WASHOE COUNTY HEALTH DISTRICT ENHANCING QUALITY OF LIFE

Ozone Wildfire Mitigation Plan

June 28, 2023

Submitted to U.S. EPA Region 9
Month Day, 2023







VISION

A healthy community

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 Washoe County Health District, Air Quality Management Division

AQS Air Quality System CAA Clean Air Act

CFR Code of Federal Regulations

CO Carbon Monoxide EC Elemental Carbon

EED Exceptional Event Demonstration

EER Exceptional Events Rule

EPA U.S. Environmental Protection Agency

HA 87 Hydrographic Area 87

MOU Memorandum of Understanding

NAAQS National Ambient Air Quality Standards

NCore National Core Multi-Pollutant Monitoring Station

NO₂ Nitrogen Dioxide
 NO_x Oxides of Nitrogen
 NWS National Weather Service

OC Organic Carbon

O₃ Ozone

PM Particulate Matter

 $PM_{2.5}$ 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_{coarse} PM_{10} minus $PM_{2.5}$

PA PurpleAir

RWC Residential Wood Combustion

SEP Supplemental Environmental Program SLAMS State and Local Air Monitoring Station

SMP Smoke Management Program

SO₂ Sulfur Dioxide

USFS United States Forest Service

VMT Vehicle Miles Traveled

1.0 Mitigation of Exceptional Events

1.1 Mitigation of Exceptional Events Requirements

On October 3, 2016, the U.S. Environmental Protection Agency (EPA) finalized revisions to the "Treatment of Data Influenced by Exceptional Events", regulations that govern the exclusion of event-influenced air quality data from certain regulatory decisions under the Clean Air Act (CAA) Section 319(b). This rule is known as the Exceptional Events Rule (EER). The EER contains definitions, procedural requirements, requirements for air agency demonstrations, and criteria for EPA approval for the exclusion of air quality data from regulatory decisions. As part of EPA's mission to protect public health, the EER also requires mitigation plans for areas with known, recurring events that caused exceedances of the National Ambient Air Quality Standards (NAAQS). On August 31, 2018, Washoe County Air Quality Management Division submitted a Wildfire Mitigation Plan for PM_{2.5} to EPA which determined the plan to be complete on November 26, 2018. In April of 2022, EPA notified the Washoe County Air Quality Management Division (AQMD) that the region is subject to additional mitigation plan requirements related to Ozone (O₃) during wildfire events. The EER "specifies the mitigation plan requirement applies to events of the same type and pollutant (such as high wind dust/particulate matter (PM), wildfire/ozone, fireworks/PM) ..." which means that AQMD is required to develop and submit a Wildfire Mitigation Plan for O₃.

Under 40 CFR 51.930, a state requesting to exclude air quality data due to exceptional events must take appropriate and reasonable actions to protect public health from exceedances or violations of the NAAQS. At a minimum, the State must:

- 1. Provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard;
- 2. Provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following an exceptional even; and
- 3. Provide for the implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by exceptional events.

Mitigation Plan components must, at a minimum, contain provisions for the following:

- 1. Public notification to and education programs for affected or potentially affected communities. Such notification and education programs shall apply whenever air quality concentrations exceed or are expected to exceed a NAAQS with an averaging time that is less than or equal to 24-hours.
- 2. Steps to identify, study, and implement mitigating measures, including approaches to address each of the following:
 - a. Measures to abate or minimize contributing controllable sources of identified pollutants.
 - b. Methods to minimize public exposure to high concentrations of identified pollutants.
 - c. Processes to collect and maintain data pertinent to the event.
 - d. Mechanisms to consult with other air quality managers in the affected area regarding the appropriate responses to abate and minimize impacts.

Additional components of the plan must include provisions for periodic review and evaluation of the mitigation plan and its effectiveness as well as a 30-day public comment period and any public comment documentation received.

This mitigation plan meets the requirements of 40 CFR 51.930 and underwent 30-day public comment period pursuant to 40 CFR 51.930(b)(2) from June 28 to July 28, 2023 (see Appendix C).



2.0 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 surrounded by mountain ranges. To the west, the Sierra Nevada rise 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.

According to local climatological data, the average annual wind speed measured in Reno is 6.3 miles per hour (mph). January is the calmest month (4.6 mph) with April being the windiest (8.2 mph). Wintertime (November-January) averages 4.8 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 7.40 inches of precipitation per calendar year.

Figure 1 Washoe County, Nevada



Maximum temperatures of 90 °F or above normally occur between July 3 and August 21. Maximum temperatures typically peak at 94 °F between July 22 and July 29.

The 2020 population of Washoe County was 486,492, as reported by the 2020 census. Approximately two-thirds of Washoe County's residents live in the Truckee Meadows, which includes the cities of Reno and Sparks. Anthropogenic activities such as transportation, manufacturing, freight distribution, and residential wood-burning are also concentrated in the Truckee Meadows.

2.1 O₃ and O₃ Precursors

Washoe County experiences two distinct air pollution seasons - wintertime particulate matter and summertime ozone. Ground-level O_3 is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. The higher UV intensity and higher temperatures in the summer cause more ground-level O_3 formation, causing higher ambient levels of O_3 .

Washoe County, and Reno/Sparks in particular, has historically low ambient O_3 concentrations during winter months, but higher concentrations during the summer months. Ambient O_3 concentrations during these times can be close to or exceed the 8-hour O_3 NAAQS. According to previous emissions inventories, mobile sources make up a large portion of NO_x and VOC emissions within Washoe County. In addition to mobile sources, stationary point sources emit O_3 precursors within Washoe County. Examples of these sources include fuel dispensing facilities, geothermal plants, printing presses, and emergency backup-up generators. All these sources that emit more than two lbs/day of pollutant are required to hold an operating permit with AQMD and adhere to local and federal regulations governing air quality management. Field inspections are completed for each of these sources to determine compliance with operating permit conditions, local regulations, and federal regulations.

Emissions from wildfires can cause significant air pollution episodes in Washoe County. Winds can transport smoke and other pollutants from wildfires hundreds of miles away. The initial impact will be reduced visibility. If the smoke reaches ground level, then increases in all air pollutants will be noticeable. The best air pollutant indicators are PM_{2.5}, PM₁₀, NO₂, and CO. An increase in O₃ can sometimes, but not always, be associated with wildfire smoke. Elemental Carbon (EC) and Organic Carbon (OC) are also good wildfire smoke markers, especially if the fires occur outside the residential wood combustion (RWC) season.

3.0 Wildfire Events

Due to the increasing frequency of wildfires, smoke impacts from fires in and surrounding Nevada are contributing to exceedances of the 8-hour O₃ NAAQS. Wildfire activity and smoke impacts are typically highest during the wildfire season/summer months (June, July, August, and September). Wildfire events in 2020, 2021, and 2022 impacted Washoe County contributing to exceedances of the 8-hour O₃ NAAQS with 32 of the 37 exceedances occurring in the same day as wildfire events. Over the last ten years the majority of O₃ exceedances were wildfire smoke influenced. See the Washoe County Air Quality Management Reports and Data on OurCleanAir.com for the 2015 and 2016 Exceptional Event Demonstrations. Each EED included a section on public outreach and media coverage.



4.0 Public Notification and Education Programs

4.1 Public Notification

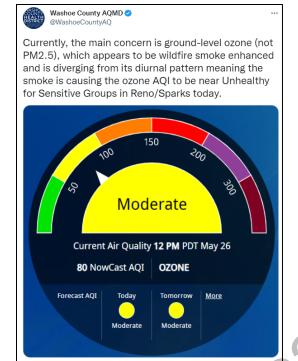
In 2013, AQMD created Facebook and Twitter pages and a YouTube channel. As part of improving outreach and the educational component of AQMD's mission statement, AQMD created these social media pages to serve as a direct and prompt outlet to the public and other entities for the daily air quality index update, wintertime burn codes, and emergency situations, such as exceptional events.

