Commonwealth of Puerto Rico
Department of Natural and Environmental Resources
Air Quality Area

Puerto Rico Air Monitoring Network Plan

2020

TABLE OF CONTENTS

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

AQS: Air Quality System
CFR: Code of Federal Regulations
CPR: Commonwealth of Puerto Rico
CBSA: Core-based Statistical Area
DNER: Department Natural and Environmental Resources
EPA: Environmental Protection Agency
FEM: Federal Equivalent Method
FRM: Federal Reference Method
MSA: Metropolitan Statistical Area
NAAQS: National Air Ambient Quality Standards
NAMS: National Air Monitoring Stations
NCore: National Core Multi-pollutant Monitoring Stations
NO_2: Nitrogen Dioxide
O_3: Ozone
OSI: Information System Office
PAMS: Photochemical Assessment Monitoring Stations
Pb: Lead
PM_{10}: Particulate Matter
$PM_{2.5}$: Fine Particulate Matter
ppm: parts per million
PR: Puerto Rico
PRAMN: Puerto Rico Air Monitoring Network
PREPA: Puerto Rico Power Electrical Authority
QAMP: Quality Assurance Monitoring Plan
QAPP: Quality Assurance Project Plan
RCAP: Regulation for the Control of Atmospheric Pollution of Puerto Rico
SLAMS: State and Local Air Monitoring Stations
SO_2: Sulfur Dioxide
SO_4: Sulfate
SPM: Special Purpose Monitor
TEOM: Tapered Element Oscillating Microbalance
TSD: Temporary Shutdown
TSP: Total Suspended Particulate

1.0 Introduction

The Commonwealth of Puerto Rico (CPR), through the 2020 –Puerto Rico Air Monitoring Network (PRAMN), provides evidence that meets current federal monitoring requirements. The PRAMN Plan details any proposed changes for the next 18 months after publication, provides specific information for each of the existing and proposed monitoring stations, and offers to the public the opportunity to comment on air sampling activities made by the DNER.

The air quality data of the PRAMN is used to determine compliance with the National Environmental Air Quality Standards (NAAQS). In 1970, the Clean Air Act (CAA) established NAAQS for the six pollutants: Lead (Pb), Particulates (PM_{10} and $PM_{2.5}$), Ozone (O_3), Sulfur dioxide (SO_2), Nitrogen dioxide (NO_2) and Carbon monoxide (CO). The CAA requires to the Commonwealth of Puerto Rico monitor these pollutants, called criteria pollutants, and report the collected data to the Environmental Protection Agency (EPA).

The data collected by the PRAMN is used to determine concentration of criteria air pollutants, compliance with NAAQS and helps determine the main sources of air pollution in Puerto Rico. The primary NAAQS standards protect the population in general and mainly the sensitive sector such as asthmatics, children and the elderly and the secondary NAAQS standards protect public welfare such as visibility, damage to animals, planting, vegetation and buildings.

The PRAMN plan describes the Puerto Rico Air Sampling Network and include updates and modifications to the network. The air sampling network is reviewed annually as part of federal regulation under Title 40, Part 58, Section 10 of the Code of Federal Regulations (40 CFR § 58.10) to identify changes in accordance with regulations or incorporate revisions to the National Air Quality Standards (NAAQS). In addition, it includes a review of the measures adopted during fiscal year 2020 and the action plans for next year. This plan will be presented to the Environmental Protection Agency (EPA) on or before July 1 of each year, after a public comment period of 30 days.

The revision to the plan focuses on the current and future strategies of the air sampling network. The network modifications are made in consultation with the EPA. In addition, it evaluates the operating cost of the network in accordance with the available budget for 2020 fiscal year.

2.0 Public Comments

In accordance with federal regulations, the plan will be available for public review and comment period for 30 days before submitting the final plan to the EPA. Comments received during the public consultation period will be forwarded to the Environmental Protection Agency (EPA) at the same time the plan is submitted. Due the COVID-19 Pandemic, this plan will be only available at

the DNER website, http://www.drna.pr.gov/acai/muestreo/. Written comments should be sent to **aire@jca.pr.gov**. The final document will be submitted to the EPA on or before July 1, 2020, along with the public comments received to comply with the federal regulatory requirements.

3.0 Monitoring Data Quality Assurance

The purpose of the Quality and Certainty Program (QA / QC) is to ensure the degree of data obtained from air monitoring networks. The PRAMN meets or exceeds the requirements defined in 40 CFR Part 58 and all applicable appendices.

