NORTHERN NEVADA

Public Health

Air Quality

2025 Ambient Air Monitoring Network Plan

June 24, 2025

NORTHERN NEVADA
Public Health
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

AADT	Annual Average Daily Traffic Count
AQMD	Northern Nevada Public Health – Air Quality Management Division
AQS	Air Quality System
ARM	Approved Regional Method
ATR	Automatic Traffic Recorder
BAM	Beta Attenuation Monitor
CARB	California Air Resources Board
CBSA	Core-Based Statistical Area
cc/min	Cubic centimeter per minute
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EPA	U.S. Environmental Protection Agency
ESC	Environmental Systems Corporation
FEM	Federal Equivalent Method
FRM	Federal Reference Method
GFC	Gas Filter Correlation
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multipollutant monitoring station
NDOT	Nevada Department of Transportation
NEI	National Emissions Inventory
NNPH	Northern Nevada Public Health
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
NOy	Reactive Oxides of Nitrogen
O_3	Ozone
ORD	EPA's Office of Research and Development
PLPT	Pyramid Lake Paiute Tribe
$PM_{2.5}$	Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter
PM_{10}	Particulate Matter less than or equal to 10 microns in aerodynamic diameter
$PM_{10-2.5}$	PM_{10} minus $PM_{2.5}$
ppb	parts per billion
ppm	parts per million
PWEI	Population Weighted Emissions Index
RSIC	Reno-Sparks Indian Colony
SASS	Speciation Air Sampling System
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Station
SO_2	Sulfur Dioxide
SPM	Special Purpose Monitoring
SR	State Route
STN	Speciation Trends Network
TAPI	Teledyne Advanced Pollution Instrumentation, Inc.
WAMMS	Wadsworth Air and Meteorological Monitoring Site

Introduction

Purpose

The U.S. Environmental Protection Agency (EPA) finalized amendments to the ambient air monitoring regulations on October 17, 2006.[1] The amendments revise the technical requirements for certain types of ambient air monitoring sites, add provisions for monitoring of $PM_{10-2.5}$, and reduce certain monitoring requirements for criteria pollutants. Monitoring agencies are required to submit annual monitoring network plans, conduct network assessments every five years, perform quality assurance activities, and in certain instances, have NCore sites established by January 1, 2011.

This plan was prepared and submitted as part of the fulfillment of these regulations. It represents the Northern Nevada Public Health - Air Quality Management Division's (AQMD) ambient air monitoring program activities completed in 2024 and proposed network modifications for 2025-2026.

Public Inspection Process

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

Agency Contacts

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

Francisco Vega, Division Director
(775) 784-7211, or fvega@nnph.org

Craig Petersen, Supervisor, Monitoring and Planning
(775) 784-7233, or cpetersen@nnph.org

Matthew McCarthy, Senior Air Quality Specialist
(775) 784-7205, or mmccarthy@nnph.org

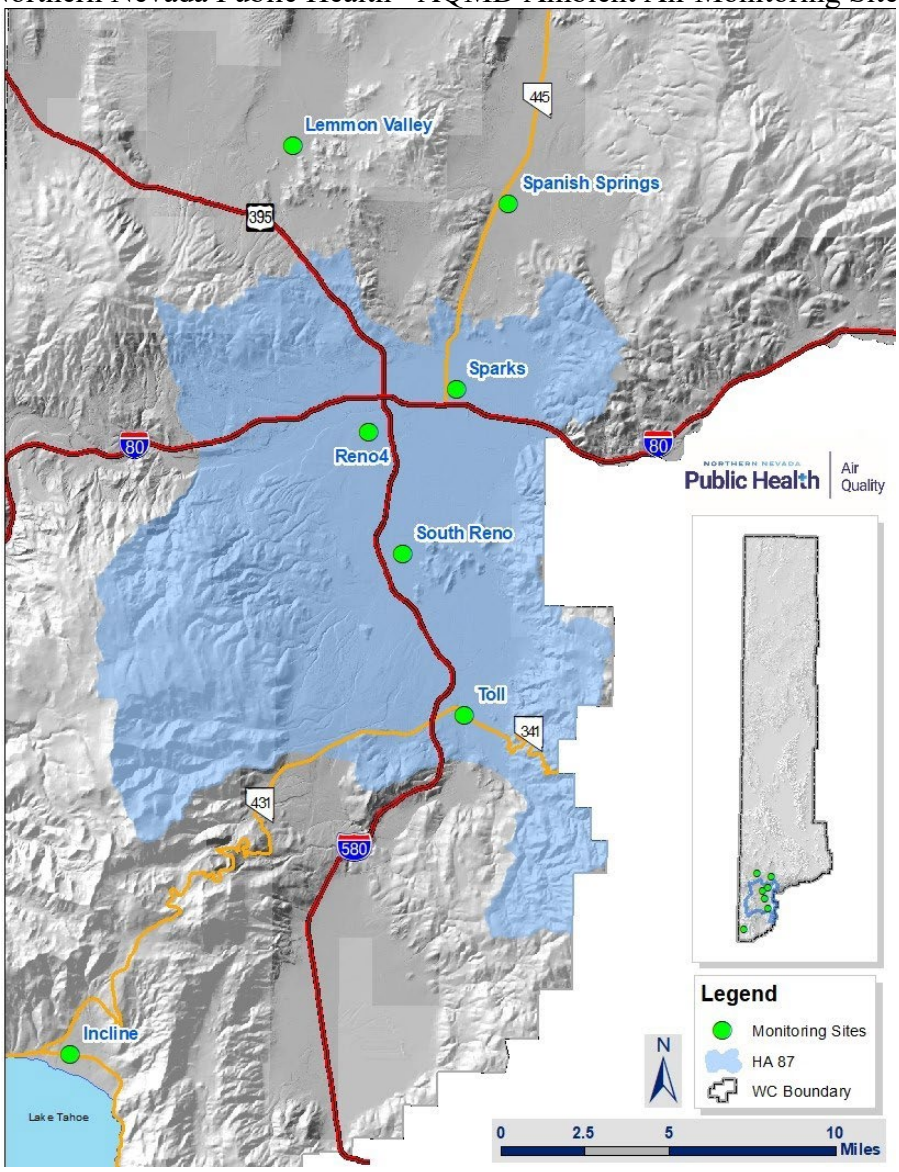
[1] 71 FR 61236-61328.

Overview of Northern Nevada Public Health Network Operation

Network Design

The AQMD operated seven (7) ambient air monitoring sites in 2024 (Figure 1). The blue boundary delineates Hydrographic Area 87 (HA 87) as defined by the State of Nevada Division of Water Resources. This area was designated as "serious" non-attainment for the 24-hour PM_{10} NAAQS until it was redesignated to "Attainment/Maintenance" effective January 7, 2016.[2] Washoe County is classified as "attainment" or "unclassifiable/attainment" for all other pollutants and averaging times. Table 1 lists the parameters monitored in 2024 sorted by network type and site.

Figure 1
Northern Nevada Public Health - AQMD Ambient Air Monitoring Sites



[2] 80 FR 76232 (December 8, 2015).

Table 1
Ambient Air Monitoring Sites and Parameters Monitored

Network Type Site	O_3	CO	Trace CO	NO	NO_2	NOx	Trace NO	NOy-NO	NOy	Trace SO_2	PM_{10} (manual)	PM_{10} (continuous)	$PM_{2.5}$ (manual)	$PM_{2.5}$ (continuous)	$PM_{10-2.5}$ (manual)	$PM_{10-2.5}$ (continuous)	$PM_{2.5}$ Speciation	Meteorology
Incline	✓																	
Lemmon Valley	✓																	
South Reno	✓																	✓
Spanish Springs	✓											✓		✓		✓		✓
Sparks	✓											✓		✓		✓		✓
Toll	✓											✓		✓		✓		✓
NCore[3]																		
Reno4	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
STN																		
Reno4																	✓	
SPM																		

Notes: Meteorology for the NCore network includes ambient temperature, wind speed, wind direction, and relative humidity. The PM_{10} manual method monitor at NCore is for $PM_{10-2.5}$ calculation only and is not submitted to AQS for data to be used in comparison to the NAAQS.

[3] NCore monitoring began December 2010.

Minimum Monitoring Requirements

Except where otherwise noted, each monitor in AQMD's ambient air monitoring network meets the minimum monitoring requirements for all criteria pollutants pursuant to 40 CFR 58, Appendices A, B, C, D, and E, where applicable. Tables 2 through 10 provide pollutant specific monitoring requirements. Additional pollutant specific data may be found in the "Washoe County, Nevada, Air Quality Trends Report, 2015-2024". The 2024 population data is from the Nevada State Demographer's Office.[4]

Table 2
Minimum Monitoring Requirements for O_3

MSA	County	Population	8-hour Design Value (2022-2024)		Number of Sites		
			ppm	Site (ID)	Minimum Required	Active	Needed
Reno-Sparks	Washoe Storey Total	513,854 4,457 518,311	0.066	South Reno (0020) Lemmon Valley (2009) Spanish Springs (1007) Incline (2002)	2	7	0

Monitors required for SIP or Maintenance Plan: 2

Title 40 CFR 58, Appendix D, Section 4.1 requires O_3 monitoring in MSAs with populations above 350,000 people. Monitors are also required in MSAs with lower populations if measured O_3 values within that MSA are 85% or more of the NAAQS.

Table 3
Minimum Monitoring Requirements for $PM_{2.5}$ SLAMS (FRM/FEM/ARM)

MSA	County	Population	Design Value (2022-2024)				Number of SLAMS Sites		
			Annual ($\mu g/m^3$)	Annual Site (ID)	Daily ($\mu g/m^3$)	Daily Site (ID)	Minimum Required	Active	Needed
Reno-Sparks	Washoe Storey Total	513,854 4,457 518,311	7.9	Sparks (1005)	34	Reno4 (0031)	2	4	0

Monitors required for: SIP or Maintenance Plan: 0; NCore: 1

Title 40 CFR 58, Appendix D, Section 4.7.1 requires $PM_{2.5}$ monitoring in MSAs with populations above 500,000 people and in MSAs with lower populations if measured $PM_{2.5}$ values for an MSA are 85% or more of the NAAQS.

[4] Nevada State Demographer, "Governor Certified Population Estimates of Nevada's Counties, Cities and Towns 2004 to 2024"

Table 4
Minimum Monitoring Requirements for Continuous $PM_{2.5}$ Monitors (FEM/ARM/non-FEM)

MSA	County	Population	Design Value (2022-2024)				Number of Continuous Monitors		
			Annual ($\mu g/m^3$)	Annual Site (ID)	Daily ($\mu g/m^3$)	Daily Site (ID)	Minimum Required	Active	Needed
Reno-Sparks	Washoe Storey Total	513,854 4,457 518,311	7.9	Sparks (1005)	34	Reno4 (0031)	1	4	0

Monitors required for: SIP or Maintenance Plan: 0; NCore: 1

Title 40 CFR 58, Appendix D, Section 4.7.2 requires continuous $PM_{2.5}$ monitors equal to at least one-half (round up) of the minimum sites listed in Table D-5 of Title 40 CFR 58, Appendix D.

Table 5
Minimum Monitoring Requirements for PM_{10}

MSA	County	Population	Maximum Concentration (2022-2024)		Number of Sites		
			$\mu g/m^3$	Site (ID)	Minimum Required	Active	Needed
Reno-Sparks	Washoe Storey Total	513,854 4,457 518,311	242	Spanish Springs (1007)	4-8	4	0

Monitors required for SIP or Maintenance Plan: 4

Title 40 CFR 58, Appendix D, Section 4.6 specifies PM_{10} monitoring requirements in MSAs based on population and design values. The number of PM_{10} stations in areas where MSA populations are from 500,000-1,000,000 must be in the range of 4 to 8 stations, depending on ambient concentration levels.

Table 6
Minimum Monitoring Requirements for NO_2

CBSA	County	Population	Max AADT counts (year)	Number of Monitors					
				Required Near-Road	Active Near-Road	Near-Road Needed	Required Area-Wide	Active Area-Wide	Area-Wide Needed
Reno, NV	Washoe Storey Total	513,854 4,457 518,311	170,000[5] (2023)	0	0	0	0	1	0

Monitors required for: SIP or Maintenance Plan: 0; NCore: 1
Monitors required for PAMS: 0
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.3.4: 0

Title 40 CFR 58, Appendix D, Section 4.3.2 requires one near-road NO_2 monitoring station in each CBSA with populations over 1,000,000 people. Likewise, Title 40 CFR 58, Appendix D, Section 4.3.3 requires one area-wide NO_2 monitoring station in each CBSA with populations over 1,000,000 people. Based on the 2024 population data from the Nevada State Demographer's Office, the Reno, NV CBSA does not require a near-road or area-wide NO_2 monitoring station.

[5] NDOT ATR 0310634 between the Plumb-Villanova Interchange 'Exit 65' & Mill St Interchange 'Exit 66'.

