2012-2013 Network Review
Air Quality Bureau
New Mexico Environment Department
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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 2012.

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. This network review is required to provide the framework for establishment and maintenance of an air quality surveillance system. 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 2012 the Bureau operated 25 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 for ambient air monitoring networks.

In 2012 the Ambient Air Monitoring Section worked with a full-time staff of six, holding one vacancy.

Table 1 contains a listing of all New Mexico Environment Department, Air Quality Bureau ambient air monitoring sites operating at the end of 2012.

2.0 PM2.5 FRM Network

The Bureau operated six PM2.5 FRMs at five monitoring locations at the end of 2012.

Farmington	35-045-0019	(Collocation)
Santa Fe	35-049-0020	
Hobbs	35-025-0008	
Las Cruces	35-013-0025	
Sunland Park	35-013-0017	

NMED proposes to change the collocation site from the Farmington site (AQS#35-045-0019) to the Sunland Park site (AQS#35-013-0017) to meet 40 CFR 58, App. A, 3.2.5.3 requirements. The sampling frequency of the FRM monitor would be 1 in every 3 days.

The Bureau intends to begin shifting from sequential FRM sampling to continuous FEM sampling in 2013. The FEM samplers that the Bureau intends to deploy are BAM 1020s manufactured by MetOne.

NMED plans to deploy and operate a BAM 1020 as a SLAMS monitor at the Sunland Park site (AQS#35-013-0017). The BAM 1020 will operate with an FRM to meet collocation requirements. The continuous FEM meets the requirements for daily operation as required by 40 CFR 58.12 (d)(1)(iii); therefore the primary FRM would not need to operate on a daily frequency. The sampling frequency of the FRM monitor would be 1 in every 3 days.

NMED proposes to discontinue the FRM samplers at Santa Fe Runnels (AQS#35-049-0020) due to historical low data concentrations.

3.0 Continuous PM2.5 Network

The Bureau operated continuous TEOM analyzers for PM2.5 at eleven monitoring locations at the end of 2012.

Santa Fe Runnels	35-049-0020	(Collocated with FRM)
Taos	35-055-0005	
Carlsbad	35-015-1005	
Anthony	35-013-0016	
Sunland Park	35-013-0017	(Collocated with FRM)
Desert View	35-013-0021	
Santa Teresa	35-013-0022	
Hobbs	35-025-0008	
Navajo Lake	35-045-0018	
Los Lunas	35-061-0008	
Santa Fe Airport	35-049-0021	

Changes that the Bureau intends to make to this network include the placement of a BAM 1020 at the Anthony site. This is for the purpose of NAAQS-comparable data collection to assess possible changes to non-attainment boundaries. Other changes include discontinuing PM2.5 TEOMs at Runnels, Hobbs, and Sunland Park.

Discontinuing the PM 2.5 TEOM at Runnels will also serve the purpose of consolidating Santa Fe area PM 2.5 monitoring since there has been “overlap” with the Santa Fe Airport site in the monitoring of PM 2.5.

NMED intends to deploy and operate BAM 1020s as Special Purpose Monitors at the Desert View site (AQS#35-013-0021), Anthony site (AQS#35-013-0016) and Santa Teresa site (AQS#35-013-0022) as part of a Border Project Study. NMED plans to continue operation of the TEOMs at these sites.

NMED proposes to discontinue samplers at Carlsbad (AQS#35-015-1005), Navajo Lake (AQS#35-045-0018), Los Lunas (AQS#35-061-0008) due to historical low data concentrations.

4.0 PM10 FRM Network

The Bureau operated a total of eleven PM10 samplers at nine monitoring locations at the end of 2012.

Farmington	35-045-0019	
Bernalillo	35-043-0001	
Santa Fe	35-049-0020	(Collocation)
Taos	35-055-0005	
Hobbs	35-025-0008	
Anthony	35-013-0016	
Sunland Park	35-013-0017	
Deming	35-029-0001	(Collocation)
Hurley Smelter	35-017-1003	

The northern counties continue to report relatively low values when compared to the southern counties.

In 2013 the Bureau intends to begin phasing out the PM10 FRM monitors and replacing them with BAM 1020s to sample for PM10. This shift to continuous sampling will allow quicker data submittal to EPA.

PM10 samplers will be discontinued at Deming.

Discontinuing the PM 10 Wedding samplers at the Deming post office will also serve the purpose of consolidating Deming area PM 10 monitoring since there has been “overlap” with the Deming Airport site in the monitoring of PM 10.

NMED proposes to discontinue the samplers at Hurley Smelter (AQS#35-017-1003), Santa Fe Runnels (AQS#35-049-0020) and Taos (35-055-0005) due to historical low data concentrations

NMED proposes moving collocation to Sunland Park.

5.0 Continuous PM10 Network

The Bureau operated a total of seven continuous TEOM PM10 analyzers at the end of 2012.