The Quality and Certainty program includes, but is not limited to, the following activities:

- Instrument performance audits
- Monitor siting evaluations
- Precision and span checks
- Bias determinations
- Flow rate audits
- Leak checks
- Data validation

The National Performance Audit Program (NPAP) and the Performance Evaluation Program (PEM) are independents activities where the PR participates to ensure the quality of the criteria pollutant monitoring data.

The Agency operates under a Quality Management Plan (QMP) approved by the EPA and develops a Quality Assurance Project Plan (QAPP) for the PRAMN. The Management and Quality Assurance Plan (QAMP) was prepared by the CPR and approved by EPA Region 2. The air monitoring network complies with the criteria identified in the QAMP.

The main objectives of the QAPP are the evaluation of the quality of the monitoring data by estimating precision and accuracy, and the control and improvement of the quality of the data through the implementation of quality control policies, procedures and corrective actions. The document is supported by all standard operating procedures (SOP) prepared for this purpose.

Each sampling site is evaluated to ensure that all EPA location requirements are met, as part of the performance audit of the instruments. In addition, it includes a safety inspection to guarantee a work environment for the personnel who work the stations.

4.0 NETWORK STATUS

Given that resources were limited, the resources were used to reestablished the network, after the impacts of the Hurricane Maria. Several equipment were repaired but the majority were

replaced with new equipment acquired by EPA with FEMA funds. At beginning of 2020 the PRAMN is working at 100%, but the AQA is still working on the relocation of the new sites, e.g., (SO_2 Salinas & $PM_{2.5}$ Guayanilla). Since the Puerto Rico Environmental Laboratory (PREL) has not resumed analysis of $PM_{2.5}$ and Lead, the AQA will use the services of the EPA national laboratory to carry out the analysis. The AQA maintain continuous communication with EPA Region 2, all the changes are done in coordination with EPA.

Table 1: Puerto Rico Network Status

PR Id	AQS Num.	County	Parameter	Active	Comments
5	72-033-0008	Cataño	O_3	√	Re-Start (2018/01/01)
7	72-061-0001	Guaynabo	PM_{10}	√	Re-Start (2018/10/05)
			SO_4		Waiting for CPR Lab
8	72-077-0001	Juncos	O_3	√	Re-Start (2020/29/01)
13	72-001-0002	Adjuntas	$PM_{2.5}$	√	Re-start (2018/10/02)
15	72-057-0012	Guayama	$PM_{2.5}$	√	New (2019/10/03)
			PM_{10}	√	New (2019/10/30)
			SO_4	TSS	Pending PREL resume analysis.
18	72-123-0002	Salinas	SO_2	P	To be Established at New Site
20	72-061-0006	Guaynabo	CO	√	TSS Traffic Accident
			NO_2	√	TSS Traffic Accident
21	72-025-0007	Caguas	$PM_{2.5}$	√	Re-start (2018/10/05)
			NO_2	√	Re-start (2018/08/01)
			CO	√	Re-start (2018/06/07)
22	72-053-0003	Fajardo	$PM_{2.5}$	√	Re-start (2018/10/05)
			PM_{10}	√	Pending PREL resume analysis.
			SO_4	TSS	Pending PREL resume analysis.
24	72-061-0005	Guaynabo	$PM_{2.5}$	√	Re-start (2018/01/11)
			$PM_{2.5}$ QA	√	Re-start (2018/01/11)
			PM_{10}	√	Re-start (2018/10/05)
			PM_{10} QA	√	Re-start (2018/10/05)
			SO_4	TSS	Waiting for CPR Lab
30	72-127-0003	San Juan	CO	√	Re start (2019/03/13
37	72-021-0010	Bayamon	$PM_{2.5}$	√	Re start (2018/01/11
			PM_{10}	√	Re start (2018/01/11
			SO_2	√	Re start (2018/05/25)
			CO	√	Re-start (2019/06/25)
			NOx	√	Re-start (2019/04/01)
			$PM_{2.5}$ Spec.	TSS	Equipment damage
			AQI $PM_{2.5}$	TSS	Need new equipment
			O_3	√	Re start (2019/04/15)

PR Id	AQS Num.	County	Parameter	Active	Comments
40	072-33-0004	Cataño	SO_2	√	Re start (2018/03/08)
			AQI $PM_{2.5}$	√	Re start (2018/01/22)
			AQI PM_{10}	√	Re start (2018/10/31)
56	72-113-0004	Ponce	CO	√	Re start (2018/01/01)
			$PM_{2.5}$	√	Re start (2018/01/11)
			PM_{10}	√	Re start (2018/10/05)
			AQI PM_{10}	√	Re start (2018/01/01)
			AQI $PM_{2.5}$	√	Re start (2018/02/05)
57	72-059-0016	Guayanilla	$PM_{2.5}$	TSS	Re location
59	072-97-0007	Mayagüez	O_3	√	Start (2019/05/14)
			$PM_{2.5}$	√	Start (2019/05/14)
69	72-057-0009	Guayama	SO_2	√	Re start (2018/01/10)
74	72-013-0001	Arecibo	Pb	√	Re start (2018/01/01)
75	72-013-0002	Arecibo	Pb	√	Re start (2018/01/01)
			Pb-QA	√	Re start (2018/01/01)

