also have a primary and secondary level. The goal of the primary levels is to protect public health, and the goal of the secondary levels is to protect the public welfare, e.g. protection against crop damage and decreased visibility. This report only considers the primary levels as they are more stringent.

In early 2024, EPA revised the primary $\text{PM}_{2.5}$ annual standard from $12.0 \mu\text{g}/\text{m}^3$ to $9.0 \mu\text{g}/\text{m}^3$ and the AQI breakpoints. This report uses the standard and AQI breakpoints in place in 2023. More information about the NAAQS can be found on [EPA's website](#).

2023 NAAQS design values

A design value is a metric used to assess air quality and determine whether a monitoring area is meeting a NAAQS. It is calculated by evaluating pollutant concentrations according to the averaging time and form specified in the NAAQS table. If the design value of a particular pollutant is less than or equal to its respective NAAQS level, the monitoring area meets or attains that NAAQS. If it is greater than the NAAQS level, it does not meet or does not attain that NAAQS.

While DEQ is presenting design value data in this report, only EPA can make regulatory determinations about whether a monitoring area is meeting a NAAQS. The design value data presented below is only for informational purposes and does not constitute a regulatory determination by EPA. Any such determinations must go through EPA's rule-making process, which allows for public notice and comment.

Below are tables listing the design values for monitoring areas by pollutant for 2023. Historical data from individual regulatory monitors are listed in Appendix 2: NAAQS historical by pollutant and by monitoring area. More information about design values can be found on [EPA's website](#).

PM_{2.5}

The daily PM_{2.5} design value standard is an annual 98th percentile of daily averaged PM_{2.5} concentrations, averaged over three years, and set to a level of 35 µg/m³. The annual PM_{2.5} design value standard is an annual average of quarterly averages of daily averaged PM_{2.5} concentrations, averaged over three years, and set to a level of 12.0 µg/m³.

PM_{2.5} design values are presented in two categories: 1) values from regulatory monitors, and 2) values from informational monitors. EPA only uses design value data from regulatory monitors to make regulatory determinations about air quality. DEQ and LRAPA use design value data from regulatory and informational monitors to inform air quality management programs, issue advisories and provide more data and information to the public.

Additionally, because wildfire smoke can significantly impact ambient PM_{2.5} concentrations, design values are calculated with and without data impacted by wildfire (WF) smoke. To be classified as wildfire data, data must be recorded during wildfire season (generally July 1 through September 30, sometimes going into October) and have a daily averaged PM_{2.5} concentration greater than 15 µg/m³. By removing data impacted by wildfire, design values show the significant impacts of wildfire smoke, reflect a value more representative of the design value period and reveal the impact of local air quality improvement programs. The EPA may formally exclude data impacted by wildfire from design value calculations by designating wildfires as exceptional events. More information about exceptional events can be found on [EPA's website](#).

Table 3: 2021-2023 PM_{2.5} Design Values

Monitoring Area	Three-Year Average of 98th Percentiles with WF, µg/m³	Three-Year Average of 98th Percentiles without WF, µg/m³	Three-Year Average of Annual Averages with WF, µg/m³	Three-Year Average of Annual Averages without WF, µg/m³
From Regulatory Monitors				
Burns	34	26	10.0	9.0
Cottage Grove	30	19	7.2	6.3
Eugene Metro	28	25	7.9	7.0
Grants Pass	47	23	10.2	7.5
Klamath Falls	49	31	12.2	8.9
Lakeview	42	28	9.1	7.4
Medford	76	22	12.3	8.8
Oakridge	121	23	14.4	7.2
Portland Metro	21	18	6.7	6.5
Prineville	33	19	7.5	6.3
Estimates from Informational Monitors				
Albany	21	19	5.8	5.5
Ashland	70	16	9.1	5.6
Baker City	26	19	7.2	6.5
Bend	57	20	7.8	5.1
Cave Junction	82	30	14.9	7.8
Corvallis	13	13	4.8	4.6
Enterprise	31	18	6.9	5.4
John Day	33	26	10.7	9.9
La Grande	23	18	6.4	5.7
Pendleton	24	18	6.6	5.7
Roseburg	36	20	8.8	7.1
Salem Metro	23	21	7.0	6.6
Sisters	61	19	8.6	5.5
Sweet Home	18	17	6.3	6.0
The Dalles	21	18	6.0	5.3

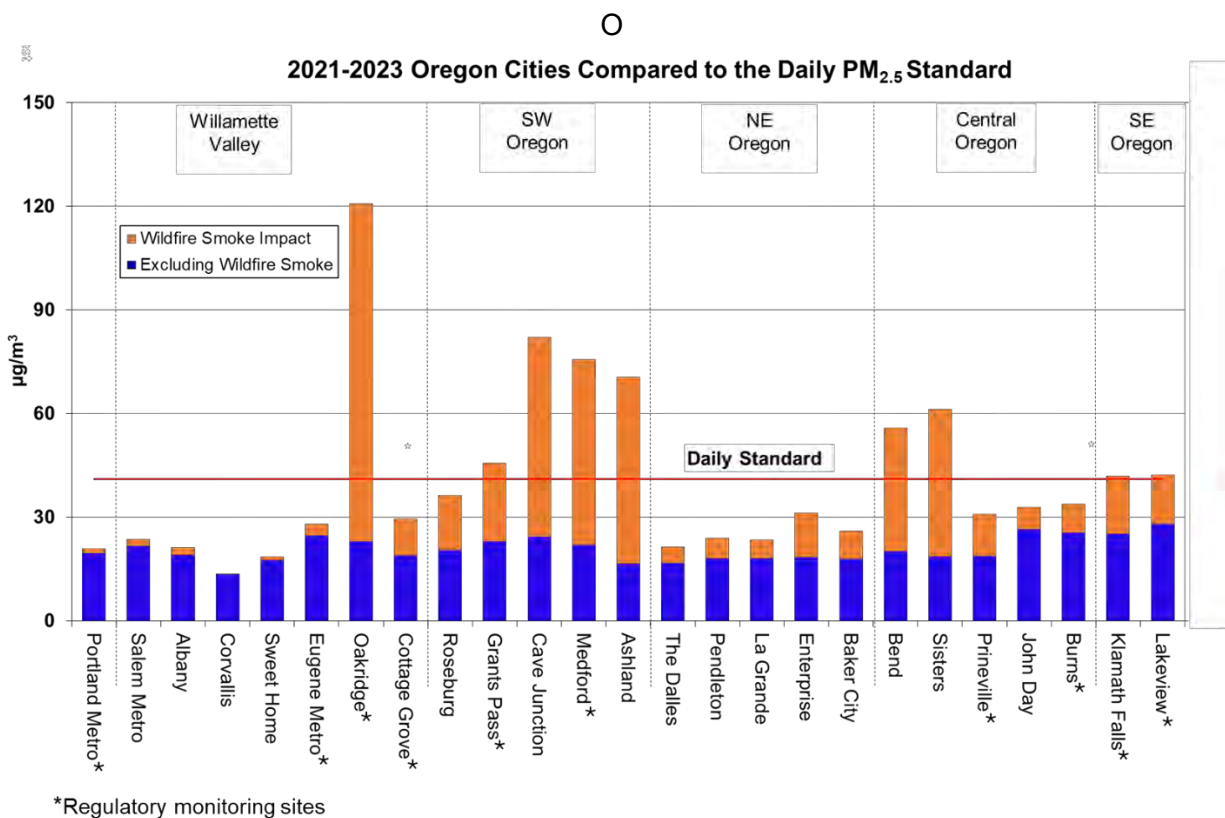


Figure 2: 2021-2023 Three-Year Average of PM_{2.5} 98th Percentiles

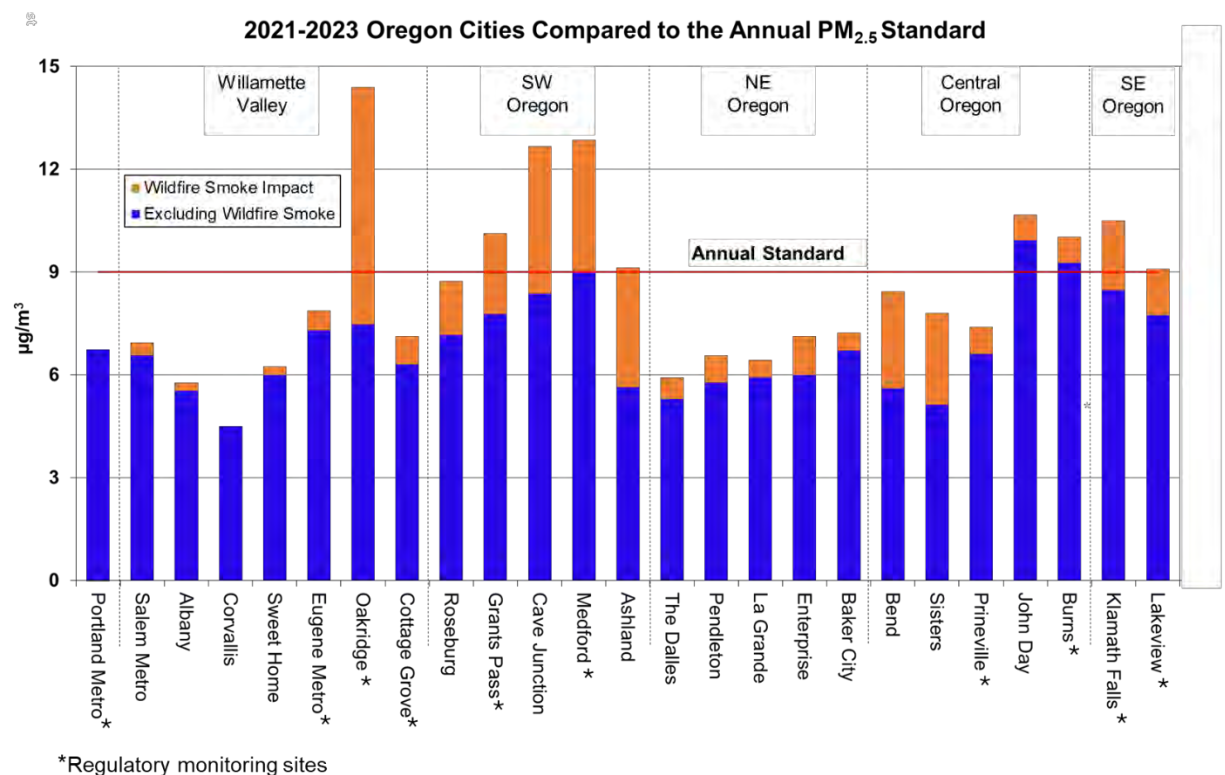


Figure 3: 2021-2023 Three-Year Averages of PM_{2.5} Annual Averages

PM₁₀

The PM₁₀ design value standard is an estimate of the number of daily averaged PM₁₀ concentrations greater than 150 µg/m³, averaged over three years, and set to a level of 1 exceedance. In other words, a monitoring area is allowed one day on average over three years, in which the daily concentration is greater than 150 µg/m³ and remain compliant with the CAA.

Table 4: 2021-2023 PM₁₀ NAAQS Design Values

Monitoring Area	Three-Year Average of Estimated Exceedances
Eugene Metro	0
La Grande	0
Lakeview	0
Medford	2.0
Oakridge	6.7
Portland Metro	0

Ozone

The ozone design value standard is an annual fourth-highest daily maximum of averaged eight-hour ozone concentrations, averaged over three years, and set to a level of 0.070 ppm.

Table 5: 2021-2023 Ozone NAAQS Design Values

Monitoring Area	Three-Year Average of Fourth-Highest Daily Maximums, ppm
Eugene Metro	0.060
Hermiston	0.063
Medford	0.065
Portland Metro	0.065
Salem Metro	0.065

Carbon Monoxide

The one-hour carbon monoxide design value standard is an annual second-highest maximum one-hour carbon monoxide concentration, with the maximum value selected over two years, and set to a level of 35 ppm. The eight-hour carbon monoxide design value standard is an annual second-highest maximum non-overlapping eight-hour averaged carbon monoxide concentration, with the maximum value selected over two years, and set to a level of 9 ppm.

Table 6: 2021-2023 Carbon Monoxide NAAQS Design Values

Monitoring Area	Two-Year Maximum of Second-Highest One-Hour Concentrations, ppm	Two-Year Maximum of Second-Highest Averages, ppm
Portland Metro	2.1	1.5

Nitrogen Dioxide

The daily nitrogen dioxide design value standard is an annual 98th percentile of daily maximums of one-hour nitrogen dioxide concentrations, averaged over three years, and set to a level of 100 ppb. The annual nitrogen dioxide design value standard is an annual average of daily maximums of one-hour nitrogen dioxide concentrations, averaged over three years, and set to a level of 53 ppb.

Table 7: 2021-2023 Nitrogen Dioxide NAAQS Design Values

Monitoring Area	Three-Year Average of 98 th Percentiles, ppb	Annual Average, ppb
Portland Metro	33	9.3

Sulfur Dioxide

The sulfur dioxide design value standard is an annual 99th percentile of daily maximums of one-hour sulfur dioxide concentrations, averaged over three years, and set to a level of 75 ppb.

Table 8: 2021-2023 Sulfur Dioxide NAAQS Design Value

Monitoring Area	Three-Year Average of 99 th Percentiles, ppb
Portland Metro	3

Air quality trends

Air quality trend graphs are used to show the impact of air quality management programs over time. The trend data plotted is the NAAQS averaging time and form of a pollutant for each year.

PM_{2.5}

PM_{2.5} has generally trended below the daily and annual PM_{2.5} NAAQS, but smoke from large wildfires will often cause a monitoring area to exceed them. The figures below show annual 98th percentile of daily averaged PM_{2.5} concentrations and annual averages of quarterly averages of daily averaged PM_{2.5} concentrations. The 98th percentile and annual averages are also plotted with and without data impacted by wildfire smoke.

