# Public Health

# Air Quality

2025 Ambient Air Monitoring Network Assessment

June 24, 2025



Serving Reno, Sparks & Washoe County

# **MISSION**

To improve and protect our community's quality of life and increase equitable opportunities for better health.

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# **Acronyms and Abbreviations**

AQI Air Quality Index

AQMD Northern Nevada Public Health Air Quality Management Division

AQS Air Quality System
BAM Beta Attenuation Monitor
CARB California Air Resources Board
CBSA Core Based Statistical Area

CO Carbon Monoxide

DMV Department of Motor Vehicles

EPA U.S. Environmental Protection Agency

Code of Federal Regulations

FEM Federal Equivalent Method FRM Federal Reference Method

GAL Galletti

CFR

HA 87 Hydrographic Area 87

INC Incline

LEM Lemmon Valley

NAAQS National Ambient Air Quality Standards

NAMS National Air Monitoring Station NCDC National Climatic Data Center

NCore National Core Multipollutant Monitoring Station

NDOT Nevada Department of Transportation

NO<sub>2</sub> Nitrogen Dioxide NOx Oxides of Nitrogen

NOy Reactive Oxides of Nitrogen

O<sub>3</sub> Ozone PLM Plumb-Kit

PM<sub>2.5</sub> Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter PM<sub>10</sub> Particulate Matter less than or equal to 10 microns in aerodynamic diameter

PM<sub>10-2.5</sub> PM<sub>10</sub> minus PM<sub>2.5</sub> ppb Parts per Billion ppm Parts per Million

REN Reno4 RNO Reno3

SLAMS State and Local Air Monitoring Station

SO<sub>2</sub> Sulfur Dioxide

SPK Sparks

SPM Special Purpose Monitoring

SPS Spanish Springs SRN South Reno

STN Speciation Trends Network

TBD To be determined

TOL Toll

#### Introduction

#### **Purpose**

The U.S. Environmental Protection Agency (EPA) finalized amendments to the ambient air monitoring regulations on October 17, 2006 (71 FR 61236). The amendments revise the technical requirements for certain types of ambient air monitoring sites, add provisions for monitoring of PM<sub>10-2.5</sub>, and reduce certain monitoring requirements for criteria pollutants. Monitoring agencies must also conduct network assessments every five years as required by 40 CFR 58.10(d) which states,

The State, or where applicable local, agency shall perform and submit to the EPA Regional Administrator an assessment of the air quality surveillance system every 5 years to determine, at a minimum, if the network meets the monitoring objectives defined in appendix D to this part, whether new sites are needed, whether existing sites are no longer needed and can be terminated, and where new technologies are appropriate for incorporation in the ambient air monitoring network. The network assessment must consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., children with asthma), and, for any sites that are being proposed for discontinuance, the effect on data users other than the agency itself, such as nearby States and Tribes or health effects studies. For PM<sub>2.5</sub>, the assessment also must identify needed changes to population-oriented sites. The State, or where applicable local, agency must submit a copy of this 5-year assessment, along with a revised annual network plan to the Regional Administrator. The first assessment is due July 1, 2010.

# **Public Inspection Process**

This monitoring network assessment was available for public inspection from May 22 to June 22, 2025, at the AQMD website (<u>OurCleanAir.com</u>). A hardcopy of the plan was also available at the AQMD office. See Appendix C for AQMD's Public Inspection Plan.

#### **Agency Contacts**

For information or questions regarding the 2025 Ambient Air Monitoring Network Assessment, please contact the following individuals of the AQMD.

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# **Regional Description**

Washoe County is located in the northwest portion of Nevada. It is bounded by California, Oregon, and the Nevada counties of Humboldt, Pershing, Storey, Churchill, Lyon, and Carson City (Figure 1). The Truckee Meadows is approximately 200 square miles in size and situated in the southern portion of Washoe County. It is geographically identified as Hydrographic Area 87 (HA 87) as defined by the State of Nevada, Division of Water Resources. Most of Washoe County's population lives in and around the Truckee Meadows.

The Truckee Meadows sits at an elevation of 4,400 feet above sea level and is surrounded by mountain ranges. To the west, the Sierra Nevada rises to elevations of 9,000 to 11,000 feet. Hills to the east reach 6,000 to 8,000 feet. The Truckee River, flowing from the Sierra Nevada eastward, drains into Pyramid Lake to the northeast of the Truckee Meadows.

Washoe County, Nevada

Figure 1



#### Climate

Average annual wind speed measured at the Reno-Tahoe International Airport is 6.4 miles per hour (mph). January is the calmest month (4.5 mph) with April being the windiest (8.3 mph). Wintertime (November-January) averages 4.9 mph and summertime (June-August) averages 7.2 mph.

Most of Reno's precipitation falls from November through March in the form of rain and snow. Reno receives an average of 7.35 inches of precipitation per calendar year (1991-2020 climate normals).

#### **Population and Demographic Trends**

The Reno, NV Core Based Statistical Area (CBSA) includes Washoe County and Storey County. The CBSA population has consistently increased through the last two decades. The net increase since 2005 has been approximately 29.3 percent (Table 1). Much of this growth has occurred in southern Washoe County, specifically the area in and adjacent to the Truckee Meadows.

Table 1
Reno, NV CBSA Population Trends (2005, 2015-2024)<sup>1</sup>

Population (1,000's)	2005	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Washoe County	396.8	441.9	448.3	451.9	460.2	469.8	473.6	485.1	501.6	508.8	513.9
Storey County	4.0	4.0	4.0	4.1	4.2	4.3	4.3	4.4	4.4	4.5	4.5
CBSA Total	400.8	445.9	452.3	456.0	464.4	474.1	477.9	489.5	506.0	513.3	518.4

The Reno, NV CBSA population projections (Table 2) are developed by the Nevada Department of Taxation using the Regional Economic Model, Inc model v3.2.0 which projects how the population might change given demographic and economic factors. The net population increase is projected to be approximately 7.3 percent over the next 10 years.

