

# 2024 Annual Network Plan For Ambient Air Monitoring

July 1, 2024



North Coast Unified  
Air Quality Management District  
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## Definition of Terms

AAQS	Ambient Air Quality Standards
ANP	Annual Network Plan
AQI	Air Quality Index
AQS	Air Quality System
BAAQMD	Bay Area Air Quality Management District
CARB	California Air Resources Board
CAN	Corrective Action Notification
E-BAM	Environment-proof Beta Attenuation Monitor
FEM	Federal Equivalency Method
FRM	Federal Reference Method
MSA	Micropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NOAA	National Oceanographic and Atmospheric Administration
NCUAQMD	North Coast Unified Air Quality Management District
NSN	National Sovereign Nation
POC	Parameter Occurrence Code
PQAO	Primary Quality Assurance Organization
QAQC	Quality Assurance and Quality Control
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Instrument
SOP	Standard Operating Procedure
SPM	Special Purpose Monitor
TRS	Total Reduced Sulfur
TSA	Technical Systems Audit

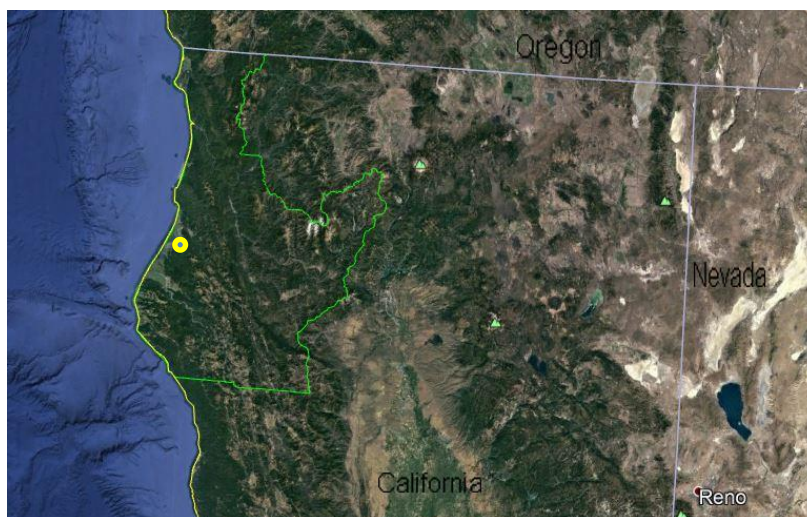
## Executive Summary

Annual review of governmental air monitoring networks is required by Title 40 Code of Federal Regulations Part 58.10 (40 CFR 58.10). The North Coast Unified Air Quality Management District's (NCUAQMD) *2024 Annual Network Plan for Ambient Air Monitoring* is an examination of the NCUAQMD's network of ambient air pollution monitoring stations. This report meets the requirements for an annual network plan as listed in 40 CFR 58.10, Appendix A.

One of the keys to managing successful emissions reduction strategies is having a reliable monitoring network to inform decisions. The NCUAQMD works to optimize its monitoring network to best monitor air quality in its jurisdiction to inform planning strategy decisions.

The NCUAQMD is located within the North Coast Air Basin in California. Responsibility for air monitoring in the North Coast Air Basin is divided among three air districts: Mendocino County Air Quality Management District, Northern Sonoma County Air Pollution Control District, and North Coast Unified Air Quality Management District. All three of these air districts belong to the California Air Resources Board (CARB) Primary Quality Assurance Agency (PQAO). Further information about all the other Districts in the air basin can be found in the CARB Annual Network Plan.

NCUAQMD is in the northwestern portion of the North Coast Air Basin, covering a territory of 7,753 square miles. It has jurisdiction over three counties: Humboldt, Del Norte, and Trinity. The NCUAQMD is bordered on the west by the Pacific Ocean and extends from the Oregon border south approximately 140 miles to the Mendocino County line. This area includes widely varied terrain, from coastal wetlands to rugged mountains. Diurnal offshore wind patterns are common. During summer months, north to northwest winds dominate, whereas in the winter more winds tend to come from the south. Inversions are common because of the complex topography of the area coupled with its coastal location. These inversions occur year-round, but most frequently during the cooler months from late fall to early spring. The NCUAQMD office is in Eureka, the county seat of Humboldt County. Eureka is 284 miles north of San Francisco and 466 miles south of Portland, Oregon.



The pollutant of greatest concern for the jurisdiction is Particulate Matter (PM). Del Norte and Trinity Counties are classified as Attainment for PM<sub>10</sub> for the California State 24-hour PM<sub>10</sub> standard under the Ambient Air Quality Standard (AAQS), while Humboldt

County is classified as Nonattainment for that standard. Based on studies and emission inventories, PM emissions in the District appear to be primarily from transportation, woodstoves, open burning, permitted sources, and wildfire events. The NCUAQMD continues to strive toward reaching the California AAQS for PM<sub>10</sub>. Humboldt County has met attainment requirements for the most recent years of 2022 and 2023. It is expected that the trend will continue, allowing the NCUAQMD to apply for District wide attainment in 2025.

There are three major (Title V) stationary sources of emissions in the jurisdiction, which are all located in Humboldt County near Eureka: Humboldt Sawmill Company (Scotia), PG&E Humboldt Bay Generating Station (Eureka), and DG Fairhaven (Samoa). The NCUAQMD operates three stationary air monitoring stations, one in each of the counties within the jurisdiction. NCUAQMD also deploys portable particulate matter monitors (E-BAM) to monitor both prescribed and wild fires.

The 2024 Annual Network Plan was available for a 30-day public comment period. All comments received will be forwarded to the United States Environmental Protection Agency (EPA) concurrent with submittal of the plan. Changes suggested in the comments may be addressed in subsequent plan updates. This report may be viewed on the NCUAQMD's website ([www.ncuaqmd.org](http://www.ncuaqmd.org)), and hard copies are available for review at the NCUAQMD office. Written comments were submitted to the North Coast Unified Air Quality Management District, Attn: Comments on Annual Network Monitoring Plan, 707 L Street, Eureka, California, 95501.

## Network Design

The NCUAQMD operated three stationary monitoring sites in 2023. The maps on the following pages show the locations of the monitoring sites. The tables below list the pollutants measured.

**Table 1. List of State and Local Air Monitoring Stations (Instruments)**

Site Name	AQS Site #	Pollutants Monitored
Jacobs	060231004	PM <sub>10</sub> , PM <sub>2.5</sub>

**Table 2. List of Special Purpose Monitoring Stations (Instruments)**

Site Name	AQS Site #	Pollutants Monitored
Jacobs	060231004	O <sub>3</sub> , NO <sub>2</sub> , CO, SO <sub>2</sub>