The AQMD collaborates with the National Weather Service (NWS) and local media to provide timely notifications to the public throughout the year and especially during wildfire events. The AQMD leverages NWS and local media's hundreds of thousands of social media followers to share accurate and consistent information to the community. The AQMD, NWS, and local media all follow each other's social media. When one organization updates their social media, it's shared and delivered to the public almost immediately. This collaboration also ensures consistent messaging.

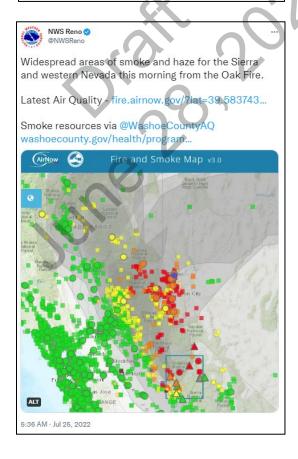
The NWS and many of the local media outlets receive EnviroFlash updates directly or via AQMD's social media. EnviroFlash provides daily air quality forecasts and alerts when the AQI reaches harmful levels. These partnerships allow the public to receive timely information about precautions they can take to reduce exposure to the high levels of air pollution.

The AQMD provides prompt notifications throughout exceptional events to the public and local media. Air Quality Index (AQI) Forecasts and Air Alerts were distributed daily, or more frequently depending on conditions, via EnviroFlash. Air quality information is also available from the AQMD website (OurCleanAir.com), social media (Facebook, Twitter, YouTube), and Air Quality Hotline [(775) 785-4110]. The AQMD provided appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by the exceptional events by providing health advisories on a daily basis based on the AQI range.

Below are examples of public notifications during exceptional events when air quality concentrations exceeded or were expected to exceed the NAAQS.



12:40 PM · May 26, 2022







The district believes air quality will get worse Saturday evening and Sunday, with air quality possibly reaching the Very Unhealthy range by Sunday.



KOLOTV.COM

Health District: Air quality could reach very unhealthy by Sunday

The district believes air quality will get worse Saturday evening and Sunday, with air quality possibly...



HOME WASHOE COUNTY HEALTH DISTRICT LIBRARY SYSTEM NEWSLETTERS MEDIA - SIGN UP

OZONE AIR POLLUTION AT WORST LEVEL IN 10 YEARS DUE TO WILDFIRES

by Scott Oxarart | Jul 30, 2018

Reno, Nev.- Several wildfires here and in California have caused air quality to deteriorate over the past week. Health officials in Washoe County Health District's Air Quality Management have reported that Washoe County experienced the highest (worst) level of ozone air pollution since 2008. An Air Quality Index (AQI) for ozone was 140 this past Sunday, Unhealthy for Sensitive Groups. The highest ever for ozone in Washoe County was an AQI of 164 in 1984, Unhealthy, Grand-level ozone is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in the presence of sunlight. While NOx and VOCs usually come from motor vehicles, industrial processes and other consumer products, wildfire smoke also contains pollutants that form ozone. The air pollutant called fine particulate matter (PM2.5) also found in wildfire smoke remains elevated in the Unhealthy for Sensitive Groups AQI range and will be a concern for the next couple of days.

4.2 NWS Area Forecast Discussions

The AQMD collaborates with the Reno NWS, especially during air pollution events such as wildfires. This partnership has increased the efficiency of the forecast discussions to include information specific to wildfires and smoke impacts to the Reno/Sparks area. The NWS Forecast Office in Reno, Nevada issues at least two daily Area Forecast Discussions summarizing the short and long-term weather forecast. It also provides a synopsis of current observations as well as weather events such as smoke and haze. Below is an excerpt from an Area Forecast Discussion issued during the Caldor and Dixie Fire.

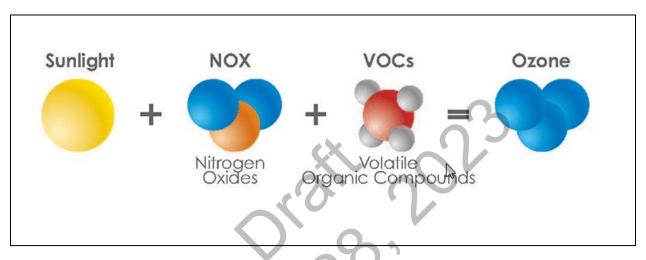
"The persistent southwest to west lower-level winds each afternoon and evening will allow an increased incursion of dense smoke from the Caldor and Dixie fires into the eastern Sierra and western NV. Some improvement in air quality is possible each afternoon and evening as mixing allows for some dispersion of smoke particulates only to have air quality once again degrade late at night and in the morning."

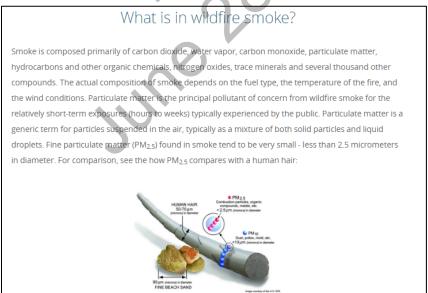
Excerpt from NWS-Reno Area Forecast Discussion (214 AM PDT SAT AUG 23, 2021)

4.3 O₃ Outreach Program

As part of the Keep it Clean outreach program, the nOzone initiative was developed in 2015 to educate the public on how they can help reduce O_3 and what they should do to protect their health during times of high O_3 concentrations. nOzone is promoted during air quality awareness week, wildfire season, and summer O_3 season on AQMD's website (OurCleanAir.com) and through social media.

The website explains what O_3 is and how it is created at the surface level. The website also touches on sources of O_3 precursors, health effects of O_3 , what AQMD is doing to reduce O_3 , and what the public can do to reduce O_3 . Below are images from the AQMD website regarding the ozone and wildfire smoke.

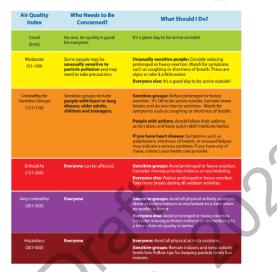




What are the health effects of wildfire smoke?

The effects of smoke range from eye and respiratory tract irritation to more serious disorders, including reduced lung function, bronchitis, exacerbation of asthma, and premature death. Studies have found that PM_{25} is linked (alone or with other pollutants) with increased mortality and aggravation of pre-existing respiratory and cardiovascular disease. In addition, particulates are respiratory irritants, and exposures to high concentrations of particulate matter can cause persistent cough, phlegm, wheezing and difficulty breathing. Particles can also affect healthy people, causing respiratory symptoms, transient reductions in lung function, and pulmonary inflammation. PM_{25} can also affect the body's immune system and make it more difficult to remove inhaled foreign materials from the lung, such as pollen and bacteria.

Air quality index (AQI) for PM_{2.5}



What you can do to protect yourself and Be Smoke Smart

- · Stop outdoor activity; stay inside and reduce activity.
- Keep AC on if available, the fresh-air intake closed, filter clean, and windows closed.
- Don't use whole-house fans and swamp coolers.
- Pay attention to air quality on AirNow.gov, your local air district website (OurCleanAir.com), and local media.
- Consult local visibility guide to approximate air quality.
- Follow the advice of your doctor especially those with heart or lung disease.
- · Don't rely on dust masks.
- Stay hydrated.
- Keep indoor air clean; don't burn candles, vacuum, or smoke tobacco products.
- · Consider relocating temporarily.
- Prevent other wildfires from happening by Living with Fire.

Recommendations for Schools and Child Cares on Poor Air Quality Days Air Quality Index (AQI) Table for Ozone and $PM_{2.5}$ with Visibilities for Wildfire Smoke¹

₽			
Activity	Good=0 to 10 miles (Visibility 10 miles and up)	Moderate=5 to 10 (6 to 10 miles)	Unhealthy for Sensitive Groups*= < 5 miles (0 to 5 miles)
Recess (15 min)	No Restrictions	No Restrictions	Make indoor space available to all children especially those with lung/heart illnesses or who complain about difficulty breathing.
P.E. (1 hr)	No Restrictions	No Restrictions	Make indoor space available to all children. High school students with lung/heart conditions should limit prolonged or heavy exertion.
Scheduled Sporting Events	No Restrictions	Unusually sensitive children and high school students should limit prolonged or heavy exertion during scheduled sporting events.	High school students with asthma or other respiratory or cardiovascular illness should be medically managing their condition. Increase rest periods and substitutions to lower breathing rates.
Athletic Practice and Training (2 to 4 hrs)	No Restrictions	Unusually sensitive children and high school students should limit prolonged or heavy exertion during practice or training.	High school students with asthma or other respiratory or cardiovascular illness should be medically managing their condition. Increase rest periods and substitutions to lower breathing rates.