Table 2
Reno, NV CBSA Population Projections (2025-2034)<sup>2</sup>

Population (1,000's)	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Washoe County	526.4	533.5	539.1	544.0	548.4	552.5	556.1	559.3	562.1	564.6
Storey County	4.5	4.5	4.5	4.6	4.6	4.6	4.7	4.7	4.7	4.8
CBSA Total	530.9	538.0	543.6	548.6	553.0	557.1	560.8	564.0	566.8	569.4

<sup>&</sup>lt;sup>1</sup> Nevada State Demographer, "Governor Certified Population Estimates of Nevada's Counties, Cities and Towns 2005 to 2024", 2024.

<sup>&</sup>lt;sup>2</sup> Nevada State Demographer, "Nevada County Population Projections 2024 to 2043", 2024.

Table 3 lists the attainment status for each National Ambient Air Quality Standard (NAAQS) by pollutant, averaging time, and geographic area in Washoe County. Attainment designations are codified in 40 CFR 81.329. Additional detailed ambient air monitoring data may be found in the AQMD's Air Quality Trends Reports. These reports are prepared annually and summarizes the ambient air monitoring data collected by the AQMD.

Table 3
Attainment Status

		1 10000111111101110 20000		
Pollutant	Averaging Time	Concentration	Geographic Area	Attainment Status
			HA 87	Attainment
СО	1-hour	35 ppm	Remainder of county	Unclassifiable/ Attainment
CO			HA 87	Attainment
	8-hour	9 ppm	Remainder of county	Unclassifiable/ Attainment
	24-hour	2	HA 87	Attainment
PM <sub>10</sub>		150 μg/m <sup>3</sup>	Remainder of county	Unclassifiable
		2.7 / 3	HA 87	Attainment
PM <sub>2.5</sub>	24-hour	35 μg/m <sup>3</sup>	Remainder of county	Unclassifiable/ Attainment
1 1/12.3	2		HA 87	Attainment
	Annual <sup>3</sup>	9.0 μg/m <sup>3</sup>	Remainder of county	Unclassifiable/ Attainment
$O_3$	8-hour	0.070 ppm	Entire county	Unclassifiable/ Attainment
All other pollutants	All averaging times	All concentrations	All geographic areas	Unclassifiable/ Attainment

 $<sup>^3</sup>$  The annual PM<sub>2.5</sub> standard was strengthened from 12.0  $\mu g/m^3$  to 9.0  $\mu g/m^3$  in February 2024. Although formal designations haven't been published by EPA, AQMD expects to be designated Attainment or Unclassifiable/Attainment.

# **Monitoring Network History**

The AQMD has operated an ambient air monitoring network since the 1960's. By multi-agency cooperative agreement, the California Air Resources Board (CARB) monitored PM<sub>2.5</sub> and NO<sub>2</sub> at the Incline site from 1999-2002. Table 4 lists the parameters monitored by pollutant and site over the last 25 years.

Table 4 Historical Monitoring Operations

	Historical Monitoring Operations									
AQS Site Name (AQS Site ID)	Ozone	PM <sub>2.5</sub>	$PM_{10}$	TSP	НС	00	$\mathrm{NO}_2$	$\mathrm{SO}_2$	Lead	
Incline (32-031-2002)	93-24	99-02	99-02			99-02	99-02			
Lemmon Valley (32-031-2009)	87-24		87			87-16				
Reno3 (32-031-0016)	82-19	99-19	88-19			83-19	84-19	11-19		
Reno4 (32-031-0031)	20-24	20-24	20-24			20-24	20-24	20-24		
Plumb-Kit (32-031-0030)			06-17							
South Reno (32-031-0020)	88-24		11-17			88-14				
Sun Valley (32-031-2006)			88-05							
Sparks (32-031-1005)	79-24	12-24	88-24			80-23				
Galletti (32-031-0022)		13-14	88-14			88-14				
Toll (32-031-0025)	02-24	19-24	02-24			02-16				
Spanish Springs (32-031-1007)	17-24	17-24	17-24							

#### **Statistical Analysis**

Site-by-site analyses are those that assign a ranking to individual monitors based on a particular metric. These analyses are good for assessing which monitors might be candidates for modification or removal. Site-by-site analyses do not reveal the most optimized network or how good a network is as a whole. In general, the metrics at each monitor are independent of the other monitors in the network. Several steps are involved in site-by-site analysis:

- 1. Determine which monitoring purposes are most important.
- 2. Assess the history of the monitor (including original purposes).
- 3. Select a list of site-by-site analysis metrics based on purposes and available resources.
- 4. Weight metrics based on importance of purpose.
- 5. Score monitors for each metric.
- 6. Sum scores and rank monitors.
- 7. Examine lowest ranking monitors for possible resource reallocation.

The low-ranking monitors should be examined carefully on a case-by-case basis. There may be regulatory or political reasons to retain a specific monitor. Also, the site could be made potentially more useful by monitoring a different pollutant or using a different technology. This assessment includes seven site-by-site statistical analyses - Number of Other Parameters Monitored; Trends Impact; Measured Concentrations; Deviation from the NAAQS; Area Served; Population Served, and Population Change.