Table 7
Minimum Monitoring Requirements for SO_2

CBSA	County	Population	Total SO_2 (tons/year)	PWEI (Million persons-tons/year)	Data Requirements Rule Source(s) using Monitoring	Number of Monitors		
						Minimum Required	Active	Needed
Reno, NV	Washoe Storey Total	513,854 4,457 518,311	339.0[6]	175.7	n/a	0	1	0

Monitors required for SIP or Maintenance Plan: 0; NCore: 1
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.4.3: 0

Title 40 CFR 58, Appendix D, Section 4.4.2 requires an SO_2 monitoring network based on a calculated population weighted emissions index (PWEI). This index is calculated by multiplying the population of a CBSA with the National Emission Inventory (NEI) data for counties within that CBSA. The calculated value is then divided by one million in order to obtain the PWEI value. PWEI monitoring requirements are as follows: 1) one monitor in CBSAs with a PWEI value greater than 5,000, 2) two monitors in CBSAs with a PWEI value greater than 100,000, and 3) three monitors in CBSAs with a PWEI value greater than 1,000,000. As shown in Table 7, AQMD used 2024 population data from the Nevada State Demographer's Office and 2020 National Emissions Inventory data to determine that no additional SO_2 monitoring is required.

Table 8
Minimum Monitoring Requirements for CO

CBSA	County	Population	Number of Monitors		
			Required Near-Road	Active Near-Road	Needed
Reno, NV	Washoe Storey Total	513,854 4,457 518,311	0	0	0

Monitors required for: SIP or Maintenance Plan: 0; NCore: 1
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.2.2: 0

Title 40 CFR 58, Appendix D, Section 3.0 requires high sensitivity CO monitors at NCore sites. Title 40 CFR 58, Appendix D, Section 4.2 requires one CO monitor to operate collocated with one required near-road NO_2 monitor in CBSAs having populations over 1,000,000 people. Based on the 2024 population data from the Nevada State Demographer's Office, the Reno, NV CBSA does not require a CO monitor collocated with a near-road NO_2 monitor.

[6] U.S.EPA, 2020 National Emissions Inventory (NEI) Data

Table 9
Source-Oriented Pb Monitoring

Source Name	Address	Pb Emissions (tons/year)	Emission Inventory Source & Data Year	Max 3-Month Design Value ($\mu g/m^3$)	Design Value Date (3rd Month, Year)	Number of Monitors		
						Minimum Required	Active	Needed
Reno-Stead Airport	4895 Texas Ave Reno, NV	0.126	2020 NEI	n/a	n/a	0	0	0
Reno-Tahoe International Airport	2001 E Plumb Lane Reno, NV	0.123	2020 NEI	n/a	n/a	0	0	0

Monitors required for: SIP or Maintenance Plan: 0
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.5(c): 0

Title 40 CFR 58, Appendix D, Section 4.5(a) requires one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source which emits 0.50 or more tons per year and from each airport which emits 1.0 or more tons per year based on the most recent National Emission Inventory. All non-airport sources of Pb within the CBSA emit less than 0.5 tons per year and all airport sources within the CBSA emit less than 1.0 tons per year, according to the 2020 NEI. Table 9 includes the two largest sources of Pb emissions in Reno, NV CBSA.

Table 10
Near-Road NO_2, $PM_{2.5}$, and CO Monitors

CBSA	Population (year)	Max AADT Counts (year)	Number of Monitors						
			Required NO_2	Active NO_2	Required $PM_{2.5}$	Active $PM_{2.5}$	Required CO	Active CO	Additional Needed
Reno, NV	518,311 (2024)	170,000[7] (2023)	0	0	0	0	0	0	0

Title 40 CFR 58.13 and Appendix D to Title 40 CFR 58, Sections 4.2, 4.3, and 4.7 require one near-road CO monitor to operate collocated with one near-road NO_2 monitor in CBSAs having a population of 1,000,000 or more persons. An additional NO_2 monitor is required in CBSAs with a population of 2,500,000 or more persons.

[7] NDOT ATR 0310634 between the Plumb-Villanova Interchange 'Exit 65' & Mill St Interchange 'Exit 66'.

Collocation Requirements

Title 40 CFR 58, Appendix A, Section 3 describes the number of collocated monitors required for $PM_{2.5}$, PM_{10}, and Pb networks at the Primary Quality Assurance Organization (PQAO) level. Tables 11 and 12 display how AQMD is assessing and meeting these collocation requirements.

Table 11
Collocation of Manual $PM_{2.5}$, PM_{10}, and non-NCore Pb Monitors

Method Code	Number of Primary Monitors	Number of Collocated Monitors	
		Required	Active
125	0	0	0

Title 40 CFR 58, Appendix A, Section 3.2.3 requires 15 percent (at least 1) of the manual method samplers be collocated. Being that AQMD only runs one manual method sampler for the calculation of $PM_{10-2.5}$ at the Reno4 NCore station, and all the Primary PM_{10} monitors are continuous methods, there is no collocation requirement.

Table 12
Collocation of Automated FEM $PM_{2.5}$ Monitors

Method Code	Number of Primary Monitors	Number of Required Collocated Monitors	Number of Active Collocated FRM Monitors	Number of Active Collocated FEM Monitors (same method designation as primary)
170	4	1	1	0

Title 40 CFR 58, Appendix A, Section 3.2.3 requires 15 percent of the primary monitors of each method designation (at least 1) be collocated. Values of 0.5 and greater round up. The first collocated monitor must be a designated FRM monitor. AQMD meets this requirement by having four Primary $PM_{2.5}$ FEM monitors with one at the Reno4 monitoring station collocated with a $PM_{2.5}$ FRM sampler.

Process to Review Changes to $PM_{2.5}$ Monitoring Network

40 CFR 58.10(c) requires this annual network plan to "provide for the review of changes to a $PM_{2.5}$ monitoring network that impact the location of a violating $PM_{2.5}$ monitor." There is no current plan to relocate or discontinue any $PM_{2.5}$ monitor suitable for NAAQS comparison. Any changes to the $PM_{2.5}$ monitoring network with impact to the location of a violating $PM_{2.5}$ monitor will be documented in this section of future annual network plans.

Network Modifications Completed in 2024

SLAMS:

- No modifications completed.

NCore:

- No modifications completed.

Speciation Trends:

- No modifications completed.

SPM:

- No modifications completed.

Additional Changes Completed in 2024

SLAMS:

O_3 (Toll)

- Installed a new T-Series Teledyne O_3 analyzer as part of 10-year replacement schedule.

Meteorology (Sparks)

- AQMD discontinued monitoring wind speed, wind direction, and ambient temperature at the Sparks SLAMS (Appendix D).

NCore:

CO (Reno4)

- Installed a new T-Series Teledyne trace-level CO analyzer as part of the 10-year replacement schedule.

Speciation Trends:

- Installed a new Met One SuperSASS as part of the 10-year replacement schedule. This sampler was purchased using one-time 103 grant funding from EPA.

SPM:

- No changes completed.

Network Modifications Proposed for 2025-2026

SLAMS:

O_3 and meteorology (South Reno)

- Discontinue all monitoring at the South Reno station. A formal request stating this proposal can be reviewed in Appendix B.

All pollutants and meteorology (Verdi)

- Begin monitoring PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$, O_3, and meteorology at a new site in Verdi. This station will be constructed with American Rescue Plan (ARP) grants funds from EPA. A formal request stating this proposal can be reviewed in Appendix B.

NCore:

Trace NO, NOy-NO, NOy (Reno4)

- Discontinue monitoring for NOy and its associated parameters as per NOy waiver provisions outlined in 40 CFR Part 85 Appendix D.3. The waiver request was submitted to EPA on February 5, 2025 (Appendix C) and is awaiting EPA approval.

Speciation Trends:

- No modifications proposed.

SPM:

- No modifications proposed.

Additional Changes Proposed for 2025-2026

SLAMS:

O_3 (Sparks, Lemmon Valley, South Reno)

- Install new O_3 analyzers as part of the 10-year replacement schedule. Monitors will be purchased using EPA IRA Direct Monitoring Grant funding.

PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$ (Spanish Springs, Toll)

- Install new Met One BAM 1020's as part of the 10-year replacement schedule. Monitors will be purchased using EPA IRA Direct Monitoring Grant funding.

NCore:

- No changes proposed.

Speciation Trends:

- No changes proposed.

SPM:

- No changes proposed.

$PM_{2.5}$ Monitoring Network Modifications Proposed for 2025-2026

SLAMS:
$PM_{2.5}$ (Verdi)

- Begin monitoring $PM_{2.5}$ at a new site in Verdi. A formal request stating this proposal will be submitted prior to any modifications to follow the 40 CFR 58.14 criteria.

NCore:
$PM_{2.5}$

- No modifications proposed.

Speciation Trends:

- No modifications proposed.

SPM:

- No modifications proposed.

Data Submission Requirements

Quality Assurance Data for 2024 were submitted to AQS for the:

1st quarter in May 2024
2nd quarter in September 2024
3rd quarter in November 2024
4th quarter in February 2025

Annual Data Certification for all data for 2024 was submitted to EPA on April 29, 2025.

Environmental Justice and Underserved Communities

Historically Underserved Communities are defined as:
(1) A census tract:

(I) Designated as a qualified census tract by the United States Secretary of Housing and Urban Development pursuant to 26 U.S.C. § 42(d)(5)(B)(ii); or
(II) In which, in the immediately preceding census, at least 20 percent of households were not proficient in the English language.

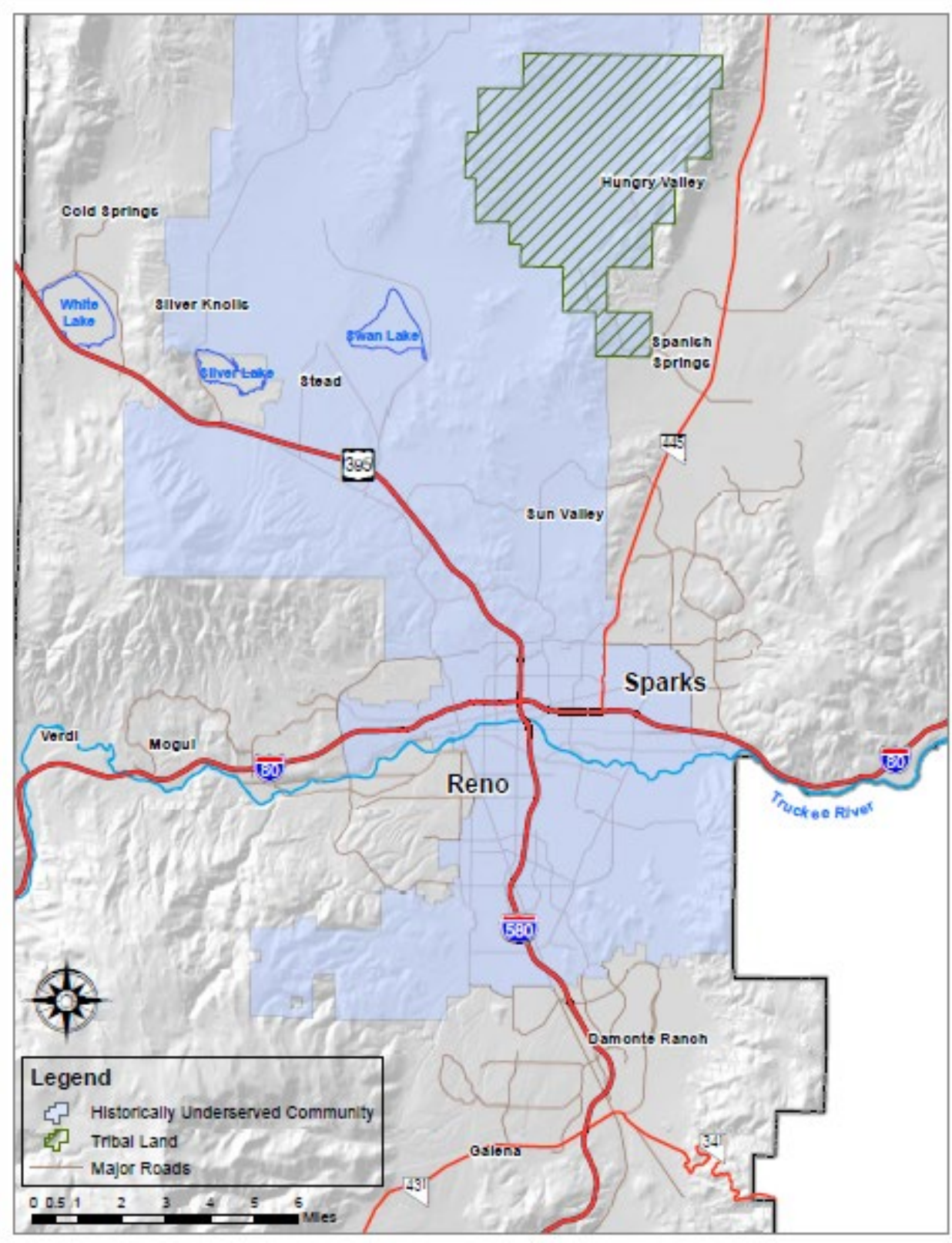
(2) A community in this State with at least one public school:

(I) In which 75 percent or more of the enrolled pupils in the school are eligible for free or reduced-price lunches pursuant to 42 U.S.C. §§ 1751 et seq.; or
(II) That participates in universal meal service in high poverty areas pursuant to Section 104 of the Healthy, Hunger-Free Kids Act of 2010, Public Law 111-296; or

(3) A community in this State located on qualified tribal land, as defined in NRS 370.0325.