¹ Visibility conversions to AQI were taken from "Wildfire Smoke: A Guide for Public Health Officials" (Rev. July 2008 with 2012 AQI updates)

*Children are anyone from Infant to 8th Grade. High School Students are indicated and assumed to be the participants for Scheduled Sporting Events and Practice and Training activities. For children, consideration for relocation or rescheduling should be given at the Unhealthy for Sensitive Groups range for Sporting Events and Practice and Training activities.

5.0 Steps to Identify, Study, and Implement Mitigating Measures

5.1 Minimize Contribution of Local O₃ Precursor Emissions

5.1.1 AQMD Permitting and Compliance Program

As the delegated authority within Washoe County, AQMD implements a permitting and compliance program in which sources within Washoe County are required to hold and follow a Permit to Operate if their source has the potential to emit more than two pounds per day of any criteria pollutant or one pound per day of any toxic pollutant. Such sources are inspected on a regular basis to determine compliance with the conditions of the Permit to Operate. Some examples of permitted O₃ precursor sources within Washoe County are fuel dispensing stations, geothermal plants, printing presses, and emergency back-up generators. Many of these sources are required to utilize control techniques to decrease emissions as per federal or local regulations.

5.1.2 Emergency Episode Plan - Regulation 050

In July of 2021, the Washoe County District Board of Health adopted the Emergency Episode Plan created by AQMD - District Board of Health Regulations Governing Air Quality Management (050.001). The purpose of the rule is to advise residents of Washoe County when air pollution levels may be harmful to their health and initiate corrective control measures to prevent elevated criteria air pollutant concentrations that would cause harm to the Washoe County population. The emergency episode levels are categorized into four stages. The pollutant concentrations required for each level to be called are shown in Table 1 below. Depending on the stage of the emergency episode, the Control Officer has the ability to require the curtailment of wood-burning devices, prescribed/open burning, commercial solid fuel burning, incinerators or crematoriums, and operations of specific public, commercial, or industrial establishments which are not deemed necessary for public health and are contributing to the declared emergency episode.

Table 1
Emergency Episode Stage Levels

Air Pollutant	Averaging Time	Stage 1	Stage 2	Stage 3	Stage 4
Particulates (PM _{2.5})	24 Hour	35.4 µg/m³	55.4 µg/m³	150.4 µg/m³	250.4 μg/m ³
Particulates (PM ₁₀)	24 Hour	154 µg/m³	254 µg/m³	354 µg/m³	424 µg/m³
Ozone (O ₃)	8 Hour	0.070 ppm	0.085 ppm	0.105 ppm	0.2 ppm
Carbon Monoxide (CO)	8 Hour	9.4 ppm	12.4 ppm	15.4 ppm	30.4 ppm
Sulfur Dioxide (SO ₂)	1 Hour	75 ppb	185 ppb	304 ppb	n/a
Nitrogen Dioxide (NO ₂)	1 Hour	100 ppb	360 ppb	649 ppb	1249 ppb

5.1.3 Vehicle I/M Program within Washoe County (Smog Check Program)

In 1983, the Nevada legislature approved an annual Inspection and Maintenance (I/M) program for controlling tailpipe emissions in both Washoe County and Clark County. The program began operating in October of 1983 and requires that vehicles with a model year of 1968 or newer complete a tailpipe emission test and inspection annually, with some exceptions for classic vehicles, brand new vehicles, and diesel vehicles greater than 14,000 pounds of gross weight. Vehicles that do not pass the test are required to undergo maintenance or repairs to fix the issue. Although the program was originally developed to control carbon monoxide emissions, O₃ precursor emissions are also measured during the test. According to recent emissions inventories, On-road Mobile sources make up a large part of O₃ precursor emissions. The I/M program decreases the amount of these emissions year-round. Recently, the Nevada State Legislature voted to strengthen the I/M program by closing a loophole regarding classic vehicle registration. The bill (AB 349) was passed in the 2021 legislative session and went into effect January of 2023.

5.1.4 Participation in EPA's O₃ Advance Program

With the recent strengthening of the 8-hour O₃ NAAQS in 2015, AQMD recognized how close the Washoe County region is to the new standard. Shortly after the new 8-hour NAAQS was promulgated, AQMD requested admittance into EPA's Ozone Advance Program. In February of 2016, Washoe County AQMD was formally accepted by the EPA to participate in the Ozone Advance Program. The purpose of the program is to encourage voluntary initiatives throughout the region to help stay in attainment with the standard. Resolutions of Support have been signed by local partners such as the District Board of Health, City of Reno, Regional Planning Governing Board, Regional Transportation Commission, City of Sparks, and Washoe County Board of County Commissioners. Many local initiatives have been made to decrease surface level O₃ formation such as reduction of Vehicle Miles Traveled (VMTs) through trip reduction strategies, and reduction of the Urban Heat Island Effect by planning to increase tree canopy.

5.2 Minimize Public Exposure

5.2.1 Keep it Clean Outreach Program

Keep it Clean is the AQMD outreach program developed in 2012 to increase public awareness and engage the citizens of Washoe County to keep our air clean (see graphic below). Community action components to help mitigate air pollution concerns include:

- Know the Code, a wood burning advisory program;
- Rack Em Up, an alternative transportation program;
- nOzone, a smog prevention program;
- Be Smoke Smart, a wildfire awareness program, and
- <u>Be Idle Free</u>, an education program to encourage the community to reduce unnecessary engine idling.

Each program encourages emission reduction and empowers citizens to take positive actions to Keep it Clean. The Keep it Clean brand has greatly increased public awareness of air quality, improved access to information regarding air quality and has successfully reached the community as indicated in website statistics, residential wood use surveys, and outreach participation. Additionally, Keep it Clean won the 2014 EPA Gregg Cooke Visionary Program Award.



(AQMD) brand developed in 2012 to increase public awareness and engage citizens of Reno, Sparks, and Washoe County, Nevada to keep our air clean.



Know the Code is used from November through February to inform the public daily when it is alright to burn and when it is not by using color coded icons



Rack Em Up is promoted throughout the year to encourage active





oke Smart is promoted during wildfire season to protect public health



Be Idle Free is promoted year round by encouraging the community to turn off their engine while not driving.





775-784-4110 Hotline 775-784-7200 General Info OurCleanAir.com

Sponsored by the Washoe County Health District Air Quality Management Division $oldsymbol{ ext{f}}oldsymbol{ ext{v}}$



5.2.2 Additional Monitoring

In addition to the current SLAMS monitoring network, the Reno/Sparks area has many low-cost PurpleAir (PA) sensors throughout the region that transmit localized near-time PM_{2.5} data from PurpleAir to the AirNow Fire and Smoke Map. AQMD directs the public to check the AirNow Fire and Smoke Map for more instantaneous localized data. Although the sensors only measure PM_{2.5}, the data is still useful to determine areas that have more localized wildfire impacts and where wildfire caused O₃ formation may have a higher impact. Organizations including the Washoe County School District, University of Nevada, and the Reno Aces have all installed and operate PAs for public use. The AQMD received funding from a Supplemental Environmental Program (SEP) to donate sixteen PAs to local organizations including the Reno/Sparks Indian Colony, Truckee Meadows Parks Foundation, Washoe County Human Services, and Washoe County Libraries in order to address inequity in PM_{2.5} monitoring locations and the gaps in the network.

5.3 Collect and Maintain Data

5.3.1 Monitoring Network

The AQMD began monitoring ambient air quality in Washoe County in the 1960's and currently operates seven State and Local Air Monitoring Stations (SLAMS) (Figure 2), with one site being a National Core Multi-Pollutant Monitoring Station (NCore). The blue boundary delineates HA87 as defined by the State of Nevada, Division of Water Resources. Table 2 lists the parameters monitored in 2023, sorted by site.