Portland Metro Area

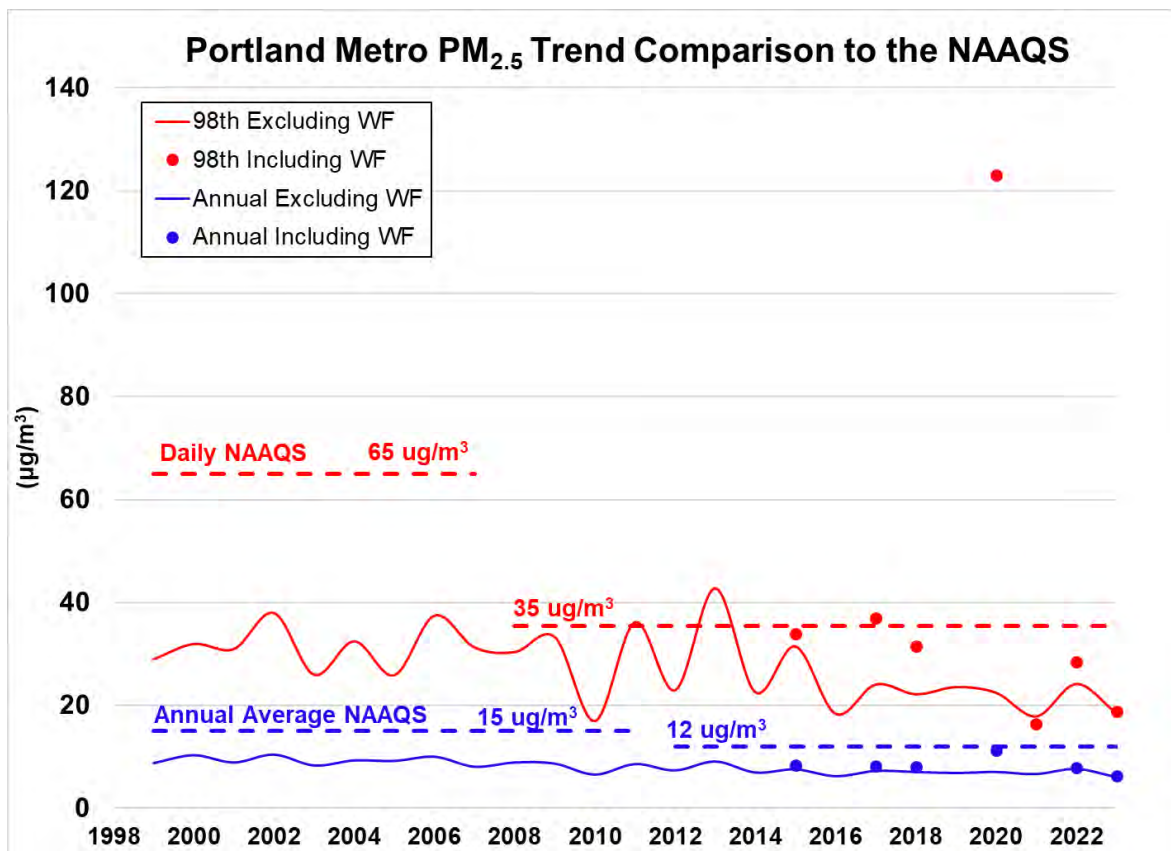


Figure 4: Portland Metro Area PM_{2.5} Trends

Willamette Valley

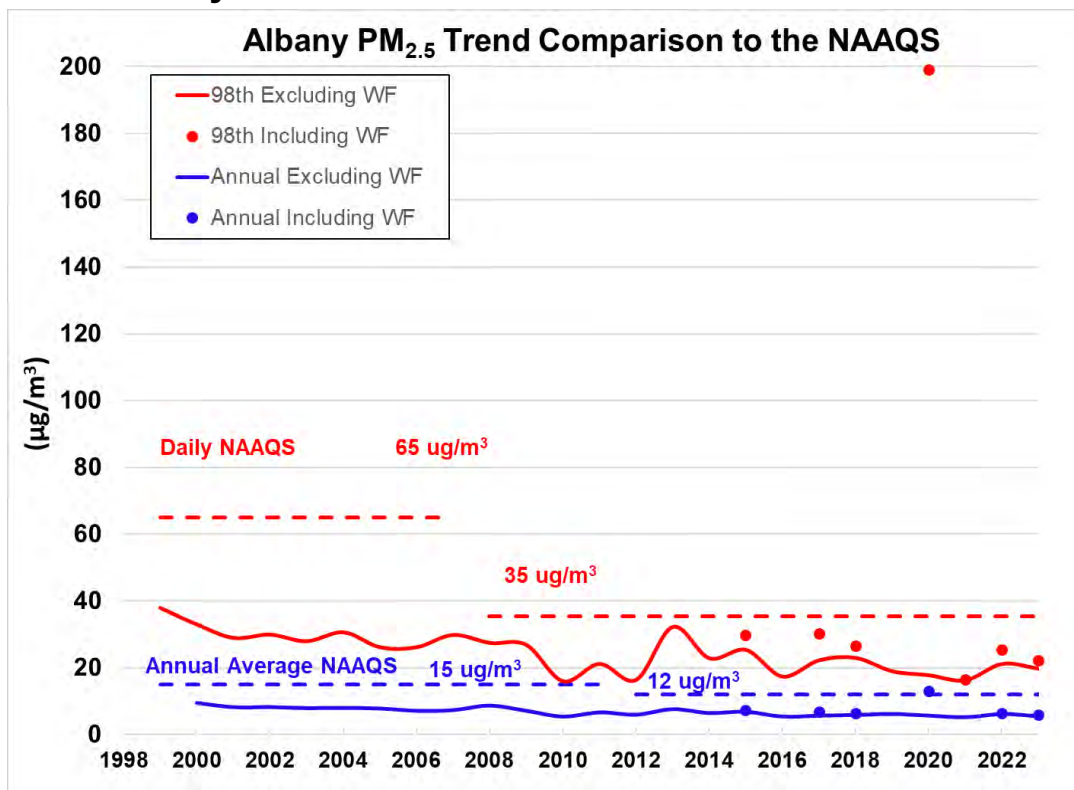


Figure 5: Albany PM_{2.5} Trends

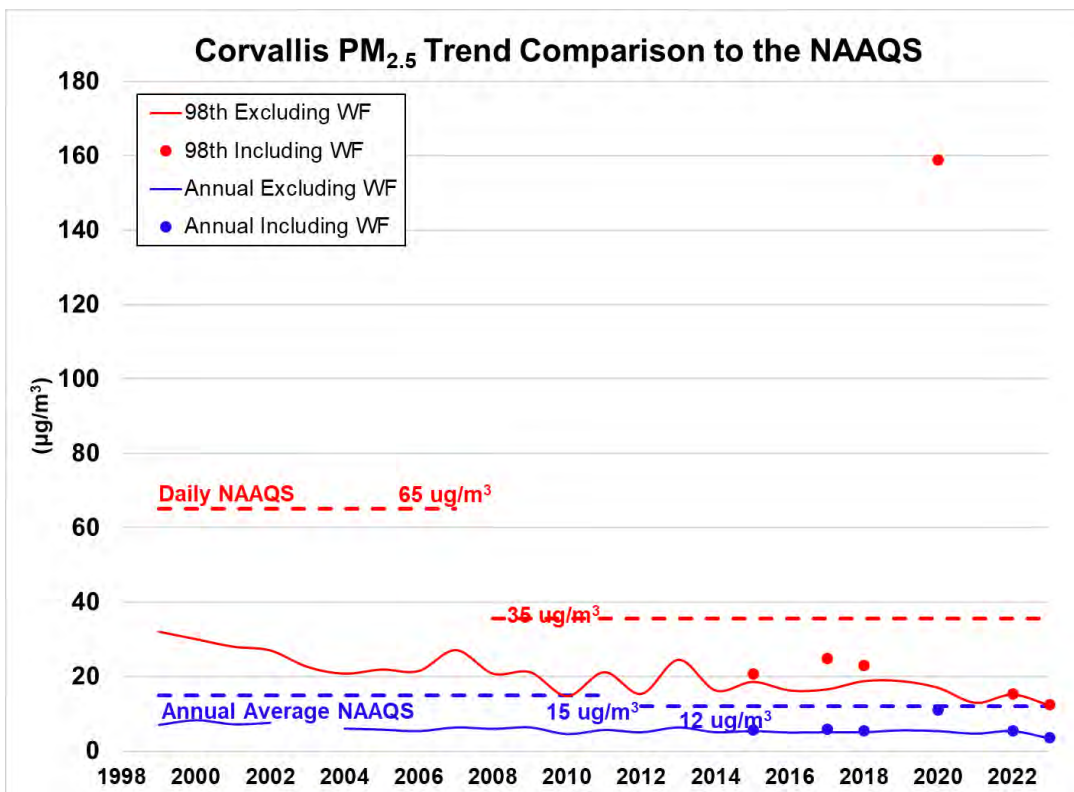


Figure 6: Corvallis PM_{2.5} Trends

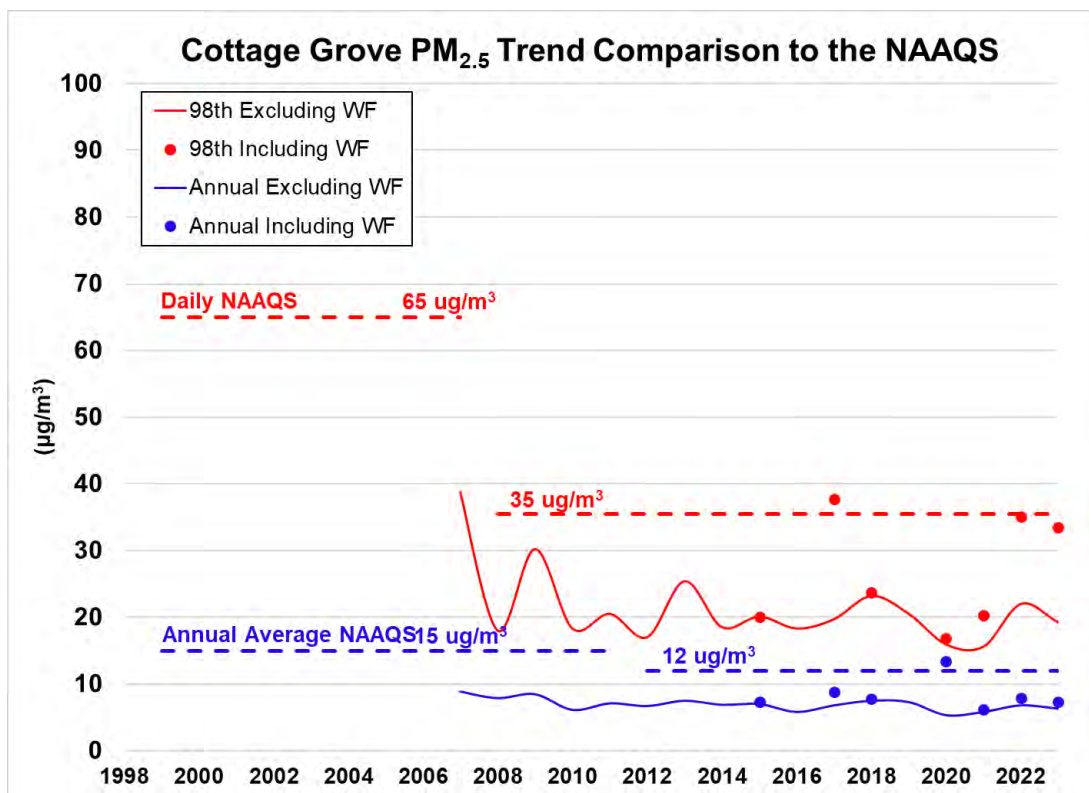


Figure 7: Cottage Grove PM_{2.5} Trends

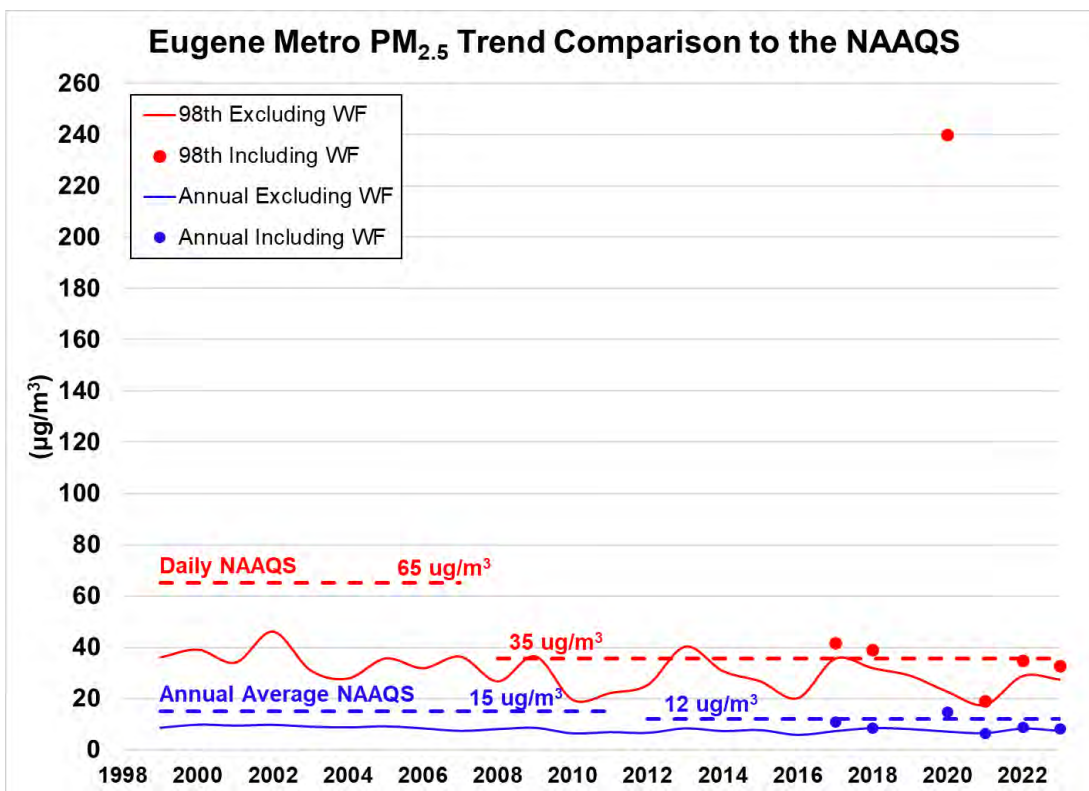


Figure 8: Eugene/Springfield PM_{2.5} Trends

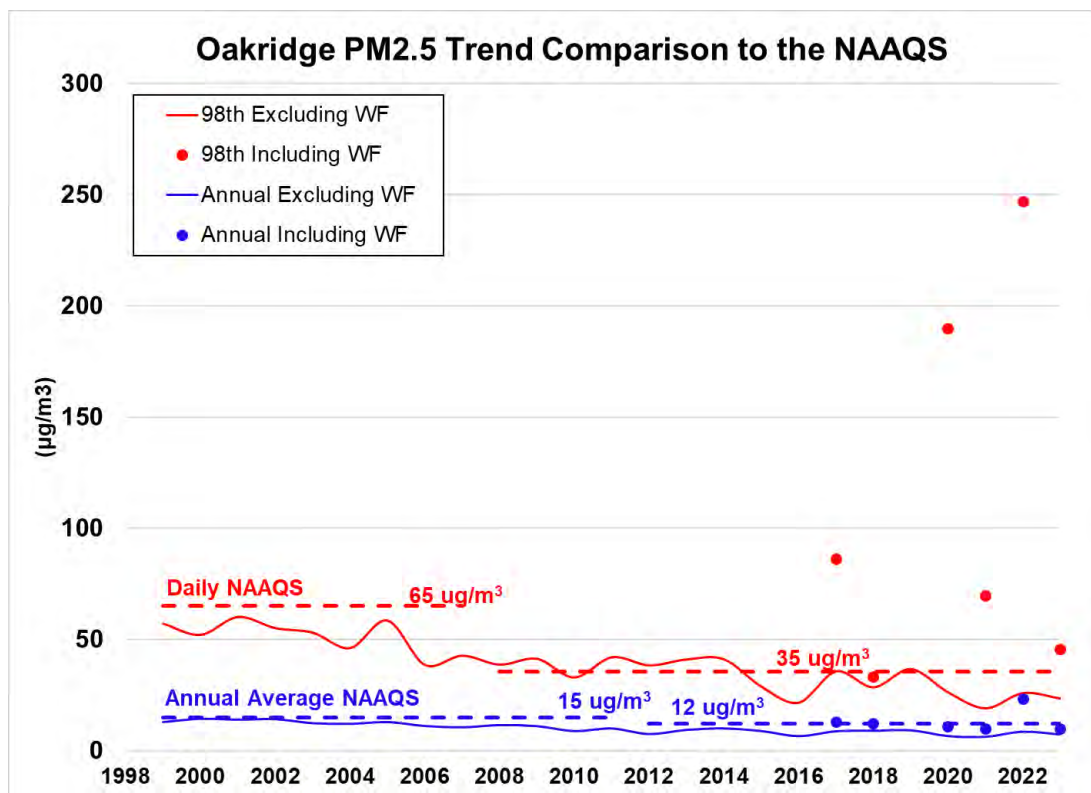


Figure 9: Oakridge PM_{2.5} Trends

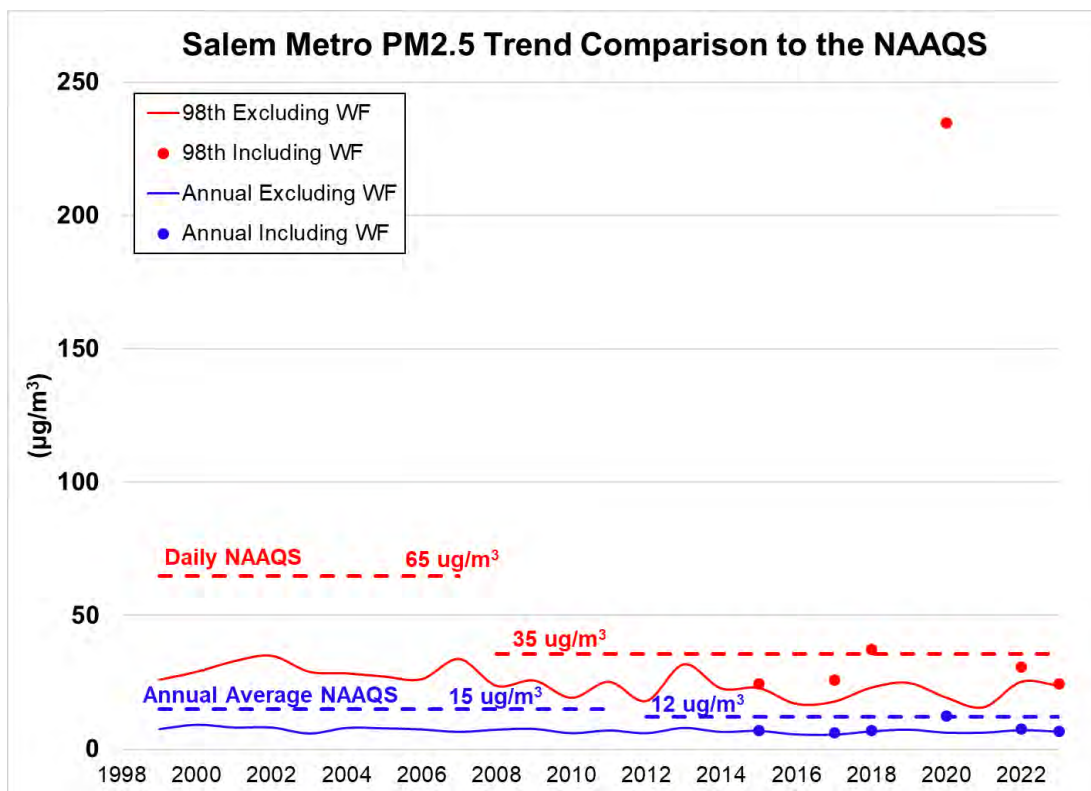


Figure 10: Salem Metro PM_{2.5} Trends

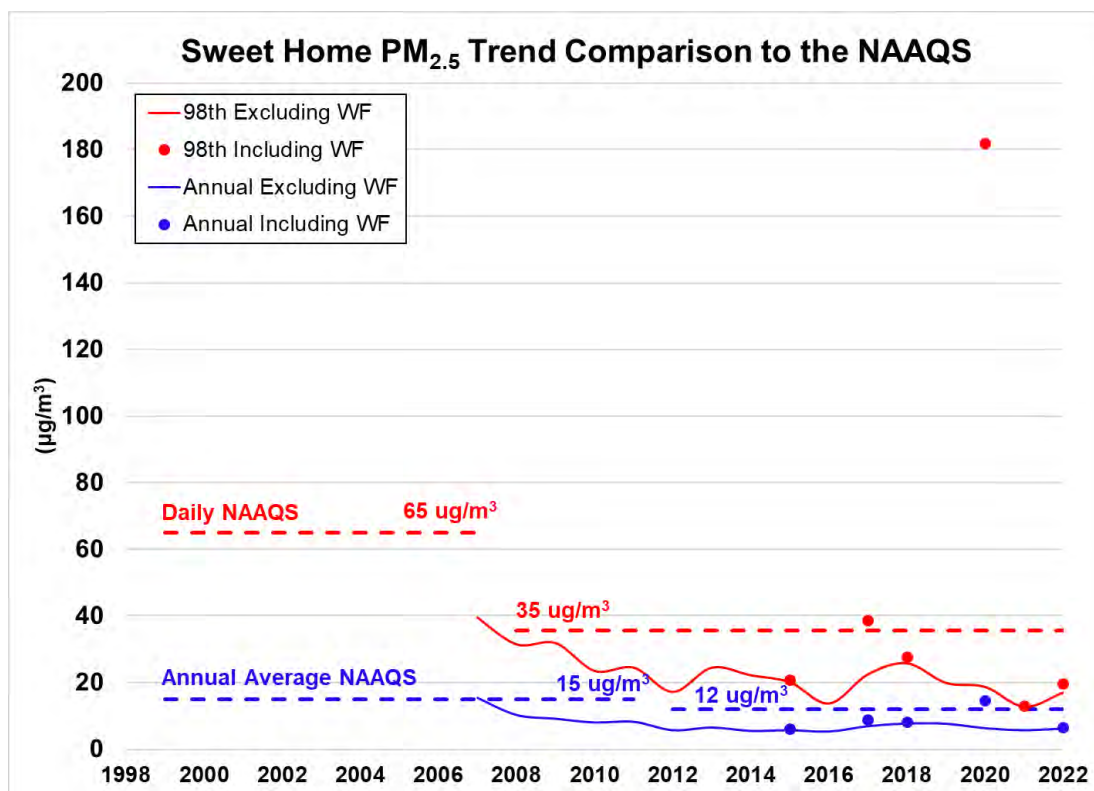


Figure 11: Sweet Home PM_{2.5} Trends

Southwest Oregon

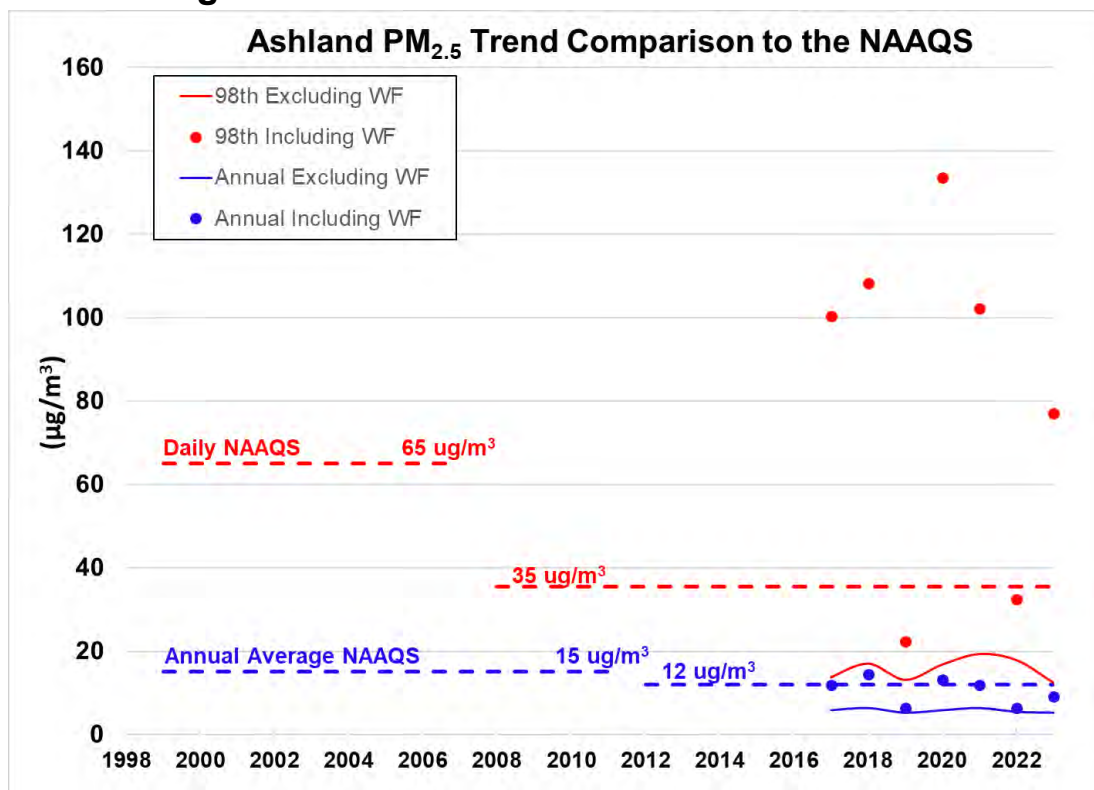


Figure 12: Ashland PM_{2.5} Trends

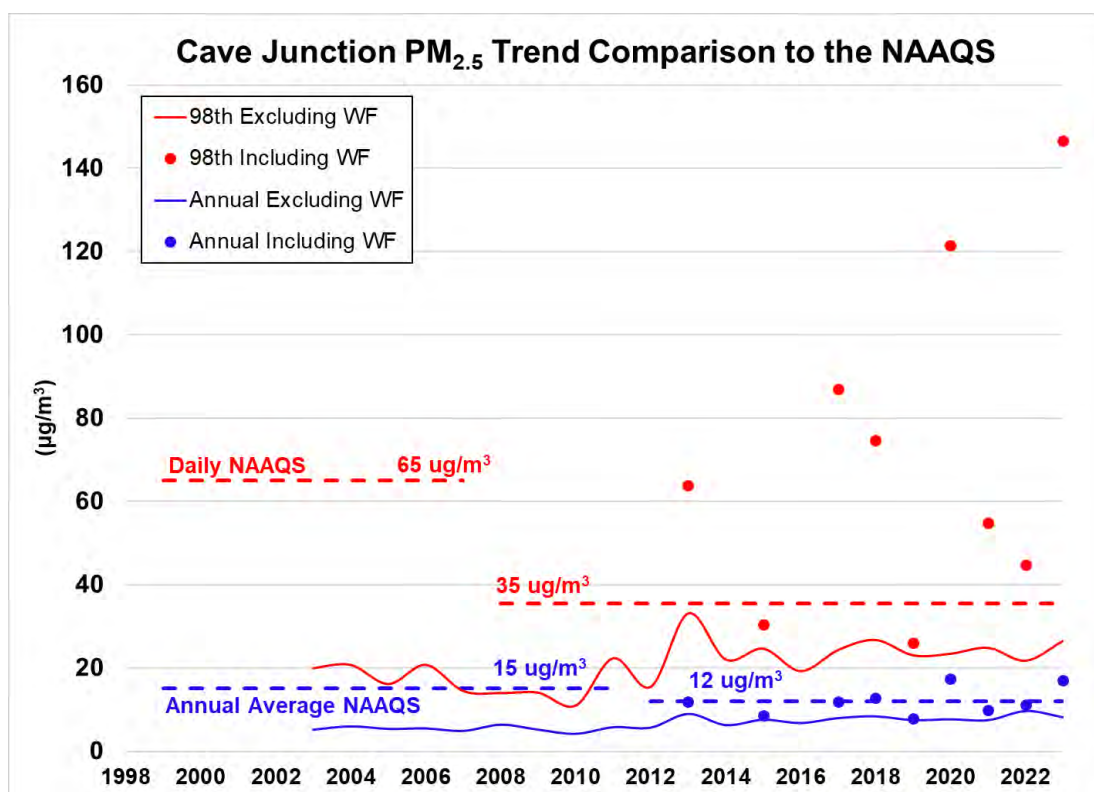


Figure 13: Cave Junction PM_{2.5} Trends

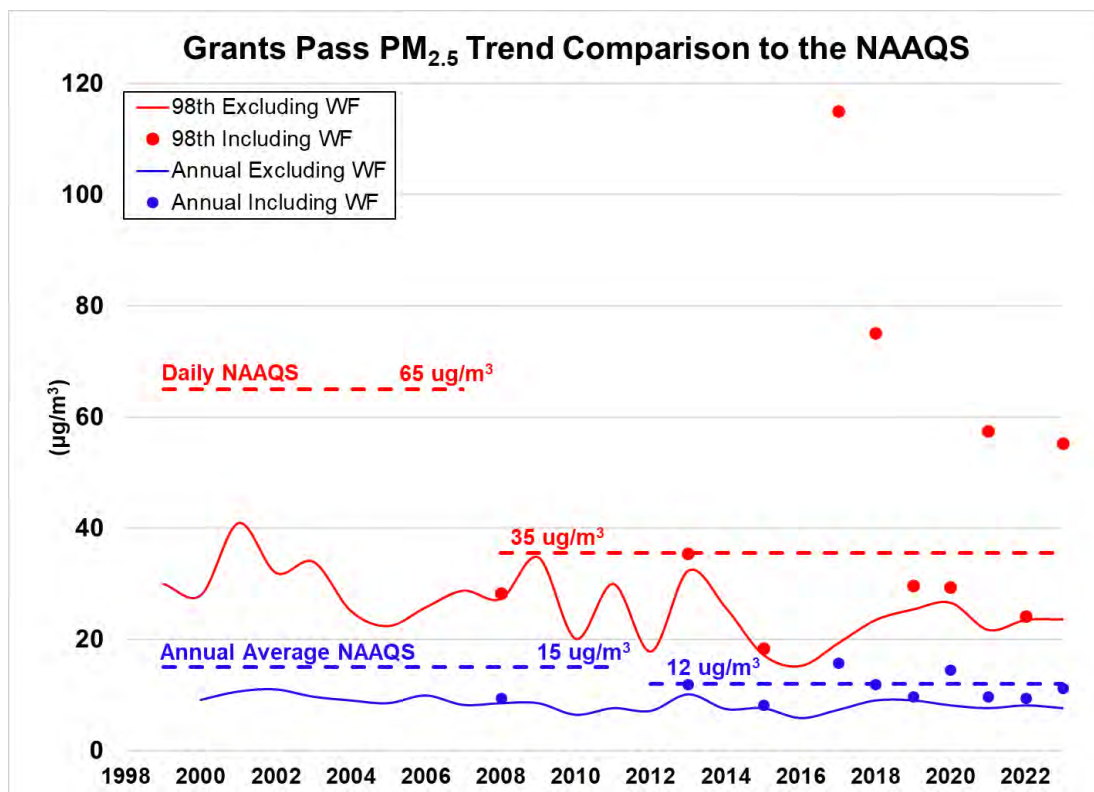


Figure 14: Grants Pass PM_{2.5} Trends

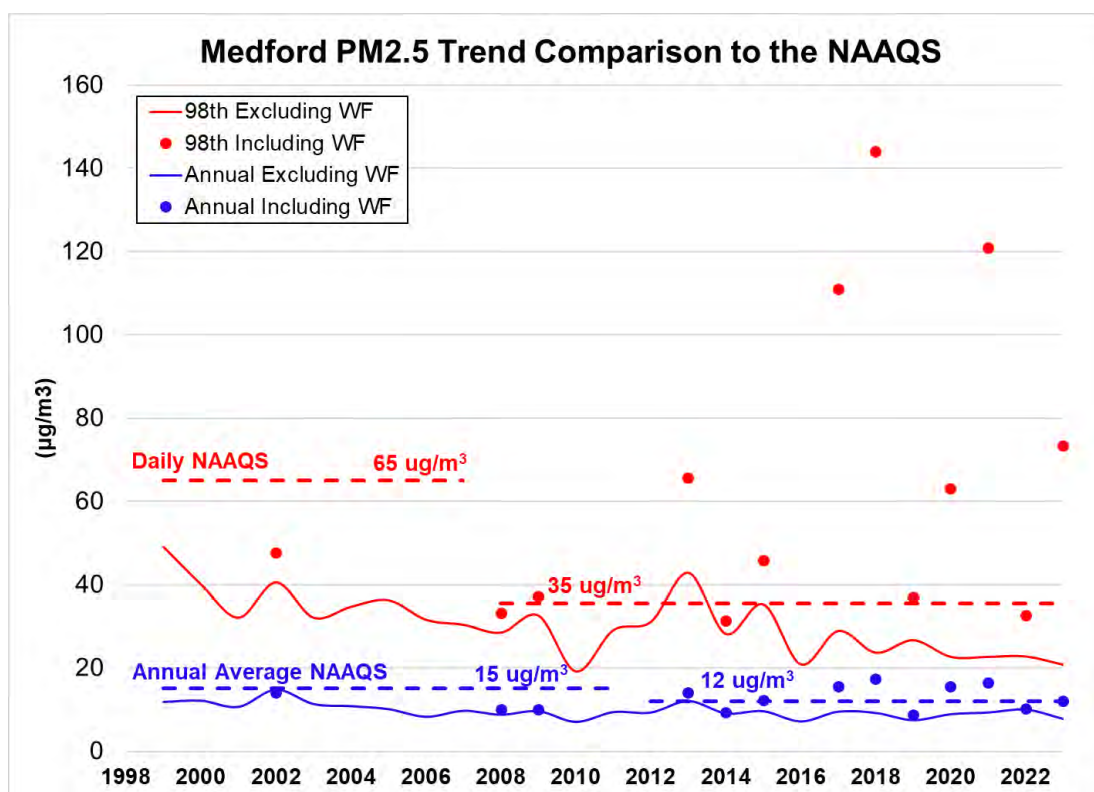


Figure 15: Medford PM_{2.5} Trends

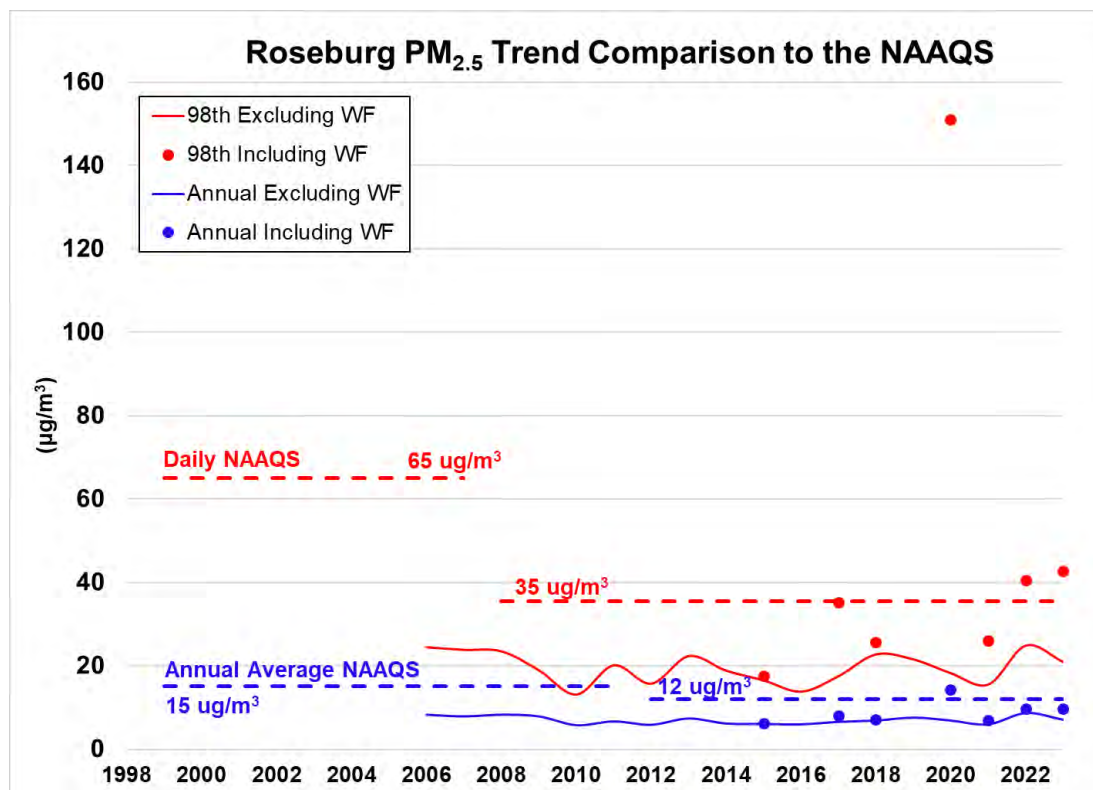


Figure 16: Roseburg PM_{2.5} Trends

Northeast Oregon

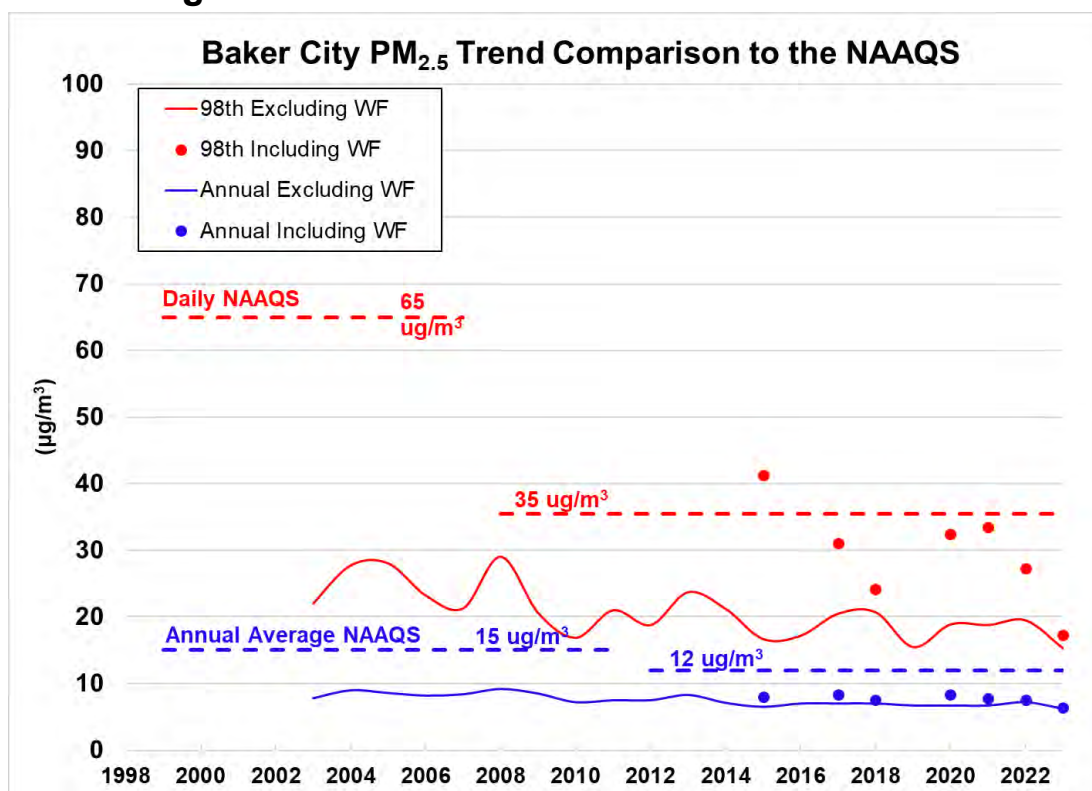


Figure 17: Baker City PM_{2.5} Trends

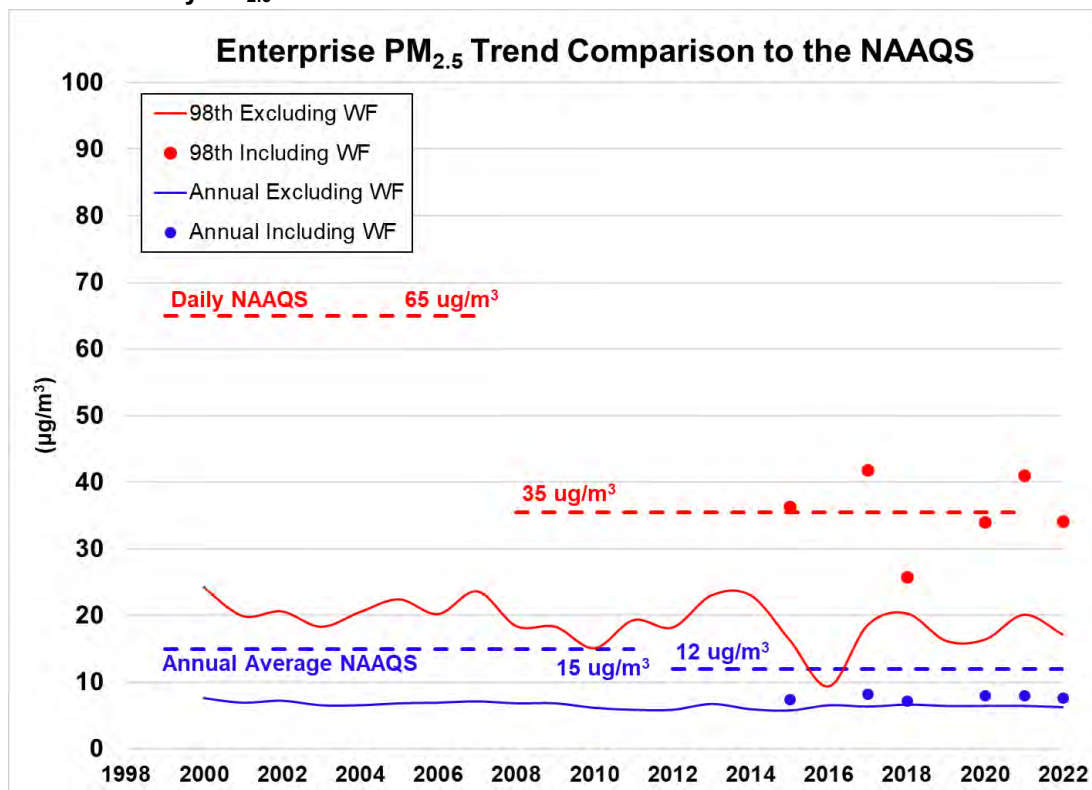


Figure 18: Enterprise PM_{2.5} Trends

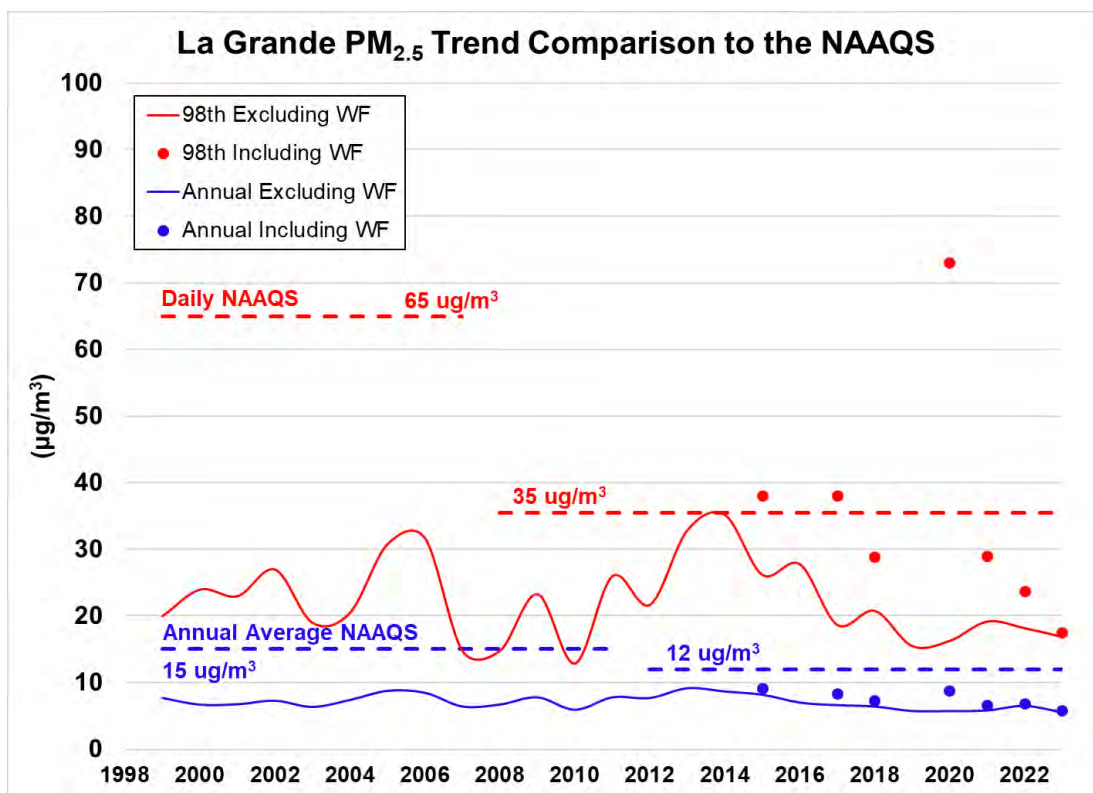


Figure 19: La Grande PM_{2.5} Trends

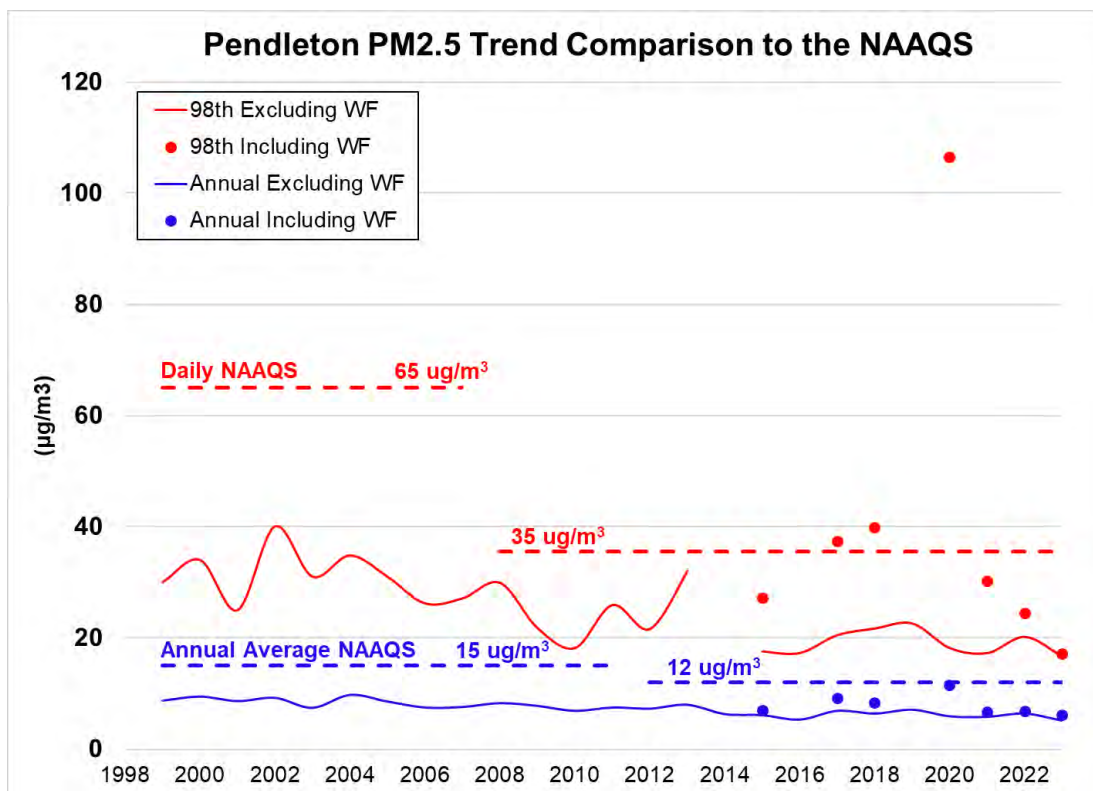


Figure 20: Pendleton PM_{2.5} Trends

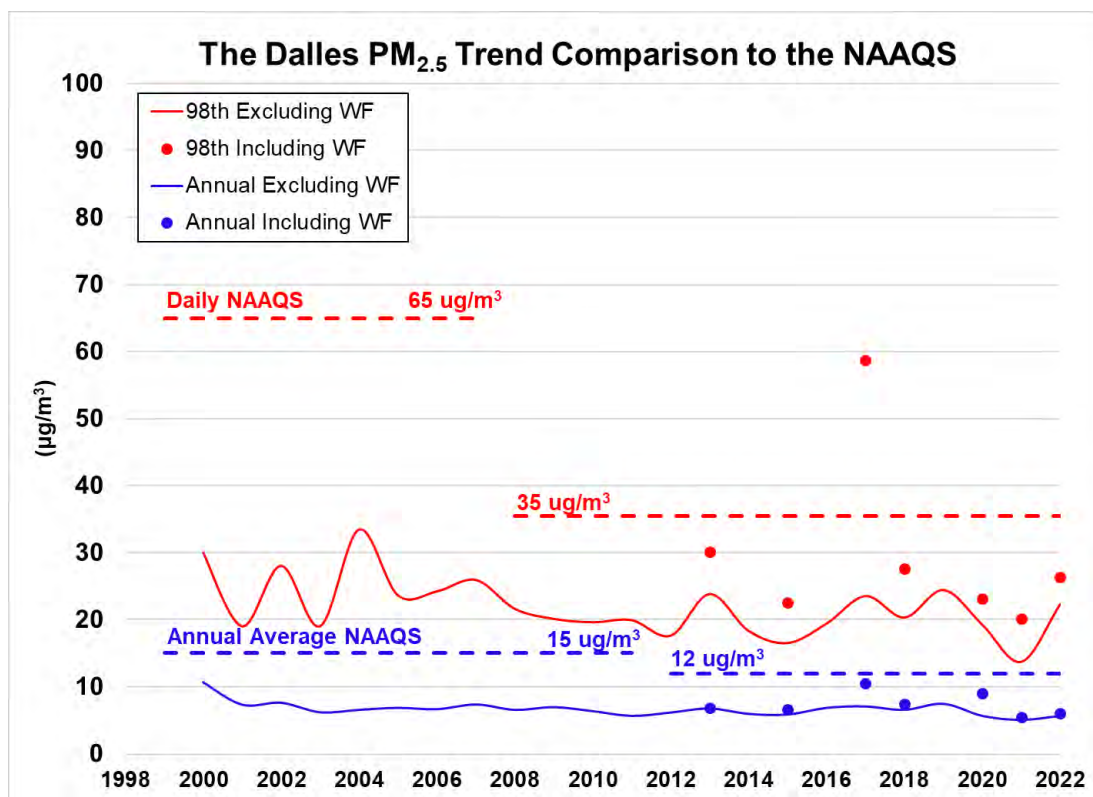


Figure 21: The Dalles PM_{2.5} Trends

Central Oregon

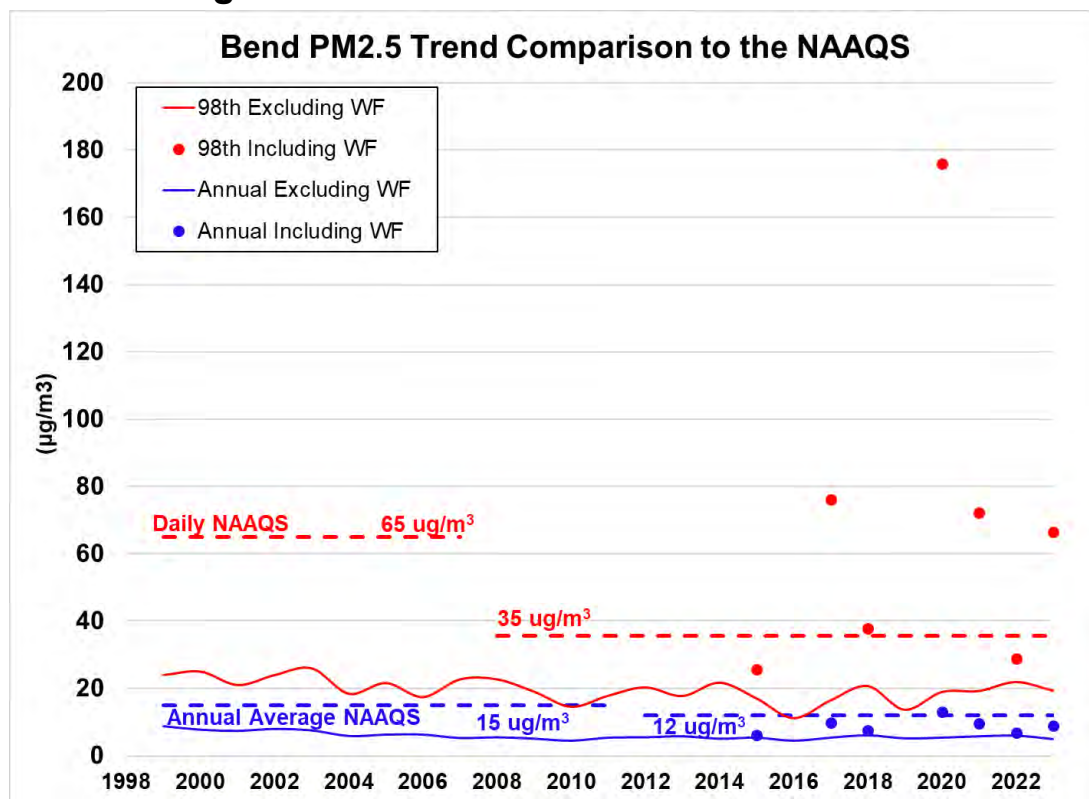


Figure 22: Bend PM_{2.5} Trends

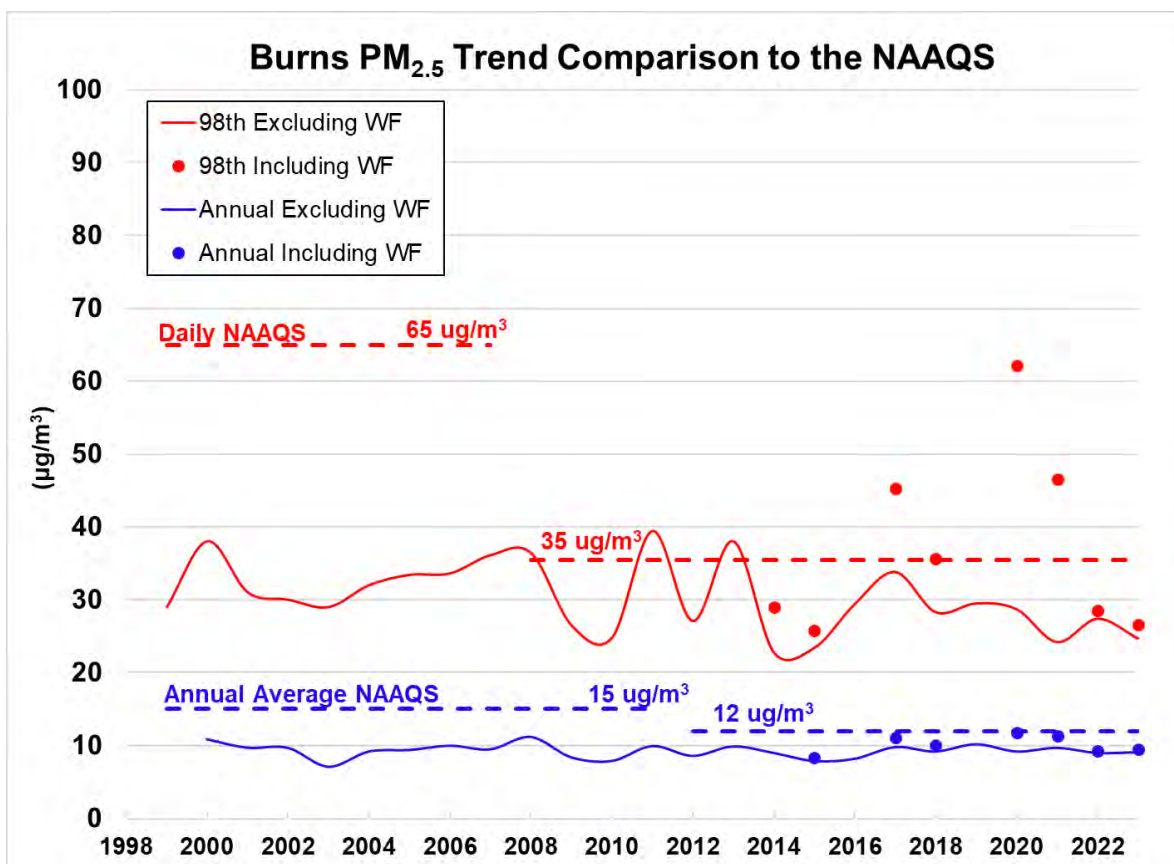


Figure 23: Burns PM_{2.5} Trends

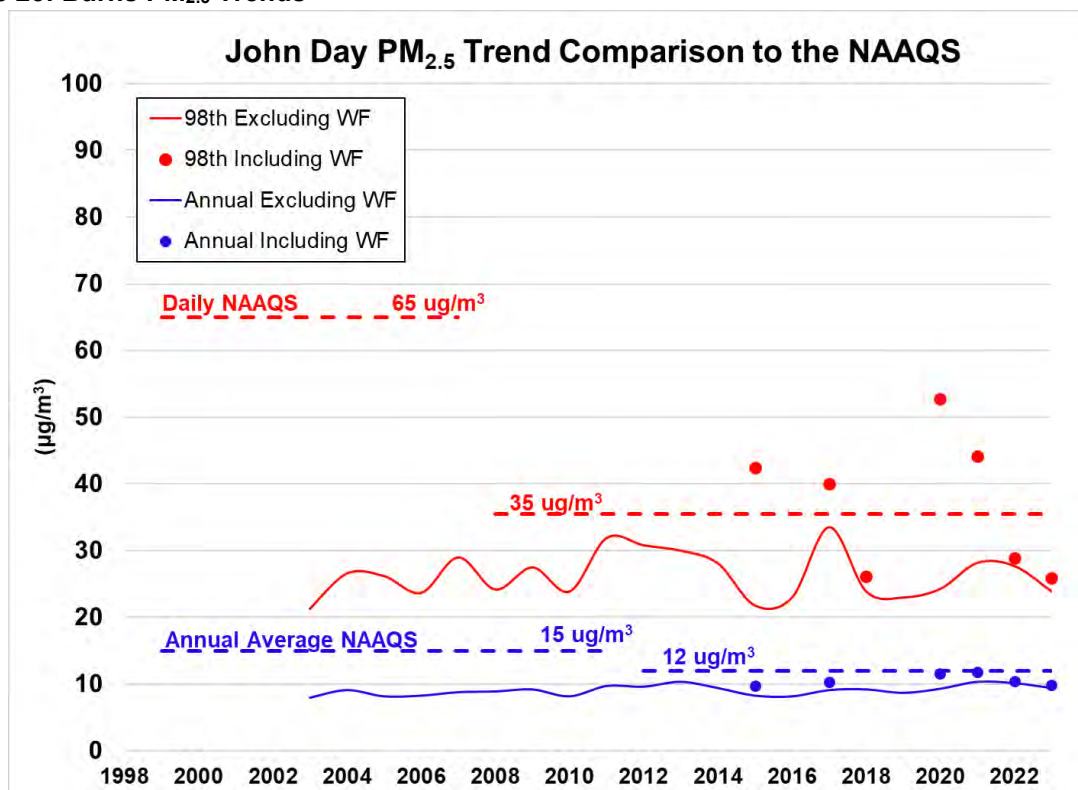


Figure 24: John Day PM_{2.5} Trends

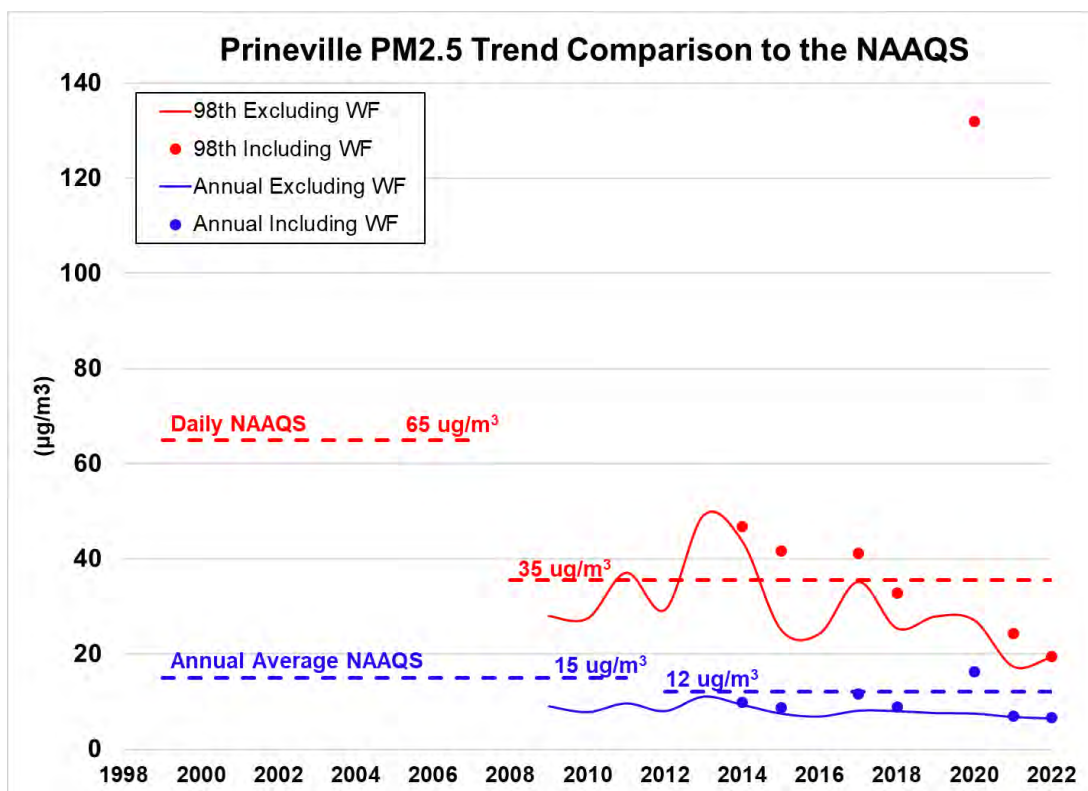


Figure 25: Prineville PM_{2.5} Trends

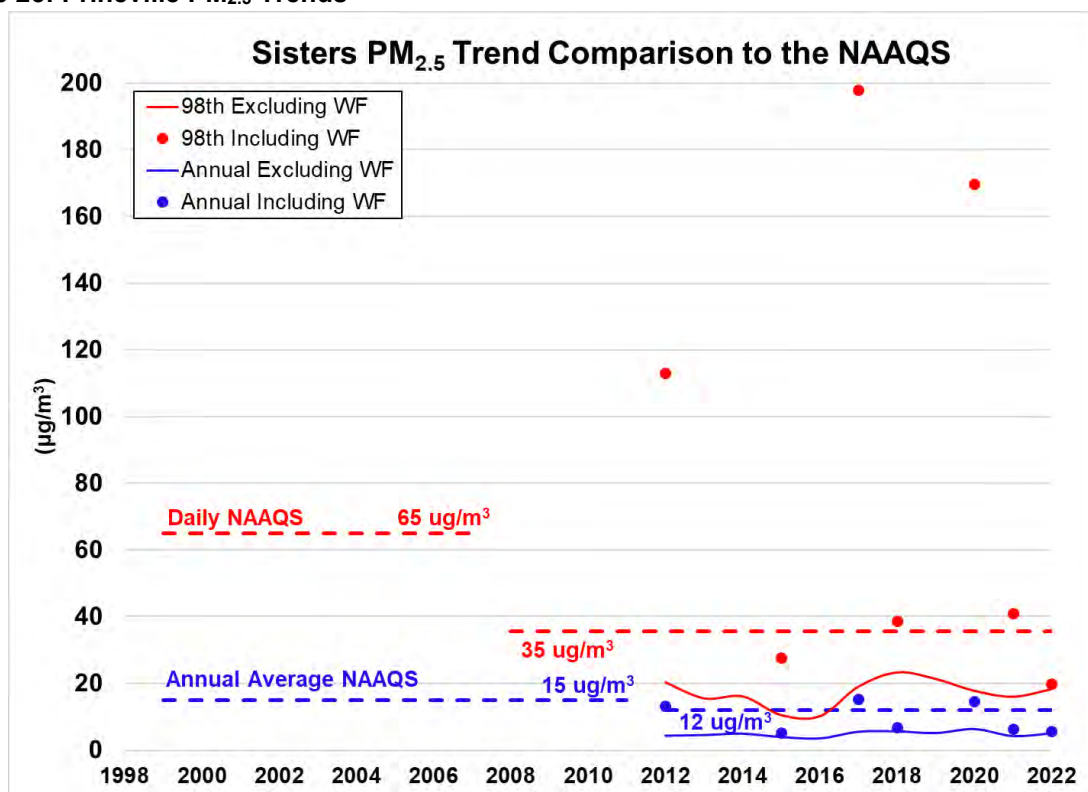
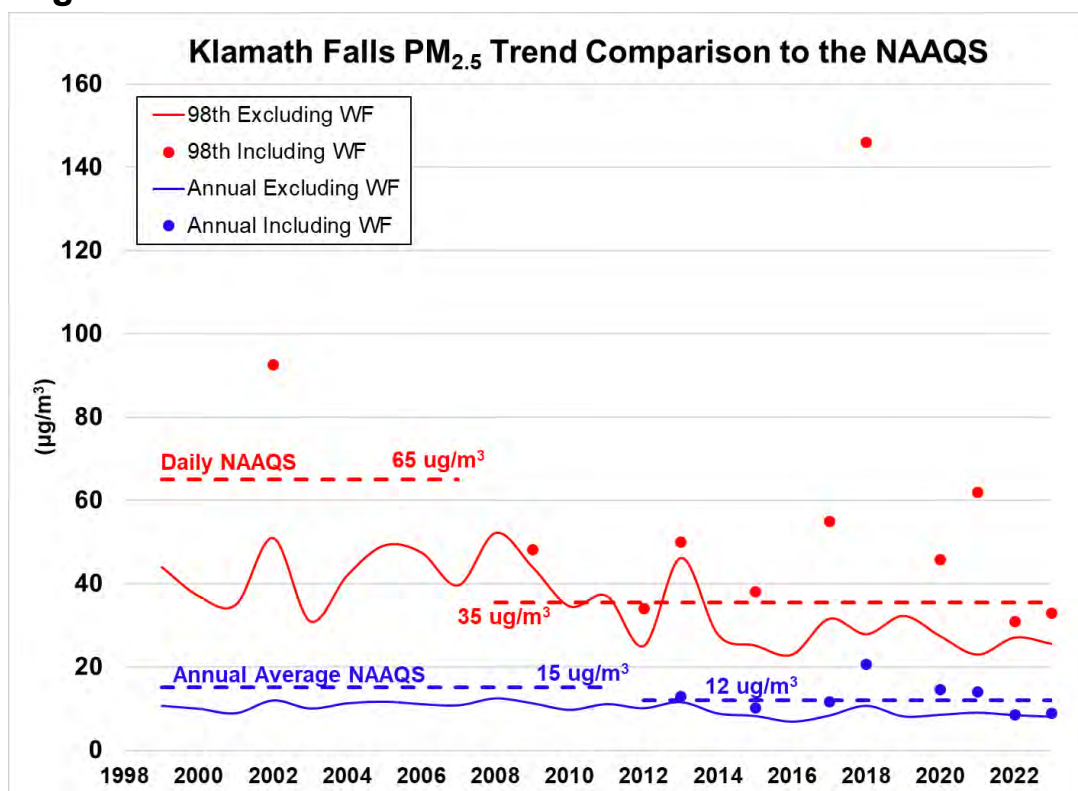
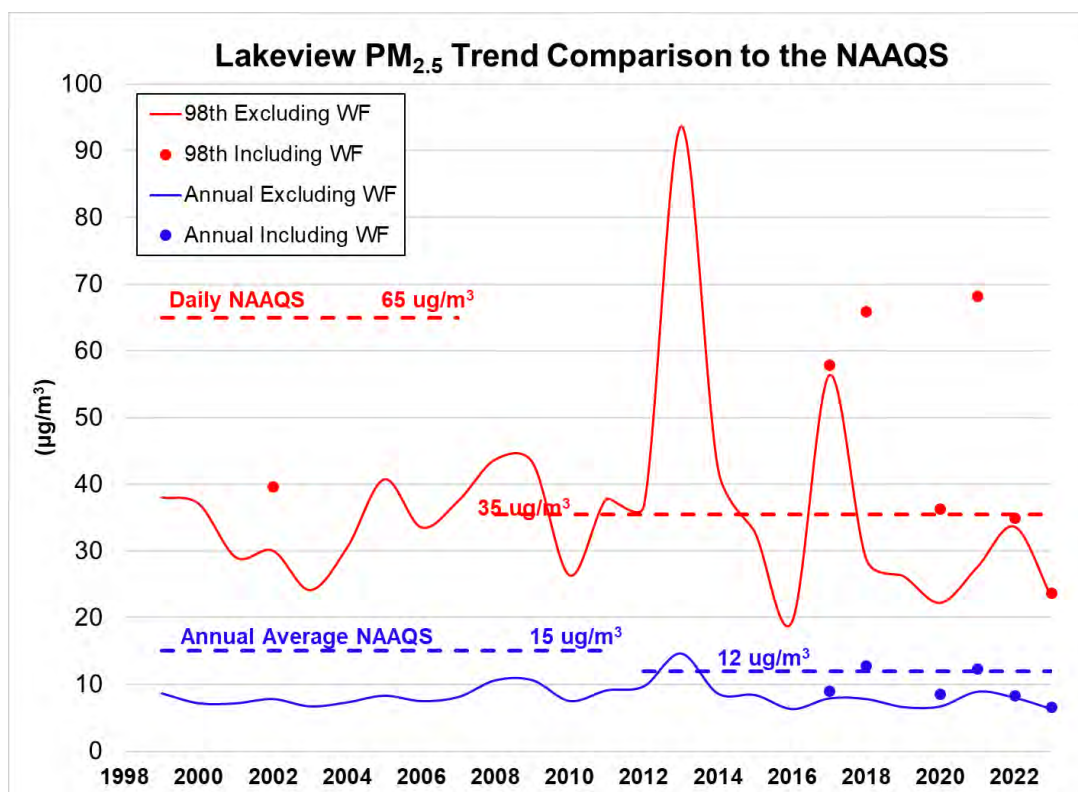


Figure 26: Sisters PM_{2.5} Trends

SE Oregon

Figure 27: Klamath Falls PM_{2.5} TrendsFigure 28: Lakeview PM_{2.5} Trends

PM₁₀

PM₁₀ has trended below the daily PM₁₀ NAAQS since 1994, except for recent wildfire smoke impacts. The figures below show annual second-highest daily averaged PM₁₀ concentrations.

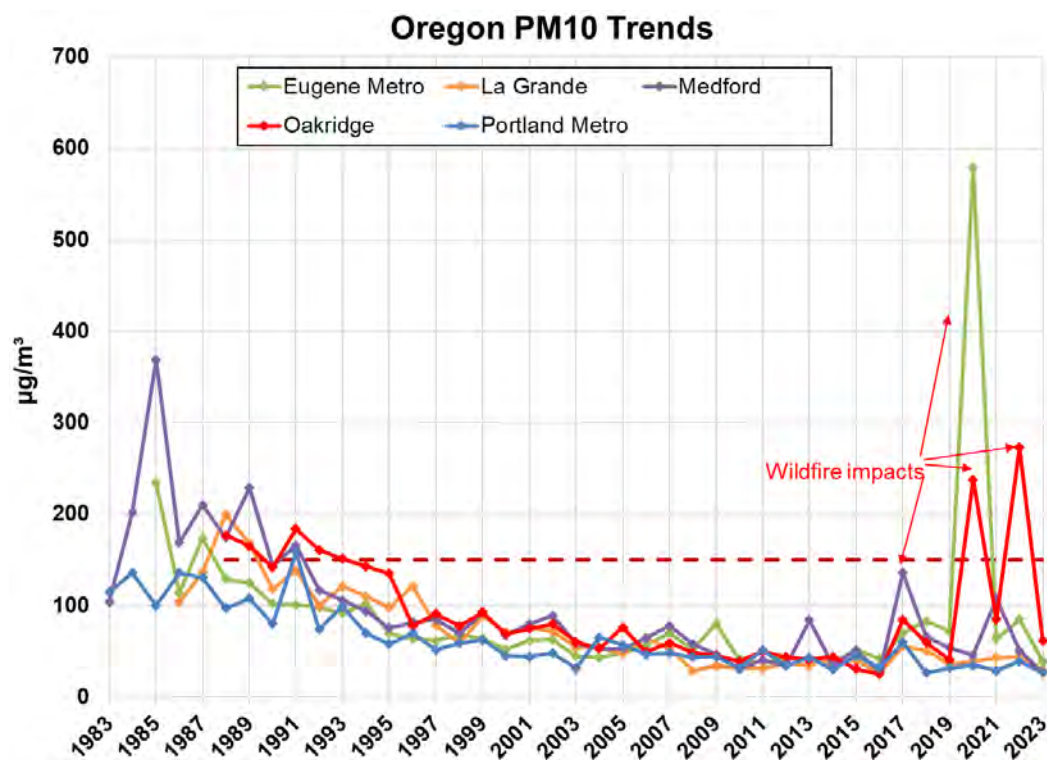


Figure 29: PM₁₀ Trends

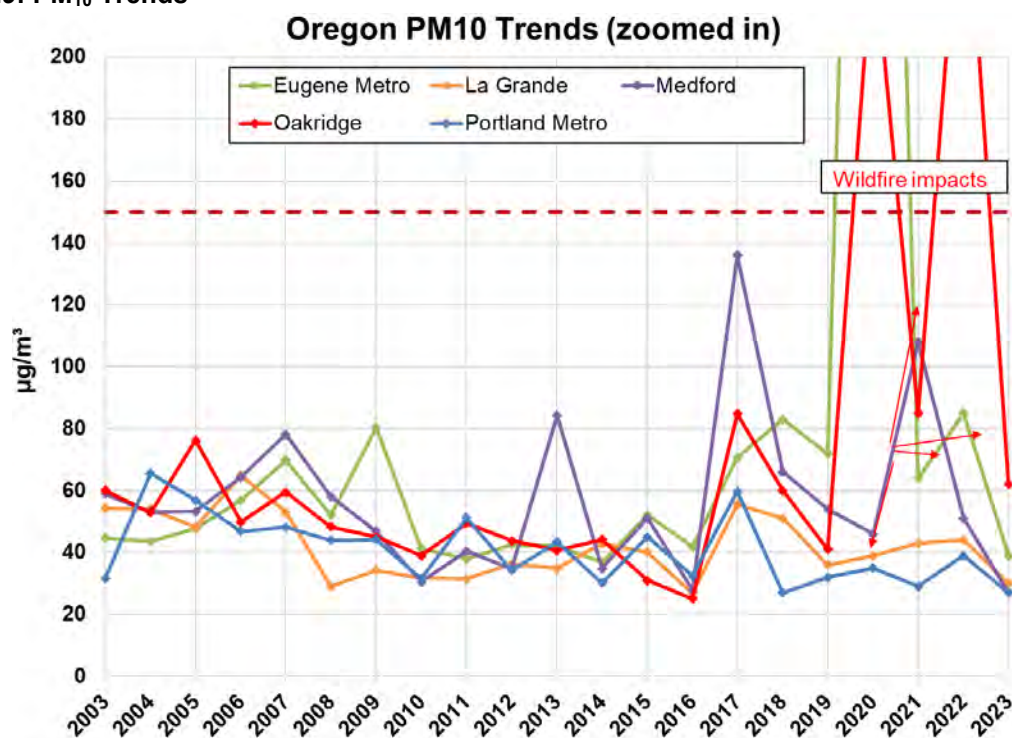


Figure 30: Close-up of PM₁₀ Trends

Ozone

Ozone is close to the eight-hour ozone NAAQS. In addition to anthropogenic sources, some areas are impacted by wildfire smoke which can also contribute to ozone formation.

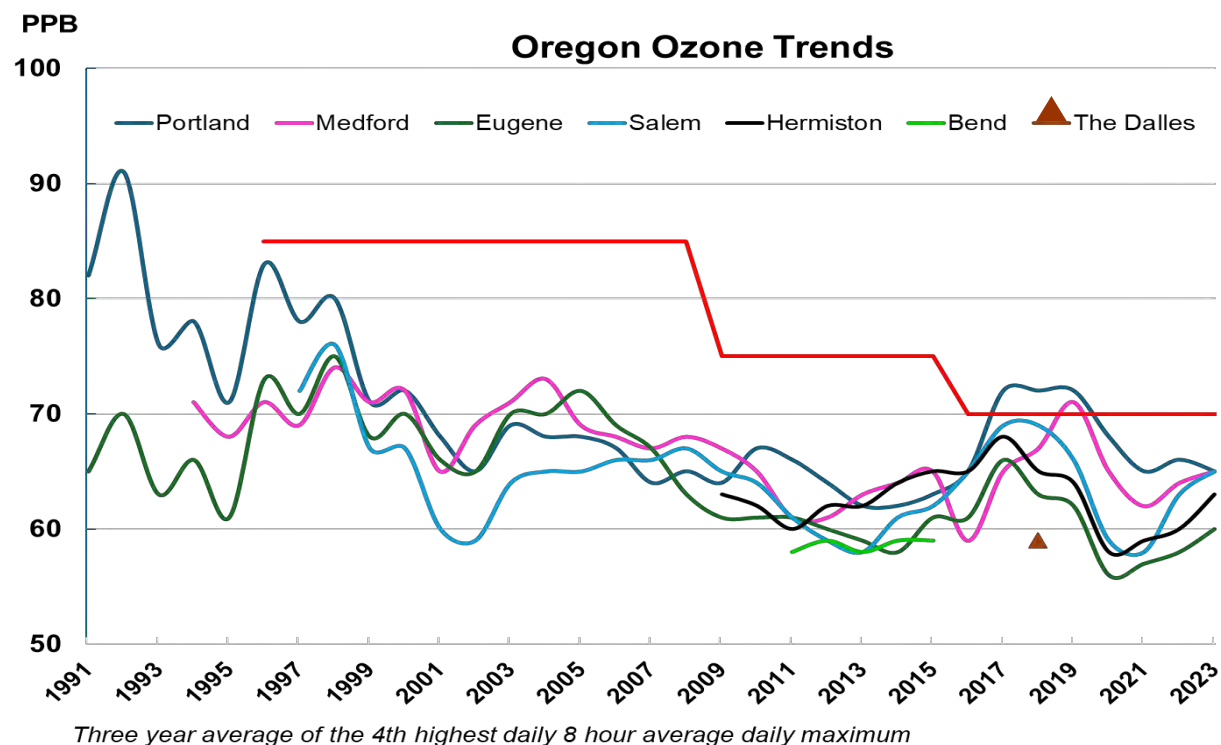


Figure 31: Ozone Trends

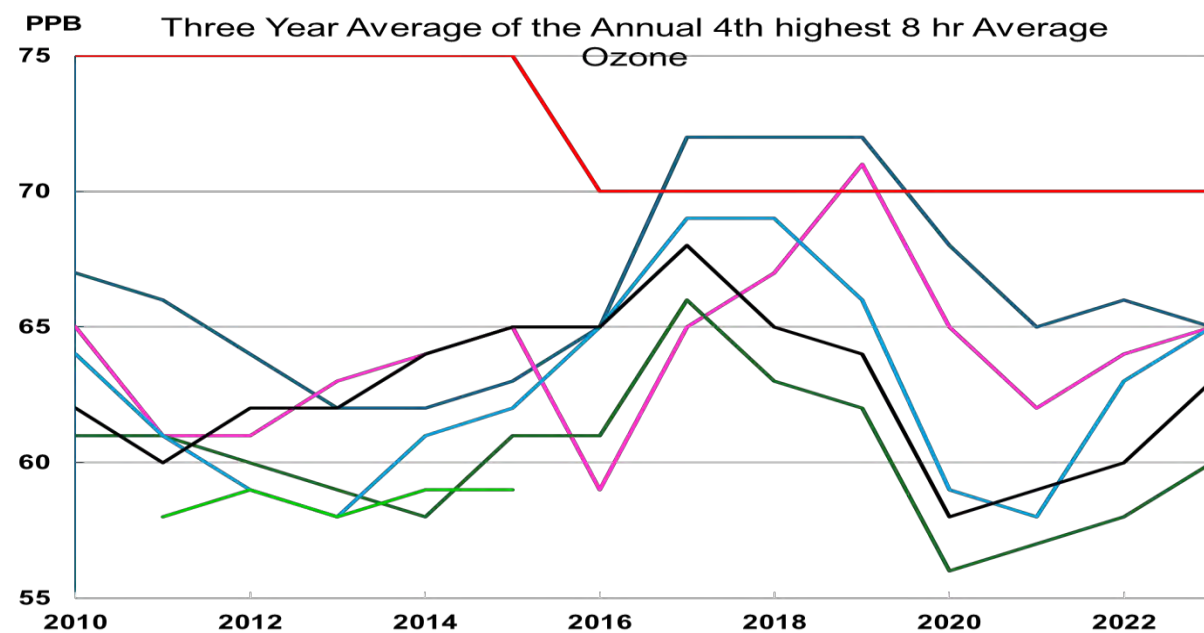


Figure 32: Close-up of Ozone Trends

Carbon Monoxide

Carbon monoxide continues to trend below the eight-hour carbon monoxide NAAQS. In the Portland metro in 2020, however, carbon monoxide exceeded it due to wildfire smoke. The figure below shows annual second-highest daily maximum of averaged eight-hour carbon monoxide concentrations.

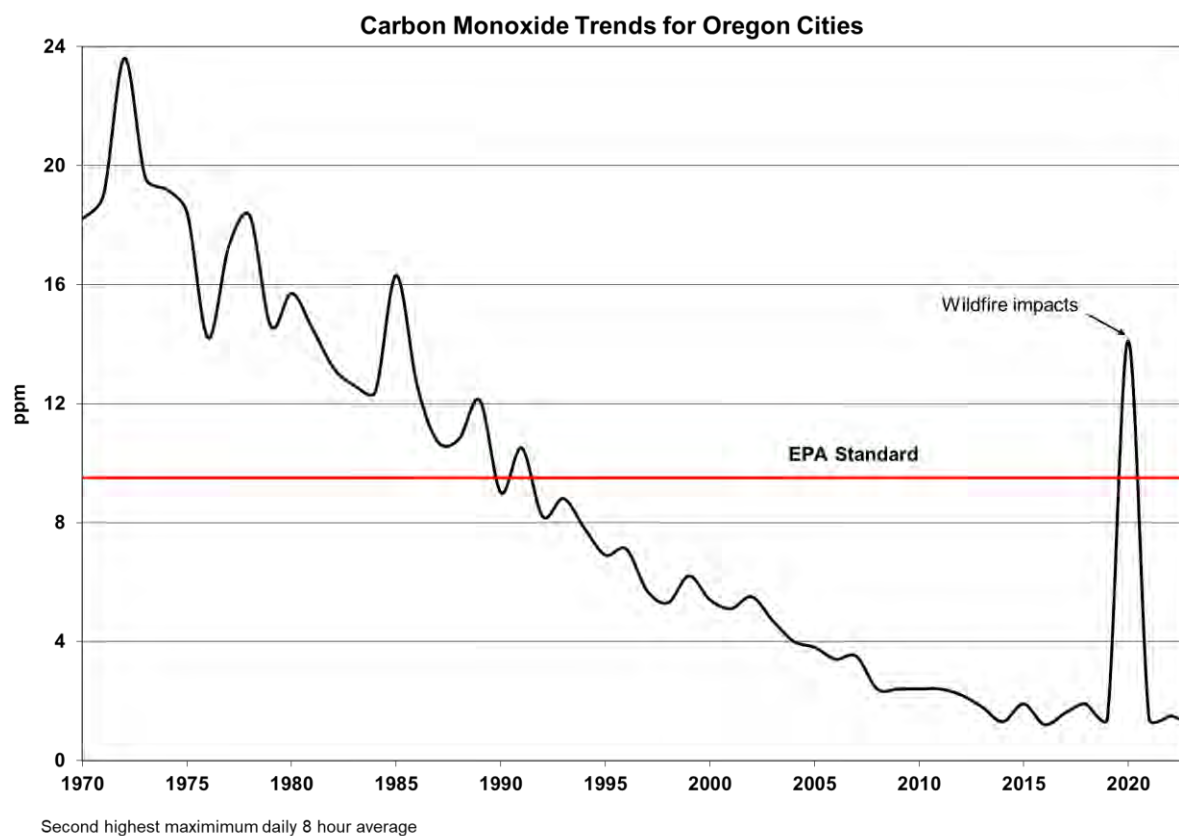


Figure 33: Carbon Monoxide Trend

Nitrogen dioxide

Nitrogen dioxide continues to trend below the nitrogen dioxide hourly and annual NAAQS. The figures below show annual 98th percentiles of daily maximums of one-hour concentrations and annual average of one-hour nitrogen dioxide concentrations.

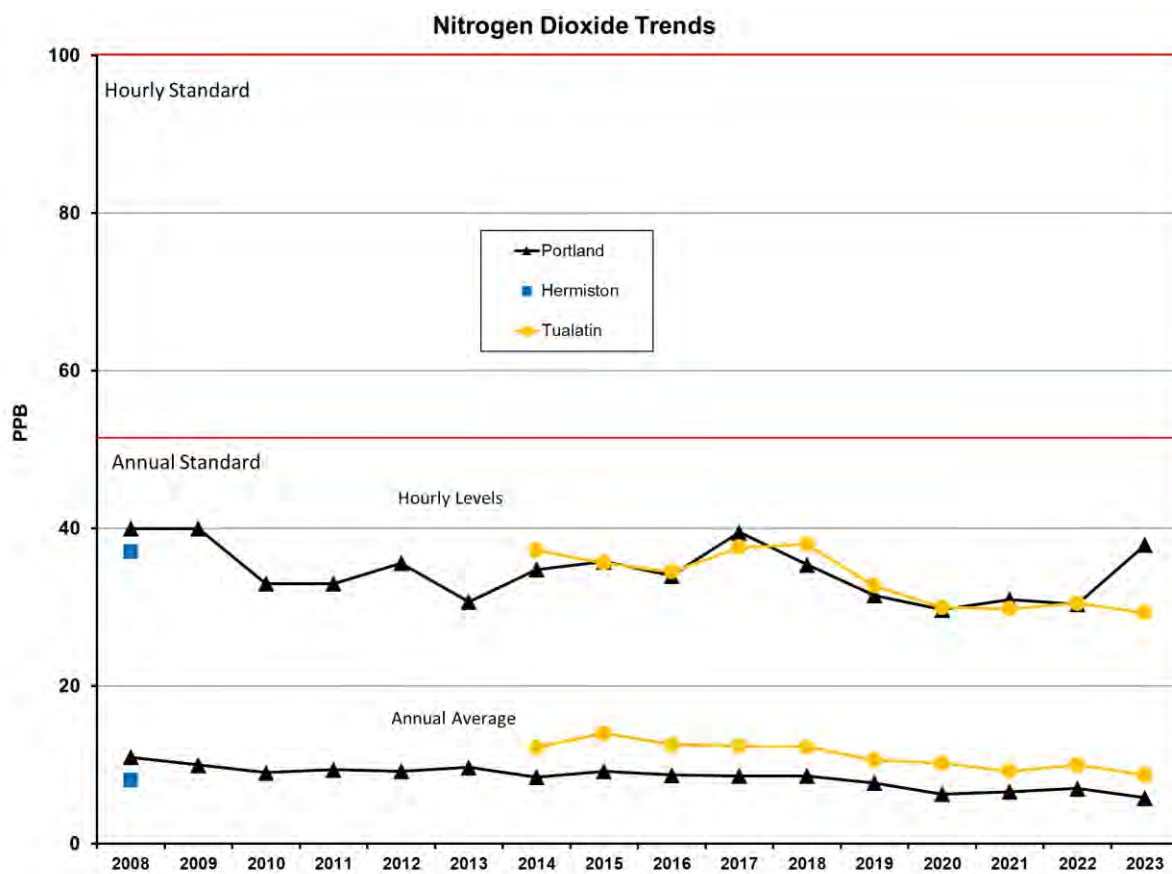


Figure 34: Annual Nitrogen Dioxide Trends

Sulfur dioxide

Sulfur dioxide continues to trend well below the hourly sulfur dioxide NAAQS. The figure below shows annual 99th percentiles of daily maximums of one-hour sulfur dioxide concentrations.