Figure 2 highlights the Historically Underserved Communities in the Reno/Sparks area.

Figure 2
Historically Underserved Communities in the Reno/Sparks Area



Four out of seven of AQMD's ambient air monitoring sites are located in communities defined above as historically underserved. Those sites are Lemmon Valley, Reno4, South Reno, and Sparks. AQMD will consider environmental justice factors during network design, siting, relocating, or discontinuing monitors, and engaging with specific communities when plans are out for public comment.

Overview of Tribal Network Operations

Network Design

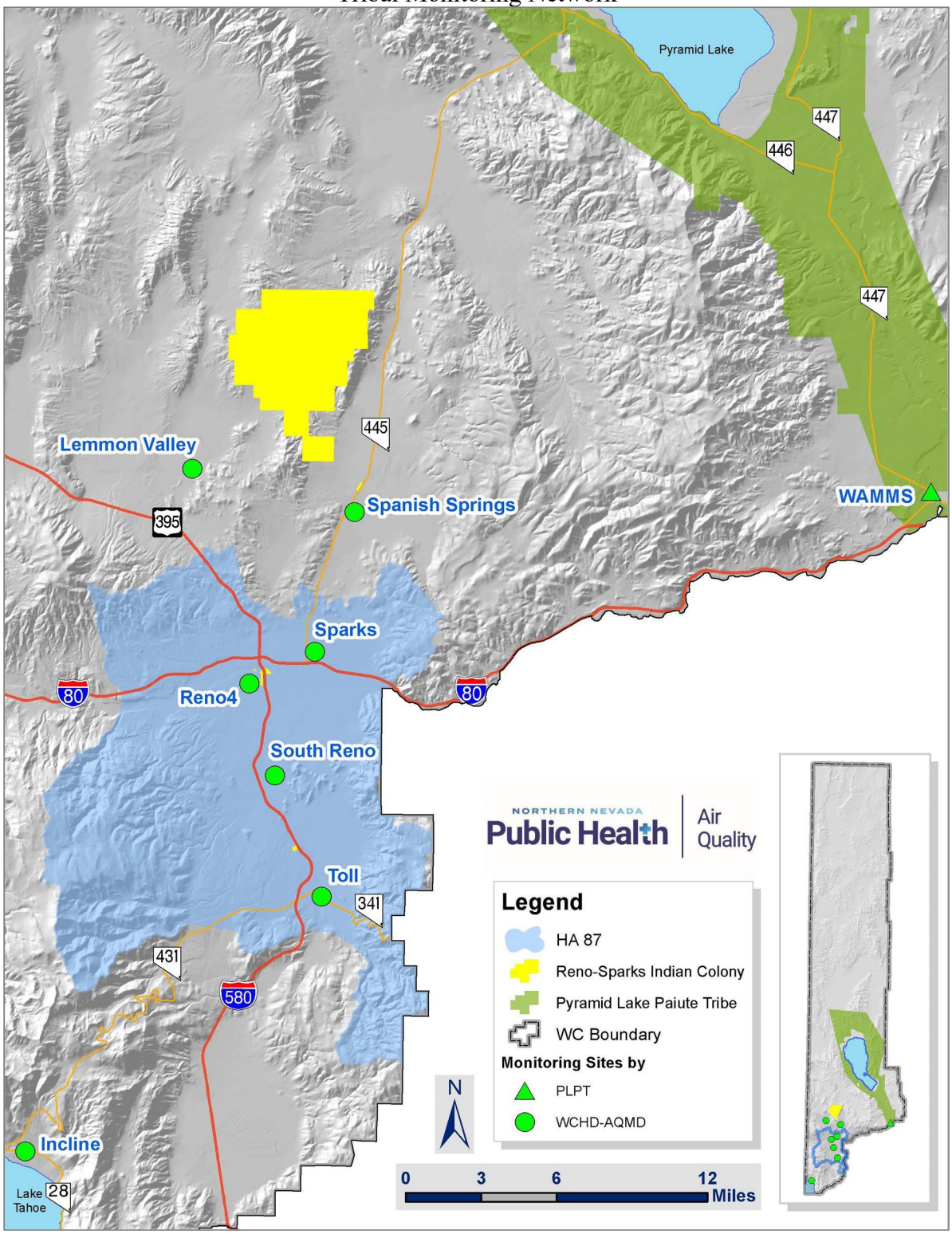
One tribe operates an ambient air monitoring network within the geographic boundaries of Washoe County - The Pyramid Lake Paiute Tribe (PLPT). Table 13 summarizes the tribal sites and parameters monitored in 2024. Figure 3 shows the location of tribal lands for the Reno-Sparks Indian Colony (RSIC) and the PLPT, including PLPT's monitoring site. The RSIC does not currently operate an ambient air quality monitoring network in Washoe County. For additional detailed site information about the PLPT monitoring network including annual network plans, refer to the following contact information.

Pyramid Lake Paiute Tribe
Tanda Roberts
Air Quality Specialist
Environmental Department
P.O. Box 256
Nixon, NV 89424
(775) 574-0101 ext.18
troberts@plpt.nsn.us
https://plpt.nsn.us/

Table 13
Tribal Ambient Air Monitoring Sites and Parameters Monitored

Network Site Site ID PLPT	O_3	CO	Trace CO	NO	NO_2	NOx	Trace NO	NOy-NO	NOy	Trace SO_2	PM_{10} (manual)	PM_{10} (continuous)	$PM_{2.5}$ (manual)	$PM_{2.5}$ (continuous)	$PM_{10\text{-}2.5}$ (manual)	$PM_{10\text{-}2.5}$ (continuous)	$PM_{2.5}$ Speciation	Meteorology
WADSAQ T-561-1026												✓						✓

Figure 3
Tribal Monitoring Network



Incline

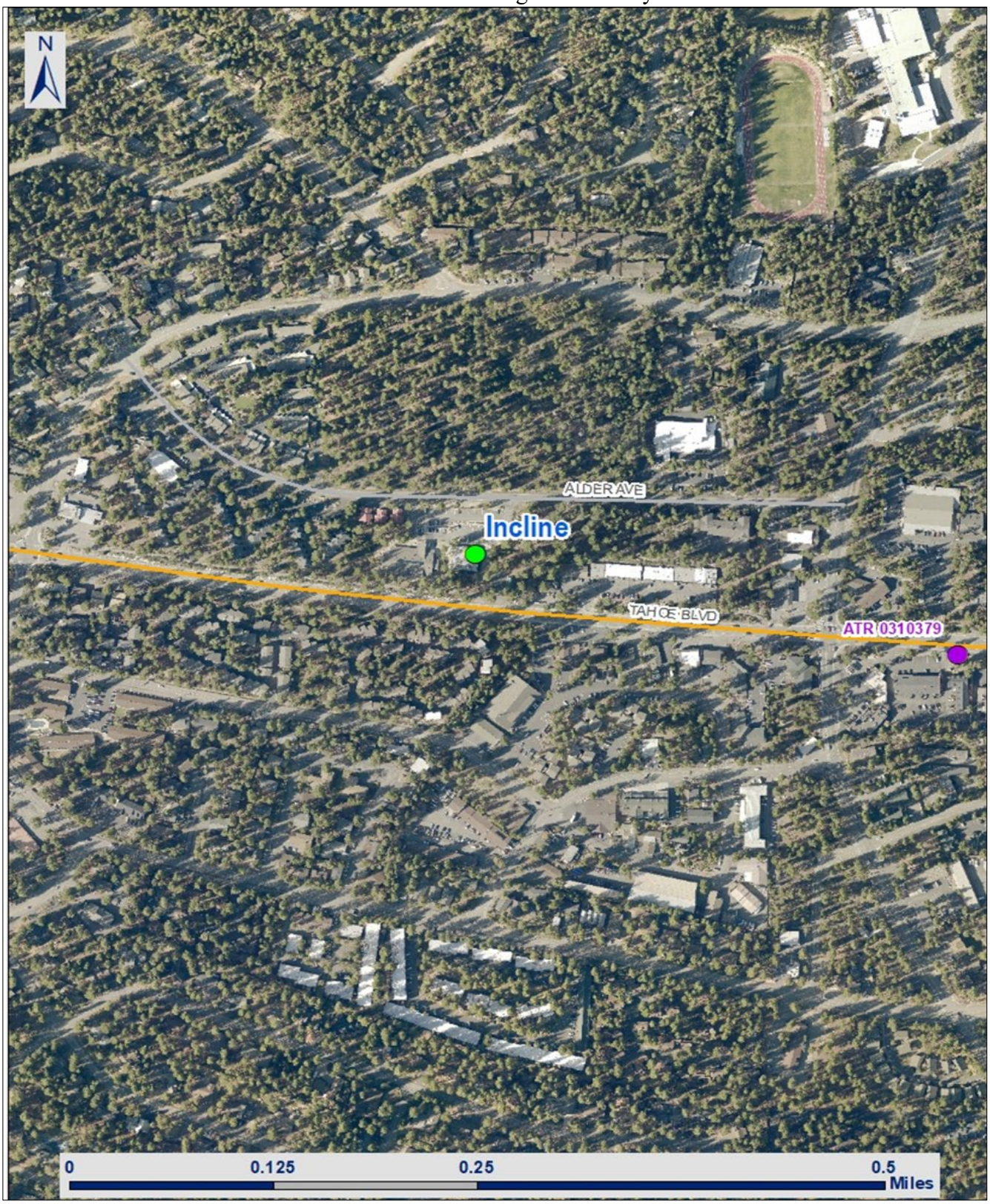
This site is located in a Washoe County office building at 855 Alder Avenue and is outside HA 87. It is located in a residential/commercial neighborhood. The AQMD had monitored PM_{10} (1993-2002) and CO (1993-2002) and currently monitors for O_3. This site was temporarily closed from December 2005 to May 2008 for remodeling. By multi-agency cooperative agreement, the California Air Resources Board (CARB) monitored $PM_{2.5}$ (1999-2002) and NO_2 (1999-2002). Since May 2008, this site only monitors for O_3.

Site Name:	Incline
AQS ID:	32-031-2002
Geographical coordinates:	39° 15.025'N, 119° 57.404'W
Elevation:	6,437'
Assessor's Parcel Number:	132-020-23
Owner:	Washoe County
Location:	Inside northeast corner of Washoe County office building.
Street address:	855 Alder Avenue Incline Village, NV 89451
County:	Washoe
Distance to road:	57 meters to Tahoe Boulevard
Traffic count:[8]	9,800 AADT (2021-2023) (NDOT ATR 0310379 – SR28 (Tahoe Blvd), 450 feet south of Village Blvd)
Groundcover:	Paved / Vegetated
Representative area:	Reno-Sparks MSA
Hydrographic area:	90

Figure 4
Incline Monitoring Station

[8] Nevada Department of Transportation Traffic Information

Figure 5
Incline Monitoring Site Vicinity Aerial



Incline (continued)

Pollutant, POC	O_3, 1
Primary / QA Collocated / Other	n/a
Parameter code	44201
Basic monitoring objective(s)	NAAQS comparison
Site type(s)	Highest Concentration
Monitor type	SLAMS
Network affiliation(s)	n/a
Instrument manufacturer / model	TAPI T400
Method code	087
FRM / FEM / ARM / Other	FEM
Collecting Agency	NNPH - AQMD
Analytical Lab	n/a
Reporting Agency	NNPH - AQMD
Spatial scale	Neighborhood
Monitoring start date	June 1993
Current sampling frequency	Continuous
Required sampling frequency	n/a
Sampling season	01/01 – 12/31
Probe height	5.6 meters
Distance from supporting structure	2.1 meters
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	None
Horizontal distance from trees	11.5 meters[1]
Vertical height of tree above probe	5.2 meters
Distance to furnace or incinerator flue	6.3 meters[2]
Distance between collocated monitors	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a
Unrestricted airflow	360 degrees
Probe material	Teflon
Residence time	8 seconds
Proposed modifications within the next 18 months?	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a
Frequency of one-point QC check (gaseous)	Bi-weekly (3 point)
Date of annual performance evaluation (gaseous & meteorological)	03/25/24 06/11/24
Date of two semi-annual flow rate audits (PM)	n/a

[1]At least 90 percent of the monitoring path is at least 10 meters from the drip line of the trees.
[2]At least 90 percent of the monitoring path is away from the furnace flue.

Lemmon Valley

Located at the Boys and Girls Club at 325 Patrician Drive, this site is outside HA 87. It is in a transitional area among residences, parks, and open fields.

