NMED
New Mexico Environment Department

Air Quality Bureau

2024 Annual Network Review

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2024 Network Review
Air Quality Bureau
New Mexico Environment Department
July 1, 2024

Prepared by
Roman Szkoda, Ambient Air Monitoring Program Manager

The purpose of this document is to provide information concerning the operation of the ambient air monitoring network by the New Mexico Environment Department (NMED) Air Quality Bureau (AQB) in Fiscal Year 2024 which covers the period from July 1, 2023 through June 30, 2024.

Introduction

In October 2006, US EPA issued final regulations concerning state and local agency ambient air monitoring networks. Under 40 CFR, Part 58, Subpart B, States are required to submit an annual monitoring network review to the Environmental Protection Agency (EPA) regional office in Dallas, Texas. These regulations require states to submit an annual monitoring network review to US EPA. This network plan is required to provide the framework for establishment and maintenance of an air quality surveillance system and to list any changes that are proposed to take place to the current network during the 2024 Fiscal Year. The annual monitoring network review must be made available for public inspection for at least 30 days prior to submission to EPA.

1.0 Overview

At the end of the state fiscal year June 30, 2024, the Bureau continued operating the 20 criteria air pollutant monitoring sites located in 11 of the State's 33 counties. Each air monitoring location is sited to meet the three basic monitoring objectives and at least one of the six federal criteria of: NO_2, O_3, CO, Lead, particulate matter (PM_{10} and $PM_{2.5}$), and SO_2 for ambient air monitoring networks.

In 2023/24, the Ambient Air Monitoring Section had a full-time staff of eight personnel.

Table 1 (Network Element Worksheet) contains the listing of all New Mexico Environment Department, Air Quality Bureau ambient air monitoring sites operating at the end of the state fiscal year 2024.

Site Designation Coding

The NMED-Air Quality Bureau's 20 air monitoring stations each have their own state region designation identified with a numeric-alpha code and site name (i.e.1ZB Bloomfield). The number and name represent the state's Air Quality Control Region and the letter(s) identifies the site followed by the name of the site. In addition, each site has a numeric AQS (Air Quality System) identifier code which is based on EPA's state, county and site ID (i.e. 35-045-1005) designation. The first two numbers identify the state (New Mexico is 35), the second set of three numbers refers to the county where the monitoring site is located. The third set of four numbers is the monitoring site ID number.

Figure 1 on page 6 shows the state and EPA air regions. The table below is a complete listing of all 20 air monitoring sites designation code, both state and EPA throughout the network.

NMED Site Designation	EPA - AQS Number Designation
1H - Sub Station	35-045-1005
1ZB - Bloomfield	35-045-0009
1NL - Navajo Lake	35-045-0018
2LL - Los Lunas	35-061-0008
2ZJ - Bernalillo	35-043-1001
3CRD - Coyote Ranger District	35-039-0026
3SFA - Santa Fe Airport	35-049-0021
3ZD - Taos	35-055-0005
5ZR - Carlsbad	35-015-1005
5ZS - Hobbs Jefferson	35-025-0008
6CM - Anthony	35-013-0016
6O - La Union	35-013-0008
6Q - Las Cruces Office	35-013-0025
6WM - West Mesa	35-013-0024
6ZL - Holman Road	35-013-0019
6ZK - Chaparral	35-013-0020
6ZM - Desert View	35-013-0021
6ZN - Santa Teresa	35-013-0022
6ZQ - Solano	35-013-0023
7E - Deming Airport	35-029-0003

Air Monitoring Network

NMED-AQB regulates air quality to protect public health and the environment in the State of New Mexico, excluding Bernalillo County. Air monitoring data are required by regulation and are used to determine compliance with U.S. EPA's NAAQS. Other important uses of the air monitoring data include the production of a daily Air Quality Index (AQI), daily air quality forecast report, support of short and long-term health risk assessments, identification of localized health concerns, and tracking long-term trends in air quality. New Mexico monitors four of the six NAAQS criteria pollutants: NO_2, O_3, particulate matter (PM_{10} and $PM_{2.5}$), and SO_2. NMED-AQB does not monitor for CO or Lead as New Mexico currently does not meet the criteria for monitoring these pollutants.

Air Quality Data

Overview of Monitored Parameters – Criteria Pollutants

Nitrogen Dioxide (NO_2)

NO_2 is a highly toxic, reddish-brown gas that is created primarily from fuel combustion in industrial sources and vehicles. It creates an odorous haze that causes eye and sinus irritation, blocks natural sunlight and reduces visibility.

Ozone (O_3)
Ground- level O_3, also known as photochemical smog, is not emitted into the atmosphere as ozone, but rather is formed by the reactions of other pollutants. The primary pollutants entering this reaction, VOC's and oxides of nitrogen, create ozone in the presence of sunlight. Ozone is a strong irritant of the upper respiratory system and causes damage to field crops.

Sulfur Dioxide (SO_2)
SO_2 is a gaseous pollutant that is emitted primarily by industrial furnaces or power plants burning coal or oil containing sulfur. At high concentrations, breathing can be impaired. Damage to vegetation can also result.

Fine Particulate Matter ($PM_{2.5}$)
Fine particulate matter with a diameter of 2.5 microns or less is created primarily from industrial processes and fuel combustion. These particles are breathed deep into the lungs. Exposure to particle pollution is linked to a variety of significant health problems ranging from aggravated asthma to premature death in people with heart and lung disease.

Particulate Matter (PM_{10})
Particulate matter with a mean diameter of 10 microns or less is emitted from transportation and industrial sources. Exposure to particle pollution is linked to a variety of significant health problems ranging from aggravated asthma to premature death in people with heart and lung disease.

Meteorological Monitoring
NMED-AQB includes meteorological monitoring of the local area because the outcome of air pollutants is influenced by the movement and characteristics of the air mass into which they are emitted. If the air is calm and pollutants cannot disperse, then the concentration of these pollutants will build up. Conversely, if a strong and turbulent wind is blowing, the pollutant will rapidly disperse into the atmosphere and will result in lower concentrations near the pollution source. The measurements of wind speed and direction, temperature, humidity, rainfall, barometric pressure, ultraviolet radiation and solar radiation are important parameters used in the study of air quality monitoring results and to further understand the chemical reactions that occur in the atmosphere.

Monitoring Methodology
NMED-AQB air monitoring network uses Thermo Environmental Instruments iQ-Series for all gaseous monitoring. The Model 42iQ Chemiluminescence monitor collects NO/NOx/NO_2 data, the Model 43iQ Pulsed Florescence monitor collects SO_2 data and the Model 49iQ UV Photometric monitor collects Ozone data. For particulate matter sampling, NMED-AQB uses the Thermo Environmental Instruments 2025i Series Partisol FRM samplers. Three of the four 2025i samplers are $PM_{2.5}$ designated and the fourth is designated as $PM_{10.}$ NMED-AQB is also operating the BAM-1020 continuous particulate matter sampler, both PM_{10} and $PM_{2.5.}$ The BAM samplers allow for real time data as it provides particulate concentrations continuously. This also has the added benefit of letting the public know of high particulate events (via the Bureau's web page) allowing citizens that may have respiratory health conditions to take necessary precautions. The Met One Instruments BAM 1020 samplers (both $PM_{2.5}$ and PM_{10}) were replaced over the year with the most current series of BAM samplers. The BAM PM_{10}

samplers were replaced with N-Series BAM-1020 PM_{10} samplers. While the BAM $PM_{2.5}$ sampler were replaced with BAM-1022 samplers as these samplers do not require a sampling shelter and are "stand-alone." The Thermo Partisol 2025i $PM_{2.5}$ samplers were replaced with the BAM-1022 samplers and the one Partisol PM_{10} was replaced with a N-Series BAM-1020 sampler (N denotes most current series of BAM sampler) during the 2024 fiscal year.

2.0 Network Review by Pollutant and Respective Air Quality Control Regions

NMED-AQB has reviewed its current ambient air quality network and proposed changes to the network implemented during Fiscal Year 2024. Current NAAQS, data trends, siting concerns, site access concerns, and other monitoring issues all contribute to any proposed network revisions.

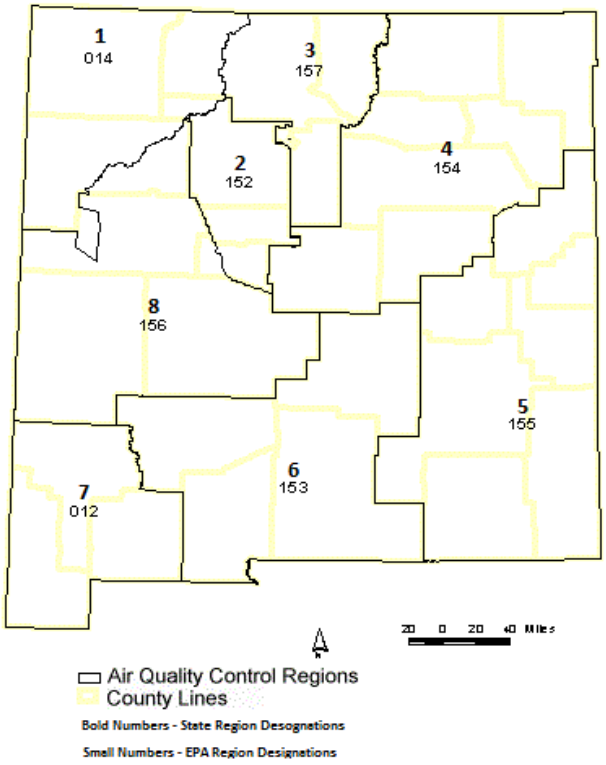
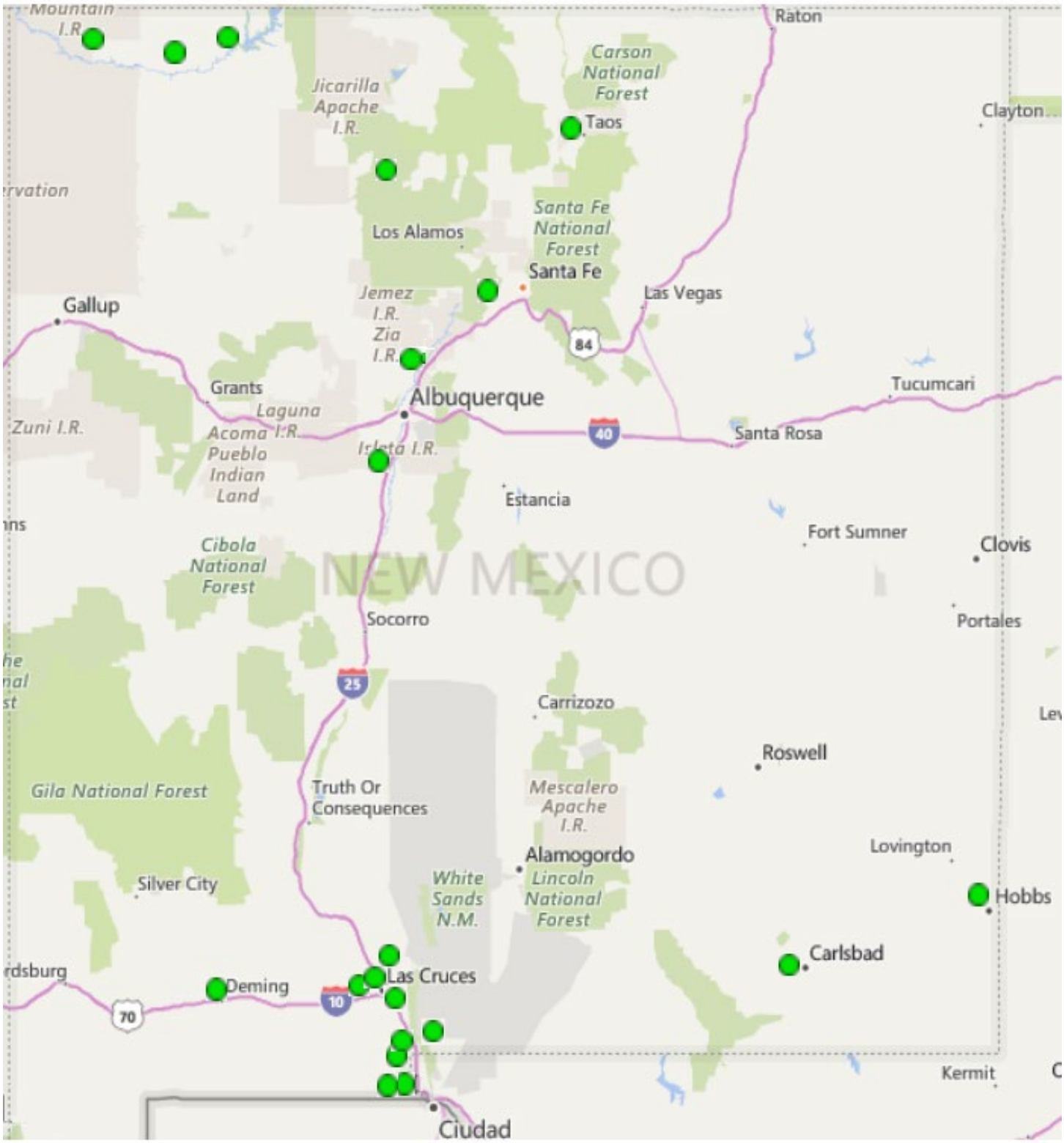


Figure 1

The Bureau's air monitoring network for 2024 consists of the sites and monitors listed in the Network Elements Spreadsheet. All site changes (if any) which have occurred or planned to take place in 2024 are included along with any network modifications for 2024. Figure – 1 above is an overview of the states and EPA's designation of Air Quality Control Regions (AQCR's). Figure – 2 on the next page depicts AQB's current monitoring network and shows the locations of monitoring sites as of 2024. The number of monitoring locations operated by the State remained unchanged throughout the 20 sites.



Monitoring Network Locations
Figure 2

Population of Metropolitan Statistical Areas (MSA's)

Albuquerque MSA	Population
Albuquerque Metro	922,296
El Paso-Las Cruces MSA	Population
Las Cruces Metro	225,210
Farmington MSA	Population
Farmington Metro	120,675
Santa Fe MSA	Population
Santa Fe Metro	155,956
Carlsbad-Artesia & Hobbs µSA	Population
Carlsbad-Artesia	60,275
Hobbs	72,101
Taos µSA	Population
Taos Micro Area	34,405

*NMED has no air monitoring stations in Bernalillo county due to the City of Albuquerque having its own monitoring group which covers the county.

Above population statistics based on US Census Bureau 2023 data.

Based on the most current population NMED's Air Quality Bureau meets the air monitoring network requirements set forth in 40 CFR Part 58 Appendices A through E.

2.1 Nitrogen Dioxide (NO_2)

The Bureau operates seven air monitoring sites in the network for Nitrogen Dioxide. Three in AQCR-1 which are in San Juan County, two in AQCR-5, one being in Eddy County and the second in Lea County and two in AQCR-6 both of which operate in Doña Ana County.