#### **Number of Other Parameters Monitored**

Monitors that are collocated with other measurements at a particular air quality site are likely more valuable than sites that measure fewer parameters, particularly for source apportionment and other air quality studies. In addition, the operating costs can be leveraged among several instruments at these sites. Sites are ranked by the number of parameters (or instruments) that are collected at the particular site.

This analysis is performed by counting the number of other parameters that are measured at the physical site. Sites with many parameters measured are ranked highest. The metric addresses two aspects of monitor value. First, collocated measurements of several pollutants are valuable for many air quality analyses, such as source apportionment, model evaluation, and emission inventory reconciliation. Second, having a single site with multiple measurements is more cost-effective to operate than having monitors scattered at several sites.

Table 5
Classification and Number of Parameters Monitored

Classification and Number of Parameters Monitored							
		Number of					
AQS Site Name	Monitor	Parameters					
(AQS Site ID)	Classifications	Measured					
South Reno (32-031-0020)	SLAMS	4					
Toll (32-031-0025)	SLAMS	7					
Reno4	SLAMS/NCore	19					
(32-031-0031)	Speciation Trends	65					
Sparks (32-031-1005)	SLAMS	4					
Spanish Springs (32-031-1007)	SLAMS	7					
Incline (32-031-2002)	SLAMS	1					
Lemmon Valley (32-031-2009)	SLAMS	1					
Verdi (Future)	SLAMS	7					

#### **Trends Impact**

Monitors that have a long historical record are valuable for tracking trends. In this analysis, sites are ranked based on the duration of the continuous measurement record. The analysis can be as simple as ranking the available monitors based on the length of the continuous sampling record. This technique places the most importance on sites with the longest continuous trend record.

Determining the trends impact of a monitor can be done simply. One approach is to rank sites based on their length of continuous sampling. Sites with the longest term of operation would score higher than those with shorter records, since they would be more useful for long-term trend analysis. Additional factors that could be used to adjust the simple ranking scale include: 1) The magnitude and direction of trends observed to date at the site, 2) the suitability of a site's location for monitoring trends after a significant event (i.e., enactment of a specific control measure), or 3) proximity of another monitor that could be used to continue the trend record. A site may be weighted as less important if changes in sampling and analysis methodology lead to a discontinuous record. Weighing these factors would require consideration of the overall goals of the monitoring network and the importance of the historical record.

Table 6 Years of Data

AQS Site Name (AQS Site ID)	Monitor Classifications	Years of Data
	Classifications	rears of Data
South Reno (32-031-0020)	SLAMS	37
Toll (32-031-0025)	SLAMS	23
Reno4	SLAMS/NCore	
(32-031-0031)	Speciation Trends	5
Sparks (32-031-1005)	SLAMS	46
Spanish Springs (32-031-1007)	SLAMS	8
Incline (32-031-2002)	SLAMS	32
Lemmon Valley (32-031-2009)	SLAMS	38
Verdi (Future)	SLAMS	0

#### **Measured Concentrations**

Individual sites are ranked based on the concentration of pollutants they measure. Monitors that measure high concentrations or design values are ranked higher than monitors that measure low concentrations. Results can be used to determine which monitors are less useful in meeting the selected objective.

Sites that measure high concentrations are important for assessing NAAQS compliance, population exposure, and performing model evaluations. The analysis is relatively straightforward, requiring only the site design values or highest concentrations. The greater the design value or concentration, the higher the site rank. If more than one standard exists for a pollutant (i.e., 24-hr and annual averages), monitors can be scored for each standard.

Figure 2 8-hr O<sub>3</sub> Design Values (2015-2024)

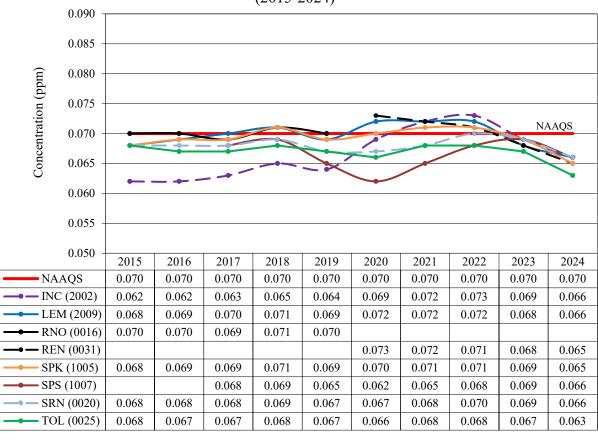


Figure 3 1-hr CO Design Values (2015-2024)

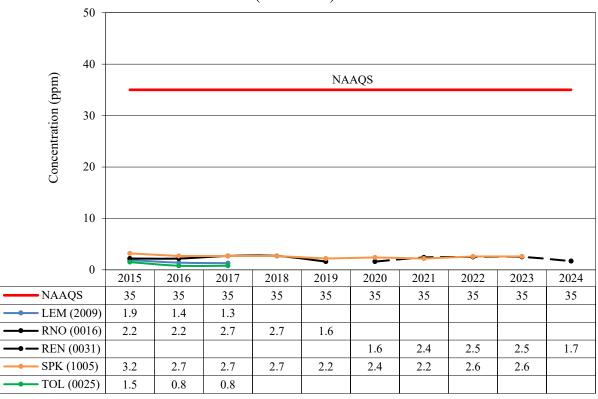


Figure 4 8-hr CO Design Values (2015-2024)