- TSS: Temporary Shutdown
- P: To be install

4.1 Network Equipment

The PRAMN uses the equipment recommended and approved in the *List of Designated Reference and Equivalents Method* of Title 40, Part 53 of the Code of Federal Regulations (40 CFR Part 53) to carry out the sampling according to each parameter being sampled. These consist of two types, continuous and intermittent (manual) sampling.

- Intermittent or manual sampling is used for the particulate stations (PM_{10}, $PM_{2.5}$ and Pb). They take samples for 24-hours, with different frequencies, PM_{10} and Lead every six days (1-6 days) and $PM_{2.5}$ every three days (1-3 days). These equipment uses filters that are analyzed through chemical processes either in the DNER environmental laboratory or by EPA national contract laboratory.
- Continuous sampling is used for NO_2, CO, SO_2, O_3, PM_{10}, and $PM_{2.5}$. The continuous equipment takes samples continuously 24-hours every day. This equipment calculates averages of five (5) minutes and hourly averages from the values taken.

Both types of equipment are calibrated, and have preventive maintenance according with the *QA Handbook Vol. II App D Measurement Quality Objectives and Validation Templates*. All the equipment have and meet the specifications of certainty and quality control; and the captured data is reliable for comparison with the NAAQS.

Table 2 list the equipment used in the PRAMN by parameter.

Table 2: List of equipment used in the Puerto Rico air monitoring network by parameter.

Parameter	Equipment	Type
Particulate Matter (PM_{10})	Hi-Vol SA/GMW-321B	manual
	TEOM 1405 _AVF 246-B Inlet	continuous
Particulate Matter ($PM_{2.5}$)	Met-One E-Seq-FRM $PM_{2.5}$ / VSCC	manual
	TEOM 1405F AVF $PM_{2.5}$ VSCC	continuous
Sulfur Dioxide (SO_2)	Teledyne T-100 Pulsed Fluorescence	continuous
Nitrogen Dioxide (NO_2)	Teledyne T-200 Chemiliminescence	continuous
Ozone (O_3)	Teledyne T-400 Instrumental Ultra Violet Abs.	continuous
Lead (Pb)	Hi-Vol ICP-MS	manual
Carbon Monoxide (CO)	Teledyne T-300 Gas Filter Corr. CO Analyzer	continuous
$PM_{2.5}$ Speciation	Met-One SASS Teflon Energy Dispersive XRF	manual

5.0 Network Budget and Limitations

The air monitoring network has several limitations that affect its development, operation and maintenance. Although the sampling network has new equipment after the passage of Hurricane Maria, the sampling network was damaged and, therefore, replaced with new equipment. The new equipment was financed with FEMA funds. If it were not for the FEMA funds, the network would be only partially working, without the $PM_{2.5}$ network, since the 103 funds do not cover new equipment.

- The PRAMN is funded by federal funds under the Clean Air Act Section 103 and Section 105, therefore the PRAMN must be approved by the EPA Region 2. Each of these funds are specifically allocated for equipment, parts, personnel, etc. These predetermined assignments benefit the network, but also limit the development of the sampling network.

  Funds under section 103 cover operational expenses of the $PM_{2.5}$ but not include purchase of new equipment, nor vehicles. The funds under section 105 of the Clean Air Act are not only allocated for the air sampling. The funds of Section 105 provide for all expenses related to air pollution control, including but not limited to: permits, inspections, compliance, quality assurance and costs related to the implementation of state plans required under CAA section 110. Therefore, as a consequence of the limited budget for air monitoring, the network has been significantly affected by a lack of materials and personnel.

- After the funds are allocated cannot immediately be used. The funds require state funds match, DNER requires approval of external government agencies that delays acquisitions and new staff approvals. Also, difference between project period and state fiscal year result in conflict with the closing of the Agency's budget, and with the Agency's purchase process under federal grants. This complicates and delays the purchase of replacement parts since

the project might be open but the government request to stop acquisition due to changes in fiscal year.

- The sampling equipment used in the network is not manufactured in PR, which complicates the purchase orders, since the purchase regulations of the PR Government requires manufactures to be registered to do business in PR. This requirement delays the order by not being able to buy directly from the manufacturer, and sometimes increases the cost of the parts. Also, the government cannot issue payments in advance, as required by some providers. Even, the regulation of the Government of PR limits the money amount of the purchases and require a previous approval from the Governor Office.