Nitrogen Dioxide (NO_2) Air Quality Control Region 1 (EPA Region 014)

The Bureau operates three air monitoring sites in AQCR-1 for Nitrogen Dioxide which are in San Juan County consisting of the Substation, Bloomfield, and Navajo Lake sites. Figure 3 indicates the location of the monitoring sites.

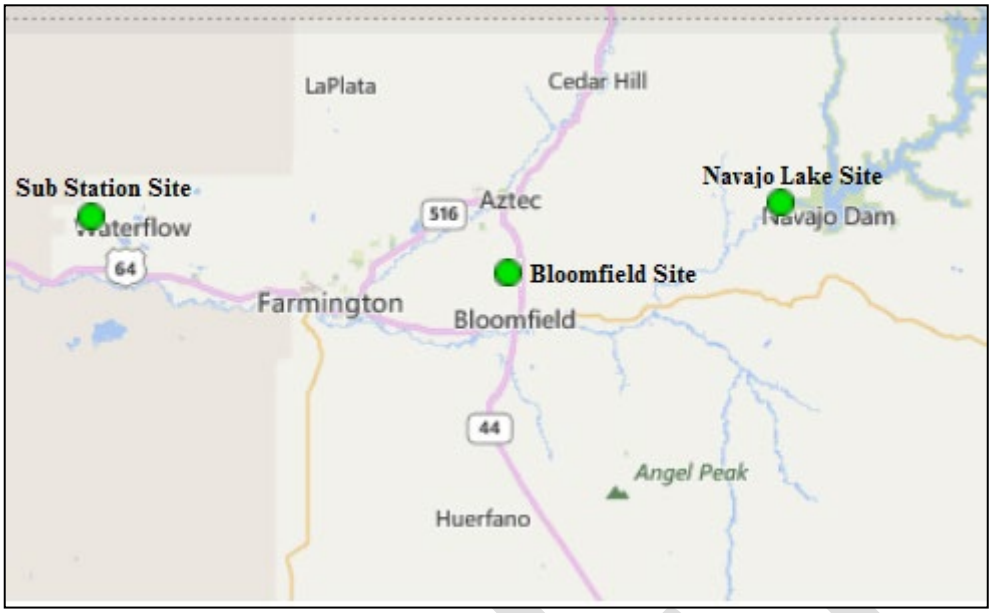


Figure 3

Substation Site AQS #: 35-045-1005:
Substation NO_2 Parameter 42602, Method 074, POC 2
The Bureau continues to operate the NO_2 monitor at the Substation air monitoring site. No changes to instrumentation occurred in FY2024.

Bloomfield Site AQS #:35-045-0009:
Bloomfield NO_2 Parameter 42602, Method 074, POC 1
The Bureau continues to operate the NO_2 monitor at the Bloomfield air monitoring site. No changes to instrumentation occurred in FY2024.

Navajo Lake Site AQS# 35-045-0018:
Navajo Lake NO_2 Parameter 42602, Method 074, POC 1
The Bureau continues to operate the NO_2 monitor at the Navajo Lake air monitoring site. No changes to instrumentation occurred in FY2024.

Nitrogen Dioxide (NO_2) Air Quality Control Region 5 (EPA Region 155)
The Bureau operates two air monitoring sites in AQCR-5, located in Eddy County, and Lea County consisting of the Carlsbad and Hobbs sites. Figure 4 indicates the location of the monitoring sites.

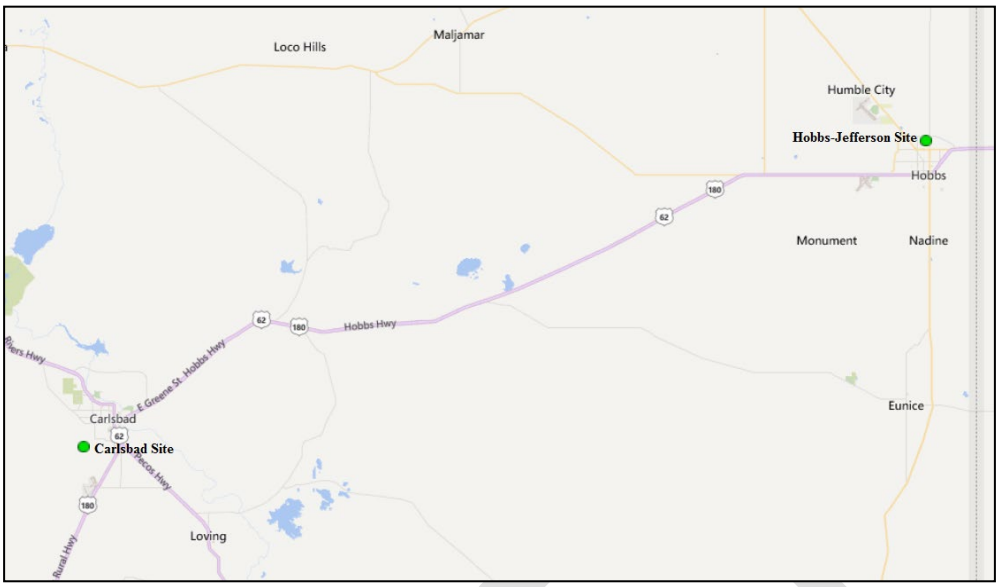


Figure 4

Carlsbad AQS #: 35-015-1005:

Carlsbad NO_2 Parameter 42602, Method 074, POC 1

The Bureau continues to operate the NO_2 monitor at the Carlsbad air monitoring site. No changes to instrumentation occurred in FY2024.

Hobbs Jefferson AQS #: 35-025-0008:

Hobbs NO_2 Parameter 42602, Method 074, POC 1

The Bureau continues to operate the NO_2 monitor at the Hobbs air monitoring site. No changes to instrumentation occurred in FY2024.

Nitrogen Dioxide (NO_2) Air Quality Control Region 6 (EPA Region 153)

The Bureau operates nine air monitoring sites in AQCR-6, located in Doña Ana County. Two of the nine monitoring sites, Desert View and Santa Teresa monitor for NO_2. Figure 5 indicates the location of the monitoring sites.

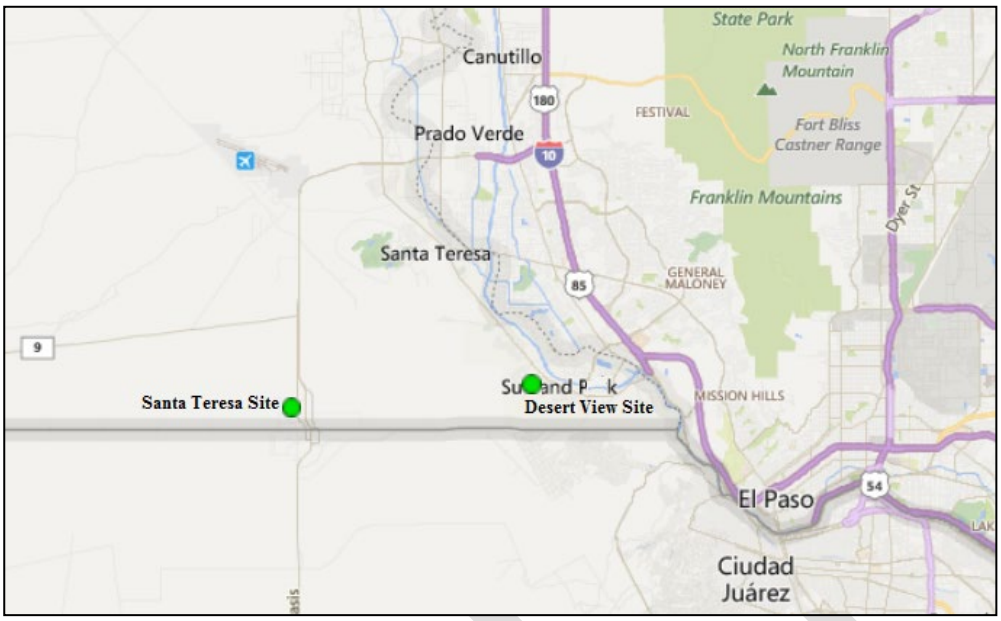


Figure 5

Desert View AQS #: 35-013-0021:
Desert View NO_2 Parameter 42602, Method 074, POC 1
The Bureau continues to operate the NO_2 monitor at the Desert View air monitoring site. No changes to instrumentation occurred in FY2024.

Santa Teresa AQS #: 35-013-0022:
Santa Teresa NO_2 Parameter 42602, Method 074, POC 1
The Bureau continues to operate the NO_2 monitor at the Santa Teresa air monitoring site. No changes to instrumentation occurred in FY2024.

2.2 Ozone (O_3)

The Bureau is continuing the operation of fourteen air monitoring sites in the network for Ozone, seven in northern New Mexico and seven in southern New Mexico. In the northern half of the state there are three sites in AQCR-1 which are in San Juan County, two sites in AQCR-2, one being in Sandoval County and the second in Valencia County, and two sites in AQCR-3, one in Santa Fe County and the second in Rio Arriba County. In the southern half of the state, there are two sites in AQCR-5, one in Lea County and the second in Eddy County and five sites in AQCR-6 which are in Doña Ana County. Figure 6 indicates the location of the northern monitoring sites and Figure 7 indicates the location of the southern monitoring sites.

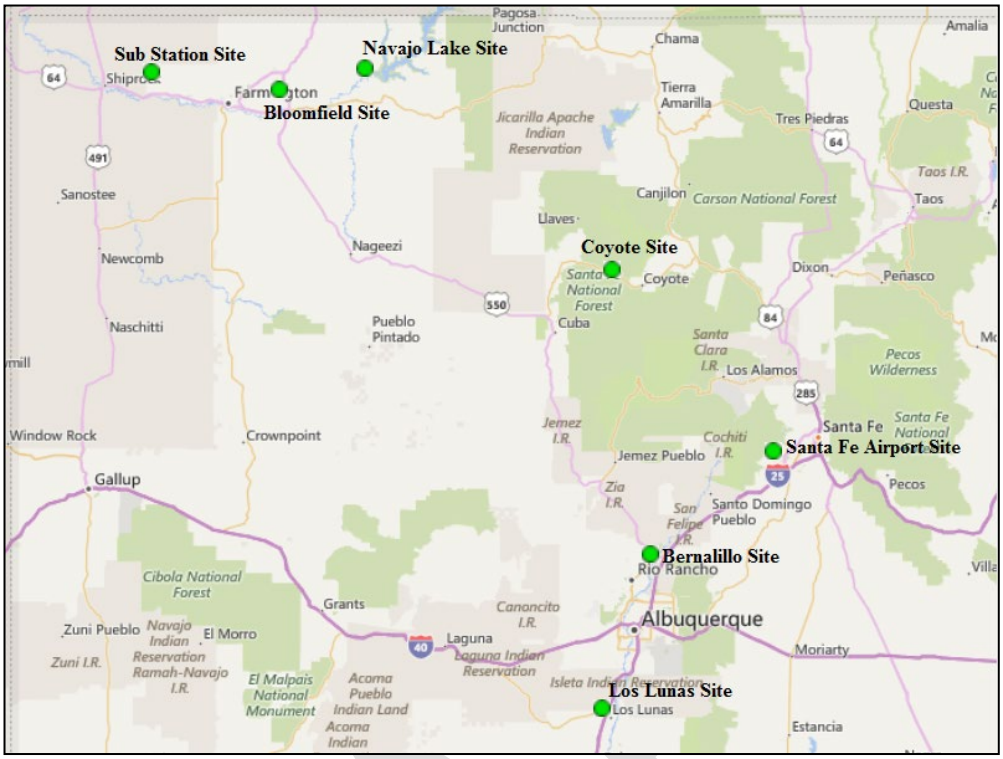


Figure 6

Figure 7

Ozone (O_3) Air Quality Control Region 1 (EPA Region 014)

The Bureau operates three air monitoring sites in AQCR-1 for Ozone which are in San Juan County consisting of the Substation, Bloomfield, and Navajo Lake sites. Figure 8 indicates the location of the monitoring sites.

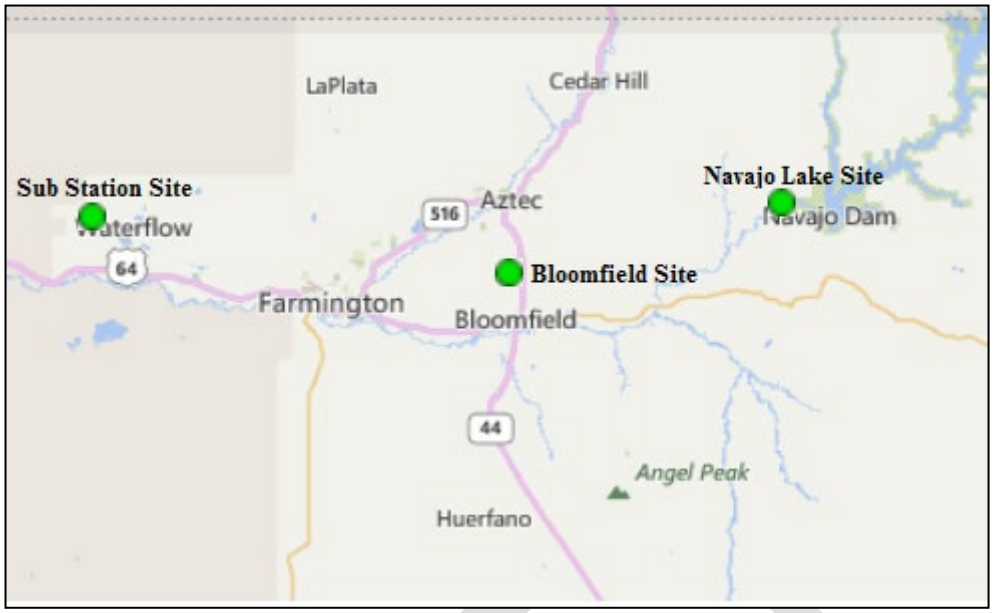


Figure 8

Substation Site AQS #: 35-045-1005:
Substation O_3 Parameter 44201, Method 047, POC 1
The Bureau continues to operate the O_3 monitor at the Substation air monitoring site. No changes to instrumentation occurred in FY2024.

Bloomfield Site AQS #:35-045-0009:
Bloomfield O_3 Parameter 44201, Method 047, POC 1
The Bureau continues to operate the O_3 monitor at the Bloomfield air monitoring site. No changes to instrumentation occurred in FY2024.

Navajo Lake Site AQS# 35-045-0018:
Navajo Lake O_3 Parameter 44201, Method 047, POC 1
The Bureau continues to operate the O_3 monitor at the Navajo Lake air monitoring site. No changes to instrumentation occurred in FY2024.

Ozone (O_3) Air Quality Control Region 2 (EPA Region 152)

The Bureau operates two ozone air monitoring sites in AQCR-2, one located in Sandoval County, and the second in Valencia County consisting of the Bernalillo and Los Lunas sites respectively. Figure 9 indicates the location of the Bernalillo and Los Lunas sites.