**Table 3. List of Other Monitors**

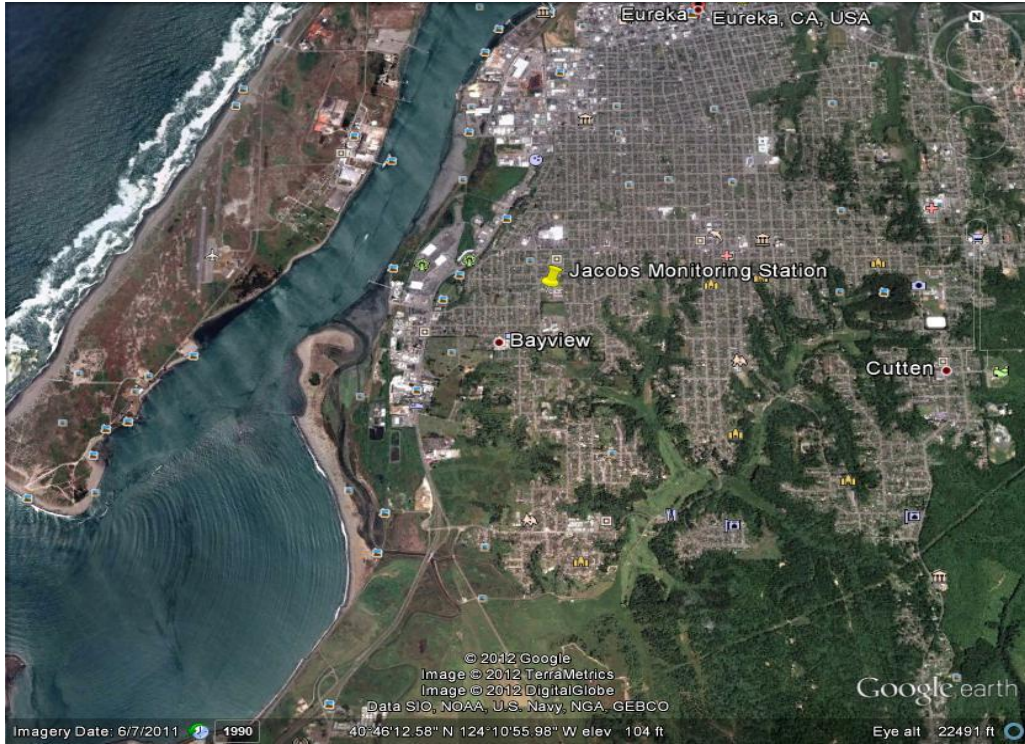
Site Name	AQS Site #	Pollutants Monitored
Crescent City	060150007	PM <sub>2.5</sub>
Weaverville	061050002	PM <sub>2.5</sub>

In the NCUAQMD's 2015 (5-year Assessment) Network Plan, the Jacobs Station's gaseous instruments were mistakenly classified as SLAMS rather than SPM which they had been previously classified since the instruments began operation in 2006. This change in classification was in error and the NCUAQMD continued to report the data collected by those instruments as SPM in the Federal Air Quality Database (AQS). The NCUAQMD does not intend to petition the EPA to change the designations from SPM to SLAMs as the regulations would require for such changes. This error was perpetuated in the following Annual Network Plans until discovered during the NCUAQMD's Technical Services Audit (TSA) in 2022. Upon review, the NCUAQMD staff corrected the error immediately, and in time for the publication of the 2022 Annual Network Plan. The correct designation for those instruments is under review, and will be addressed in a Corrective Action Notification (CAN) that is part of the 2022 TSA.



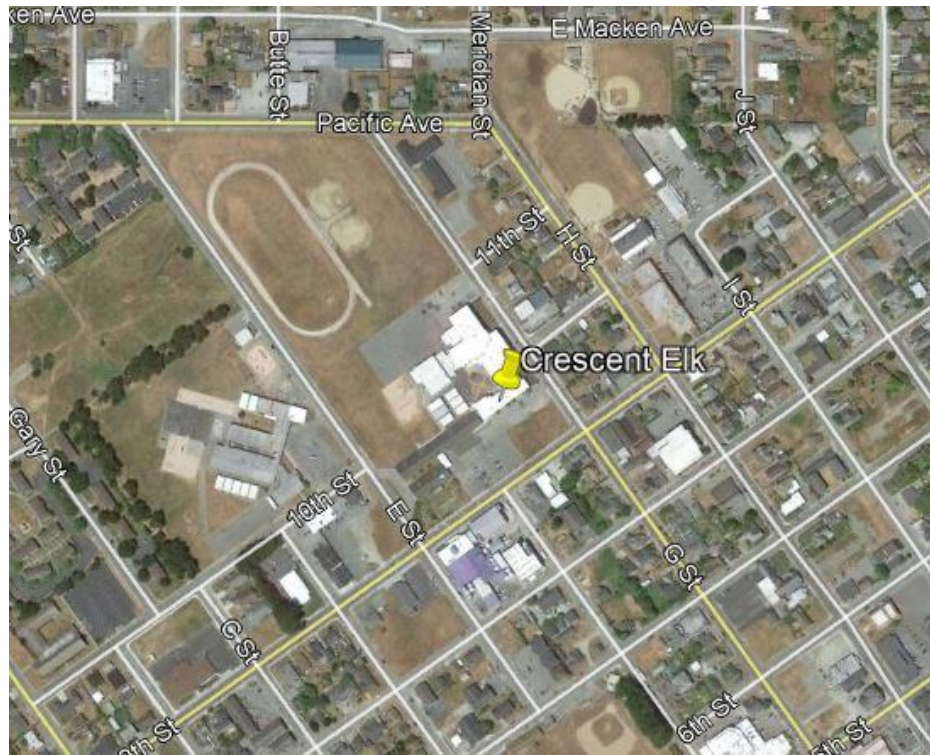
# Monitoring Station Locations

## Jacobs Monitoring Station (717 South Ave, Eureka, Humboldt County)



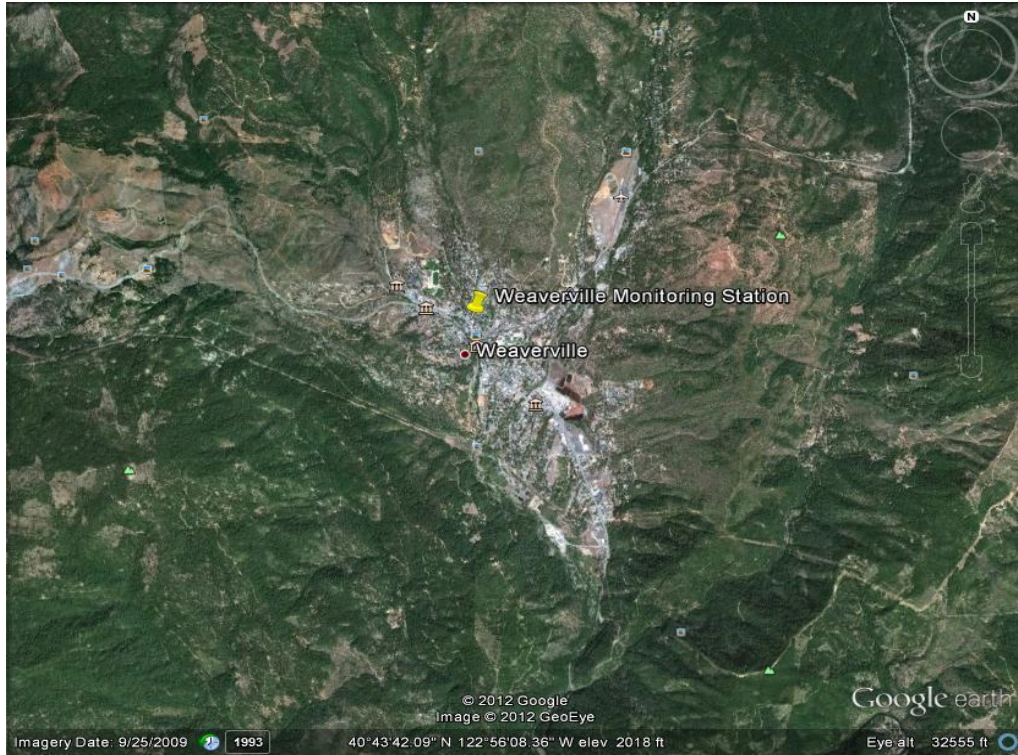


Crescent City Monitoring Station (994 G Street, Crescent City, Del Norte County)





Weaverville Monitoring Station (11 Court Street, Weaverville, Trinity County)



## Minimum Monitoring Requirements

This network meets the minimum monitoring requirements for all criteria pollutants (Tables 3-9).