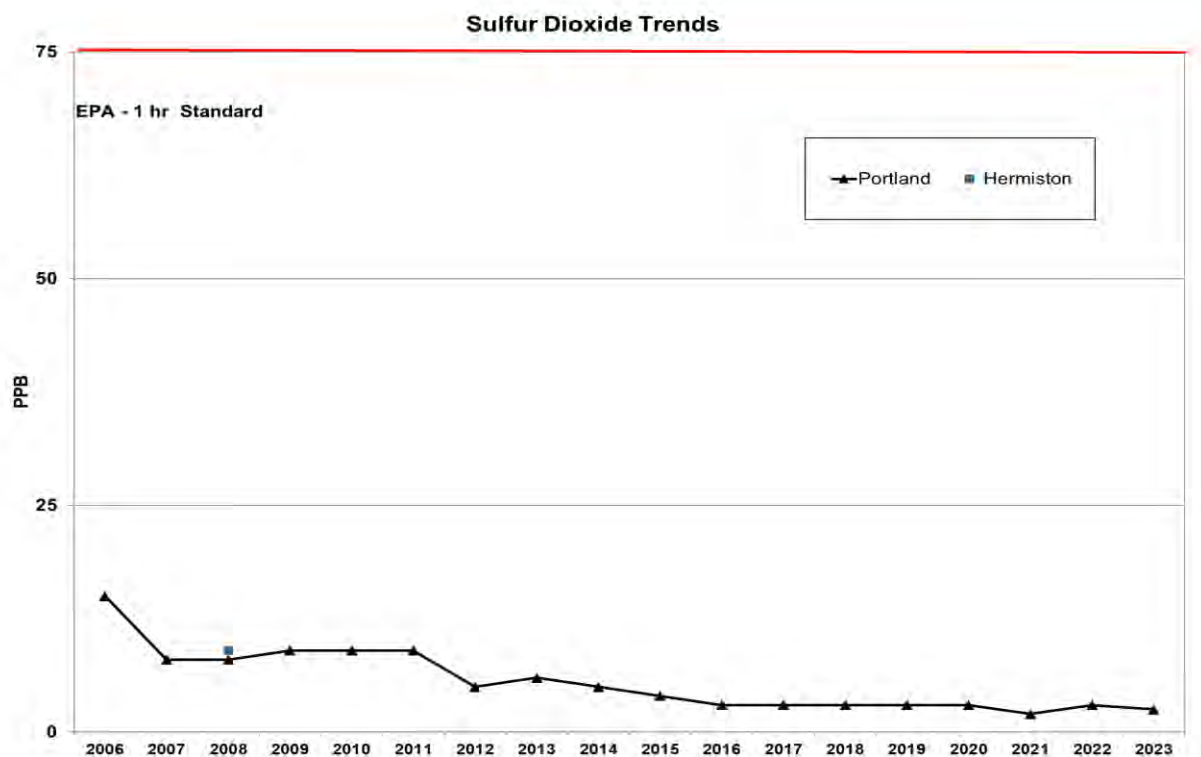


Figure 35: Sulfur Dioxide Trend

2023 Air Quality Index

EPA created the Air Quality Index (AQI) to communicate air quality information to the public. It uses a numerical scale used to describe air quality in a monitoring area and divides it into five categories of health risk based on pollutant concentrations in the ambient air. An AQI value is calculated for each criteria pollutant monitored and the highest value is selected to describe the health risk for the entire monitoring area. In Oregon, pollutants that primarily drive the AQI are ozone and PM_{2.5}. The table below shows the relationships between AQI categories, AQI values, pollutant concentrations and air quality descriptions. The AQI ranges may also change if the PM_{2.5} NAAQS is revised. More technical information about the AQI is available through EPA's [AIRNow's website](#).

Table 9: Detailed AQI Information

Health Category	AQI	PM _{2.5} Daily Averaged Concentration, µg/m ³	Ozone Eight-Hour Averaged Concentration, ppm	Health Risk Description of Air Quality
Good	0 – 50	0.0 – 12.0	0.000 – 0.054	Air quality is satisfactory, and air pollution poses little or no risk
Moderate	51 – 100	12.1 – 35.4	0.055 – 0.070	Air quality is acceptable. However, there may be a risk for some people, particularly those very sensitive to air pollution.
Unhealthy for Sensitive Groups	101 – 150	35.5 – 55.4	0.071 – 0.085	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Unhealthy	151 – 200	55.5 – 150.4	0.086 – 0.105	Members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 – 300	150.5 – 250.4	0.106 – 0.200	Health alert. The risk of health effects is increased for everyone.
Hazardous	301+	250.5 – 500.4	0.200+	Health warning of emergency conditions. everyone is more likely to be affected.

AQI summary

DEQ and LRAPA monitor air quality in cities and areas throughout the state. Most sites monitor all year, but a handful only monitor during summer. The table below lists all the monitoring locations in Oregon, the number of days in each AQI health category, how many days were missed (often due to equipment failure) and how many days were expected to be monitored (Sum). Historical AQI summary data can be found in Appendix 3: AQI historical .

Table 10: 2023 AQI Summary

	Air Shed	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing	Sum
Coast	Brookings	296	10	1	0	0	0	58	365
	Coos Bay	342	11	0	0	0	0	12	365
	Florence	350	4	0	0	0	0	11	365
	Tillamook	352	2	0	0	0	0	11	365
	Toledo	349	5	0	0	0	0	11	365
Portland Metro	Sauvie Island	352	12	1	0	0	0	0	365
	Gresham	298	18	1	0	0	0	48	365
	Forest Grove	333	16	1	0	0	0	15	365
	Hillsboro	333	31	1	0	0	0	0	365
	Beaverton	351	12	1	0	0	0	1	365
	SE Portland – Salmon & Main	338	13	0	0	0	0	14	365
	Portland – McDaniel High School	334	19	1	0	0	0	11	365
	Portland – Roosevelt High School	339	15	0	0	0	0	11	365
	Portland – Jefferson High School	330	11	0	0	0	0	24	365
	Portland – Cully Neighborhood	337	24	1	0	0	0	3	365
	Portland – Woodstock Neighborhood	314	12	0	0	0	0	39	365
	Portland – Lincoln High School	320	10	1	0	0	0	34	365
	Tualatin	340	24	1	0	0	0	0	365
	Estacada	316	36	0	1	0	0	12	365
	Carus	341	22	1	0	0	0	1	365
	Milwaukie	324	18	0	0	0	0	23	365

Appendix 1: Ambient air monitoring network

	Air Shed	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing	Sum
Willamette Valley	Woodburn	311	33	2	0	0	0	19	365
	Silverton	328	36	1	0	0	0	0	365
	Lyons	170	30	2	1	0	0	162	365
	Mill City	300	54	1	0	0	0	10	365
	NE Salem	303	40	6	1	0	0	15	365
	Central Salem	311	51	3	0	0	0	0	365
	Turner	318	45	2	0	0	0	0	365
	Dallas	334	16	0	0	0	0	15	365
	Albany	327	37	1	0	0	0	0	365
	Corvallis	339	10	0	0	0	0	16	365
	Sweet Home	339	23	3	0	0	0	0	365
	Eugene Amazon Park	324	37	3	1	0	0	0	365
	Eugene Wilkes Drive	325	37	2	1	0	0	0	365
	Springfield	325	36	2	2	0	0	0	365
	Eugene Highway 99 West	305	57	2	1	0	0	0	365
	Oakridge	288	65	6	6	0	0	0	365
	Cottage Grove	314	43	6	1	0	0	1	365
Portland Metro	Roseburg	285	59	4	3	2	0	12	365
	Grants Pass	285	64	9	4	3	0	0	365
	Cave Junction	267	68	10	13	4	3	0	365
	Shady Cove	346	11	6	2	0	0	0	365
	Medford	268	80	2	11	1	0	3	365
	Talent	268	20	4	10	0	0	63	365
	Ashland	331	21	2	10	1	0	0	365

Appendix 1: Ambient air monitoring network

	Air Shed	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing	Sum
Central Oregon	Madras	299	60	3	2	1	0	0	365
	Redmond	268	52	4	10	2	0	29	365
	Prineville	315	38	6	6	0	0	0	365
	Sisters	315	28	5	11	4	1	1	365
	Bend Portland Avenue Bridge	318	28	10	8	0	0	1	365
	Bend High School	294	42	5	7	0	0	17	365
	Bend – Ponderosa Elementary School	290	25	6	9	0	0	35	365
	Bend – Pine Ridge Elementary School	302	31	11	8	1	0	12	365
	Sun River	301	34	7	9	0	0	14	365
	La Pine	227	96	19	10	0	0	13	365
NE Oregon	The Dalles	345	15	1	3	1	0	0	365
	Hermiston	319	36	0	1	2	0	7	365
	Pendleton	342	20	0	2	1	0	0	365
	La Grande	337	22	0	0	0	0	6	365
	Enterprise	341	24	0	0	0	0	0	365
	John Day	250	113	2	0	0	0	0	365
	Cove	348	13	0	0	0	0	4	365
	Baker City	336	27	0	0	0	0	2	365
	Ontario	337	20	0	0	0	0	8	365
SE Oregon	Burns	263	101	1	0	0	0	0	365
	Chiloquin	260	23	4	4	0	0	74	365
	Klamath Falls	258	101	4	2	0	0	0	365
	Lakeview	309	54	1	0	0	0	1	365
Cascades	Hood River	314	34	1	2	1	0	13	365
	Detroit	334	10	1	1	0	0	19	365
	Crater Lake	94	16	6	3	0	0	5	124
	Mt. Hood at Government Camp	101	3	2	3	0	0	5	114

AQI graphs

The AQI graphs below show the AQI value for each day for each monitored city in Oregon. The AQI calculation uses PM_{2.5} data for most locations and uses both PM_{2.5} and ozone at the following locations: Portland Metro, Eugene-Springfield, Hermiston, Medford, and Salem. Within each graph is a table of AQI health categories, the number of days within each category, and the number of wildfire days within categories of Unhealthy for Sensitive Groups (USG) or higher.