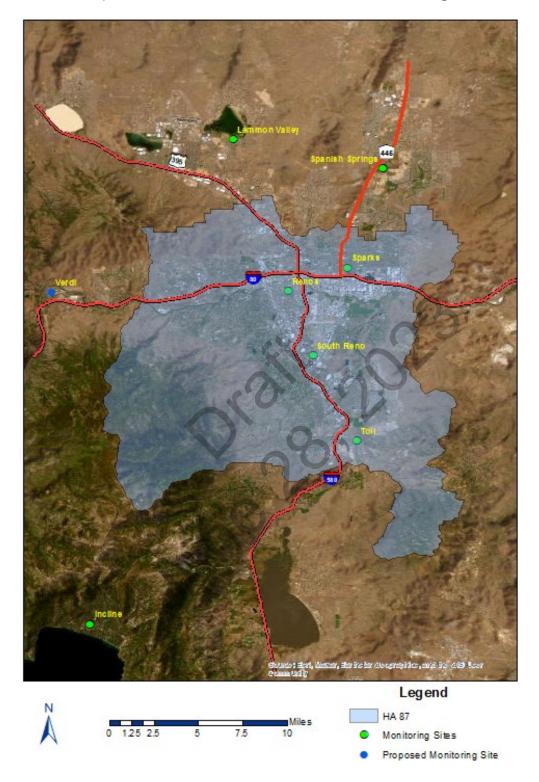
The AQMD's ambient air monitoring network meets the minimum monitoring requirements for all criteria pollutants pursuant to 40 CFR 58, Appendix D. Washoe County's monitoring network is reviewed annually pursuant to 40 CFR 58.10 to ensure the network meets the monitoring objectives defined in 40 CFR 58, Appendix D. Data is collected, quality assured, and certified annually in accordance with 40 CFR 58 and submitted to the Air Quality System (AQS). See Appendix A for the Annual Network Plan Approval Letter and Appendix B for the Data Certification Letter.

Recently, AQMD received American Rescue Plan (ARP) funds through the Enhanced Air Quality Monitoring Grant to build a new SLAMS in Northwest Reno (Verdi) that will measure O_3 , $PM_{2.5}$, PM_{10} , PM_{coarse} , and meteorology. The gathering of data in this region will allow AQMD to better document, forecast, and categorize wildfire events. The Verdi Site is expected to be collecting data for record by 2025.

Table 2 List of Monitoring Sites and Pollutants Monitored in 2023

Site	O ₃	00	Trace CO	Trace NO	NO ₂	NO _x	Trace NOy	Trace SO ₂	PM ₁₀	PM _{2.5}	PM _{coarse}	PM _{2.5} Speciation	Meteorology
Incline	✓												
Lemmon Valley	✓												
Reno4	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
South Reno	✓												✓
Sparks	✓	✓							✓	✓	✓		✓
Spanish Springs	✓								✓	✓	✓		
Toll	✓								✓	✓	✓		✓
Verdi (Proposed for 2025)	✓								✓ (~	✓		✓

Figure 2 Washoe County Health District – AQMD Ambient Air Monitoring Sites in 2023



5.4 Air Agency Consultation and Collaboration

During wildfire events, the AQMD shares information on social media from other air agencies as appropriate and participates in daily coordination calls regarding weather and fire activity to provide information regarding smoke impacts in the area. AQMD also utilizes the State Smoke Blogs, specifically the California Smoke Blog, as a means to monitor smoke impacts and wildfire activity. When additional monitors are deployed in response to a wildfire event through the United States Forest Service (USFS) Wildland Fire Air Quality Response Program, the AQMD monitors the PM_{2.5} interactive monitoring website to determine the AQI in surrounding areas from all sampling monitors. Air Resource Advisors (ARAs) deployed by the USFS to wildfires are also consulted and utilized to gauge the downwind AQI forecasting to the local community.

Utilizing several resources and collaborating with surrounding air agencies during a wildfire event affecting the Mitigation Area allows AQMD to provide appropriate responses to abate and minimize smoke impacts to the public during an event.



6.0 Review and Evaluation Process

This mitigation plan will be reviewed and evaluated no less frequently than every five years.

The mitigation plan review will include an evaluation of:

- Conditions that resulted in O₃ NAAQS exceedance in the Mitigation Area (if appropriate),
- Effectiveness of public notification and education,
- Effectiveness of control measures on identified sources, and
- Efficacy of communication and collaboration between affected air agencies and interested stakeholders.

A decision regarding revision and possible subsequent public comment period will be made after each review and evaluation. Revisions will be submitted to EPA in accordance with 40 CFR 51.930.

7.0 Public Comment

This mitigation plan was prepared to satisfy 40 CFR 51.930 and underwent a 30-day public comment period from June 28, 2023 to July 28, 2023.

A press release was issued by AQMD on June 28, 2023 notifying the public that the Wildfire Mitigation Plan was available for public comment from June 28 through July 28, 2023 (Appendix C). A hard copy was available at the AQMD office and on the website (OurCleanAir.com).

Appendix A Annual Network Plan Approval



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX 75 Hawthorne Street

75 Hawthorne Street San Francisco, CA 94105-3901

October 28, 2022

Francisco Vega Director, Air Quality Management Division Washoe County Health District 1001 East Ninth Street, Building B-171 Reno, Nevada 89512

Dear Director Vega:

Thank you for your submission of the Washoe County Health District (AQMD) 2022 Ambient Air Monitoring Network Plan on June 29, 2022. We have reviewed the submitted document based on the requirements set forth in 40 CFR Part 58. Based on the information provided in the plan, the U.S. Environmental Protection Agency (EPA) approves all portions of the network plan except those specifically identified below.

Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information provided does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. EPA Region 9 also cannot approve portions of the plan for which the EPA Administrator has not delegated approval authority to the regional offices. Enclosure A (A. Annual Monitoring Network Plan Checklist) is the checklist EPA used to review your plan for items that are required to be included in the annual network plan along with our assessment of whether the plan submitted by your agency addresses those requirements. Items highlighted in yellow are those EPA Region 9 is not acting on, as we either lack the authority to approve the specific item, or we have determined that a requirement is either not met or information in the plan is insufficient to judge whether the requirement has been met. Items highlighted in green in Enclosure A require attention in order to improve next year's plan. All comments conveyed via this letter and enclosure should be addressed prior to submittal of next year's annual monitoring network plan to EPA.

Additionally, EPA supports state and local government partners in advancing environmental justice efforts while ensuring compliance with applicable civil rights laws. To this end, we see an opportunity for all monitoring organizations to address and advance environmental justice in their annual network plans. Through the development and implementation of annual network plans, activities to advance environmental justice could include identifying monitoring sites in or near communities with environmental justice concerns, describing how environmental justice is considered in network design, considering environmental justice factors in siting, relocating, or discontinuing air monitors, and engaging with specific communities when plans are out for public comment. EPA encourages monitoring organizations to continue considering these issues throughout the year, and to convey yearly

updates to the public and EPA on these important areas through the annual network plan process. EPA's EJSCREEN mapping and screening tool, including the environmental justice indexes and demographic indicators, may be useful in support of these efforts. We also encourage you to provide us with any suggestions or requests that could further advance environmental justice in your ambient air monitoring programs.

If you have any questions regarding this letter or the enclosure, please feel free to contact me at (415) 947-4134 or Randall Chang at (415) 947-4180.

Sincerely,

Gwen Yoshimura, Manager Air Quality Analysis Office

Enclosure:

A. Annual Monitoring Network Plan Checklist

cc (via email): Daniel Timmons, AQMD Craig Peterson, AQMD

¹ U.S. EPA. 2022. EJScreen: Environmental Justice Screening and Mapping Tool, Version 2.0, https://www.epa.gov/ejscreen.

A. ANNUAL MONITORING NETWORK PLAN CHECKLIST

(Updated June 21, 2022)

Year: 2022

Agency: Washoe County Health District (AQMD)

40 CFR 58.10(a)(1) requires that each Annual Network Plan (ANP) shall provide for the documentation of the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations that can include FRM, FEM, and ARM monitors that are part of SLAMS, NCore, CSN, PAMS, and SPM stations.