Anthony	35-013-0016
Sunland Park	35-013-0017
Chaparral	35-013-0020
Holman Road	35-013-0019
West Mesa	35-013-0024
Deming Airport	35-029-0003
Desert View	35-013-0021

In 2013 the Bureau intends to begin phasing out the continuous TEOM PM10 monitors and replacing them with BAM 1020s to sample for PM10.

6.0 CO Network

The Bureau no longer conducts carbon monoxide monitoring.

7.0 SO2 Network

The Bureau operated a total of three SO2 monitoring stations at the end of 2012.

Substation	35-045-1005
Bloomfield	35-045-0009
Hurley Smelter	35-017-1003

In 2012 the Bureau upgraded the SO2 monitors at all three sites. Monitoring for SO2 at Hurley continues under a maintenance plan, even though there is no longer a source at Hurley.

The Bureau is now reporting "five minute" data for SO2.

8.0 NO2 Network

The Bureau operated a total of eight NO2 monitoring stations at the end of 2012.

Substation	35-045-1005
Bloomfield	35-045-0009
Carlsbad	35-015-1005
Desert View	35-013-0021
Santa Teresa	35-013-0022
Hobbs	35-025-0008
Navajo Lake	35-045-0018
Deming Airport	35-029-0003

In 2012 the Bureau upgraded six of the NO2 monitors, at Substation, Bloomfield, Navajo Lake, Carlsbad, Desert View, and Santa Teresa.

9.0 O3 Network

The Bureau operated sixteen O3 monitoring stations in its statewide network in 2012.

Substation	35-045-1005
Bloomfield	35-045-0009
Bernalillo	35-043-1001
Carlsbad	35-015-1005
La Union	35-013-0008
Solano Road	35-013-0023
Sunland Park	35-013-0017
Chaparral	35-013-0020
Desert View	35-013-0021
Santa Teresa	35-013-0022
Hobbs	35-025-0008
Navajo Lake	35-045-0018
Deming Airport	35-029-0003
Santa Fe Airport	35-049-0021
Hurley Smelter	35-017-1003
Los Lunas	35-061-0008

In 2012 the Bureau upgraded 12 of the O3 monitors: at Substation, Navajo Lake, Los Lunas, Bernalillo, Santa Fe Airport, Carlsbad, Hobbs, La Union, Chaparral, Desert View, Santa Teresa, and Solano.

NMED proposes to discontinue Ozone at the Deming Airport site (AQS#35-029-0003) and the Hurley Smelter site (AQS#35-017-0003) due to historical low concentrations of ozone data.

10.0 Network Changes

The Coyote ozone site was commissioned.

11.0 Other Projects

There is one other monitoring projects underway in New Mexico that are supported by NMED/AQB air monitoring staff.

1. Northern air monitoring staff is continuing a second NADP-sponsored project to collect passive ammonia monitoring data in San Juan County, New Mexico. This project will hopefully continue for the next two years. 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.

12.0 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 Region VI staff early in the process of any plans to make changes to the ambient air monitoring network, other than those described in this review, to ensure that state and federal priorities continue to be aligned.

13.0 Addressing New Monitoring Requirements in Monitoring Network

13.1 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.

Based on these criteria, no Pb monitors are required in regions under NMED / AQB jurisdiction.

13.2 Nitrogen Dioxide

Two federal criteria have been set up for NO2 monitoring:

- Near-road NO2 monitoring; 1 micro-scale site would be required in Core Based Statistical Areas (CBSA) >= 500,000 at a location of expected highest hourly NO2 concentrations sited near a major road with high Annual Average Daily Traffic (AADT) counts.

- Community-wide; required in CBSAs >= 1 million at a location of expected highest NO2 concentrations representing neighborhood or larger (urban) spatial scale.

Based on these criteria, no new NO2 monitors are required in regions under NMED / AQB jurisdiction.

13.3 Sulfur Dioxide

A federal criteria has been set up for SO2 monitoring:

- Based on population per CBSA and amount of SO2 emissions within that CBSA , that is, the Population Weighed Emissions Index (PWEI) and

Based on the PWEI criteria, NMED / AQB would not need to deploy any new monitors.

Based on the 2005 NEI criteria, NMED / AQB would need one monitor. This requirement is already being complied with by virtue of the Substation site.

13.4 Ozone

Previous to this writing three federal criteria had been set up for ozone monitoring. Although these criteria are no longer required, one is still listed because NMED/AQB set up a new ozone site based on that criterion.

- 1 monitor in an area of high ozone concentration outside of currently monitored MSAs and Micropolitan areas.

NMED / AQB has been working with the US Forest Service to commission a site at the Coyote Ranger Station on the Santa Fe National Forest. Commissioning of the site began in the Fall of 2011 and was completed in the Spring of 2013. Data collection has been established.

14.0 Other Issues

The Bureau filled one of the two vacant operator positions in 2012.

A draft of this document will be made available to the public in May of 2013, at http://www.nmenv.state.nm.us/aqb/. Any comments pertaining to this document should be sent to the following contact:

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