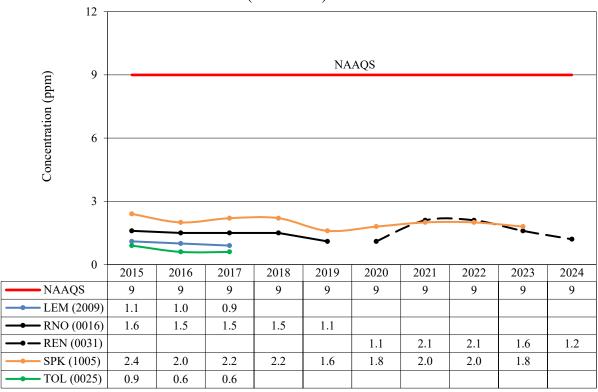


Figure 5 1-hr NO<sub>2</sub> Design Values (2015-2024)

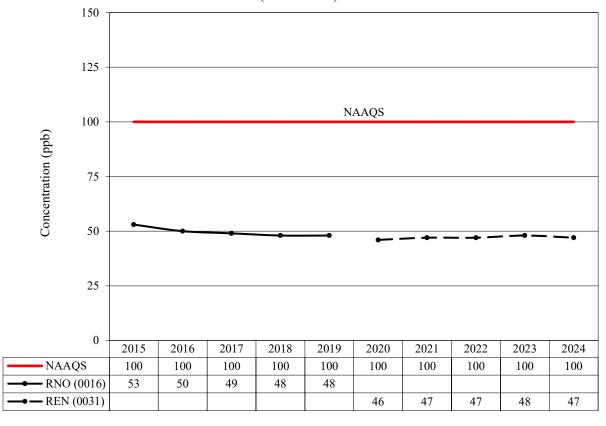


Figure 6 Annual NO<sub>2</sub> Design Values (2015-2024)

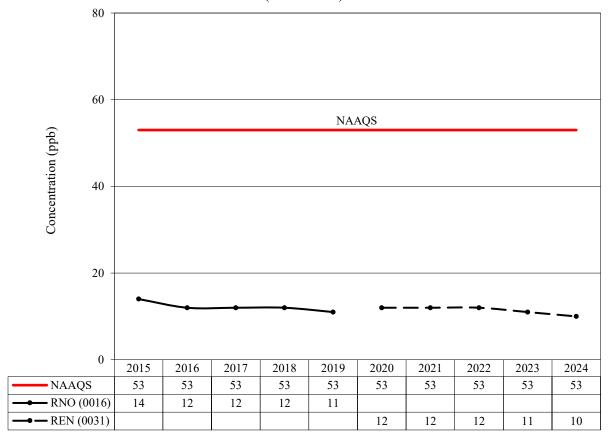


Figure 7 1-hr SO<sub>2</sub> Design Values (2015-2024)

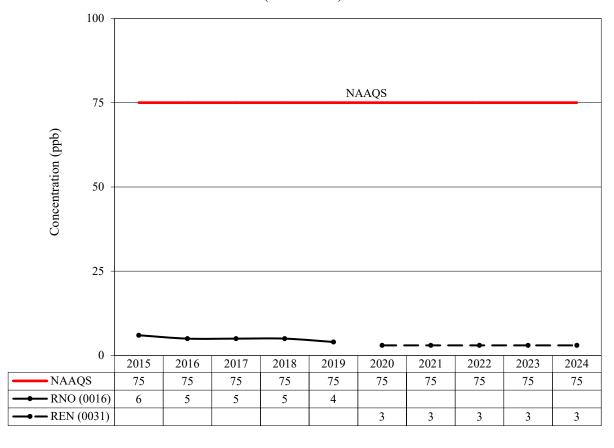


Figure 8 24-hr PM<sub>2.5</sub> Design Values (2015-2024)

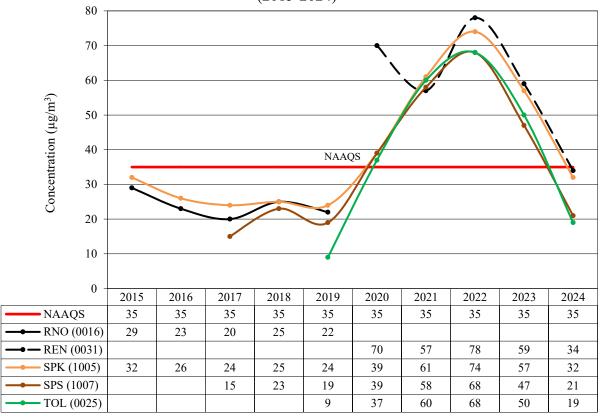


Figure 9 Annual PM<sub>2.5</sub> Design Values (2015-2024)

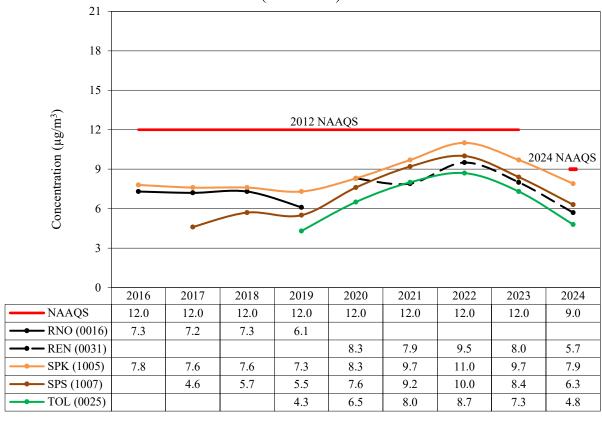
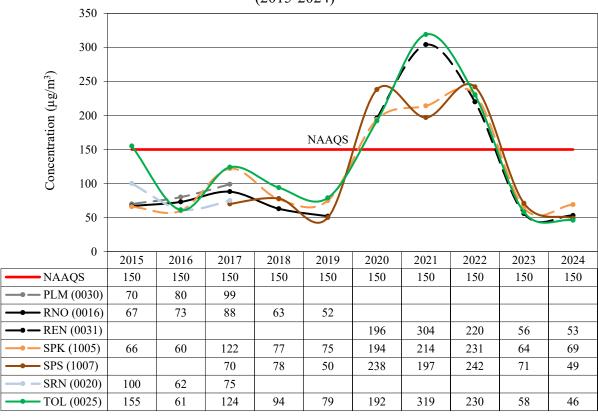


Figure 10 24-hr PM<sub>10</sub> First Highs (2015-2024)



#### **Deviation from the NAAQS**

Sites that measure concentrations that are very close to the NAAQS exceedance threshold are ranked highest in this analysis. These sites may be considered more valuable for NAAQS compliance evaluation. Sites well above or below the threshold do not provide as much information in terms of NAAQS compliance.