40 CFR 58.10(a)(1) further directs that, "The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement." On this basis, review of the ANPs is based on the requirements listed in 58.10 along with those in Appendices A, C, D, and E.

EPA Region 9 will not take action to approve or disapprove any item for which Part 58 grants approval authority to the Administrator rather than the Regional Administrators, but we will do a check to see if the required information is included and correct. The items requiring approval by the Administrator are: NCore, and Speciation (STN/CSN).

Please note that this checklist summarizes many of the requirements of 40 CFR Part 58, but does not substitute for those requirements, nor do its contents provide a binding determination of compliance with those requirements. The checklist is subject to revision in the future and we welcome comments on its contents and structure.

Key:

White	meets the requirement
Yellow	requirement is not met, or information is insufficient to make a determination. Action requested in next year's plan or outside the ANP
	process.
Green	item requires attention in order to improve next year's plan

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
GENERA	L PLAN REQUIREMENTS				
1.	Submit plan by July 1st	58.10 (a)(1)	letter dated and emailed plan received June 29, 2022	Y	
2.	30-day public comment / inspection period	58.10 (a)(1); 58.10 (c)	pages 49-51	Y	
3.	Statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E, where applicable	58.10 (a)(1)	page 4	Y	
4.	Modifications to SLAMS network – case when we are not approving system modifications	58.10 (a)(2); 58.10 (b)(5); 58.10 (e); 58.14	page 10	Y	No system mods submitted for approval
5.	Modifications to SLAMS network – case when we are approving system modifications per 58.14	58.10 (a)(2); 58.10 (b)(5); 58.10 (e); 58.14	page 10	Y	No system mods submitted for approval
6.	Does plan include documentation (e.g., attached approval letter) for system modifications that have been approved since last ANP approval?	11/6	NA	NA	none since last ANP approval
7.	Any proposals to remove or move a monitoring station within a period of 18	58.10 (b)(5)	page 11	Y	Begin monitoring PM2.5 at new site in West Reno/Verdi. A formal request

Unless otherwise noted.
 Response options: NA (Not Applicable), Yes, No, or Incomplete.
 Assuming the information is correct.
 Response options: NA (Not Applicable) – [reason], Yes, No, Insufficient to Judge, or Incorrect

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes					
	months following plan submittal				stating this proposal will be submitted prior to any modifications per the 40 CFR 58.14 regulations.					
8.	Precision/Accuracy reports submitted to AQS	58.16 (a)	page 11	Y						
9.	Annual data certification submitted	58.15	page 11	Y						
10.	Statement that SPMs operating an FRM/FEM/ARM that meet Appendix E also meet either Appendix A or an approved alternative. Documentation for any Appendix A approved alternative should be included. 6	58.11 (a)(2)	NA	NA S	No SPMs					
11.	SPMs operating FRM/FEM/ARM monitors for over 24 months are listed as comparable to the NAAQS or the agency provided documentation that requirements from Appendices A, C, or E were not met. ⁷	58.20 (c)	NA 1	NA	No SPMs					
12.		App D 2(e)	NA	NA						
GENERA	GENERAL PARTICULATE MONITORING REQUIREMENTS (PM ₁₀ , PM _{2.5} , Pb-TSP, Pb-PM ₁₀)									
13.	Designation of a primary monitor if there is more than one monitor for a pollutant at a site.	App. A 3.2.3	pages 14-41	Y						

⁶ Alternatives to the requirements of appendix A may be approved for an SPM site as part of the approval of the annual monitoring plan, or separately. ⁷ This requirement only applies to monitors that are eligible for comparison to the NAAQS per 40 CFR §§58.11(e) and 58.30.

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
14.	Distance between QA collocated monitors. For low volume PM instruments (flow rate < 200 liters/minute) > 1 m. For high volume PM instruments (flow rate > 200 liters/minute) > 2m. [Note: waiver request or the date of previous waiver approval must be included if the distance deviates from requirement.]	App. A 3.2.3.4 (c) and 3.3.4.2 (c)	page 23	Y	
PM _{2.5} –SP	ECIFIC MONITORING REQUIREMENT	S	c×.		
15.	Document how states and local agencies provide for the review of changes to a PM _{2.5} monitoring network that impact the location of a violating PM _{2.5} monitor.	58.10 (c)	page 8	Y	
16.		58.10 (b)(13) 58.11 (e)	NA P	NA	no FEMs/ARMs identified as ineligible due to poor FRM comparability
17.	Minimum # of monitoring sites for PM _{2.5} [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D 4.7.1(a) and Table D-5	page 4	Y	
18.	Requirements for continuous PM _{2.5}	App. D 4.7.2	Page 8	Y	

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
	monitoring (number of monitors and collocation)				
	FRM/FEM/ARM PM _{2.5} QA collocation	App. A 3.2.3	page 8	Y	
20.	PM _{2.5} Chemical Speciation requirements for official STN sites	App. D 4.7.4	pages 20-26	Y	
21.	Identification of sites suitable and sites not suitable for comparison to the annual PM _{2.5} NAAQS as described in Part 58.30	58.10 (b)(7)	pages 14-41	Y	none identified as unsuitable for NAAQS comparison.
22.	Required PM _{2.5} sites represent area-wide air quality	App. D 4.7.1(b)	pages 14-41	Y	
23.	For PM _{2.5} , within each MSA, at least one site at neighborhood or larger scale in an area of expected maximum concentration	App. D 4.7.1(b)(1)	page 36	Y	
24.	If additional SLAMS PM _{2.5} is required, there is a site in an area of poor air quality	App. D 4.7.1(b)(3)	NA	NA	additional not required
25.	States must have at least one PM _{2.5} regional background and one PM _{2.5} regional transport site.	App. D 4.7.3	NA	NA	This is a state requirement that is fulfilled by NDEP
26.	Sampling schedule for PM _{2.5} - applies to year-round and seasonal sampling schedules (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4); 58.12(d); App. D 4.7	NA	NA	continuous methods
27.	Frequency of flow rate verification for automated and manual PM _{2.5} monitors	App. A 3.2.1	pages 14-41	Y	
28.		App. A 3.2.2	pages 14-41	Y	

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
PM ₁₀ –SPl	ECIFIC MONITORING REQUIREMENT	S			
29.	Minimum # of monitoring sites for PM ₁₀ [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D, 4.6 (a) and Table D-4	page 5	Y	
30.	Manual PM ₁₀ method collocation (note: continuous PM ₁₀ does not have this requirement)	App. A 3.3.4	NA	NA	continuous method
31.	Sampling schedule for PM ₁₀	58.10 (b)(4); 58.12(e); App. D 4.6	NA	NA	continuous method
32.	Frequency of flow rate verification for automated and manual PM ₁₀ monitors	App. A 3.3.1 and 3.3.2	pages 14-41	Y	
33.	Dates of two semi-annual flow rate audits conducted in the previous CY for PM ₁₀ monitors [Note: 5 -7 month interval is recommended but not a requirement.]	App. A 3.3.3	pages 14-41	Y	
Pb –SPEC	CIFIC MONITORING REQUIREMENTS	7			
34.	Minimum # of monitors for non-NCore Pb [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.5	page 7	Y	does not meet Pb emissions threshold for required monitoring.
35.		App A 3.4.4 and 3.4.5	NA	NA	does not meet Pb emissions threshold for required monitoring.
36.	Any source-oriented Pb site for which a waiver has been granted by EPA Regional	58.10 (b)(10)	NA	NA	No waiver granted