Coastal AQI

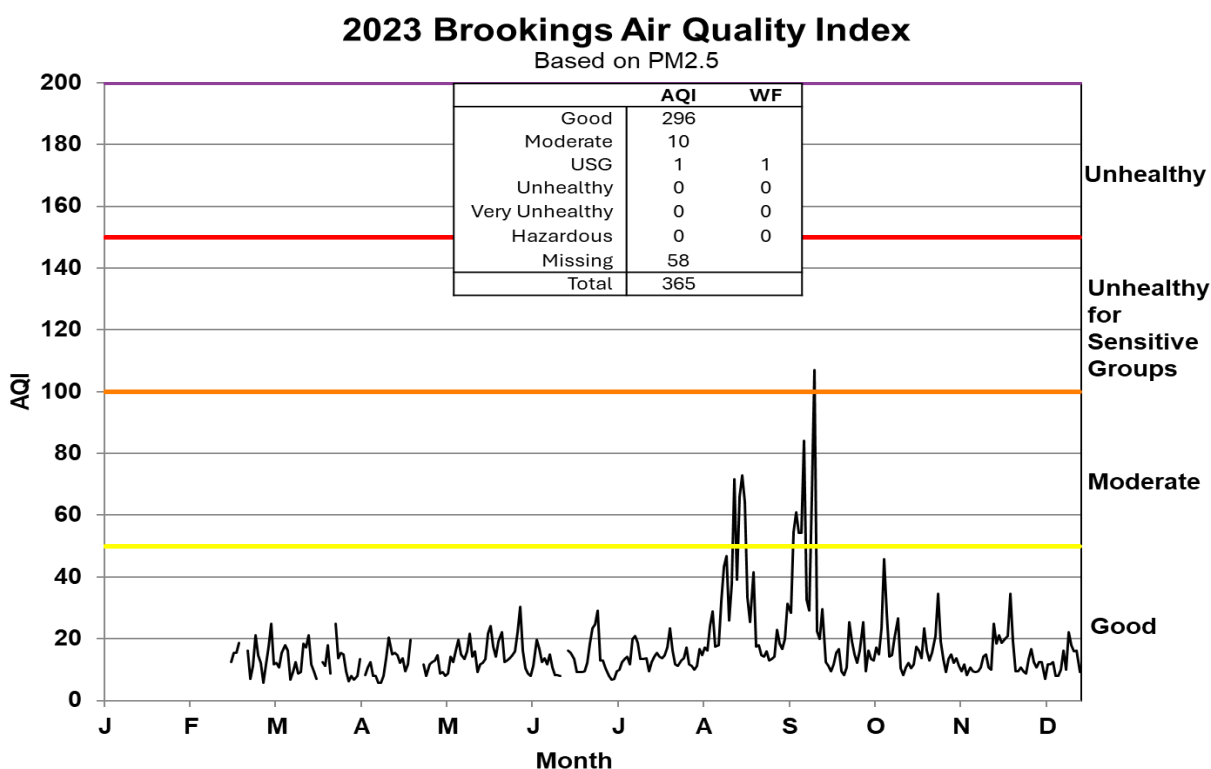


Figure 36. 2023 Brookings AQI

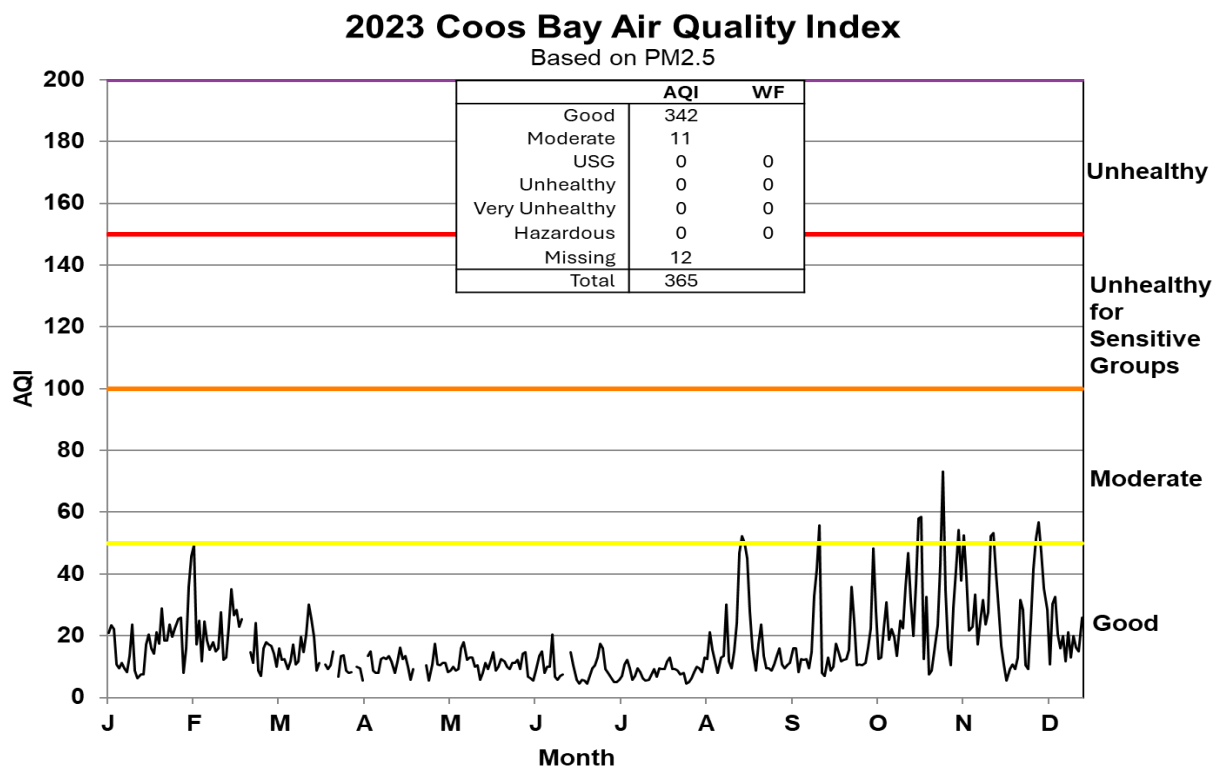


Figure 37. 2023 Coos Bay AQI

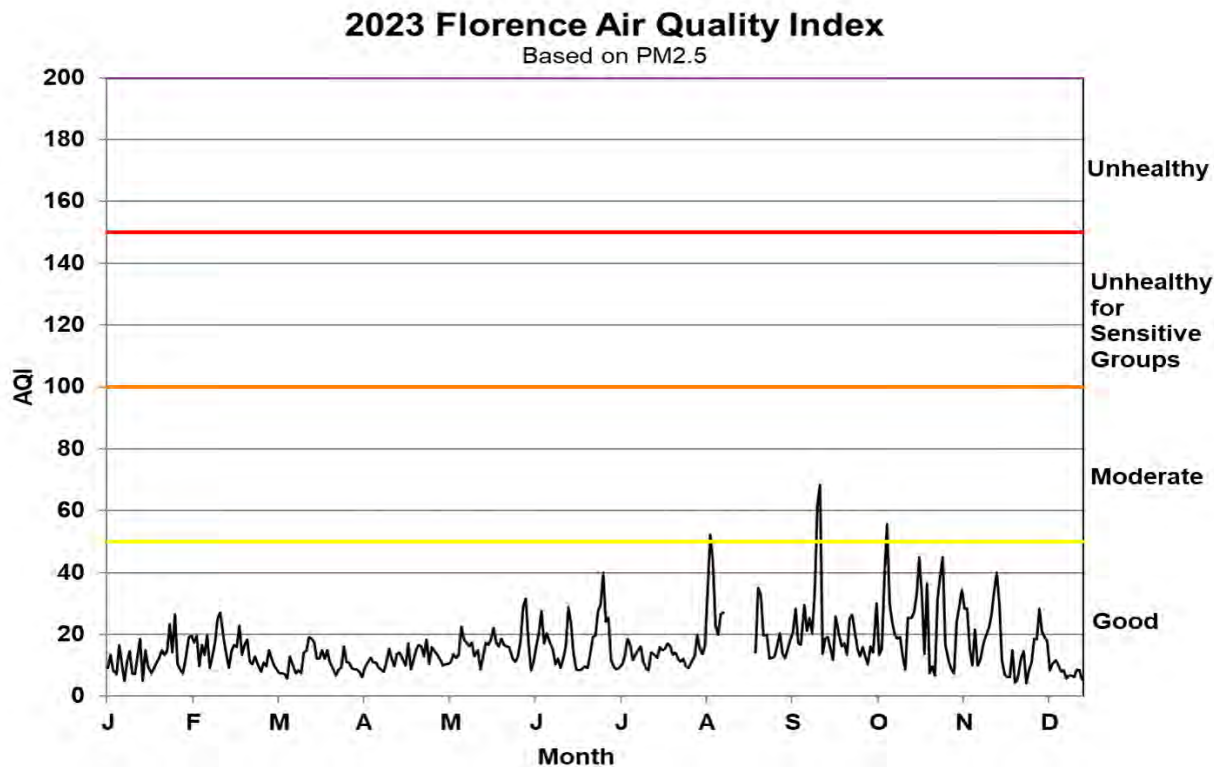


Figure 38. 2023 Florence AQI

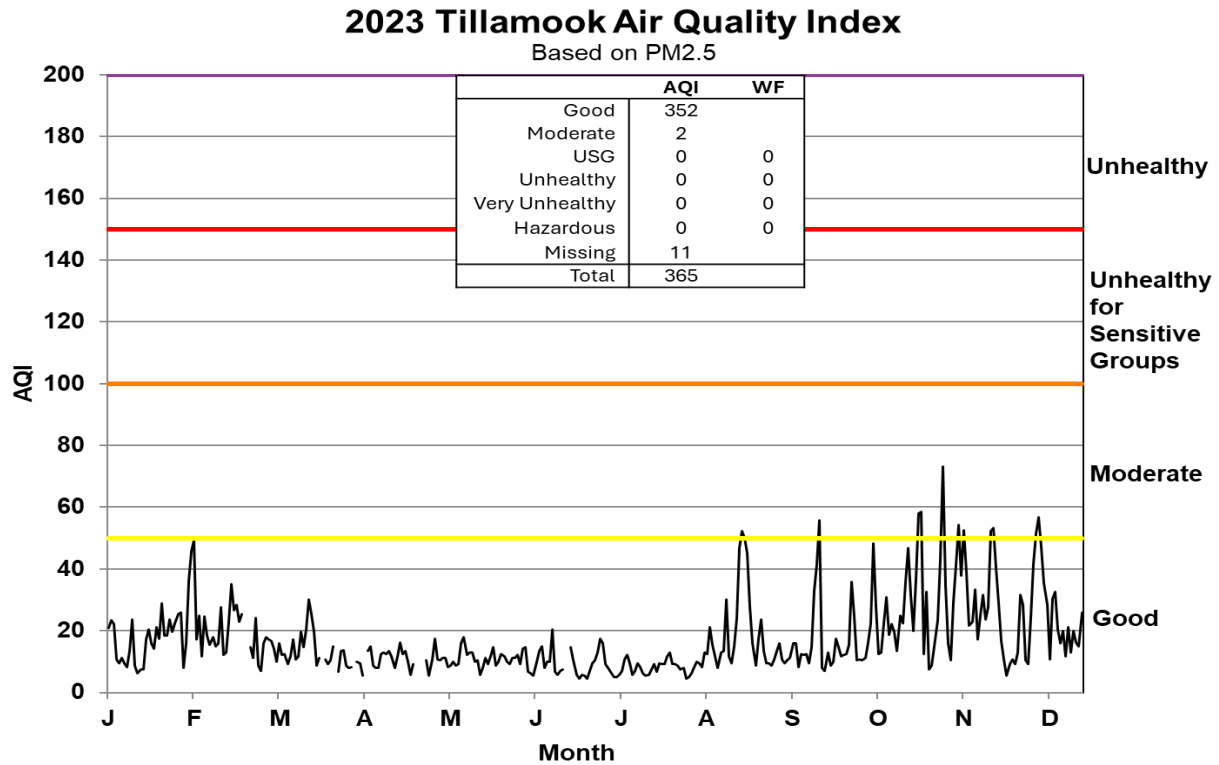


Figure 39. 2023 Tillamook AQI

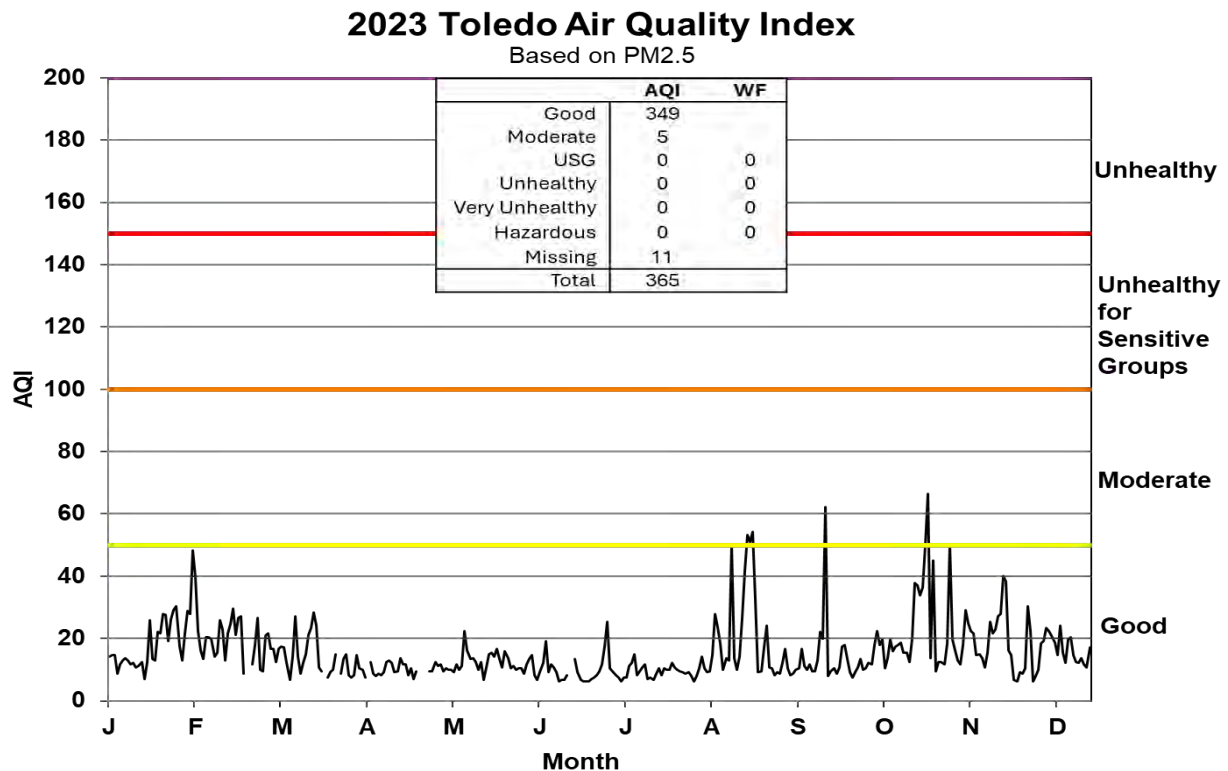


Figure 40. 2023 Toledo AQI

Greater Portland Metro Area

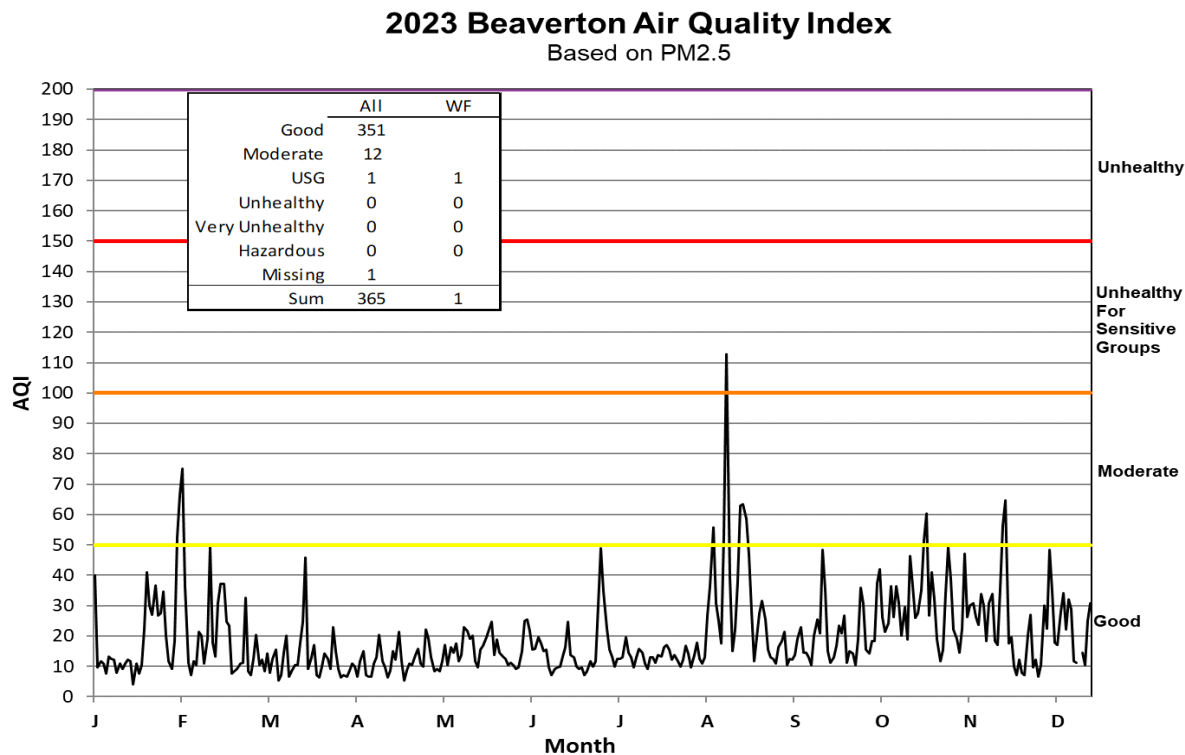


Figure 41. 2023 Beaverton AQI

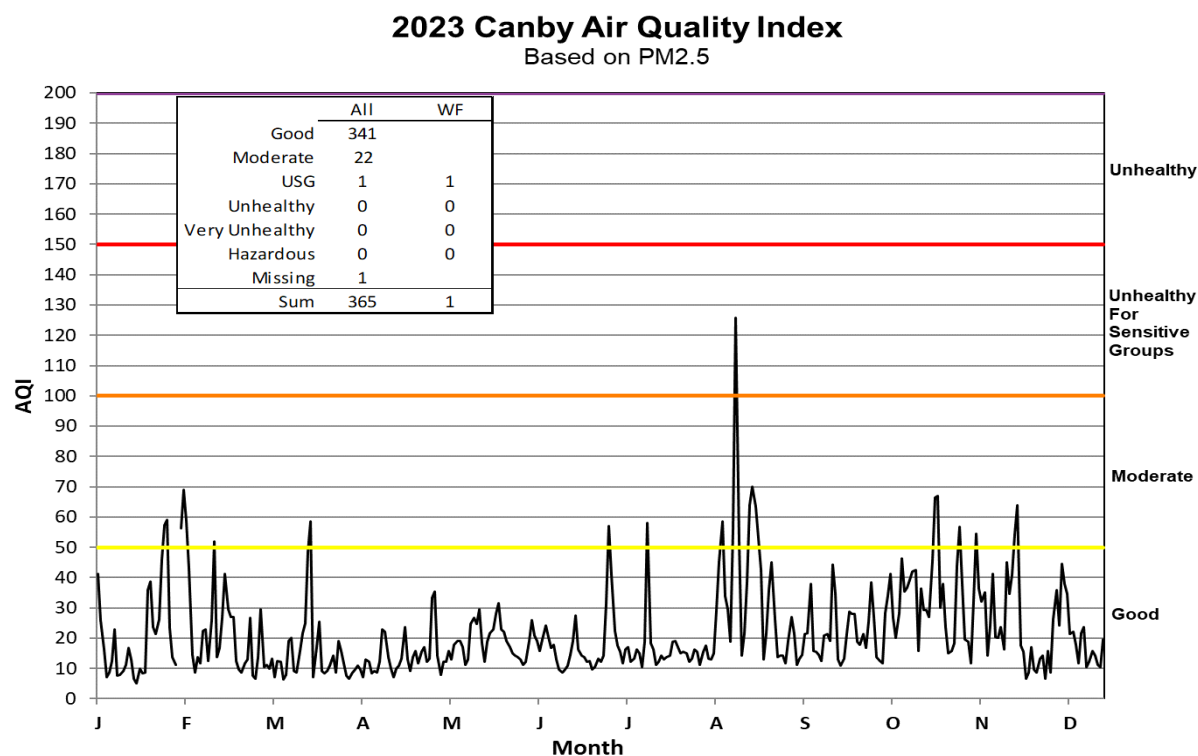


Figure 42. 2023 Canby AQI

Appendix 1: Ambient air monitoring network

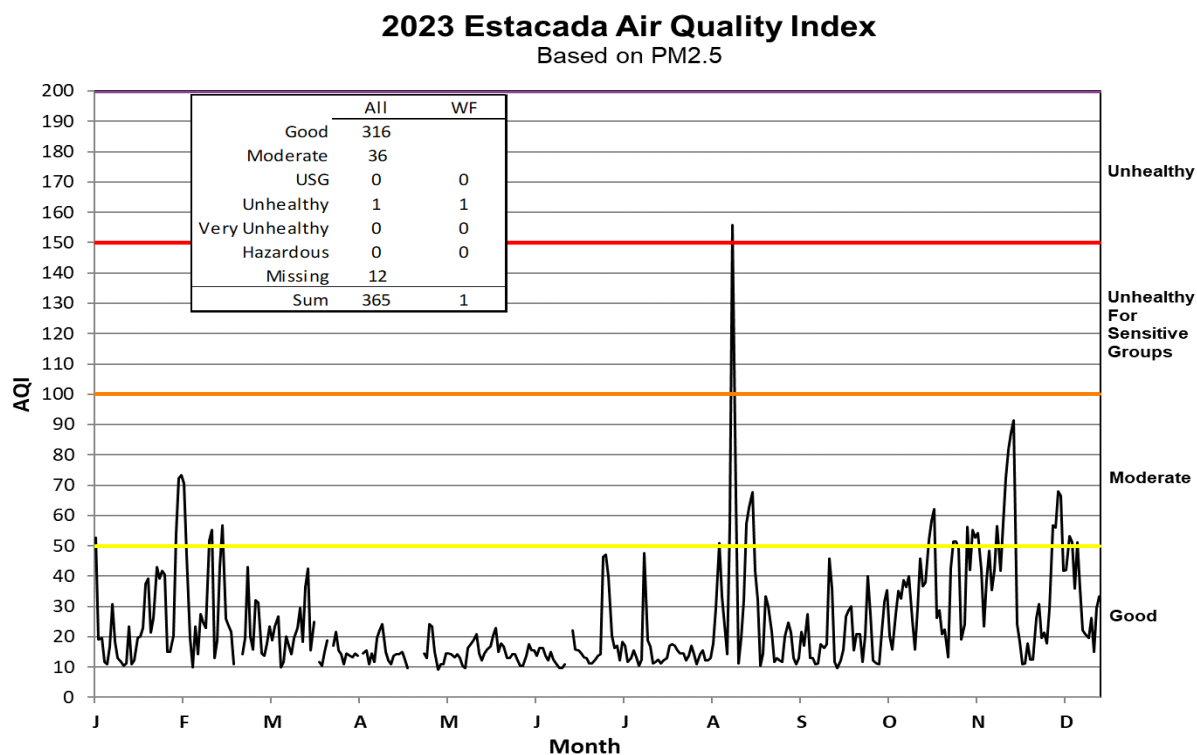


Figure 43. 2023 Estacada AQI

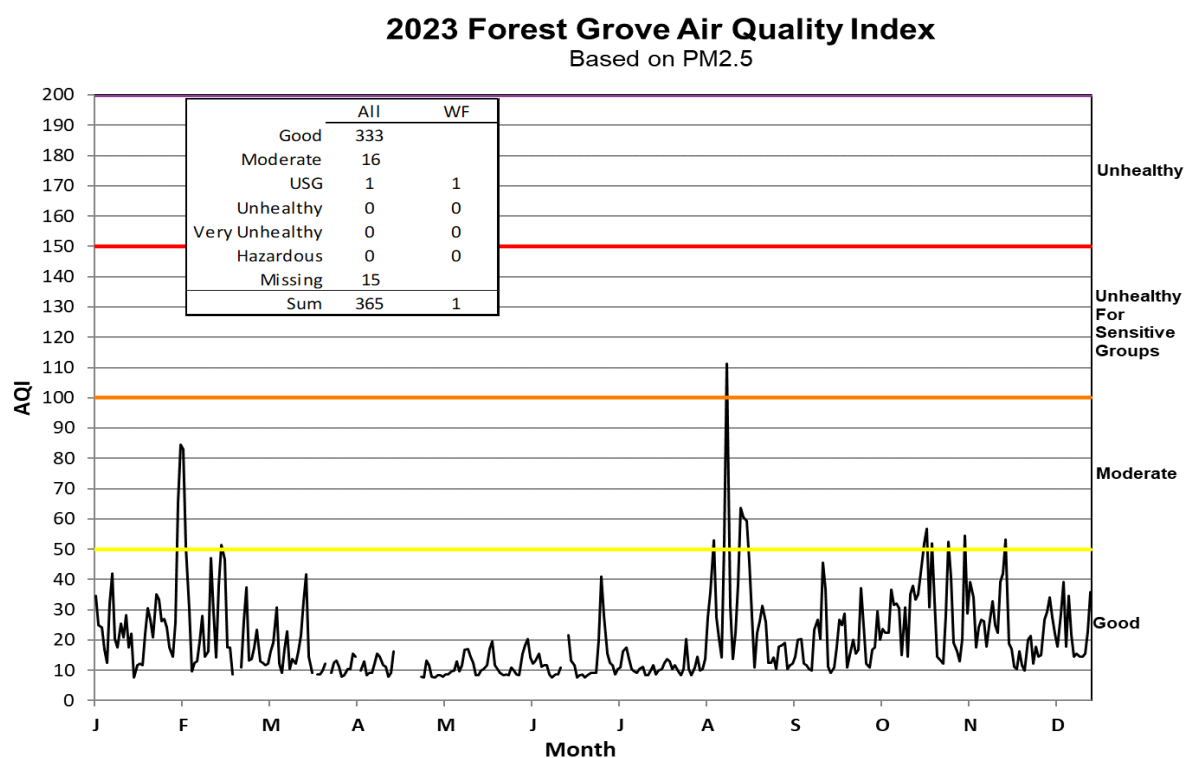


Figure 44. 2023 Forest Grove AQI

Appendix 1: Ambient air monitoring network

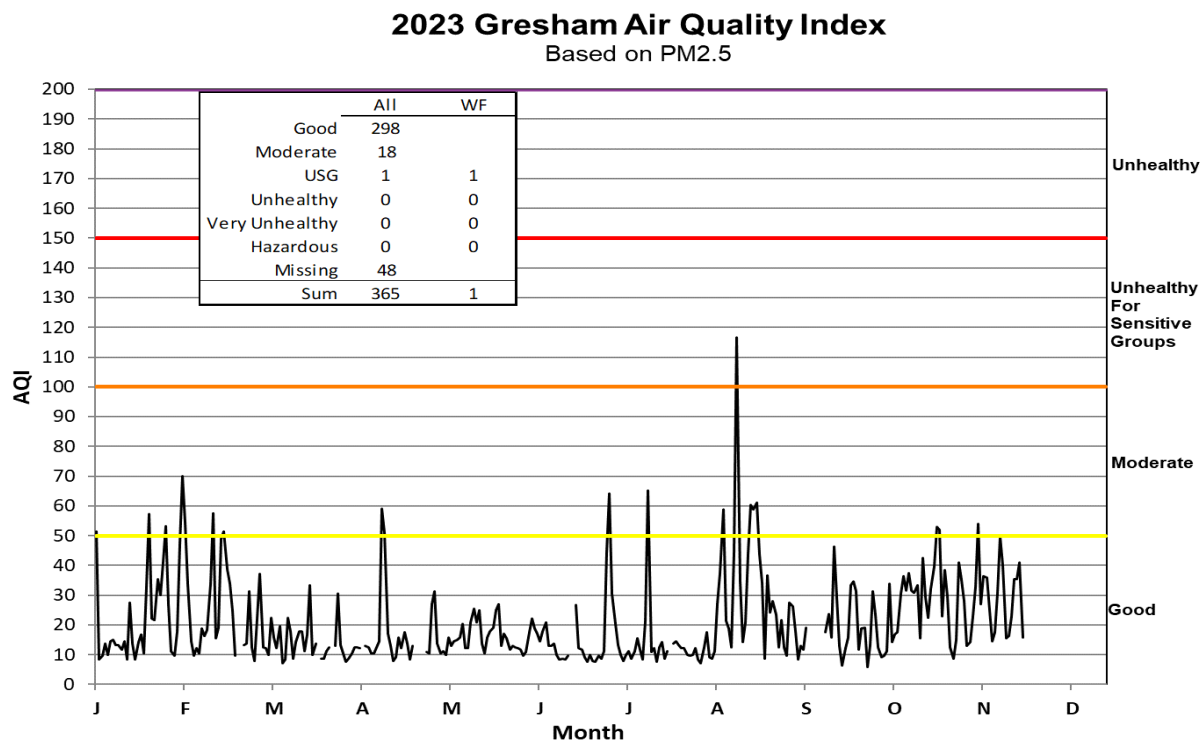


Figure 45. 2023 Gresham AQI

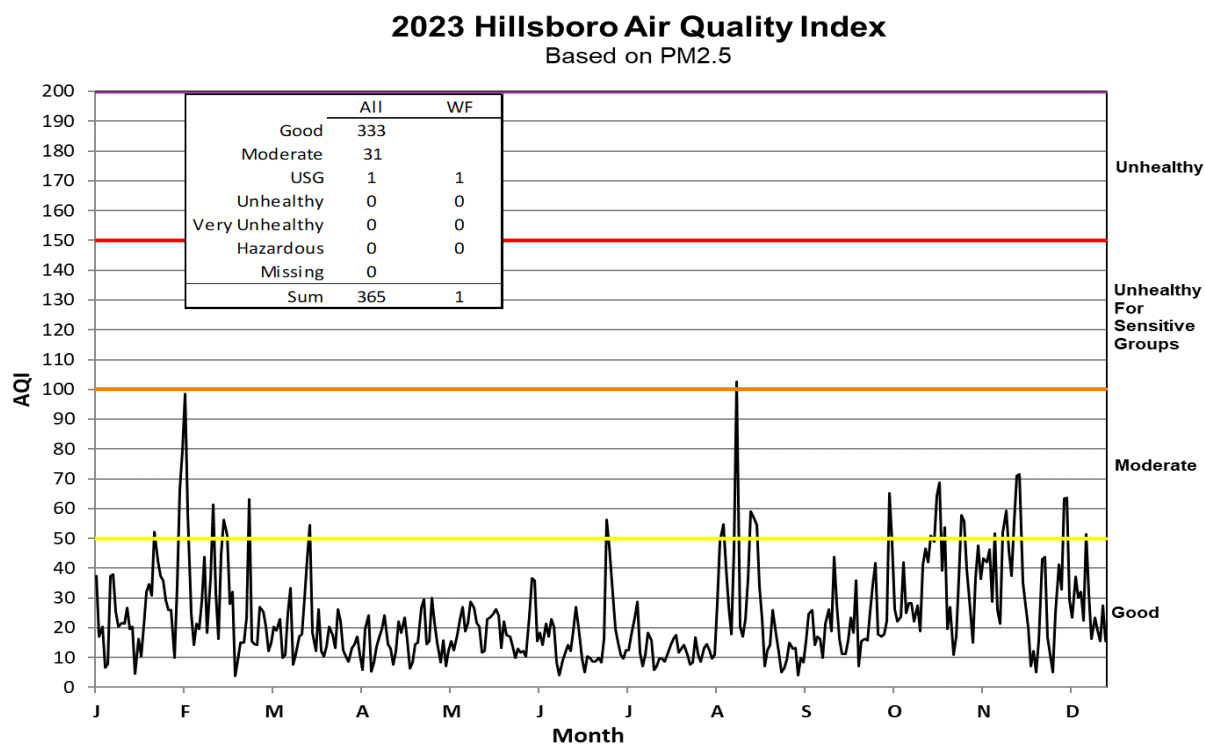


Figure 46. 2023 Hillsboro AQI

Appendix 1: Ambient air monitoring network

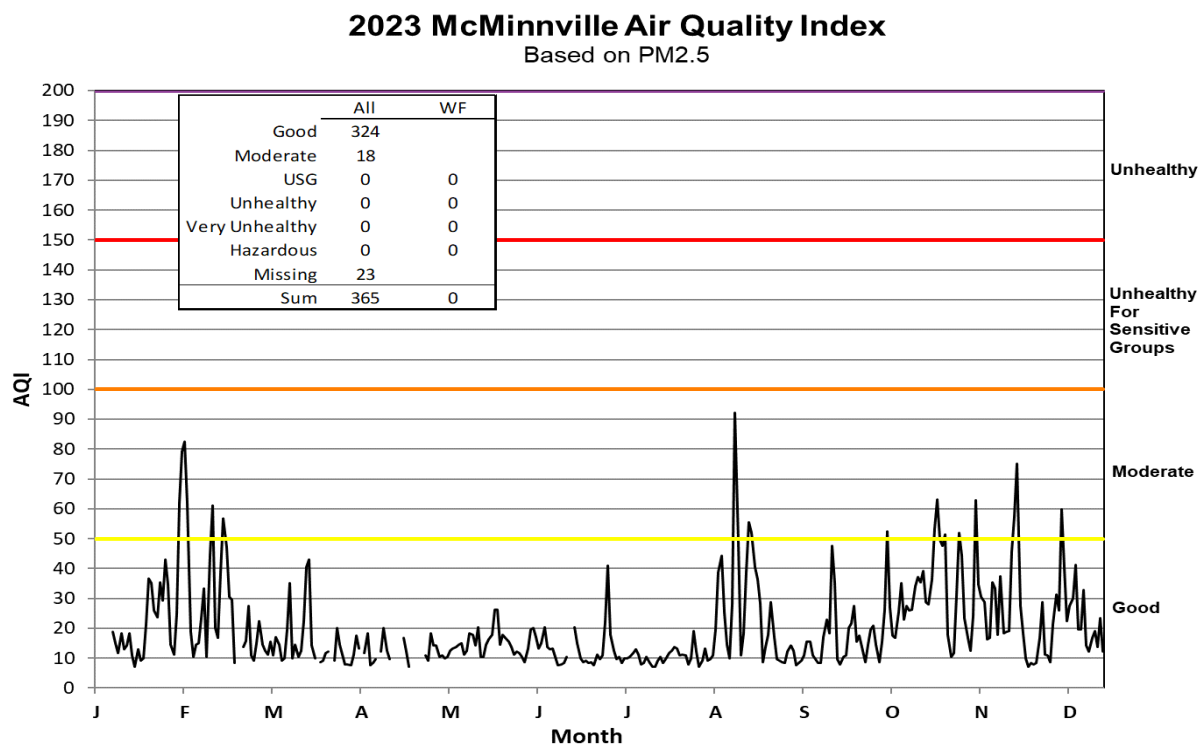


Figure 47. 2023 McMinnville AQI

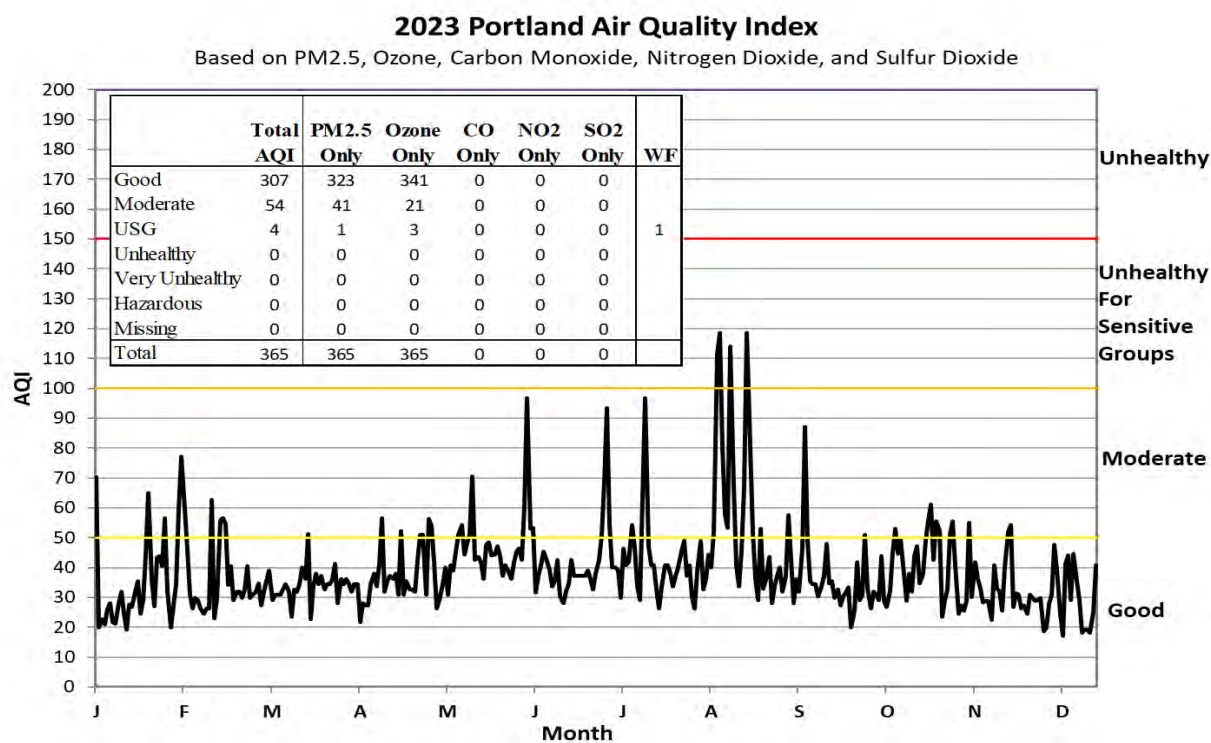


Figure 48. 2023 Portland AQI

Appendix 1: Ambient air monitoring network

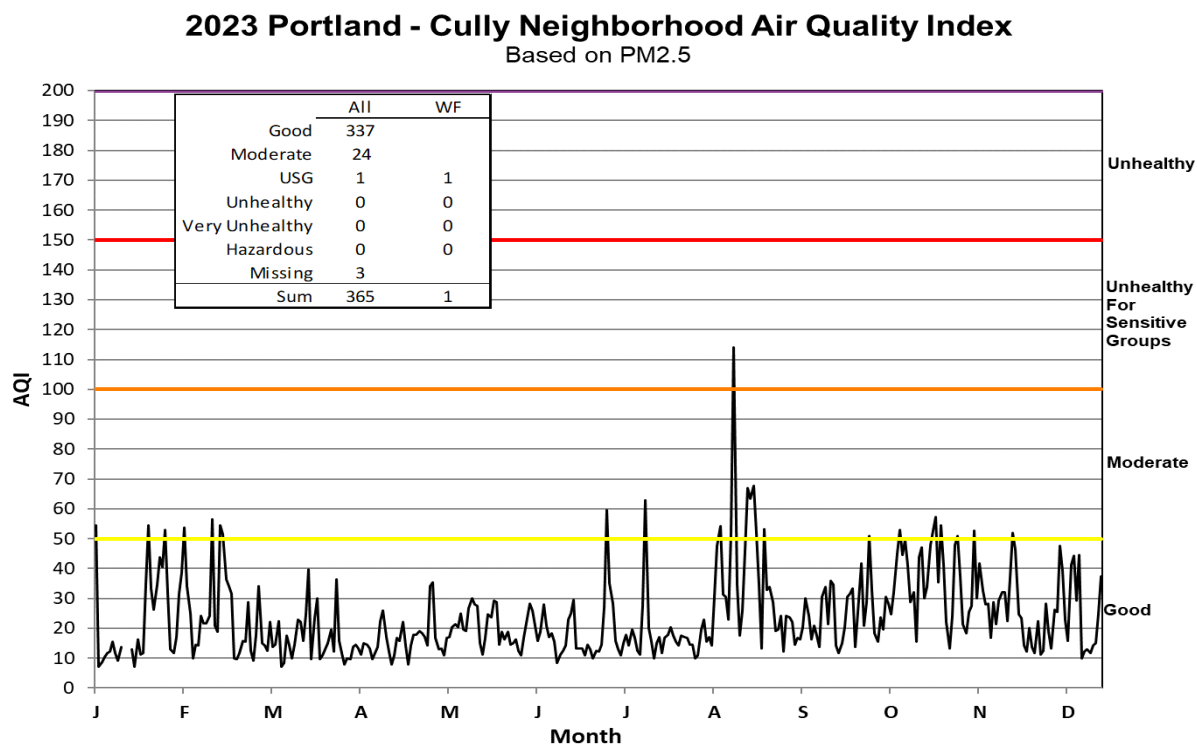


Figure 49. 2023 NE Portland - Cully Neighborhood AQI

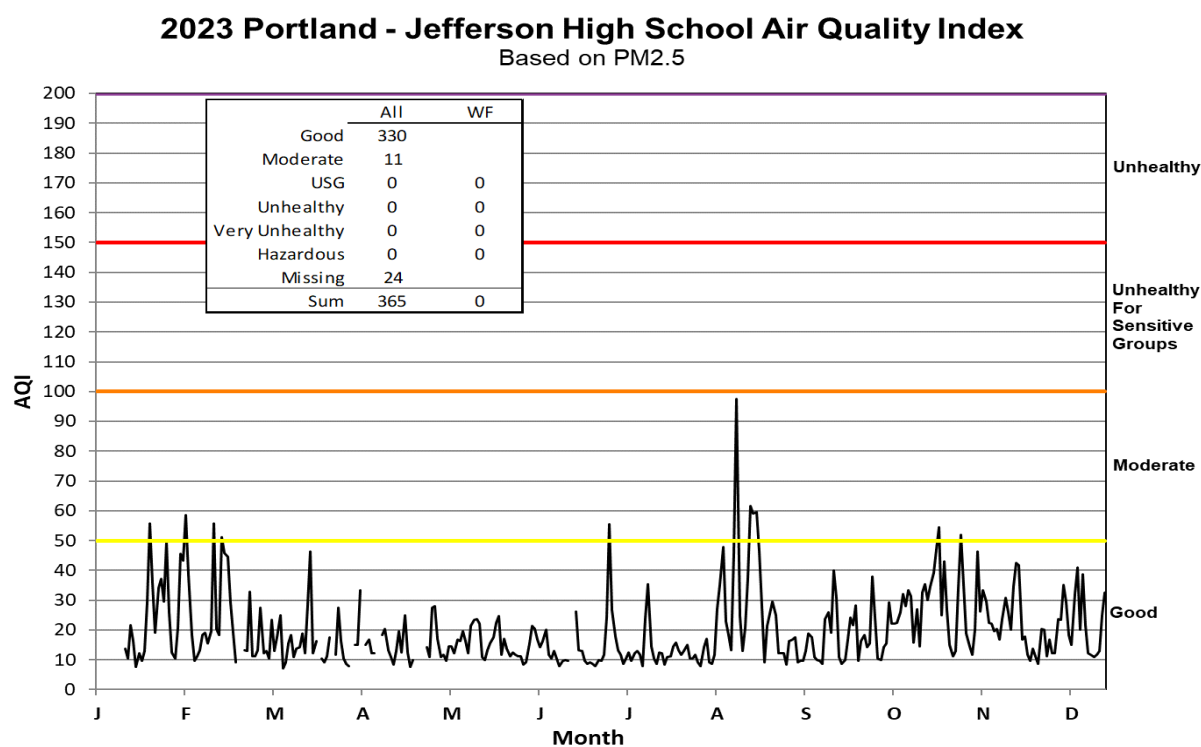


Figure 50. 2023 North Portland – Jefferson High School AQI

Appendix 1: Ambient air monitoring network

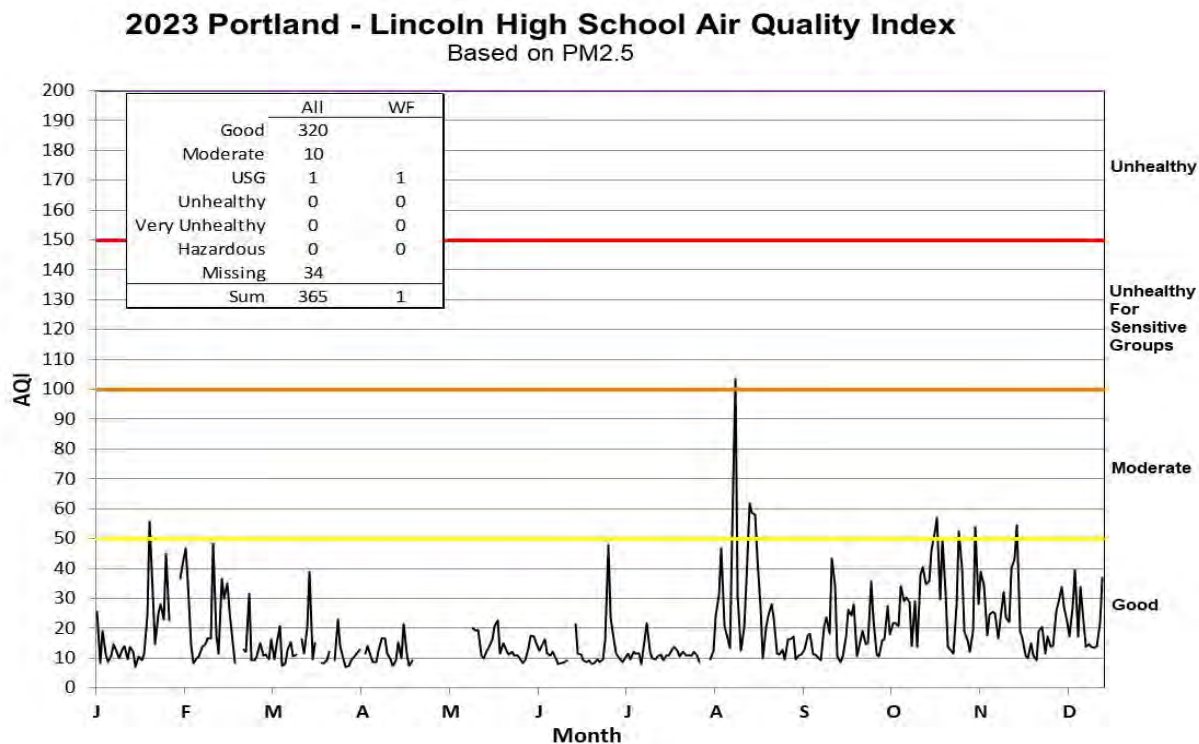


Figure 51. 2023 NW Portland – Lincoln High School AQI

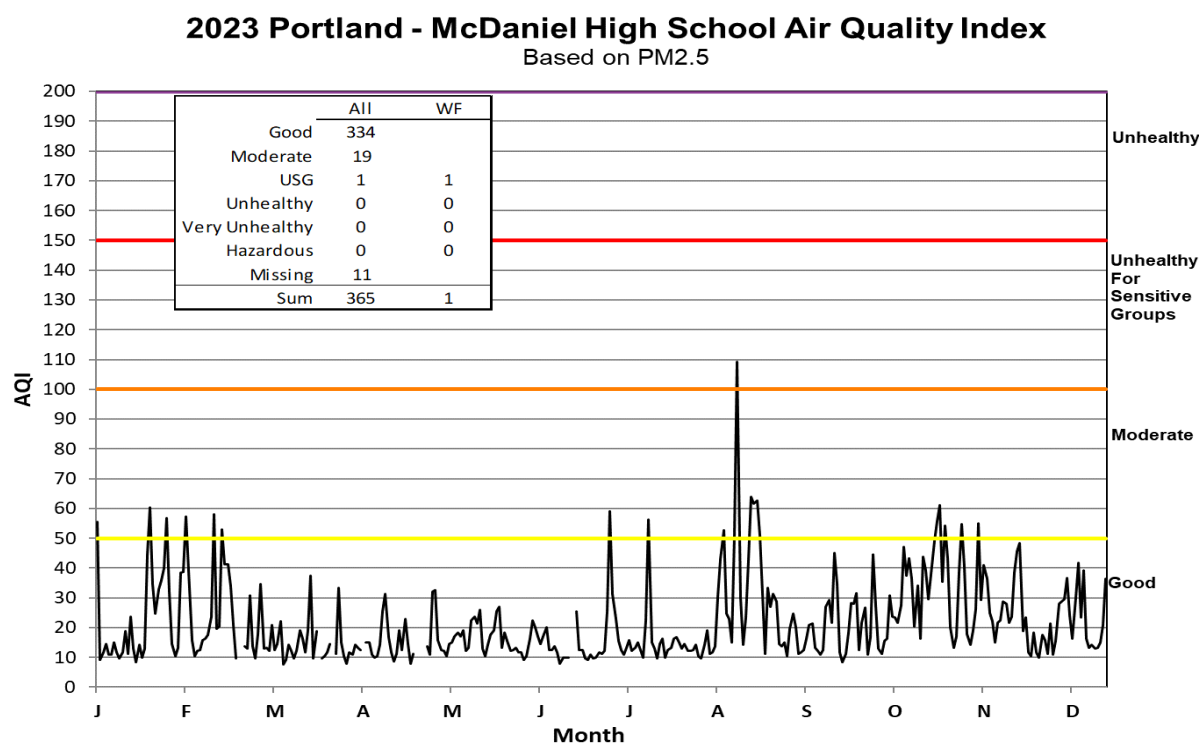


Figure 52. 2023 NE Portland – McDaniel High School AQI

Appendix 1: Ambient air monitoring network

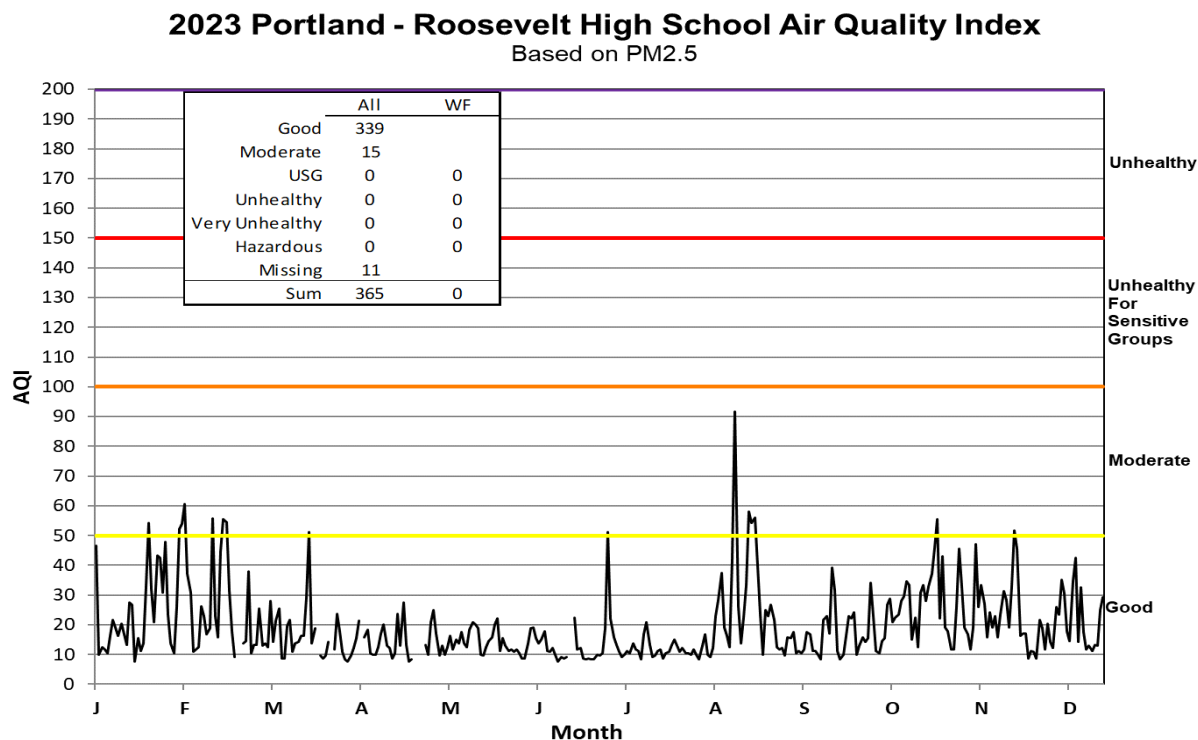


Figure 53. 2023 North Portland – Roosevelt High School AQI

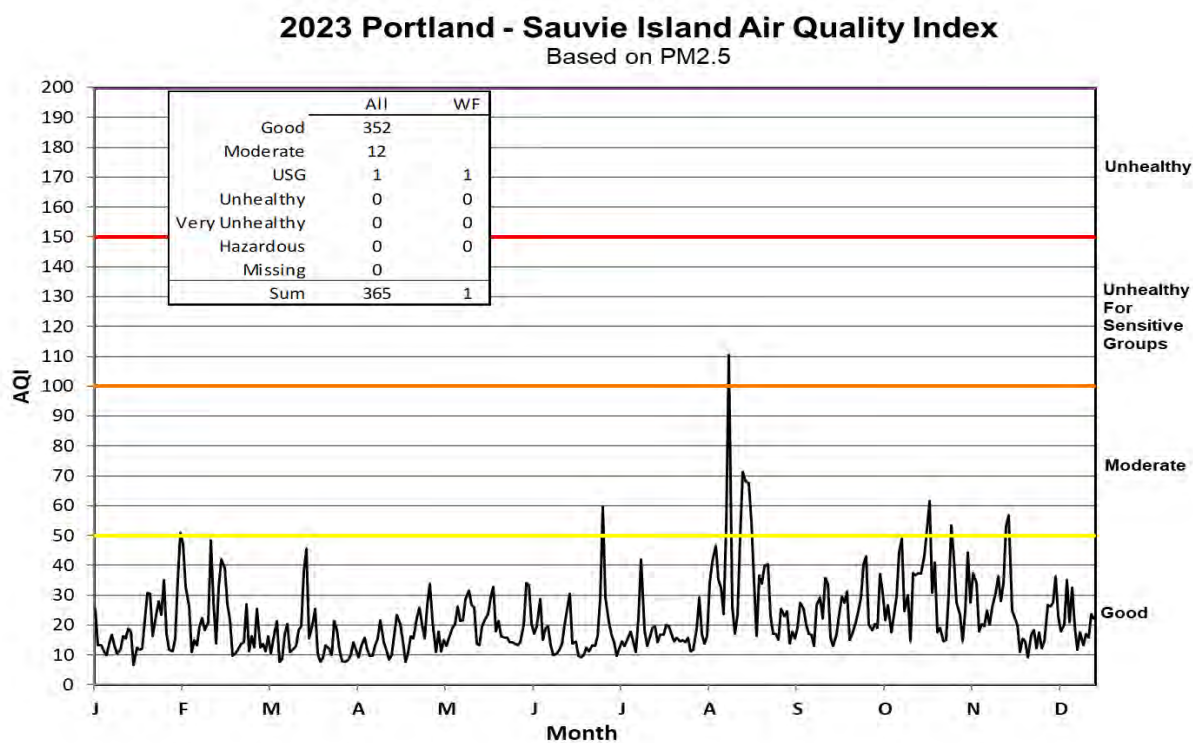


Figure 54. 2023 Sauvie Island AQI

Appendix 1: Ambient air monitoring network

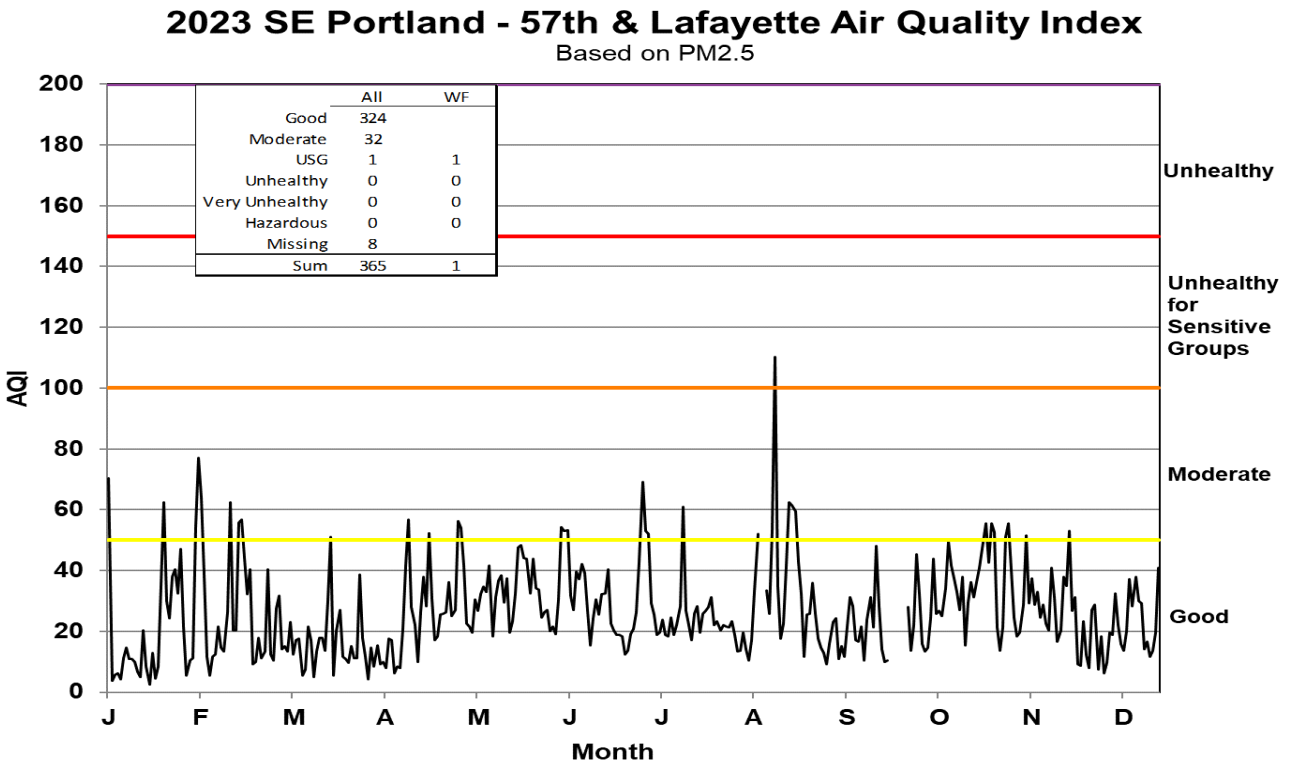


Figure 55. 2023 SE Portland – SE Lafayette and 57th AQI

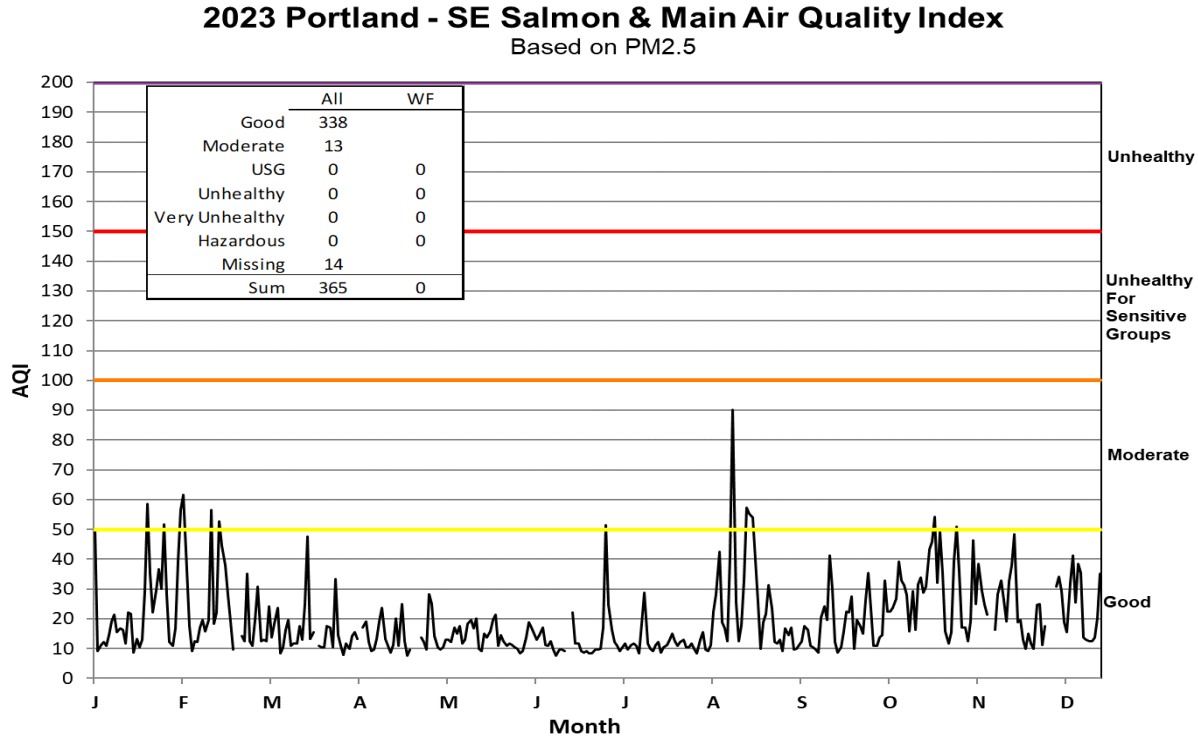


Figure 56. 2023 SE Portland – SE Salmon & Main AQI

Appendix 1: Ambient air monitoring network

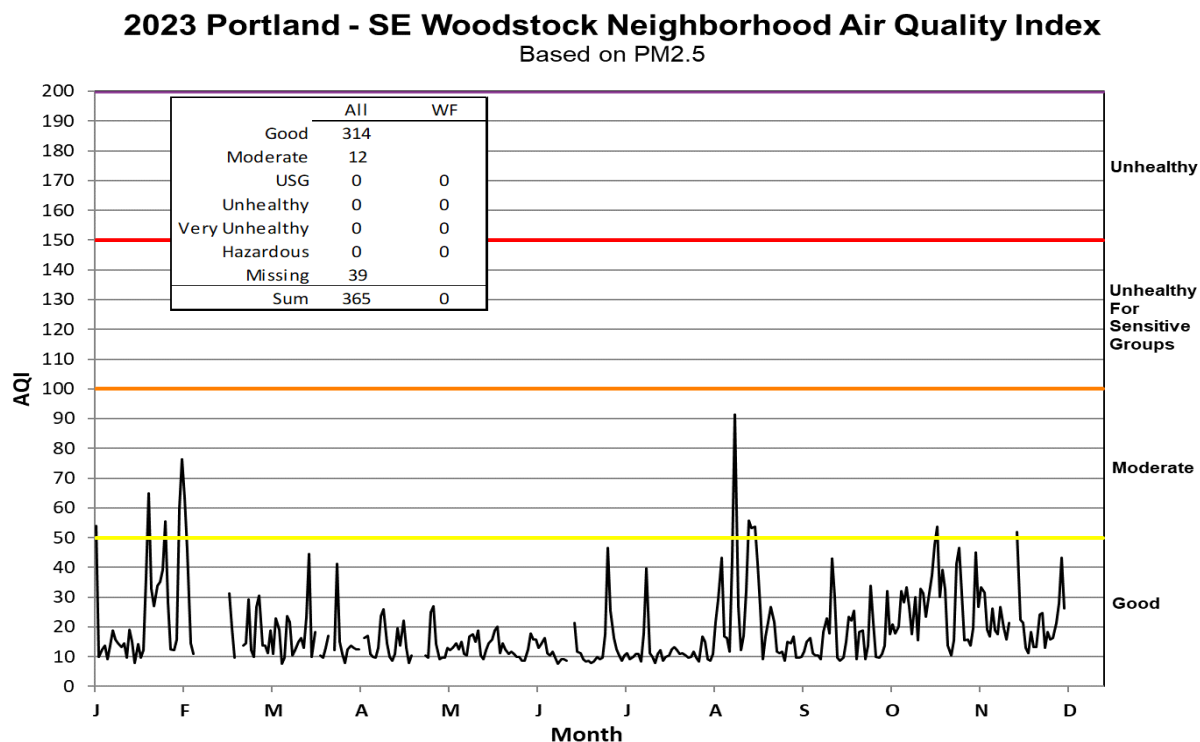


Figure 57. 2023 SE Portland – Woodstock Neighborhood AQI

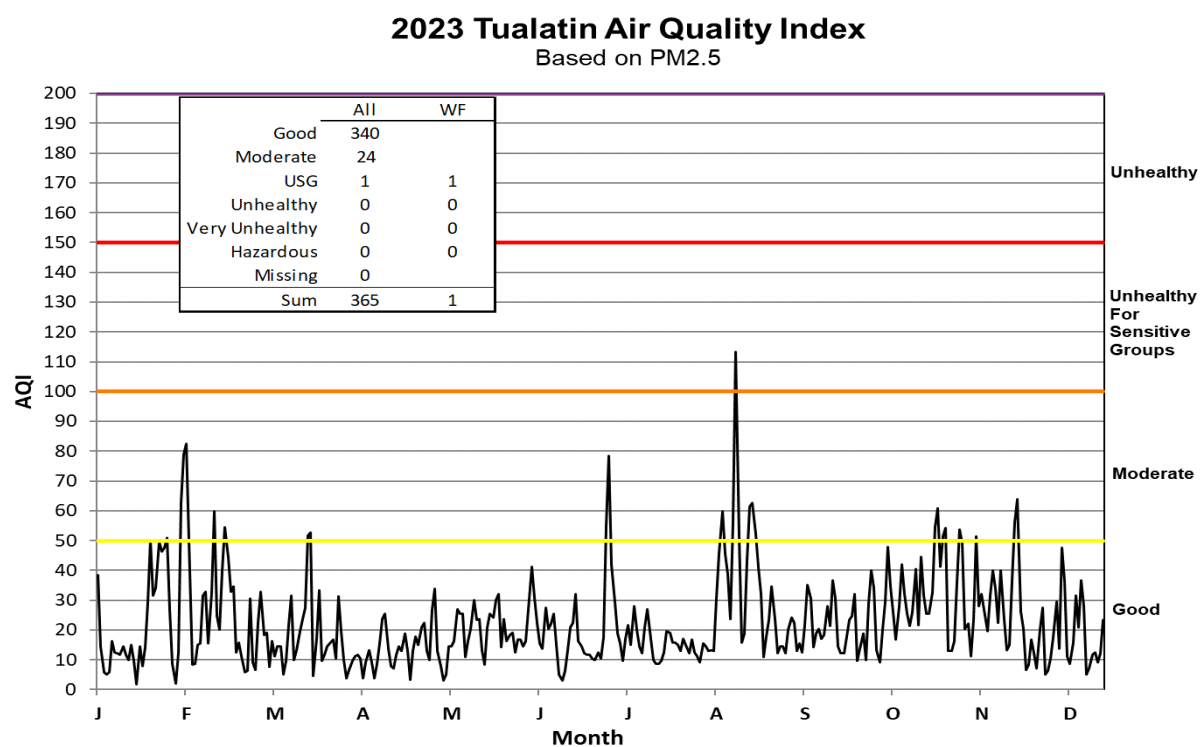


Figure 58. 2023 Tualatin AQI

Willamette Valley

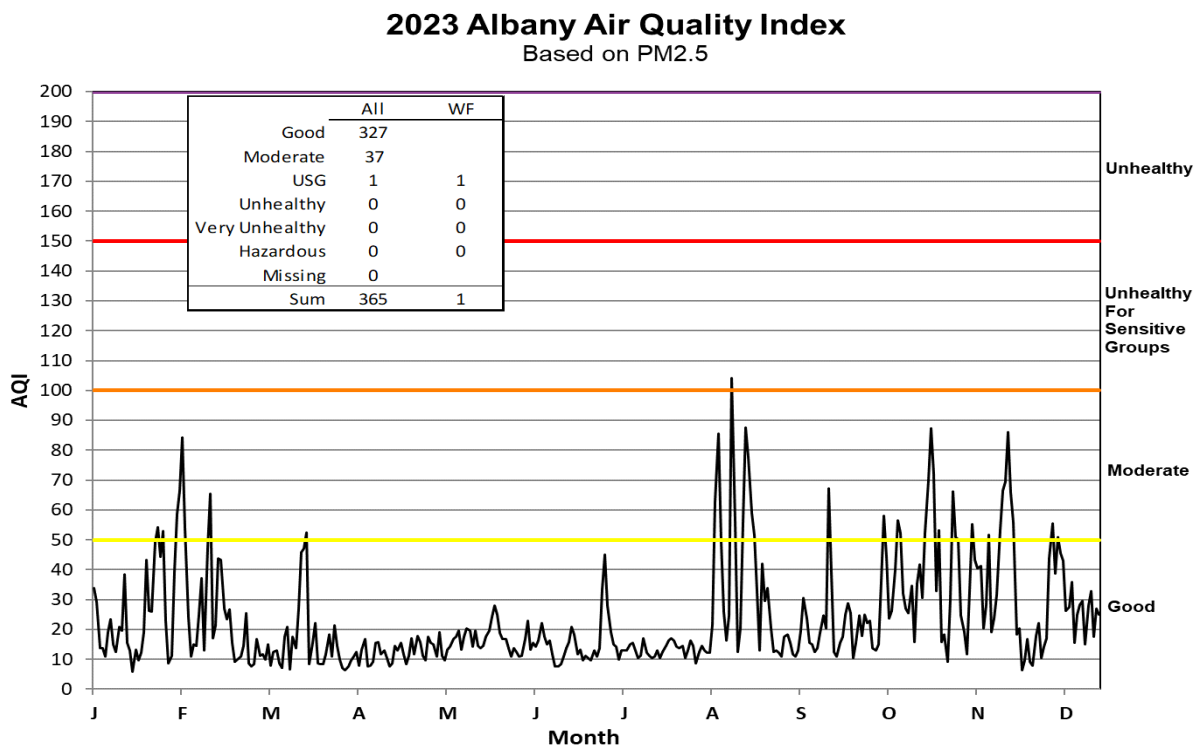


Figure 59. 2023 Albany AQI

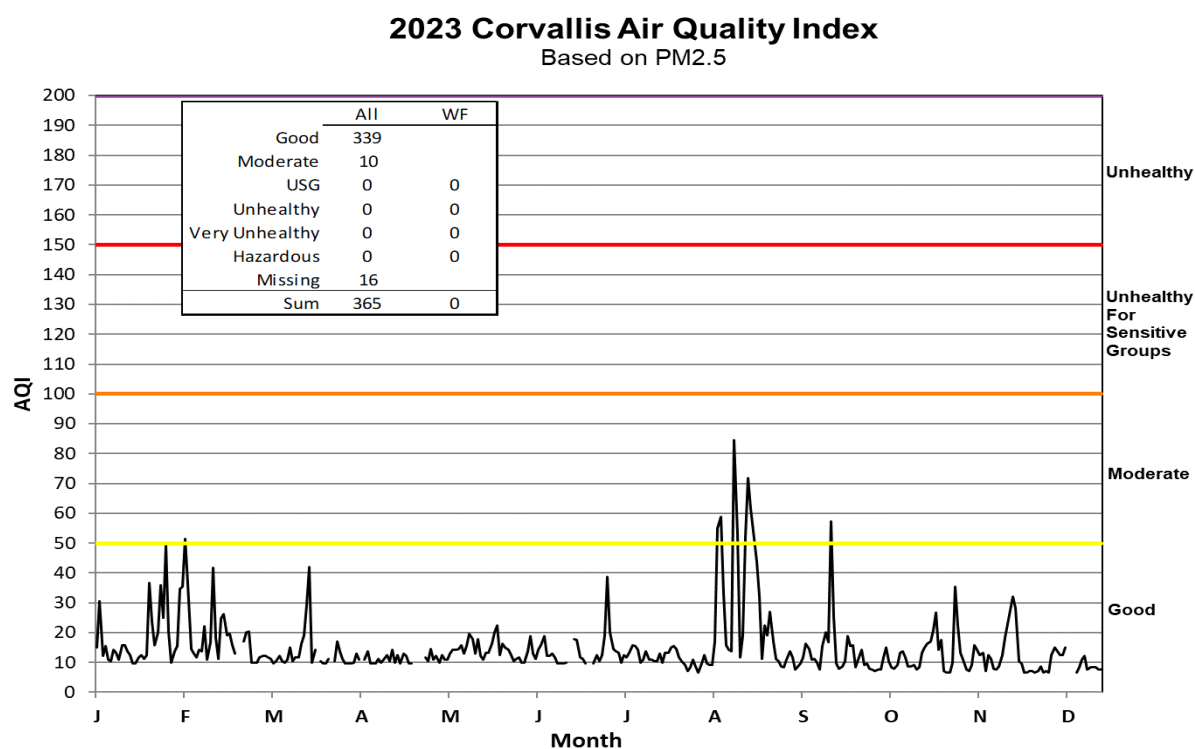


Figure 60. 2023 Corvallis AQI

Appendix 1: Ambient air monitoring network

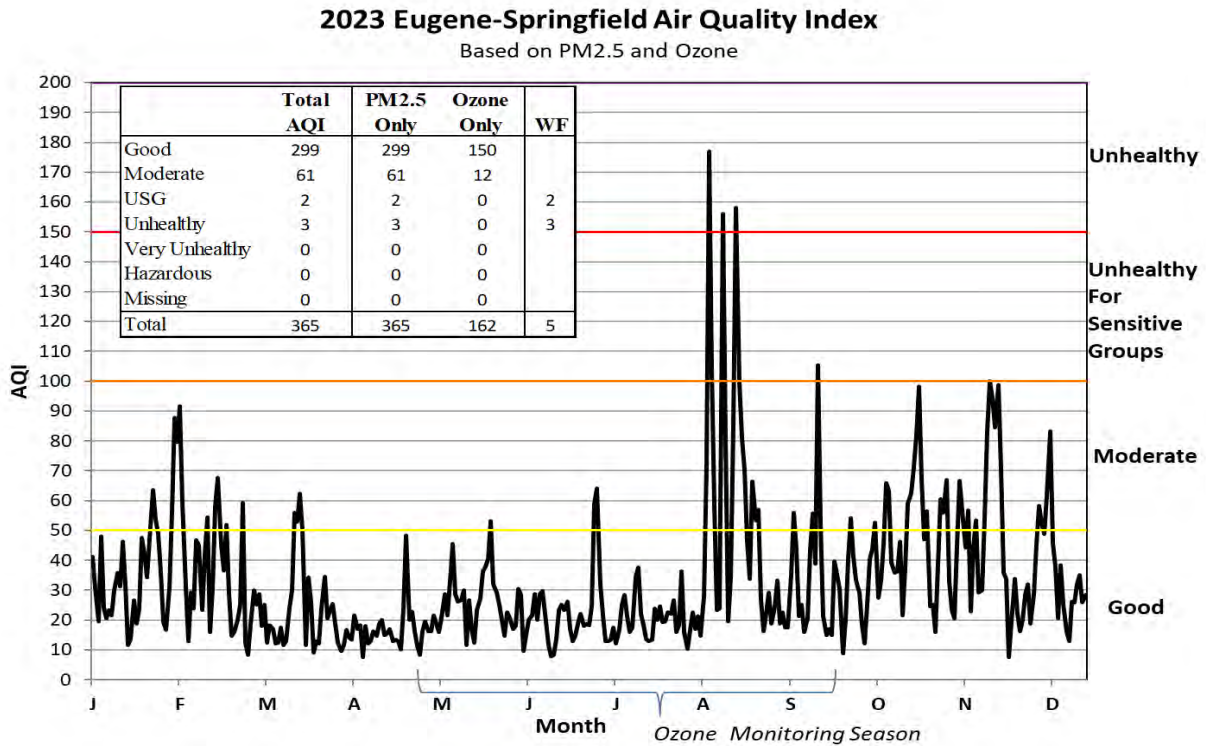


Figure 61. 2023 Eugene-Springfield AQI

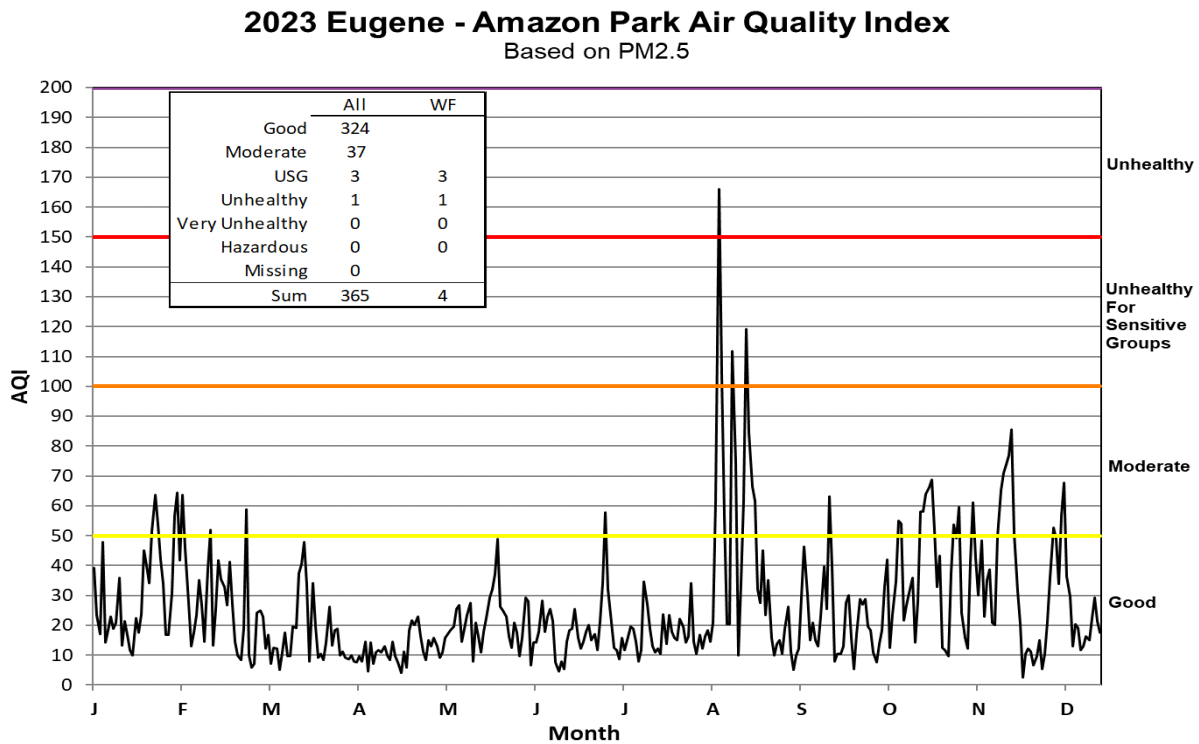


Figure 62. 2023 Eugene – Amazon Park AQI

Appendix 1: Ambient air monitoring network

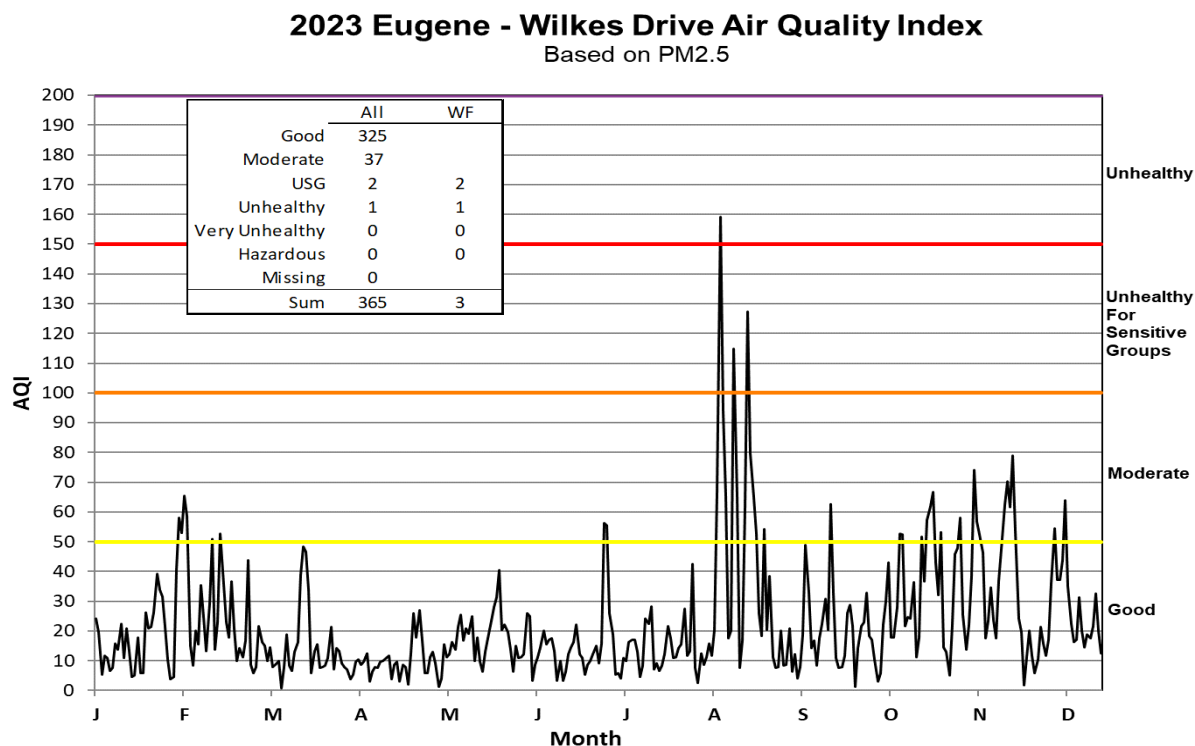


Figure 63 2023 Eugene – Wilkes Drive AQI

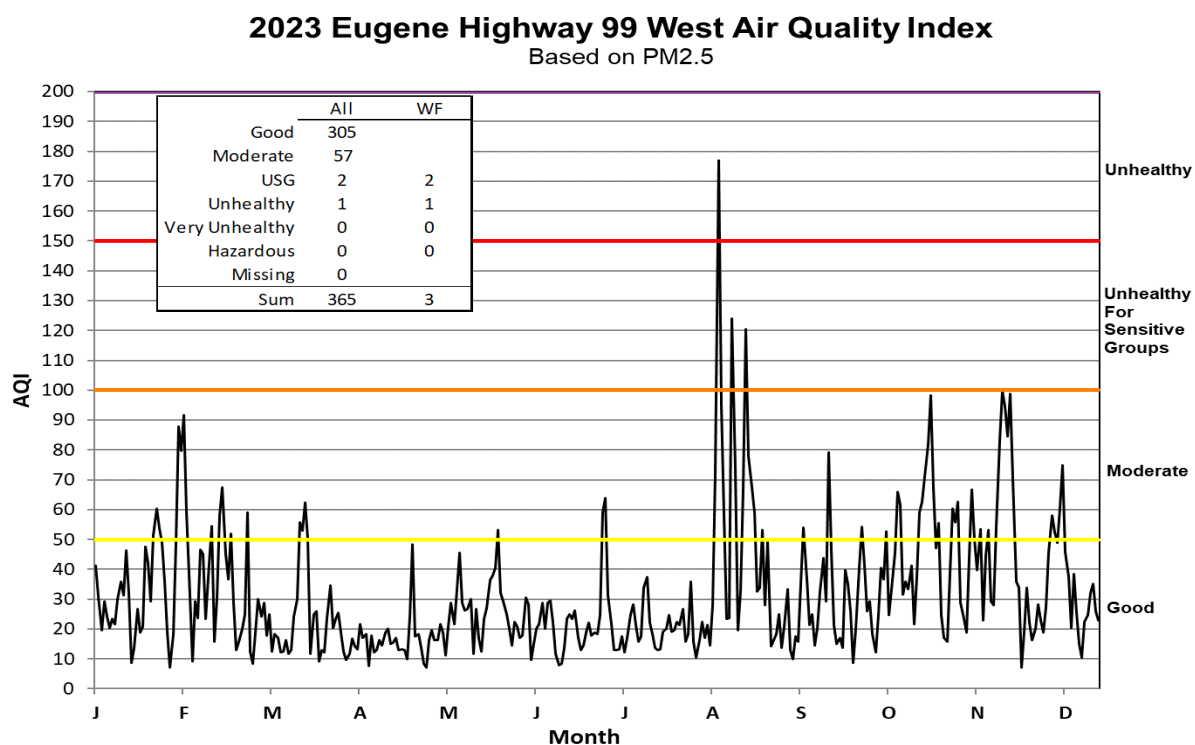


Figure 64 2023 Eugene Highway 99 West AQI

Appendix 1: Ambient air monitoring network

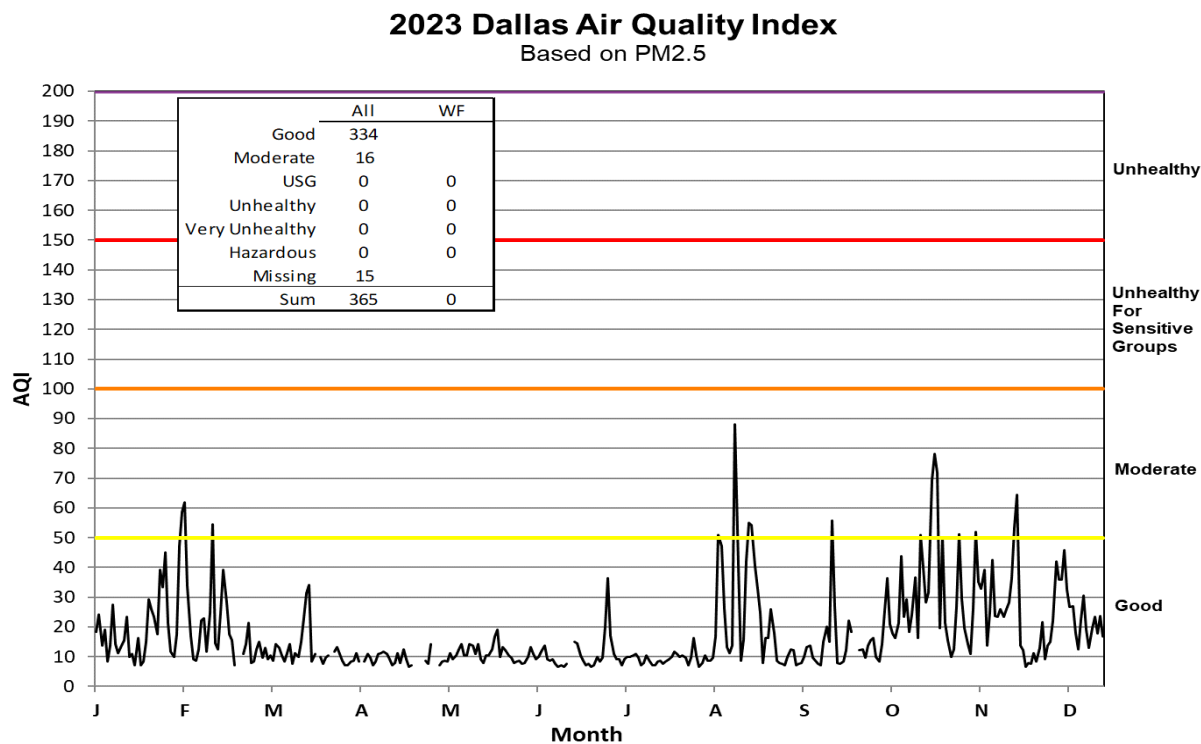


Figure 65 2023 Dallas AQI

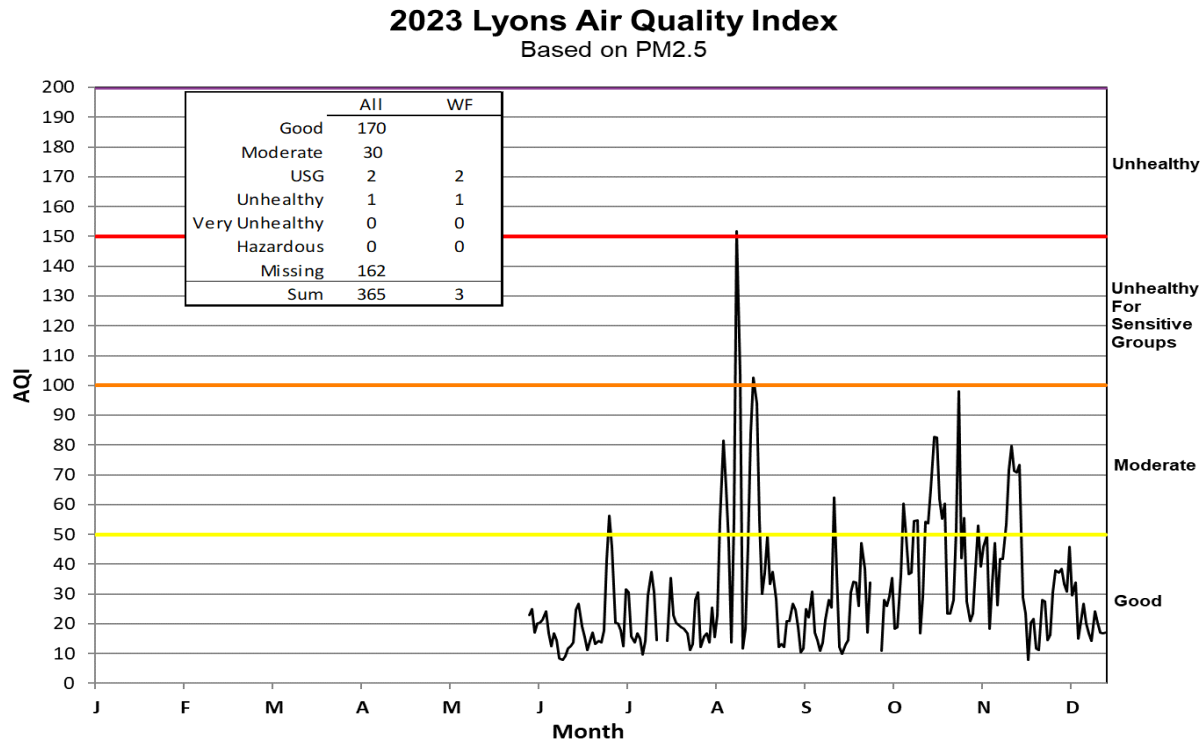


Figure 66 2023 Lyons AQI

Appendix 1: Ambient air monitoring network

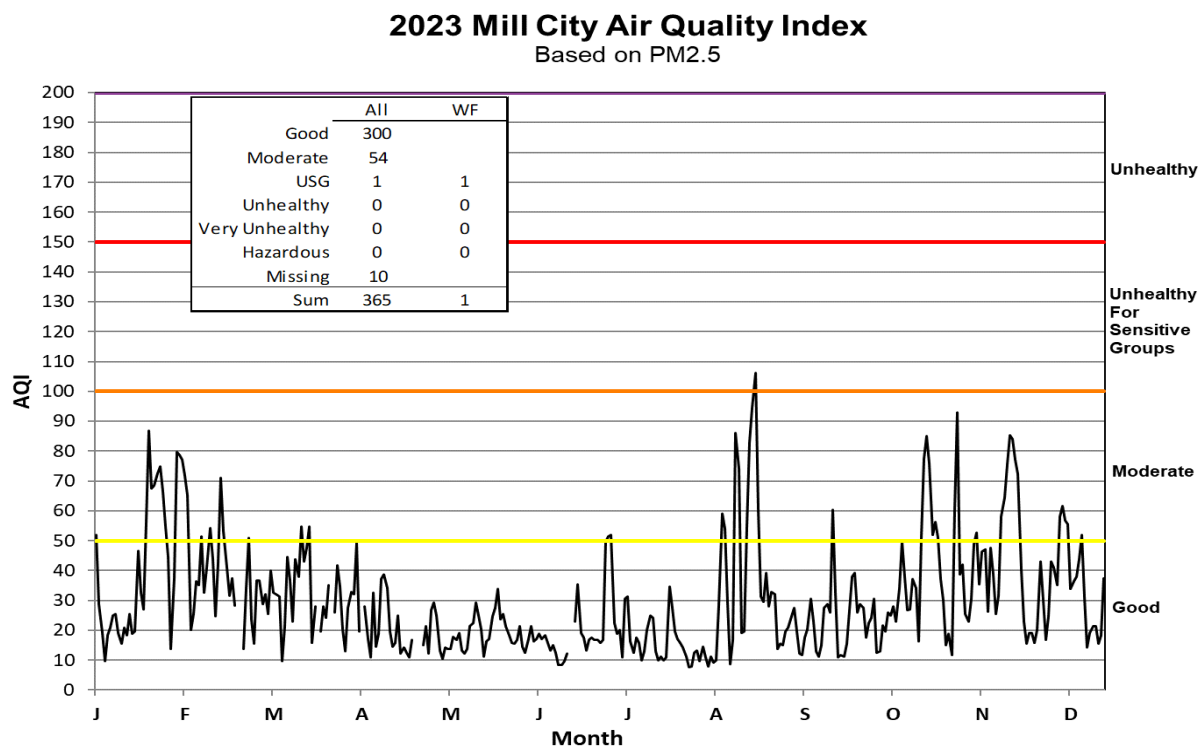


Figure 67. 2023 Mill City AQI

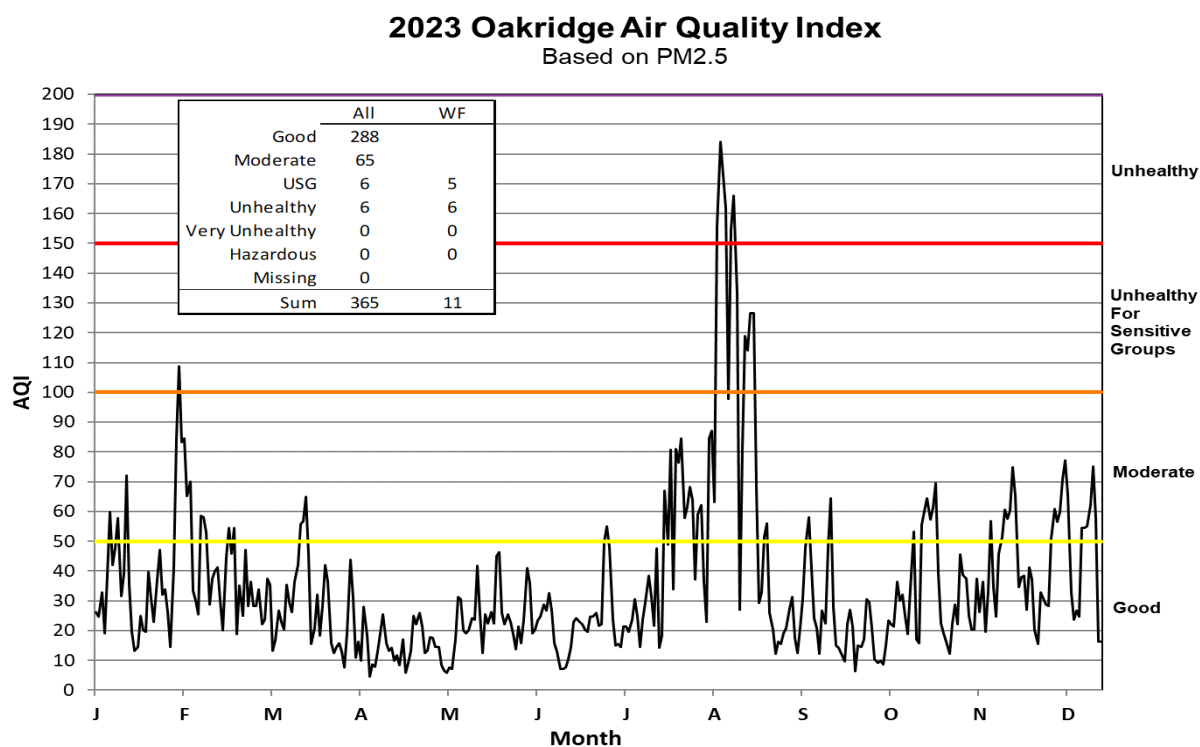


Figure 68. 2023 Oakridge AQI

Appendix 1: Ambient air monitoring network

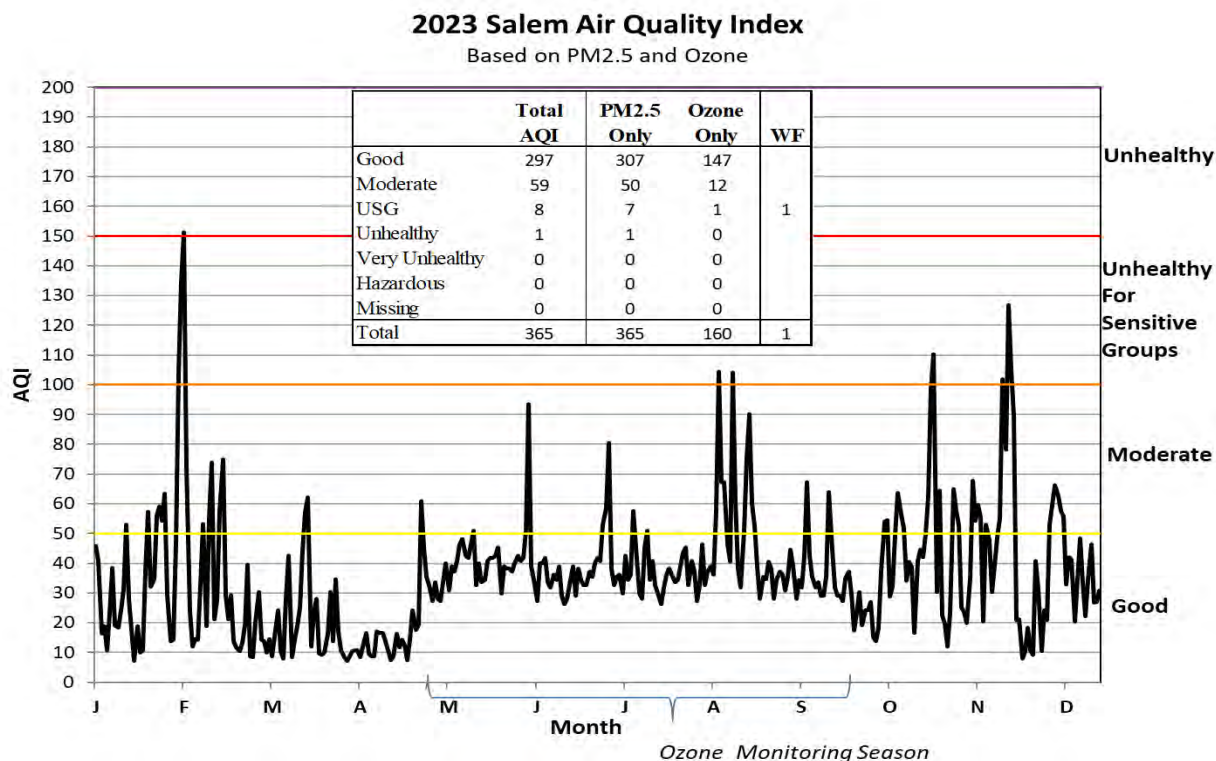


Figure 69. 2023 Salem AQI

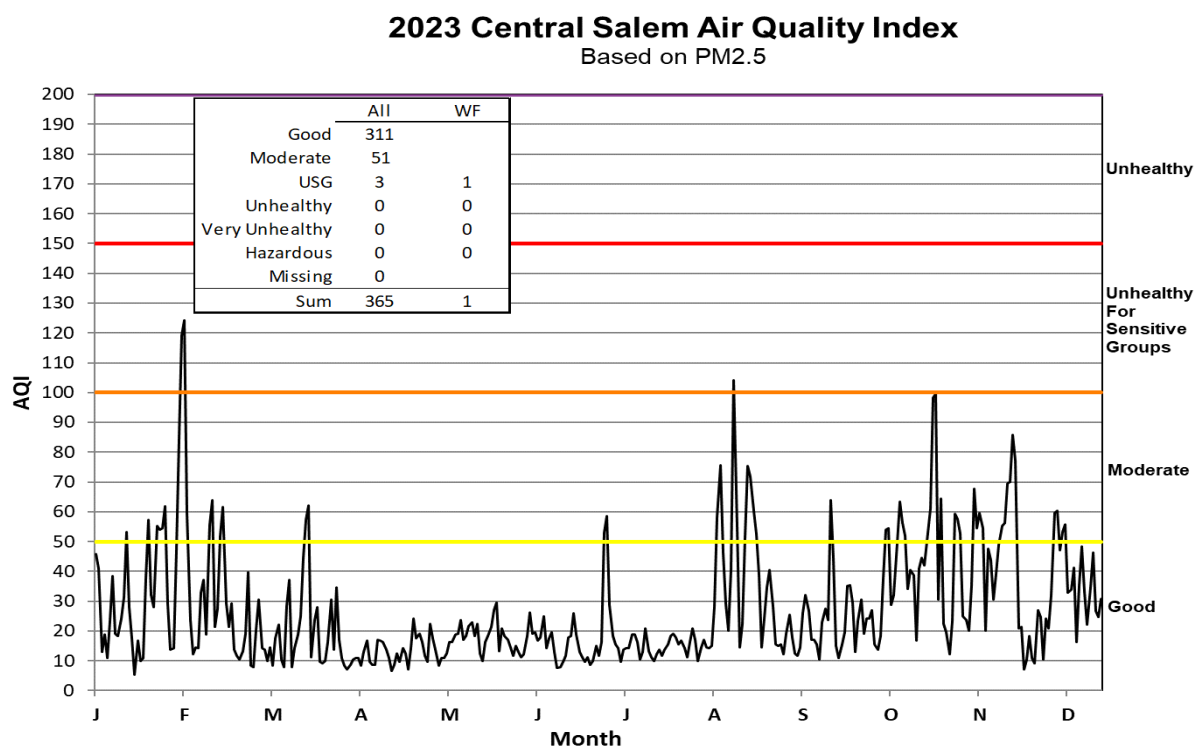


Figure 70. 2023 Central Salem AQI

Appendix 1: Ambient air monitoring network

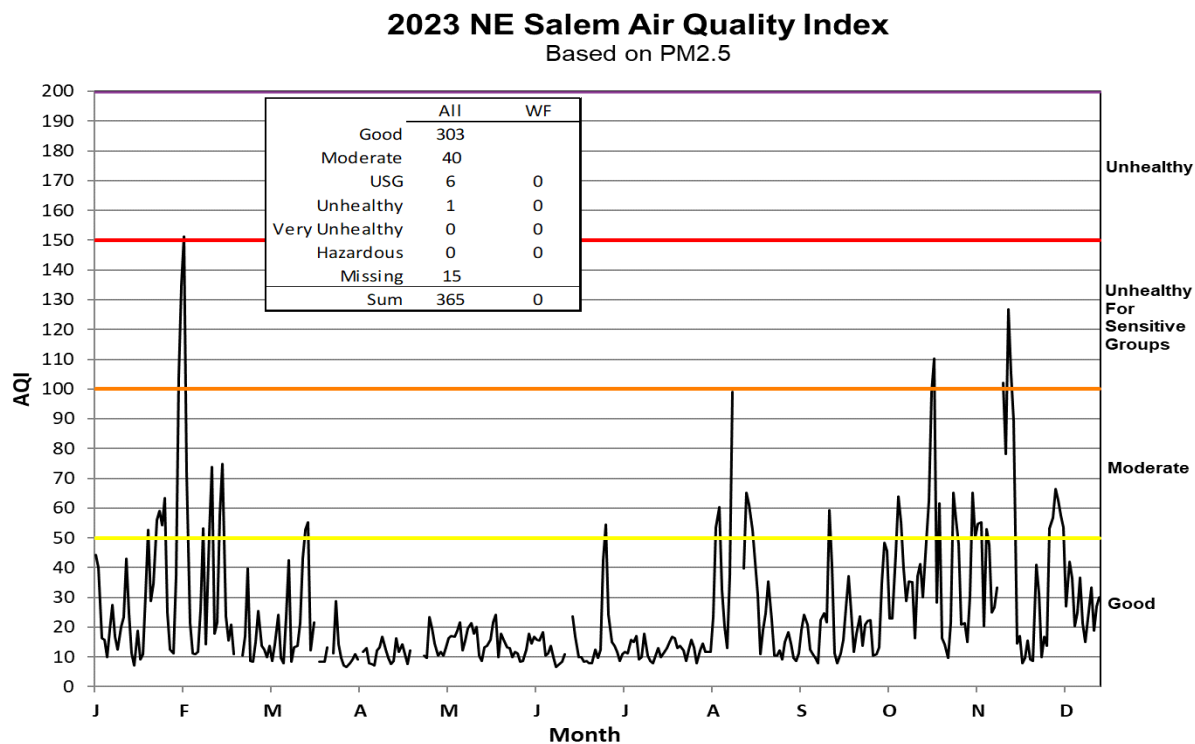


Figure 71. 2023 Northeast Salem AQI

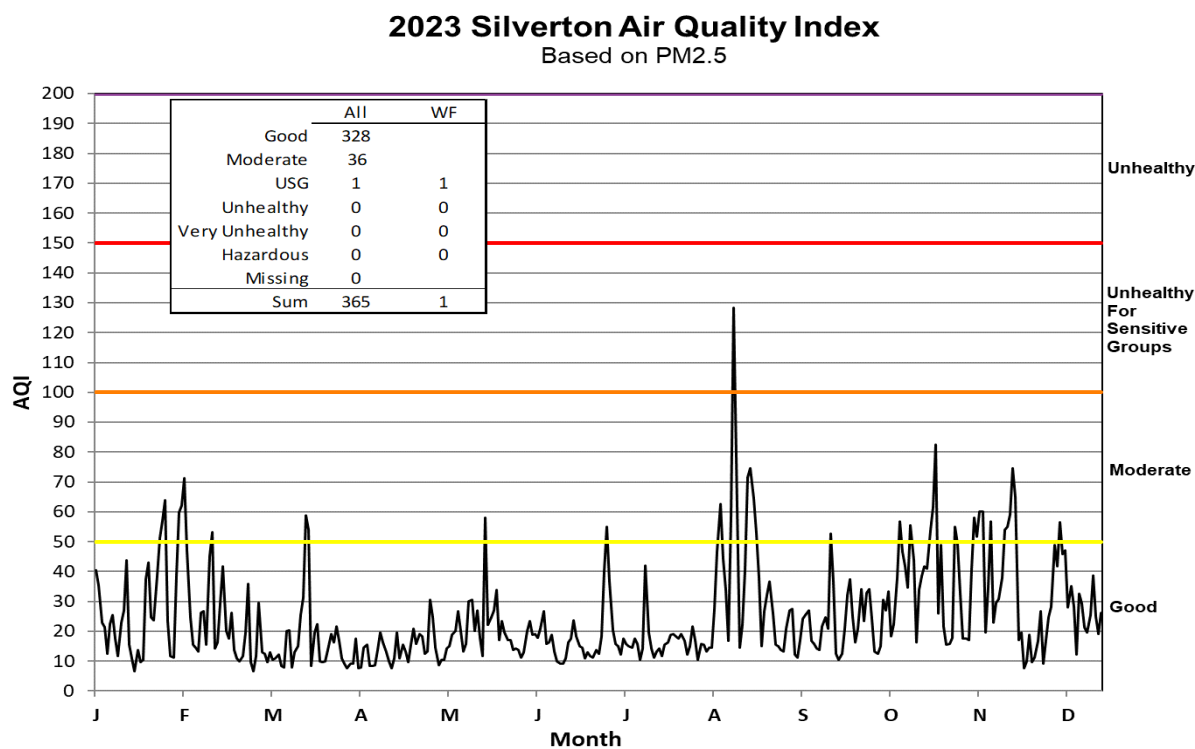


Figure 72. 2023 Silverton AQI

Appendix 1: Ambient air monitoring network

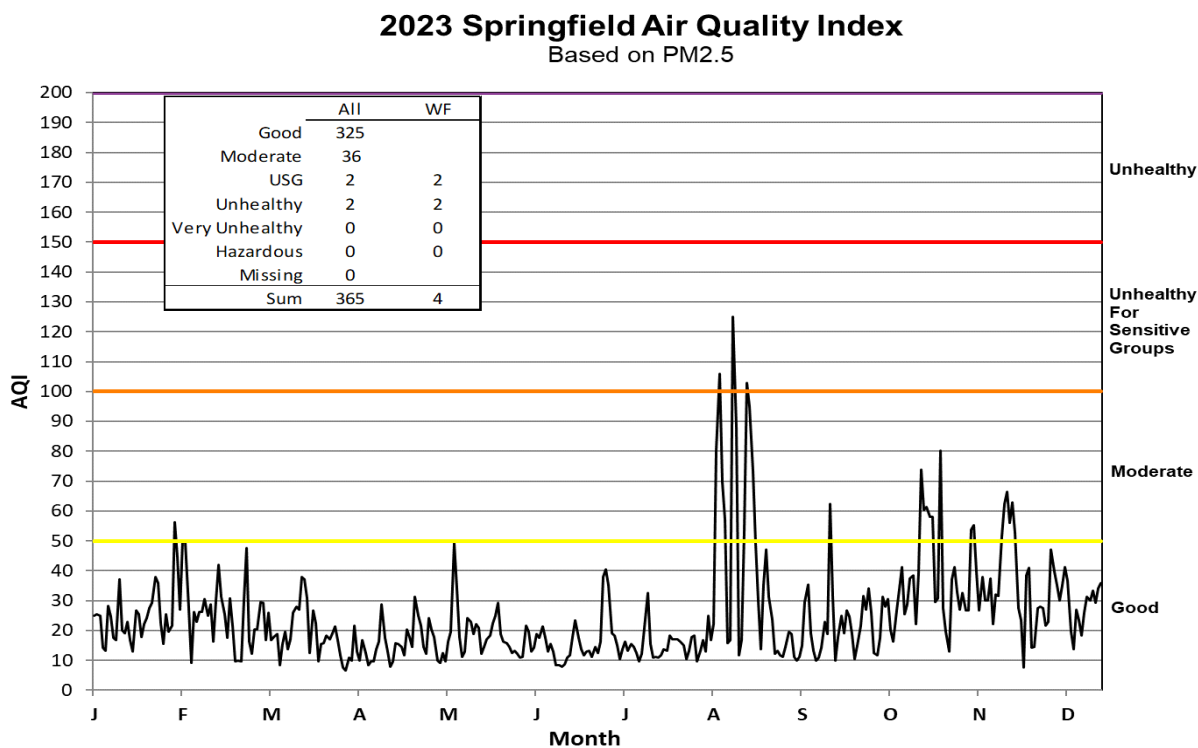


Figure 73. 2023 Springfield AQI

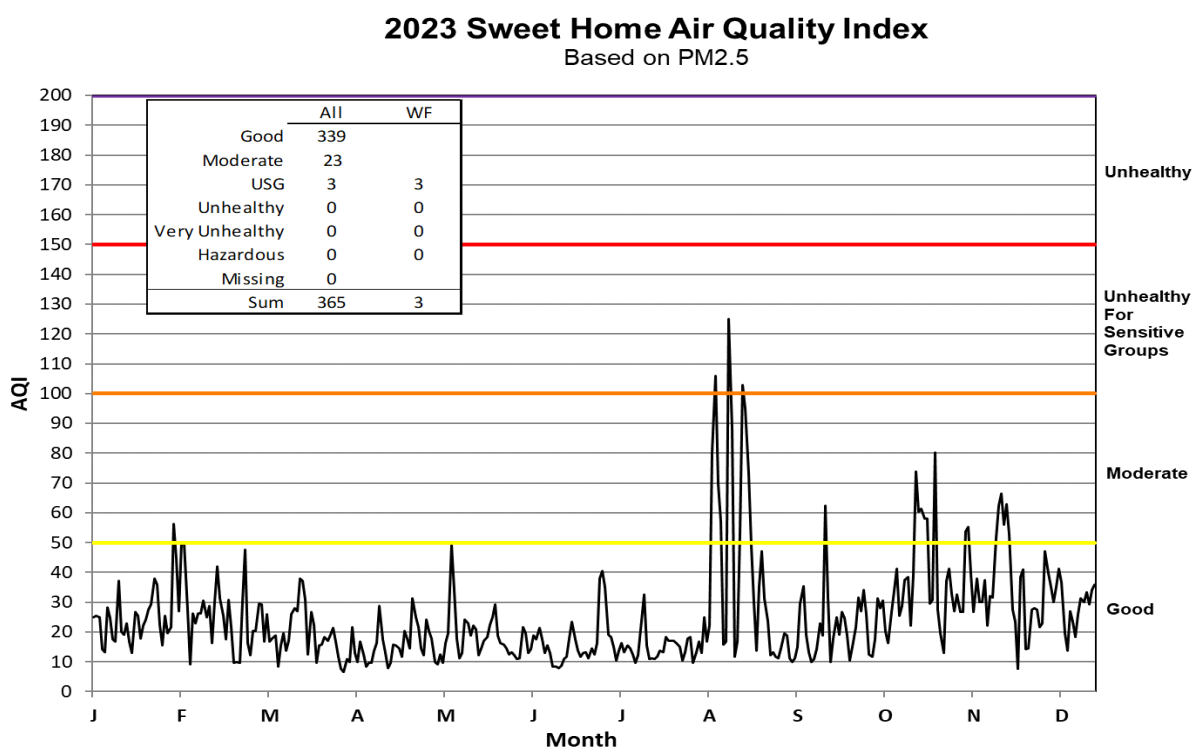


Figure 74. 2023 Sweet Home AQI

Appendix 1: Ambient air monitoring network

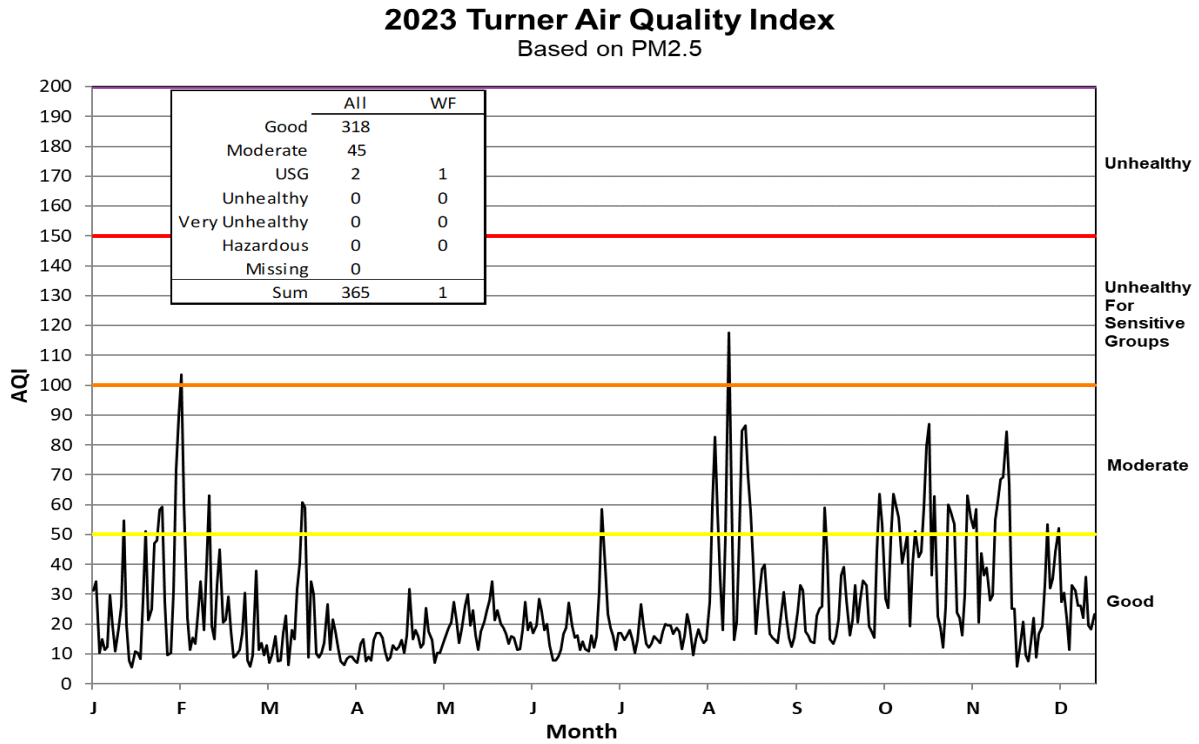


Figure 75. 2023 Turner

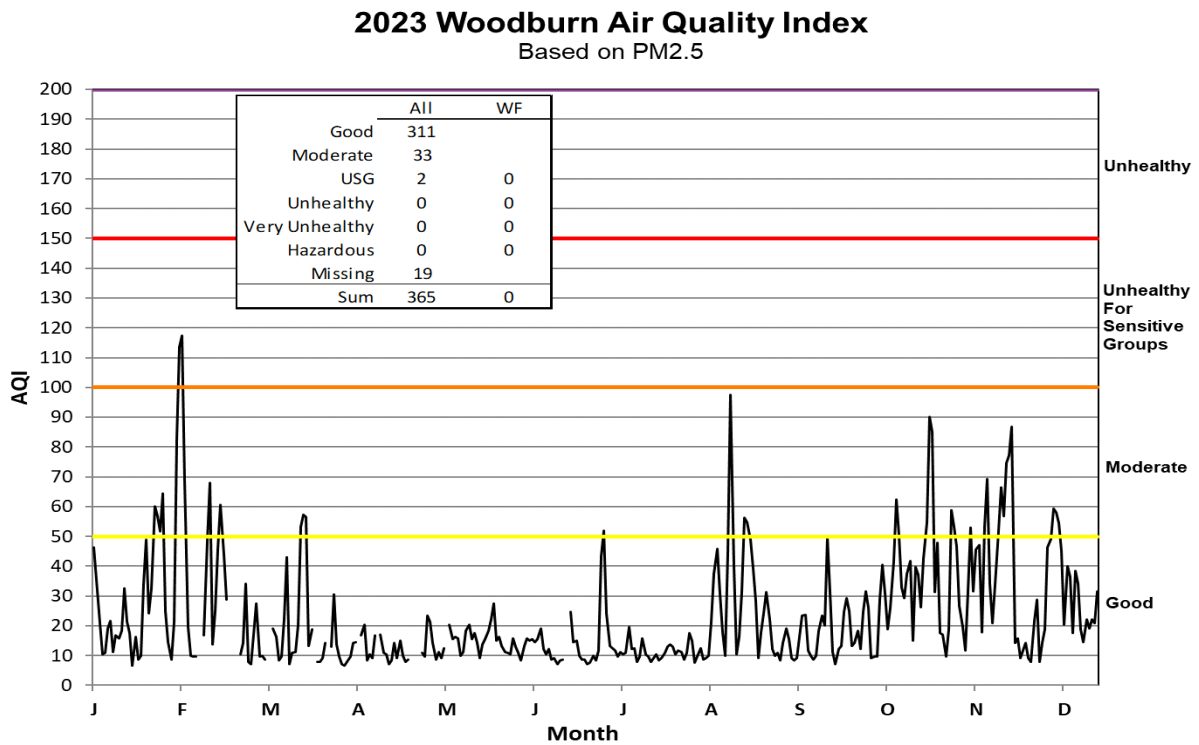


Figure 76. 2023 Woodburn AQI

SW Oregon

Appendix 1: Ambient air monitoring network

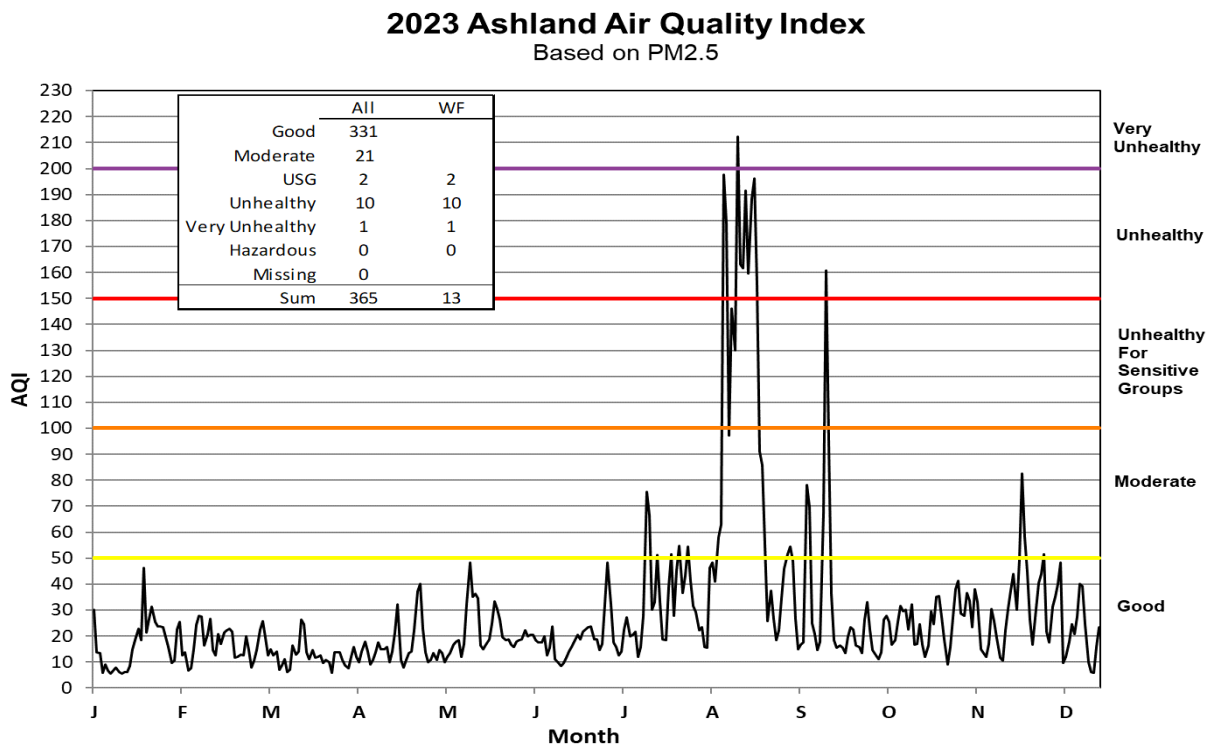


Figure 77. 2023 Ashland AQI

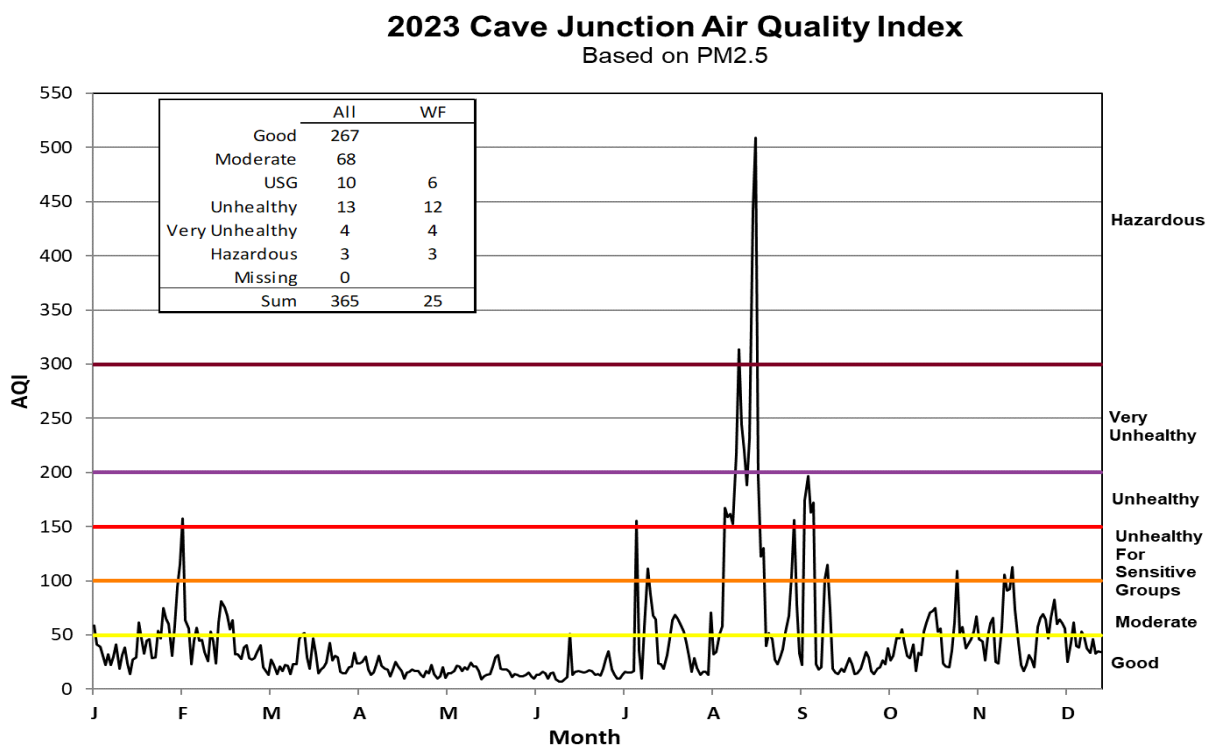


Figure 78 2023 Cave Junction

Appendix 1: Ambient air monitoring network