This technique contrasts the difference between the standard and actual measurements or design values. It is a simple way to assess a monitor's value for evaluating compliance. The design values for each pollutant should be calculated as they impact regulatory compliance. If a pollutant has more than one standard (i.e., 24-hr and annual averages), monitors can be scored for each standard. The measured design value percentage of the NAAQS can be used to score each monitor. Monitors with the highest percentage will rank as most important.

Table 7
2024 Design Values vs. NAAQS
(Percentage of the NAAQS)

	O <sub>3</sub>	C	0	N	$O_2$	SO <sub>2</sub>	P	b	PM	<b>I</b> <sub>2.5</sub>	PM <sub>10</sub>
AQS Site Name (AQS Site ID)	(8-hr)	(1-hr)	(8-hr)	(1-hr)	(Annual)	(1-hr)	(Rolling 3-mo)	(Quarterly)	(24-hr)	(Annual)	(24-hr First Highs)
South Reno 32-031-0020	0.94										
Toll 32-031-0025	0.90								0.54	0.53	0.31
Reno4 32-031-0031	0.93	0.05	0.13	0.47	0.19	0.04			0.97	0.63	0.35
Sparks 32-031-1005	0.93								0.91	0.88	0.46
Spanish Springs 32-031-1007	0.94								0.6	0.7	0.33
Incline 32-031-2002	0.94										
Lemmon Valley 32-031-2009	0.94										

--- = n/a

 $= \ge 80\%$  of NAAQS

#### Inter-Site Correlation Analysis for Ozone and PM2.5

The NetAssess2025 app was developed by EPA's Office of Air Quality Planning and Standards (OAQPS). It is an update of the NetAssess app developed by LADCO for the 2015 5-year Ambient Air Monitoring Network Assessments. The Pearson Correlation Matrix Tool within the NetAssess2025 app was used for the Inter-Site Correlation Analysis for Ozone and PM<sub>2.5</sub>.

The following figures provide information about how concentrations at monitors within the Reno, NV CBSA compare to one another. Each monitor comparison is represented by a square in the chart. The blue squares in the bottom-left corner show the correlation between each pair of monitors, with text indicating the number of days used in the calculation. The red squares in the top-right corner show the mean absolute difference in concentrations between each pair of monitors, with text indicating the distance in kilometers between each pair of monitors. The numbers along the diagonal indicate the most recent design value for each monitor.

Measured concentrations at one monitor are compared to concentrations at other monitors to determine if concentrations correlate temporally. Monitors with concentrations that correlate well (e.g., R > 0.8) with concentrations at another monitor may be redundant. Conversely, a monitor with concentrations that do not correlate with other nearby monitored concentrations may be unique and have more value for spatial monitoring objectives.

Figure 11 8-hr Daily Max Ozone Correlation Matrix

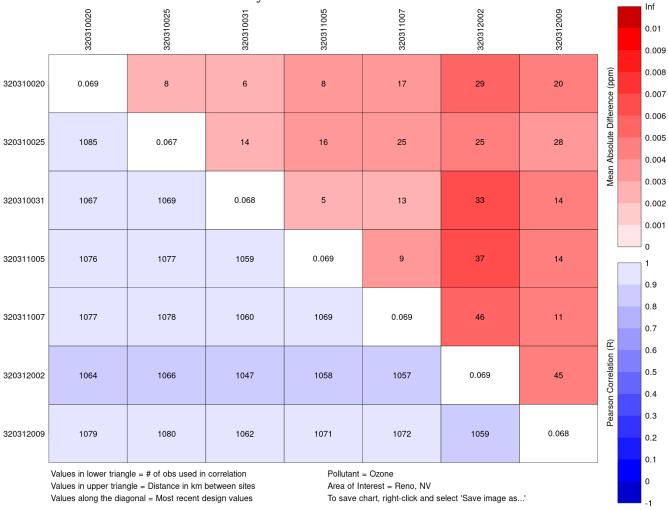
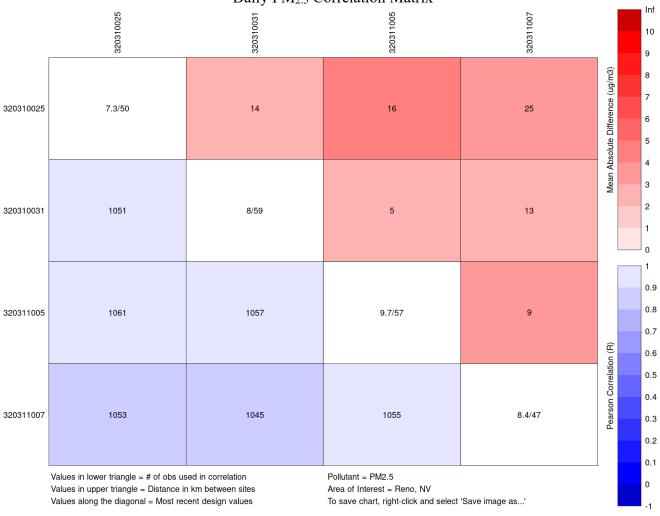