Site name:	Lemmon Valley
AQS ID:	32-031-2009
Geographical coordinates:	39° 38.716'N, 119° 50.401'W
Elevation:	4,925'
Assessor's Parcel Number	080-461-31
Owner:	Washoe County
Location:	Inside northwest corner of Boys and Girls Club.
Street address:	325 W. Patrician Drive Reno, NV 89506
County:	Washoe
Distance to road:	59 meters to Patrician Drive.
Traffic count:	840 AADT (2021-2023) (NDOT ATR 0310926 - Patrician Drive, 150 feet west of Lemmon Drive)
Groundcover:	Paved / Vegetated
Representative area:	Reno-Sparks MSA
Hydrographic area:	92B

Figure 6
Lemmon Valley Monitoring Station

Figure 7
Lemmon Valley Monitoring Site Vicinity Aerial

Lemmon Valley (continued)

Pollutant, POC	O_3, 1
Primary / QA Collocated / Other	Primary
Parameter code	44201
Basic monitoring objective(s)	NAAQS comparison
Site type(s)	Highest Concentration
Monitor type	SLAMS
Network affiliation(s)	n/a
Instrument manufacturer / model	TAPI T400
Method code	087
FRM / FEM / ARM / Other	FEM
Collecting Agency	NNPH - AQMD
Analytical Lab	n/a
Reporting Agency	NNPH - AQMD
Spatial scale	Urban
Monitoring start date	January 1987
Current sampling frequency	Continuous
Required sampling frequency	n/a
Sampling season	01/01 – 12/31
Probe height	5.5 meters
Distance from supporting structure	2.0 meters
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	None
Horizontal distance from trees	21 meters
Vertical height of tree above probe	9.8 meters
Distance to furnace or incinerator flue	6.0 meters[1]
Distance between collocated monitors	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a
Unrestricted airflow	360 degrees
Probe material	Teflon
Residence time	7 seconds
Proposed modifications within the next 18 months?	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a
Frequency of one-point QC check (gaseous)	Bi-weekly (3 point)
Date of annual performance evaluation (gaseous & meteorological)	03/26/24 06/13/24
Date of two semi-annual flow rate audits (PM)	n/a

[1]At least 90 percent of the monitoring path is away from the furnace flue.

Reno4

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 Reno3 site. Reno4 is an NCore site and monitors for O_3, PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$, Trace CO, Trace SO_2, 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).

Site name:	Reno4
AQS ID:	32-031-0031
Geographical coordinates:	39° 31.316'N, 119° 47.724'W
Elevation:	4,461'
Assessor's Parcel Number:	013-042-01
Owner:	Washoe County School District Board
Location:	North edge of Libby Booth Elementary School property.
Street address:	1260-A Stewart St. Reno NV 89502
County:	Washoe
Distance to road:	10 meters to Stewart St. and 150 meters to Yori Ave.
Traffic count:	813 AADT (2021-2023) (NDOT ATR 0310886 - Yori Ave, 165 feet north of Stewart St.)
	≤900 Approximate AADT (NDOT Estimate – Stewart Street)
Groundcover:	Decomposed Granite
Representative area:	Reno-Sparks MSA
Hydrographic area:	87

Figure 8
Reno4 Monitoring Station

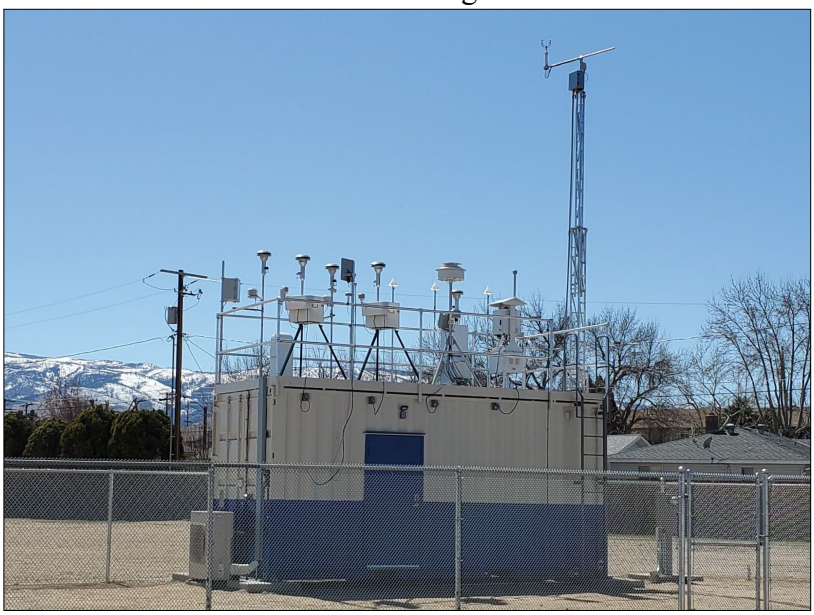


Figure 9
Reno4 Monitoring Site Vicinity Aerial

Reno4 (continued)

Pollutant, POC	PM_{10}, 2	$PM_{2.5}$, 2	$PM_{10-2.5}$, 2	$PM_{2.5}$ Speciation, 5
Primary / QA Collocated / Other	Primary	Primary	Primary	Primary
Parameter code	81102 & 85101	88101	86101	88502
Basic monitoring objective(s)	NAAQS comparison	NAAQS comparison	Research Support	Research Support
Site type(s)	Population Exposure	Highest Concentration	n/a	Population Exposure
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	NCore	NCore	NCore	STN, NCore
Instrument manufacturer / model	Met One BAM 1020	Met One BAM 1020	Met One BAM 1020 Coarse Pair	Met One SASS; URG 3000N
Method code	122	170	185	SASS: 810 URG: 870
FRM / FEM / ARM / Other	FEM	FEM	FEM	Other
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	Wood
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	UC Davis
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2020	January 2020	January 2020	January 2020
Current sampling frequency	Continuous	Continuous	Continuous	1:3
Required sampling frequency	n/a	n/a	n/a	1:3
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	5.3 meters	5.1 meters	5.1 meters	SASS: 4.9 meters URG: 5.1 meters
Distance from supporting structure	2.2 meters	2.1 meters	2.1 meters	SASS: 1.8 meters URG: 2.1 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizonal distance from trees	46.6 meters	48.1 meters	46.6 meters	SASS: 49.6 meters URG: 50.6 meters
Vertical height of tree above probe	9.9 meters	10.1 meters	10.1 meters	SASS: 10.3 meters URG: 10.1 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	1.2 meters	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	No	No	No	No
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	n/a
Residence time	n/a	n/a	n/a	n/a
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	Yes	n/a	No
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	Monthly verifications and quarterly audits
Frequency of flow rate verification for automated analyzers (PM)	Bi-weekly verifications and quarterly audits	Bi-weekly verifications and quarterly audits	Bi-weekly verifications and quarterly audits	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a	n/a
Date of two semi-annual flow rate audits (PM)	01/31/24 04/24/24 07/31/24 10/14/24	01/31/24 04/24/24 07/31/24 10/14/24	01/31/24 04/24/24 07/31/24 10/14/24	03/20/24 05/22/24 09/26/24 12/13/24

Reno4 (continued)

Pollutant, POC	PM_{10}, 1	$PM_{2.5}$, 1	$PM_{10-2.5}$, 1	Trace CO, 1
Primary / QA Collocated / Other	Other	QA Collocated	Other	n/a
Parameter code	85101	88101	86101	42101
Basic monitoring objective(s)	Research Support	NAAQS comparison	Research Support	NAAQS comparison
Site type(s)	n/a	Population Exposure	n/a	Highest Concentration
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	NCore	NCore	NCore	NCore
Instrument manufacturer / model	Met One E-SEQ	Met One E-SEQ	Met One E-SEQ	TAPI 300EU
Method code	246	545	247	593
FRM / FEM / ARM / Other	FRM	FRM	FRM	FRM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2020	January 2020	January 2020	January 2020
Current sampling frequency	1:3	1:3	1:3	Continuous
Required sampling frequency	1:3	1:3	1:3	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	5.0 meters	5.0 meters	5.0 meters	5.1 meters
Distance from supporting structure	1.9 meters	1.9 meters	1.9 meters	2.0 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	46.6 meters	48.6 meters	46.6 meters	50.4 meters
Vertical height of tree above probe	10.2 meters	10.2 meters	10.2 meters	10.1 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	1.2 meters	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	No	No	No	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	Teflon
Residence time	n/a	n/a	n/a	6 seconds
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	Yes	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	Monthly verifications and quarterly audits	Monthly verifications and quarterly audits	Monthly verifications and quarterly audits	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	Weekly
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a	03/28/24 06/20/24
Date of two semi-annual flow rate audits (PM)	03/20/24 05/22/24 09/26/24 12/13/24	03/20/24 05/22/24 09/26/24 12/13/24	03/20/24 05/22/24 09/26/24 12/13/24	n/a

Reno4 (continued)

Pollutant, POC	O_3, 1	NO, 1	NO_2, 1	NOx, 1
Primary / QA Collocated / Other	n/a	Primary	Primary	Primary
Parameter code	44201	42601	42602	42603
Basic monitoring objective(s)	NAAQS comparison	Research Support	NAAQS comparison	Research Support
Site type(s)	Population Exposure	n/a	Highest Concentration	n/a
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	NCore	NCore	NCore	NCore
Instrument manufacturer / model	TAPI T400	TAPI 200U	TAPI 200U	TAPI 200U
Method code	087	099	099	099
FRM / FEM / ARM / Other	FEM	FRM	FRM	FRM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2020	January 2020	January 2020	January 2020
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 - 12/31	01/01 - 12/31	01/01 - 12/31	01/01 - 12/31
Probe height	5.1 meters	5.2 meters	5.2 meters	5.2 meters
Distance from supporting structure	2.0 meters	2.1 meters	2.1 meters	2.1 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	50.4 meters	51.6 meters	51.6 meters	51.6 meters
Vertical height of tree above probe	10.1 meters	10.0 meters	10.0 meters	10.0 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	Teflon	Teflon	Teflon	Teflon
Residence time	6 seconds	5 seconds	5 seconds	5 seconds
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	Weekly	Weekly (4 point w/ GPT)	Weekly (4 point w/ GPT)	Weekly (4 point w/ GPT)
Date of annual performance evaluation (gaseous & meteorological)	03/28/24 06/20/24	03/27/24	03/27/24	03/27/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a	n/a

Reno4 (continued)

Pollutant, POC	Trace NO, 1	NOy-NO, 1	NOy, 1	Trace SO_2, 1
Primary / QA Collocated / Other	n/a	n/a	n/a	n/a
Parameter code	42601	42612	42600	42401
Basic monitoring objective(s)	Research Support	Research Support	Research Support	NAAQS comparison
Site type(s)	n/a	n/a	n/a	Highest Concentration
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	NCore	NCore	NCore	NCore
Instrument manufacturer / model	TAPI T200U with 501	TAPI T200U with 501	TAPI T200U with 501	TAPI T100U
Method code	699	699	699	600
FRM / FEM / ARM / Other	Other	Other	Other	FEM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2020	January 2020	January 2020	January 2020
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 - 12/31	01/01 - 12/31	01/01 - 12/31	01/01 - 12/31
Probe height	8.6 meters	8.6 meters	8.6 meters	5.1 meters
Distance from supporting structure	8.6 meters	8.6 meters	8.6 meters	2.0 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	53.9 meters	53.9 meters	53.9 meters	50.4 meters
Vertical height of tree above probe	6.6 meters	6.6 meters	6.6 meters	10.1 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	Teflon	Teflon	Teflon	Teflon
Residence time	8 seconds	8 seconds	8 seconds	6 seconds
Proposed modifications within the next 18 months?	Yes, see page 10	Yes, see page 10	Yes, see page 10	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	Weekly (4 point w/ GPT)	Weekly (4 point w/ GPT)	Weekly (4 point w/ GPT)	Weekly
Date of annual performance evaluation (gaseous & meteorological)	03/22/24	03/22/24	03/22/24	03/28/24 06/20/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a	n/a

Reno4 (continued)

Pollutant, POC	Wind Speed, 1	Wind Direction, 1	Ambient Temperature, 1	Relative Humidity, 1
Primary / QA Collocated / Other	n/a	n/a	n/a	n/a
Parameter code	61101 & 61103	61102 & 61104	62101	62201
Basic monitoring objective(s)	Research, Public Information	Research, Public Information	Research, Public Information	Research, Public Information
Site type(s)	n/a	n/a	n/a	n/a
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	NCore	NCore	NCore	NCore
Instrument manufacturer / model	Met One 50.5H Met One 30.5	Met One 50.5H Met One 30.5	Met One 063-1	Met One 083E
Method code	071	071	040	061
FRM / FEM / ARM / Other	n/a	n/a	n/a	n/a
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2020	January 2020	January 2020	January 2020
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	10.0 meters	10.0 meters	4.4 meters	4.4 meters
Distance from supporting structure	10.0 meters	10.0 meters	1.3 meters	1.3 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	53.9 meters	53.9 meters	53.9 meters	53.9 meters
Vertical height of tree above probe	5.2 meters	5.2 meters	10.8 meters	10.8 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	n/a
Residence time	n/a	n/a	n/a	n/a
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	05/16/24 10/16/24	05/16/24 10/16/24	07/31/24 12/19/24	07/31/24 12/19/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a	n/a

South Reno

Located on the NV Energy property at 4110 Delucchi Lane, this site is in a transitional environment between open fields and office buildings.