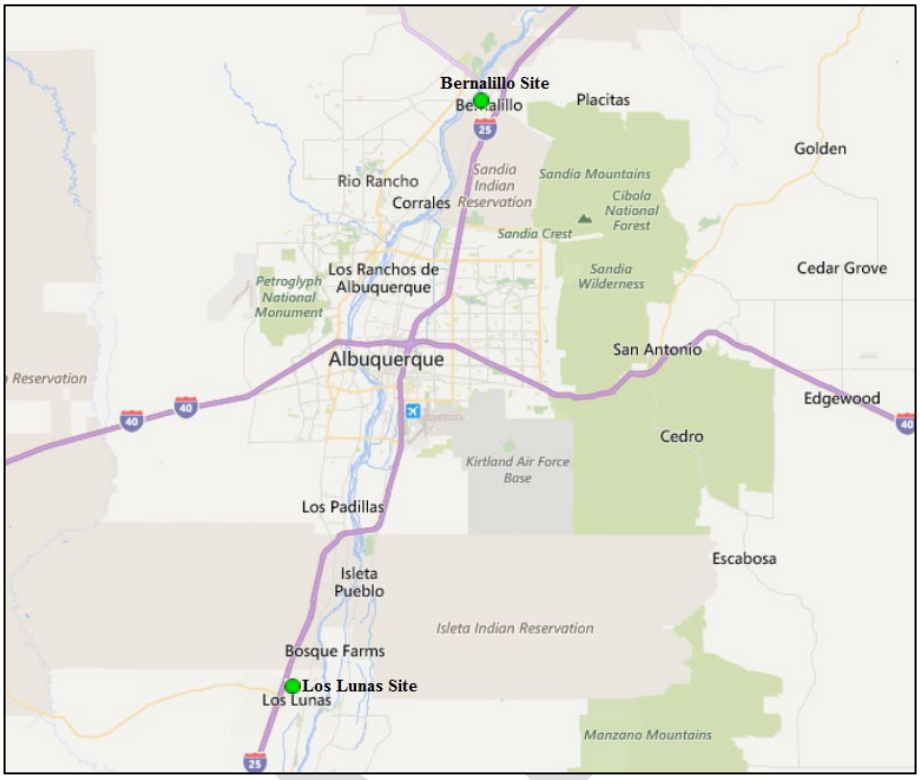


Figure 9

Bernalillo (DOT Yard) Site AQS#: 35-043-1001:

Bernalillo O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at the Bernalillo air monitoring site. EPA Region-6 has noted that this site is not required due to the City of Albuquerque (COA) currently operating more than the required Ozone sites for the Albuquerque MSA. However, NMED had requested to continue operating the O_3 monitor at Bernalillo and provided an explanation for continuing ozone monitoring in the 2015 Five-Year Network Assessment. NMED will continue collaborating with EPA Region-6 on appropriateness of continuing operating the Bernalillo site. No changes to instrumentation occurred in FY2024.

Los Lunas AQS #: 35-061-0008:

Los Lunas O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at the Los Lunas air monitoring site. No changes to instrumentation occurred in FY2024.

Ozone (O_3) Air Quality Control Region 3 (EPA Region 157)

The Bureau operates two ozone air monitoring sites in AQCR-3 located in Santa Fe County and Rio Arriba County consisting of the Santa Fe Airport and Coyote Ranger District sites. Figure 10 indicates the location of the two sites.

Figure 10

Santa Fe Airport AQS #: 35-049-0021:
Santa Fe Airport O_3 Parameter 44201, Method 047, POC 1
The Bureau continues to operate the Ozone monitor at the Santa Fe Airport air monitoring site. No changes to instrumentation occurred in FY2024.

Coyote Ranger District AQS #: 35-039-0026:
Coyote Ranger District O_3 Parameter 44201, Method 047, POC 1
The Bureau continues to operate the Ozone monitor at the Coyote Ranger District air monitoring site. No changes to instrumentation occurred in FY2024.

Ozone (O_3) Air Quality Control Region 5 (EPA Region 155)

The Bureau operates two ozone air monitoring sites in AQCR-5, located in Eddy County, and Lea County consisting of the Carlsbad and Hobbs sites. Figure 11 indicates the location of the two sites.

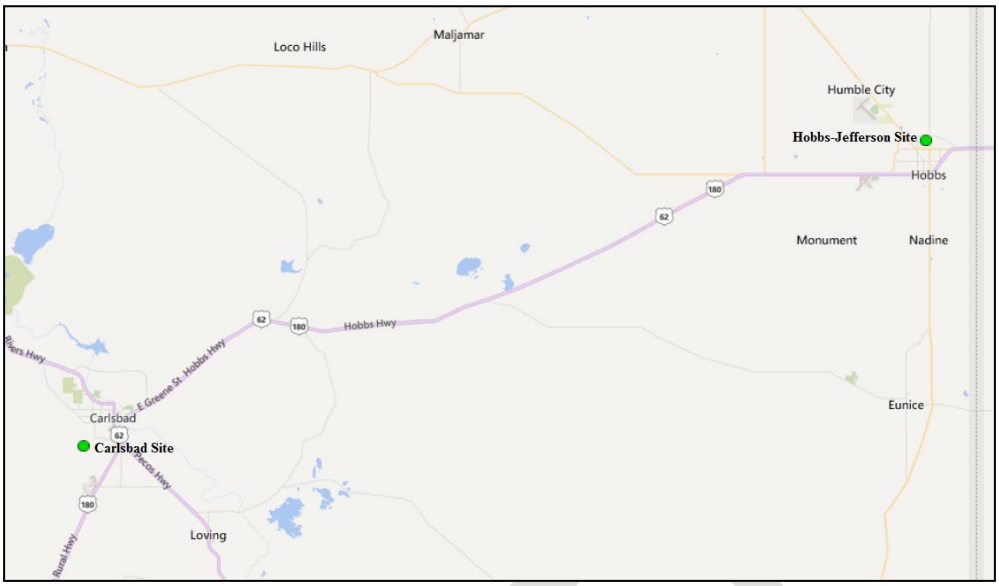


Figure 11

Carlsbad AQS #: 35-015-1005:

Carlsbad O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at the Carlsbad air monitoring site. No changes to instrumentation occurred in FY2024.

Hobbs Jefferson AQS #: 35-025-0008:

Hobbs Jefferson O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at the Hobbs air monitoring site. No changes to instrumentation occurred in FY2024.

Ozone (O_3) Air Quality Control Region 6 (EPA Region 153)

The Bureau operates a total of eight air monitoring sites in AQCR-6. Five of those sites monitor for ozone consisting of the Chaparral, Desert View, La Union, Santa Teresa, and Solano sites. Figure 12 indicates the location of the ozone monitoring sites.

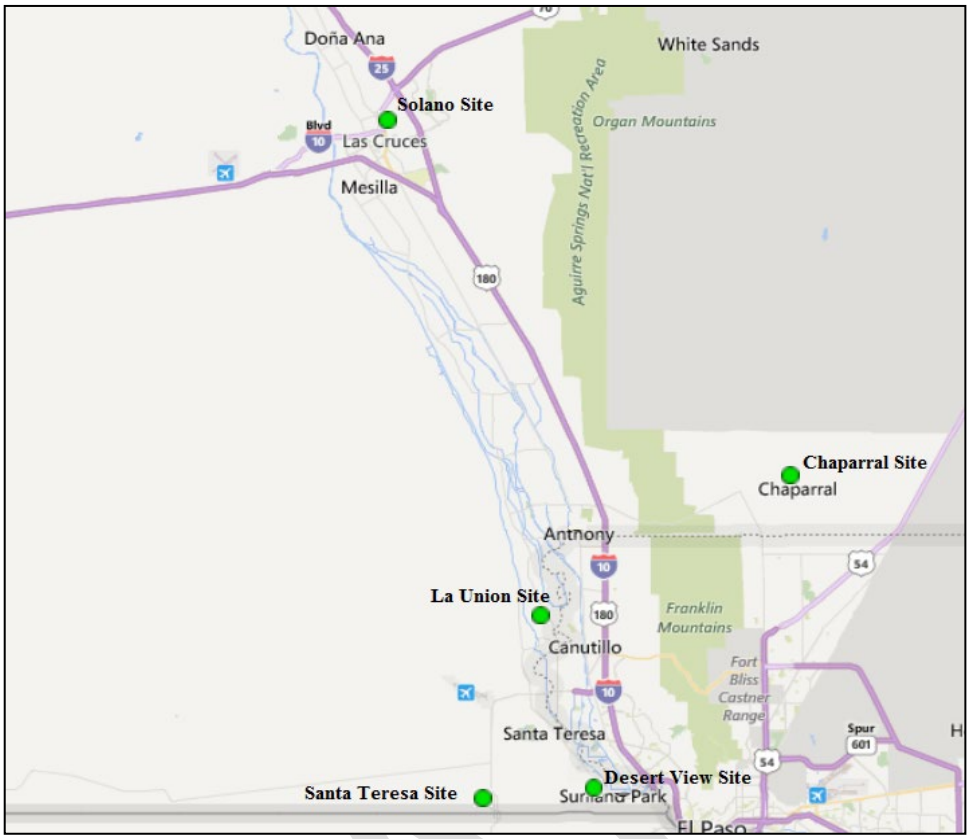


Figure 12

Chaparral AQS #: 35-013-0020:

Chaparral O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at the Chaparral air monitoring site. No changes to instrumentation occurred in FY2024.

Desert View AQS #: 35-013-0021:

Desert View O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at the Desert View air monitoring site. No changes to instrumentation occurred in FY2024.

La Union AQS #: 35-013-0008:

La Union O_3 Parameter 44201, Method 047, POC 2

The Bureau continues operating the Ozone monitor at La Union. No changes to instrumentation occurred in FY2024.

Santa Teresa AQS #: 35-013-0022:

Santa Teresa O_3 Parameter 44201, Method 047, POC 1

The Bureau continues to operate the Ozone monitor at Santa Teresa air monitoring site. No changes to instrumentation occurred in FY2024.

Solano Road AQS #: 35-013-0023:

Solano Road O_3 Parameter 44201, Method 047, POC 1

The Bureau continues operating the Ozone monitor at Solano Road. No changes to instrumentation occurred in FY2024.

2.3 Sulfur Dioxide (SO_2)

The Bureau discontinued operating the two SO2 analyzers in the air monitoring network. Both sites are in the northern half of the state in AQCR-1 which is in San Juan County consisting of the Sub Station and Bloomfield air monitoring sites. Figure 13 below indicates the location of the SO_2 monitoring sites. Details concerning the discontinuation are explained below.

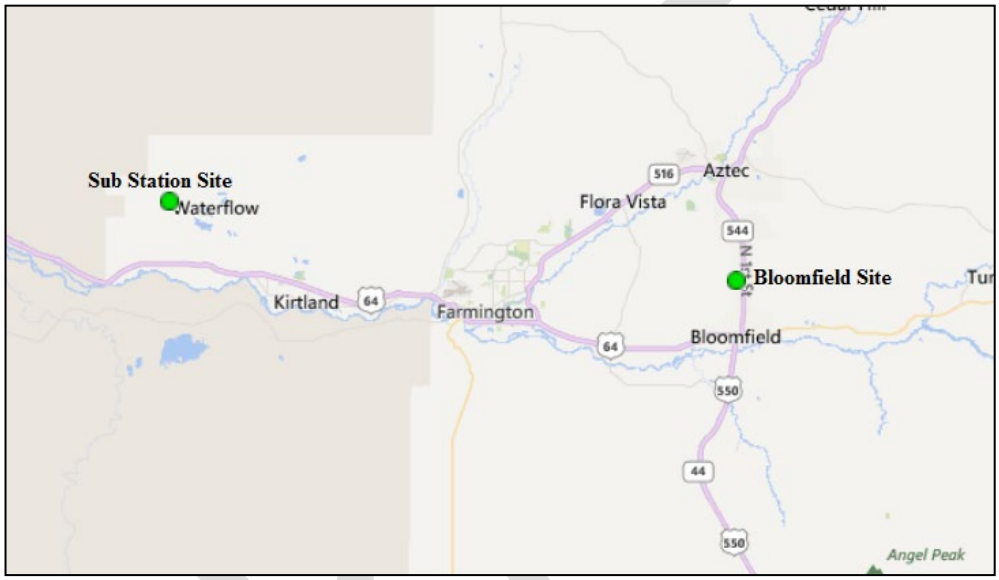


Figure 13

Sulfur Dioxide (SO_2) Air Quality Control Region 1 (EPA Region 014)

Substation SO_2 AQS #:35-045-1005

Substation SO_2 Parameter 42401, Method 060, POC 1 & Method 009, POC 3

The Bureau discontinued operating the SO_2 monitor at the Substation air monitoring site on December 22, 2023. NMED is requested to discontinue operation of the SO_2 monitor based on the PWEI calculation explained on page 30 (calculations obtained through EPA web site: www.epa.gov/air-emissions-inventories). The PWEI value indicates that it is well below 5000 as per 40CFR, Part-58, Appendix D paragraph 4.4. Therefore, no SO_2 monitoring is required, NMED discussed and received concurrence from EPA Region-6 that the 3-year SO_2 design values were well below 50% of the NAAQS and to proceed with discontinuation of the SO_2 monitoring. SO_2 levels have reduced significantly in San Juan County due to the shutdown of the San Juan Generator Station and the Four Corners Power Station shutting down two units.

Bloomfield SO_2 AQS #:35-045-0009

Bloomfield SO_2 Parameter 42401, Method 060, POC 1 & Method 009, POC 3

The Bureau discontinued operating the SO_2 monitor at the Bloomfield air monitoring site on December 22, 2023. NMED requested to discontinue operation of the SO_2 monitor based on the PWEI calculation explained on page 30 (calculations obtained through EPA web site: www.epa.gov/air-emissions-inventories). The PWEI value indicates that it is well below 5000 as per 40CFR, Part-58, Appendix D paragraph 4.4. Therefore, no SO_2 monitoring is required. NMED discussed and received concurrence from EPA Region-6 that the 3-year SO_2 design values were well below 50% of the NAAQS and to proceed with discontinuation of the SO_2 monitoring. SO_2 levels have reduced significantly in San Juan County due to the shutdown of the San Juan Generator Station and the Four Corners Power Station shutting down two units.

2.4 Particulate Matter $PM_{2.5}$ Non-Continuous Federal Reference Method (FRM)

The Bureau discontinued operating the three Method 145 $PM_{2.5}$ FRM Partisol samplers within the air monitoring network, all three samplers were operating in Doña Ana County which is AQCR-6. The Desert View monitoring site is the designated co-location site for the FRM 145 samplers operating in the network. Figure 14 below indicates the location of the non-continuous FRM $PM_{2.5}$ monitoring sites. NMED replaced all manual samplers with continuous samplers for FRM with FEM samplers, as stated in sections 2.4, section 2.5 on page 20, sections 2.6 on page 23 and section 2.7 on page 24.