### Ozone

**Table 4. Minimum Monitoring Requirements for Ozone Sites.**

Micropolitan Statistical Area (MSA)	County	Pop. In Year 2020	4th highest 8-hour max. (ppb) (2021-2023)	2023 3-year design value (ppb)	SLAMS Ozone Sites Required	Active SLAMS Ozone Sites	Active Ozone SPMs	Sites Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	Jacobs 0.047	Jacobs 0.041	0	0	1	0
Crescent City	Del Norte	27,743	-	-	0	0	0	0
none	Trinity	16,112	-	-	0	0	0	0

The NCUAQMD is not required to have Ozone monitors by either a State Implementation Plan (SIP) or Criteria Pollutant Maintenance Plan. The NCUAQMD monitors Ozone as an estimation of population exposure levels. The NCUAQMD has never had an exceedance of Ozone and has been below the standard since operation of the monitor.

### PM<sub>2.5</sub>

**Table 5. Minimum Monitoring Requirements for SLAMS PM<sub>2.5</sub> Sites.**

Micropolitan Statistical Area	County	Pop. In Year 2020	Annual Design Value ( $\mu\text{g}/\text{m}^3$ ) (2021 - 2023)	Daily Design Value ( $\mu\text{g}/\text{m}^3$ ) (2021-2023)	FRM Sites Required	SLAMS Sites Active	Other Sites Active	Sites Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	Jacobs 6.9	Jacobs 18	0	1	0	0
Crescent City	Del Norte	27,743	-	-	0	0	1	0
none	Trinity	16,112	-	-	0	0	1	0

**Table 6. Minimum Monitoring Requirements for Continuous PM<sub>2.5</sub> Sites.**

Micropolitan Statistical Area	County	Pop. In Year 2020	SLAMS FEM Sites required	SLAMS Sites Active	Other Sites Active
Eureka, Arcata, Fortuna	Humboldt	136,463	0	0	0
Crescent City	Del Norte	27,743	0	0	1
none	Trinity	16,112	0	0	1

**Table 7. Collocation of continuous PM<sub>2.5</sub> monitors**

Method Code	# Primary Monitors	POC designations	Required NCUAQMD operated collocated monitors	Active NCUAQMD operated collocated FRM monitors	Active Collocated FEM Monitors
-	1	2	0	1	0

The NCUAQMD is not required to have PM<sub>2.5</sub> monitors as they are not required by either by a State Implementation Plan (SIP) or Criteria Pollutant Maintenance Plan. The NCUAQMD has no required FRM PM<sub>2.5</sub> sites, so it is not necessary to identify the maximum concentration PM<sub>2.5</sub> site. Collocation is the responsibility of the Primary Quality Assurance Organization (PQAO). Because Humboldt County is out of attainment for PM<sub>10</sub>, the NCUAQMD also monitors the smaller particles of PM<sub>2.5</sub> in Humboldt County to estimate population exposure throughout the year and during wildfire events and in order to provide good quality information AQI information during wildfire events for the EPA AirNow website (i.e. the EPA AirNow Fire & Smoke Map).

## PM<sub>10</sub>

**Table 8. Minimum Monitoring Requirements for PM<sub>10</sub> Sites.**

Micropolitan Statistical Area	County	Population in Year 2020	Max Concentration (2021-2023) (ug/m <sup>3</sup> )	SLAMS Sites Required	SLAMS Sites Active	SPM Sites Active	Sites Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	Jacobs 61	1	1	0	0
Crescent City	Del Norte	27,743	-	0	0	0	0
none	Trinity	16,112	-	0	0	0	0

The NCUAQMD is classified a Nonattainment for PM<sub>10</sub> for the California State 24-hour PM<sub>10</sub> standard under the AAQS for Humboldt County. However, the NCUAQMD continues to only have rare exceedances of PM<sub>10</sub>. The Jacobs Station is the only, and thus the maximum, PM<sub>10</sub> site in Humboldt County in the NCUAQMD. The NCUAQMD is not required to have additional PM<sub>10</sub> monitors as they are not required by either a SIP or a Maintenance Plan.

## NO<sub>2</sub>

**Table 9. Minimum Monitoring Requirements for NO<sub>2</sub> Monitors.**

Micropolitan Statistical Area	County	Population in Year 2020	Annual Design Value (ppb) (2021-2023)	SLAMS Monitors Required	Active SLAMS Monitors	Active SPM Monitors	Monitors Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	Jacobs 14	0	0	1	0
Crescent City	Del Norte	27,743	-	0	0	0	0
none	Trinity	16,112	-	0	0	0	0

The NCUAQMD has never had an exceedance of NO<sub>2</sub> and has been well below the standard since operation of the monitor. The NCUAQMD is not required to have NO<sub>2</sub> monitors as they are not required by either SIP or Maintenance Plan. The NCUAQMD has recently requested shutdown of this instrument.



## SO<sub>2</sub>

**Table 10. Minimum Monitoring Requirements for SO<sub>2</sub> Monitors.**

Micro-politan Statistical Area	County	Pop. in Year 2020	Annual Design Value (ppb) (2021-2023)	Max 24 hour (ppb) (2021-2023)	Max 1 hour (ppb) (2021-2023)	SLAMS Monitors Required	Active SLAMS Monitors	Active SPM Monitors	Monitors Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	1	0.9	1.2	0	0	1	0
Crescent City	Del Norte	27,743	-	-	-	0	0	0	0
none	Trinity	16,112	-	-	-	0	0	0	0

The NCUAQMD has never had an exceedance of SO<sub>2</sub> and has been well below the standard since operation of the monitor. The NCUAQMD is not required to have SO<sub>2</sub> monitors as they are not required by either a SIP or Maintenance Plan. The NCUAQMD has recently requested shutdown of this instrument.

## CO

**Table 11. Minimum Monitoring Requirements for CO Monitors.**

Micro-politan Statistical Area	County	Pop. in Year 2020	8-hour Design Value (ppm) (2021-2023)	1 hour. Design Value (ppm) (2021-2023)	SLAMS Monitors Required	Col-located Monitors Required	Active SLAMS Monitors	Active SPM Monitors	Monitors Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	Jacobs 0.6	Jacobs 0.7	0	0	0	1	0
Crescent City	Del Norte	27,743	-	-	0	0	0	0	0
none	Trinity	16,112	-	-	0	0	0	0	0

The NCUAQMD has never had an exceedance of CO and has been well below the standard since operation of the monitor. The NCUAQMD is not required to have CO monitors as they are not required by either a SIP or Maintenance Plan. The CO instrument failed in 2023 and ceased operation. The NCUAQMD has recently requested shutdown of this instrument.