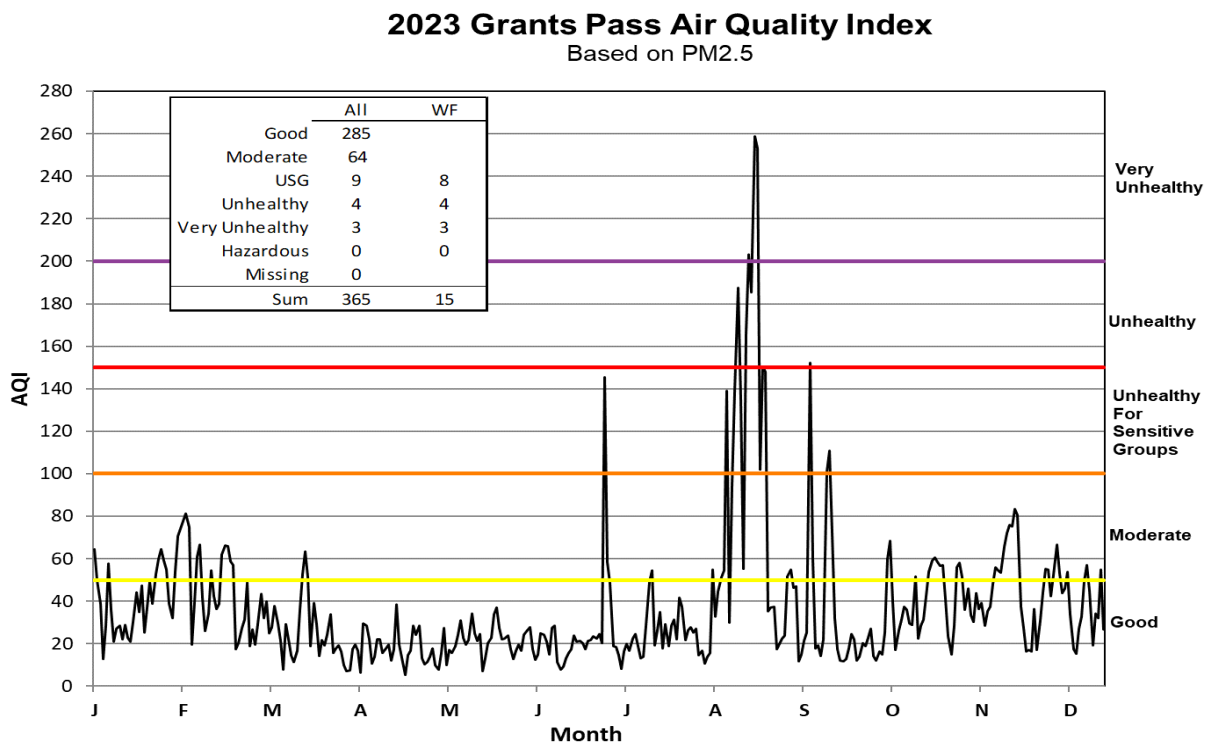


Figure 79 2023 Grants Pass

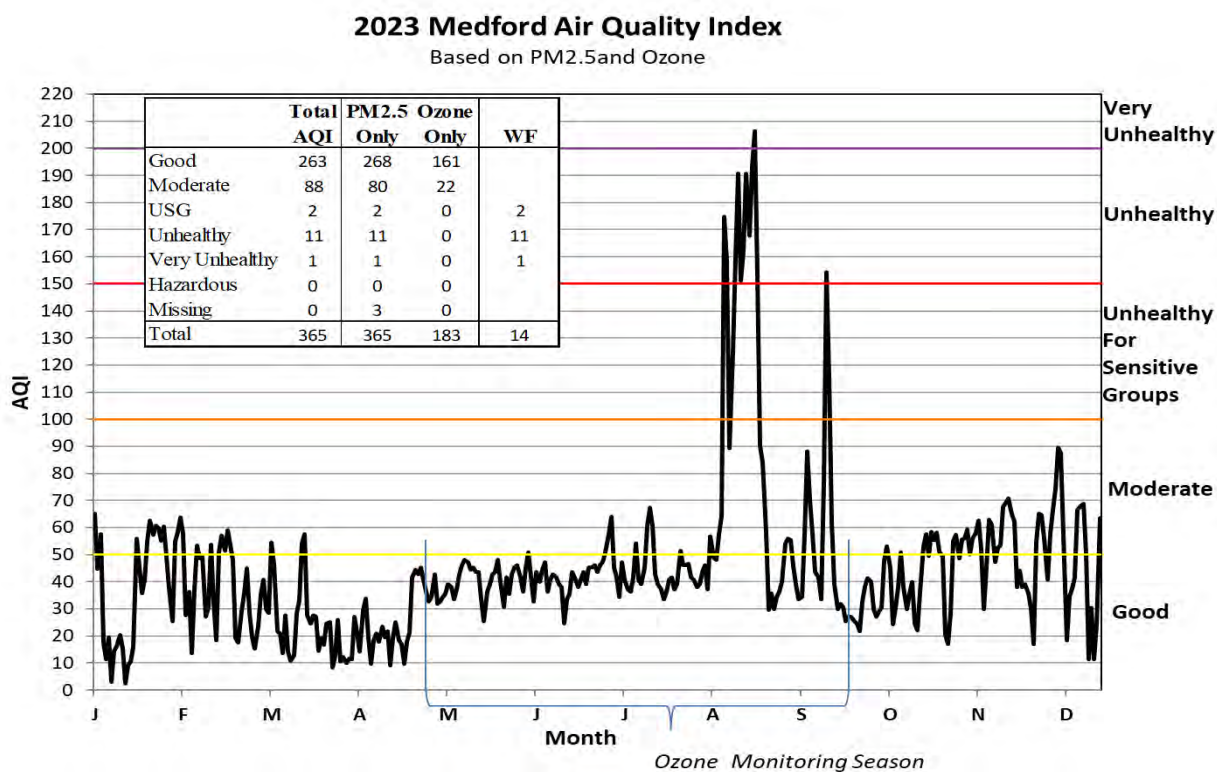


Figure 80 2023 Medford

Appendix 1: Ambient air monitoring network

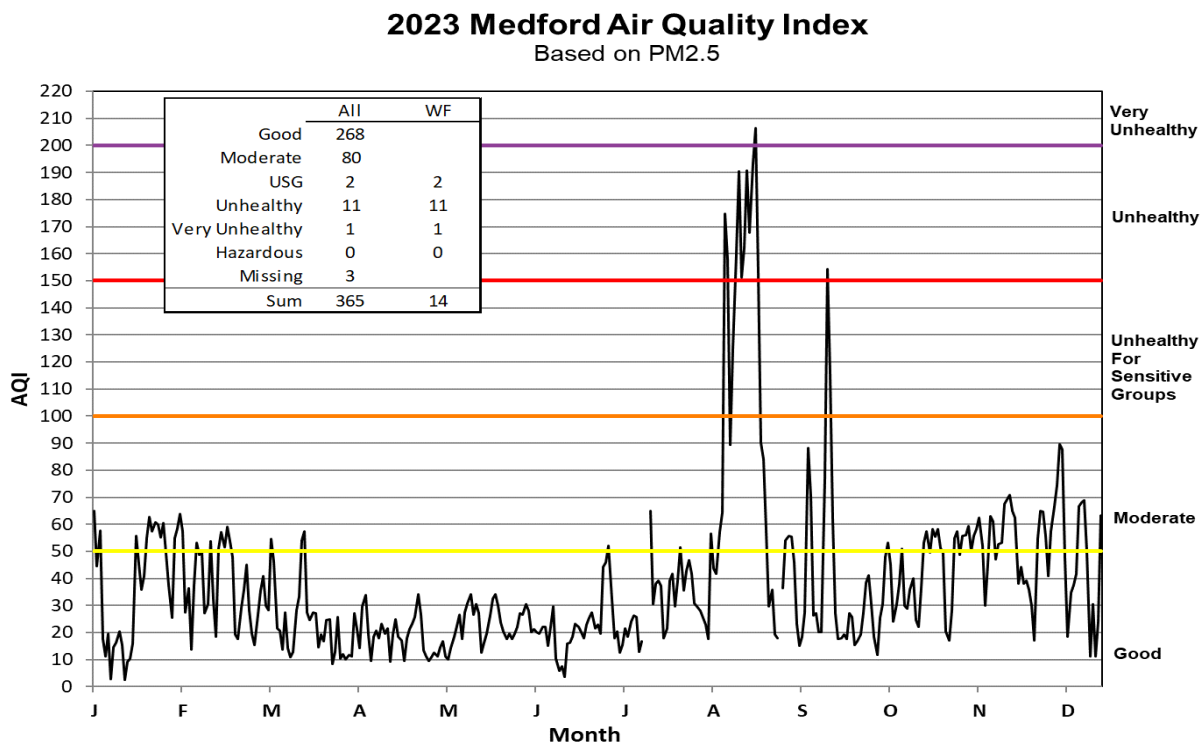


Figure 81 2023 Medford - PM2.5 only

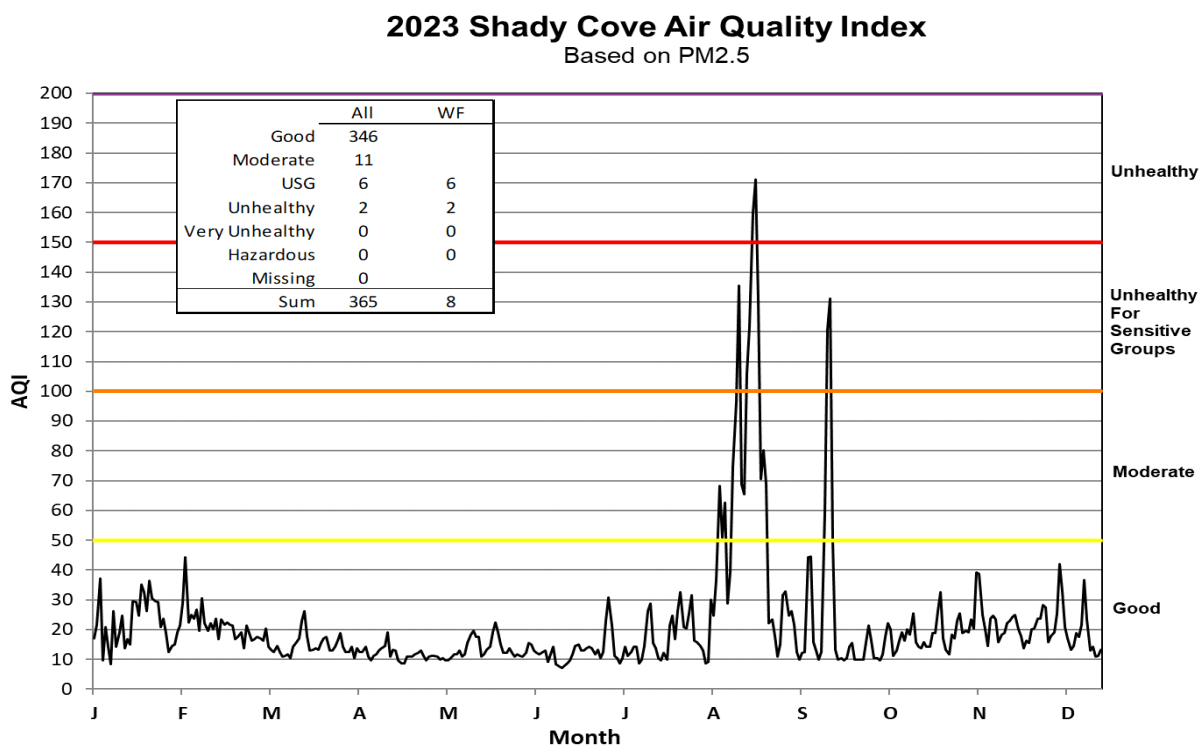


Figure 82 2023 Shady Cove

Appendix 1: Ambient air monitoring network

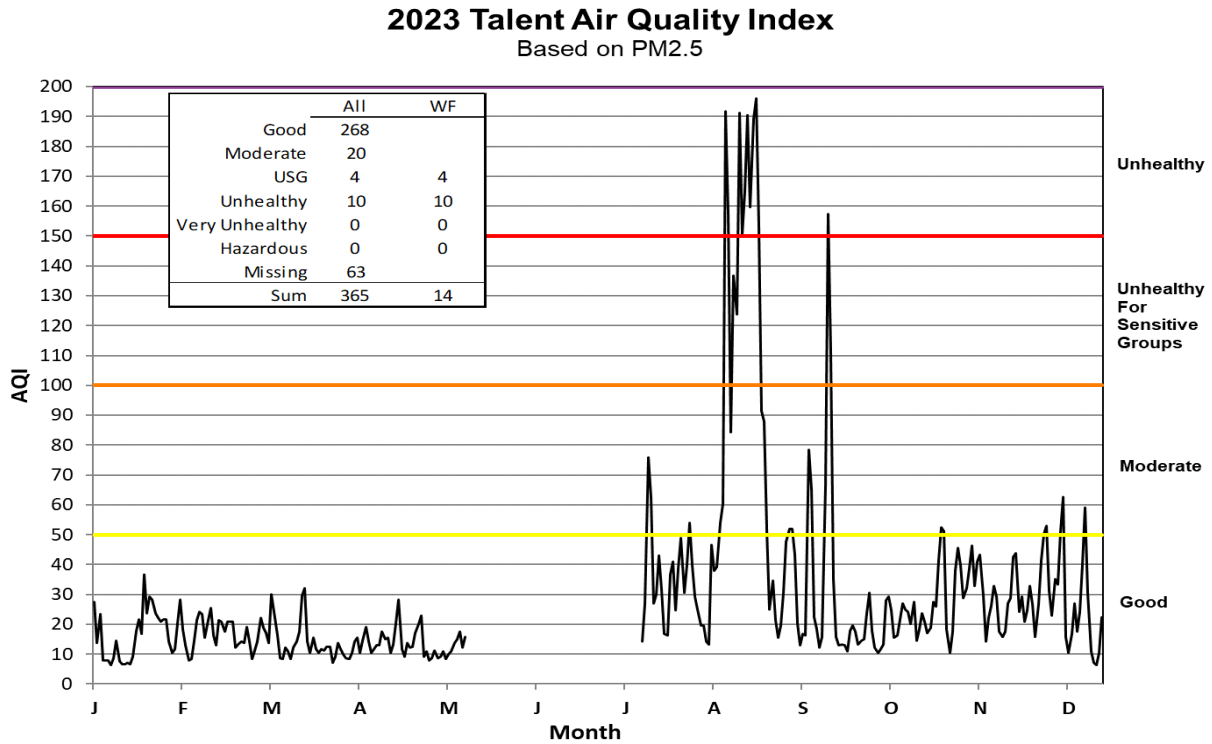


Figure 83 2023 Talent
Cascades

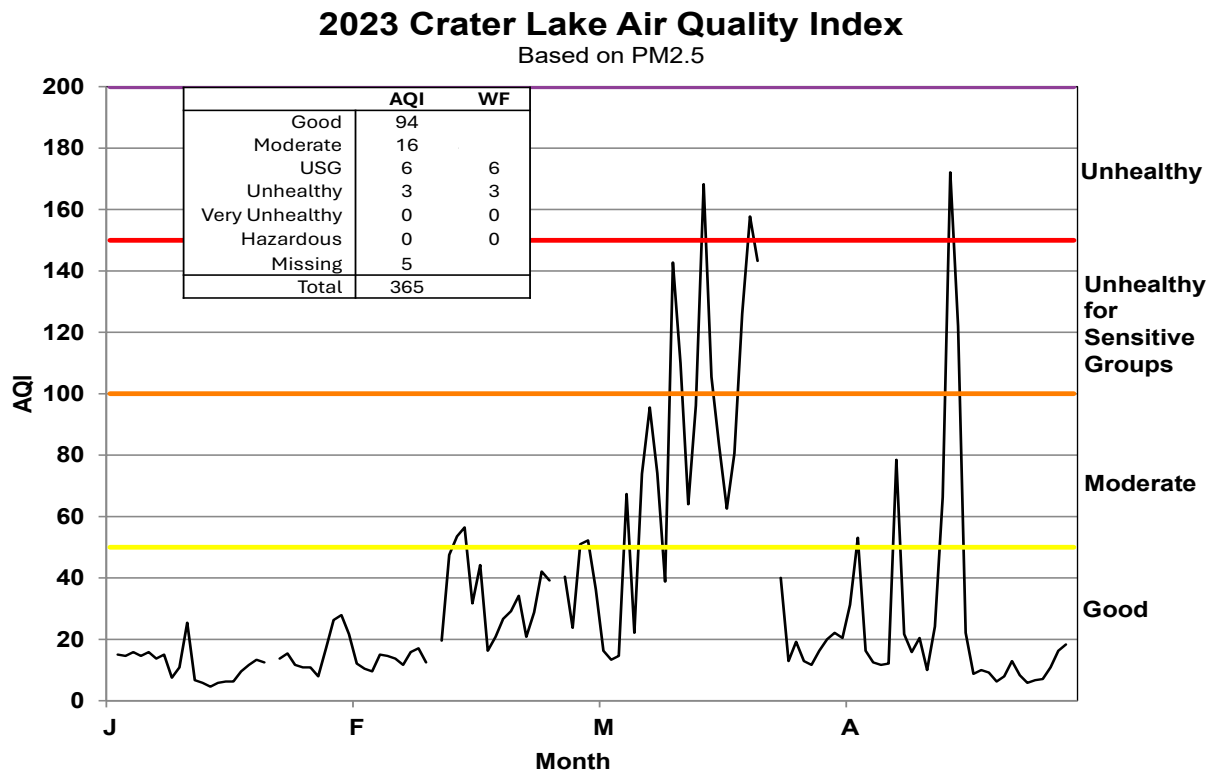


Figure 84 Crater Lake AQI

Appendix 1: Ambient air monitoring network

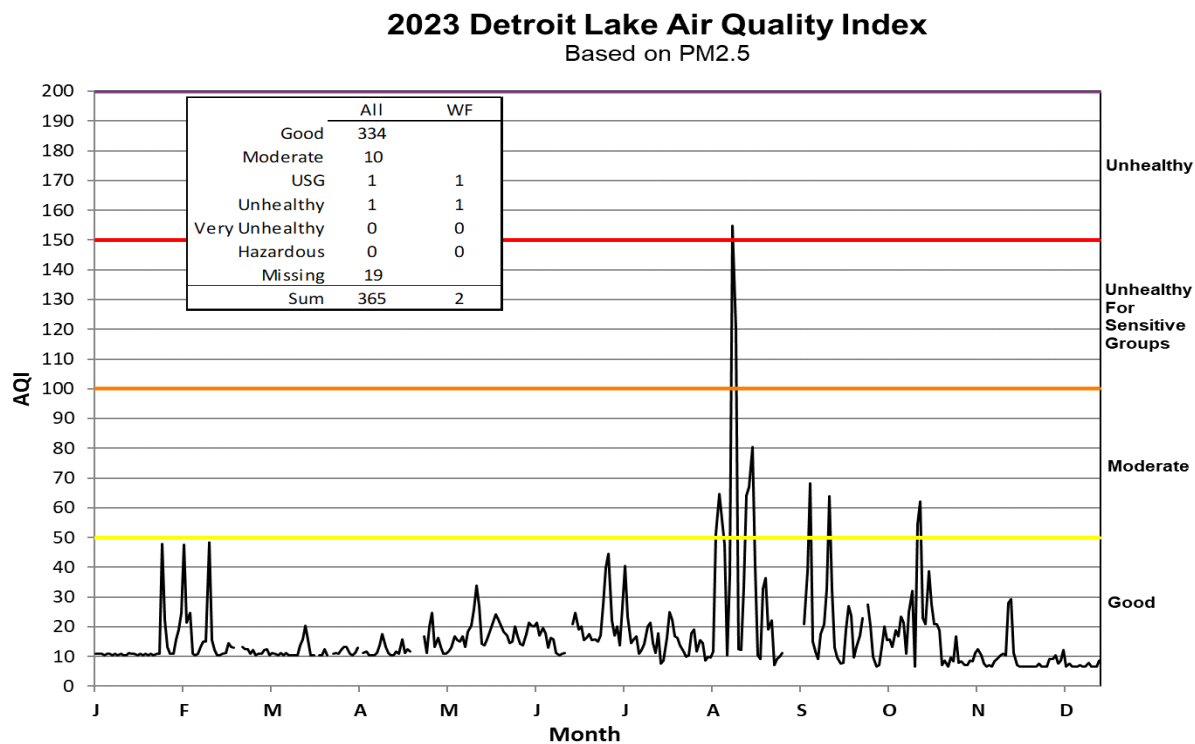


Figure 85 2023 Detroit Lake AQI

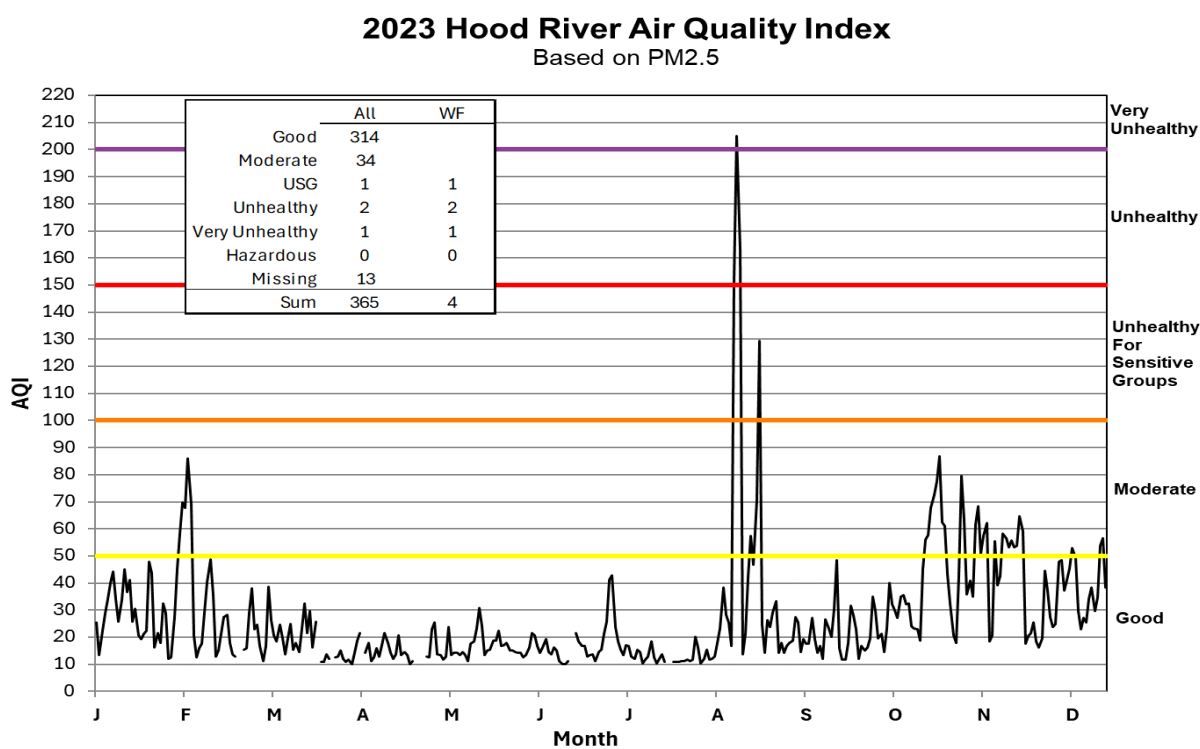


Figure 86 2023 Hood River AQI

Appendix 1: Ambient air monitoring network

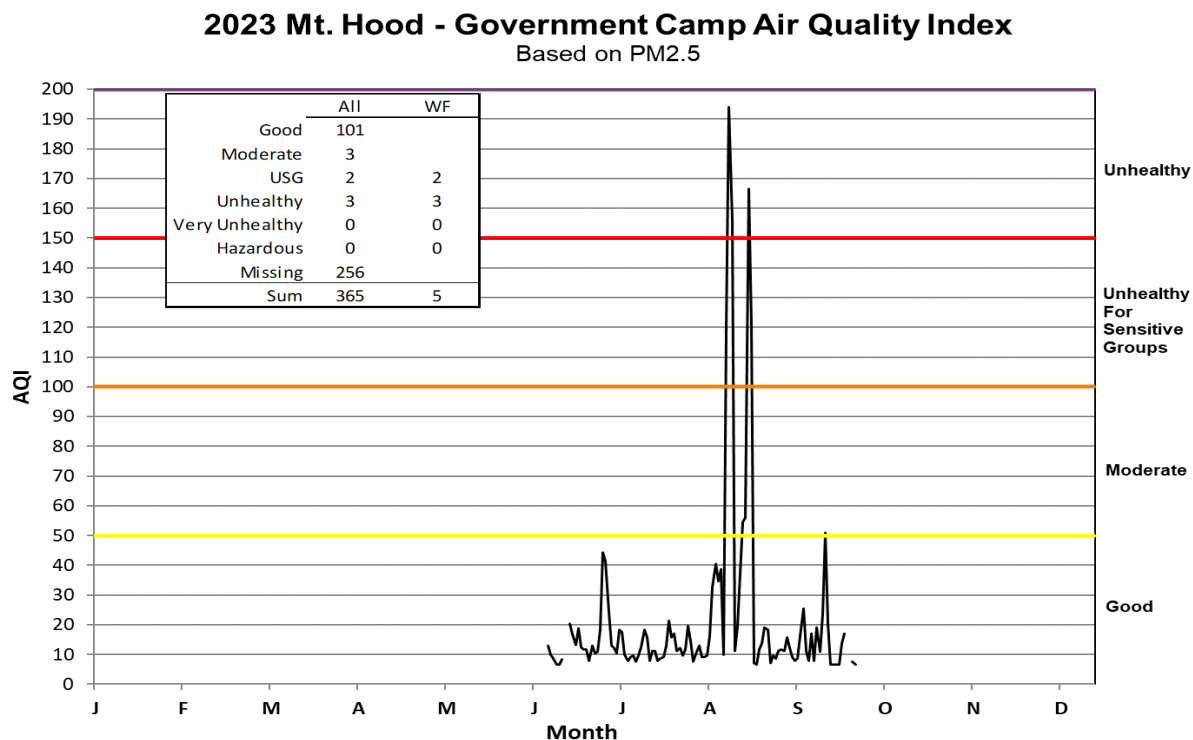


Figure 87 2023 Mt. Hood – Government Camp AQI

Northeast Oregon

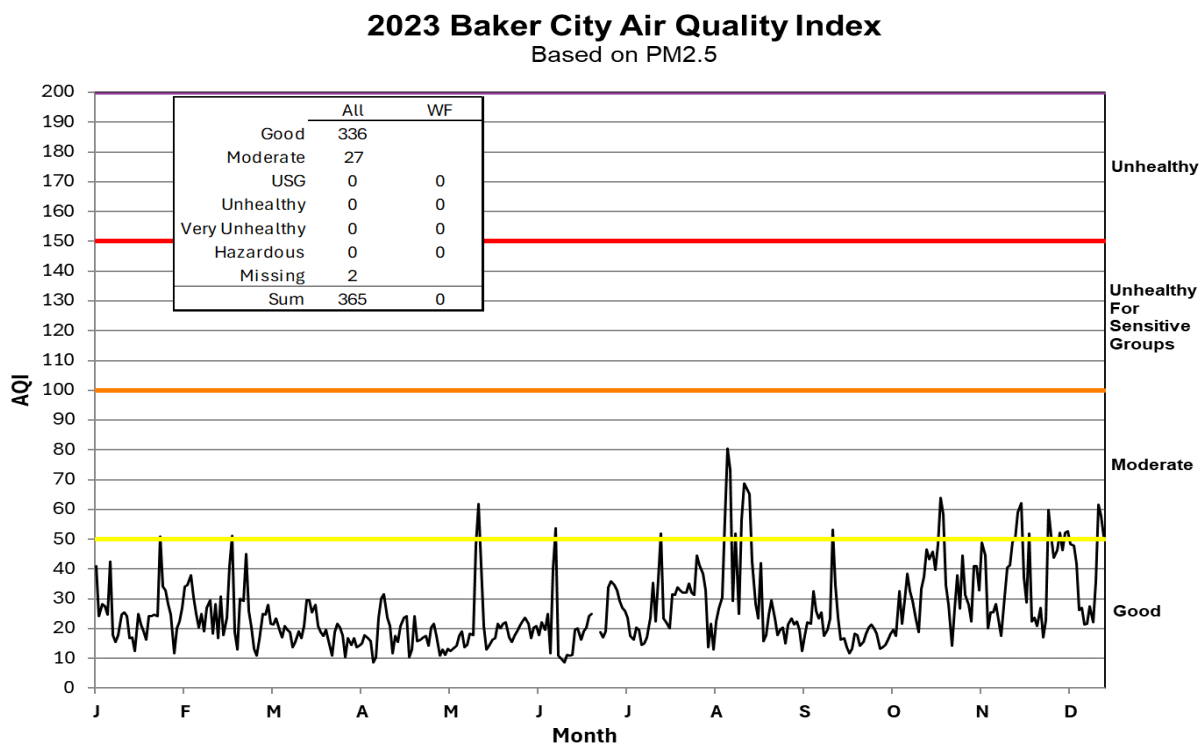


Figure 88 2023 Baker City

Appendix 1: Ambient air monitoring network

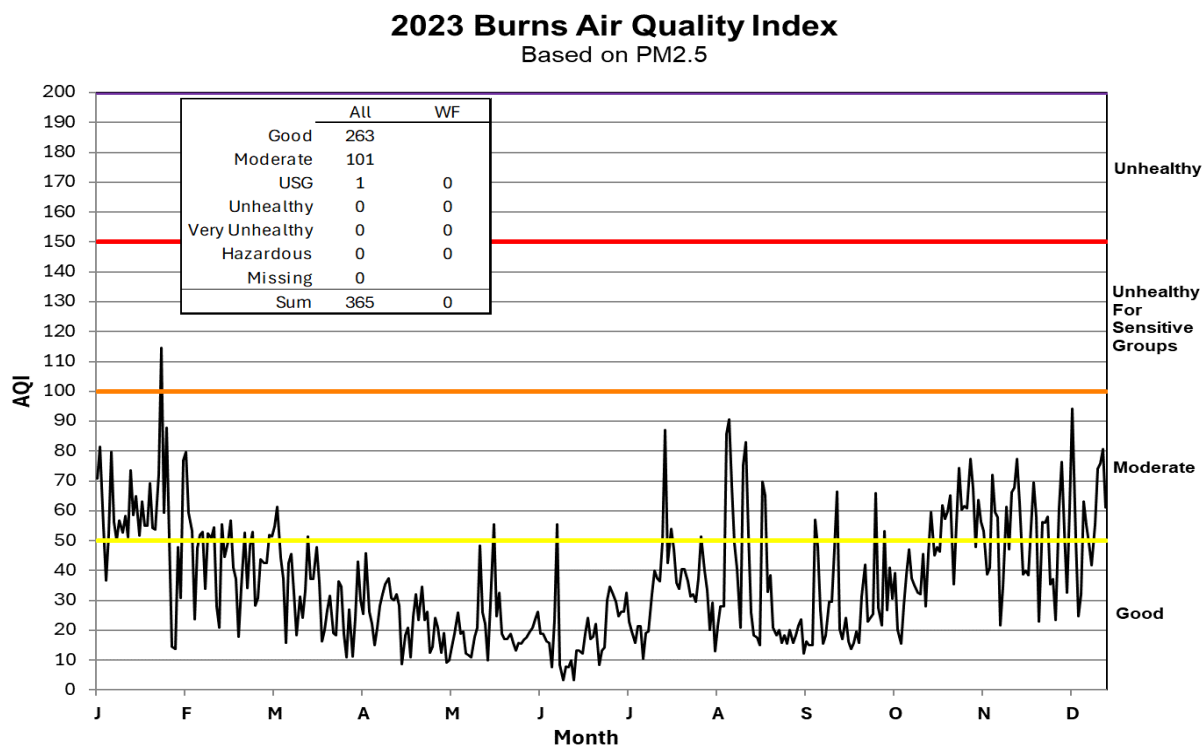


Figure 89 2023 Burns

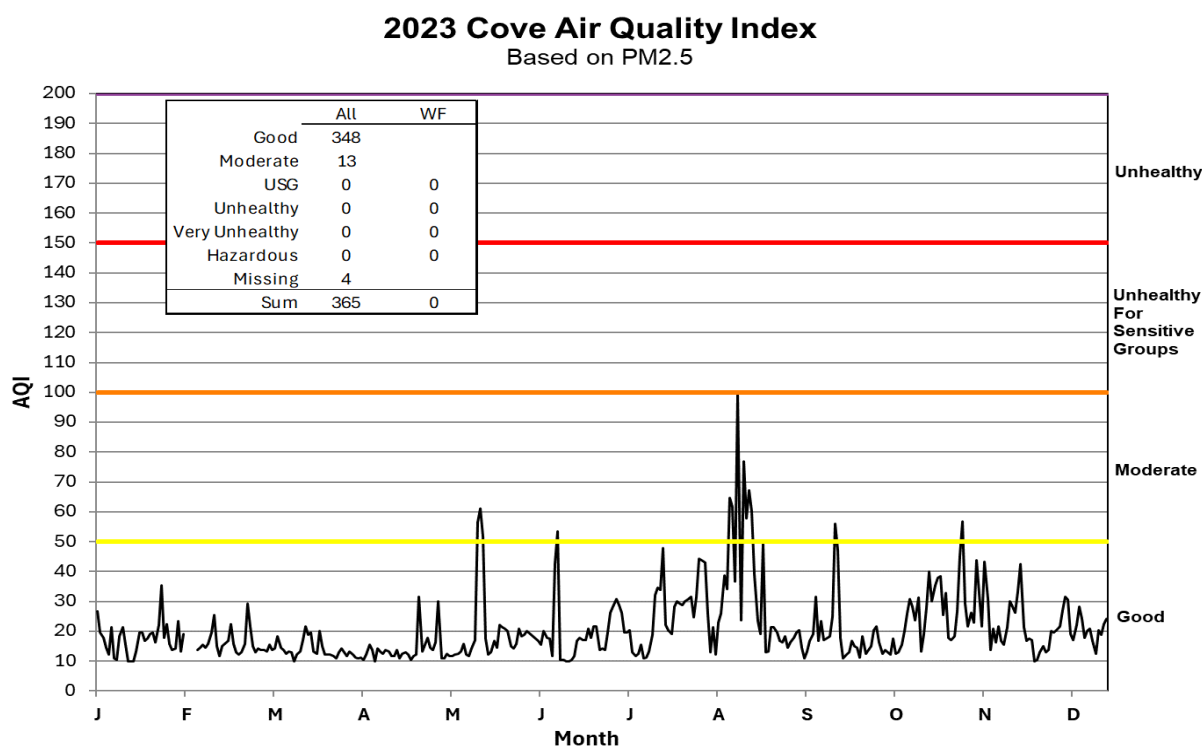


Figure 90 2023 Cove

Appendix 1: Ambient air monitoring network

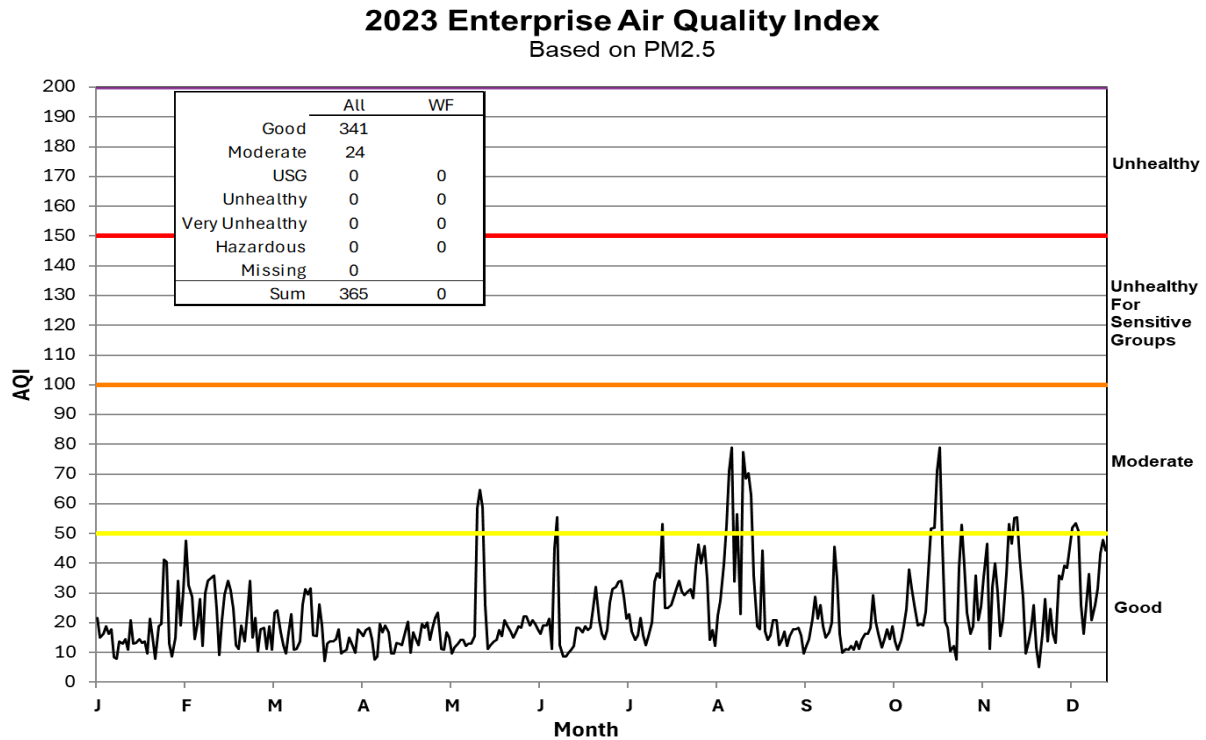


Figure 91. 2023 Enterprise

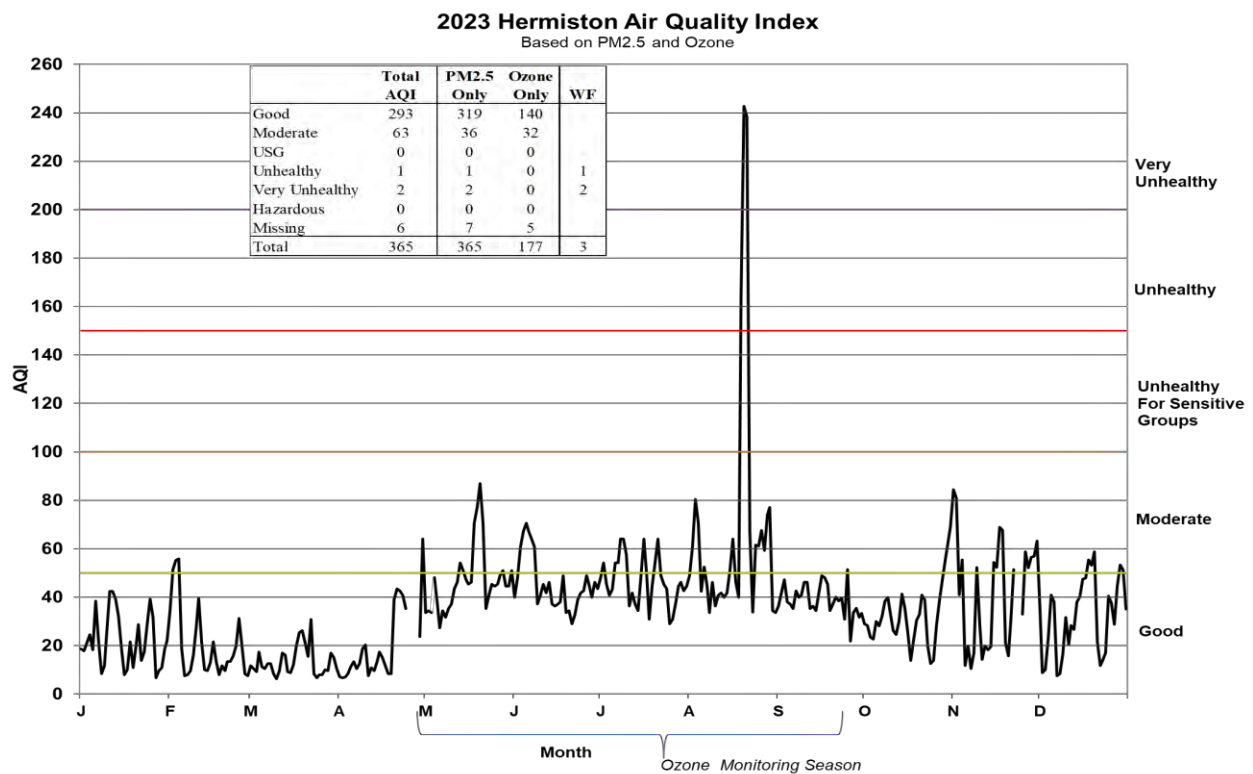


Figure 92. 2023 Hermiston

Appendix 1: Ambient air monitoring network

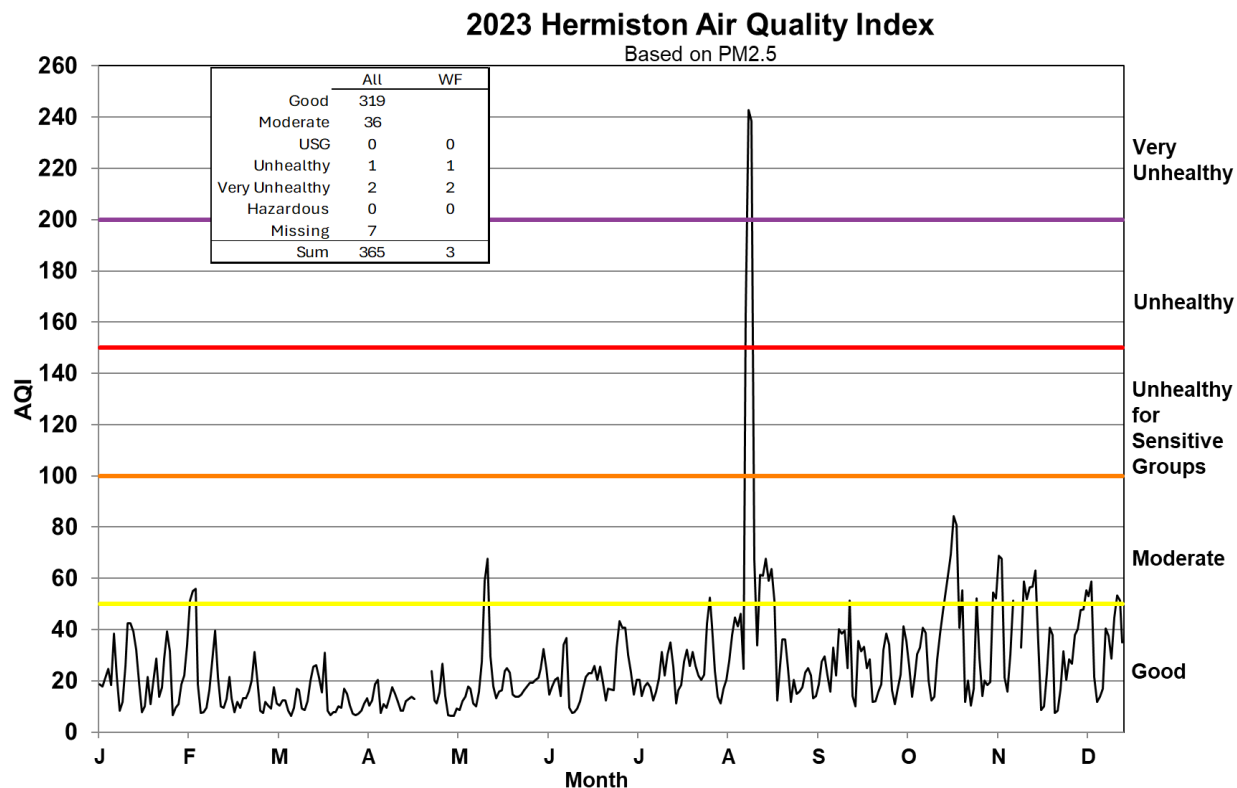


Figure 93. 2023 Hermiston – PM2.5 only

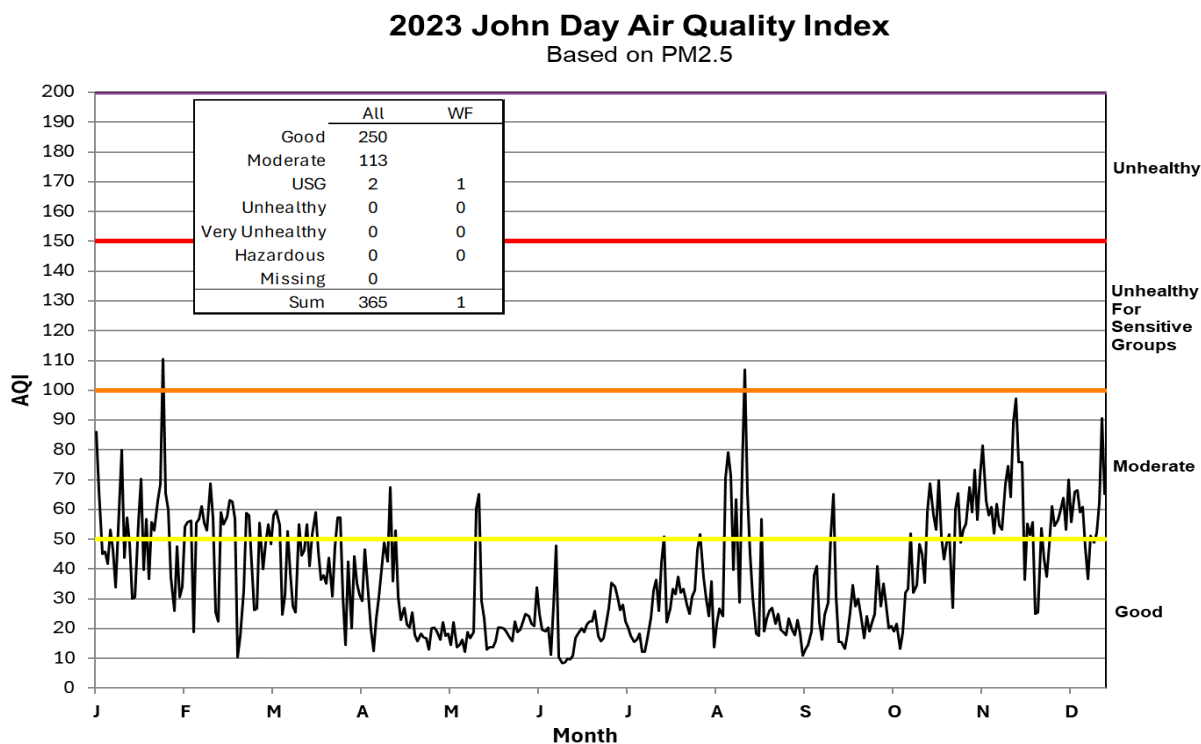


Figure 94. 2023 John Day AQI

Appendix 1: Ambient air monitoring network

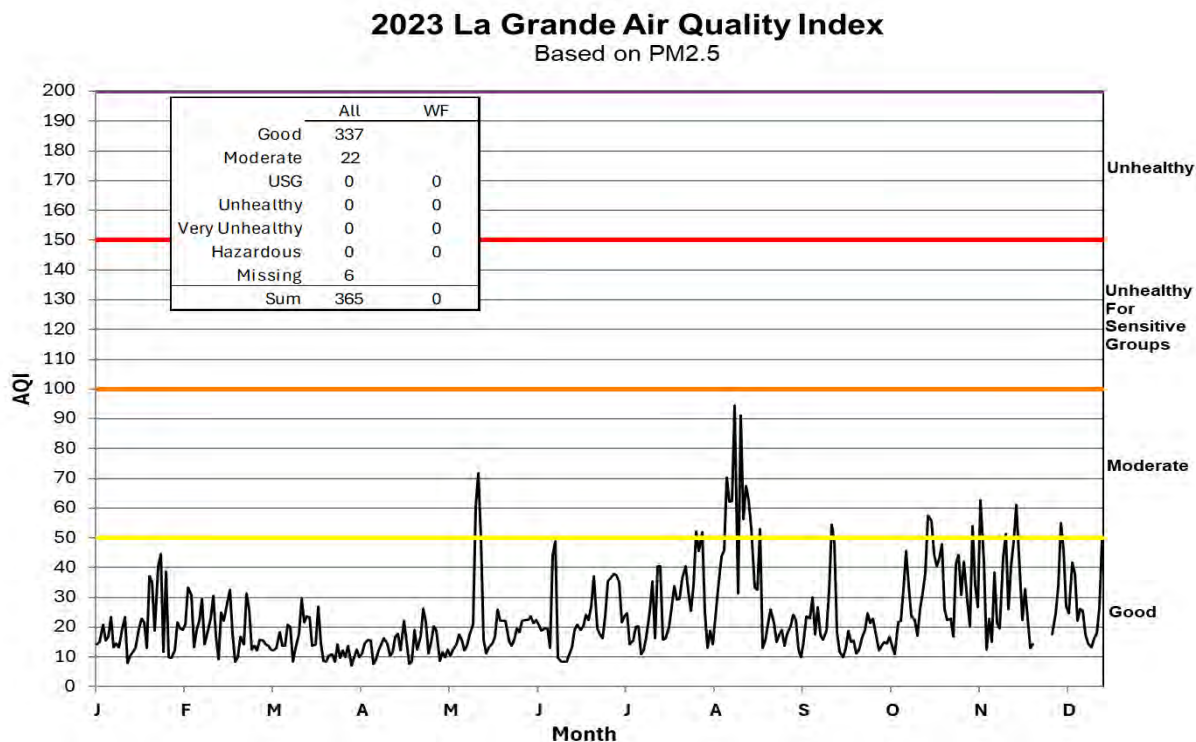


Figure 95. 2023 La Grande AQI

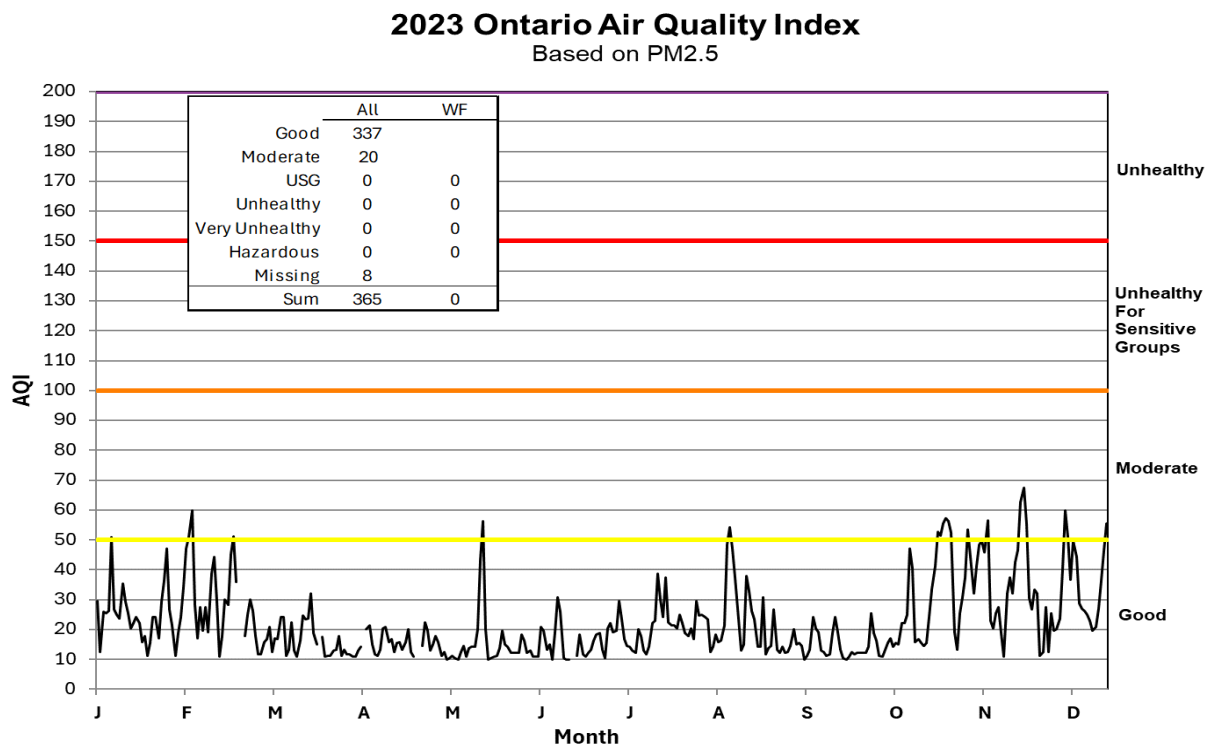


Figure 96. 2023 Ontario AQI

Appendix 1: Ambient air monitoring network

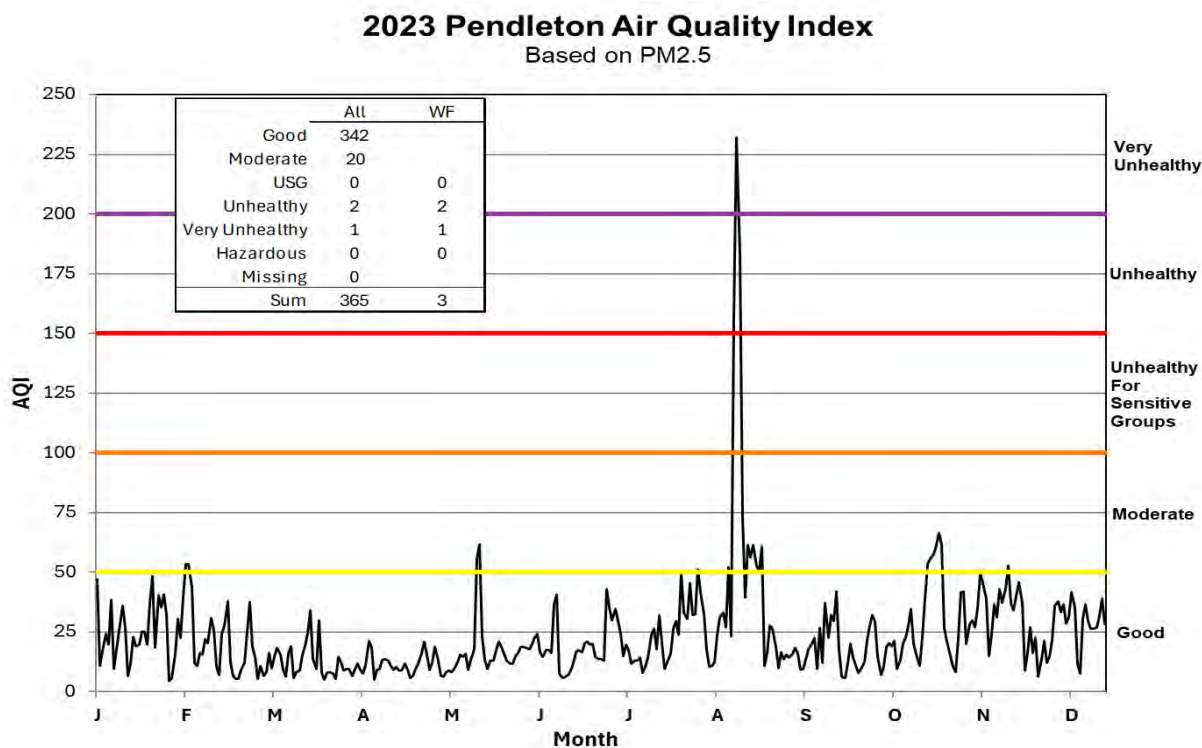


Figure 97. 2023 Pendleton AQI

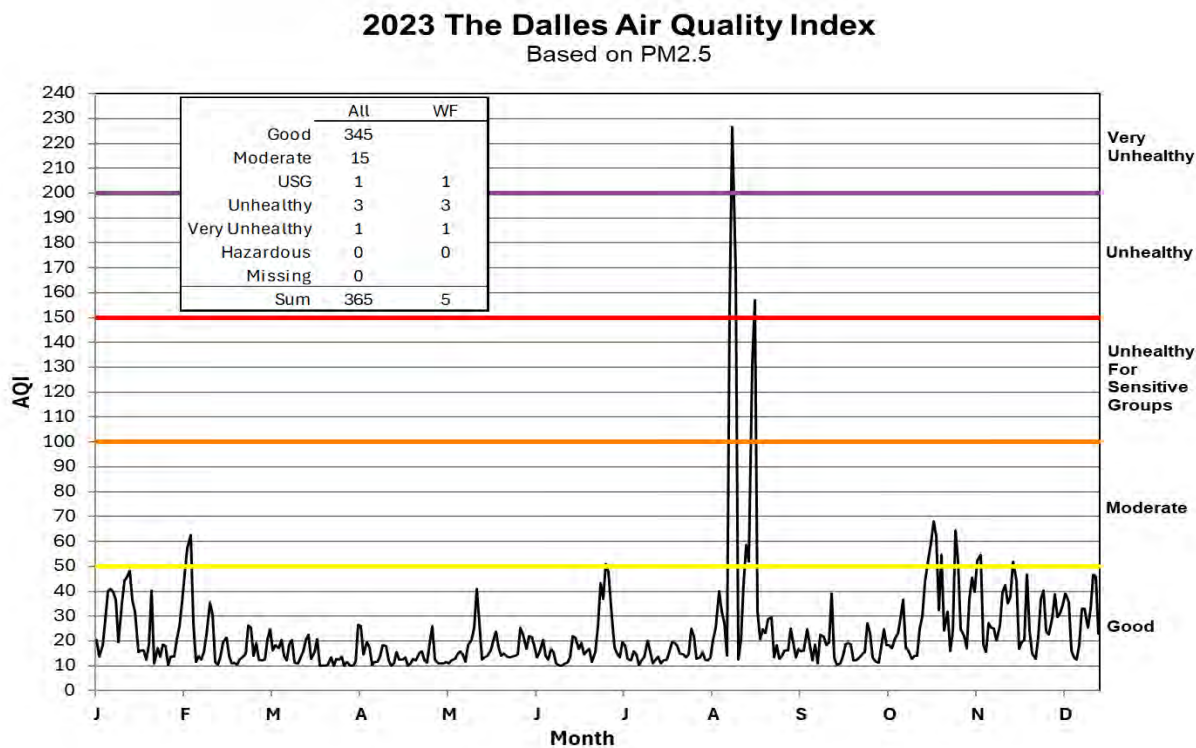


Figure 98. 2023 The Dalles AQI

Central Oregon

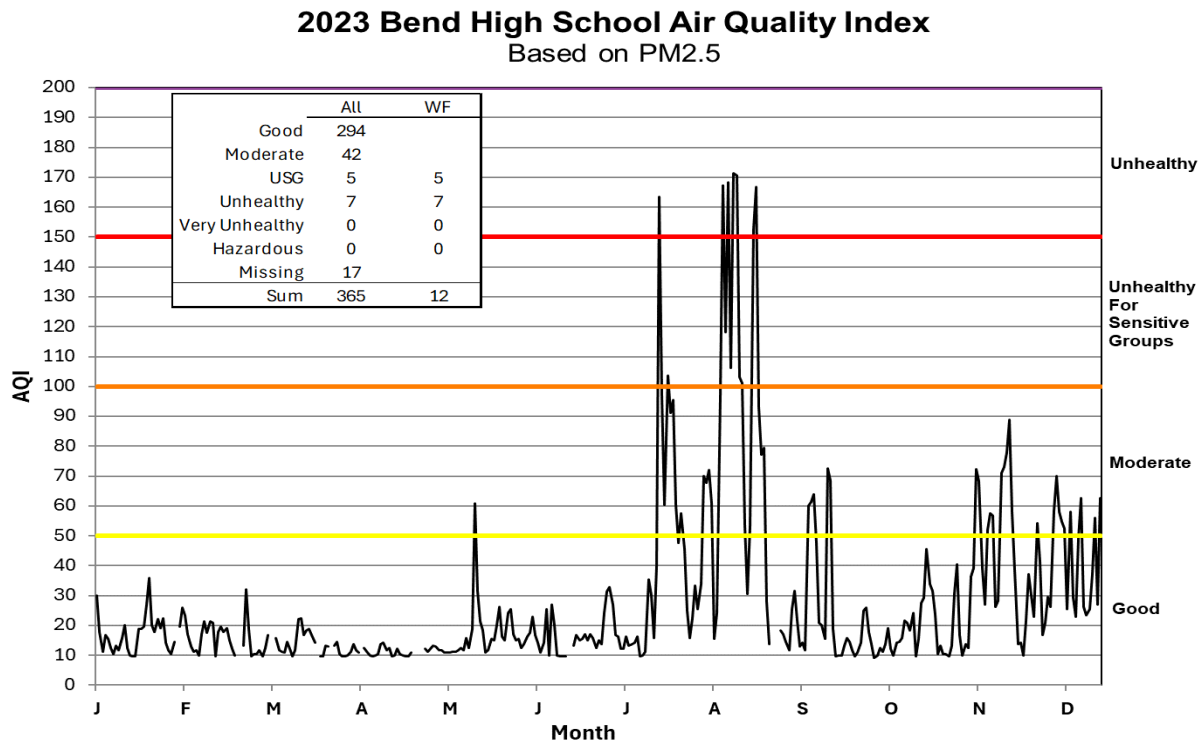


Figure 99. 2023 Central Bend – Bend High School AQI

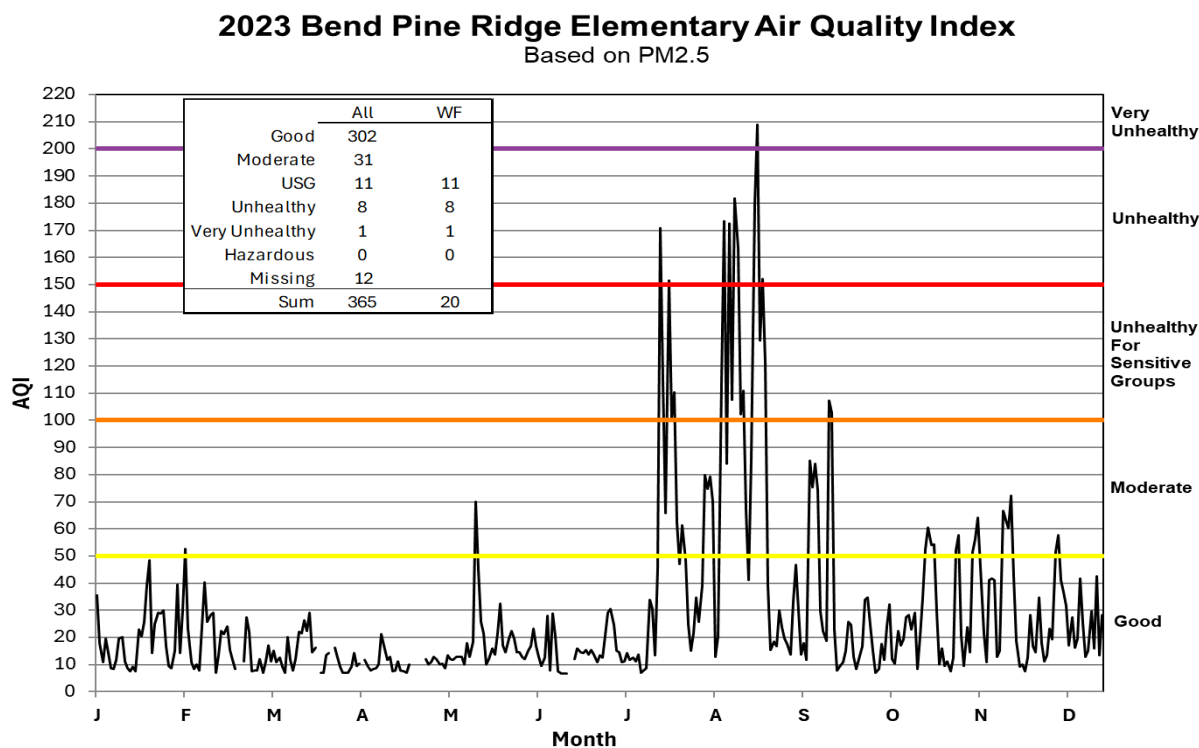


Figure 100. 2023 Southwest Bend – Pine Ridge Elementary AQI

Appendix 1: Ambient air monitoring network

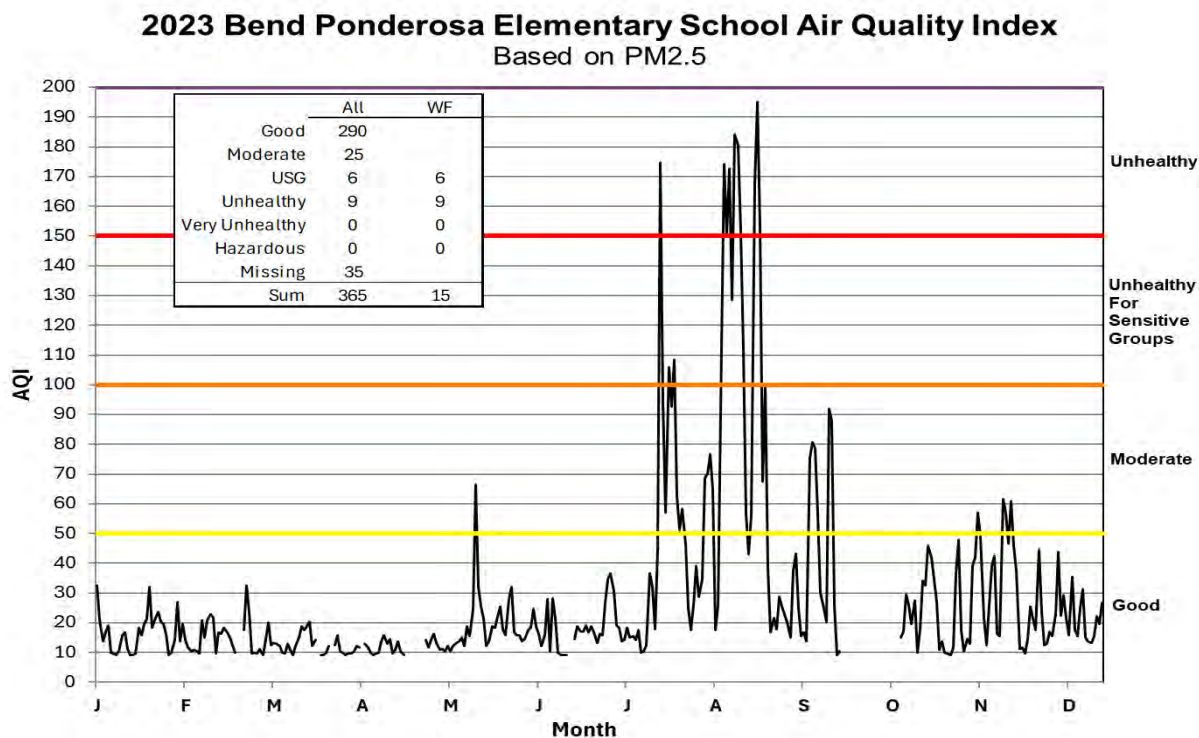


Figure 101. 2023 Northeast Bend – Ponderosa Ridge Elementary AQI

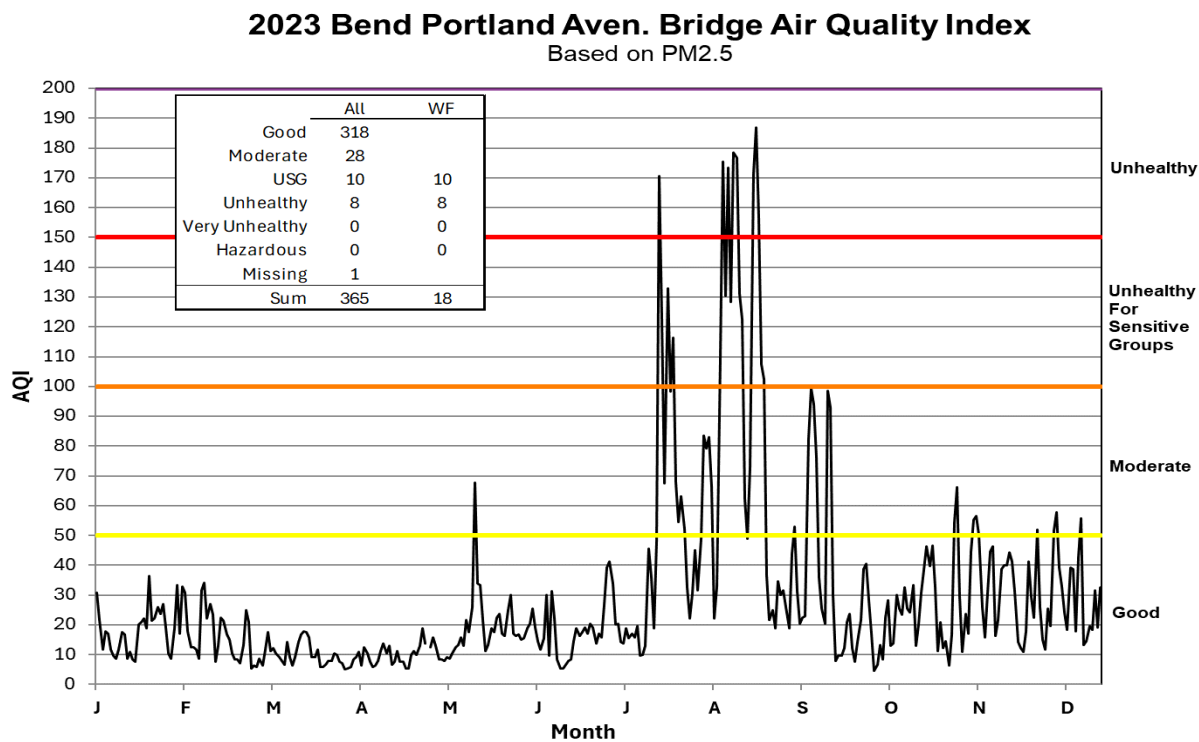


Figure 102. 2023 Central Bend – Portland Avenue Bridge AQI

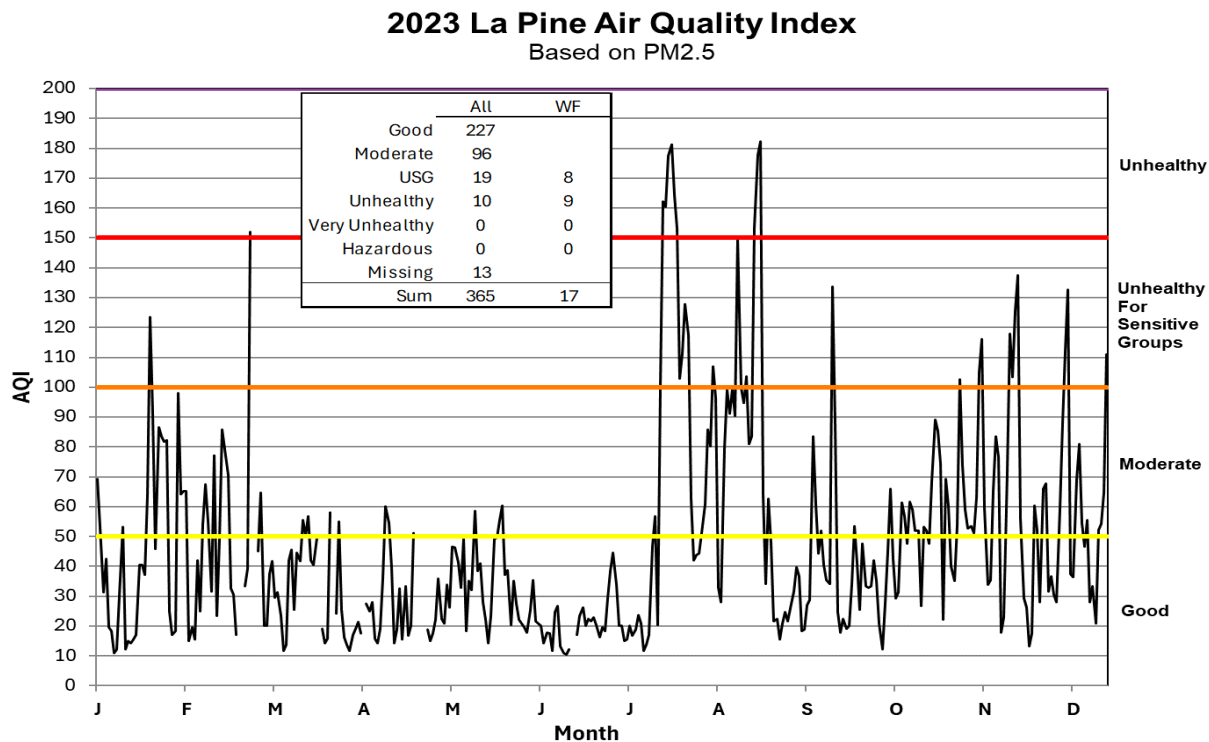


Figure 103. 2023 La Pine AQI

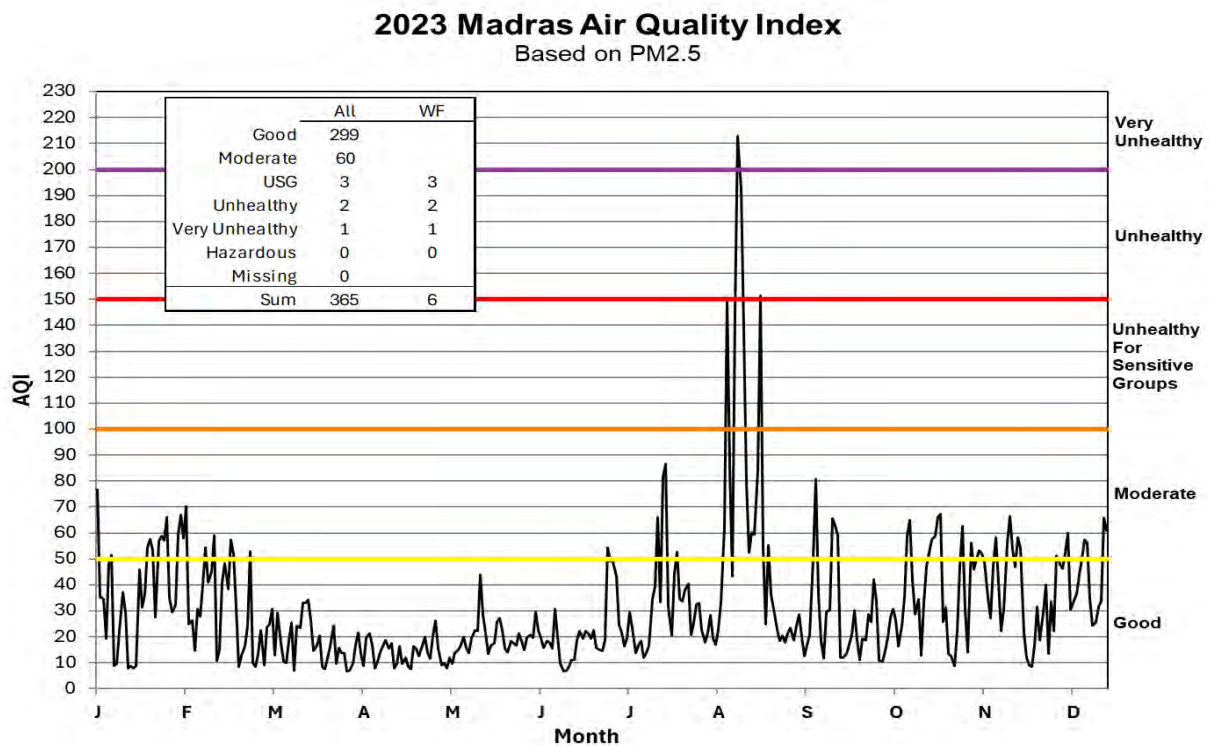


Figure 104. 2023 Madras AQI

Appendix 1: Ambient air monitoring network

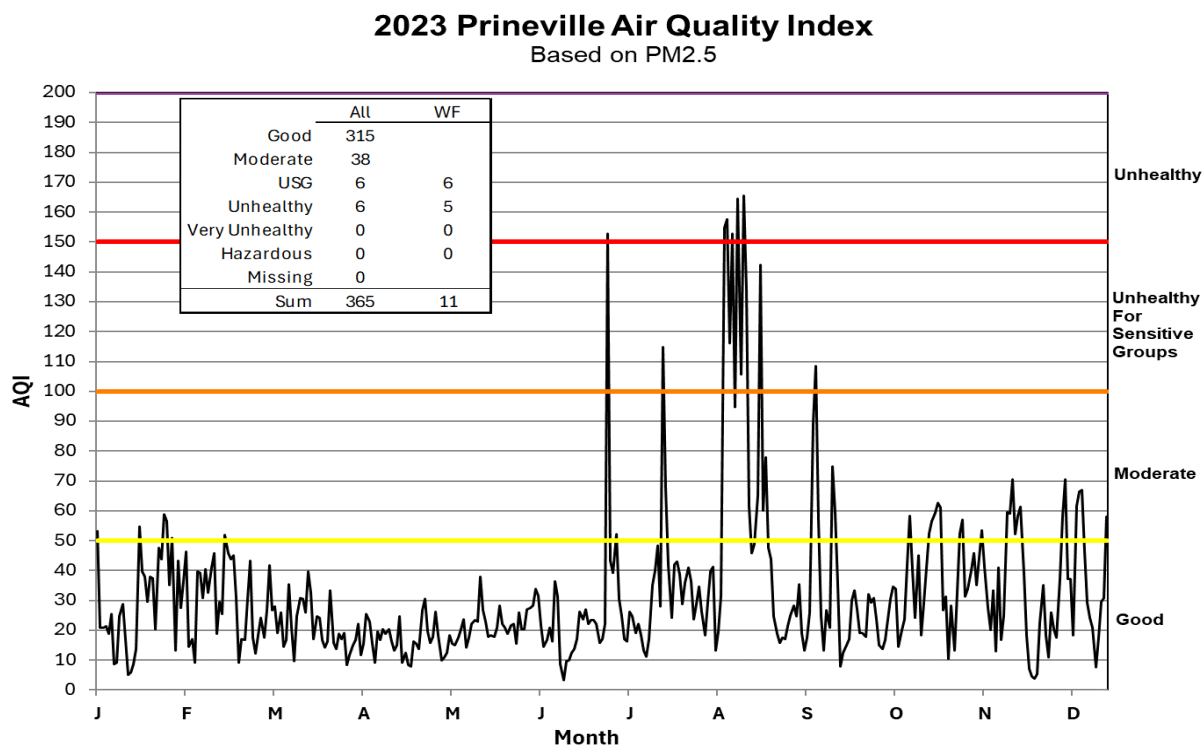


Figure 105. 2023 Prineville AQI

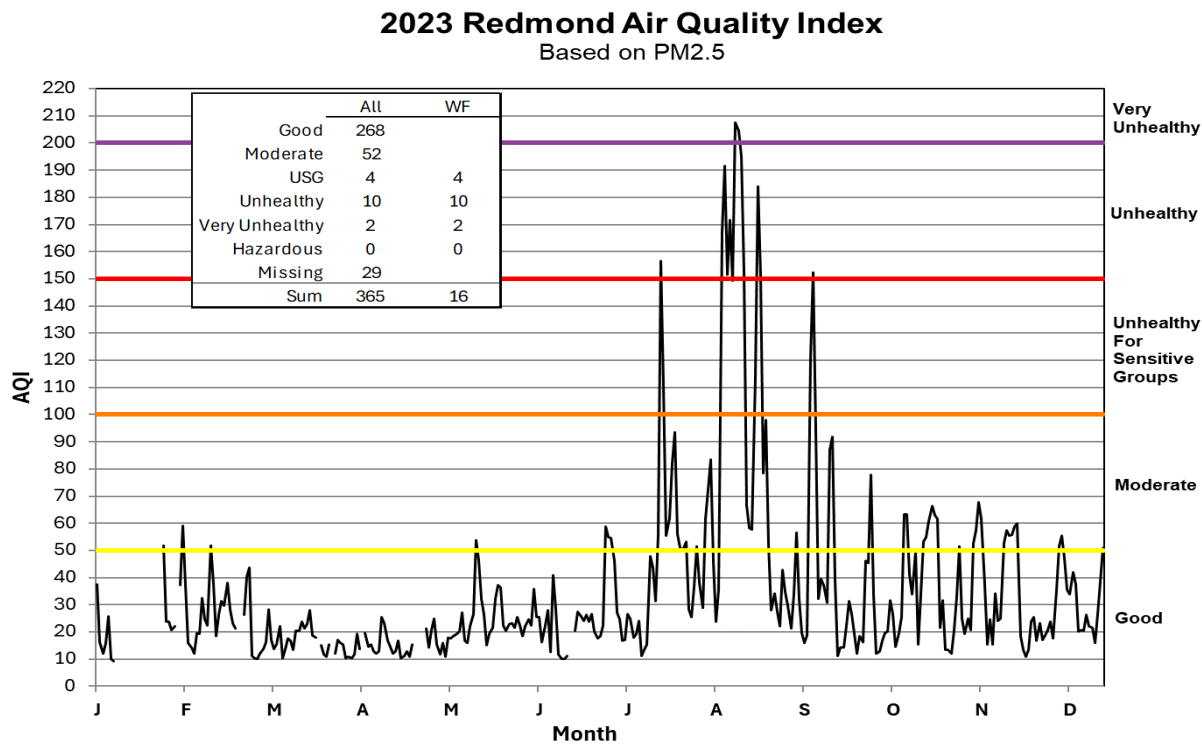


Figure 106. 2023 Redmond AQI

Appendix 1: Ambient air monitoring network

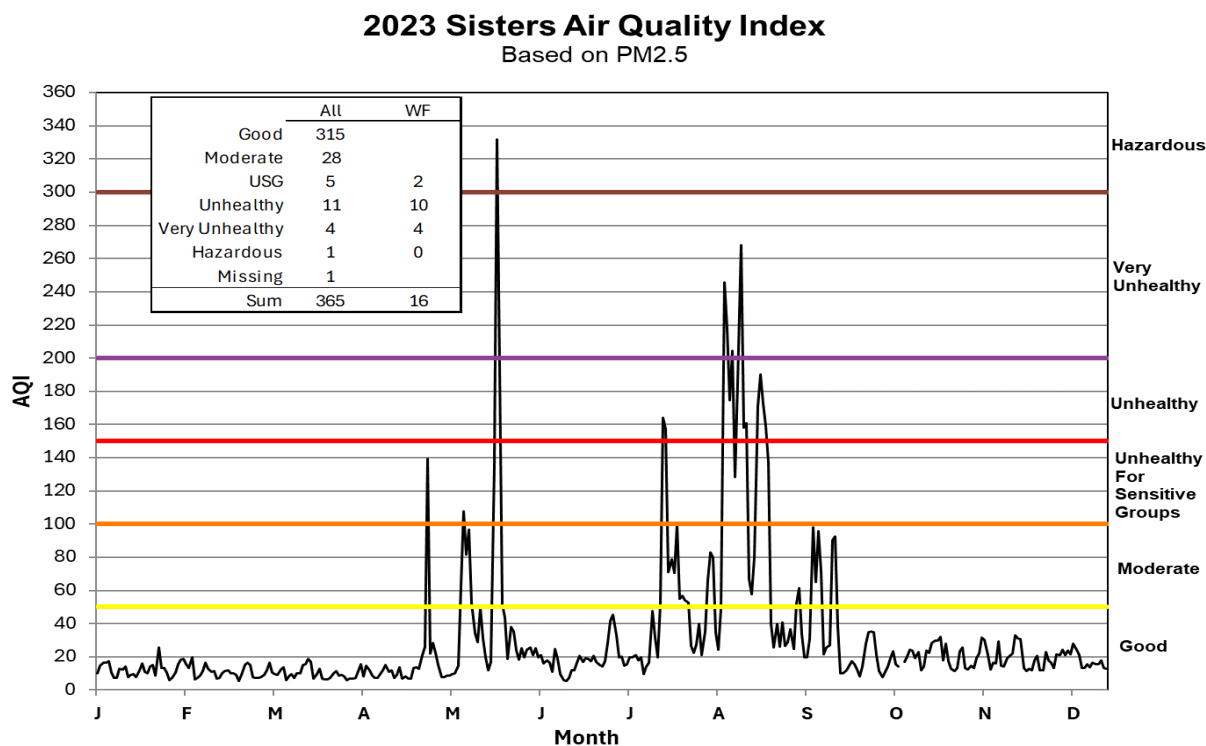


Figure 107. 2023 Sisters AQI

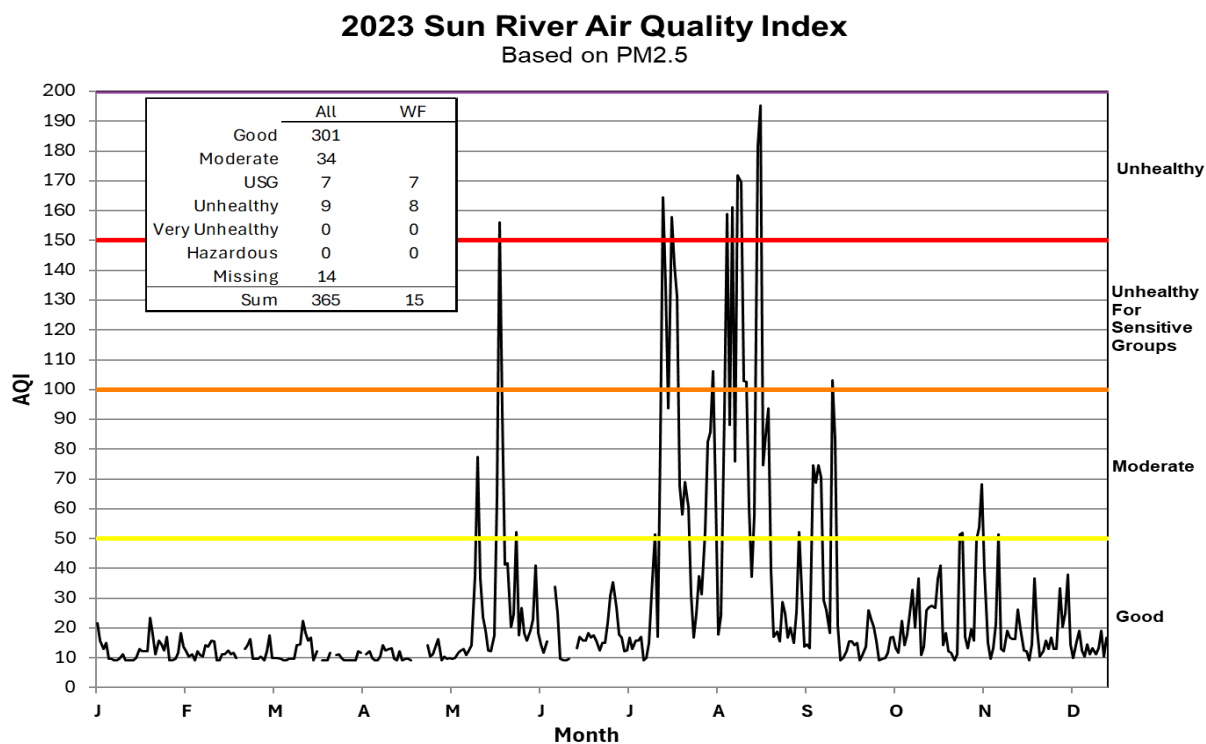


Figure 108. 2023 Sun River AQI

Southeast Oregon

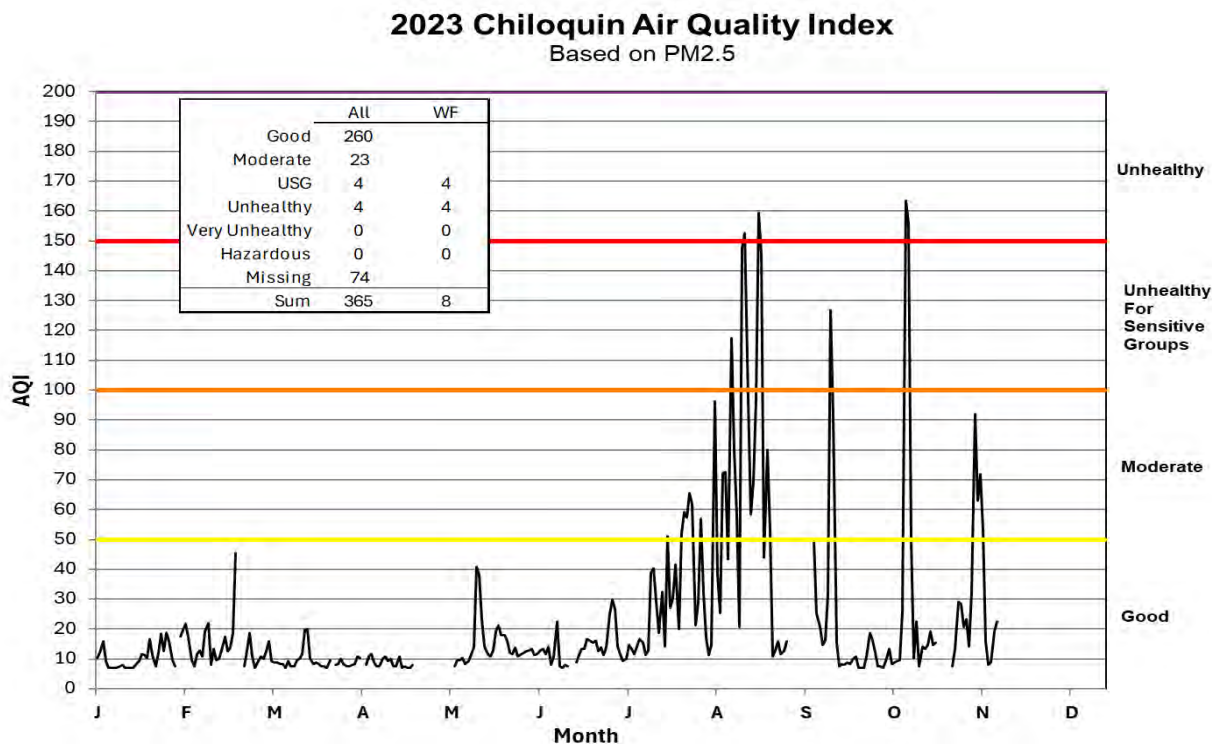


Figure 109. 2023 Chiloquin AQI

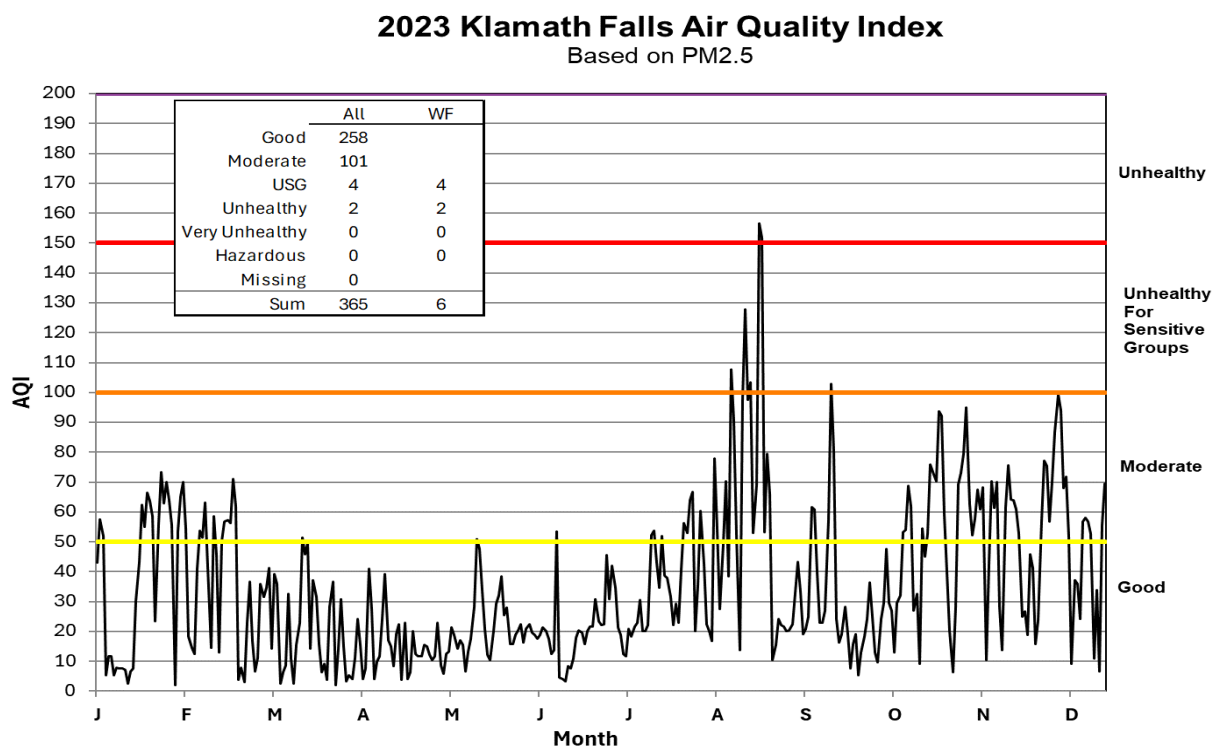


Figure 110. 2023 Klamath Falls AQI

Appendix 1: Ambient air monitoring network

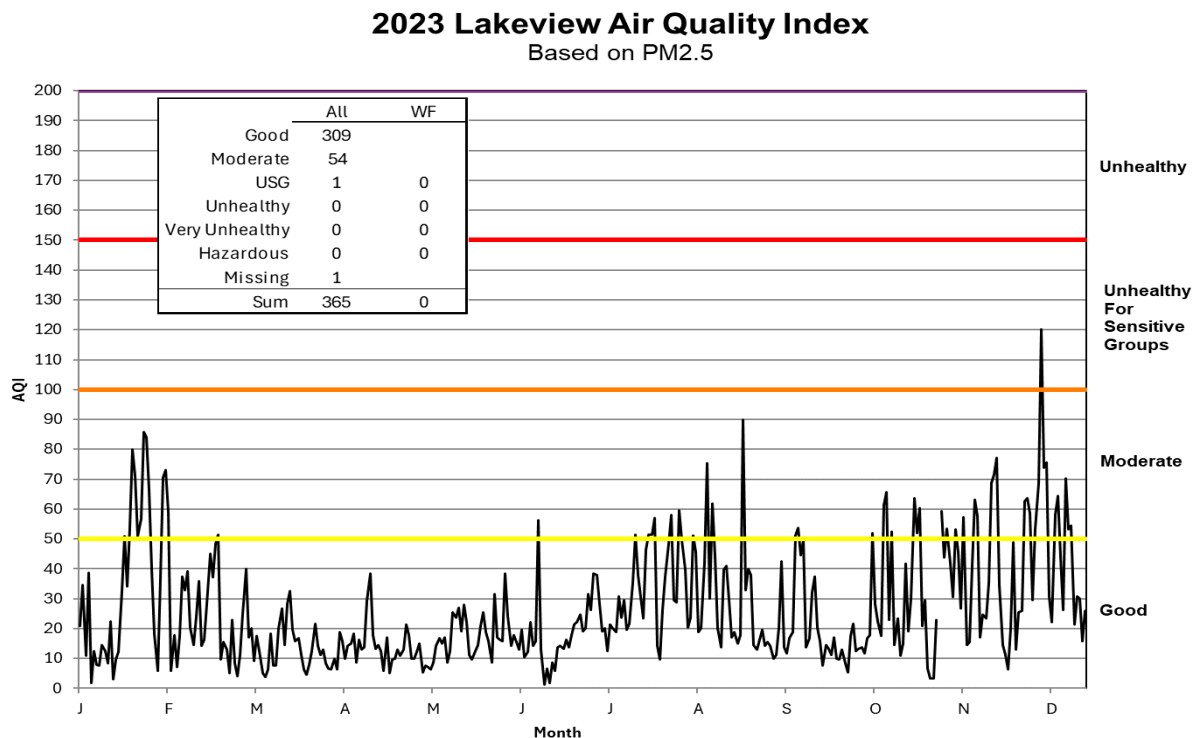


Figure 111. 2023 Lakeview AQI

Appendix 1: Ambient air monitoring network data

DEQ and LRAPA operate complex ambient air monitor networks, and the parameters monitored can vary. The tables below list the identification information, parameters monitored, monitoring area information, monitoring methods and location of all sites in the network. Some network data is available on DEQ's [AQI website](#). DEQ can also provide data upon request; email requests to aqm.questions@deq.oregon.gov.

Site information

Site City	Site Name	DEQ Site Code	EPA Site Number	Sulfur Dioxide	Carbon Monoxide	Nitrogen Dioxide	Ozone	PM _{2.5}	PM _{2.5} Est	PM _{2.5} Spec	PM ₁₀	Hazardous Air Pollutants	Lead	Wind Speed/Direction	Temperature	Differential Temperature	Barometric Pressure	Relative Humidity	Solar Radiation
Albany	Calapooia School	ACS	410430009						X										
Ashland	Fire Department	AFD	410290203						X										
Baker City	US Forest Service	BFS	410010004						X										
Beaverton	Highland Park School	BHP	410670111						X										
Bend	High School	BEE	410170123						X			X					X		
Bend	Pine Ridge Elementary	BPR	410170116						X										