Figure 14

Particulate Matter $PM_{2.5}$ (FRM) Air Quality Control Region 6 (EPA Region 153)

Desert View AQS #: 35-013-0021:

Desert View $PM_{2.5}$ FRM (Primary)	Parameter 88101, Method 145, POC 2 (Discontinued July 13, 2023)
Desert View PM2.5 FEM (Primary)	Parameter 88101, Method 209, POC 4 (as of July 13, 2023)

Desert View $PM_{2.5}$ FRM (Co-Located) Parameter 88101, Method 145, POC 3 (Discontinued July 13, 2023)
Desert View PM2.5 FEM (Collocated) Parameter 88101, Method 209, POC 5 (as of July 13, 2023)

The Desert View site is designated as the bureau's co-location site using the Thermo 2025i series Partisol $PM_{2.5}$ samplers. In 2018, this site was chosen for co-location due to the area experiencing residential and commercial development nearby in Santa Teresa and on the Mexican side along the US/Mexican border which is just one mile south of the Desert View site. NMED requested to replace these units in the 2022 ANR with Met One Instruments BAM-1022 FEM $PM_{2.5}$ samplers (Parameter 88101, Method 209, POC 4 and POC 5 respectively) using approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB had purchased the BAM-1022 samplers and installed them July 10, 2023. Following calibration and 72-hour background test, operations began on July 13, 2023. These units will operate as the primary and co-located $PM_{2.5}$ samplers.

Anthony AQS#: 35-013-0016:
Anthony $PM_{2.5}$ FRM Parameter 88101, Method 145, POC 2 (Discontinued May 12, 2023)
Anthony $PM_{2.5}$ FEM Parameter 88101, Method 209, POC 3 (as of May 12, 2023)

The Bureau discontinued operating the co-located Partisol 2025i FRM $PM_{2.5}$ sampler at the Anthony air monitoring site along with the primary BAM-1020 FEM $PM_{2.5}$ sampler, NMED requested to replace these units in the 2022 ANR with Met One Instruments BAM-1022 FEM $PM_{2.5}$ samplers (Parameter 88101, Method 209, POC 3 using approved EPA funding from the American Rescue Plan. AQB purchased the BAM-1022 samplers and installed them May 10, 2023, and operating on May 12, 2023, following calibration and 72-hour background test. This unit will operate as the co-located $PM_{2.5}$ sampler.

2.5 Particulate Matter $PM_{2.5}$ Continuous (BAM-1020 Sampler)

The Bureau operated six Method 170 BAM-1020 $PM_{2.5}$ samplers within the air monitoring network designated as SLAMS. Three of the six samplers are in southern New Mexico's Doña Ana County at the Anthony, Santa Teresa and Las Cruces Office sites. The fourth is in Lea County at the Hobbs monitoring site. The remaining two samplers are in northern New Mexico with the fifth at the Santa Fe Airport monitoring site and the sixth at the Taos monitoring site. Figure 15 indicates the location of the Santa Fe Airport and Taos monitoring sites and Figure 16 indicates the Anthony, Las Cruces Office and Hobbs monitoring sites. The samplers were replaced with Met One Instruments model BAM-1022 $PM_{2.5}$ samplers from May to October 2023 as part of EPA funding from the American Rescue Plan. These samplers are more efficient as they do not require a temperature-controlled shelter in which to operate in, thus avoiding having HVAC contractual work performed on a quarterly basis.

Figure 15

Figure 16

Air Quality Control Region 3 (EPA Region 157)

Santa Fe Airport AQS #: 35-049-0021:

Santa Fe Airport $PM_{2.5}$ Continuous Parameter 88101, Method 170, POC 1 (Discontinued October 13, 2023)

Santa Fe Airport $PM_{2.5}$ Continuous Parameter 88101, Method 209, POC 1 (as of October 11, 2023)

The Bureau discontinued operating the Met-One BAM-1020 $PM_{2.5}$ sampler and replaced it with a BAM-1022 sampler. NMED requested to replace this unit in the 2022 ANR with a Met One

Instruments BAM-1022 FEM $PM_{2.5}$ sampler (Parameter 88101, Method 209, POC 1) using pre-approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1022 units and installed the unit on October 11, 2023, and has been operating as of October 27, 2023, following calibration and 72-hour background test and additional testing due to sampler hardware issues.

Taos AQS #: 35-055-0005:

Taos $PM_{2.5}$ Continuous Parameter 88101, Method 170, POC 1 (Discontinued October 11, 2023)

Taos $PM_{2.5}$ Continuous Parameter 88101, Method 209, POC 1 (as of October 11, 2023)

The Bureau discontinued operating the Met-One BAM-1020 $PM_{2.5}$ sampler and replaced it with a BAM -10222 sampler. NMED requested to replace this unit in the 2022 ANR with a Met One Instruments BAM-1022 FEM $PM_{2.5}$ sampler (Parameter 88101, Method 209, POC 1) using pre-approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1022 sampler and installed the unit October 11, 2023, and has been operating as of October 20, 2023, following calibration, unexpected power outages and 72-hour background test.

Air Quality Control Region 5 (EPA Region 155)

Hobbs Jefferson AQS#: 35-025-0008:

Hobbs Jefferson $PM_{2.5}$ Continuous Parameter 88101, Method 170, POC 2 (Discontinued June 6, 2023)

Hobbs Jefferson $PM_{2.5}$ Continuous Parameter 88101, Method 209, POC 2 (as of June 6, 2023)

The Bureau discontinued operating the Met-One BAM-1020 $PM_{2.5}$ sampler and replaced it with a BAM-1022 sampler, NMED requested to replace this unit in the 2022 ANR with a Met One Instruments BAM-1022 FEM $PM_{2.5}$ sampler (Parameter 88101, Method 209, POC 2) using pre-approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1022 sampler and installed the unit June 6, 2023, and has been operating as of June 12, 2023, following calibration, and 72-hour background test.

Air Quality Control Region 6 (EPA Region 153)

Anthony AQS #: 35-013-0016:

Anthony $PM_{2.5}$ Continuous Parameter 88101, Method 170, POC 1 (Discontinued May 12, 2023

Anthony $PM_{2.5}$ Continuous Parameter 88101, Method 209, POC 1 (as of May 12, 2023

The Bureau discontinued operating the Met-One BAM-1020 $PM_{2.5}$ sampler. The Anthony site is the designated co-location site for the FEM Method 170 samplers operating in the network. NMED requested to replace this unit in the 2022 ANR with a Met One Instruments BAM-1022 FEM $PM_{2.5}$ sampler (Parameter 88101, Method 209, POC 1) using approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1022 sampler and installed the unit May 10, 2023, and has been operating as of May 12, 2023, following calibration, and 72-hour background test. This unit will operate as the primary $PM_{2.5}$ sampler.

Las Cruces Office AQS #: 35-013-0025:

Las Cruces $PM_{2.5}$ Continuous Parameter 88101, Method 170, POC 2 (Discontinued June 23,2023)

Las Cruces $PM_{2.5}$ Continuous Parameter 88101, Method 209, POC 2 (as of June 23, 2023)

The Bureau discontinued operating the Met-One BAM-1020 $PM_{2.5}$ sampler which is the Bureau's Regional Transport particulate site and was replaced with a BAM-1022 sampler. NMED is requested to replace this unit with a Met One Instruments BAM-1022 FEM $PM_{2.5}$ sampler (Parameter 88101, Method 209, POC 2) using approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1022 sampler and installed the unit June 23, 2023, and has been operating as of June 28, 2023, following calibration, and 72-hour background test.

Santa Teresa AQS #: 35-013-0022:

Santa Teresa $PM_{2.5}$ Continuous Parameter 88101, Method 170, POC 1 (Discontinued June 29, 2023)

Santa Teresa $PM_{2.5}$ Continuous Parameter 88101, Method 209, POC 1 (as of June 29, 2023)

The Bureau discontinued operating the Met-One BAM-1020 $PM_{2.5}$ sampler, and replaced it with a BAM-1022 sampler, NMED requested to replace this unit with a Met One Instruments BAM-1022 FEM $PM_{2.5}$ sampler (Parameter 88101, Method 209, POC 1) using approved EPA funding from the American Rescue Plan. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1022 sampler and installed the unit June 29, 2023, and has been operating as of June 29, 2023, following calibration, and 72-hour background test.

2.6 Particulate Matter PM_{10} Non-Continuous Federal Reference Method (FRM)

The Bureau discontinued operating the one non-continuous Thermo Partisol 2025i FRM sampler in the monitoring network as the primary for PM_{10} particulate matter. The sampler was replaced with a BAM-1020. The Thermo Partisol sampler was located at the Anthony air monitoring site which also contained a Met-One BAM-1020 PM_{10} continuous sampler as the assigned co-located sampler for the PM_{10} FRM sampler per EPA requirements. This Met-One BAM 1020 PM_{10} sampler is currently co-located with the new Met-One BAM-1020 sampler. Specifics regarding the change are listed below.

Air Quality Control Region 6 (EPA Region 153)

Anthony PM_{10} FRM Parameter 81102, Method 127, POC 1 (Discontinued May 10, 2023)

Anthony PM_{10} FEM Parameter 81102, Method 122, POC 1 (as of May 10, 2023)

The Bureau discontinued operating the Partisol 2025i non-continuous sampler as the designated primary sampler for PM_{10} particulate matter. Figure 17 indicates the location of the PM_{10} monitoring site. NMED replaced this unit using approved EPA funding from the American Rescue Plan with a Met One Instruments BAM-1020 FEM sampler (Parameter 81102, Method 122, POC 1). Having the continuous sampler eliminates having to get filters processed and weighed by the lab and will capture all exceptional wind events that occur and overall is more efficient. The funding was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1020 sampler and installed the unit May 10, 2023. This unit will operate as the primary PM_{10} sampler.

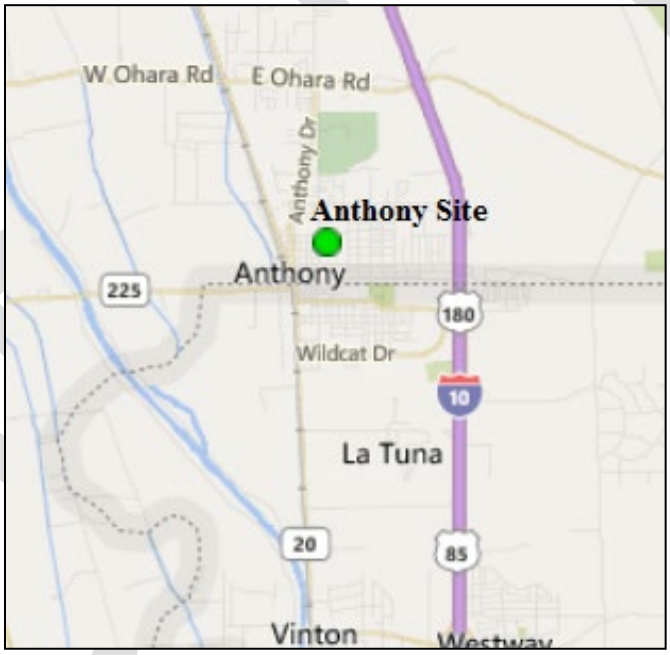


Figure 17

2.7 Particulate Matter PM_{10} Continuous (BAM Sampler)

The Bureau operates seven Method 122 BAM-1020 PM_{10} continuous samplers throughout the monitoring network. Figure 18 indicates the location of the northern New Mexico monitoring site where one of the seven BAM-1020 PM_{10} samplers in the network is operating as a SLAMS monitor. Six of the seven BAM-1020 PM_{10} continuous samplers are located and operating in the Bureau's southern network as SLAMS monitors. Figure 19 indicates the locations of the six BAM-1020 PM_{10} samplers in the southern network.

PM_{10} Air Quality Control Region 1 (EPA Region 014)

Sub Station Site AQS #:35-045-1005:

Sub Station PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate a Met-One BAM-1020 FEM PM_{10} sampler to obtain representative sampling of PM_{10} for San Juan County. This sampler was upgraded with the most current model of the BAM-1020 PM_{10} during FY24 using approved EPA funding from the American Rescue Plan. The parameter, method and POC did not change. AQB has purchased the BAM-1020 sampler and installed the unit May through July 2023.

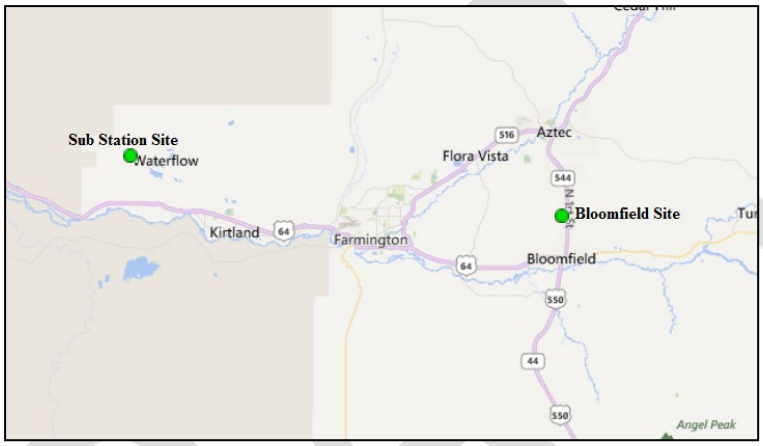


Figure18

PM_{10} Air Quality Control Region 6 (EPA Region 153)

Anthony AQS #: 35-013-0016:

Anthony PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate the Met-One BAM-1020 FEM PM_{10} continuous sampler, NMED requested to replace this unit with a Met One Instruments BAM-1020 FEM PM_{10} sampler (Parameter 81102, Method 122, POC 2) using approved EPA funding from the American Rescue Plan with the most current model of the BAM-1020 PM_{10} during FY24. This was approved per EPA letter dated November 8, 2022, AQB purchased the BAM-1020 sampler and installed the unit May 10, 2023. The parameter, method and POC did not change. This unit will operate as the co-located PM_{10} sampler.

Chaparral AQS #: 35-013-0020:

Chaparral PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate the Met-One BAM-1020 FEM PM_{10} continuous sampler. This sampler was upgraded with the most current model of BAM-1020 PM_{10} during FY24 using 105 Grant funding. The parameter, method and POC will not change. AQB purchased the BAM-1020 sampler and installed the unit June 22, 2023, and has been operating as of June 28, 2023, following calibration, and 72-hour background test.

Desert View AQS #: 35-013-0021:

Desert View PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate the Met-One BAM-1020 FEM PM_{10} continuous sampler. This sampler was upgraded with the most current model of the BAM-1020 PM_{10} during FY24 using 105 Grant funding. The parameter, method and POC did not change. AQB purchased the BAM-1020 sampler and installed the unit June 22, 2023, and has been operating as of June 25, 2023, following calibration, and 72-hour background test.

Holman Road AQS #: 35-013-0019:

Holman Road PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate the Met-One BAM-1020 FEM PM_{10} continuous sampler. This sampler was upgraded with the most current model of the BAM-1020 PM_{10} during FY24 using 105 Grant funding. The parameter, method and POC did not change. AQB purchased the BAM-1020 sampler and installed the unit July 13, 2023, and has been operating as of July 15, 2023, following calibration, and 72-hour background test.

West Mesa AQS #: 35-013-0024:

West Mesa PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate the Met-One BAM-1020 FEM PM_{10} continuous sampler. This sampler was upgraded with the most current model of the BAM-1020 PM_{10} during FY24 using 105 Grant funding. The parameter, method and POC did not change. AQB purchased the BAM-1020 sampler and installed the unit July 6, 2023, and has been operating as of July 8, 2023, following calibration, and 72-hour background test.