- Another limitation is the lack of personnel for the maintenance, checks and data handling of the air monitoring network. The staff responsible of these functions are only two (2) field technicians, one (1) electronics technicians and two (2) statisticians. Despite so many limitations, the network is fully operational with equipment with the latest technology, remote data communication, and staff highly trained.

- To establish a site, depend of the topography and electrical service infrastructure of the area, the owner of the locations approval, and other Agency collaborated with us to connect the electrical services.

6.0 Network Design

The PRAMN has nineteen (19) locations with forty-two (42) monitors around the island where the air quality for criteria pollutants (gaseous and particulate) is measured at ground level. The goal of the network is, almost instantaneously, to maintain information about pollution. The information is available on maps, Internet sites, and / or public notices. The PRAMN is a backbone for air quality management programs, provide the public with information on current conditions and the progress in improving air quality, and are used by health researchers, business interests, environmental groups, and others.

The air sampling network has the collection of pollutant data such as particles with a diameter of 2.5 micrometers or less ($PM_{2.5}$), particles with a diameter of 10 micrometers or less (PM_{10}), ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxide (NO_2), PM_{10} - sulfates (SO_4) and lead (Pb). In addition, meteorological data are also collected, the network has an NCore station with a $PM_{2.5}$ speciation monitor and, two NO_2 stations near roads. These last one with the purpose of analyzing and describing the nature of air quality problems to the population on the Island.

The data obtained from the FRM and FEM monitors for the criteria pollutants are compared with NAAQS, in order to develop achievement and maintenance plans. Sites classified as SLAMS, and especially NCore, are used to evaluate air quality prototypes used in the development of strategies and explore trends in the impact of control measures. Air sampling near major emission sources can give an idea of how these sources control their pollutants as a result of their operations.

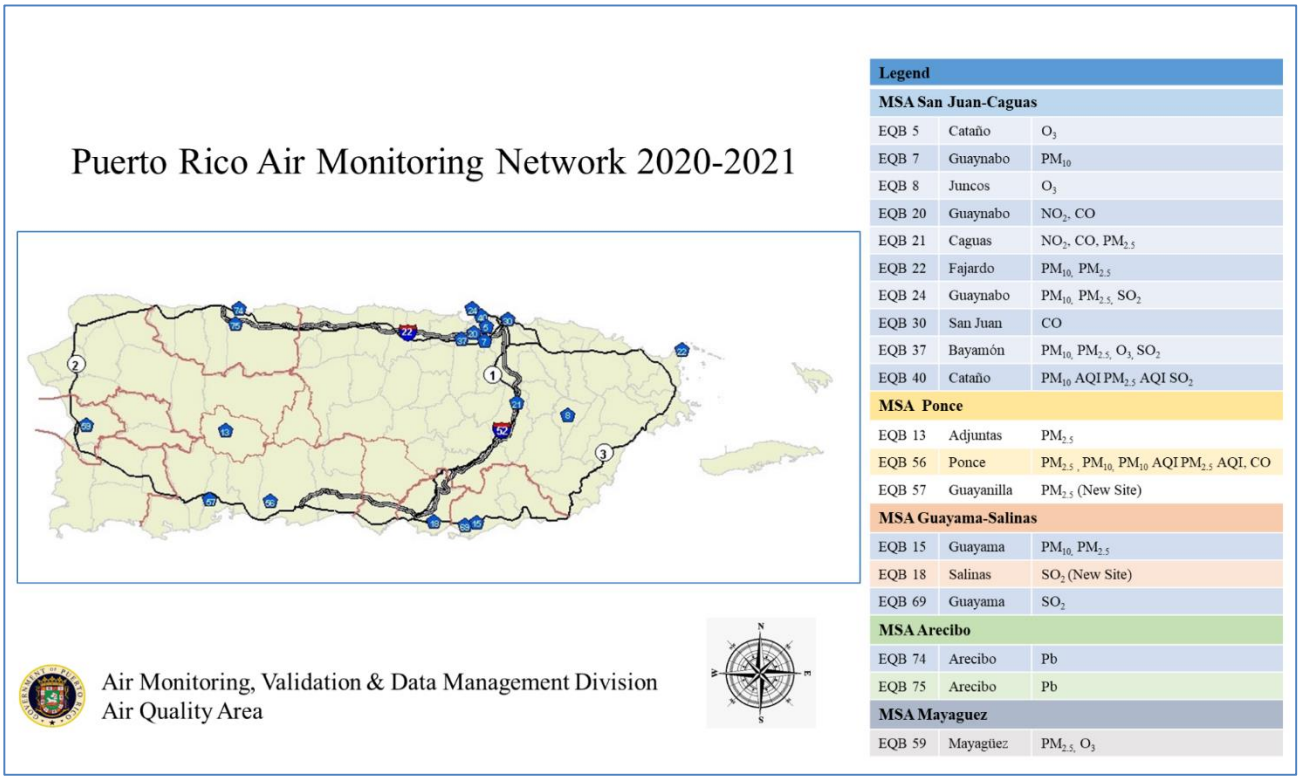
The characteristic data of an NCore station and / or of SLAMS stations are comparable with the data collected by research on the effects on health and atmospheric events, or very well for the work of method development.