## Lead (Pb)

**Table 12. Minimum Monitoring Requirements for Pb.**

Micropolitan Statistical Area	County	Pop. In Year 2020	Annual Design Value	Monitors Required	Active Monitors	Monitors Needed
Eureka, Arcata, Fortuna	Humboldt	136,463	-	0	0	0
Crescent City	Del Norte	27,743	-	0	0	0
none	Trinity	16,112	-	0	0	0

The NCUAQMD is not required to monitor Lead (Pb). Lead monitors are not required by either a SIP or Maintenance Plan.

## Quality Control

The NCUAQMD is a member of the CARB Primary Quality Assurance Organization (PQAO), and all ambient air monitoring meet CARB Quality Control and Quality Assurance requirements. CARB audit records and site information for the NCUAQMD can be found on the CARB website or obtained by contacting the NCUAQMD.

The NCUAQMD's PM<sub>2.5</sub> FRM filters are analyzed by the Bay Area Air Quality Management District (BAAQMD). The BAAQMD Laboratory meets Federal Requirements for Quality Control and Quality Assurance. Information regarding the laboratory can be found on the BAAQMD website.

## Collocation

The NCUAQMD is a member of the CARB Primary Quality Assurance Organization (PQAO) and relies on the PQAO network to satisfy all collocation requirements (CFR 58 App A 3.2.5). In December of 2023, NCUAQMD voluntarily deployed a method 143 FRM/FRM collocation in support of unmet PQAO collocation requirement.

## Network Modification Plan

The Carbon Monoxide instrument at the Jacobs Station has been well below the NAAQS since the monitor began operation in 2006. The Carbon Monoxide instrument located at the Jacobs Station in Humboldt County failed in April 2023. Due to the combination of low CO levels and the cost of instrument replacement and operation, the NCUAQMD has recently requested shutdown of this instrument.

The Sulfur Dioxide instrument at the Jacobs Station has been well below the NAAQS since the monitor began operation in 2006. This instrument is nearing the end of its useful life. Because of the combination of low SO<sub>2</sub> levels and the cost of instrument replacement and operation, the NCUAQMD has recently requested shutdown of this instrument.

The Nitrogen Dioxide instrument at the Jacobs Station has been below the NAAQS since the monitor began operation in 2006. This instrument is nearing the end of its useful life. Because of the combination of low NO<sub>2</sub> levels and the cost of instrument replacement and operation, the NCUAQMD has recently requested shutdown of this instrument.

Overall, the NCUAQMD's decision to remove the above instruments is consistent with the findings in EPA's 2022 TSA Report which indicated that the monitoring network generally exceeded the regulatory monitoring requirements and was too large for the current resources. The NCUAQMD indicated its intention in the 2023 ANP to cease operation of these instruments. If these devices were considered SLAMS, the shutdown request would be based on 40CFR Part 58.14(1) as there is less than a 10% change that the monitors will exceed 80% of the NAAQS over the next three years.

The NCUAQMD believes that Southern Humboldt would benefit from a PM<sub>2.5</sub> monitor as PM typically affects the region because of the prevalent use of woodstoves, prescribed fire activity, and frequent wildfire events. A continuous PM<sub>2.5</sub> device is also necessary to provide good quality information AQI information for this affected region during wildfire events for the EPA AirNow website (i.e. the EPA AirNow Fire & Smoke Map). The NCUAQMD continues to seek funding for a particulate-only monitoring station for this area.

## **Review of Changes to PM<sub>2.5</sub> Monitoring Network**

Should a required PM<sub>2.5</sub> monitor need to be moved, the annual network plan inspection/comment process would be used to review any such changes. The NCUAQMD has never had an exceedance of the PM<sub>2.5</sub> standard, and has not changed the location of such a monitor. Any change to the NCUAQMD's PM<sub>2.5</sub> network is reviewed by EPA Region 9. In 2023, the NCUAQMD began running an FRM collocation of method 143 at Jacobs Station.

## **Data Submission Requirements**

Data and Precision/Accuracy reports should be submitted to CARB no later than 60 days after the quarter of record. The CARB should upload NCUAQMD data to the National Air Quality System (AQS) no later than 90 days after the quarter of record. CARB typically submits the annual data certification no later than May 1<sup>st</sup> of each year.

## **Data Availability**

NCUAQMD's air quality data is available in the AQS database and the Air Quality and Meteorological Information System (AQMIS) database. It can also be obtained directly from the NCUAQMD. The NCUAQMD should be contacted directly to request data if access through the public databases is problematic.

## Detailed Site Information

### Site Name: Jacobs

The Jacobs site was established in December of 2006 and is located on the west side of the City of Eureka.

<b>Jacobs</b>	
AQS ID	060231004
Latitude /Longitude (degrees)	40.776608 N 124.179494 W
Location	Alice Birney Elementary School
Address	717 South Ave, Eureka
County	Humboldt
Dist. to road (meters)	50
Traffic count (AADT)	2,299 (June 2023, Utah Street between Gibson Ave. and Highland Ave.)
Representative statistical area name	Eureka, Arcata, Fortuna
Groundcover	grass
PEP audit?	Information maintained by EPA
NPAP audit?	Information maintained by EPA
PM10 Flow audits	Performed every 2 weeks by NCUAQMD, Performed biannually by CARB
PM2.5 Flow audits	Performed monthly by NCUAQMD, Performed biannually by CARB
Gaseous audits	Following the requirement in QA Volume II, performance audits are performed annually by CARB
Date of 2023 CARB annual performance evaluation for ozone instruments	May 23, 2023
Dates of two semi-annual PM10 flow CARB audits occurring in 2023	May 23, 2023 November 15, 2023
Dates of two semi-annual CARB PM2.5 flow audits, occurring in 2023	May 23, 2023 November 15, 2023
Gaseous One-point control checks	Performed a minimum of once 14 days
Gaseous instrument calibrations	Performed bi-annually
Representative Area	Humboldt County Micropolitan Statistical Area, Eureka-Arcata-Fortuna, suburban



Pollutant	O3	NO2	CO	SO2	PM2.5	PM2.5	PM10
Primary/QA Collocated/Other	N/A	N/A	N/A	N/A	Primary	Collocated	Primary
Parameter Code	44201	42602	42101	42401	88101	88101	81102
POC	1	1	1	1	1	2	1
Basic Monitoring Objective	NAAQS comparison	NAAQS comparison	NAAQS comparison	NAAQS comparison	NAAQS comparison	Research Support	NAAQS comparison
Site Type	Population exposure	Population exposure	Population exposure	Population exposure	Population exposure	Population Exposure	Population exposure
Monitor Type	SPM	SPM	SPM	SPM	SLAMS	SLAMS	SLAMS
Network affiliations	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	Photometric EQOA-0880-047	Chemiluminescence RFNA-1289-074	Gas Filter correlation RFCA-0981-054	Pulsed Fluorescence EQSA-0486-060	Low Volume RFPS-0498-143	Low-Volume RFPS-0498-143	EQPM-0798-122
Instrument manufacturer and model	Thermo 49i	Thermo 42i	Thermo 48i	Thermo 43i	Thermo 2000i	Thermo 2000i	Met One BAM-1020
FRM/FEM/ARM	FEM	FRM	FRM	FEM	FRM	FRM	FEM
Collecting Agency	NCUAQMD	NCUAQMD	NCUAQMD	NCUAQMD	NCUAQMD	NCUAQMD	NCUAQMD
Analytical Lab	N/A	N/A	N/A	N/A	BAAQMD	BAAQMD	N/A
Reporting Agency	CARB	CARB	CARB	CARB	CARB	CARB	CARB
Start date	Dec 15, 2006	Dec 15, 2006	Dec 15, 2006	Dec 15, 2006	Dec 25, 2006	Dec 2, 2023	Jan 1, 2014
Required Sampling Frequency	N/A	N/A	N/A	N/A	1:6	1:12	1:6
Current Sampling Frequency	continuous	continuous	continuous	continuous	1:3	1:12	continuous
Sampling season	Year round	Year round	Year round	Year round	Year round	Year Round	Year round
Probe height (meters)	4.5	4.5	4.5	4.5	4.3	4.3	5
Distance of low-volume PM instrument from other PM instruments are >1 meter?	N/A	N/A	N/A	N/A	yes	yes	N/A
Distance from supporting structure (meters)	2	2	2	2	1.8	1.8	2.4