PM_{10} Air Quality Control Region 7 (EPA Region 012)

Deming Airport AQS #: 35-029-0003:

Deming Airport PM_{10} Continuous Parameter 81102, Method 122, POC 2

The Bureau continues to operate the Met-One BAM-1020 FEM PM_{10} continuous sampler. This sampler was upgraded with the most current model of the BAM-1020 PM_{10} during FY24 using 105 Grant funding. The parameter, method and POC did not change. AQB purchased the BAM-1020 sampler and installed the unit July 6, 2023, and has been operating as of July 8, 2023, following calibration, and 72-hour background test.

Figure 19

3.0 Other Projects

There are three other projects continuing in New Mexico and are supported by NMED/AQB staff.

1. Northern air monitoring staff continue with the NADP-sponsored project to collect passive ammonia monitoring data in San Juan County, New Mexico. This project will continue if federal funds are available. Ammonia is a precursor of fine particulate matter which adversely affects public health and visibility. This continued study will augment the baseline data collected in 2007 to assess any significant changes in ambient ammonia levels. Additionally, the RadNet study will also continue as long as federal funds are available for the study.

2. NMED-AQB installed the Synspec GC955 BTEX analyzer at the Carlsbad air monitoring station as part of the American Rescue Plan Carlsbad Community project. The analyzer was purchased and delivered in June and installation was performed in July 2023. Analyzer training was conducted at the Carlsbad site on November 1, 2023, and the analyzer started collecting data the same day. This project period is from April 1, 2023, to March 31, 2026, according to the project plan.

3. NMED-AQB will be replacing all monitoring site calibrators due to age and general wear and tear of internal components during calendar year 2024. AQB has begun the process of ordering new calibrators, and half the order has been delivered. The calibrators will be deployed after manufacturers training is completed in March and April 2024.

4.0 Summary

The intention of the Bureau is to continue to focus on pollutants of concern while also striving to continue to serve the public health needs and to satisfy the expectations of the New Mexico communities. The Bureau will inform EPA Region 6 staff early in the process of any plans to make changes or modifications to the ambient air monitoring network, other than those described in this review, to ensure that state and federal priorities continue to be aligned.

4.1 Network Modifications During FY2024

During Fiscal year 2024 the Bureau replaced the aging Thermo model 2025i FRM particulate samplers and Met-One Instruments BAM-1020 continuous samplers, both PM_{10} and $PM_{2.5}$ with Met One Instruments BAM-1020 N-series samplers for PM_{10} and BAM-1022 samplers for $PM_{2.5}$. The BAM-1022 are more efficient as they do not require a temperature-controlled shelter resulting in cost savings by not needing quarterly HVAC services and eventual AC unit replacement.

4.2 Pending System Modifications

NMED-AQB is currently in the process of preparing to replace the existing air monitoring site calibrators during this calendar year. The current calibrators in use are aging and experiencing normal wear and tear and in need of replacement following EPAs recommended time frame. New calibrators have been purchased and the majority have been shipped and awaiting deployment following manufacturer training for AQB staff on the instrumentation. The installation of the calibrators is expected to be completed by the end of 2024. Additionally, the existing 18 meteorological towers throughout the monitoring network will also be replaced due to age. The current towers are 25 or more years old, and the manufacturer recommends replacing them every 15 years due to metal fatigue. The towers have been purchased and are awaiting deployment which will be done in conjunction with the calibrator replacement and are listed in the tables below.

Summary of Pending Meteorological Tower Replacement

AQS number designation	NMED site designation	Current Tower Model	Replacement Tower Model	Funding Source	Number of Towers to be Replaced
35-045-1005	1H Sub Station	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-049-0009	1ZB Bloomfield	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-049-0018	1NL Navajo Lake	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-061-0008	2LL Los Lunas	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-043-1001	2ZJ Bernalillo DOT	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-039-0026	3CRD Coyote Ranger District	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-049-0021	3SFA Santa Fe Airport	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-055-0005	3ZD Taos	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-015-1005	5ZR Carlsbad	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-025-0008	5ZS Hobbs Jefferson	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0016	6CM Anthony	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0008	6O La Union	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0024	6WM West Mesa	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0019	6ZL Holman Road	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0020	6ZK Chaparral	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0021	6ZM Desert View	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-013-0022	6ZN Santa Teresa	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
35-029-0003	7E Deming Airport	Universal Mfg. Company 4-30	Universal Mfg. Company 4-30	SAF	1
				Total Towers to Replace	18

Funding Source SAF: Special Appropriation Fund

5.0 Addressing New Monitoring Requirements in Monitoring Network

5.1 Lead (Pb)

Two federal criteria have been set up for Pb monitoring:

- Source-oriented – For sources over 0.5 Tons per year.
- "Non-source"-oriented in every urban area with NCore monitoring sites, that have a population of 500,000 or more.

As stated in previous annual network reviews, based on these criteria, no Pb monitors are required in regions under NMED/AQB jurisdiction.

5.2 Nitrogen Dioxide

Two federal criteria have been set up for NO_2 monitoring:

- Near-road NO_2 monitoring; 1 micro-scale site would be required in Core Based Statistical Areas (CBSA) ≥ 1 million in population at a location of expected highest hourly NO_2 concentrations sited near a major road with high Annual Average Daily Traffic (AADT) counts.
- Community-wide; required in CBSAs ≥ 1 million in population at a location of expected highest NO_2 concentrations representing neighborhood or larger (urban) spatial scale.

Based on these criteria, no new NO_2 monitors are required in the state's air quality control regions under NMED/AQB jurisdiction.

5.3 Sulfur Dioxide

Two federal criteria have been set up for SO_2 monitoring:
- Based on population per CBSA and amount of SO_2 emissions within that CBSA, that is, the Population Weighed Emissions Index (PWEI) and
- Based on individual state contribution to national SO_2 inventory in the 2020 National Emissions Inventory (NEI). Data was obtained from the EPA site: www.epa.gov/air-emissions-inventories and calculated to determine the PWEI values for SO_2.

Based on the 2020 NEI criteria as listed in the PWEI calculation table below, NMED/AQB would not require any SO_2 monitoring within the state. However, due to increased oil and gas production in southeast New Mexico the PWEI for SO_2 indicates an increase and AQB requested and received concurrence from EPA Region-6 to install an SO_2 Special Purpose Monitor (SPM) at NMED's Hobbs monitoring site to determine if adding an SO_2 monitor to the SLAMS network is warranted. The PWEI for SO_2 below reflects 2020 data and is the most current available. The EPA will update and make available the PWEI for SO_2 in March 2026.

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
San Juan	Fuel Comb. Elec. Util.	045	Sulfur Dioxide	CAP	1355.221
San Juan	Petroleum & Related Industries	045	Sulfur Dioxide	CAP	169.291
San Juan	Fuel Comb. Industrial	045	Sulfur Dioxide	CAP	89.003
San Juan	Miscellaneous	045	Sulfur Dioxide	CAP	18.586
San Juan	Fuel Comb. Other	045	Sulfur Dioxide	CAP	14.981
San Juan	Highway Vehicles	045	Sulfur Dioxide	CAP	4.342
San Juan	Waste Disposal & Recycling	045	Sulfur Dioxide	CAP	2.837
San Juan	Off-Highway	045	Sulfur Dioxide	CAP	1.330
San Juan	Storage & Transport	045	Sulfur Dioxide	CAP	0.021
				Total SO_2 Emissions	1655.612
				San Juan CBSA Population	120418
				Population x SO_2	199365517.4
				PWEI-San Juan Co.	199.366
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Sandoval	Petroleum & Related Industries	043	Sulfur Dioxide	CAP	76.864
Sandoval	Fuel Comb. Industrial	043	Sulfur Dioxide	CAP	24.469
Sandoval	Fuel Comb. Other	043	Sulfur Dioxide	CAP	19.071
Sandoval	Waste Disposal & Recycling	043	Sulfur Dioxide	CAP	10.280
Sandoval	Highway Vehicles	043	Sulfur Dioxide	CAP	5.476
Sandoval	Miscellaneous	043	Sulfur Dioxide	CAP	3.866
Sandoval	Off-Highway	043	Sulfur Dioxide	CAP	0.381
Sandoval	Other Industrial Processes	043	Sulfur Dioxide	CAP	0.251
				Total SO_2 Emissions	140.659
				Sandoval CBSA Population	153501
				Population x SO_2	21591231.61
				PWEI-Sandoval Co.	21.591
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Valencia	Fuel Comb. Industrial	061	Sulfur Dioxide	CAP	11.356
Valencia	Fuel Comb. Other	061	Sulfur Dioxide	CAP	5.387
Valencia	Highway Vehicles	061	Sulfur Dioxide	CAP	2.231
Valencia	Fuel Comb. Elec. Util.	061	Sulfur Dioxide	CAP	2.010
Valencia	Off-Highway	061	Sulfur Dioxide	CAP	1.680
Valencia	Waste Disposal & Recycling	061	Sulfur Dioxide	CAP	1.132
Valencia	Miscellaneous	061	Sulfur Dioxide	CAP	1.126
				Total SO_2 Emissions	24.923
				Valencia CBSA Population	78080
				Population x SO_2	1945959.061
				PWEI-Valencia Co.	1.946
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Rio Arriba	Petroleum & Related Industries	039	Sulfur Dioxide	CAP	26.089
Rio Arriba	Fuel Comb. Industrial	039	Sulfur Dioxide	CAP	18.731
Rio Arriba	Miscellaneous	039	Sulfur Dioxide	CAP	9.392
Rio Arriba	Fuel Comb. Other	039	Sulfur Dioxide	CAP	5.919
Rio Arriba	Highway Vehicles	039	Sulfur Dioxide	CAP	1.447
Rio Arriba	Waste Disposal & Recycling	039	Sulfur Dioxide	CAP	1.088
Rio Arriba	Off-Highway	039	Sulfur Dioxide	CAP	0.287
Rio Arriba	Storage & Transport	039	Sulfur Dioxide	CAP	0.016
Rio Arriba	Other Industrial Processes	039	Sulfur Dioxide	CAP	0.012
				Total SO_2 Emissions	62.981
				Rio Arriba CBSA Population	40048
				Population x SO_2	2522274.577
				PWEI-Rio Arriba Co.	2.522
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)

Santa Fe	Miscellaneous	049	Sulfur Dioxide	CAP	62.032
Santa Fe	Fuel Comb. Other	049	Sulfur Dioxide	CAP	22.584
Santa Fe	Fuel Comb. Industrial	049	Sulfur Dioxide	CAP	18.496
Santa Fe	Highway Vehicles	049	Sulfur Dioxide	CAP	6.020
Santa Fe	Waste Disposal & Recycling	049	Sulfur Dioxide	CAP	4.558
Santa Fe	Off-Highway	049	Sulfur Dioxide	CAP	3.800
Santa Fe	Fuel Comb. Elec. Util.	049	Sulfur Dioxide	CAP	0.012
				Total SO_2 Emissions	117.501
				Santa Fe CBSA Population	155664
				Population x SO_2	18290622.53
				PWEI-Santa Fe Co.	18.291
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Taos	Miscellaneous	055	Sulfur Dioxide	CAP	25.284
Taos	Fuel Comb. Other	055	Sulfur Dioxide	CAP	7.143
Taos	Fuel Comb. Industrial	055	Sulfur Dioxide	CAP	3.793
Taos	Waste Disposal & Recycling	055	Sulfur Dioxide	CAP	1.702
Taos	Highway Vehicles	055	Sulfur Dioxide	CAP	1.176
Taos	Off-Highway	055	Sulfur Dioxide	CAP	0.271
				Total SO_2 Emissions	39.371
				Taos CBSA Population	34580
				Population x SO_2	1361436.836
				PWEI-Taos County	1.361
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Eddy	Petroleum & Related Industries	015	Sulfur Dioxide	CAP	35048.697
Eddy	Fuel Comb. Industrial	015	Sulfur Dioxide	CAP	435.393
Eddy	Miscellaneous	015	Sulfur Dioxide	CAP	6.381
Eddy	Fuel Comb. Other	015	Sulfur Dioxide	CAP	5.240
Eddy	Highway Vehicles	015	Sulfur Dioxide	CAP	3.157
Eddy	Waste Disposal & Recycling	015	Sulfur Dioxide	CAP	3.157
Eddy	Off-Highway	015	Sulfur Dioxide	CAP	1.736
Eddy	Other Industrial Processes	015	Sulfur Dioxide	CAP	0.291
Eddy	Fuel Comb. Elec. Util.	015	Sulfur Dioxide	CAP	0.071
Eddy	Storage & Transport	015	Sulfur Dioxide	CAP	0.033
				Total SO_2 Emissions	35504.155
				Eddy CBSA Population	60400
				Population x SO_2	2144450973
				PWEI-Eddy Co.	2144.451
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Lea	Petroleum & Related Industries	025	Sulfur Dioxide	CAP	43445.955
Lea	Fuel Comb. Industrial	025	Sulfur Dioxide	CAP	3114.303
Lea	Fuel Comb. Elec. Util.	025	Sulfur Dioxide	CAP	9.315
Lea	Fuel Comb. Other	025	Sulfur Dioxide	CAP	5.096
Lea	Highway Vehicles	025	Sulfur Dioxide	CAP	3.574

Lea	Miscellaneous	025	Sulfur Dioxide	CAP	2.290
Lea	Waste Disposal & Recycling	025	Sulfur Dioxide	CAP	1.270
Lea	Off-Highway	025	Sulfur Dioxide	CAP	0.539
Lea	Storage & Transport	025	Sulfur Dioxide	CAP	0.029
				Total SO_2 Emissions	46582.371
				Lea CBSA Population	72452
				Population x SO_2	3374985939
				PWEI-Lea Co.	3374.986
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Doña Ana	Fuel Comb. Industrial	013	Sulfur Dioxide	CAP	31.557
Doña Ana	Fuel Comb. Elec. Util.	013	Sulfur Dioxide	CAP	16.211
Doña Ana	Fuel Comb. Other	013	Sulfur Dioxide	CAP	13.750
Doña Ana	Miscellaneous	013	Sulfur Dioxide	CAP	9.434
Doña Ana	Off-Highway	013	Sulfur Dioxide	CAP	7.814
Doña Ana	Highway Vehicles	013	Sulfur Dioxide	CAP	7.704
Doña Ana	Waste Disposal & Recycling	013	Sulfur Dioxide	CAP	6.488
Doña Ana	Petroleum & Related Industries	013	Sulfur Dioxide	CAP	1.560
Doña Ana	Other Industrial Processes	013	Sulfur Dioxide	CAP	0.047
				Total SO_2 Emissions	94.566
				Doña Ana CBSA Population	222285
				Population x SO_2	21020641.3
				PWEI-Doña Ana Co.	21.021
				SO_2 monitors required	**0**

COUNTY	TIER	COUNTY FIPS	POLLUTANT	POLLUTANT TYPE	EMISSIONS (TONS)
Luna	Fuel Comb. Industrial	029	Sulfur Dioxide	CAP	18.425
Luna	Fuel Comb. Other	029	Sulfur Dioxide	CAP	7.970
Luna	Off-Highway	029	Sulfur Dioxide	CAP	5.530
Luna	Miscellaneous	029	Sulfur Dioxide	CAP	2.264
Luna	Highway Vehicles	029	Sulfur Dioxide	CAP	1.855
Luna	Petroleum & Related Industries	029	Sulfur Dioxide	CAP	0.731
Luna	Waste Disposal & Recycling	029	Sulfur Dioxide	CAP	0.586
Luna	Other Industrial Processes	029	Sulfur Dioxide	CAP	0.380
				Total SO_2 Emissions	37.741
				Luna CBSA Population	25749
				Population x SO_2	971787.7318
				PWEI-Luna Co.	0.972
				SO_2 monitors required	**0**

SO_2 Data Requirements Rule

Per EPA Requirement that by July 1, 2016, each air agency was required to identify, for each source area on the list, the approach it will use to characterize air quality to help characterize sources listed as 2,000 tpy or larger, air agencies were to indicate by July 1, 2016 one of the three options to use which were:

Option 1: Ambient air monitoring for a source

Option 2: Air quality modeling for a source
Option 3: Federally enforceable emissions limits applicable to sources less than 2,000tpy

NMED chose the second option, but this requires operating both SO_2 monitors in the network (1H Sub Station site and the 1ZB Bloomfield site) in order to provide data for modeling. The most recent report shows that our only source of concern, the San Juan Generating Station, reduced its SO_2 emissions since the December 2017 shut-down of the two boiler units. The San Juan Generator Station ceased operating in 2022. The modeling data also indicates that SO_2 emissions have reduced.