Site name:	South Reno
AQS ID:	32-031-0020
Geographical coordinates:	39º 28.153'N, 119º 46.521'W
Elevation:	4,449'
Assessor's Parcel Number:	025-460-35
Owner:	Sierra Pacific Power Co.
Location:	Northeast corner of NV Energy campus.
Street address:	4110 Delucchi Lane Reno, NV 89502
County:	Washoe
Distance to road:	37 meters to Delucchi Lane.
Traffic count:	4,233 AADT (2021-2023) (NDOT ATR 0310690 - Neil Road, 515 feet north of Delucchi Lane)
	9,167 AADT (2021-2023) (NDOT ATR 0311159 - Airway Drive, south of McCarran Blvd.)
	≤900 Approximate AADT (NDOT Estimate – Delucchi Lane)
Groundcover:	Gravel / Dirt / Vegetated
Representative area:	Reno-Sparks MSA
Hydrographic area:	87

Figure 10
South Reno Monitoring Station

Figure 11
South Reno Monitoring Site Vicinity Aerial

South Reno (continued)

Pollutant, POC	O_3, 1	Wind Speed, 1	Wind Direction, 1	Ambient Temperature, 1
Primary / QA Collocated / Other	n/a	n/a	n/a	n/a
Parameter code	44201	61101	61102	62101
Basic monitoring objective(s)	NAAQS comparison	Public Information	Public Information	Public Information
Site type(s)	Highest Concentration	n/a	n/a	n/a
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a	n/a
Instrument manufacturer / model	TAPI T400	Met One 50.5H Met One 30.5	Met One 50.5H Met One 30.5	Met One 063-1
Method code	087	071	071	040
FRM / FEM / ARM / Other	FEM	n/a	n/a	n/a
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 1988	January 2014	January 2014	January 2014
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	3.9 meters	10.0 meters	10.0 meters	5.0 meters
Distance from supporting structure	1.1 meters	10.0 meters	10.0 meters	5.0 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	27.5 meters	27.2 meters	27.2 meters	27.2 meters
Vertical height of tree above probe	4.8 meters	n/a	n/a	3.7 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	Teflon	n/a	n/a	n/a
Residence time	6 seconds	n/a	n/a	n/a
Proposed modifications within the next 18 months?	Yes, see page 10	Yes, see page 10	Yes, see page 10	Yes, see page 10
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	Bi-weekly (3 point)	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	03/25/24	None	None	09/27/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a	n/a

Spanish Springs

Located on the north side of Lazy 5 Regional Park in Spanish Springs, this site is located outside of HA 87. It is in a transitional area between open rangeland, residential areas, and the Washoe County Public Library. The Spanish Springs site began monitoring O_3, PM_{10}, $PM_{2.5}$, and $PM_{10-2.5}$ as a SPM on January 1, 2017, and was converted to a SLAMS on July 1, 2018. It began monitoring wind speed, wind direction, and ambient temperature as a SPM on January 1, 2019, and was converted to a SLAMS on January 1, 2020.

Site name:	Spanish Springs
AQS ID:	32-031-1007
Geographical coordinates:	39°37.287' N, 119°43.124' W
Elevation:	4,485'
Assessor's Parcel Number:	083-024-06
Owner:	Washoe County
Location:	North side of Lazy 5 Regional Park.
Street address:	7200 Pyramid Way Sparks, NV 89436
County:	Washoe
Distance to road:	460 meters to Pyramid Hwy and 99 meters to Aquene Court.
Traffic count:	40,667 AADT (2021-2023) (NDOT ATR 0311128 – SR445 (Pyramid Hwy), 0.25 miles north of Sparks Blvd.)
	≤900 Approximate AADT (NDOT Estimate – Aquene Court)
Groundcover:	Paved / Vegetated
Representative area:	Reno-Sparks MSA
Hydrographic area:	85

Figure 12
Spanish Springs Monitoring Station

Figure 13
Spanish Springs Site Vicinity Aerial

Spanish Springs (continued)

Pollutant, POC	PM_{10}, 1	$PM_{2.5}$, 1	$PM_{10-2.5}$, 1	O_3, 1
Primary / QA Collocated / Other	Primary	Primary	Primary	n/a
Parameter code	81102 & 85101	88101	86101	44201
Basic monitoring objective(s)	NAAQS comparison	NAAQS comparison	Research Support	NAAQS comparison
Site type(s)	Population Exposure	Population Exposure	n/a	Highest Concentration
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a	n/a
Instrument manufacturer / model	Met One BAM 1020	Met One BAM 1020	Met One BAM 1020 Coarse Pair	TAPI T400
Method code	122	170	185	087
FRM / FEM / ARM / Other	FEM	FEM	FEM	FEM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2017	January 2017	January 2017	January 2017
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	5.0 meters	5.1 meters	5.1 meters	3.9 meters
Distance from supporting structure	2.1 meters	2.2 meters	2.2 meters	1.0 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	n/a	n/a	n/a	n/a
Horizontal distance from trees	34 meters	35 meters	33 meters	35 meters
Vertical height of tree above probe	1.6 meters	1.5 meters	1.5 meters	2.7 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	No	No	No	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	Teflon
Residence time	n/a	n/a	n/a	6 seconds
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	Yes	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	Bi-weekly (3 point)
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a	03/26/24 06/13/24 11/21/24
Date of two semi-annual flow rate audits (PM)	02/16/24 05/3/24 08/29/24 12/02/24	02/16/24 05/3/24 08/29/24 12/02/24	02/16/24 05/3/24 08/29/24 12/02/24	n/a

Spanish Springs (continued)

Pollutant, POC	Wind Speed, 1	Wind Direction, 1	Ambient Temperature, 1
Primary / QA Collocated / Other	n/a	n/a	n/a
Parameter code	61101	61102	62101
Basic monitoring objective(s)	Public Information	Public Information	Public Information
Site type(s)	n/a	n/a	n/a
Monitor type	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a
Instrument manufacturer / model	Met One 50.5H Met One 30.5	Met One 50.5H Met One 30.5	Met One 063-1
Method code	071	071	040
FRM / FEM / ARM / Other	n/a	n/a	n/a
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2019	January 2019	January 2019
Current sampling frequency	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	10.0 meters	10.0 meters	4.0 meters
Distance from supporting structure	10.0 meters	10.0 meters	1.1 meters
Distance from obstructions on roof	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None
Horizontal distance from trees	35 meters	35 meters	33 meters
Vertical height of tree above probe	n/a	n/a	2.6 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a
Residence time	n/a	n/a	n/a
Proposed modifications within the next 18 months?	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	10/10/24	10/10/24	08/29/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a

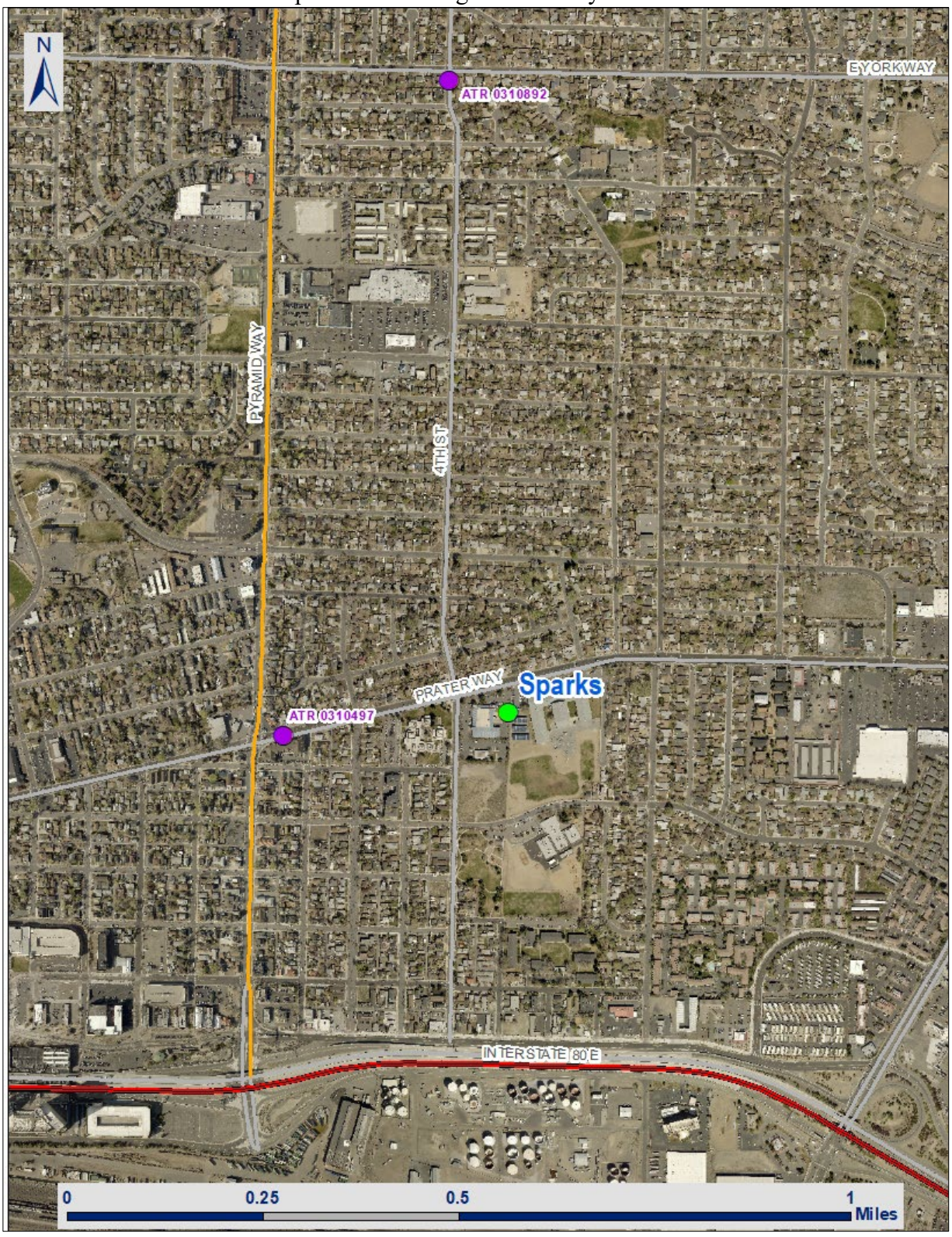
Sparks

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 adjacent to Dilworth Middle School. In 2007 the Sparks site was moved approximately 55 meters north of its previous location, due to tree growth affecting siting criteria.

Site name:	Sparks
AQS ID:	32-031-1005
Geographical coordinates:	39° 32.455'N, 119° 44.806'W
Elevation:	4,409'
Assessor's Parcel Number:	033-253-04
Owner:	United States Postal Service
Location:	East end of US Postal Service back parking lot.
Street address:	750 4th Street Sparks, NV 89431
County:	Washoe
Distance to road:	50 meters to Prater Way and 103 meters to 4th Street.
Traffic count:	13,200 AADT (2021-2023) (NDOT ATR 0310497 - Prater Way, 100 feet east of Pyramid Way)
	1,750 AADT (2021-2023) (NDOT ATR 0310892 - 4th Street, 123 feet north of Tasker Way & 129 feet south of York Way)
Groundcover:	Paved / Vegetated / Decomposed Granite
Representative area:	Reno-Sparks MSA
Hydrographic area:	87

Figure 14
Sparks Monitoring Station

Figure 15
Sparks Monitoring Site Vicinity Aerial



Sparks (continued)

Pollutant, POC	PM_{10}, 4 & 3	$PM_{2.5}$, 1	$PM_{10-2.5}$, 1	O_3, 1
Primary / QA Collocated / Other	Primary	Primary	Primary	n/a
Parameter code	81102 & 85101	88101	86101	44201
Basic monitoring objective(s)	NAAQS comparison	NAAQS comparison	Research Support	NAAQS comparison
Site type(s)	Population Exposure	Highest Concentration	n/a	Population Exposure
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a	n/a
Instrument manufacturer / model	Met One BAM 1020	Met One BAM 1020	Met One BAM 1020 Coarse Pair	TAPI T400
Method code	122	170	185	087
FRM / FEM / ARM / Other	FEM	FEM	FEM	FEM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	April 1988	January 2012	July 2014	January 1979
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	4.9 meters	5.0 meters	4.9 meters	4.6 meters
Distance from supporting structure	2.1 meters	2.1 meters	2.1 meters	1.7 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	34.9 meters	34.9 meters	34.9 meters	35.4 meters
Vertical height of tree above probe	12.5 meters	12.4 meters	12.5 meters	12.8 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	No	No	No	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	Teflon
Residence time	n/a	n/a	n/a	7 seconds
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	Yes	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	Bi-weekly (3 point)
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a	03/26/24 06/12/24 09/18/24
Date of two semi-annual flow rate audits (PM)	01/25/24 05/03/24 08/29/24 12/02/24	01/25/24 05/03/24 08/29/24 12/02/24	01/25/24 05/03/24 08/29/24 12/02/24	n/a

Sparks (continued)

Pollutant, POC	Wind Speed, 1	Wind Direction, 1	Ambient Temperature, 1
Primary / QA Collocated / Other	n/a	n/a	n/a
Parameter code	61101	61102	62101
Basic monitoring objective(s)	Public Information	Public Information	Public Information
Site type(s)	n/a	n/a	n/a
Monitor type	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a
Instrument manufacturer / model	Met One 30.5	Met One 30.5	Met One 063-1
Method code	071	071	040
FRM / FEM / ARM / Other	n/a	n/a	n/a
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2014	January 2014	January 2014
Current sampling frequency	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	10.0 meters	10.0 meters	5.0 meters
Distance from supporting structure	10.0 meters	10.0 meters	5.0 meters
Distance from obstructions on roof	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None
Horizontal distance from trees	38.5 meters	38.5 meters	38.5 meters
Vertical height of tree above probe	7.4 meters	7.4 meters	12.4 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a
Residence time	n/a	n/a	n/a
Proposed modifications within the next 18 months?	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	08/29/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a

Toll

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 is becoming commercially developed with an apartment complex and storage units. The Toll site began monitoring $PM_{2.5}$ and $PM_{10-2.5}$ on January 1, 2019, and was converted to a SLAMS on January 1, 2020.