Bend	Ponderosa Elementary	BPE	410170115						X										
Bend	Pump Station	BPS	410170120						X										
Bend	Road Department	BRD	410140121											X	X		X	X	X
Brookings	Oregon Dept. of Forestry Office	BDF	410150002						X										
Burns	Washington Street	BWS	410250003					X	X					X	X		X		
Carus	Spangler Road	SPR	410050004				X		X					X	X		X		
Cave Junction	US Forest Service Office	CJFS	410330036						X										
Chiloquin	Duke Drive	CDD	410352040						X										
Coos Bay	Marshfield High School	CBM	410110003						X										
Corvallis	Fire Department #3	CCB	410030013						X										

Appendix 1: Ambient air monitoring network

Site City	Site Name	DEQ Site Code	EPA Site Number	Sulfur Dioxide	Carbon Monoxide	Nitrogen Dioxide	Ozone	PM _{2.5}	PM _{2.5} Est	PM _{2.5} Spec	PM ₁₀	Hazardous Air Pollutants	Lead	Wind Speed/Direction	Temperature	Differential Temperature	Barometric Pressure	Relative Humidity	Solar Radiation
Corvallis	EPA ORD Office	CJT	410030014						X										
Cottage Grove	City Shops	CGC	410399004					X	X										
Cove	City Hall	CCH	410610120						X					X					
Crater Lake	Lodge at Rim	CLR	410351002						X										
Dallas	LeCreole Middle School	DLM	410530004						X										
Detroit	US Forest Service Office	DFS	410470123						X										
Enterprise	US Forest Service Office	EFS	410630001						X										
Estacada	Clackamas River School	ECR	410050011						X										
Eugene	Amazon Park	AMZ	410390060				X	X	X					X					
Eugene	Highway 99	E99	410390059					X	X		X								
Eugene	Wilkes Drive	EWD	410390101						X					X	X		X		X
Florence	Oregon Dept. of Forestry	FDF	410390100						X										
Forest Grove	Pacific University	FGP	410670006						X										
Government Camp	Multitorpor	MUL	410050102						X										
Grants Pass	Parkside School	GPP	410330114					X	X					X	X		X		
Gresham	Centennial High School	GCH	410510031						X										
Hermiston	Municipal Airport	HMA	410591003				X		X					X	X				

Appendix 1: Ambient air monitoring network

Site City	Site Name	DEQ Site Code	EPA Site Number	Sulfur Dioxide	Carbon Monoxide	Nitrogen Dioxide	Ozone	PM _{2.5}	PM _{2.5} Est	PM _{2.5} Spec	PM ₁₀	Hazardous Air Pollutants	Lead	Wind Speed/Direction	Temperature	Differential Temperature	Barometric Pressure	Relative Humidity	Solar Radiation
Hillsboro	Hare Field	HHF	410670004					X	X			X	X				X		
Hood River	Westside Fire Department #2	HRF	410270001						X										
John Day	Davidson Street	JDD	410230002						X										
Klamath Falls	Peterson School	KFP	410350004					X	X					X	X	X	X		
La Grande	N Hall Avenue and E N Street	LHN	410610123						X		X	X	X	X	X		X	X	
La Pine	Rural Fire Station #103	LFD	410172002						X										
Lakeview	Center and M Streets	LCM	410370001					X	X		X			X	X		X		
Lyons	Mari-Linn School	LMS	410432003						X										
Madras	Westside School	MWS	410310007						X										
McMinnville	High School	MHS	410711003																
Medford	Rossanley Drive	MTV	410291002											X	X		X	X	X
Medford	Welch/Jackson Streets	MWJ	410292129					X	X		X	X							
Mill City	High School	MCS	410430104						X										
Oakridge	Willamette Activity Center	WAC	410392013					X	X		X			X	X		X		X
Ontario	May Roberts School	OMR	410450001						X										
Pendleton	McKay Creek	PMC	410590121						X								X		
Portland	Helensview School/Cully	PCH	410512011						X					X					

Appendix 1: Ambient air monitoring network

Site City	Site Name	DEQ Site Code	EPA Site Number	Sulfur Dioxide	Carbon Monoxide	Nitrogen Dioxide	Ozone	PM _{2.5}	PM _{2.5} Est	PM _{2.5} Spec	PM ₁₀	Hazardous Air Pollutants	Lead	Wind Speed/Direction	Temperature	Differential Temperature	Barometric Pressure	Relative Humidity	Solar Radiation
Portland	Humboldt School	PHS	410512010						X		X	X	X						
Portland	Jefferson High School	PJH	410511191											X					
Portland	Lane Middle School	PLM	410510032						X										
Portland	Lincoln High School	PLH	410510034						X										
Portland	McDaniel High School	PMS	410510039						X										
Portland	Roosevelt High School	PRH	410510003						X										
Portland	Sauvie Island	SIS	410090004				X		X					X	X				
Portland	SE 12 th Ave and Main St	PTM	410510035						X										
Portland	SE 57 th Ave & Lafayette St	SEL	410510080	X	X	X	X	X	X	X	X		X	X			X		
Prineville	Davidson Park	PDP	410130100					X	X					X	X		X	X	X
Redmond	High School	RHS	410171001						X										