5.4 Ozone

During FY 2024 the exceedances of the 8-hours standard did not increase significantly from the year prior although the state experienced the largest wildfire recorded. This can be attributed to the monsoon season starting a bit earlier and lasting longer than usual. The monsoon rains were very beneficial in the northern half of the state in containing the wildfires and consequently the ozone concentrations.

The chart below is provided by EPA which tracks the number of ozone exceedances throughout the five Region-6 states. Typically, the October EPA chart is the end of the ozone season which indicates the total number of exceedances that occurred between April 1st through mid-October as well as the number of Air Quality Index Category Totals. However, this year EPA Region 6 provided data from April 1st through October 26th as indicated in the table below.

Region 6 8-Hour Ozone Exceedance Days

preliminary data April 1, 2023 through October 26, 2023

Applicable Standard = 70 ppb

State/Cities	Year to Date Ozone Exceedances (# of Days)	Max. Exceedances (ppb) Week of 10/20-10/26							Year to Date Air Quality Index Level Totals (# of Days)		
New Mexico		F	S	S	M	T	W	R	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy
Albuquerque											
Carlsbad	19								19		
Carlsbad Caverns NP	11								11		
Hobbs	6								6		
San Juan Co.	3								3		
Southern Dona Ana Co.	11								11		

The chart below, also provided by EPA, provides the running 3-year Ozone Design Values for all NMED-AQB monitoring sites that measure ozone. This assists state environmental agencies in determining if the monitoring area is in attainment or non-attainment of the ozone standard and necessary courses of action that need to be implemented to achieve attainment.
Current EPA 3-Year Ozone Design Values 2020 through 2022

State Name	County Name	State FIPS	County FIPS	EPA Region	AQS Site ID	NMED Site Designation	2020-2022 Design Value (ppm) [1,2]	Meet NAAQS?	CBSA Name
New Mexico	Bernalillo	35	1	6	350011012		0.073	No	Albuquerque, NM*
New Mexico	Dona Ana	35	13	6	350130021	6ZM Desert View	0.081	No	Las Cruces, NM
New Mexico	Dona Ana	35	13	6	350130008	6O La Union	0.076	No	Las Cruces, NM
New Mexico	Dona Ana	35	13	6	350130020	6ZK Chaparral	0.071	No	Las Cruces, NM
New Mexico	Eddy	35	15	6	350151005	5ZR Carlsbad Site	0.077	No	Carlsbad-Artesia, NM
New Mexico	Lea	35	25	6	350250008	5ZS Hobbs Jefferson	0.066	Yes	Hobbs, NM
New Mexico	Rio Arriba	35	39	6	350390026	3CRD Coyote Ranger District	0.064	Yes	Espanola, NM
New Mexico	Sandoval	35	43	6	350431001	2ZJ Bernalillo DOT	0.070	Yes	Albuquerque, NM
New Mexico	San Juan	35	45	6	350450018	1NL Navajo Lake	0.070	Yes	Farmington, NM
New Mexico	Santa Fe	35	49	6	350490021	3SFA Santa Fe Airport	0.067	Yes	Santa Fe, NM
New Mexico	Valencia	35	61	6	350610008	2LL Los Lunas	0.066	Yes	Albuquerque, NM

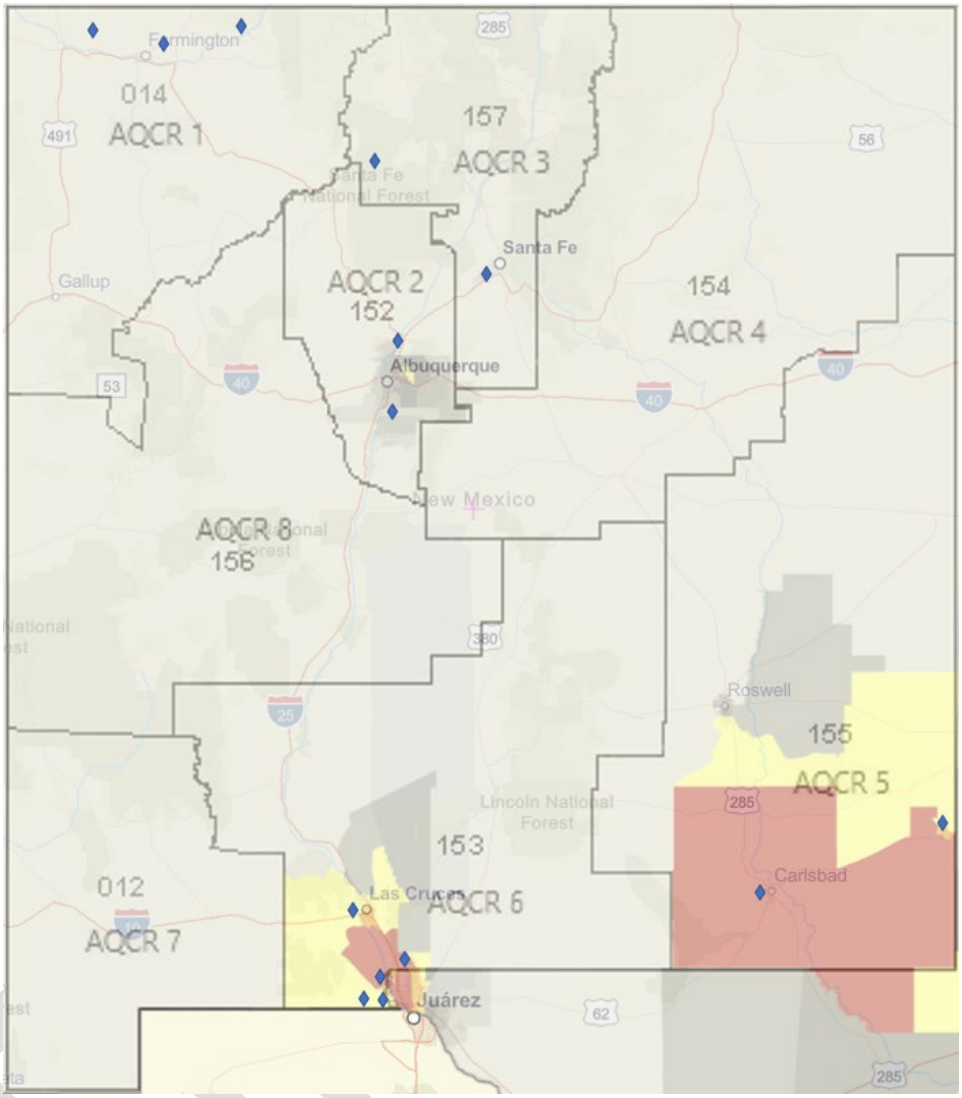
* This site is not part of NMED's air monitorng network but falls under the same CBSA (Core Based Statistical Area) and is for informational purposes only.

6.0 Environmental Justice Concerns

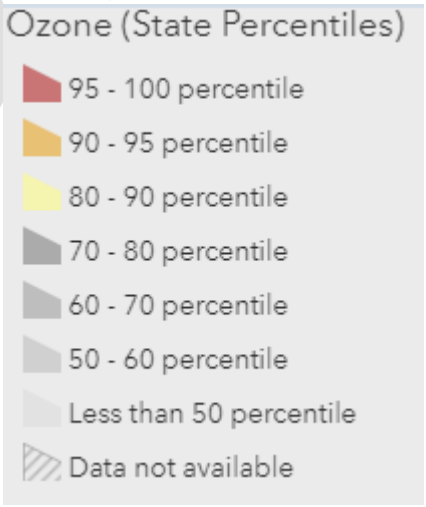
The NMED-AQB is committed to addressing environmental justice concerns related to the air quality network. Based on EPA's EJ Screen for ozone and $PM_{2.5}$, NMED's air monitoring network provides representative data and monitoring sites have appropriate number of sampling equipment. Additionally, monitoring sites are located in areas that coincide with the pollution concentration percentages.

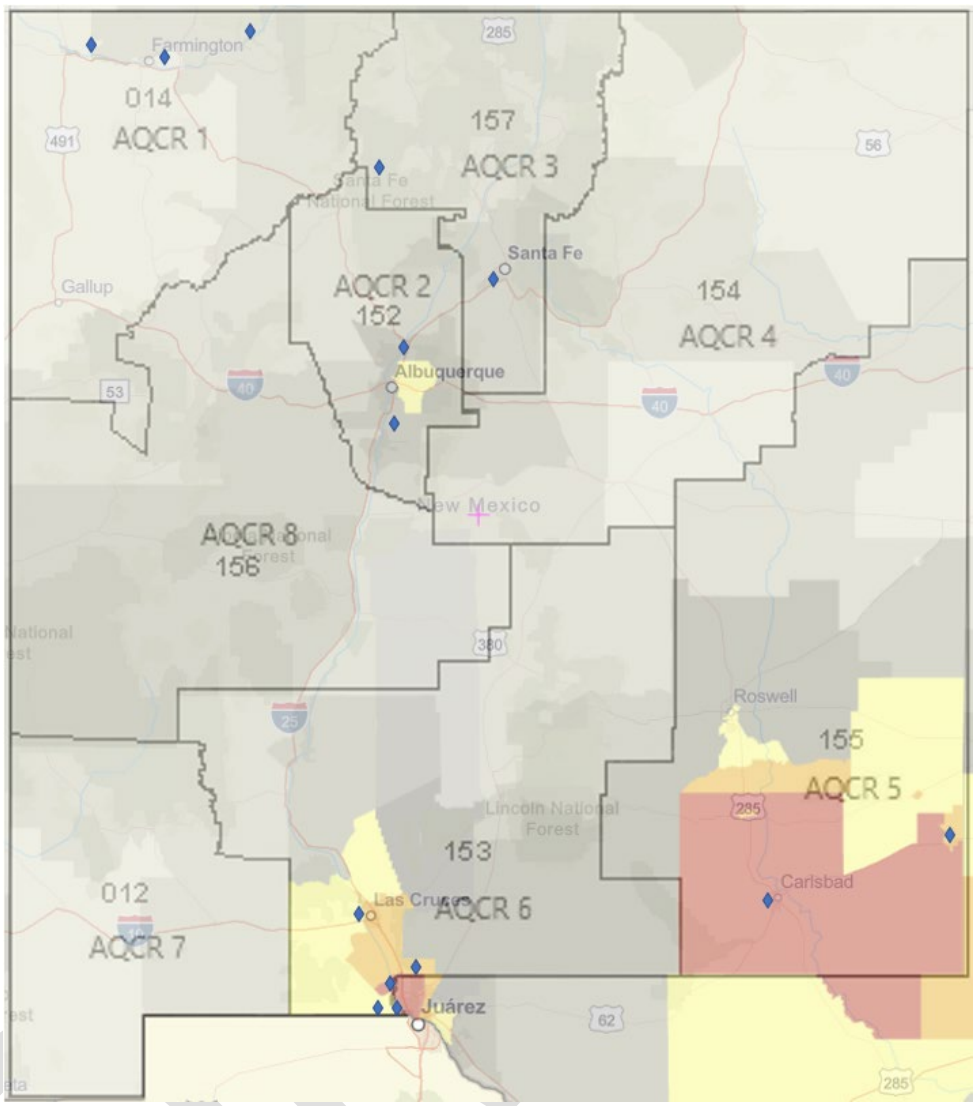
Currently, the Air Quality Bureau is operating a Synspec GC 955 BTEX analyzer purchased through American Rescue Plan to monitor volatile organic compound (VOC) air pollutants from oil and gas sources for a period of three years at the existing Carlsbad monitoring site.

The rural nature of these communities suggests that minimal data has been historically obtained due to a lack of monitoring for VOC to adequately assess relative risk. These communities are at an increased risk of the adverse health effects from air pollution from increased oil and gas sources. Monitoring for aromatic VOC will focus resources on the most concerning air pollutants that pose a risk to the health and well-being of the most vulnerable residents.