Figure 12 Daily PM<sub>2.5</sub> Correlation Matrix



Area served was one of five site-by-site criteria used in the national-scale network assessment. In the National Assessment, the "area served" metric was used as a proxy for the spatial coverage of each monitor. Thiessen polygons are applied as a standard technique in geography to assign a zone of influence or representativeness to the area around a given point. These polygons can be determined using EPA's NetAssess2025 app. Calculating Thiessen polygons is one of the simplest quantitative methods for determining an area of representation around sites (see Appendix A). However, it is not a true indication of which site is most representative in concentration to a given area. Meteorology (including pollutant transport), topography, and proximity to population or emission sources are not considered, so some areas assigned to a particular monitor may actually be better represented by a different monitor. More accurate determinations of representative monitors require a more sophisticated spatial analysis technique, such as suitability modeling, photochemical modeling, or parameter weighted distance.

Table 8 Area Served (2024)

	Area Served (square miles) by Pollutant							
AQS Site Name (AQS Site ID)	$O_3$	СО	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>		
South Reno (32-031-0020)	38							
Toll (32-031-0025)	363				561	561		
Reno4 (32-031-0031)	58	6,532	6,532	6,532	161	161		
Sparks (32-031-1005)	30				34	34		
Spanish Springs (32-031-1007)	645				5,824	5,824		
Incline (32-031-2002)	180							
Lemmon Valley (32-031-2009)	5,267							

# **Population Served**

Large populations are associated with high emissions. Sites are ranked based on the number of people they represent. Area of representation can be determined using the Thiessen polygons. Populations at the census-tract or block-group level that fall within the area of representation of a monitor are assigned to that monitor (see Appendix A). This technique gives the most weight to sites that are in areas of high population and have large areas of representation.

Calculating the population served by a particular monitor requires two steps: 1) Determine the area of representation for each monitor; and 2) determine the population within each area of representation. Step 1 can be performed most simply using the Thiessen polygons technique; however, a more sophisticated method that takes into account distance, meteorology, topography, etc. could also be applied. Sites that score high with this metric are important for assessing population exposure. This technique was one of five site-by-site criteria used in the national-scale network assessment. Thiessen polygons are applied as a standard technique in geography to assign a zone of influence or representativeness to the area around a given point. The "population served" method can also be applied to assess the importance of monitors from an environmental justice perspective. The technique is the same, except populations of specific groups (i.e., low income or disadvantaged) are used instead of total population.

Table 9 Population Served (2024)

	Population Served (1,000's) by Pollutant							
AQS Site Name (AQS Site ID)	$O_3$	СО	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>		
South Reno (32-031-0020)	49.3							
Toll (32-031-0025)	56.5				79.8	79.8		
Reno4 (32-031-0031)	159.6	490.7	490.7	490.7	236.6	236.6		
Sparks (32-031-1005)	75.6				83.1	83.1		
Spanish Springs (32-031-1007)	74.4				91.0	91.0		
Incline (32-031-2002)	11.4							
Lemmon Valley (32-031-2009)	63.9							

# **Situational Analysis**

Situational analysis considers the entire ambient air monitoring network and individual monitors in more detail and may take into account criteria such as research, policy, and resource needs. This analysis reviewed a scenario that added one monitoring site (Verdi) and removed one monitoring site (South Reno). The site under consideration for addition would monitor for O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, PM<sub>10-2.5</sub>, and surface meteorology. Thiessen Polygons were used to determine Area Served and Population Served with the addition of the Verdi monitoring site, and removal of the South Reno monitoring site (see Appendix B). The site-by-site situational analyses are summarized in the next two tables and can be compared to the analyses without the new site addition and site removal in Tables 8 and 9.

Table 10
Area Served (2024) with Verdi Site Addition and South Reno Removal

	Area Served (square miles) by Pollutant							
AQS Site Name (AQS Site ID)	$O_3$	СО	NO <sub>2</sub>	$SO_2$	PM <sub>10</sub>	PM <sub>2.5</sub>		
Toll (32-031-0025)	381				449	449		
Reno4 (32-031-0031)	52	6,532	6,532	6,532	73	73		
Sparks (32-031-1005)	34				34	34		
Spanish Springs (32-031-1007)	645				5,824	5,824		
Incline (32-031-2002)	180							
Lemmon Valley (32-031-2009)	5230							
Verdi (Future)	59				200	200		

Table 11 Population Served (2024) with Verdi Site Addition and South Reno Removal

1 optilation Served (2024) with Verai Site Addition and South Keno Kenovan						
	Population Served (1,000's) by Pollutant					
AQS Site Name (AQS Site ID)	$O_3$	СО	NOx	$SO_2$	$PM_{10}$	PM <sub>2.5</sub>
Toll (32-031-0025)	68.5				77.4	77.4
Reno4 (32-031-0031)	175.8	490.7	490.7	490.7	205.3	205.3
Sparks (32-031-1005)	83.1				83.1	83.1
Spanish Springs (32-031-1007)	74.4				91.0	91.0
Incline (32-031-2002)	11.4					
Lemmon Valley (32-031-2009)	58.3					
Verdi (Future)	19.2				33.8	33.8

# **Suggested Modifications to the Monitoring Network**

The AQMD network assessment focused primarily on the population and geography of HA 87 and directly adjacent areas. Consequently, the recommendations developed as a result of this assessment will concentrate on the southern portion of Washoe County as described in the Regional Description section of this document. The analyses provided an objective assessment of the current AQMD network and the recommendations offered in this section do not necessarily indicate how AQMD will eventually act to meet its objectives.