Roseburg	Douglas County Fire Department	RFD	410190004						X										
Saginaw	Delight Valley Road	SAG	410391007				X												
Salem	Chemeketa Comm College	SCC	410470022						X										
Salem	State Hospital	SSH	410470041				X		X										
Shady Cove	Shady Cove Schools	SCS	410290019						X										
Silverton	James St and Western St	SJW	410470007						X					X					

Appendix 1: Ambient air monitoring network

Site City	Site Name	DEQ Site Code	EPA Site Number	Sulfur Dioxide	Carbon Monoxide	Nitrogen Dioxide	Ozone	PM _{2.5}	PM _{2.5} Est	PM _{2.5} Spec	PM ₁₀	Hazardous Air Pollutants	Lead	Wind Speed/Direction	Temperature	Differential Temperature	Barometric Pressure	Relative Humidity	Solar Radiation
Sisters	US Forest Service Office	SFS	410170004						X								X		
Springfield	City Hall	SCH	410391009						X					X					
Sunriver	Three Rivers Elementary	SRE	410170117						X										
Sweet Home	Fire Department	SFD	410432002						X										
Talent	Rapp Lane	TAL	410290201				X		X										
The Dalles	Cherry Heights	TDC	410650007						X										
Tillamook	Junior High School	TJH	410570001						X										
Toledo	NE Hwy 20 and NW A St	TPS	410410004						X										
Tualatin	Bradbury Court	TBC	410670005		X	X	X	X	X					X	X		X	X	
Turner	Cascade Junior High	CJH	410470004				X		X					X	X				
Woodburn	Chemeketa Comm College	WCC	410470023						X										

Monitoring area information

A monitoring area often coincides with city boundaries, but a monitoring area may also cover multiple cities for larger metropolitan areas or cities very close to each other. For monitoring areas with multiple sites, the tables below list which sites are used to monitor for each criteria pollutant by DEQ site code. Regulatory monitor site codes are **bolded**.

Monitoring Areas with Regulatory and Informational Monitors						
Monitoring Area	PM _{2.5}	PM ₁₀	Ozone	Carbon Monoxide	Nitrogen Dioxide	Sulfur Dioxide
Bend	BEE, BPE, BPR, BPS					
Corvallis	CCB, CJT					
Eugene Metro	E99, AMZ, EWD, SCH	E99	AMZ, SAG			
Medford	MWJ	MWJ	TAL			
Portland Metro	HHF, PCH, PHS, PLH, PLM, PMS, PRH, PTM, SEL, TBC	PHS, SEL	SEL, SIS, SPR, TBC	SEL, TBC	SEL, TBC	SEL
Salem	CJH, SCC, SSH		CJH, SSH			

Monitoring methods

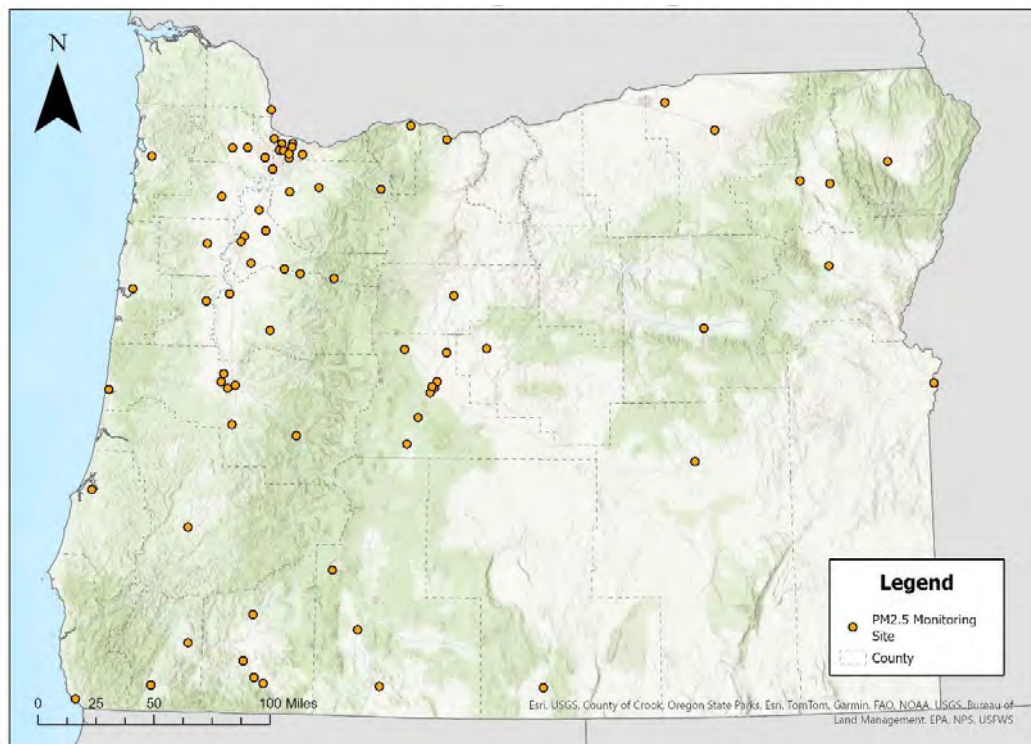
Multiple monitors can measure pollutant concentrations in ambient air, but EPA requires that DEQ only use certain monitors to support regulatory determinations. Monitors approved by EPA are called a Federal Reference Method monitor or Federal Equivalent Method monitor. More information about approved federal methods can be found on [EPA's website](#).

Air Monitoring Methods		
Pollutant	Method Code	Method Description
PM _{2.5}	117, 118, 145	Low-volume filter sampler and pre- and post-sampling weighing
	209	FEM beta attenuation
PM ₁₀	127	Low-volume filter sampler and pre- and post-sampling weighing
	141	High-volume filter sampler and pre- and post-sampling weighing
	122	FEM beta attenuation
Ozone	087	Ultraviolet photometry
NO ₂	200	Chemiluminescence analyzer with photolytic conversion
SO ₂	100	Ultraviolet fluorescence spectrometer trace SO ₂ analyzer
CO	093	Nondispersive infrared trace CO analyzer
PM _{2.5} Est	027/145, 791/145	Light scattering correlated with PM _{2.5} filter sampling

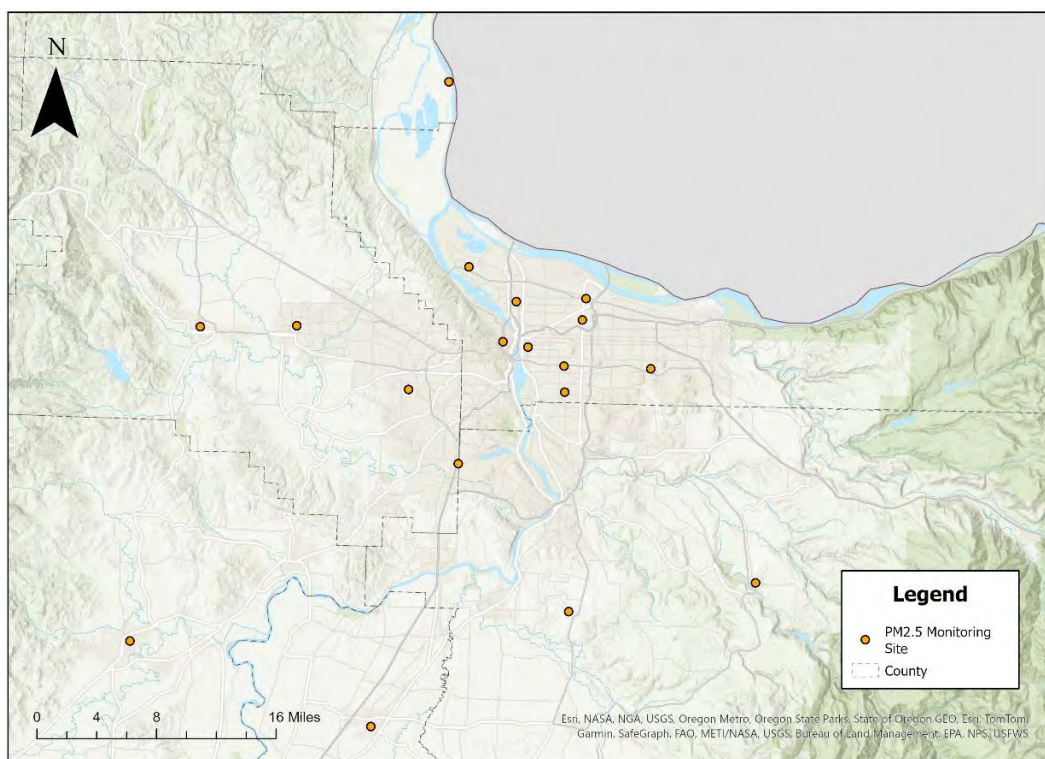
Monitoring network maps

Below are maps of monitoring networks for each criteria pollutant monitored in Oregon.

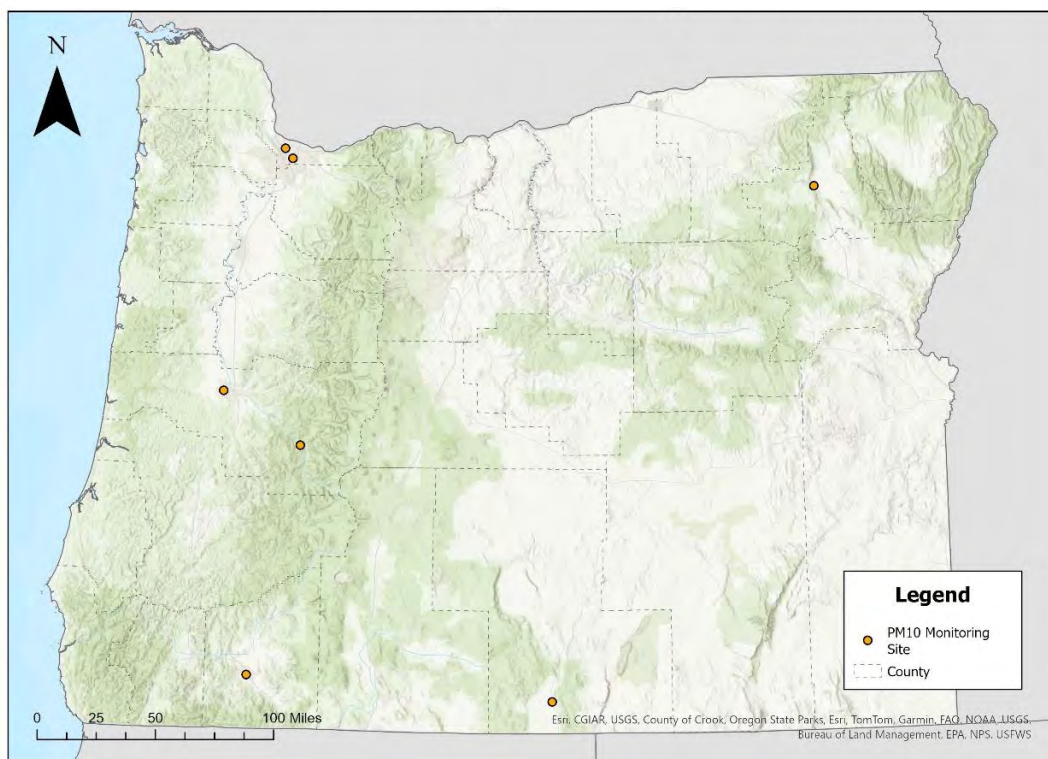
ODEQ and LRAPA PM2.5 Monitoring Sites



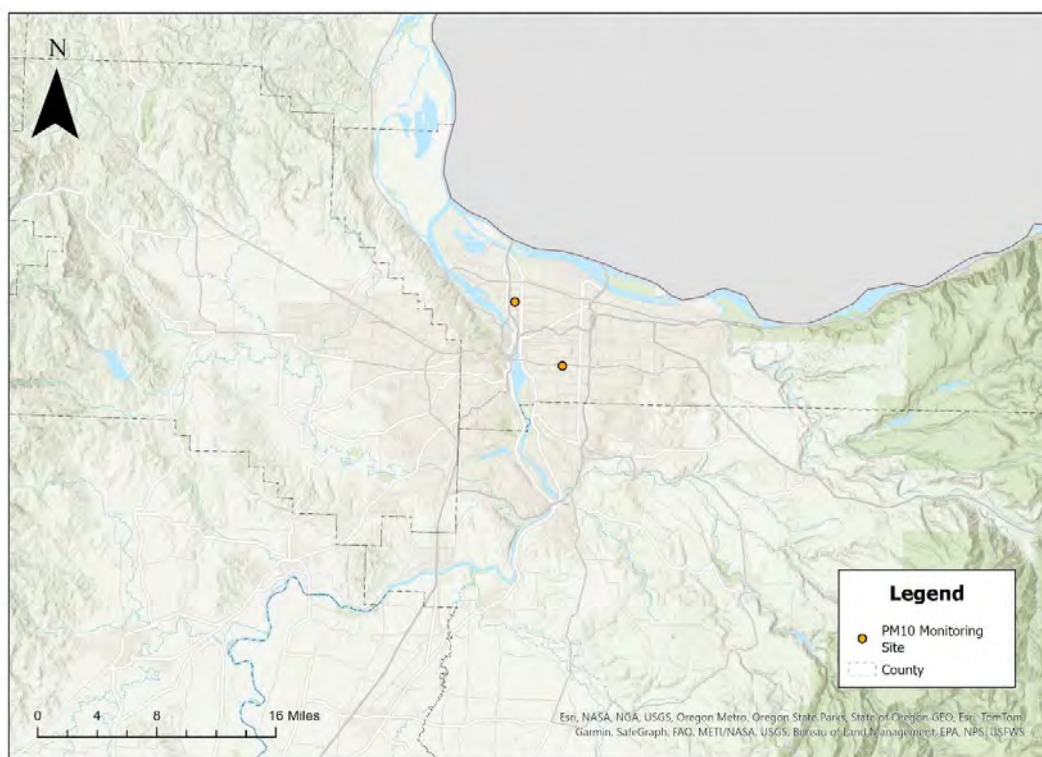
ODEQ Portland Metro PM2.5 Monitoring Sites



ODEQ and LRAPA PM10 Monitoring Sites



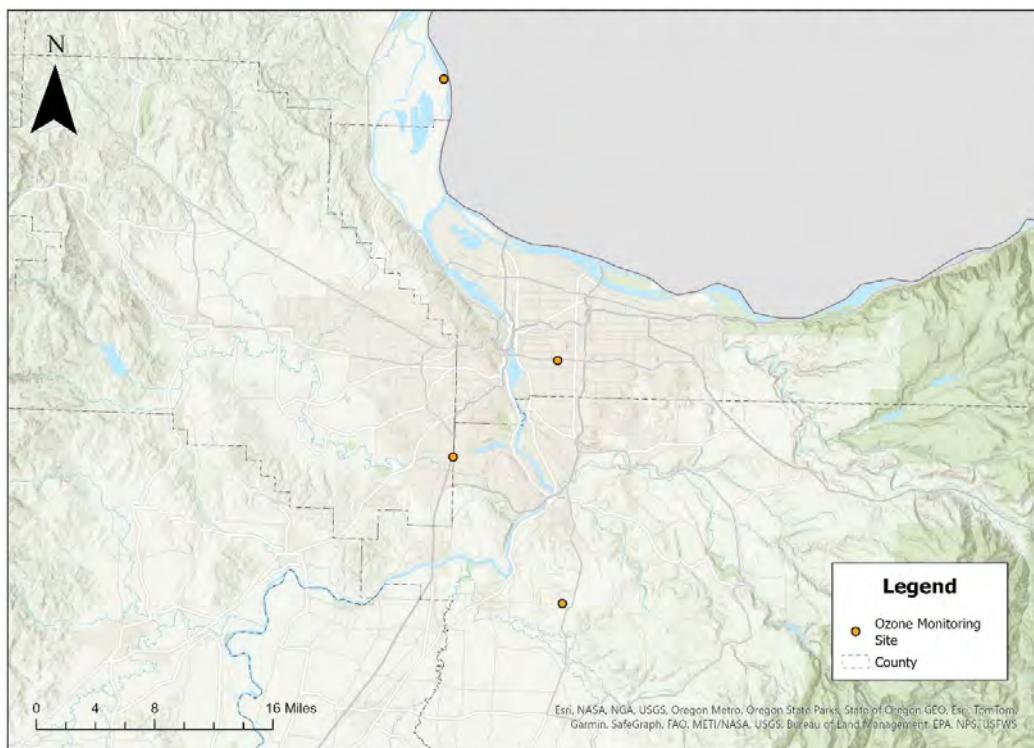
ODEQ Portland Metro PM10 Monitoring Sites



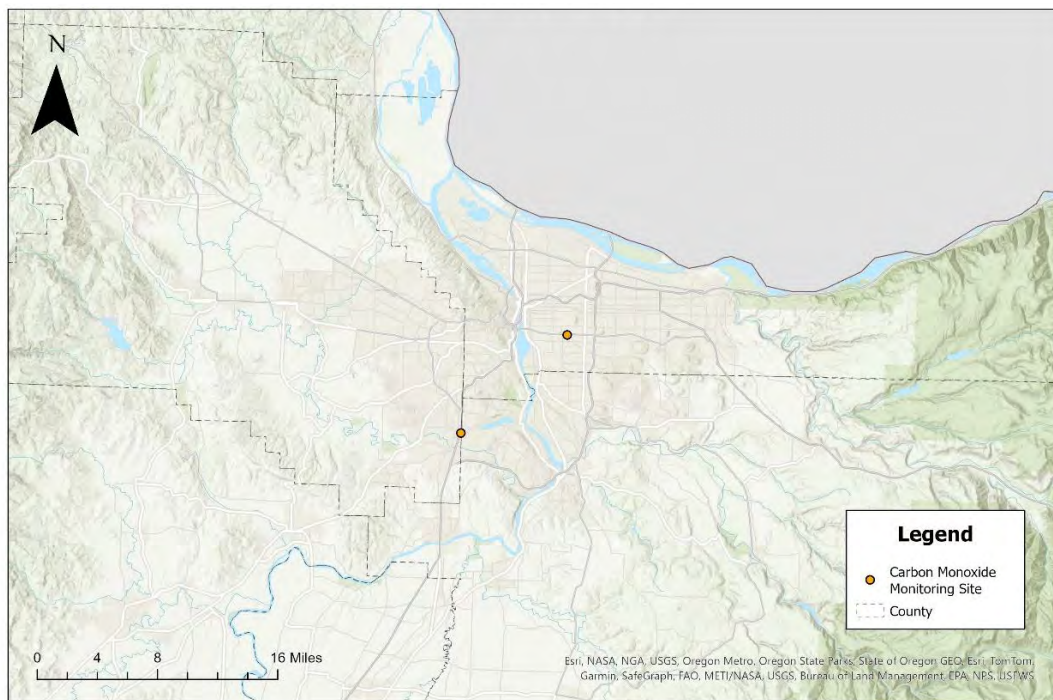
ODEQ and LRAPA Ozone Monitoring Sites



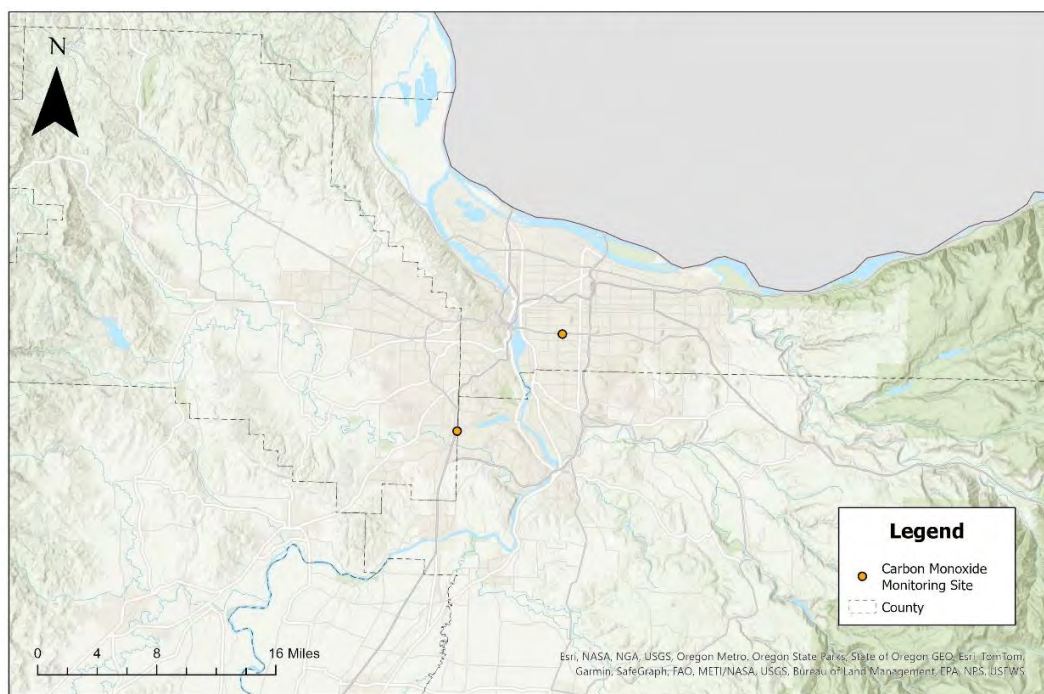
Portland Metro Ozone Monitoring Sites



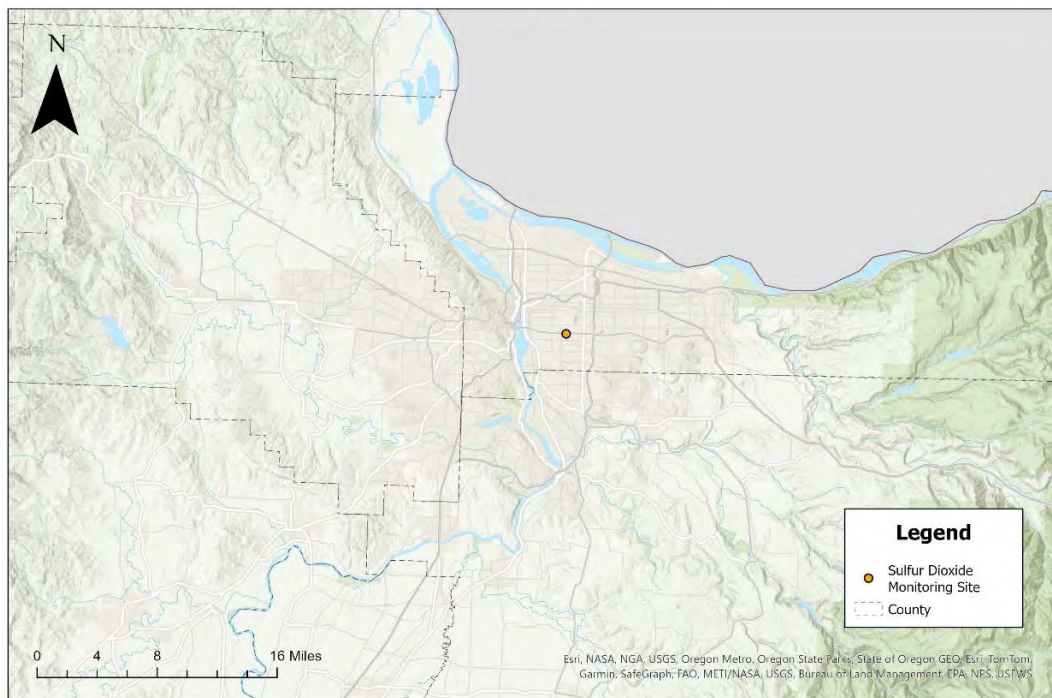
Portland Metro Carbon Monoxide Monitoring Sites



Portland Metro Nitrogen Dioxide Monitoring Sites



Portland Metro Sulfur Dioxide Monitoring Sites



Appendix 2: NAAQS historical data

Data listed below are from regulatory monitors. This data can be retrieved from [EPA's website](https://www.epa.gov/air-quality-criteria) or be requested at aqm.questions@deq.oregon.gov.