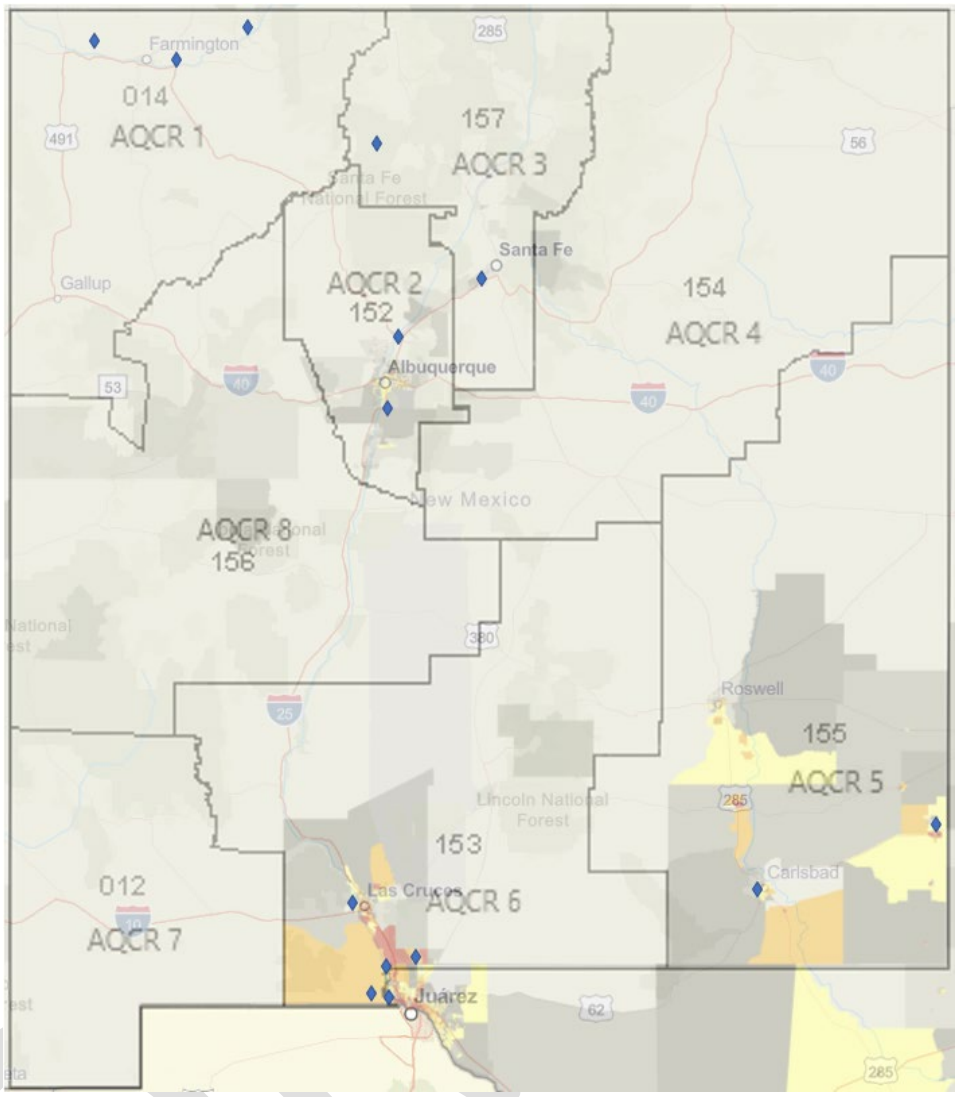


EJ Screen – Pollution & Sources (Ozone – State Percentile)

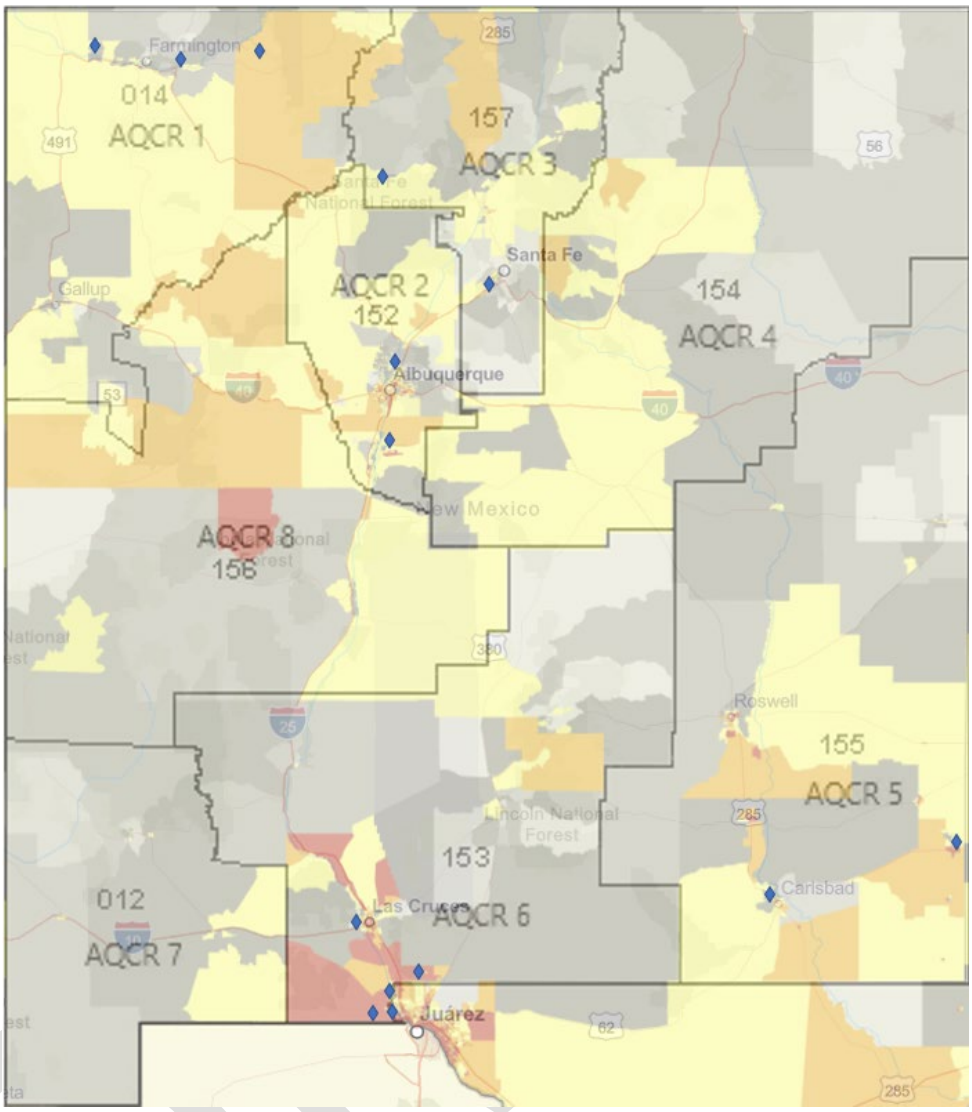




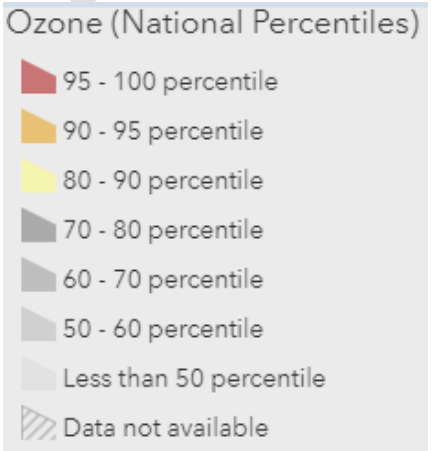
EJ Screen – Pollution and Sources (Ozone – National Percentile)

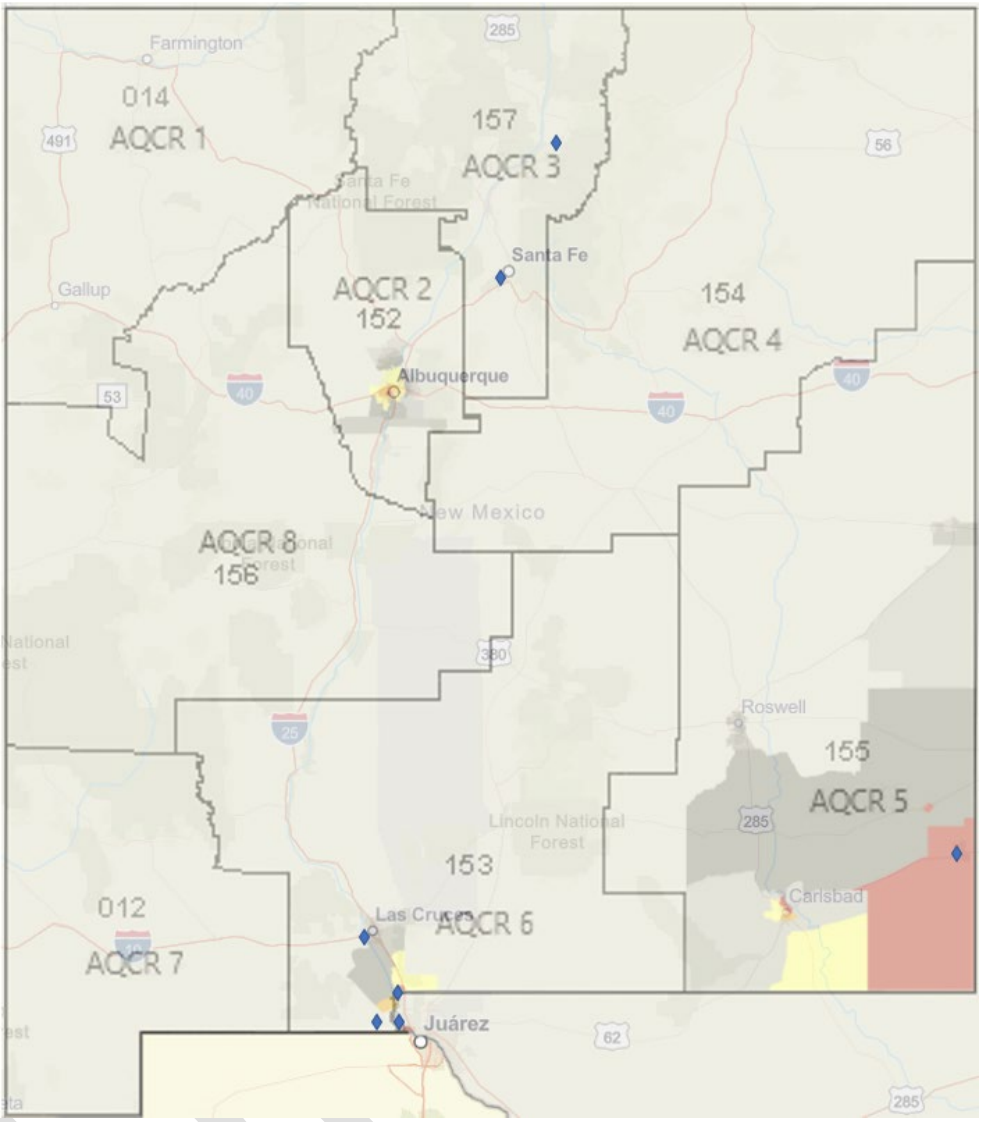


EJ Screen – Environmental Justice Indexes (Ozone State Percentile)

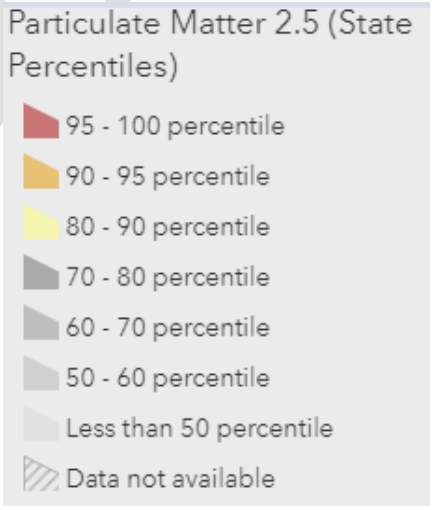


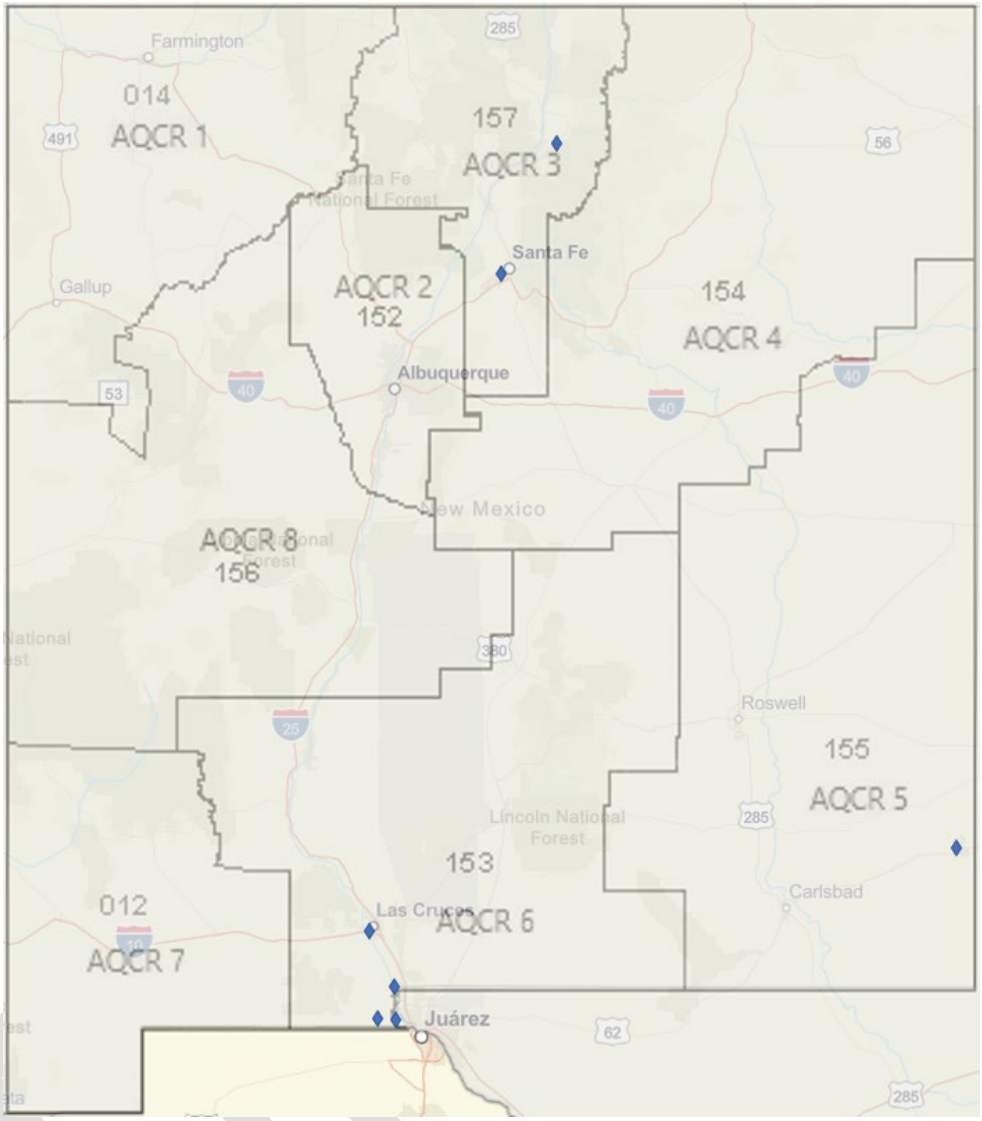
EJ Screen – Environmental Justice Indexes (Ozone – National Percentile)