To meet the objectives of the AQMD network assessment, a suite of analyses was performed. The results of the individual analyses were summarized into a complete set of conclusions and recommendations. Recommendations were developed for the AQMD network as a whole and for individual monitoring sites within the network. The remainder of this section summarizes the overall AQMD network recommendations and the site-specific recommendations.

# Recommendations for the Overall AQMD Monitoring Network

- 1. Consider placing a neighborhood scale monitoring site in the West Reno/Verdi area. Currently, the Reno4 monitoring site covers a large population. By placing an additional monitoring site just west of the HA 87 boundary, population exposure of PM<sub>10</sub>, PM<sub>2.5</sub>, PM<sub>10-2.5</sub>, O<sub>3</sub>, and surface meteorology could be collected. This would cover a dense population situated at a slightly higher elevation at the base of the Sierra Nevada foothills.
- 2. Consider discontinuing all monitoring and closing the South Reno monitoring site. Removing the South Reno monitoring site from the network would build capacity to initiate monitoring in West Reno/Verdi. The area and population served by the South Reno monitoring site would be absorbed primarily by the Toll monitoring site. The daily maximum 8-hour ozone concentration is highly correlated to both the Reno4 and Toll ozone monitor, thus having a low removal bias.

#### **Site-Specific Recommendations**

Table 12 summarizes the current monitoring objective of each site in the AQMD network and includes a summary of the recommended modifications to each site. The recommendations were developed by examining the results of the assessment as a whole.

Table 12 Summary of Recommended Modifications to the Existing AQMD Network

AQS Site Name	Summary of Recommended Wodiffeations to the	
(AQS Site ID)	Current Monitoring Objective	Recommended Modifications
, ,	Located on the NV Energy property at 4110 Delucchi Lane, this site is in a transitional environment between open fields and office buildings. The site monitors highest	Site objective: Consider discontinuing all monitoring and closing site.
South Reno (32-031-0020)	concentration of O <sub>3</sub> , wind speed, wind direction, and ambient temperature. The monitoring objectives are Public Information and NAAQS comparison.	Parameters measured: Consider discontinuing all monitoring and closing site.
		Other recommendations: Consider discontinuing all monitoring and closing site.
Toll (32-031-0025)	The Toll Road site is located at 684A State Route 341 (Geiger Grade), one-half mile east of US Highway 395. The site is near the edge of a residential neighborhood and adjacent to an area that may become commercially developed. This site monitors highest concentration of PM <sub>10</sub> and population exposure of PM <sub>2.5</sub> , PM <sub>10-2.5</sub> , O <sub>3</sub> ,	Site objective: No recommended changes.  Parameters measured: No recommended changes.  Other recommendations: No recommended changes.
	wind speed, wind direction, and ambient temperature.	
	Located at Libby C. Booth Elementary School at 1450 Stewart Street in Reno, this site is near the northern edge of the playground and bus loading/unloading zone. Reno4 began monitoring in January 2020 as a relocation of the	Site objective: No recommended changes.  Parameters measured: No recommended changes.
Reno4 (32-031-0031)	Reno3 site. Reno4 is an NCore site and monitors for O <sub>3</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>10-2.5</sub> , Trace CO, Trace SO <sub>2</sub> , NOx, and Trace NOy. Meteorological parameters including ambient temperature, relative humidity, wind speed, and wind direction are also monitored. This site is also part of EPA's national Speciation Trends Network (STN).	Other recommendations: No recommended changes.

Table 12 (continued)
Summary of Recommended Modifications to the Existing AQMD Network

AQS Site Name	Sammary of Recommended Wodfredwords to the	
(AQS Site ID)	Current Monitoring Objective	Recommended Modifications
Sparks (32-031-1005)	The Sparks site is located on US Postal Service property at 750 Fourth Street. The site is surrounded by commercial property, a residential neighborhood and is	Site objective: No recommended changes.  Parameters measured: No recommended changes.
	adjacent to Dilworth Middle School. This site monitors highest concentrations of PM <sub>2.5</sub> and PM <sub>10-2.5</sub> , and	Other recommendations: No recommended changes.
	population exposure of PM <sub>10</sub> , O <sub>3</sub> , wind speed, wind direction, and ambient temperature. The monitoring objectives are Public Information and NAAQS comparison.	
Spanish Springs (32-031-1007)	This site is located on the north side of Lazy 5 Park in Spanish Springs. It is located in area among residences,	Site objective: No recommended changes.
	parks, and open fields. This site monitors highest concentration for O <sub>3</sub> and population exposure of PM <sub>10</sub> ,	Parameters measured: No recommended changes.
	PM <sub>2.5</sub> , PM <sub>10-2.5</sub> , wind speed, wind direction, and ambient temperature. The monitoring objectives are Public Information and NAAQS comparison.	Other recommendations: No recommended changes.
Incline (32-031-2002)	This site is located in a Washoe County office building at 855 Alder Avenue and is outside HA 87. It is located in a	Site objective: No recommended changes.
	residential/commercial neighborhood. This site only monitors highest concentration of O <sub>3</sub> . The monitoring	<u>Parameters measured</u> : No recommended changes.
	objective is NAAQS comparison.	Other recommendations: No recommended changes.
Lemmon Valley (32-031-2009)	Located at the Boys and Girls Club at 325 Patrician Drive,	Site objective: No recommended changes.
	this site is outside HA 87. It is in a transitional area among	D ( 1.1.1
	residences, parks, and open fields. The site monitors	<u>Parameters measured</u> : No recommended changes.
	highest concentration of O <sub>3</sub> . The monitoring objective is NAAQS comparison.	Other recommendations: No recommended changes.