PM_{2.5}

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Annual Mean, µg/m ³	98 th Percentile, µg/m ³
Burns Washington Street BWS 410250003	2014 ^{fb}	119/122	61(08/06)	2	9.0	29
	2015 ^{fb}	360/365	46 (08/29)	2	8.3	26
	2016	118/122	30 (11/17)	0	8.2	29
	2017 ^{fb}	122/122	90 (09/07)	5	11.1	45
	2017*	119/122	52 (01/16)	2	9.8	34
	2018 ^{fb}	116/122	88 (08/21)	3	10.1	36
	2018*	115/122	36 (12/16)	2	9.2	28
	2019	350/365	48 (02/01)	5	10.2	30
	2020 ^{fb}	352/366	254 (09/12)	11	11.8	65
	2020*	342/366	38 (12/08)	1	9.2	30
	2021 ^{fb}	344/365	104 (09/09)	9	11.3	47
	2021*	330/365	29 (12/19)	0	9.7	24
	2022 ^{fb}	365/365	41 (09/10)	3	9.3	29
	2022*	342/365	35 (12/26)	1	9	27
	2023 ^{fb}	360/365	41 (01/24)	1	9.5	27
	2023*	356/365	41 (01/24)	1	9.0	25
Cottage Grove City Shops CGS 410399004	2014	124/122	34 (11/19)	0	6.9	21
	2015 ^{fb}	118/121	40 (08/22)	1	7.3	20
	2016	121/122	26 (01/01)	0	5.8	18
	2017 ^{fb}	117/122	116 (09/04)	3	8.8	38
	2017*	111/122	28 (01/16)	0	6.8	20
	2018 ^{fb}	123/122	44 (08/21)	1	7.8	24
	2018*	122/122	26 (12/07)	0	7.5	23
	2019	120/121	29 (12/11)	0	7.3	21
	2020 ^{fb}	121/122	499 (09/12)	2	13.4	17
	2020*	119/122	17 (10/27)	0	6.5	16
	2021 ^{fb}	357/365	45 (09/07)	1	6.2	20
	2021*	351/365	26 (07/04)	0	5.8	16
	2022 ^{fb}	362/365	93 (09/10)	7	7.9	35
	2022*	348/365	35 (11/20)	0	6.8	22
	2022 ^{fb}	355/365	56 (08/16)	7	7.4	34
	2022*	346/365	34 (07/04)	0	6.3	19
	2023 ^{fb}	355/365	59 (08/16)	7	7.4	34
	2023*	346/355	34 (07/04)	0	6.3	19

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Annual Mean, µg/m ³	98 th Percentile, µg/m ³
Eugene Amazon Park AMZ 410390060	2014	123/122	36 (01/26)	1	7.2	31
	2015 [Ⓟ]	121/121	55 (08/22)	2	7.4	27
	2016	122/122	38 (01/01)	2	5.4	20
	2017 [Ⓟ]	119/122	145 (09/04)	9	9.0	42
	2017*	115/122	42 (01/06)	6	6.9	37
	2018 [Ⓟ]	121/122	40 (08/21)	1	7.5	32
	2018*	120/122	34 (12/07)	0	7.2	29
	2019	120/121	30 (11/23)	0	7.3	25
	2020 [Ⓟ]	121/122	528 (09/12)	4	14.9	240
	2020*	118/122	26 (12/05)	0	6.2	17
	2021	120/122	22 (09/04)	0	5.5	14
	2022 [Ⓟ]	362/365	75 (10/10)	7	8.2	35
	2022*	352/365	32 (11/20)	0	7.2	23
	2023 [Ⓟ]	350/365	86 (08/15)	4	6.5	23
	2023*	345/365	29 (11/29)	0	5.5	20
Eugene Highway 99 E99 410390059	2014	120/122	44 (01/26)	2	7.2	31
	2015 [Ⓟ]	122/121	55 (08/22)	2	8.0	27
	2016	119/122	18 (01/04)	0	5.7	16
	2017 [Ⓟ]	120/122	330 (09/04)	4	10.9	43
	2017*	118/122	43 (01/16)	2	7.2	32
	2018 [Ⓟ]	122/122	46 (11/13)	3	8.7	39
	2018*	121/122	46 (11/13)	2	8.4	32
	2019	121/121	31 (01/12)	0	8.0	29
	2020 [Ⓟ]	121/122	454 (09/12)	3	14.9	218
	2020*	118/122	31 (11/02)	0	7.0	23
	2021 [Ⓟ]	360/365	37 (09/03)	1	6.6	19
	2021*	357/365	32 (01/20)	0	6.4	18
	2022 [Ⓟ]	361/365	70 (10/10)	6	8.8	32
	2022*	349/365	42 (11/20)	2	8.2	29
	2023 [Ⓟ]	360/365	107 (08/15)	3	8.3	33
	2023*	356/365	35 (11/26)	0	7.2	27
Grants Pass Parkside School GPP 410330114	2014	61/61	43 (11/19)	0	7.4	26
	2015 [Ⓟ]	57/60	24 (08/28)	0	8.2	18
	2016	61/61	17 (12/20)	0	5.8	15
	2017 [Ⓟ]	58/61	283 (09/04)	4	15.8	115
	2017*	54/61	24 (01/01)	0	7.4	19
	2018 [Ⓟ]	61/61	99 (08/06)	1	11.9	75
	2018*	58/61	31 (11/16)	0	9.0	24
	2019 [Ⓟ]	59/60	46 (07/26)	1	9.7	30
	2019*	60/61	30 (01/15)	0	9.0	25

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Annual Mean, µg/m ³	98 th Percentile, µg/m ³
	2020 ^{fb}	60/61	395 (09/12)	1	14.5	29
	2020*	59/61	29 (10/06)	0	8.1	27
	2021 ^{fb}	54/61	81 (09/07)	2	9.7	58
	2021*	52/61	29 (11/18)	0	7.6	22
	2022 ^{fb}	109/122	103 (08/30)	2	9.4	24
	2022*	109/122	24 (12/04)	0	8.1	24
	2023 ^{fb}	357/365	208 (08/27)	15	11.3	55
	2023*	341/365	55 (07/04)	1	7.8	24
Klamath Falls Peterson School KFP 410350004	2014	118/122	31 (08/03)	0	8.8	30
	2015 ^{fb}	112/121	85 (08/01)	4	10.2	44
	2015*	108/121	38 (11/29)	1	8.2	25
	2016	118/122	29 (12/08)	0	6.8	23
	2017 ^{fb}	122/122	102 (09/04)	3	11.7	55
	2017*	115/122	32 (12/12)	0	8.5	32
	2018 ^{fb}	117/122	156 (08/03)	12	20.6	146
	2018*	103/122	28 (12/13)	0	10.7	22
	2019	63/63	27 (10/12)	0	10.5	25
	2020 ^{fb}	61/61	300 (09/12)	3	14.6	46
	2020*	57/61	29 (11/29)	0	8.5	25
	2021 ^{fb}	59/61	132 (08/14)	4	13.7	62
	2021*	55/61	24 (11/24)	0	9.0	23
	2022 ^{fb}	358/365	60 (07/04)	3	8.5	31
	2022*	357/365	43 (12/19)	2	8.4	26
	2023 ^{fb}	346/365	54 (08/25)	4	9.1	34
	2023*	340/365	35 (12/14)	0	7.8	29
Lakeview Center and M Streets LCM 410370001	2014	120/122	47 (01/20)	6	8.6	42
	2015	115/121	45 (11/29)	2	8.4	33
	2016	106/122	70 (12/29)	2	6.3	19
	2017 ^{fb}	108/122	64 (12/12)	8	11.0	58
	2017*	107/122	64 (12/12)	7	8.3	56
	2018 ^{fb}	101/122	112 (07/31)	9	12.8	66
	2018*	91/122	30 (11/13)	0	7.8	29
	2019	102/122	28 (01/27)	0	6.6	23
	2020 ^{fb}	110/122	67 (09/15)	3	8.2	36
	2020*	106/122	26 (12/08)	0	6.7	22
	2021 ^{fb}	95/122	87 (08/26)	8	13.8	68
	2021*	84/122	30 (12/21)	0	8.9	28
	2022 ^{fb}	108/122	47 (12/19)	2	8.5	35
	2022*	107/122	47 (12/19)	1	8.0	34
	2023	356/365	43 (12/15)	1	6.6	24

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Annual Mean, µg/m ³	98 th Percentile, µg/m ³
Medford Grant Ave and Belmont St MGB 410290133	2014 ^{fb}	121/122	39 (01/02)	2	9.3	31
	2014*	120/122	39 (01/02)	1	9.1	28
	2015 ^{fb}	119/121	112 (08/01)	7	12.1	46
	2015*	115/121	36 (11/23)	3	9.6	35
	2016	120/122	25 (12/17)	0	7.2	21
	2017 ^{fb}	117/122	151 (09/04)	9	15.5	111
	2017*	110/122	37 (12/15)	2	10.2	29
Medford Welch & Jackson Streets MWJ 410292129 Moved to Jackson Pk. in July 2023	2018 ^{fb}	120/122	180 (08/09)	3	17.4	144
	2018*	105/122	26 (01/14)	0	9.2	24
	2019 ^{fb}	117/119	105 (07/26)	3	8.7	37
	2019*	119/121	37 (01/03)	1	7.5	27
	2020 ^{fb}	120/122	526 (09/12)	4	15.5	63
	2020*	112/122	25 (12/05)	0	8.9	23
	2021 ^{fb}	93/122	141 (08/14)	8	16.4	121
	2021*	83/122	23 (09/16)	0	9.3	23
	2022 ^{fb}	97/122	73 (08/30)	2	10.0	33
	2022*	97/122	31 (12/13)	0	10.0	23
	2023 ^{fb}	353/365	156 (08/28)	14	12.0	73
	2023*	335/365	31 (12/16)	0	7.9	21
Oakridge Willamette Activity Center WAC 410392013	2014	122/122	46 (01/05)	5	10.0	41
	2015	121/121	39 (11/29)	1	8.9	29
	2016	120/122	31 (12/08)	0	6.7	22
	2017 ^{fb}	125/122	200 (09/04)	9	13.0	86
	2017*	119/122	42 (12/12)	3	8.8	36
	2018 ^{fb}	114/122	62 (08/21)	2	12.2	33
	2018*	112/122	35 (02/13)	1	9.0	29
	2019	354/365	42 (01/12)	3	9.2	37
	2020 ^{fb}	340/366	577 (09/12)	3	14.9	190
	2020*	329/366	39 (12/03)	1	6.7	26
	2021 ^{fb}	361/365	134 (09/07)	19	10.0	70
	2021*	332/365	24 (08/06)	0	6.4	19
	2022 ^{fb}	358/265	330 (10/19)	37	23.3	247
	2022*	321/365	35 (12/16)	0	8.6	26
	2023 ^{fb}	353/365	122 (08/15)	12	10.0	46
	2023*	335/365	39 (01/31)	1	7.3	24

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Annual Mean, µg/m ³	98 th Percentile, µg/m ³
Portland Metro Hillsboro Hare Field HHF 410670004	2014	117/122	37 (01/26)	1	7.0	23
	2015 ^{1b}	120/121	58 (08/22)	1	8.3	34
	2015*	119/121	34 (11/29)	0	7.6	32
	2016	120/122	21 (12/17)	0	5.9	18
	2017 ^{1b}	119/122	40 (08/02)	2	8.2	33
	2017*	115/122	36 (01/13)	1	7.3	24
	2018 ^{1b}	116/122	52 (08/21)	2	8.0	32
	2018*	114/122	32 (11/13)	0	7.2	22
	2019	114/121	36 (12/05)	1	6.7	24
	2020 ^{1b}	117/122	297 (09/15)	3	10.9	30
	2020*	114/122	28 (11/02)	0	6.1	18
	2021	120/122	24 (10/16)	0	5.1	15
	2022 ^{1b}	118/122	47 (10/20)	2	7.9	29
	2022*	115/122	32 (11/22)	0	7.3	23
	2023	365/365	36 (08/20)	1 ^{1b}	5.9	19
Portland Metro SE Lafayette St. and 57 th SEL 410510080	2014	120/122	30 (02/10)	0	6.3	15
	2015 ^{1b}	121/121	56 (08/22)	1	7.2	29
	2015*	120/121	30 (11/23)	0	6.8	24
	2016	122/122	28 (12/26)	0	5.6	14
	2017 ^{1b}	119/122	53 (09/16)	2	7.9	34
	2017*	115/122	24 (12/21)	0	6.8	22
	2018 ^{1b}	120/122	48 (08/21)	2	7.4	20
	2018*	118/122	20 (11/13)	0	6.8	17
	2019	121/121	30 (11/23)	0	6.5	20
	2020 ^{1b}	120/122	334 (09/15)	2	10.7	31
	2020*	118/122	31 (11/02)	0	7.1	23
	2021	117/122	23 (10/16)	0	6.1	16
	2022 ^{1b}	119/122	75 (10/20)	2	8.0	27
	2022*	116/122	37 (11/13)	0	7.1	22
	2023	353/365	39 (08/20)	1 ^{1b}	6.4	17

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Annual Mean, µg/m ³	98 th Percentile, µg/m ³
Portland Metro Tualatin Bradbury Court TBC 410670005	2016	108/122	22 (10/12)	0	6.3	18
	2017 [Ⓘ]	118/122	50 (09/16)	3	7.9	36
	2017*	115/122	24 (12/15)	0	6.9	20
	2018 [Ⓘ]	121/122	47 (08/21)	2	7.7	19
	2018*	119/122	19 (11/13)	0	7.1	17
	2019	120/121	32 (11/23)	0	6.8	21
	2020 [Ⓘ]	119/122	373 (09/15)	2	11.2	28
	2020*	117/122	28 (11/02)	0	6.8	18
	2021	98/122	20 (03/02)	0	6.7	18
	2022 [Ⓘ]	113/122	66 (10/20)	1	8.6	28
	2022*	111/122	28 (11/13)	0	7.9	24
	2023	365/365	40 (08/20)	1 [Ⓘ]	5.5	17
Prineville Davidson Park PDP 410130100	2014 [Ⓘ]	119/122	69 (07/19)	4	9.9	47
	2014*	118/122	48 (01/17)	3	9.4	44
	2015 [Ⓘ]	108/121	83 (08/13)	3	8.9	42
	2015*	104/121	42 (01/06)	2	7.5	25
	2016	116/122	41 (12/17)	1	6.9	24
	2017 [Ⓘ]	112/122	106 (09/07)	8	11.7	58
	2017*	107/122	50 (12/15)	4	8.5	35
	2018 [Ⓘ]	113/122	60 (08/21)	2	8.9	33
	2018*	110/122	33 (10/17)	0	8.0	25
	2019	116/121	33 (09/06)	0	7.6	28
	2020 [Ⓘ]	115/122	593 (09/12)	3	16.4	132
	2020*	112/122	30 (12/29)	0	7.5	27
	2021 [Ⓘ]	106/122	54 (09/04)	2	7.3	24
	2021*	104/122	24 (09/07)	0	6.8	17
	2022 [Ⓘ]	115/122	28 (09/11)	0	6.7	20
	2022*	114/122	25 (11/16)	0	6.5	19
	2023 [Ⓘ]	360/365	84 (08/22)	12	8.5	49
	2023*	347/365	59 (07/04)	1	6.6	20

[Ⓘ] Wildfire data included

* Wildfire data removed

PM₁₀

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Second-Highest Daily Max, µg/m ³ (date)
Eugene Metro Highway 99 E99 410390059	2014	61/61	46 (11/19)	0	37 (09/08)
	2015 ^{fb}	60/60	97 (08/22)	0	53 (07/29)
	2016	60/61	57 (08/22)	0	42 (09/13)
	2017 ^{fb}	355/365	239 (09/04)	3	226 (09/03)
	2018 ^{fb}	339/365	134 (08/21)	0	83 (08/20)
	2019	354/365	77 (08/26)	0	31 (08/27)
	2020 ^{fb}	356/366	588 (09/13)	10	579 (09/12)
	2020*	344/366	59 (08/14)	0	58 (09/02)
	2021	359/365	66 (09/03)	0	64 (08/04)
	2022 ^{fb}	361/365	85 (10/10)	0	85 (10/20)
	2023	189/213	59 (08/16)	0	43 (01/31)
La Grande Ash Street (LAS) 410610119	2014	60/61	50 (11/19)	0	43 (11/13)
	2015 ^{fb}	60/60	69 (08/22)	0	41 (08/28)
	2016	45/61	45 (11/02)	0	27 (12/20)
La Grande N Hall Street and E N Ave LHN 410610123	2017 ^{fb}	56/61	64 (08/11)	0	55 (08/05)
	2018 ^{fb}	61/61	54 (07/14)	0	51 (08/06)
	2019	61/61	48 (03/16)	0	36 (11/05)
	2020	58/61	49 (08/25)	0	39 (02/21)
	2021	58/61	82 (08/14)	0	43 (08/20)
	2022	56/61	67 (10/20)	0	44 (09/02)
	2023	61/61	33 (09/15)	0	30 (10/21)
Medford Grant Ave and Belmont St MGB 410290133	2012 ^{fb}	44/61	37 (01/28)	0	36 (08/13)
	2013 ^{fb}	58/61	91 (08/08)	0	84 (08/14)
	2014	54/61	41 (01/05)	0	35 (12/31)
	2015 ^{fb}	57/60	61 (08/22)	0	52 (08/28)
Medford Welch & Jackson Streets MWJ 410292129 Moved to Jackson Pk. in July 2023	2016	53/61	33 (12/20)	0	28 (01/07)
	2017 ^{fb}	58/61	175 (09/04)	1	136 (08/29)
	2017*	53/61	47 (01/31)	0	39 12/09)
	2018 ^{fb}	55/61	99 (07/25)	0	66 07/19)
	2019 ^{fb}	58/61	118 (07/26)	0	54 (01/03)
	2020 ^{fb}	60/61	62 (10/06)	0	46 (09/18)
	2021 ^{fb}	58/61	154 (08/14)	1	108 (09/07)
	2022 ^{fb}	51/61	86 (09/02)	0	51 (10/20)
	2023	53/61	29 (12/14)	0	27 (01/30)

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, µg/m ³ (date)	Days Above NAAQS Level	Second-Highest Daily Max, µg/m ³ (date)
Oakridge Willamette Activity Center WAC 410392013	2014	61/61	55 (01/05)	0	43 (08/27)
	2015	60/60	37 (02/17)	0	32 (02/23)
	2016	60/61	30 (12/08)	0	25 (02/24)
	2017*	336/365	55 (12/07)	0	44 (12/13)
	2017 ^{fb}	352/365	210 (09/04)	4	173 (09/05)
	2018 ^{fb}	354/365	76 (08/21)	0	60 (08/22)
	2019	354/365	53 (05/04)	0	49 (06/14)
	2020 ^{fb}	351/366	592 (09/12)	8	424 (09/13)
	2020*	341/366	40 (12/03)	0	38 (02/20)
	2021 ^{fb}	352/365	157 (09/07)	1	129 (08/14)
	2022 ^{fb}	348/365	363 (10/19)	19	350 (09/10)
	2023 ^{fb}	356/365	142 (08/15)	0	118 (08/16)
Portland Metro North Roselawn PNR, 410510246	2014	60/61	18 (09/14)	0	17 (11/19)
	2015 ^{fb}	58/60	73 (08/22)	0	45 (11/24)
Portland Metro Humboldt School PHS 410512010	2017 ^{fb}	46/61	52 (09/16)	0	29 (08/29)
	2018	61/61	29 (02/07)	0	27 (10/17)
	2019	61/61	29 (11/23)	0	28 (12/05)
	2020	58/61	21 (12/29)	0	20 (02/03)
	2021	59/61	27 (03/17)	0	25 (10/19)
	2022 ^{fb}	60/61	89 (10/20)	0	39 (10/14)
Portland Metro SE Lafayette St & 57 th Ave SEL 410510080	2023	59/61	21 (05/12)	0	19 (03/19)
	2014	120/122	37 (02/10)	0	30 (09/11)
	2015 ^{fb}	119/121	68 (08/22)	0	33 (11/24)
	2016	119/122	34 (08/19)	0	32 (12/26)
	2017 ^{fb}	120/122	70 (09/16)	0	59 (08/02)
	2018 ^{fb}	117/122	54 (08/15)	0	27 (02/07)
	2019	119/122	33 (11/23)	0	29 (12/05)
	2020	119/122	35 (09/09)	0	35 (11/02)
	2021	116/122	32 (03/17)	0	29 (03/02)
	2022 ^{fb}	118/122	83 (10/20)	0	39 (09/11)
	2023	115/122	32 (07/05)	0	27 (08/25)

^{fb} Wildfire data included, * Wildfire data removed

Ozone

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, ppb (date)	Days Above NAAQS Level	Annual 4 th -Highest Maximum, ppb (date)	Three-year Average 4 th -Highest Maximum, ppb
Eugene Metro Amazon Park AMZ 410390060	2014	152/153	61	0	58	56
	2015	152/153	78	1	68	59
	2016	152/153	64	0	57	61
	2017	152/153	91	3	70	65
	2018	147/153	65	0	60	62
	2019	153/153	62	0	54	61
	2020	142/153	66	0	55	56
	2021	152/153	71	1	62	57
	2022	152/153	67	0	59	58
	2023	153/153	65	0	59	60
Eugene Metro Saginaw SAG 410391007	2014	152/153	62	0	58	58
	2015	152/153	80	1	71	61
	2016	151/153	63	0	56	61
	2017	152/153	91	4	73	65
	2018	152/153	68	0	60	63
	2019	153/153	65	0	55	62
	2020	139/153	62	0	52	55
	2021	151/153	68	0	59	55
	2022	149/153	62	0	56	55
	2023	153/153	61	0	60	58
Hermiston Municipal Airport HMA 410591003	2014	145/153	67	0	64	64
	2015	150/153	73	0	70	65
	2016	136/153	74	1	63	65
	2017	152/153	80	7	73	68
	2018	96/153	66	0	60	65
	2019	149/153	65	0	59	64
	2020	141/153	60	0	56	58
	2021	152/153	74	1	65	60
	2022	148/153	67	0	64	61
	2023	152/153	66	0	62	63

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, ppb (date)	Days Above NAAQS Level	Annual 4 th -Highest Maximum, ppb (date)	Three-year Average 4 th -Highest Maximum, ppb
Medford Talent Rapp Lane TAL 410290201	2014	150/153	64	0	59	64
	2015	139/153	86	1	69	65
	2016	130/153	50	0	49	59
	2017	149/153	83	5	78	65
	2018	152/153	76	6	74	67
	2019	152/153	80	1	62	71
	2020	146/153	67	0	60	65
	2021	152/153	78	2	69	63
	2022	151/153	71	1	66	65
	2023	152/153	69	0	62	65
Portland Metro Carus Spangler SPR 410050004	2014	152/153	72	0	62	62
	2015	147/153	73	0	69	63
	2016	152/153	63	0	64	65
	2017	145/153	116	8	83	72
	2018	147/153	76	3	70	72
	2019	152/153	71	1	65	72
	2020	139/153	77	3	70	68
	2021	149/153	90	1	62	65
	2022	151/153	75	2	67	66
	2023	149/153	76	2	68	65
Portland Metro Sauvie Island SIS 410090004	2014	152/153	56	0	53	51
	2015	149/153	63	0	58	52
	2016	151/153	58	0	51	54
	2017	147/153	86	2	64	57
	2018	151/153	55	0	53	56
	2019	149/153	65	0	51	56
	2020	144/153	57	0	51	51
	2021	150/153	58	0	54	52
	2022	150/153	63	0	54	53
	2023	151/153	76	1	56	54
Portland Metro SE Lafayette St & SEL 410510080	2014	152/153	75	0	55	56
	2015	151/153	62	0	57	55
	2016	147/153	60	0	55	55
	2017	317/365	87	1	68	60
	2018	354/365	76	2	67	63
	2019	336/365	66	0	58	64
	2020	352/366	75	1	59	61
	2021	361/365	72	1	60	59
	2022	360/365	80	1	56	58
	2023	338/365	67	0	56	57

Appendix 2: NAAQS historical

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, ppb (date)	Days Above NAAQS Level	Annual 4 th -Highest Maximum, ppb (date)	Three-year Average 4 th -Highest Maximum, ppb
Portland Metro Tualatin Bradbury TBC 410670005	2014	141/153	72	1	53	-
	2015	153/153	67	0	52	-
	2016	145/153	57	0	48	51
	2017	143/153	85	4	71	57
	2018	140/365	56	0	54	57
	2019	152/153	65	0	50	58
	2020	141/153	76	1	59	54
	2021	151/153	70	0	56	55
	2022	153/153	67	0	61	58
	2023	152/153	69	0	56	58
Salem Metro State Hospital SSH 410470041	2018	107/153	58	0	55	-
	2019	151/153	64	0	52	-
	2020	138/153	68	0	53	53
	2021	143/153	63	0	58	54
	2022	147/153	74	1	64	58
	2023	152/153	72	1	59	60
Salem Metro Turner Cascade Jr CJH 410470004	2014	144/153	81	1	66	61
	2015	152/153	78	1	65	62
	2016	150/153	69	0	65	65
	2017	152/153	85	6	78	69
	2018	149/153	70	0	66	69
	2019	149/153	66	0	55	66
	2020	141/153	63	0	57	59
	2021	150/153	69	0	63	58
	2022	147/153	71	2	69	63
	2023	146/153	70	0	64	65

Carbon monoxide

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, ppm	Days Above NAAQS Level	Second- Highest Maximum, ppm
Portland Metro SE Lafayette St & 57 th Ave SEL 410510080	2014	356/365	1.3	0	1.3
	2015	365/365	2.0	0	1.9
	2016	311/366	1.5	0	1.5
	2017	215/365	1.7	0	1.6
	2018	361/365	1.6	0	1.6
	2019	244/365	1.6	0	1.4
	2020 [Ⓜ]	360/366	14.2	3	14.1
	2020*	351/366	1.5	0	1.4
	2021	358/365	1.7	0	1.4
	2022	362/365	1.7	0	1.5
	2023	326/365	1.2	0	1.2
Portland Metro Tualatin Bradbury Court TBC 410670005	2015	336/365	1.3	0	1.3
	2016	317/366	1.3	0	1.3
	2017	296/365	1.4	0	1.3
	2018	325/365	1.0	0	1.0
	2019	355/365	1.0	0	1.0
	2020 [Ⓜ]	337/366	14.3	3	12.9
	2020*	328/366	1.0	0	0.9
	2021	349/365	1.0	0	0.9
	2022	364/365	1.1	0	0.9
	2023	345/365	1.1	0	1.0

[Ⓜ] Wildfire data included

* Wildfire data removed

Nitrogen dioxide

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, ppb	Days Above NAAQS Level	Annual Mean, ppb	98 th Percentile, ppb
Portland Metro SE Lafayette St & 57 th Ave SEL 410510080	2014	340/365	40	0	8	35
	2015	365/365	47	0	9	36
	2016	366/366	41	0	9	34
	2017	346/365	53	0	9	40
	2018	337/365	47	0	9	35
	2019	352/365	43	0	8	32
	2020	354/366	35	0	6	30
	2021	350/365	36	0	7	31
	2022	350/365	36	0	7	30
	2023	282/365	71	0	6	38
Only 3 quarters of data						
Portland Metro Tualatin Bradbury Court TBC 410670005	2014	231/238	19	0	21	39
	2015	332/365	41	0	14	36
	2016	363/366	38	0	13	35
	2017	361/365	49	0	12	38
	2018	341/365	44	0	12	38
	2019	326/365	41	0	11	33
	2020	342/366	42	0	10	30
	2021	348/365	38	0	9	30
	2022	357/365	34	0	10	31
	2023	359/365	34	0	9	29

Sulfur dioxide

Monitoring Area DEQ Site Name DEQ Site Code EPA Site Number	Year	Sample Days: Actual/ Expected	Daily Maximum, ppb	Days Above NAAQS Level	99 th Percentile, ppb
Portland Metro SE Lafayette St & 57 th Ave SEL 410510080	2014	343/365	4	0	3
	2015	359/365	8	0	4
	2016	353/366	3	0	3
	2017	332/365	4	0	3
	2018	331/365	3	0	3
	2019	345/365	3	0	3
	2020	351/366	2	0	2
	2021	355/365	3	0	3
	2022	350/365	3	0	3
	2023	320/365	3	0	3
Only 3 quarters of data					

Appendix 3: AQI historical data

AQI data listed below are from regulatory and informational monitors for the past 10 years. AQI values are calculated from PM_{2.5} pollutant concentrations in all the monitoring areas listed below. Select monitoring areas monitor for additional pollutants, which factor into AQI calculations. Those areas are annotated accordingly:

*Ozone monitoring only

**PM_{2.5} and ozone monitoring

***PM_{2.5}, ozone, carbon monoxide, nitrogen oxide and sulfur dioxide monitoring

AQI data is available from regulatory and some informational monitors through EPA's [AQS database](#). Current hourly AQI data is available from all monitors through DEQ's [AQI map](#); some historical pollutant concentration data from all monitors is also available. DEQ can also provide data upon request; email requests to aqm.questions@deq.oregon.gov.

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Albany	2014	335	28	2	0	0	0	0	365
	2015	305	43	2	3	0	0	12	365
	2016	343	23	0	0	0	0	0	366
	2017	320	39	3	3	0	0	0	365
	2018	328	34	3	0	0	0	0	365
	2019	322	43	0	0	0	0	0	365
	2020	325	30	0	1	6	4	0	366
	2021	346	19	0	0	0	0	0	365
	2022	315	48	2	0	0	0	0	365
	2023	327	37	1	0	0	0	0	365
Ashland	2016	163	8	0	0	0	0	0	171
	2017	300	43	7	11	1	2	1	365
	2018	300	26	11	20	4	0	4	365
	2019	351	9	1	4	0	0	0	365
	2020	322	32	1	4	3	4	0	366
	2021	303	32	11	19	0	0	0	365
	2022	330	29	3	3	0	0	0	365
	2023	331	21	2	10	1	0	0	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Baker City	2014	317	48	0	0	0	0	0	365
	2015	326	29	8	2	0	0	0	365
	2016	339	27	0	0	0	0	0	366
	2017	307	52	3	3	0	0	0	365
	2018	313	35	1	1	0	0	15	365
	2019	328	32	0	0	0	0	5	365
	2020	327	32	2	5	0	0	0	366
	2021	312	47	1	4	0	0	1	365
	2022	318	44	3	0	0	0	1	365
	2023	336	27	0	0	0	0	2	365
Beaverton	2014	349	16	0	0	0	0	0	365
	2015	338	24	1	1	0	0	1	365
	2016	357	9	0	0	0	0	0	366
	2017	334	23	7	0	0	0	1	365
	2018	328	28	6	0	0	0	3	365
	2019	345	17	0	0	0	0	3	365
	2020	343	14	1	1	4	3	0	366
	2021	354	8	0	0	0	0	3	365
	2022	330	33	0	2	0	0	0	365
	2023	351	12	1	0	0	0	1	365
Bend	2014	335	29	1	0	0	0	0	365
	2015	329	33	2	1	0	0	0	365
	2016	335	5	1	0	0	0	25	366
	2017	291	48	4	8	3	0	11	365
	2018	307	47	5	4	0	0	2	365
	2019	345	13	0	0	0	0	7	365
	2020	320	33	5	0	2	6	0	366
	2021	314	27	9	8	1	1	5	365
	2022	310	50	3	1	1	0	0	365
	2023	318	28	10	8	0	0	1	365
Brookings	2020	109	8	1	4	0	0	34	156
	2021	216	2	1	0	0	0	146	365
	2022	160	8	0	0	0	0	197	365
	2023	296	10	1	0	0	0	58	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Burns	2014	277	83	3	2	0	0	0	365
	2015	282	80	3	0	0	0	0	365
	2016	279	77	1	0	0	0	8	366
	2017	248	109	6	2	0	0	9	365
	2018	251	104	1	2	0	0	7	365
	2019	265	95	5	0	0	0	0	365
	2020	251	102	2	8	0	1	2	366
	2021	258	98	5	4	0	0	0	365
	2022	273	90	2	0	0	0	0	365
	2023	263	101	1	0	0	0	0	365
Carus	2014	88	2	1	1	0	0	0	92
	2015	88	2	0	2	0	0	0	92
	2017	89	12	4	2	0	0	0	107
	2018	70	9	2	0	0	0	0	81
	2019	153	0	0	0	0	0	0	153
	2020	223	12	0	0	1	2	7	245
	2021	341	11	0	0	0	0	13	365
	2022	328	32	1	2	0	0	2	365
	2023	341	22	1	0	0	0	1	365
Cave Junction	2014	327	38	0	0	0	0	0	365
	2015	275	71	3	1	0	0	15	365
	2016	337	29	0	0	0	0	0	366
	2017	273	75	4	7	4	0	2	365
	2018	261	71	18	15	0	0	0	365
	2019	293	69	3	0	0	0	0	365
	2020	282	59	5	12	0	7	1	366
	2021	297	52	10	6	0	0	0	365
	2022	257	93	10	4	0	0	1	365
	2023	267	68	10	13	4	3	0	365
Chiloquin	2019	99	16	2	2	0	0	4	123
	2020	236	17	2	4	4	0	103	366
	2021	113	28	6	22	5	0	191	365
	2022	326	13	0	1	0	0	25	365
	2023	260	23	4	4	0	0	74	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Corvallis	2014	344	19	1	0	0	0	1	365
	2015	333	30	1	1	0	0	0	365
	2016	185	9	0	0	0	0	172	366
	2017	319	36	2	0	0	0	8	365
	2018	340	23	2	0	0	0	0	365
	2019	332	33	0	0	0	0	0	365
	2020	330	25	0	3	5	3	0	366
	2021	338	1	0	0	0	0	26	365
	2022	326	27	2	0	0	0	10	365
	2023	339	10	0	0	0	0	16	365
Coos Bay	2020	323	13	1	6	0	0	23	366
	2021	283	4	0	0	0	0	78	365
	2022	338	17	1	0	0	0	9	365
	2023	342	11	0	0	0	0	12	365
Cottage Grove	2014	323	40	1	1	0	0	0	365
	2015	329	34	1	1	0	0	0	365
	2016	346	20	0	0	0	0	0	366
	2017	295	60	3	7	0	0	0	365
	2018	318	45	1	0	0	0	1	365
	2019	311	53	0	0	0	0	1	365
	2020	314	42	0	1	2	7	0	366
	2021	339	23	1	0	0	0	2	365
	2022	306	49	4	3	0	0	3	365
	2023	314	43	6	1	0	0	1	365
Cove	2014	68	7	0	0	0	0	2	77
	2015	64	14	2	4	0	0	0	84
	2017	39	24	7	3	0	0	0	73
	2018	32	11	1	1	0	0	0	45
	2019	66	2	0	0	0	0	38	106
	2020	108	23	2	6	2	0	5	146
	2021	298	31	5	2	0	0	29	365
	2022	338	23	3	1	0	0	0	365
	2023	348	13	0	0	0	0	4	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Crater Lake	2013	71	15	4	2	0	0	0	92
	2014	104	16	2	0	0	0	0	122
	2015	54	17	9	0	0	0	0	80
	2019	102	1	0	0	0	0	4	107
	2020	43	15	4	4	1	0	5	72
	2021	32	24	15	21	0	0	0	92
	2022	92	14	0	1	0	0	3	110
	2023	94	16	6	3	0	0	5	124
Dallas	2021	329	3	0	0	0	0	33	365
	2022	327	28	1	0	0	0	9	365
	2023	334	16	0	0	0	0	15	365
Detroit	2019	83	0	0	0	0	0	0	83
	2020	81	4	0	0	0	0	2	87
	2021	142	19	7	10	1	0	186	365
	2022	319	7	2	0	0	0	37	365
	2023	334	10	1	1	0	0	19	365
Enterprise	2014	329	33	3	0	0	0	0	365
	2015	322	34	3	5	0	0	1	365
	2016	318	31	0	0	0	0	17	366
	2017	291	50	6	3	0	0	15	365
	2018	272	46	2	0	0	0	45	365
	2019	333	29	1	0	0	0	2	365
	2020	323	36	0	7	0	0	0	366
	2021	311	43	6	4	0	0	1	365
	2022	297	32	3	4	0	0	29	365
	2023	341	24	0	0	0	0	0	365
Estacada	2021	307	36	1	0	0	0	21	365
	2022	309	51	0	0	0	0	5	365
	2023	316	36	0	1	0	0	12	365
Eugene	2014	301	59	5	0	0	0	0	365
	2015	282	77	4	2	0	0	0	365
	2016	335	30	0	0	0	0	1	366
	2017	290	57	10	5	2	1	0	365
	2018	290	69	6	0	0	0	0	365
	2019	292	71	2	0	0	0	0	365
	2020	289	66	1	0	2	8	0	366
	2021	317	46	2	0	0	0	0	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
	2022	277	79	6	3	0	0	0	365
	2023	299	61	2	3	0	0	0	365
Florence	2019	262	4	0	0	0	0	0	266
	2020	350	7	1	5	0	2	1	366
	2021	363	0	0	0	0	0	2	365
	2022	346	9	0	0	0	0	10	365
	2023	350	4	0	0	0	0	11	365
Forest Grove	2019	141	39	0	0	0	0	5	185
	2020	317	23	0	3	4	1	18	366
	2021	340	14	0	0	0	0	11	365
	2022	316	40	2	0	0	0	7	365
	2023	333	16	1	0	0	0	15	365
Government Camp	2014	95	4	0	0	0	0	4	103
	2015	65	8	0	2	0	0	0	75
	2017	19	12	4	1	0	0	0	36
	2018	55	15	2	1	0	0	0	73
	2019	93	0	0	0	0	0	2	95
	2020	69	2	0	2	1	1	7	82
	2021	103	10	3	3	0	0	4	123
	2022	55	0	1	0	0	0	6	62
	2023	101	3	2	3	0	0	5	114
Grants Pass	2014	323	40	2	0	0	0	0	365
	2015	307	55	2	1	0	0	0	365
	2016	322	39	0	0	0	0	5	366
	2017	265	81	2	9	4	1	3	365
	2018	252	85	9	14	0	0	5	365
	2019	264	55	3	2	0	0	41	365
	2020	285	44	2	6	1	4	24	366
	2021	303	47	6	8	0	0	1	365
	2022	265	95	1	4	0	0	0	365
	2023	285	64	9	4	3	0	0	365
Gresham	2020	139	10	1	2	2	4	18	176
	2021	314	20	0	0	0	0	31	365
	2022	316	39	1	2	0	0	7	365
	2023	298	18	1	0	0	0	48	365
Hermiston*	2014	132	11	0	0	0	0	10	153

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Hermiston**	2015	133	18	0	0	0	0	2	153
	2016	115	19	1	0	0	0	18	153
	2017	103	43	6	1	0	0	0	153
	2018	90	7	0	0	0	0	56	153
	2019	143	11	0	0	0	0	1	155
	2020	214	23	0	0	0	1	12	245
	2021	302	54	4	2	0	0	3	365
	2022	298	62	3	0	0	0	2	365
	2023	293	63	0	1	2	0	6	365
Hillsboro	2014	324	40	1	0	0	0	0	365
	2015	309	54	1	1	0	0	0	365
	2016	331	33	0	0	0	0	2	366
	2017	298	60	5	0	0	0	2	365
	2018	306	51	6	0	0	0	2	365
	2019	316	46	1	0	0	0	2	365
	2020	328	29	0	2	2	3	1	366
	2021	341	24	0	0	0	0	0	365
	2022	305	58	2	0	0	0	0	365
	2023	333	31	1	0	0	0	0	365
Hood River	2020	99	20	0	1	5	2	12	139
	2021	335	18	1	1	0	0	10	365
	2022	323	30	0	0	0	0	12	365
	2023	314	34	1	2	1	0	13	365
John Day	2014	266	91	1	1	0	0	6	365
	2015	279	75	4	5	0	0	2	365
	2016	285	56	0	0	0	0	25	366
	2017	257	89	9	3	0	0	7	365
	2018	251	104	1	2	0	0	7	365
	2019	255	93	1	0	0	0	16	365
	2020	248	109	1	5	1	1	1	366
	2021	236	119	5	5	0	0	0	365
	2022	243	121	1	0	0	0	0	365
	2023	250	113	2	0	0	0	0	365
Klamath Falls	2014	274	89	2	0	0	0	0	365
	2015	263	92	8	2	0	0	0	365
	2016	292	71	0	0	0	0	3	366

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
	2017	246	93	13	8	1	0	4	365
	2018	219	105	11	25	3	0	2	365
	2019	287	78	0	0	0	0	0	365
	2020	264	75	12	3	1	1	10	366
	2021	241	86	14	24	0	0	0	365
	2022	278	85	1	1	0	0	0	365
	2023	258	101	4	2	0	0	0	365
La Grande	2014	291	66	6	0	0	0	2	365
	2015	285	59	8	3	0	0	10	365
	2016	329	35	0	0	0	0	2	366
	2017	308	49	5	3	0	0	0	365
	2018	322	35	5	1	0	0	2	365
	2019	344	19	0	0	0	0	2	365
	2020	334	23	1	5	3	0	0	366
	2021	321	33	2	2	0	0	7	365
	2022	315	37	4	0	0	0	9	365
	2023	337	22	0	0	0	0	6	365
La Pine	2020	103	45	2	1	6	1	39	197
	2021	186	51	7	8	6	2	105	365
	2022	239	90	6	7	1	0	22	365
	2023	227	96	19	10	0	0	13	365
Lakeview	2014	302	48	12	1	0	0	2	365
	2015	294	68	3	0	0	0	0	365
	2016	318	41	0	1	0	0	6	366
	2017	288	57	17	1	0	0	2	365
	2018	277	59	13	9	0	0	7	365
	2019	311	51	1	0	0	0	2	365
	2020	293	55	13	4	0	0	1	366
	2021	278	64	17	6	0	0	0	365
	2022	306	55	4	0	0	0	0	365
	2023	309	54	1	0	0	0	1	365
Lyons	2019	138	50	2	0	0	0	3	193
	2020	283	58	0	1	0	6	18	366
	2021	321	39	1	0	0	0	4	365
	2022	306	55	2	0	0	0	2	365
	2023	170	30	2	1	0	0	162	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Madras	2014	61	19	0	2	0	0	0	82
	2015	75	13	3	1	0	0	0	92
	2016	119	1	0	0	0	0	2	122
	2017	58	25	5	3	1	0	0	92
	2018	132	46	5	1	0	0	0	184
	2019	290	73	2	0	0	0	0	365
	2020	297	53	3	0	3	5	5	366
	2021	316	43	4	2	0	0	0	365
	2022	304	60	1	0	0	0	0	365
	2023	299	60	3	2	1	0	0	365
McMinnville	2022	57	32	1	1	0	0	2	93
	2023	324	18	0	0	0	0	23	365
Medford**	2014	276	88	1	0	0	0	0	365
	2015	248	99	11	7	0	0	0	365
	2016	312	54	0	0	0	0	0	366
	2017	238	98	14	9	5	1	0	365
	2018	232	87	8	22	3	0	13	365
	2019	295	63	3	4	0	0	0	365
	2020	270	83	2	4	3	4	0	366
	2021	253	83	10	19	0	0	0	365
	2022	268	89	6	2	0	0	0	365
	2023	263	88	2	11	1	0	0	365
Mill City	2019	77	0	0	0	0	0	0	77
	2020	136	31	2	1	0	7	25	204
	2021	293	36	1	0	0	0	36	365
	2022	245	71	4	0	0	0	45	365
	2023	300	54	1	0	0	0	10	365
Oakridge	2014	277	75	13	0	0	0	0	365
	2015	286	71	6	1	0	0	1	365
	2016	330	36	0	0	0	0	0	366
	2017	267	74	13	8	2	0	1	365
	2018	286	74	2	1	0	0	2	365
	2019	283	73	4	0	0	0	5	365
	2020	297	57	3	1	4	4	0	366
	2021	302	42	10	9	0	0	2	365
	2022	249	79	3	16	11	7	0	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
	2023	288	65	6	6	0	0	0	365
Ontario	2020	62	59	1	6	0	0	12	140
	2021	272	53	4	0	0	0	36	365
	2022	272	52	2	1	0	0	38	365
	2023	337	20	0	0	0	0	8	365
Pendleton	2014	312	40	0	0	0	0	13	365
	2015	312	47	2	2	0	0	2	365
	2016	341	25	0	0	0	0	0	366
	2017	279	74	7	2	1	0	2	365
	2018	276	40	5	3	1	0	40	365
	2019	298	60	1	0	0	0	6	365
	2020	324	34	0	1	3	4	0	366
	2021	323	35	3	2	0	0	2	365
	2022	316	46	3	0	0	0	0	365
	2023	342	20	0	2	1	0	0	365
Portland***	2014	332	32	1	0	0	0	0	365
	2015	305	58	0	2	0	0	0	365
	2016	340	26	0	0	0	0	0	366
	2017	309	41	9	5	1	0	0	365
	2018	301	54	9	1	0	0	0	365
	2019	320	44	1	0	0	0	0	365
	2020	305	50	3	0	2	6	0	366
	2021	304	60	0	1	0	0	0	365
	2022	273	85	5	2	0	0	0	365
	2023	299	61	2	3	0	0	0	365
Prineville	2014	289	66	4	6	0	0	0	365
	2015	290	63	6	2	0	0	4	365
	2016	288	59	1	0	0	0	18	366
	2017	260	81	8	8	0	0	8	365
	2018	289	71	3	2	0	0	0	365
	2019	296	69	0	0	0	0	0	365
	2020	297	61	0	2	3	3	0	366
	2021	311	45	7	2	0	0	0	365
	2022	320	37	2	0	0	0	6	365
	2023	315	38	6	6	0	0	0	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Redmond	2020	325	18	0	0	3	5	15	365
	2021	322	22	5	5	1	0	10	365
	2022	343	17	1	0	0	0	4	365
	2023	268	52	4	10	2	0	29	365
Roseburg	2014	330	34	0	0	0	0	1	365
	2015	326	35	1	0	0	0	3	365
	2016	314	14	0	0	0	0	27	366
	2017	303	49	4	3	0	0	6	365
	2018	293	43	2	0	0	0	27	365
	2019	288	59	0	0	0	0	18	365
	2020	313	43	1	1	2	6	0	366
	2021	339	21	3	2	0	0	0	365
	2022	237	79	6	2	0	0	41	365
	2023	285	59	4	3	2	0	12	365
Salem**	2014	322	42	1	0	0	0	0	365
	2015	311	51	1	2	0	0	0	365
	2016	326	35	0	0	0	0	5	366
	2017	301	53	6	2	0	0	3	365
	2018	294	37	7	1	0	0	26	365
	2019	300	56	0	0	0	0	9	365
	2020	303	53	0	1	1	8	0	366
	2021	317	45	0	0	0	0	3	365
	2022	278	79	6	2	0	0	0	365
	2023	297	59	8	1	0	0	0	365
Sauvie Island**	2014	353	9	0	0	0	0	3	365
	2015	307	17	1	0	0	0	40	365
	2016	344	3	0	0	0	0	19	366
	2017	323	19	3	1	0	0	19	365
	2018	342	17	4	0	0	0	2	365
	2019	358	5	0	0	0	0	2	365
	2020	341	11	1	4	4	0	4	366
	2021	339	6	0	0	0	0	20	365
	2022	328	30	1	2	0	0	4	365
	2023	352	12	1	0	0	0	0	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Shady Cove	2014	341	20	1	0	0	0	3	365
	2015	333	15	9	6	1	1	0	365
	2016	346	5	0	0	0	0	15	366
	2017	294	32	9	11	1	0	18	365
	2018	303	25	9	27	1	0	0	365
	2019	358	7	0	0	0	0	0	365
	2020	329	23	1	4	1	1	7	366
	2021	300	30	6	24	5	0	0	365
	2022	336	27	2	0	0	0	0	365
	2023	346	11	6	2	0	0	0	365
Silverton	2014	86	5	0	1	0	0	0	92
	2015	85	3	0	2	0	0	2	92
	2017	75	13	4	0	0	0	0	92
	2018	78	9	3	0	0	0	0	90
	2019	110	0	0	0	0	0	0	110
	2020	180	23	1	1	1	6	2	214
	2021	342	21	0	0	0	0	2	365
	2022	317	46	1	1	0	0	0	365
	2023	328	36	1	0	0	0	0	365
Sisters	2014	350	15	0	0	0	0	0	365
	2015	332	31	0	2	0	0	0	365
	2016	346	1	0	0	0	0	19	366
	2017	286	29	2	15	8	0	22	365
	2018	317	33	7	3	0	0	5	365
	2019	351	9	4	1	0	0	0	365
	2020	307	25	3	1	1	7	22	366
	2021	332	23	4	5	1	0	0	365
	2022	337	24	1	3	0	0	0	365
	2023	315	28	5	11	4	1	1	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Springfield	2014	343	22	0	0	0	0	0	365
	2015	352	9	0	2	0	0	2	365
	2016	356	4	0	0	0	0	6	366
	2017	324	25	8	3	3		2	365
	2018	317	43	1	0	0	0	4	365
	2019	323	38	0	0	0	0	4	365
	2020	325	31	0	1	4	5	0	366
	2021	337	23	2	0	0	0	3	365
	2022	339	23	1	0	0	0	2	365
	2023	325	36	2	2	0	0	0	365
Sunriver	2021	58	0	0	0	0	0	0	58
	2022	321	19	3	3	0	0	19	365
	2023	301	34	7	9	0	0	14	365
Sweet Home	2014	336	27	0	0	0	0	2	365
	2015	332	31	0	2	0	0	0	365
	2016	346	19	0	0	0	0	1	366
	2017	299	57	4	5	0	0	0	365
	2018	299	65	1	0	0	0	0	365
	2019	297	68	0	0	0	0	0	365
	2020	320	36	1	1	2	6	0	366
	2021	353	12	0	0	0	0	0	365
	2022	327	35	0	0	0	0	3	365
	2023	339	23	3	0	0	0	0	365
Talent* Talent**	2014	139	13	0	0	0	0	1	153
	2015	110	29	1	1	0	0	2	153
	2016	133	0	0	0	0	0	20	153
	2017	111	36	5	0	0	0	1	153
	2018	111	36	6	0	0	0	0	153
	2019	145	2	2	3	0	0	1	153
	2020	213	25	1	4	2	1	6	252
	2021	305	32	13	15	0	0	0	365
	2022	328	31	5	1	0	0	0	365
	2023	268	20	4	10	0	0	63	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
The Dalles	2014	331	33	1	0	0	0	0	365
	2015	326	30	0	2	0	0	7	365
	2016	319	31	0	0	0	0	16	366
	2017	287	59	6	8	1	0	4	365
	2018	293	33	4	2	0	0	33	365
	2019	297	53	0	0	0	0	15	365
	2020	323	31	0	0	3	4	5	366
	2021	305	12	1	1	0	0	46	365
	2022	319	26	0	0	0	0	20	365
	2023	345	15	1	3	1	0	0	365
Tillamook	2020	144	5	2	4	0	0	13	168
	2021	335	0	0	0	0	0	30	365
	2022	287	5	0	0	0	0	73	365
	2023	352	2	0	0	0	0	11	365
Toledo	2022	241	8	0	0	0	0	4	254
	2023	349	5	0	0	0	0	11	365

Appendix 3: AQI historical

Monitoring Area	Year	Good	Moderate	USG	Unhealthy	Very Unhealthy	Hazardous	Missing Days	Expected Days
Tualatin* Tualatin**	2014	233	2	1	0	0	0	9	245
	2015	361	2	0	0	0	0	2	365
	2016	357	1	0	0	0	0	8	366
	2017	311	14	4	0	0	0	36	365
	2018	323	28	6	0	0	0	8	365
	2019	329	36	0	0	0	0	0	365
	2020	317	33	1	0	3	5	7	366
	2021	331	33	0	0	0	0	1	365
	2022	296	66	2	1	0	0	0	365
	2023	340	24	1	0	0	0	0	365
Turner* Turner**	2014	128	15	1	0	0	0	9	153
	2015	136	15	1	0	0	0	1	153
	2016	139	11	0	0	0	0	3	153
	2017	130	16	6	0	0	0	1	153
	2018	135	14	0	0	0	0	4	153
	2019	138	4	0	0	0	0	11	153
	2020	206	29	0	1	1	6	3	246
	2021	331	28	0	0	0	0	6	365
	2022	294	64	4	0	0	0	3	365
	2023	318	45	2	0	0	0	0	365
Woodburn	2022	225	34	1	1	0	0	20	281
	2023	311	33	2	0	0	0	19	365

Appendix 4: Ambient air data quality

It is a policy of DEQ that all data will be of sufficient quality to support the regulatory decisions. The minimum quality assurance requirements set by EPA are consistently met or exceeded by DEQ. The continued assurance of data quality requires carrying out the two complimentary tasks.

Quality control

DEQ operates its ambient air monitoring program according to the “Quality Assurance Project Plan: Air Quality Monitoring for the Measurement of Criteria Air Pollutants” (April 2018, [DEQ09-LAB-0004-QAPP Version 2.0](#)). The QAPP is designed to help DEQ produce high quality data in a consistent manner, and it incorporates Federal Reference Methods or Federal Equivalent Methods when applicable. To produce high quality data in a consistent manner from air monitoring equipment, DEQ performs scheduled maintenance, audits and calibrations. When calibrating equipment, DEQ uses standards from the National Institute of Standards Technology. By adhering to quality control procedures, DEQ creates high quality data that is used by staff, partners, EPA and the public.

Quality assessment

DEQ evaluates data quality in several ways. At a minimum, DEQ conducts a quarterly network-wide audit in which DEQ visits each monitoring site to assess the site location, verify adherence to procedures, and ensure proper documentation. Data quality is assessed in terms of precision, accuracy, and completeness. Data precision—the ability to obtain the same reading multiple times—is verified by routinely auditing monitor performance. Data accuracy—the ability to measure the “true” value—is verified by measurement of a known control sample or by replicate measurements with other monitors. Data completeness is a measurement of the amount of data captured relative to the amount that was intended to be collected. DEQ must also participate in EPA quality assurance programs. EPA will also hire independent contractors to evaluate quality assessment procedures and data.

If you have further questions about data or data quality assurance, contact DEQ at aqm.questions@deq.oregon.gov.