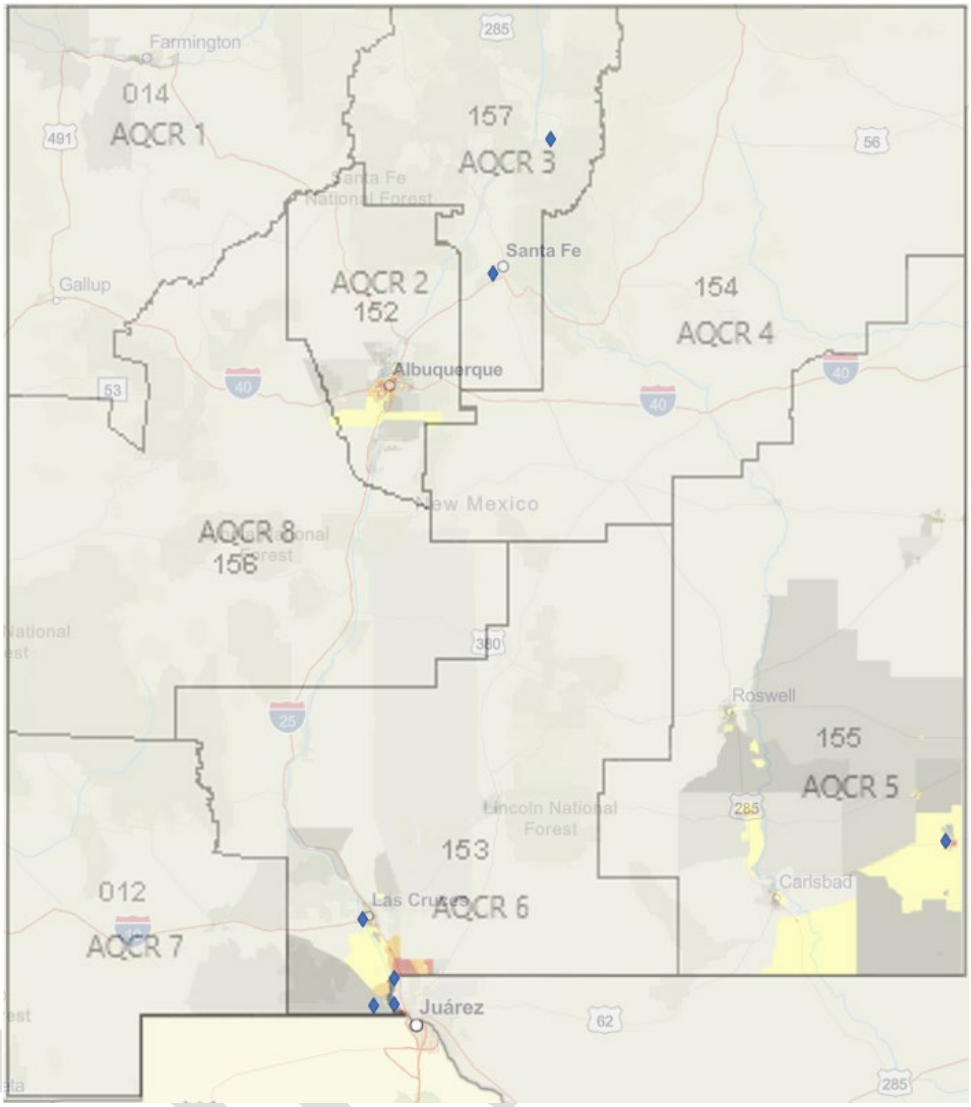


EJ Screen – Pollution & Sources ($PM_{2.5}$ State Percentile)

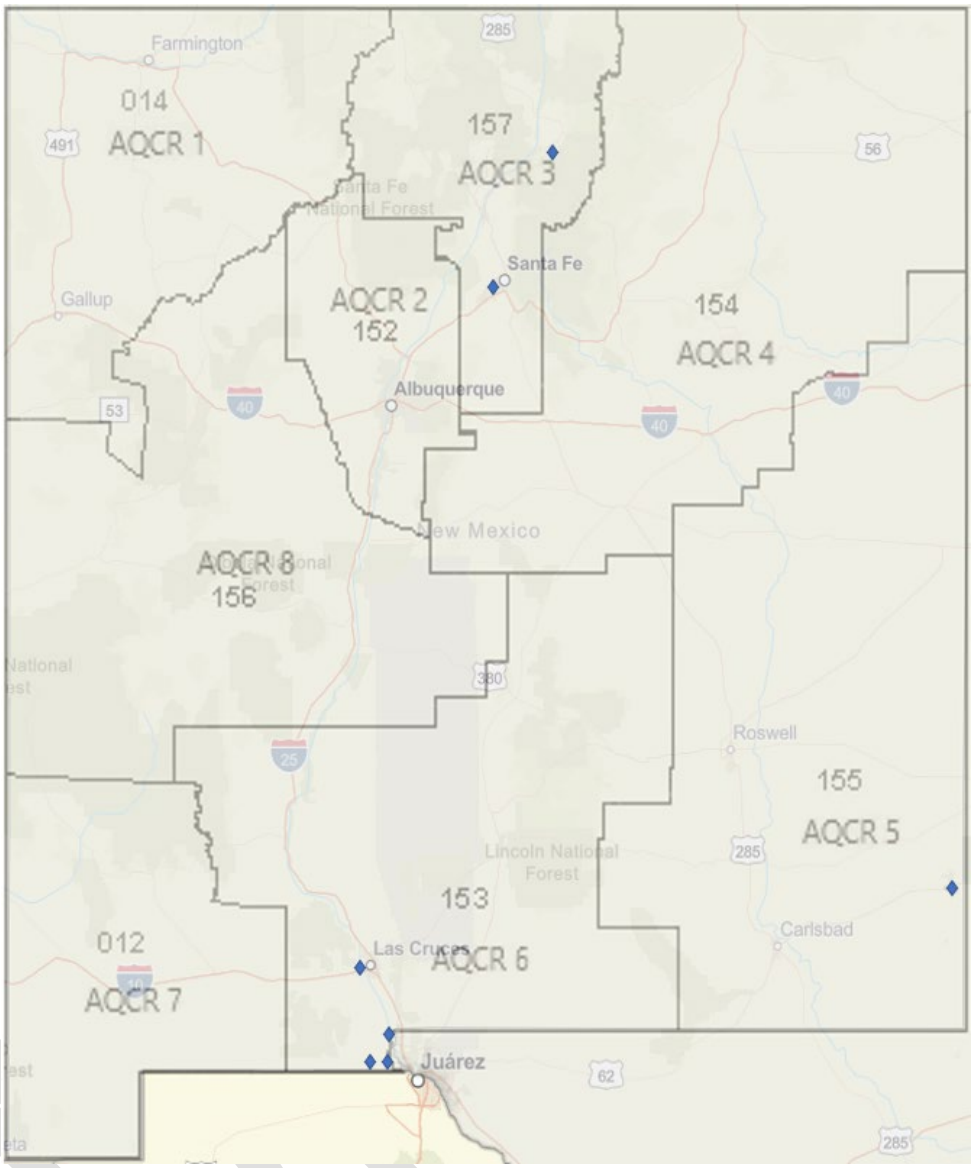




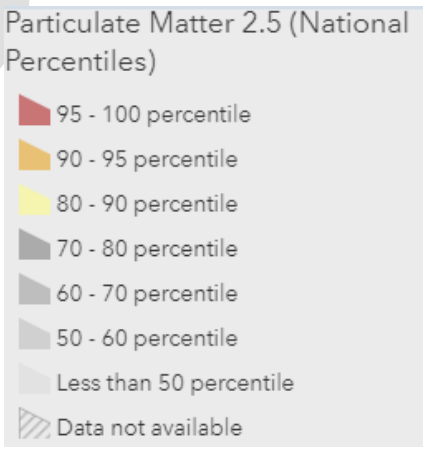
EJ Screen – Pollution & Sources ($PM_{2.5}$ National Percentile)



EJ Screen – Environmental Justice Indexes ($PM_{2.5}$ State Percentile)



EJ Screen – Environmental Justice Indexes ($PM_{2.5}$ National Percentile)



7.0 Other Issues

Position Vacancies:
At present the NMED-AQB Monitoring Section has six positions filled with two vacancies. This consists of two Environmental Scientist & Specialist - Operational staff, two Environmental Scientist & Specialist - Advanced staff, two Environmental Scientist & Specialist – Supervisor staff and one Staff Manager.

A draft of this document was made available to the public May 16 through June 16, 2024 which was posted on public portal for the public to comment at: https://nmed.commentinput.com/comment/search. In addition, we also provided a draft of this document on our Air Quality Bureau Monitoring webpage at https://www.env.nm.gov/air-quality/monitoring/.

Roman Szkoda
Monitoring Program Manager
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505
roman.szkoda@env.nm.gov

TABLE 1
New Mexico Monitoring Network in 2024

Continuous Monitors & Non-Continuous Monitors

Site AQS #	Site Name	Station Type	Site Address	Latitude	Longitude	Pollutants Measured	Analysis Method	Operating Schedule	Is site proposed to be removed/moved within next 18 months?	Monitoring Objective	NAAQS Comparable ?	msa/cbsa/csa represented	Spatial Scale
35-045-1005	1H Substation	SLAMS	Shiprock Electrical Substation, Waterflow, NM 87421	36.7976	-108.4801	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	Farmington MSA	Regional
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		General Background	Yes	Farmington MSA	Regional
		SLAMS				Sulfur Dioxide	Pulsed Fluorescence	Continuous		Source Oriented	Yes	Farmington MSA	Regional
		SLAMS				PM_{10}	Continuous; BAM-1020	Continuous		General Background	Yes	Farmington MSA	Regional
35-045-0009	1ZB Bloomfield	SLAMS	2500 N 1st Street, Bloomfield, NM 87413	36.7421	-107.9778	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	Farmington MSA	Neighborhood
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		General Background	Yes	Farmington MSA	Neighborhood
		SLAMS				Sulfur Dioxide	Pulsed Fluorescence	Continuous		Source Oriented	Yes	Farmington MSA	Neighborhood
35-045-0018	1NL Navajo Lake	SLAMS	423A Highway 539, Navajo Dam, NM 87419	36.8097	-107.6514	Ozone	U.V. Photometric	Continuous	No	Regional Transport	Yes	Farmington MSA	Middle
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		Regional Transport	Yes	Farmington MSA	Middle
35-061-0008	2LL Los Lunas	SLAMS	1000 W. Main St, Los Lunas, NM 87031	34.8147	-106.7400	Ozone	U.V. Photometric	Continuous	No	Population Exposure	Yes	Albuquerque MSA	Neighborhood
35-043-1001	2ZB Bernalillo	SLAMS	400 Oak Street, Bernalillo NM 87004	35.2998	-106.5479	Ozone	U.V. Photometric	Continuous	No	Population Exposure	Yes	Albuquerque MSA	Neighborhood
35-039-0026	3CRD Coyote Ranger District	SLAMS	21 New Mexico 96, Coyote, NM, 87012	36.1877	-106.6986	Ozone	U.V. Photometric	Continuous	No	Regional Transport	Yes	Albuquerque-Santa Fe-Las Vegas CSA	Regional
35-049-0021	3SFA Santa Fe Airport	SLAMS	2001 Aviation Dr, Santa Fe, NM 87507	35.6198	-106.0797	Ozone	U.V. Photometric	Continuous	No	Population Exposure	Yes	Santa Fe MSA	Neighborhood
		SLAMS				$PM_{2.5}$	Continuous; BAM-1022	Continuous		Population Exposure	Yes	Santa Fe MSA	Neighborhood
35-055-0005	3ZD Taos	SLAMS	123 Camino de Santiago Fire Station, Taos, NM 87571	36.3833	-105.5849	$PM_{2.5}$	Continuous; BAM-1022	Continuous	No	Population Exposure	Yes	Taos µSA	Neighborhood
35-015-1005	5ZR Carlsbad	SLAMS	2811 Holland Ln., Carlsbad, NM 88220	32.3840	-104.2640	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	Carlsbad-Artesia, CBSA/µSA	Urban
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		General Background	Yes	Carlsbad-Artesia, CBSA/µSA	Urban
35-025-0008	5ZS Hobbs Jefferson	SLAMS	2320 N. Jefferson St., Hobbs, NM 88240	32.7268	-103.1230	Ozone	U.V. Photometric	Continuous	No	Population Exposure	Yes	Hobbs CBSA/µSA	Neighborhood
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		Population Exposure	Yes	Hobbs CBSA/µSA	Neighborhood
		SLAMS				$PM_{2.5}$	Continuous; BAM-1022	Continuous		General Background	Yes	Hobbs CBSA/µSA	Neighborhood
35-013-0016	6CM Anthony	SLAMS	305 Church St, Anthony, NM 88021	32.0033	-106.5992	PM_{10}	Primary Continuous; BAM-1020	Every 6th Day	No	Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				PM_{10}	Co-Located Continuous; BAM-1020	Continuous		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				$PM_{2.5}$	Primary Continuous; BAM-1022	Continuous		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				$PM_{2.5}$	Co-located Continuous BAM-1022	Every 3rd Day		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
35-013-0008	6O La Union	SLAMS	7048 McNutt, La Union, NM 88021	31.9387	-106.6330	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	El Paso-Las Cruces CSA	Urban
35-013-0024	6WM West Mesa	SLAMS	West Mesa Well #46, Las Cruces, NM 88005	32.2781	-106.8649	PM_{10}	Continuous; BAM-1020	Continuous	No	Up Wind Background	Yes	El Paso-Las Cruces CSA	Urban
35-013-0019	6ZL Holman Road	SLAMS	Las Cruces Well #48, Las Cruces, NM 88012	32.4246	-106.6739	PM_{10}	Continuous; BAM-1020	Continuous	No	Population Exposure	Yes	El Paso-Las Cruces CSA	Urban
35-013-0020	6ZK Chaparral	SLAMS	480 McCombs, Chaparral, NM 88081	32.0409	-106.4058	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	Not in an MSA	Urban
		SLAMS				PM_{10}	Continuous; BAM-1020	Continuous		Population Exposure	Yes	Not in an MSA	Neighborhood
35-013-0021	6ZM Desert View	SLAMS	5935A Valle Vista, Sunland Park, NM 88063	31.7961	-106.5839	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				PM_{10}	Continuous; BAM-1020	Continuous		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				$PM_{2.5}$	Primary Continuous; BAM-1022	Every 3rd Day		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
		SLAMS				$PM_{2.5}$	Co-located Continuous BAM-1022	Every 3rd Day		Population Exposure	Yes	El Paso-Las Cruces CSA	Neighborhood
35-013-0022	6ZN Santa Teresa	SLAMS	164-2 Santa Teresa Int'l. Blvd., Santa Teresa, NM 88063	31.7881	-106.6828	Ozone	U.V. Photometric	Continuous	No	General Background	Yes	El Paso-Las Cruces CSA	Urban
		SLAMS				Nitrogen Dioxide	Chemiluminescence	Continuous		General Background	Yes	El Paso-Las Cruces CSA	Urban
		SLAMS				$PM_{2.5}$	Continuous; BAM-1022	Continuous		General Background	Yes	El Paso-Las Cruces CSA	Urban
35-013-0023	6ZQ Solano	SLAMS	750 N. Solano Drive, Las Cruces, NM 88001	32.3187	-106.7678	Ozone	U.V. Photometric	Continuous	No	Population Exposure	Yes	El Paso-Las Cruces CSA	Urban
35-013-0025	6Q Las Cruces	SLAMS	2301 Entrada del Sol, Las Cruces, NM 88001	32.3103	-106.7512	$PM_{2.5}$	Continuous; BAM-1022	Continuous	No	Regional Transport	Yes	El Paso-Las Cruces CSA	Neighborhood
35-029-0003	7E Deming Airport	SLAMS	3612 Raymond Reed Blvd, Deming, NM 88030	32.2558	-107.7227	PM_{10}	Continuous; BAM-1020	Continuous	No	Population Exposure	Yes	Deming CBSA/µSA	Neighborhood

All NMED AQB sites and monitors conform to 40 CFR, Subchapter C, Part 58 appendix A