Currently, Puerto Rico meets all minimum air monitoring requirements. The EPA in Appendix D of 40 CFR Part 58, establishes the minimum number of monitoring sites necessary to meet the environmental monitoring objectives. The minimum monitoring requirements are specific for each of the pollutants or based on objectives (NCore, ozone, $PM_{2.5}$, NO_2 near roads). Generally, the monitoring requirements of the population and the air emissions of the area.

Table 3: Site Information – Puerto Rico Sites

PR Id.	AQS Num.	County	Coordinates		Parameter
			Latitude	Longitude	
Metropolitan Area San Juan - Caguas					
EQB 5	72-033-0008	Cataño	18.431208	-66.141683	O_3
EQB 7	72-061-0001	Guaynabo	18.42565192	-66.115845	PM_{10}, SO_4
EQB 8	72-077-0001	Juncos	18.17793873	-65.915482	O_3
EQB 20	72-061-0006	Guaynabo	18.4218472	-66.1206861	CO, NO_2
EQB 21	72-025-0007	Caguas	18.198092	-66.052719	$PM_{2.5}$, NO_2, CO
EQB 22	72-053-0003	Fajardo	18.381291	-65.61718	$PM_{2.5}$, PM_{10}, SO_4
EQB 24	72-061-0005	Guaynabo	18.4400954	-66.1144597	$PM_{2.5}$, PM_{10}, PM_{10} QA $PM_{2.5}$-QA, SO_4
EQB 30	72-127-0003	San Juan	18.4478145	-66.0525095	CO
EQB 37	72-021-0010	Bayamón	18.4200891	-66.1506155	NCore ($PM_{2.5}$, SO_2, CO, NOx, O_3, PM_{10}, $PM_{2.5}$ Spec, AQI)
EQB 40	72-33-0004	Cataño	18.4312075	-66.1416826	SO_2, AQI ($PM_{2.5}$, PM_{10})
Metropolitan Area Ponce					
EQB 13	72-001-0002	Adjuntas	18.17537759	-66.725988	$PM_{2.5}$
EQB 56	72-113-0004	Ponce	18.0095583	-66.6272249	CO, $PM_{2.5}$, PM_{10}, AQI
EQB 57	72-059-0016	Guayanilla	New		$PM_{2.5}$
Metropolitan Area Guayama - Salinas					
EQB 15	72-057-0012	Guayama	17.955378	-66.162122	$PM_{2.5}$, PM_{10}, SO_4
EQB 18	72-123-0002	Salinas	17.9688288	-66.261284	SO_2
EQB 69	72-057-0009	Guayama	17.9676377	-66.1874706	SO_2
Metropolitan Area Mayaguez					
EQB 59	072-97-0007	Mayagüez	18.21428	-67.14461	O_3, $PM_{2.5}$
Metropolitan Area Arecibo					
EQB 74	72-013-0001	Arecibo	18.45703907	-66.696697	Pb
EQB 75	72-013-0002	Arecibo	18.45338923	-66.694986	Pb, Pb-QA

Figure 1: Puerto Rico Air Monitoring Network



The network design proposed in this document is according to the Clean Air Act, the 40 Code of the Federal Regulations (CFR) Part 58, which presents a balance between the desired number of monitors, the sampling frequency, the available budget and the employees necessary for its management and operation.

The recommended changes in this network will be implemented during the period from July 2020 to December 2021, depending on the available budget. The operation of the network may change over the years without public notification based on unexpected circumstances. Examples of unexpected circumstances include catastrophic equipment failures, construction or demolition activities, and loss of access to the site, monitor obstructions or natural events (hurricanes or storms).