Site name:	Toll
AQS ID:	32-031-0025
Geographical coordinates:	39° 23.990'N, 119° 44.376'W
Elevation:	4,570'
Assessor's Parcel Number:	017-011-22
Owner:	Washoe County School District Board
Location:	North end of Washoe County School District parking lot.
Street address:	684A State Route 341 Reno, NV 89521
County:	Washoe
Distance to road:	21 meters to SR341 (Geiger Grade Road).
Traffic count:	8,817 AADT (2021-2023) (NDOT ATR 0310137 - SR 341, 0.4 miles east of US 395)
Groundcover:	Paved parking lot
Representative area:	Reno-Sparks MSA
Hydrographic area:	87

Figure 16
Toll Monitoring Station

Figure 17
Toll Monitoring Site Vicinity Aerial

Toll (continued)

Pollutant, POC	PM_{10}, 2	$PM_{2.5}$, 1	$PM_{10-2.5}$, 1	O_3, 1
Primary / QA Collocated / Other	Primary	Primary	Primary	n/a
Parameter code	81102 & 85101	88101	86101	44201
Basic monitoring objective(s)	NAAQS comparison	NAAQS comparison	Research Support	NAAQS comparison
Site type(s)	Highest Concentration	Population Exposure	n/a	Population Exposure
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a	n/a
Instrument manufacturer / model	Met One BAM 1020	Met One BAM 1020	Met One BAM 1020 Coarse Pair	TAPI 400E
Method code	122	170	185	087
FRM / FEM / ARM / Other	FEM	FEM	FEM	FEM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	March 1996	January 2019	January 2019	March 1996
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	5.0 meters	5.1 meters	5.0 meters	4.0 meters
Distance from supporting structure	2.1 meters	2.2 meters	2.1 meters	1.2 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None	None
Horizontal distance from trees	8.3 meters	10.3 meters	8.3 meters	9.5 meters
Vertical height of tree above probe	0.3 meters	0.2 meters	0.3 meters	1.3 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	No	No	No	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	Teflon
Residence time	n/a	n/a	n/a	7 seconds
Proposed modifications within the next 18 months?	None	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	Yes	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	Bi-weekly (3 point)
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a	03/25/24 06/11/24 11/21/24
Date of two semi-annual flow rate audits (PM)	03/21/24 06/26/24 09/23/24 12/16/24	03/21/24 06/26/24 09/23/24 12/16/24	03/21/24 06/26/24 09/23/24 12/16/24	n/a

Toll (continued)

Pollutant, POC	Wind Speed, 1	Wind Direction, 1	Ambient Temperature, 1
Primary / QA Collocated / Other	n/a	n/a	n/a
Parameter code	61101	61102	62101
Basic monitoring objective(s)	Public Information	Public Information	Public Information
Site type(s)	n/a	n/a	n/a
Monitor type	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a
Instrument manufacturer / model	Met One 50.5H Met One 30.5	Met One 50.5H Met One 30.5	Met One 063-1
Method code	071	071	040
FRM / FEM / ARM / Other	n/a	n/a	n/a
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	January 2014	January 2014	January 2014
Current sampling frequency	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	10.0 meters	10.0 meters	4.5 meters
Distance from supporting structure	10.0 meters	10.0 meters	4.5 meters
Distance from obstructions on roof	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None
Horizontal distance from trees	8.4 meters	8.4 meters	8.4 meters
Vertical height of tree above probe	n/a	n/a	0.8 meters
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a
Residence time	n/a	n/a	n/a
Proposed modifications within the next 18 months?	None	None	None
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	None	None	11/21/24
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a

NORTHERN NEVADA
Public Health
Air Quality

Please contact Craig Petersen for
questions and comments at,
cpetersen@nnph.org

Appendix A

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 Annual Network Plan 30-day comment period. The press release provided a web link to the draft plan 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.

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NORTHERN NEVADA
Public Health
NEWSROOM

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 AQMDPlanning@nnph.org.

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.

Appendix B

58.14 Network Modification Request for South Reno and Verdi SLAMS

NORTHERN NEVADA Public Health | Air Quality

May 22, 2025

Dena Vallano
Manager, Air Quality Analysis Office
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street, AIR-7
San Francisco, CA 94105

Subject: Proposed Modification to the Northern Nevada Public Health, Air Quality Management Division Ambient Air Monitoring Network

Dear Ms. Vallano:

Pursuant to 40 CFR 58.14, the Northern Nevada Public Health, Air Quality Management Division (AQMD) requests review and approval for a modification to the existing ambient air monitoring network. The AQMD is proposing to:

1. Close the South Reno State and Local Air Monitoring Station (SLAMS) (AQS ID 32-031-0020) including discontinuation of all monitors (Ozone and meteorology); and
2. Initiate a SLAMS (proposed AQS ID 32-031-2010) in the Verdi area of western Washoe County to monitor Ozone, PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$, and meteorology.

If you require additional information, feel free to contact me or Mr. Matt McCarthy at (775) 784-7205.

Sincerely,

Craig Petersen
Supervisor, Monitoring and Planning
Air Quality Management Division
Northern Nevada Public Health

cc: Laura Barry, EPA Region 9
Matt McCarthy, AQMD
Francisco Vega, AQMD

Attachment A

40 CFR 58.14(c)(1) Criteria Test for the South Reno Ozone Monitor

		Design Values (2020-2024)												
		Year 1	Year 2	Year 3	Year 4	Year 5	Ave D.V.							
Parameter	Averaging Times	2020	2021	2022	2023	2024	2020-2024	Std. Dev. (*s*)	Student's *t* value (90% confidence)	Number of Data Values (*n*)	90% Upper CI	NAAQS	80% NAAQS	Test
O3 (ppm)	8-hr	0.067	0.068	0.070	0.069	0.066	0.068	0.002	2.13	5	0.070	0.070	0.056	FAIL

Attachment B

Closure of the South Reno SLAMS including discontinuing Ozone monitoring

Ozone

Although the discontinuation of ozone monitoring at the South Reno SLAMS does not pass the criteria test described in 40 CFR 58.14(c)(1), AQMD is requesting discontinuation based on the following:

1. The monitor has had design values at or below the 2015 NAAQS during the previous five years (2020-2024).
2. The monitor is not the only ozone monitor in Washoe County. Ozone monitoring will continue at seven SLAMS including the proposed Verdi SLAMS.
3. The population that is currently served by the South Reno ozone monitor, will still be served by Toll, Sparks, and Reno4 ozone monitors which are all less than 6 miles away.
4. Ozone concentrations at the South Reno SLAMS correlate well to the Toll, Sparks, and Reno4 monitors that will serve the population that South Reno currently serves.
5. The monitor is not required and is not the last within a nonattainment or maintenance area. All of Washoe County is designated as attainment for all ozone NAAQS. Washoe County is not a maintenance area for any ozone NAAQS.
6. The other requirements of Appendix D will continue to be met.
7. Table 1 references the minimum monitoring requirements for Ozone for our current population.

Table 1
Minimum Monitoring Requirements for O_3

MSA	County	Population	8-hour Design Value (2022-2024)		Number of Sites		
			ppm	Site (ID)	Minimum Required	Active	Needed
Reno-Sparks	Washoe Storey Total	513,854 4,457 518,311	0.066	South Reno (0020) Spanish Springs (1007) Incline (2002) Lemmon Valley (2009)	2	7	0

Attachment C

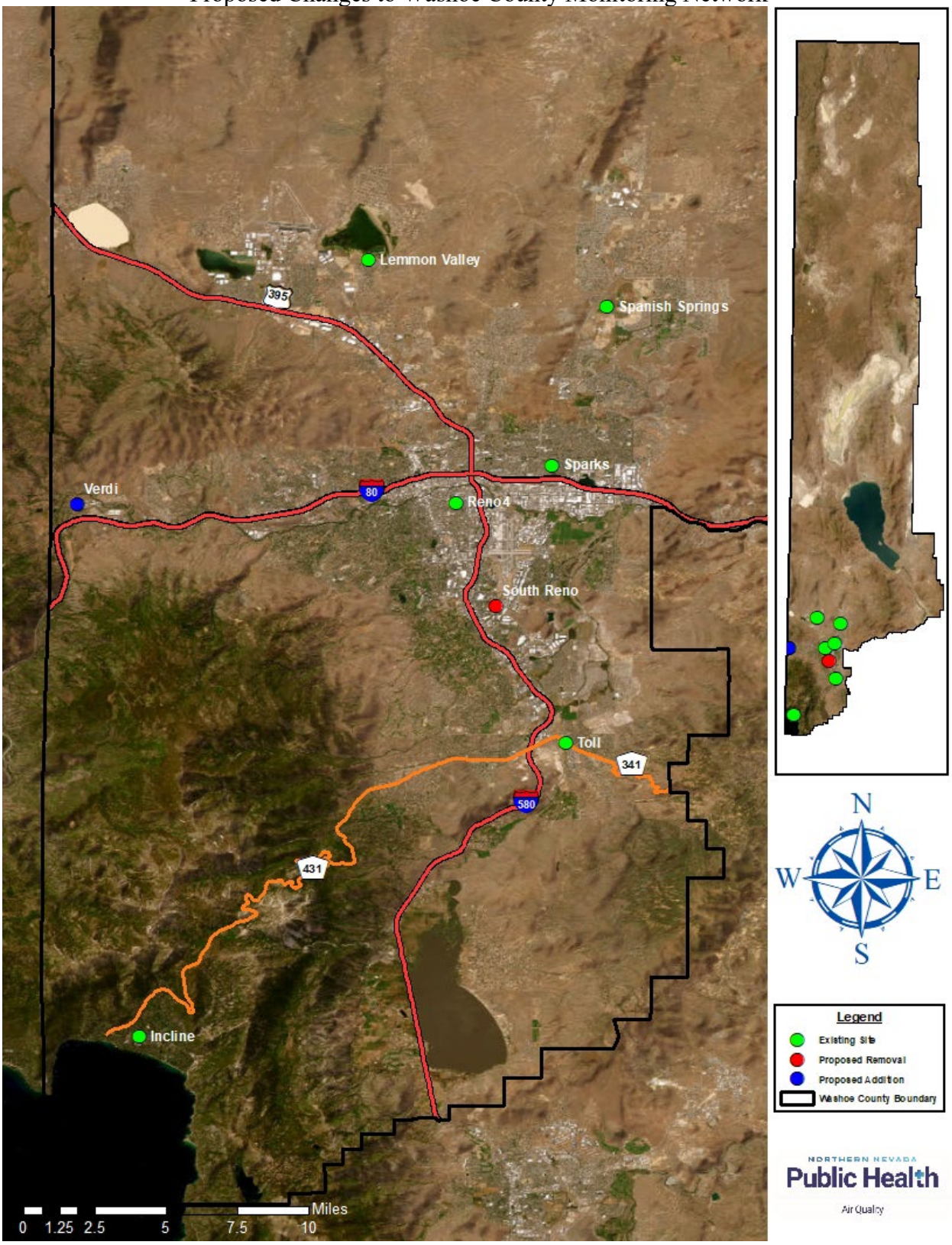
Initiation of a SLAMS in Verdi to monitor Ozone, PM_{10}, $PM_{2.5}$, $PM_{10\text{-}2.5,}$ and Meteorology

Initiation of a SLAMS in the Verdi area (Western Washoe County)

Initiating a SLAMS to monitor Ozone, PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$, and Meteorology is based on 40 CFR 58.14(b). The AQMD is requesting approval of the Verdi SLAMS to be in conjunction with the discontinuation of the South Reno SLAMS. The points below support the AQMD request.