Pollutant	O3	NO2	CO	SO2	PM2.5	PM2.5	PM10
Distance from obstructions on roof (meters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Height of obstructions not on roof (meters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distance from trees (meters)	29	29	29	29	28	28	31
Distance to furnace or incinerator flue (meters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors (meters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unrestricted airflow (degrees)	360	360	360	360	360	360	360
Probe material	Teflon	Teflon	Teflon	Teflon	N/A	N/A	N/A
Residence time (seconds)	10.5	12.2	8.5	14.6	N/A	N/A	N/A
Operation meets requirements of appendices B, C, D and E where applicable	yes	yes	yes	yes	yes	yes	yes
Will there be changes within the next 18 months?	yes	yes	yes	yes	no	no	no
With regard only to CFR 58.30, is data suitable for comparison against the annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A	yes	yes	N/A
Does instrument meet EPA Min. Data Assess. Requirements for PM2.5 instruments (CFR 40, part 58, Appendix A) or an alternative?	N/A	N/A	N/A	N/A	yes	yes	N/A

## **Site Name: Weaverville**

The Weaverville site was established in 1995 and is located in downtown Weaverville near HWY 299.

<b>Weaverville Site</b>	
AQS ID	061050002
Latitude/Longitude (degrees)	40.734767 N 122.941172 W
Location	Trinity County Courthouse
Address	11 Court Street, Weaverville
County	Trinity
Dist. to road	28 meters to highway 299
Traffic count	9,600 AADT for HWY 299 at Washington Street (2020)
Groundcover	Paved
PEP audit	Information maintained by EPA
NPAP audit	Information maintained by EPA
PM <sub>2.5</sub> Flow audits	Performed biweekly by NCUAQMD, Performed biannually by CARB
Date of annual performance evaluation (2023 CARB flow audit)	May 22,2023
2023 semi-annual PM <sub>2.5</sub> flow audits by CARB	May 22, 2023 Nov 15,2023
Representative Area	Rural, no MSA in Trinity County
<b>Pollutant</b>	<b>PM<sub>2.5</sub></b>
Primary/QA Collocated/ Other	Primary
Parameter Code	88502
POC	1
Basic monitor objective	Air Pollution Data
Site Type	Population exposure
Monitor Type	Other
Spatial scale	Neighborhood
Network Affiliation	N/A
Sampling method	EQPM-0798-122
Instrument manufacturer and model	Met One BAM-1020
FRM/FEM/ARM	Non-FEM
Collecting Agency	NCUAQMD
Analytical Lab	N/A
Reporting Agency	CARB
Start date	March 2015

<b>Pollutant</b>	<b>PM<sub>2.5</sub></b>
Required Sampling Frequency	N/A
Current Sampling Frequency	continuous
Sampling season	Year round
Probe height (meters)	8
Distance from supporting structure (meters)	2.4
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof	N/A
Distance from trees (meters)	15
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow (degrees)	360
Probe material	N/A
Residence time	N/A
Operation meets requirements of appendices B, C, D, and E, where applicable	yes
Will there be changes within the next 18 months?	no
I With regard only to CFR 58.30. is data suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	no
Does instrument meet EPA Minimum Data Assessment Requirements for PM <sub>2.5</sub> instruments (CFR 40, part 58, Appendix A) or an approved alternative?	yes



**Site Name: Crescent City**

A Crescent City site was established in 1998 and is currently located at the Crescent Elk Middle School.

<b>Crescent City</b>	
AQS ID	060150007
Latitude/ Longitude (degrees)	41.755925 N 124.203614 W
Location	Crescent Elk Middle School
Address	994 G Street
County	Del Norte
Dist. to road	64 meters to 9 <sup>th</sup> Street
Traffic count	7,500 AADT ON L STREET AT 9TH STREET (2020)
Groundcover	Paved/grass
PEP audit	Information maintained by EPA
NPAP audit	Information maintained by EPA
Flow audit	bimonthly by NCUAQMD
Date of 2023 annual performance evaluation (CARB audit)	none
Date of semi-annual flow audit occurring in 2023	none
Representative Area	Del Norte County, Micropolitan Statistical Area, Crescent City Urban
<b>Pollutant</b>	<b>PM<sub>2.5</sub></b>
Primary/QA Collocated/Other	Other
Parameter Code	88502
POC	1
Basic Monitoring Objectives	NAAQS comparison
Site Type	Population exposure
Monitor Type	Other
Network Affiliation	N/A
Spatial scale	Neighborhood
Sampling method	EQPM-0798-122
Instrument manufacturer and model	Met One BAM-1020
FRM/FEM/ARM	Non-FEM
Collecting Agency	NCUAQMD
Analytical Lab	N/A
Reporting Agency	CARB
Start date	May 2019
Current Sampling Frequency	Continuous
Required Sampling Frequency	N/A
Sampling season	Year round

Pollutant	PM <sub>2.5</sub>
Probe height	7
Distance from supporting structure	2
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Height of obstruction not on roof (meters)	N/A
Distance from trees	93 meters
Distance to furnace or incinerator flue	49 meters
Height of stack	4 meters
Fuel burned	Diesel, intermittent, as determined by building needs
Distance between collocated monitors	N/A
Unrestricted airflow(degrees)	360
Probe material	N/A
Residence time	N/A
Operation meets requirements of appendices B, C, D, and E, where applicable	yes
Will there be changes within the next 18 months?	no
With regard only to CFR 58.30. is data suitable for comparison against the annual PM <sub>2.5</sub> NAAQS?	no
Does instrument meet EPA Minimum Data Assessment Requirements for PM <sub>2.5</sub> instruments (CFR 40, part 58, Appendix A) or an approved alternative?	yes

## APPENDIX

### A. NCUAQMD Letter to EPA requesting shutdown of CO, NO<sub>2</sub>, and SO<sub>2</sub> monitors at Jacobs Station

**North Coast Unified  
Air Quality Management District**  
707 L Street, Eureka, CA 95501  
(707) 443-3093  
[www.ncuaqmd.org](http://www.ncuaqmd.org)



June 28, 2024

Dr. Gwen Yoshimura  
Air Quality Analysis Office, Manager  
U.S. EPA Region 9  
75 Hawthorne Street  
Mail Code: AIR-7  
San Francisco, California 94105

**Re: Shutdown of SPM CO, SO<sub>2</sub> and NO<sub>2</sub> Monitors at Eureka Jacob Station**

Dear Dr. Yoshimura:

The North Coast Unified Air Quality Management District ("District") requests shut down of the Carbon Monoxide (CO), Sulfur Dioxide (SO<sub>2</sub>), and Nitrogen Dioxide (NO<sub>2</sub>) monitors located at the Eureka Jacobs ("Jacobs Station") Air Monitoring Station (AQS #06-023-1004).