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes			
	Administrator							
37.	Any Pb monitor for which a waiver has been requested or granted by EPA Regional Administrator for use of Pb-PM ₁₀ in lieu of Pb-TSP	58.10 (b)(11)	NA	NA	No waiver granted			
38.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	NA	NA				
39.	Sampling schedule for Pb	58.10 (b)(4); 58.12(b); App A 3.4.4.2 (c) and 3.4.5.3 (c)	NA	NA				
40.	Frequency of flow rate verification for Pb monitors audit	App A 3.4.1 and 3.4.2	NA	NA				
41	Dates of two semi-annual flow rate audits conducted in the previous CY for Pb monitors [Note: 5 -7 month interval is recommended but not a requirement.]	App A 3.4.3	NA O	NA				
GENERAL GASEOUS MONITORING REQUIREMENTS								
42.	Frequency of one-point QC check (gaseous)	App. A 3.1.1	pages 14-41	Y				
43.	Date of Annual Performance Evaluation (gaseous) conducted in the previous CY	App. A 3.1.2	pages 14-41	Y				
O ₃ –SPECIFIC MONITORING REQUIREMENTS								
44.	Minimum # of monitoring sites for O ₃ [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2:	App D 4.1(a) and Table D-2	page 4	Y				

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes			
45.	Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.] [Note 3: monitors that do not meet traffic count/distance requirements to be neighborhood or urban scale (40 CFR Appendix E, Table E-1) cannot be counted towards meeting minimum monitoring requirements] Identification of maximum concentration	App D 4.1 (b)	pages 14-41	3				
46.	O ₃ site(s) Sampling season for O ₃ (Note: Waivers must be renewed annually. EPA expects agencies to submit re-evaluations of the relevant data each year with the ANP. EPA will then respond as part of the ANP response.)	58.10 (b)(4); App D 4.1(i)	pages 14-41	Y	sampling year-round			
NO ₂ –SPECIFIC MONITORING REQUIREMENTS								
47.	Minimum monitoring requirements for area-wide NO ₂ monitor in location of expected highest NO ₂ concentrations representing neighborhood or larger scale	App D 4.3.3	page 5	Y				
48.	Minimum monitoring requirements for susceptible and vulnerable populations monitoring (aka RA40) NO ₂	App D 4.3.4	page 5	Y				
49.	Identification of required NO ₂ monitors as either near-road, area-wide, or vulnerable and susceptible population (aka RA40)	58.10 (b)(12)	NA	NA				
NEAR RO	and susceptible population (aka RA40) ADWAY – SPECIFIC MONITORING REQU	UIREMENTS						

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
In CBSAs	≥ 2.5 million, the following near-roadway mi	nimum monitoring r	equirements apply:		
50.	Two NO ₂ monitors	App. D 4.3.2(a); 58.13(c)(3) and (4)	page 5	NA	does not meet population threshold
51.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	page 5	NA O	does not meet population threshold
52.	One PM _{2.5} monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	page 5	NA	does not meet population threshold
	\geq 1 million and AADT \geq 250K, the following	g near-roadway minii	mum monitoring requi	rements apply:	
53.	Two NO ₂ monitors	App. D 4.3.2(a); 58.13(c)(3) and (4)	page 5	NA	does not meet population threshold
54.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	page 5	NA	does not meet population threshold
55.		App. D 4.7.1(b)(2); 58.13(f)(2)	page 5	NA	does not meet population threshold
In CBSAs	\geq 1 million and \leq 2.5 million AND AADT $<$ 3	250K, the following	near-roadway minimu	ım monitoring require	ments apply:
56.	One NO ₂ monitor	App. D 4.3.2(a); 58.13(c)(3)	page 5	NA	does not meet population threshold
57.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	page 5	NA	does not meet population threshold
58.	One PM _{2.5} monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	page 5	NA	does not meet population threshold

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
SO ₂ –SPE	CIFIC MONITORING REQUIREMENTS				
59.	Minimum monitoring requirements for SO ₂ based on PWEI and/or RA required monitors under Appendix D 4.4.3 [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.4	page 6	NA S	Does not meet PWEI threshold
60.		51.1203(c)	Page 6	NA	Does not meet DRR Rule threshold
NCORE -	SPECIFIC MONITORING REQUIREMENTS				
61.	NCore site and all required parameters operational: year-round O ₃ , SO ₂ , CO, NO _y , NO, PM _{2.5} mass, PM _{2.5} continuous, PM _{2.5} speciation, PM _{10-2.5} mass, resultant wind speed at 10m, resultant wind direction at 10m, ambient temperature, relative humidity. NOy waiver, if applicable.	App. D 3(b)	pages 20-26	Y	
62.		58.10 (a)(10); 58.13 (h) App. D 5(f)	page 5		

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
63.	AQS site identification number for each site	58.10 (b)(1)	pages 14-41	Y	
64.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	pages 14-41	Y	
65.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	pages 14-41	Y	
66.	Parameter occurrence code for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	pages 14-41	Y	
67.	Basic monitoring objective for each monitor	App D 1.1; 58.10 (b)(6)	pages 14-41	Y	
68.	Site type for each monitor	App D 1.1.1	pages 14-41	Y	
69.	Network Affiliation(s) as appropriate	Needed to determine if other requirements (e.g., min # and collocation) are met	pages 14-41	Y	
70.	monitor as defined in Appendix D	58.10(b)(6); App D	pages 14-41	Y	
71.	Parameter code for each monitor	Needed to determine if other	pages 14-41	Y	

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
		requirements (e.g., min # and collocation) are met			
72.	Method code and description (e.g., manufacturer & model) for each monitor	58.10 (b)(3); App C 2.4.1.2	pages 14-41	Y	
73.	Sampling start date for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	pages 14-41	3	
74.	Distance of monitor from nearest road	App E 6	pages 14-41	Y	
	Traffic count of nearest road	App E	pages 14-41	Y	
	Groundcover	App E 3(a)	pages 14-41	Y	
77.	Probe height	App E 2	pages 14-41	Y	
78.	Distance from supporting structure (vertical and horizontal, if applicable, should be provided)	App E 2	pages 14-41	Y	
79.	Distance from obstructions on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be provided)	App E 4(b)	pages 14-41	Y	
80.	Distance from obstructions not on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be provided)	App E 4(a)	pages 14-41	Y	For row 81, the distance to the trees was provided. In that trees can be obstructions, in future ANPs, please provide the horizontal distance to the tree, and vertical height of the tree above the probe.

	ANP requirement	Citation within 40 CFR 58 ²	Was the information submitted? ³ If yes, section or page #s.	Does the information provided ⁴ meet the requirement? ⁵	Notes
81.	tree(s)	App E 5	pages 14-41	Y	
82.	Distance to furnace or incinerator flue	App E 3(b)	pages 14-41	Y	
83.	around probe/inlet or percentage of monitoring path)	App E, 4(a) and 4(b)	pages 14-41	Y	
84.	PAMS: VOCs, Carbonyls)	App E 9	pages 14-41	Y	
85.	Residence time (NO/NO ₂ /NO _y , SO ₂ , O ₃ ; For PAMS: VOCs, Carbonyls)	App E 9	pages 14-41	Y	
		201Us	3, J		

Public Comments on Annual Network Plan

Were comments submitted to the S/L/T agency during the public comment period?	Yes
Were comments included in ANP submittal?	Yes
Were any of the comments substantive? If yes, which ones? If comments were not substantive provide rationale.	No. The commenter pointed out a typo and asked whether the location of two Purple Airs could be included in this year's plan or next year's plan. AQMD responded that there was an error with the figure numbers and the related wording in the overview, and that the Purple Airs were not operational during the period this plan focuses on; they will revisit the topic for the 2023 ANP.
Were S/L/T responses to substantive comments included in ANP submittal?	NA
Were the S/L/T responses to substantive comments adequate?	NA
Do the substantive comments require separate EPA response (i.e., agency response wasn't adequate)?	NA NA
Are the sections of the annual network plan that received substantive comments approvable after consideration of comments? If yes, provide rationale	NA

Appendix B Data Certification Letter



April 13, 2023

Dena Vallano Manager, Air Quality Analysis Office U.S. Environmental Protection Agency, Region 9 75 Hawthorne Street, AIR-4-2 San Francisco, CA 94105

Re: CY2022 Ambient Air Monitoring Data Certification

Dear Ms. Vallano:

Attached please find a copy of the Washoe County Health District, Air Quality Management Division's (AQMD) AQS AMP600 Data Certification Report and AMP450NC Quick Look summary report for ambient air monitoring data for all State and Local Air Monitoring Stations (SLAMS) which meet criteria in 40 CFR 58 Appendix A operated from January 1 to December 31, 2022. Included is data from Federal Reference Method (FRM) and Federal Equivalent Method (FEM) monitors for CO, NO₂, ozone, PM₁₀, PM_{10-2.5}, PM_{2.5}, and SO₂ (hourly and 5-minute average data).