Table 12 (continued)
Summary of Recommended Modifications to the Existing AQMD Network

AQS Site Name (AQS Site ID)	Current Monitoring Objective	Recommended Modifications
West Reno/Verdi (Future)	Consider placing a neighborhood scale monitoring site in the West Reno/Verdi area. Currently, the Reno4 monitoring site covers a large population. By placing an additional monitoring site just west of the HA 87 boundary, population exposure of PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>10-2.5</sub> , O <sub>3</sub> , and surface meteorology could be collected. This would cover a dense population situated at a slightly higher elevation at the base of the Sierra Nevada foothills. A formal request stating this proposal will be submitted prior to any modifications to follow the 40 CFR 58.14 criteria.	Site objective: Initiate monitoring for Public Information and NAAQS comparison.  Parameters measured: Initiate PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>10-2.5</sub> , O <sub>3</sub> , wind speed, wind direction, and ambient temperature monitoring.  Other recommendations: Initiate as a SLAMS.

Future Monitoring Requirements		
None at this time.		



Air Quality

Please contact Craig Petersen for questions and comments at, <a href="mailto:cpetersen@nnph.org">cpetersen@nnph.org</a>

### Appendix A

### Statistical Analysis (Area Served and Population Served Analyses)

Thiessen Polygons for AQMD's Current O<sub>3</sub> Monitoring Sites 03 - Ozone (44201) Sun Valley Kir gs Beach

Thiessen Polygons for AQMD's Current CO Monitoring Sites

CO - Carbon Monoxide (42101) Sparks

Thiessen Polygons for AQMD's Current NO<sub>2</sub> Monitoring Sites NO2 - Nitrogen Dioxide (42602) Sun Valley Sparks

Thiessen Polygons for AQMD's Current PM<sub>10</sub> Monitoring Sites

PM10 - Particulates (81102) Sun Valley Kings Beach

Thiessen Polygons for AQMD's Current PM<sub>2.5</sub> Monitoring Sites PM2.5 - Fine Particulates (88101) Sun Valley Silver Springs Kings Beach

Thiessen Polygons for AQMD's Current SO<sub>2</sub> Monitoring Sites

SO<sub>2</sub> - Sulfur Dioxide (42401) Kings Beach

### Appendix B

### Situational Analysis (Area Served and Population Served Analyses)

Thiessen Polygons for AQMD's Current and Future O<sub>3</sub> Monitoring Sites 03 - Ozone (44201) Fernley Sun Valley Kir gs Beach Carson City

Thiessen Polygons for AQMD's Current and Future PM<sub>10</sub> Monitoring Sites PM10 - Particulates (81102) Sun Valley

Thiessen Polygons for AQMD's Current and Future PM<sub>2.5</sub> Monitoring Sites PM2.5 - Fine Particulates (88101) Sun Valley Kir gs Peach

## Appendix C

**Public Inspection Plan** 

### **Public Inspection Plan**

The Northern Nevada Public Health issued a press release on May 22, 2025, to inform the public of the Network Assessment 30-day comment period. The press release provided a web link to the draft assessment and explained how to submit written comments during the comment period. A copy of the press release, all comments received during the comment period, and AQMD's response to the comments are included below.

1. No comments received.

<u>English</u> | <u>Español</u>

# Public Health N E W S R O O M

## NNPH AIR QUALITY DIVISION SEEKS PUBLIC COMMENT ON ANNUAL AMBIENT AIR MONITORING NETWORK PLAN AND 5-YEAR NETWORK ASSESSMENT

May 22, 2025

May 22, 2025. Reno/Sparks, Nevada. - Northern Nevada Public Health - Air Quality Management Division (AQMD) is requesting written comments from the public on its draft 2025 Ambient Air Monitoring Network Plan and its draft 2025 Ambient Air Monitoring Network Assessment.

Comments will be accepted until midnight on June 22, 2025, and may be submitted via e-mail to <a href="mailto:AQMDPlanning@nnph.org">AQMDPlanning@nnph.org</a>.

All correspondence must include the commenter's first and last name and a complete mailing address.

Air Monitoring Network Plans are required annually by the U.S. Environmental Protection Agency (EPA). The plan provides detailed information on the specific location of each

monitoring station, siting criteria, monitoring methods and objectives, sampling frequency, pollutants measured at each station, and aerial photographs showing their physical location. It also summarizes network modifications completed over the last 12 months and proposed network modifications over the next 18 months. The 2025 plan is substantially similar to the 2024 Ambient Air Monitoring Network Plan. A summary of all completed and proposed changes can be found on pages 9 through 11 of the plan.

Air Monitoring Network Assessments are required every five years by the EPA. The primary objectives of the Network Assessments are to determine whether the network meets the monitoring objectives defined in Appendix D of 40 CFR Part 58. The assessments also evaluate whether new sites are needed, whether existing sites are no longer needed and can be terminated, and whether new technologies are appropriate to incorporate into the ambient air monitoring network. The 2025 Assessment is also substantially similar to the 2020 Assessment.

For more information on NNPH Air Quality Management Division's efforts, visit OurCleanAir.com.

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Northern Nevada Public Health (NNPH) is nationally accredited by the Public Health Accreditation Board and has jurisdiction over all public health matters in Reno, Sparks, and Washoe County through the policy-making District Board of Health. NNPH consists of five divisions: Administrative Health Services, Air Quality Management, Community and Clinical Health Services, Environmental Health Services and Epidemiology & Public Health Preparedness. More info can be found here.

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