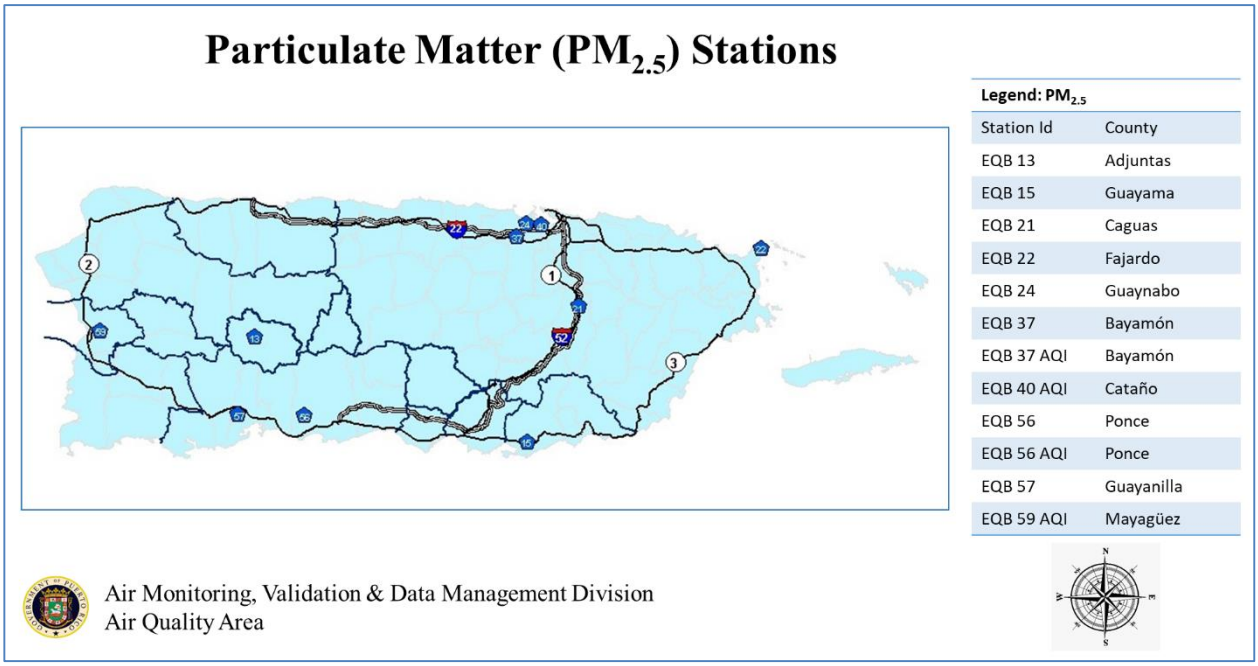
5.1 $PM_{2.5}$ Air-Monitoring Network

The PRAMN operates twelve (12) sites of $PM_{2.5}$ in the air sampling network, eight (8) use the FRM, four (4) continuous FEM sampling and one (1) collocated (QA) $PM_{2.5}$

The FRM $PM_{2.5}$ sampling equipment was changed for a reference sampling equipment included in the EPA-Designated Reference List as Met One E-SEQ-FRM $PM_{2.5}$ / VSCC. All FRM sites operate one every three days (1-3). The monitor placed FRM QA operate one day every 6 days.

The $PM_{2.5}$ continuous monitors operate throughout the year and the data is sent to the EPA AQS system database in one hour values. The continuous sampling of $PM_{2.5}$ uses the TEOM 1405F-AVF $PM_{2.5}$ VSCC. The continuous monitors of $PM_{2.5}$ are used to report the AQI. The details of these sites are included in Appendix I and Figure 2.