1. A SLAMS in the Verdi area is a recommendation in the 2020 and 2025 Network Assessments.
2. On May 11, 2023, AQMD received a $213,204 Enhanced Air Quality Monitoring for Communities Award from EPA for the establishment of the new monitoring station in Verdi.
3. In conjunction with the proposed South Reno SLAMS closure, the overall balance of the PM and ozone network Area Served and Population Served distributions will be improved.
4. In conjunction with the proposed South Reno SLAMS closure, the AQMD will be able to maintain staffing and budgetary capacity.
5. AQMD has received formal approval from the Washoe County School District (WCSD) to establish a SLAMS at the Verdi Elementary School in Verdi. In addition to WCSD approval, AQMD has received approval for rights of entry from Truckee Meadows Water Authority (TMWA). TMWA owns the road to access 180 Bridge St. Verdi, NV (APN 038-060-46) for which will be entry point of the Verdi SLAMS.
6. The proposed location will not prohibit any planned future development included in the Washoe County School District Master Plan.

Figure 1
Proposed Changes to Washoe County Monitoring Network



Proposed Verdi SLAMS Detailed Site Information

Site Name:	Verdi
AQS ID:	32-031-2010
Geographical coordinates:	39° 31.257' N, 119° 59.309' W
Elevation:	4,895'
Assessor's Parcel Number:	038-060-27
Owner:	Washoe County School District Board
Location:	South side of Verdi Elementary School
Street address:	180 Bridge St. Verdi, NV 89439
County:	Washoe
Distance to road:	190 meters to SR425 E, 23 meters to Power House Rd.
Traffic count:	2500 AADT (2021-2023) (NDOT ATR 0310012 – SR425 E, 155' W of Second St.)
Groundcover:	Decomposed Granite
Representative area:	Reno-Sparks MSA
Hydrographic Area	91

Figure 2
Proposed Verdi SLAMS (looking north)

Proposed Verdi SLAMS

Pollutant, POC	PM_{10}, 1	$PM_{2.5}$, 1	$PM_{10-2.5}$, 1	O_3, 1
Primary / QA Collocated / Other	Primary	Primary	Primary	n/a
Parameter code	81102 & 85101	88101	86101	44201
Basic monitoring objective(s)	NAAQS comparison	NAAQS comparison	Research Support	NAAQS comparison
Site type(s)	Population Exposure	Population Exposure	n/a	Population Exposure
Monitor type	SLAMS	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a	n/a
Instrument manufacturer / model	Met One BAM 1020	Met One BAM 1020	Met One BAM 1020 Coarse Pair	TAPI T400
Method code	122	170	185	087
FRM / FEM / ARM / Other	FEM	FEM	FEM	FEM
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	01/01/2026 (est)	01/01/2026 (est)	01/01/2026 (est)	01/01/2026 (est)
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	4.7 meters	4.7 meters	4.7 meters	4.8 meters
Distance from supporting structure	2.0 meters	2.0 meters	2.0 meters	2.1 meters
Distance from obstructions on roof	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	n/a	n/a	n/a	n/a
Horizontal distance from trees	n/a	n/a	n/a	n/a
Vertical height of tree above probe	n/a	n/a	n/a	n/a
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	No	No	No	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a	Teflon
Residence time	n/a	n/a	n/a	6 seconds
Proposed modifications within the next 18 months?	n/a	n/a	n/a	n/a
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	Yes	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	Bi-weekly and quarterly audits	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a	Bi-weekly (3 point)
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a	n/a
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a	n/a

Proposed Verdi SLAMS

Pollutant, POC	Wind Speed, 1	Wind Direction, 1	Ambient Temperature, 1
Primary / QA Collocated / Other	n/a	n/a	n/a
Parameter code	61101	61102	62101
Basic monitoring objective(s)	Public Information	Public Information	Public Information
Site type(s)	n/a	n/a	n/a
Monitor type	SLAMS	SLAMS	SLAMS
Network affiliation(s)	n/a	n/a	n/a
Instrument manufacturer / model	Met One 30.5	Met One 30.5	Met One 063-1
Method code	071	071	040
FRM / FEM / ARM / Other	n/a	n/a	n/a
Collecting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Analytical Lab	n/a	n/a	n/a
Reporting Agency	NNPH - AQMD	NNPH - AQMD	NNPH - AQMD
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Monitoring start date	01/01/2026 (est)	01/01/2026 (est)	01/01/2026 (est)
Current sampling frequency	Continuous	Continuous	Continuous
Required sampling frequency	n/a	n/a	n/a
Sampling season	01/01 – 12/31	01/01 – 12/31	01/01 – 12/31
Probe height	10.0 meters	10.0 meters	5.0 meters
Distance from supporting structure	10.0 meters	10.0 meters	5.0 meters
Distance from obstructions on roof	n/a	n/a	n/a
Distance from obstructions not on roof	None	None	None
Horizontal distance from trees	n/a	n/a	n/a
Vertical height of tree above probe	n/a	n/a	n/a
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
For low volume PM instruments, is any PM instrument within 1 meter?	n/a	n/a	n/a
For high volume PM instruments, is any PM instrument within 2 meters?	n/a	n/a	n/a
Unrestricted airflow	360 degrees	360 degrees	360 degrees
Probe material	n/a	n/a	n/a
Residence time	n/a	n/a	n/a
Proposed modifications within the next 18 months?	n/a	n/a	n/a
Is it suitable for comparison against the annual $PM_{2.5}$ NAAQS?	n/a	n/a	n/a
Frequency of flow rate verification for manual samplers (PM)	n/a	n/a	n/a
Frequency of flow rate verification for automated analyzers (PM)	n/a	n/a	n/a
Frequency of one-point QC check (gaseous)	n/a	n/a	n/a
Date of annual performance evaluation (gaseous & meteorological)	n/a	n/a	n/a
Date of two semi-annual flow rate audits (PM)	n/a	n/a	n/a

Figure 3
Proposed Verdi SLAMS Site Plan

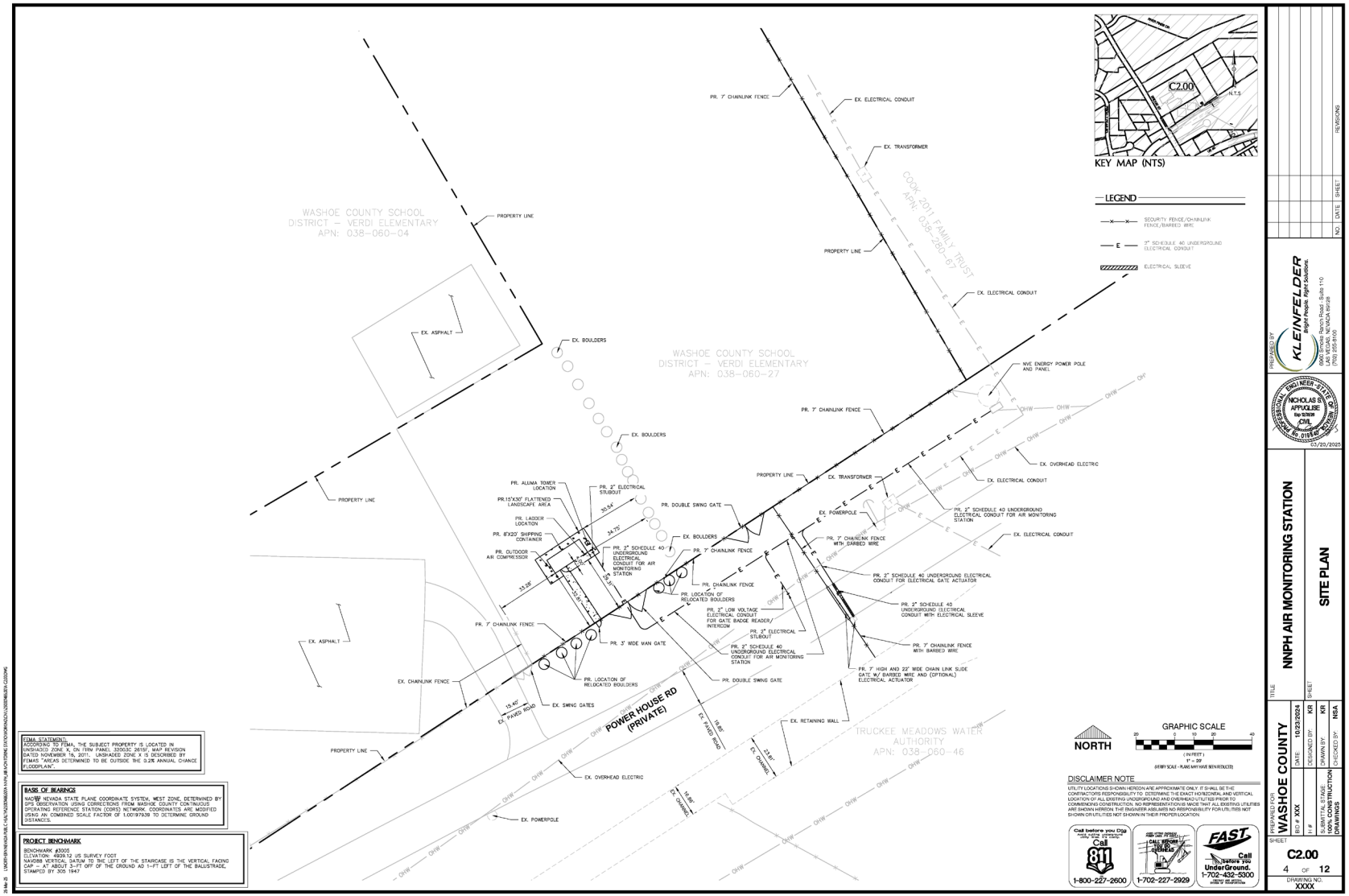


Figure 4
Proposed Verdi SLAMS Distance to Roadway

Figure 5
Proposed Verdi SLAMS Shelter Description

Monitoring Station

1. Quick Space container shelter, 8’ 6” x 20’, anchor mounted.
2. 10-meter, T-135 telescoping Aluma Tower with building brackets (no guy wiring).
3. 200A, single-phase 120V/240V underground power service.
4. Chain link security fence, 7’ in height.

Instrumentation (inside shelter)

1. Teledyne-API T400 ozone analyzer.
2. Teledyne-API T700 Calibrator.
3. Teledyne-API T701 Zero Air Generator.
4. Met One BAM 1020 continuous PM_{10} monitor.
5. Met One BAM 1020 continuous $PM_{2.5}$ monitor.
6. Agilaire 8872 data logger.
7. T-Sentry 140 Station Temp sensor.

Instrumentation (on tower)

1. Met One 30.5 sonic anemometer.
2. Met One 063-1 ambient temperature sensor.

Instrumentation (on roof)

1. Met One BAM 1020 PM_{10} inlet.
2. Met One BAM 1020 $PM_{2.5}$ inlet.
3. Wireless Broadband Antenna

Interior Heating/Cooling

1. Mitsubishi 1.5 Ton Mini Split System.

Appendix C

NOy Waiver Request

NORTHERN NEVADA Public Health | Air Quality

February 5, 2025

Dena Vallano
Manager, Monitoring and Analysis Section
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Subject: Request for NOy Waiver

Dear Ms. Vallano,

Northern Nevada Public Health, AQMD has been operating a federally mandated NOy instrument as part of EPA NCore requirements since 2020 at our Reno4 site (AQS ID 32-031-0031) and between 2011 and 2020 at our Reno3 site (AQS ID 32-031-0016). Hourly average data from the monitor has been submitted to the EPA AQS database using the required method code 699 and parameter code 42600.

The analysis of 24-hour NOx vs. NOy averages shows statistically insignificant differences between NOx and NOy measurements as demonstrated in the three figures included below. Since the middle of 2024, the amount of time and financial resources spent on NOy monitoring has far exceeded that of the other parameters at the Reno4 monitoring site. Additionally, an instrument malfunction has caused a loss of the previous two quarters of data. Neither the manufacturer's technical support staff, nor AQMD have been able to identify the problem. In order to better utilize the resources of AQMD, we are requesting that the EPA Administrator grant a waiver permitting NOx monitoring to be substituted for the required NOy monitoring at the Reno4 NCore site as allowed in 40 CFR Part 58 Appendix D.3: Design Criteria for NCore sites.

The data represented in the figures below support the case that the difference between NOx and NOy measurements at Reno4 are statistically insignificant and that on average NOz is non-existent. The data used to create the analysis comes from the EPA AQS database and is available for independent verification by EPA if desired. AQMD proposes to close this monitor immediately upon receipt of an approval letter from the Administrator.