This letter certifies that the ambient concentration data and the quality assurance data are completely submitted to AQS, and the ambient data are accurate to the best of my knowledge taking into consideration the quality assurance findings.

Please contact Mr. Daniel Timmons or me at (775) 784-7200 with any questions or concerns.

Sincerely,

Francisco Vega, P.E., MBA

Director, Air Quality Management Division

Washoe County Health District

Attachments:

AMP600 Data Certification Report 2022 AMP450NC Quick Look All Parameters Report 2022

cc: Fletcher Clover, Air Quality Analysis Office, U.S. EPA, Region 9



User ID: BMCMULLEN

CERTIFICATION EVALUATION AND CONCURRENCE

Report Code: Apr. 11, 2023 Report Request ID: 2095169 AMP600

GEOGRAPHIC SELECTIONS

Tribal EPA

CSA Region Code State County Site Parameter POC City AQCR UAR CBSA

32 031

PROTOCOL SELECTIONS

AGENCY SELECTIONS

Parameter

Classification Parameter Method Duration

Washoe County District Health Department

CRITERIA

SELECTED OPTIONS

Option Type

Option Value

MERGE PDF FILES

YES

AGENCY ROLE

CERTIFYING

DATE CRITERIA

Start Date

End Date

2022

2022

Data Evaluation and Concurrence Report Summary

Certification Year: 2022

Certifying Agency (CA): Washoe County District Health Department (1138)

Pollutants in Report:		Monitors	Monitors Recommended for	Monitors NOT Recommended
Parameter Name	Code	Evaluated	Concurrence by AQS	for Concurrence by AQS
Carbon monoxide	42101	2	2	0
Nitrogen dioxide (NO2)	42602	1	1	0
Ozone	44201	7	7	0
PM10 Total 0-10um STP	81102	4	4	0
PM2.5 - Local Conditions	88101	5	5	0
Sulfur dioxide	42401	1	1	0

PQAOs in Report:

PQAO Code TSA Date **PQAO Name**

Washoe County District Health Department 1138 08/15/19

AQS Cert. Agency **Summary of 'N' flags for all pollutants:** Recommended Recommended

Parameter

Flag Flag Code AQS Site-ID POC **Reason for AQS Recommendation PQAO**

Signature of Monitoring Organization Representative:

Certifying Year 2022

Certifying Agency Code Washoe County District Health Department (1138)

Parameter Carbon monoxide (42101) (ppm)

PQAO Name Washoe County District Health Department (1138)

QAPP Approval Date 12/12/2019

NPAP Audit Summary: Number of Passed Audits NPAP Bias Criteria Met

3.20599 Y

			One Point Quality Check Annual PE				NPAP			Concur. Flag								
AQS Site ID	POC Monitor Type	Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision	Bias Co	omplete	Bias	Complete	Bias	PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Re	c Epa Concur
32-031-00	031 1 SLAMS ່	0.238	- 0.001	3.256	0	0	98	2.20	+2.13	100	0.35	100		Υ	Υ	Υ	Υ	S
32-031-10	005 1 SLAMS	0.372	0.000	2.700	0	0	99	1.35	+/-1.62	100	1.65	100	3.21	Υ	Υ	Υ	Y	S

Certifying Year 2022

Certifying Agency Code Washoe County District Health Department (1138)

Parameter Nitrogen dioxide (NO2) (42602) (ppb)

PQAO Name Washoe County District Health Department (1138)

QAPP Approval Date 12/12/2019

NPAP Audit Summary: Number of Passed Audits NPAP Bias Criteria Met

Υ

Routine Data								One Point	One Point Quality Check Annual PE				NPAP			Concur. Flag		lag	
AQS	POC Monitor	Mean	Min	Max	Exceed.	Outlier	Perc.	Precision	Bias C	omplete	Bias	Complete	Bias	PQAO Level	QAPP		CA Re	с Ера	
Site ID	Туре				Count	Count	Comp.							Criteria	Appr.	Flag	Flag	Concur	
32-031-003	31 1 SLAMS `	11.8	0.0	51.4		0	97	4.55	-5.18	100	- 5.53	100		Υ	Υ	Υ	Y	S	

Certifying Year 2022

Certifying Agency Code Washoe County District Health Department (1138)

Parameter Ozone (44201) (ppm)

PQAO Name Washoe County District Health Department (1138)

QAPP Approval Date 12/12/2019

NPAP Audit Summary: Number of Passed Audits NPAP Bias Criteria Met

Υ

	Routine Data							One Point Quality C	heck	Annual PE	NPAP		Concur. Flag		lag
AQS Site ID	POC Monitor Type	Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision Bias Co	mplete	Bias Complete	Bias PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Re Flag	c Epa Concur
32-031-00	20 1 SLAMS	0.049	0.017	0.082	0	0	99	2.05 +/-1.49	100	- 0.81 100	Υ	Υ	Υ	Υ	S
32-031-00	25 1 SLAMS	0.047	0.021	0.076	0	0	99	1.84 +/-1.50	100	- 0.19	Υ	Υ	Υ	Υ	s
32-031-00	31 1 SLAMS	0.048	0.015	0.080	0	0	98	1.54 +/-1.13	100	- 0.86 100	Υ	Υ	Υ	Υ	s
32-031-10	005 1 SLAMS	0.046	0.011	0.077	0	0	98	2.86 +/-2.37	100	0.59 100	Υ	Υ	Υ	Υ	s
32-031-10	007 1 SLAMS	0.048	0.020	0.079	0	0	99	0.96 +/-0.89	100	0.48 100	Υ	Υ	Υ	Υ	s
32-031-20	002 1 SLAMS	0.051	0.033	0.080	0	0	99	2.55 +/-1.96	100	5.81 100	Υ	Υ	Υ	Υ	s
32-031-20	009 1 SLAMS	0.048	0.022	0.071	0	0	99	3.30 +/-2.55	100	1.53 100	Y	Υ	Υ	Υ	s

Mille Je

Certifying Year 2022

Certifying Agency Code Washoe County District Health Department (1138)

Parameter Sulfur dioxide (42401) (ppb)

PQAO Name Washoe County District Health Department (1138)

QAPP Approval Date 12/12/2019

NPAP Audit Summary: Number of Passed Audits NPAP Bias Criteria Met

Υ

	Routine Data							One Point Qu	uality Check Annual PE				NPAP		Concur. F		ag	
AQS Site ID	POC Monitor Type	Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision Bia	as Co	mplete	Bias	Complete	Bias	PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Red Flag	Epa Concur
32-031-	0031 1 SLAMS	0.4	- 0.5	4.0		0	98	5.10 +/-	4.16	100	- 2.37	100		Υ	Υ	Υ	Υ	S

Data Evaluation and Concurrence Report for Particulate Matter

Certifying Year:2022

Certifying Agency: Washoe County District Health Department (1138)

Parameter: PM10 Total 0-10um STP (81102) CONTINUOUS
PQAO Name: Washoe County District Health Department (1138)
Quality Assurance Project Plan Approval Date: 12/12/2019

Monitors Summaries

				Routine Data (ug	g/m3)		Flow Rate	Verification	Flow F	Rate Audit		Coll6	caticon rence	Flag	
AQS Site ID	<u>POC</u>	Monitor <u>Type</u>	='	Exceed <u>Max</u> Count		, -	Bias Co	% omplete	<u>Bias</u>	% Complete			Rec CA Reg Flag	ec EPA 2 Concur	
32-031-0025	2	SLAMS	21.67 -3.0	985.0	0	98	+0.66	100	+0.44	100	Υ	Υ	Υ	S	
32-031-0031	2	SLAMS	21.91 -5.0	558.0	0	98	+/-0.81	100	-0.49	100	Υ	Υ	Υ	S	
32-031-1005	4	SLAMS	26.32 -5.0	587.0	0	98	+/-0.76	100	-0.41	100	Υ	Υ	Υ	S	
32-031-1007	1	SLAMS	19.97 -3.0	820.0	0	95	+/-0.87	100	-0.59	100	Υ	Υ	Υ	S	