The District considers these instruments to be Special Purpose Monitors (SPM) where typically notification to the U.S. EPA would suffice for a shutdown. However, the District recognizes there may be some confusion as these devices had been incorrectly designated as State and Local Ambient Monitoring Station (SLAMS) monitors for a period in the past, and therefore a request for shutdown of a SLAMS might be preferred by EPA. Although the District considers this correspondence simply notification of the shutdown of SPM instruments, the District contends that even if the devices were to be considered SLAMS, their shutdown would be a practical and feasible request meeting regulatory requirements.

In the District's 2015 Annual Network Plan (5-year Assessment), the Jacobs Station's gaseous instruments were mistakenly classified as SLAMS rather than SPM. Previously, they had been classified as SPM since the instruments began operation in 2006. This change in classification was an error, and the District continued to report the data collected by those instruments as SPM in the Federal Air Quality Database (AQS). This error was perpetuated in following Annual Network Plan(s) until the error was discovered during the District's Technical Systems Audit (TSA) in 2022 (see attached, Finding #NM-1, page 8). Upon review, District staff corrected the error in time for the publication of the 2022 Annual Network Plan. The initial error was due to the District's misunderstanding of the notion that instruments operating longer than 24 months would automatically be classified as SLAMS.

Aside from the error made in the Annual Network Plan(s), the District has been consistent in all other communications with respect to the SPM designation of all the instruments at Jacobs Station. The District has never petitioned the EPA to change the designations from SPM to SLAMS, nor has the EPA approved or granted such a change. CARB noted that the District's AMP390 Monitor Description Report states that the Ozone, NO<sub>2</sub>, SO<sub>2</sub>, and CO monitors were dedicated as SPM on December 15, 2006 when they began operation. The District has reported the data from these instruments to the Federal Air Quality Database (AQS) as SPM for 17 years.

The District's decision to remove these instruments is also consistent with the recommendations in Finding #NM-2 in the recent 2022 TSA Report (see attached, Finding NM-2, page 9). In the report, CARB had indicated that *"the size of the CO, NO<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> monitoring network generally exceeded the regulatory monitoring requirements and was too large for the current resources, resulting in data quality issues."* Additionally, they stated that *"the SLAMS sites that are currently active at Eureka – Jacobs are not required according to the District's own ANP. There are no minimum monitoring requirements for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, and PM<sub>2.5</sub> at Eureka – Jacobs, but monitoring for each parameter mentioned above is active. Only PM<sub>10</sub> is non-attainment."* CARB suggested that *"... by operating fewer monitoring sites, the District can focus on improving data quality from a smaller network, and that "... if the quantity of sites is not proportional to staffing and equipment resources, then U.S. EPA-approved regulatory monitor closures should be considered for CO, NO<sub>2</sub>, and SO<sub>2</sub>. Any such closures require U.S. EPA approval. It is recommended that the District focus on PM<sub>10</sub>, PM<sub>2.5</sub>, and O<sub>3</sub>, for prescribed burning, wildfire smoke, and O<sub>3</sub> exposure for the population. This will alleviate stress on staff to learn new calibration procedures for gases, free up resources and staff time to focus on O<sub>3</sub> and PM monitoring, and have the District maintain their monitoring activities with the staff available. The District will also benefit from upgrading to newer equipment."* The District believes the above underlined comments (emphasis added) to be made in context to the perpetuated error that the instruments were incorrectly designated as SLAMS in the most recent Annual Network Plan at the time the TSA Audit was performed. As indicated earlier above, District staff corrected the error immediately, and in time for the publication of the 2022 Annual Network Plan.

The District specified in the 2023 Annual Network Plan that its intention was to cease operation of these SPM instruments. However, even if these devices were considered SLAMS, the shutdown request would be based on 40CFR Part 58.14 (1), where data collected supports a less than a 10% chance that either the Jacobs CO monitor, the Jacobs SO<sub>2</sub>, or the Jacobs NO<sub>2</sub> monitor will exceed 80% of the NAAQS over the next three (3) years. None of the monitors are specifically required by a federally-approved attainment or maintenance plan. Therefore, even on this basis alone, this action would meet the shutdown requirements of 40CFR Part 58.14(c)(1).

Details of the NAAQS probabilities is displayed below:

**Carbon Monoxide:**

1. CO NAAQS: 8 hr												
Site	Year 1 Design Value (ppm)	Year 2 Design Value (ppm)	Year 3 Design Value (ppm)	Year 4 Design Value (ppm)	Year 5 Design Value (ppm)	Average Design Value (ppm)	Std. Dev. s	Student's t value (90% confidence)	Number of Data Values (n)	90% Upper CI (ppm)	80% of 9 ppb NAAQS (ppm)	Test
	2018	2019	2020	2021	2022	2018-2022						
Jacobs (06231004)	0.9	0.8	1.5	0.7	1.4	1.06	0.36	2.13	5	1.4	7.2	PASS

2. CO NAAQS: 1-hour												
Site	Year 1 Design Value (ppm)	Year 2 Design Value (ppm)	Year 3 Design Value (ppm)	Year 4 Design Value (ppm)	Year 5 Design Value (ppm)	Average Design Value (ppm)	Std. Dev. s	Student's t value (90% confidence)	Number of Data Values (n)	90% Upper CI (ppm)	80% of 35 ppm NAAQS (ppm)	Test
	2018	2019	2020	2021	2022	2018-2022						
Jacobs (06231004)	1.3	1	1.7	0.9	1.9	1.36	0.43	2.13	5	1.8	28	PASS
										1.8	80% of 20 ppm CA AQS 16	PASS

**Sulphur Dioxide:**

1. SO2 NAAQS: 1 hr												
Site	Year 1 Design Value (ppb)	Year 2 Design Value (ppb)	Year 3 Design Value (ppb)	Year 4 Design Value (ppb)	Year 5 Design Value (ppb)	Average Design Value (ppb)	Std. Dev. s	Student's t value (90% confidence)	Number of Data Values (n)	90% Upper CI (ppb)	80% of 75 ppb NAAQS (ppb)	Test
	2019	2020	2021	2022	2023	2019-2023						
Site name (AQ5 ID)	1	1	1	1	1	1.00	0.00	2.13	5	1.0	60	PASS

SO2 NAAQS 24 hrs												
Site	Year 1 24 hr max (ppb)	Year 2 24 Hr Max (ppb)	Year 3 24 hr Max (ppb)	Year 4 24 Hr Max (ppb)	Year 5 24 Hr Max (ppb)	Average Design Value (ppb)	Std. Dev. s	Student's t value (90% confidence)	Number of Data Values (n)	90% Upper CI (ppb)	80% of 40 ppm NAAQS (ppb)	Test
	2019	2020	2021	2022	2023	2019-2023						
Site name (AQ5 ID)	3.3	1.2	0.9	1	0.9	1.06	0.18	2.13	5	1.2	32	PASS