Figure 2: $PM_{2.5}$ Network



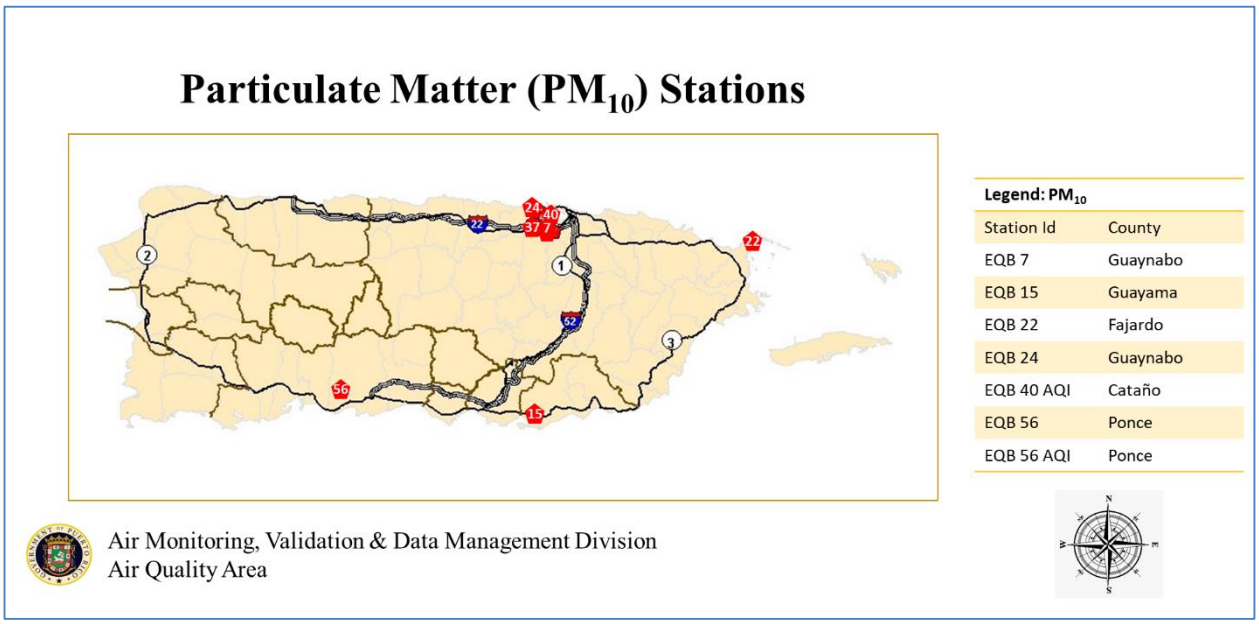
5.2 PM_{10} Air-Monitoring Network

The PRAMN operates seven (7) PM_{10} sites and is broken down into five (5) intermittent FRM monitors and two (2) PM_{10} continuous monitors in the air sampling network.

The FRM PM_{10} sampling equipment used in the network are the Hi-Vol SA/GMW-321B. The site located at Guaynabo operate every three days (1 in 3) and the others four (4) sites operated every six days (1 in 6). In addition, the CPR operates one (1) PM_{10} FRM monitor as collocated (QA) with frequency of 1 in 6 days.

The continuous PM_{10} monitors take samples throughout the year and the concentrations are sent to the AQS system of the EPA and are used for AQI purposes. The equipment used are a TEOM 1405F-AVF. The details of the sites are included in Appendix I and Figure 3