Parameter: PM2.5 - Local Conditions (88101)

PQAO Name: Washoe County District Health Department (1138)

Quality Assurance Project Plan Approval Date: 12/12/2019

Colloca	ition Si	ummar	y				V	PEP Sun	nmary					
		# Sites	# Sites	%	CV		Criteria	# :	# Audited	# PEP	# PEP	%		Criteria
Method	# Sites	Req	Collocated	Collocated	<u>Est</u>	CV UB	Met?	<u>Methods</u>	<u>Methods</u>	Required	<u>Submitted</u>	<u>Complete</u>	<u>Bias</u>	Met?
170	4	1	1	100	11.49	12.73	Y	1	1	5	3	60	+13.06	Υ

Monitors Summaries

						Routine Dat	a (ug/m3)		Flow	Rate Audit		Collocation	on	PEP		Con	currence F	lag
			Monito	r		Exc	ed. Outlie	r %		%		%	PQAO			AQS Re	c CA Red	c EPA
AQS Site ID	<u>P00</u>	Metho	od Type	<u>Mean</u>	<u>Min</u>	Max Cou	unt Count	Complete	<u>Bias</u>	Complete	<u>CV</u>	Complete	Crit. Met	Crit. Met	Appr.	<u>Flag</u>	Flag	Concur
32-031-0025	1	170	SLAMS	6.72	-6.0	432.0	0	99	-0.55	100	•		Υ	Υ	Υ	Υ	Υ	S
32-031-0031	1	545	SLAMS	7.76	.8	129.7	0	100	-0.04	100			Υ	Υ	Υ	Υ	Υ	S
32-031-0031	2	170	SLAMS	8.16	-9.0	435.0	0	94	-0.73	100	12.73	3 100	Υ	Υ	Y	Υ	Υ	S
32-031-1005	1	170	SLAMS	10.15	-8.0	439.0	0	99	+0.00	100			Υ	Υ	Υ	Υ	Υ	S
32-031-1007	1	170	SLAMS	7.79	-5.0	391.0	0	98	+0.12	2 100			Υ	Υ	Υ	Υ	Υ	S

User ID: BMCMULLEN QUICKLOOK ALL PARAMETERS

Apr. 6, 2023 Report Request ID: 2093798 Report Code: AMP450NC

PROTOCOL SELECTIONS

AGENCY SELECTIONS

Parameter

2022

Classification Parameter Method Duration

Washoe County District Health Department

86101 ALL

42401 ALL Η

SELECTED OPTIONS

SORT ORDER SCR GROUP SELECTIONS Option Type Option Value Order Column Washoe Co, NV

1

STATE_CODE

COUNTY_CODE

SITE_ID PARAMETER_CODE POC DATES EDT_ID

EVENTS PROCESSING EXCLUDE REGIONALLY CONCURRED EVENTS

MERGE PDF FILES

AGENCY ROLE PQAO

DATE CRITERIA Start Date End Date

2022

APPLICABLE STANDARDS

Standard Description

EXCEPTIONAL DATA TYPES

EDT	DESCRIPTION	
0	NO EVENTS	
1	EVENTS EXCLUDED	
2	EVENTS INCLUDED	
5	EVENTS WITH CONCURRENCE EXCLUDED	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AIR QUALITY SYSTEM

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

			P				ш	1st Max	2nd Max	3rd Max	4th Max	Arith.		Cert& H
Parameter		Unit	0 C	PQAO	Year	Meth	# Obs	Value	Value	Value	Value	Mean	Duration	
Site ID: 32-031-0025	City: Reno	County:	Wa	shoe			P	Address: 6	684A STATE	ROUTE 34	11, RENO N	V 89521		
86101 PM10-2.5 - Local	Conditions	Micrograms/cubic meter	1	1138	2022	185	8612	817.0	492.0	407.0	379.0	12.36	1 HOUR	C
Site ID: 32-031-0031	City: Reno	County:	Wa	shoe			P	Address: 1	1260-A Ste	ewart St.				
42401 Sulfur dioxide		Parts per billion	2	1138	2022	600	98911	5.8	4.6	4.6	4.4	.44	5 MINUTE	0
86101 PM10-2.5 - Local	Conditions	Micrograms/cubic meter (LC)	1	1138	2022	247	118	31.1	24.3	23.8	21.5	10.59	24 HOUR	0
86101 PM10-2.5 - Local	Conditions	Micrograms/cubic meter (LC)	2	1138	2022	185	8209	305.0	210.0	204.0	125.0	11.59	1 HOUR	0
Site ID: 32-031-1005	City: Sparks	County:	Wa	shoe			P	Address: 7	750 4TH ST	, SPARKS,	NV 89431			
86101 PM10-2.5 - Local	Conditions	Micrograms/cubic meter (LC)	1	1138	2022	185	8600	503.0	440.0	396.0	262.0	13.21	1 HOUR	0
Site ID: 32-031-1007	City: Sparks	County:	Wa	shoe			F	Address: 7	7200 Pyran	nid Hwy, S	Sparks, NV	, 89441		
86101 PM10-2.5 - Local	Conditions	Micrograms/cubic meter (LC)	1	1138	2022	185	8376	623.0	452.0	326.0	265.0	9.94	1 HOUR	0
		3		100	3									

Note: The * indicates that the mean does not satisfy summary criteria.

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QUICKLOOK ALL PARAMETERS

METHODS USED IN THIS REPORT

	METHOD		
PARAMETER	CODE	COLLECTION METHOD	ANALYSIS METHOD
42401	600	Instrumental	Ultraviolet Fluorescence API 100 EU
86101	185	Met One BAM-1020 System	Paired Beta Difference
86101	247	Met One E-SEQ-FRM PM10-2.5 sampler pair	Paired Gravimetric



Note: The * indicates that the mean does not satisfy summary criteria.

Apr. 6, 2023

Apr. 6, 2023

PQAOS USED IN THIS REPORT

PQAO	AGENCY DESCRIPTION	
1138	Washoe County District Health Department	



Note: The * indicates that the mean does not satisfy summary criteria.

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QUICKLOOK ALL PARAMETERS

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

FLAG	MEANING
М	The monitoring organization has revised data from this monitor since the
	most recent certification letter received from the state.
N	The certifying agency has submitted the certification letter and required
	summary reports, but the certifying agency and/or EPA has determined
	that issues regarding the quality of the ambient concentration data cannot
	be resolved due to data completeness, the lack of performed quality
	assurance checks or the results of uncertainty statistics shown in the
	AMP255 report or the certification and quality assurance report.
S	The certifying agency has submitted the certification letter and required
	summary reports. A value of "S" conveys no Regional assessment regarding
	data quality per se. This flag will remain until the Region provides an "N" or
	"Y" concurrence flag.
U	Uncertified. The certifying agency did not submit a required certification
	letter and summary reports for this monitor even though the due date has
	passed, or the state's certification letter specifically did not apply the
	certification to this monitor.
Χ	Certification is not required by 40 CFR 58.15 and no conditions apply to be
	the basis for assigning another flag value
Y	The certifying agency has submitted a certification letter, and EPA has no
	unresolved reservations about data quality (after reviewing the letter, the
	attached summary reports, the amount of quality assurance data
	submitted to AQS, the quality statistics, and the highest reported
	concentrations).

Note: The \star indicates that the mean does not satisfy summary criteria.

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Appendix C Public Inspection Plan

Public Inspection Plan

A press release was issued by AQMD on June 28, 2023, notifying the public that the "Wildfire Mitigation Plan" was available for public inspection and comment from June 28 through July 28, 2023. A hard copy was available at the AQMD office and on the website (OurCleanAir.com). This mitigation plan underwent a 30-day public comment pursuant to 40 CFR 51.930(b)(2). All comments received during this inspection period are outlined below.