**Nitrogen Dioxide:**

1. NO2 NAAQS: 1 hr												
Site	Year 1 Design Value (ppb)	Year 2 Design Value (ppb)	Year 3 Design Value (ppb)	Year 4 Design Value (ppb)	Year 5 Design Value (ppb)	Average Design Value (ppb)	Std. Dev. s	Student's t value (90% confidence)	Number of Data Values (n)	90% Upper CI (ppb)	80% of 100 ppb NAAQS (ppb)	Test
	2019	2020	2021	2022	2023	2019-2023						
Site name (AQ5 ID)	19	18	15	14	14	16.00	2.35	2.13	5	18.2	80	PASS

2. NO2 NAAQS: Annual												
Site	Year 1 Design Value (ppb)	Year 2 Design Value (ppb)	Year 3 Design Value (ppb)	Year 4 Design Value (ppb)	Year 5 Design Value (ppb)	Average Design Value (ppb)	Std. Dev. s	Student's t value (90% confidence)	Number of Data Values (n)	90% Upper CI (ppb)	80% of 53 ppb NAAQS (ppb)	Test
	2019	2020	2021	2022	2023	2019-2023						
Site name (AQ5 ID)	2.2	2	1.6	2	1.6	1.88	0.27	2.13	5	2.1	42.4	PASS
										2.1	80% of 30 ppb CA AQS 24	PASS



Additional Information:

Micropolitan Statistical Area	County	Pop. in Year 2020	CO Monitors Required	SO2 Monitors Required	NO2 Monitors Required	CO Active Monitors	SO2 Active Monitors	NO2 Active Monitors
Eureka, Arcata, Fortuna	Humboldt	136,463	0	0	0	1	1	1

Jacobs Station Detail

AQS ID	060231004
Latitude /Longitude (degrees)	40.776608 N 124.179494 W
Location	Alice Birney Elementary School
Address	717 South Ave, Eureka
County	Humboldt
Dist. to road (meters)	50
Traffic count (AADT)	2,299 (June 2023, Utah Street between Gibson Ave. and Highland Ave.)
Representative statistical area name	Eureka, Arcata, Fortuna
Groundcover	grass
PEP audit	Information maintained by EPA
NPAP audit	Information maintained by EPA
Gaseous audits	Following the requirement in QA Volume II, performance audits are performed annually by CARB
Date of 2023 annual performance evaluation (CARB audit)	December 19, 2023
Gaseous One-point control checks	Performed a minimum of once 14 days
Gaseous instrument calibrations	Performed bi-annually
Representative Area	Humboldt County Micropolitan Statistical Area, Eureka-Arcata-Fortuna, suburban

Pollutant	CO	SO <sub>2</sub>	NO <sub>2</sub>
Primary/QA Collocated/Other	N/A	N/A	N/A
Parameter Code	42101	42401	42602
POC	1	1	1
Basic Monitoring Objective	NAAQS comparison	NAAQS comparison	NAAQS Comparison
Site Type	Population exposure	Population exposure	Population Exposure
Monitor Type	SPM	SPM	SPM
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Sampling method	Gas Filter correlation RFC A-0981-054	Pulsed Florescence EQSA-0486-060	Chemiluminescence RFNA-1289-074
Instrument manufacturer and model	Thermo 48i	Thermo 43i	Thermo 42i
FRM/FEM/ARM	FRM	FEM	FRM
Collecting Agency	NCUAQMD	NCUAQMD	NCUAQMD
Analytical Lab	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB
Start date	Dec 15, 2006	Dec 15, 2006	Dec 15,2006
Current Sampling Frequency	continuous	continuous	continuous
Sampling season	Year round	Year round	Year rounds
Probe height (meters)	4.5	4.5	4.5
Distance of low-volume PM instrument from other PM instruments are >1 meter?	N/A	N/A	N/A
Distance from supporting structure (meters)	2	2	2
Distance from obstructions on roof (meters)	N/A	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A	N/A
Height of obstructions not on roof (meters)	N/A	N/A	N/A
Distance from trees (meters)	29	29	29
Distance to furnace or incinerator flue (meters)	N/A	N/A	N/A
Distance between collocated monitors (meters)	N/A	N/A	N/A
Unrestricted airflow (degrees)	360	360	360
Probe material	Teflon	Teflon	Teflon
Residence time (seconds)	8.5	14.7	12.2
Operation meets requirements of appendices B, C, D and E	yes	yes	yes

The District respectfully requests the EPA sanction the shutdown of the SPM CO, SO<sub>2</sub> and NO<sub>2</sub> instruments located at Jacobs Air Monitoring station.

Please contact Wendy Caruso, Air Monitoring Specialist, or myself if you have any further questions.

Sincerely,



Brian Wilson  
Air Pollution Control Officer

cc: Dena Vallano, U.S. EPA  
Sylvia Vanderspek, CARB  
Mike Miguel, CARB  
Ken Stroud, CARB  
Aman Bains, CARB

Attachments: District correspondence (dated June 1, 2023) to CARB re: comments on  
Draft 2022 TSA Report  
Excerpt of pages 8 & 9 from CARB's Technical Systems Audit (dated  
December 2023)

**North Coast Unified  
Air Quality Management District**  
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June 1, 2023

Ms. Manisha Singh, Ph.D.  
Chief, Quality Management Branch  
California Air Resources Board  
10011 Street  
Sacramento, CA 95812

**RE: NCUAQMD Comments on Preliminary Draft 2022 TSA Report**

Dear Dr. Singh,

The North Coast Unified Air Quality Management District ("District") has reviewed the preliminary draft 2022 TSA Report and respectfully has the following suggestions:

**Page 4**

Louise Sorensen also participated in the TSA, however she is not listed here.

**NM-1**

**Description:**

In the District's 2015 (5-year Assessment) Network Plan, the Jacobs Station's gaseous instruments were mistakenly classified as SLAMS rather than SPM which they had been previously classified since the instruments began operation in 2006. This change in classification was in error and the District continued to report the data collected by those instruments as SPM in the Federal Air Quality Database (AQS). The District does not intend to petition the EPA to change the designations from SPM to SLAMS as the regulations require. This error was perpetuated in the following Annual Network Plans until discovered during the District's Technical Services Audit (TSA) in 2022. Upon review, District staff corrected the error immediately, and in time for the publication of the 2022 Annual Network Plan.

This mis-match was due to District misunderstanding of the notion that instruments operating longer than 24 months would automatically be classified as SLAMS. When this discrepancy was pointed out during the TSA, we indicated that it was never the District's desire to convert them to SLAMS and that the AQS data had been certified over the last 15 years defining the instruments as SPMs. As noted by CARB, the District's AMP390 Monitor Description Report states that the Ozone, NO<sub>2</sub>, SO<sub>2</sub>, and CO monitors were dedicated as SPM on December 15, 2006 when they began operation. As discussed with CARB, the EPA must be petitioned in order to begin operating SLAMS instruments and we note that the District has not petitioned the EPA for this change. Given that the change of designation in the ANP was due to staff error, that the District has not desired nor petitioned the EPA to change those instruments to SLAMS, and that the AQS data was consistently certified as SPM, the District simply made the correction in 2022 ANP to correctly reflect the original SPM designation. Thus, in 2022, the instruments in question met the definition of an SPM (see page 7). Additionally, the District will be indicating in the 2023 ANP that its intention will be to cease operation of gaseous SPM instruments as



there has never been an exceedance of any NAAQS or state standard(s) as the levels have all been far below these standards since operation of the monitors began in 2006.