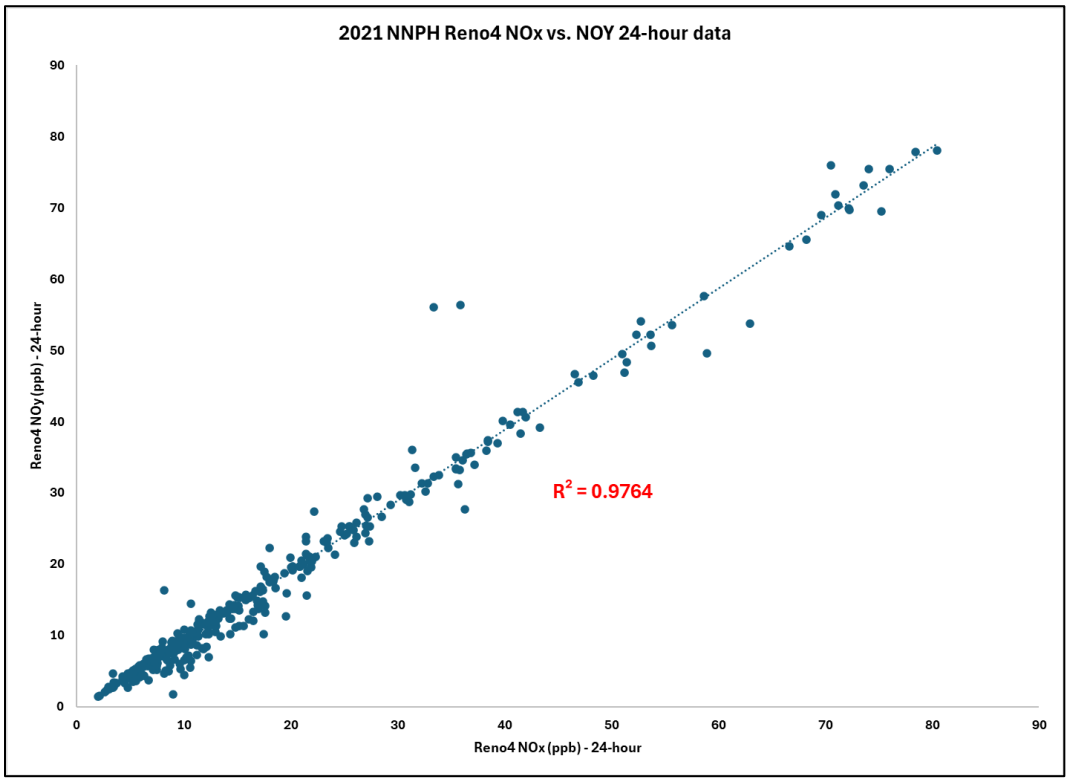
Please contact Matthew McCarthy at (775) 784-7205 if you have any questions or concerns.

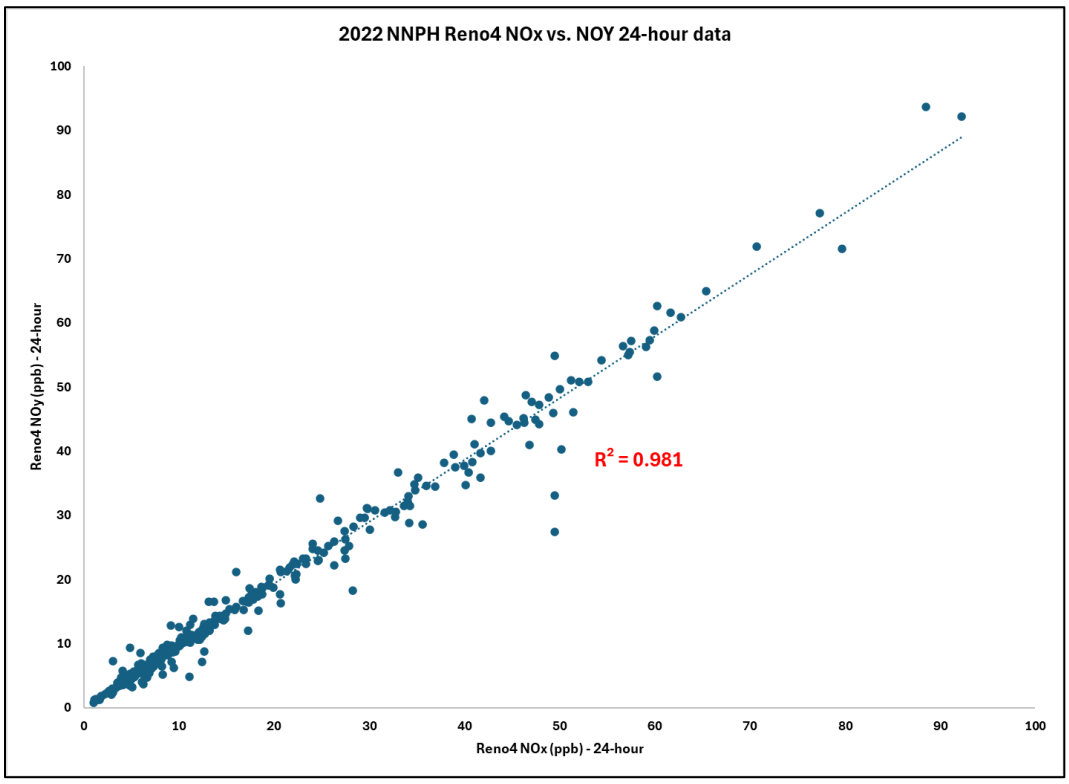
Sincerely,

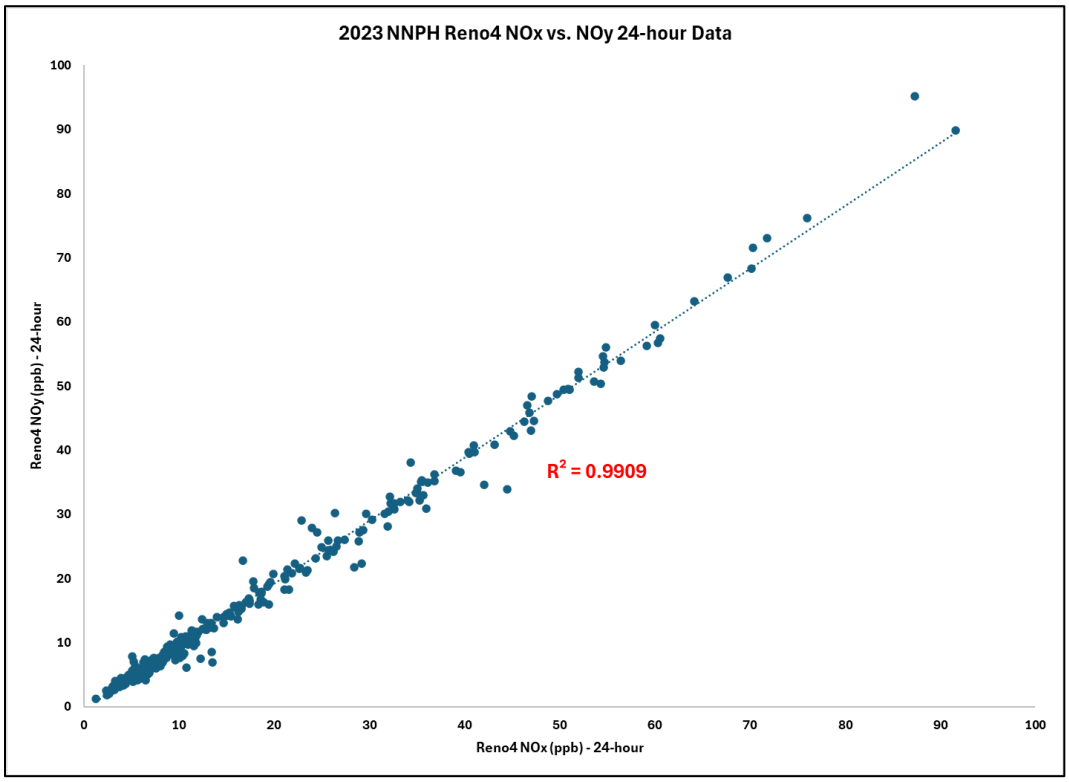
Francisco Vega

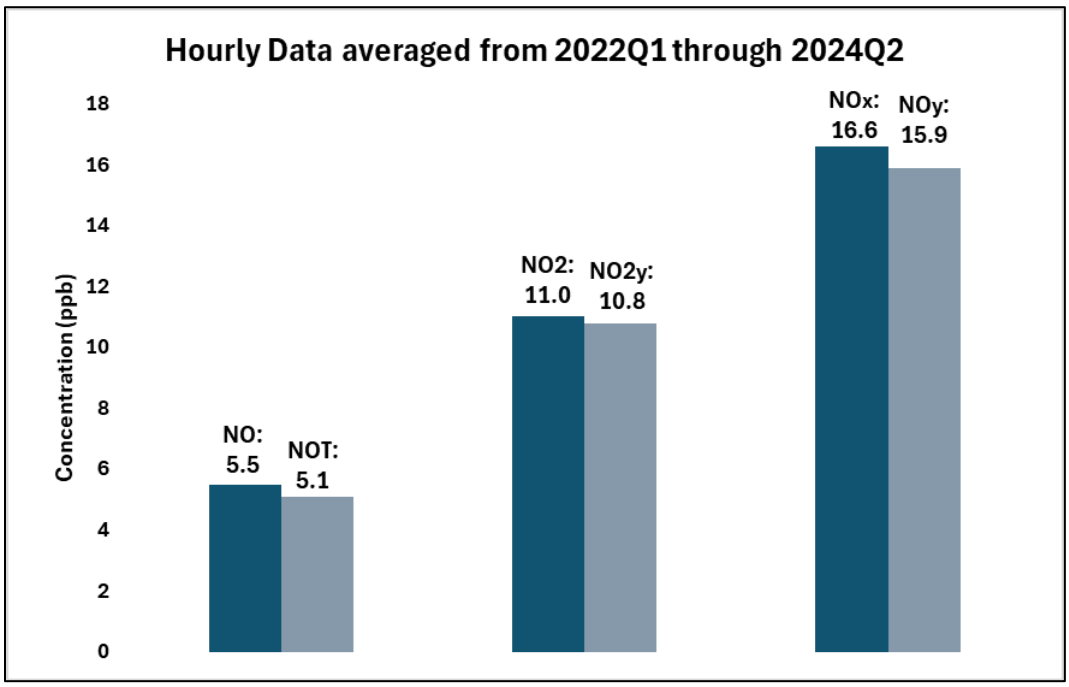
Francisco Vega, P.E., MBA
Director, Air Quality Management Division
Northern Nevada Public Health

cc:
Laura Berry, EPA Region 9
Craig Petersen, AQMD
Matthew McCarthy, AQMD


2021 NNPH Reno4 NOx vs. NOY 24-hour data
Reno4 NOy (ppb) - 24-hour
Reno4 NOx (ppb) - 24-hour
R² = 0.9764
0
10
20
30
40
50
60
70
80
90


2022 NNPH Reno4 NOx vs. NOY 24-hour data
Reno4 NOy (ppb) - 24-hour
Reno4 NOx (ppb) - 24-hour
R² = 0.981
0
10
20
30
40
50
60
70
80
90
100





AIR QUALITY MANAGEMENT DIVISION
1001 East Ninth Street, Building B-171, Reno, Nevada 89512
AQMD Office: 775-784-7200 I Fax: 775-784-7225 I OurCleanAir.com
Serving Reno, Sparks and all of Washoe County, Nevada.

Appendix D

Sparks Met Removal

From: Barry, Laura
To: McCarthy, Matthew
Subject: RE: Discontinuation of WSP,WDR, and Ambient Temp at Sparks
Date: Monday, March 3, 2025 11:39:16 AM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png

Thanks Matt!

From: McCarthy, Matthew <MMcCarthy@nnph.org>
Sent: Thursday, February 27, 2025 2:12 PM
To: Barry, Laura <Barry.Laura@epa.gov>
Cc: Petersen, Craig <CPetersen@nnph.org>; McMullen, Ben <BMcMullen@nnph.org>; Schnieder, Brendan <BSchnieder@nnph.org>; Crawford, Michael <MCrawford@nnph.org>; Volk, Jordan <JVolk@nnph.org>
Subject: Discontinuation of WSP,WDR, and Ambient Temp at Sparks

Hi Laura,

Back in October, we notified you that we were planning on discontinuing the collection of Wind Speed, Wind Direction, and Ambient Temperature continuous data at our Sparks site (AQS: 32-031-1005). As you mentioned in the meeting, there is no approval process required for us to stop collecting this data, but I wanted to notify you that we did end up following through with that. We will not be reporting this data into AQS starting with the January 1, 2025 data. An end date will be set in AQS for December 31, 2024. The ANP will reflect this change going forward.

Thank you!

Matt McCarthy
Senior Air Quality Specialist

NORTHERN NEVADA
Public Health

Air Quality Management Division

O: 775-784-7205
1001 E Ninth St. Bldg. B Reno, NV 89512

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