#### **F0-1**

##### **Description:**

###### **Item 1**

The General Station Operations SOP was written in 2018 and is due for an update this year. The "Monthly Tasks List," was intended as a minimum work level for the station operator, and was not intended to serve as an SOP for an individual instrument. This oversight will be corrected in 2023, and we suggest that the General Stations SOP not be used in the place of the CO SOP in this TSA report. The District CO SOP in Draft form was in use at the time of the TSA, and was in review with ARB at the time of the TSA. The Draft CO SOP is the more robust document, and contains Quality Assurance levels and recommendations for the CO instrument. We suggest revisions to item 1, (F0-1).

###### **Item 3**

The Thermo 1461 calibrator calculates converter efficiency, and this automated converter efficiency was evaluated at the time of all calibration's verifications. The District suggests eliminating this comment, or changing it to indicate that the instrument's internal process of calculating converter efficacy is unacceptable, and the ARB form must be used instead.

##### **Suggested Actions to Address Findings:**

Many of these issues were already addressed prior to the 2022 TSA. The TSA time period included 2018-2019, and everything changed in 2020. Calibration comments are outdated because of the significant change in processes that occurred in 2020. It might be helpful to consider making note of problems identified in 2018- 2019, verses in 2020. This would be helpful, as so many issues listed in the report from 2018-2019 have already been addressed.

#### **F0-2**

##### **Description:**

###### **Item 1**

The 146i instrument appears to drift, which is evident in the difference between the ARB calibration instrument and the station instrument. The District suggests excluding the recommendation to expound on reasoning and criteria in the station logbook, as that information will be more clearly recorded in calibration records and the SOPs.

##### **Suggested Actions to Address Findings:**

###### **Item 3**

The current MOU between the District and ARB recommends ARB is responsible for calibration of instrumentation - can we remove this suggested action and divert the conversation to the MOU update process?

#### **F0-3**

##### **Description:**

The District suggests indicating that that the settings "changed," rather than "were adjusted." The District has a documented problem with Thermo instruments setting changes without human intervention. As-is, this comment seems to suggest staff deliberately changed instrument settings, and this interpretation would be incorrect. The fact of the 146i setting changes has no bearing on the hierarchy problem between the 49i and the 1461, and that hierarchy is the substance of this important finding.

## **DATA MANAGEMENT**

### **Overview:**

The District has a 4 level review process. It is named a 4 level review within our approved Data Management and Validation SOP. The check sheets only include signoff for 3 people, because the fourth level is the "zero

level", an automated level. We request that this overview of information be changed to state the District conducts a 4 level review.

### **DM-RI**

#### **Finding**



The District does have a system to quickly and automatically identify precision/zero/ span exceedances. That is part of the DAS package we employ. Exceedances are colored RED, so the operator assessing the data quickly sees the exceedance.

**Data Audit and Trend Analysis Potential outliers and trends**

The District requests a copy of this report to assist us in our network.

Thank you for the opportunity to provide the above comments. The District is thankful for all of CARB's assistance during this audit process. We are grateful for the PQAO's assistance in helping us achieve a high-quality air monitoring program.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Wilson", written in a cursive style.

Brian Wilson  
APCO

<b>Finding #:</b>	NM-1
<b>Agency:</b>	North Coast Unified Air Quality Management District
<b>Date of Audit:</b>	May 10, 11, and 12, 2022
<b>Program Area:</b>	Network Management

<b>Finding:</b>
The SPM versus SLAMS designations do not match between AQS and the District's ANP.
<b>Description:</b>
All gaseous instruments at the Eureka-Jacobs site are listed as SPM in AQS and as SLAMS in the District's ANP.
The gaseous instruments at the Eureka-Jacobs site are listed as SLAMS in each of the 2015 through 2021 District's ANPs.
The gaseous instruments at the Eureka-Jacobs site are listed as SPM in the 2015 through 2021 AMP600 Certification Evaluation and Concurrence Reports, that the District certifies each year.
The AMP390 Monitor Description Report states that the O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , and CO was dedicated as SPM on December 15, 2006.
<b>References:</b>
<a href="#">U.S. EPA Volume II: Ambient Air Quality Monitoring Program, 1.1 .1 Ambient Air Quality Monitoring Network (Page 2 of 12) (5)</a>
<b>Suggested Actions to Address Finding:</b>
Update AQS to align with what is stated in the District's 2015 through 2021 ANPs.
The SLAMS consist of a network of monitoring stations whose size and distribution are largely determined by the monitoring requirements for National Ambient Air Quality Standards (NAAQS) comparison and the needs of monitoring organizations to meet their respective state implementation plan requirements.
A SPM is defined as any monitor included in an agency's monitoring network that the agency has designated as a special purpose monitor in its annual monitoring network plan and in AQS, and which the agency does not count when showing compliance with the minimum requirements of this subpart for the number and siting of monitors of various types.

<b>Finding #:</b>	NM-2
<b>Agency:</b>	North Coast Unified Air Quality Management District
<b>Date of Audit:</b>	May 10, 11, and 12, 2022
<b>Program Area:</b>	Network Management

<b>Finding:</b>
The size of the CO, NO <sub>2</sub> , O <sub>3</sub> , SO <sub>2</sub> , PM <sub>10</sub> , and PM <sub>2.5</sub> monitoring network generally exceeded the regulatory monitoring requirements and was too large for the current resources, resulting in data quality issues (see Field Operations finding FO-1).
<b>Description:</b>
The SLAMS sites that are currently active at Eureka – Jacobs are not required according to the District’s own ANP. There are no minimum monitoring requirements for O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, and PM <sub>2.5</sub> at Eureka – Jacobs, but monitoring for each parameter mentioned above is active. Only PM <sub>10</sub> is non-attainment. The ANP says these gases are being monitored “as an examination of population exposure” (3). The ambient air monitoring operated was larger than required by CFR. By operating fewer monitoring sites, the District can focus on improving data quality from a smaller network.
<b>References:</b>
<a href="#">U.S. EPA Volume II: Ambient Air Quality Monitoring Program, 1.1 Ambient Air Quality Monitoring Network (Page 2 of 12) (5)</a>
<b>Suggested Actions to Address Finding:</b>
If the quantity of sites is not proportional to staffing and equipment resources, then U.S. EPA-approved regulatory monitor closures should be considered for CO, NO <sub>2</sub> , and SO <sub>2</sub> . Any such closures require U.S. EPA approval. It is recommended that the District focus on PM <sub>10</sub> , PM <sub>2.5</sub> , and O <sub>3</sub> , for prescribed burning, wildfire smoke, and O <sub>3</sub> exposure for the population. This will alleviate stress on staff to learn new calibration procedures for gases, free up resources and staff time to focus on O <sub>3</sub> and PM monitoring, and have the District maintain their monitoring activities with the staff available. The District will also benefit from upgrading to newer equipment.

## **B. Public Comments Received on ANP and District response to comments**

No Comments were received.