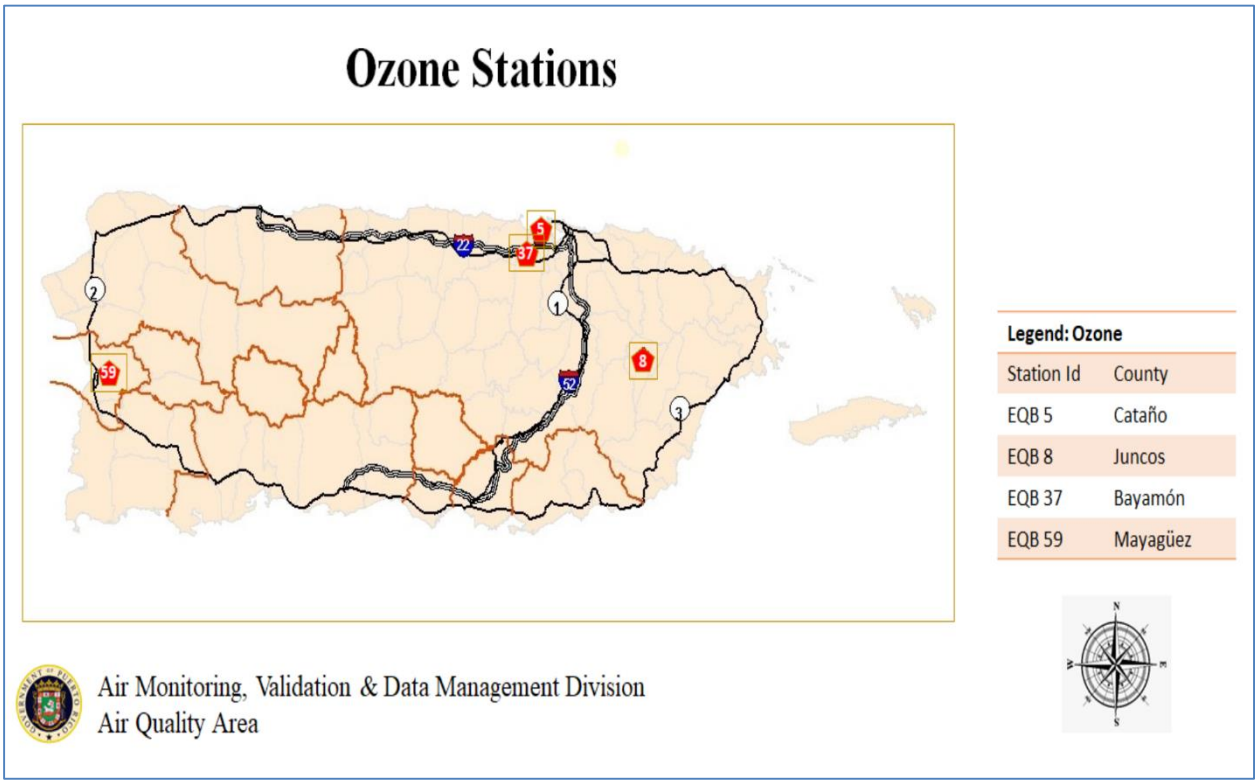
Figure 3: PM_{10} Network



5.3 Ozone Air-Monitoring Network

The PRAMN operates four (4) ozone sites in the air sampling network with one (1) monitor located at the NCore site. The ozone monitors operate throughout the year and the concentrations are sent in one hour values to AQS of the EPA. The monitors are classified as SLAMS and the equipment used are Teledyne T-400 Instrumental Ultra Violet Abs. The details of the location of the sites are included in Appendix I and Figure 4.

Figure 4: O_3 Network



5.4 SO_2 Air-Monitoring Network

The PRAMN operates four (4) sites of sulfur dioxide (SO_2) in the air sampling network; one of these monitors is at the NCore station. All SO_2 monitors are operated throughout the year. The concentrations are sent in one hour values to AQS of the EPA, also five minutes concentrations. All SO_2 monitors are oriented to the sources. The equipment used are Teledyne T-100 Pulsed Fluorescence.

The Salinas station will be located near an area where maximum SO_2 concentrations. The location has already been approved by the EPA. The station will be inside the Syngenta Company. The map below shows the area and the details of the new location.

The details of the location of the sites are included in Appendix I and Figure 6.

Figure 5: Salinas new location

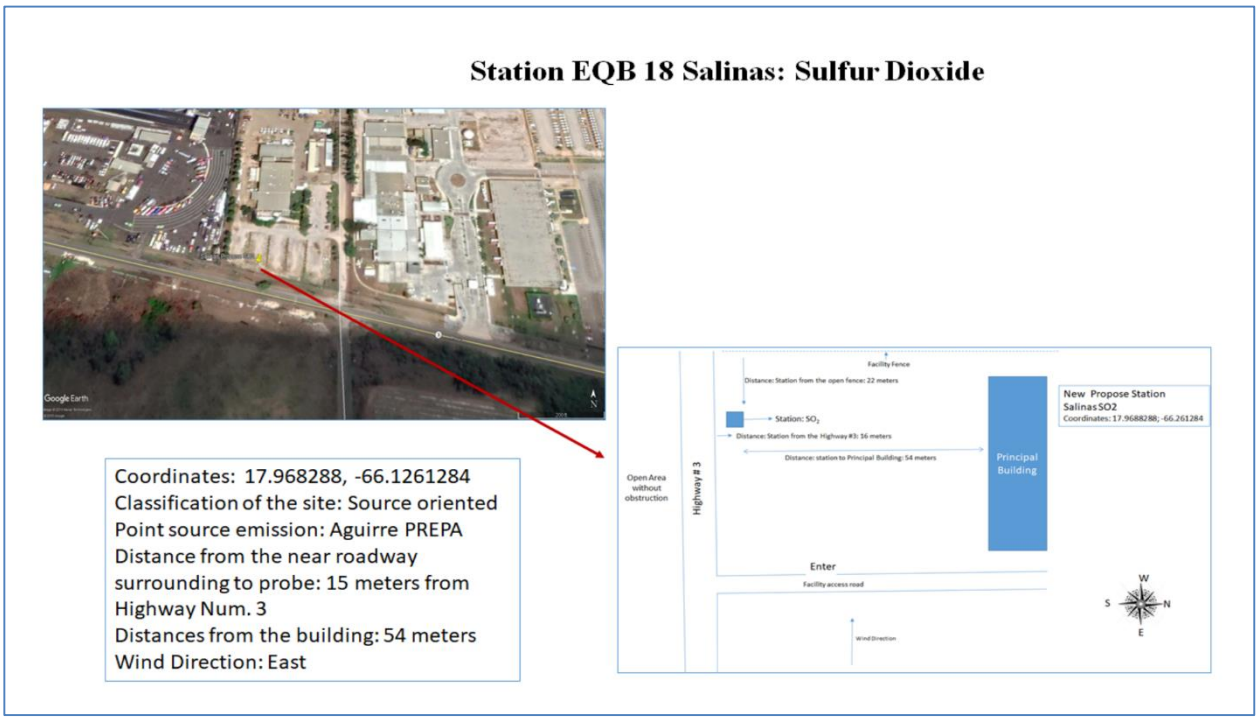
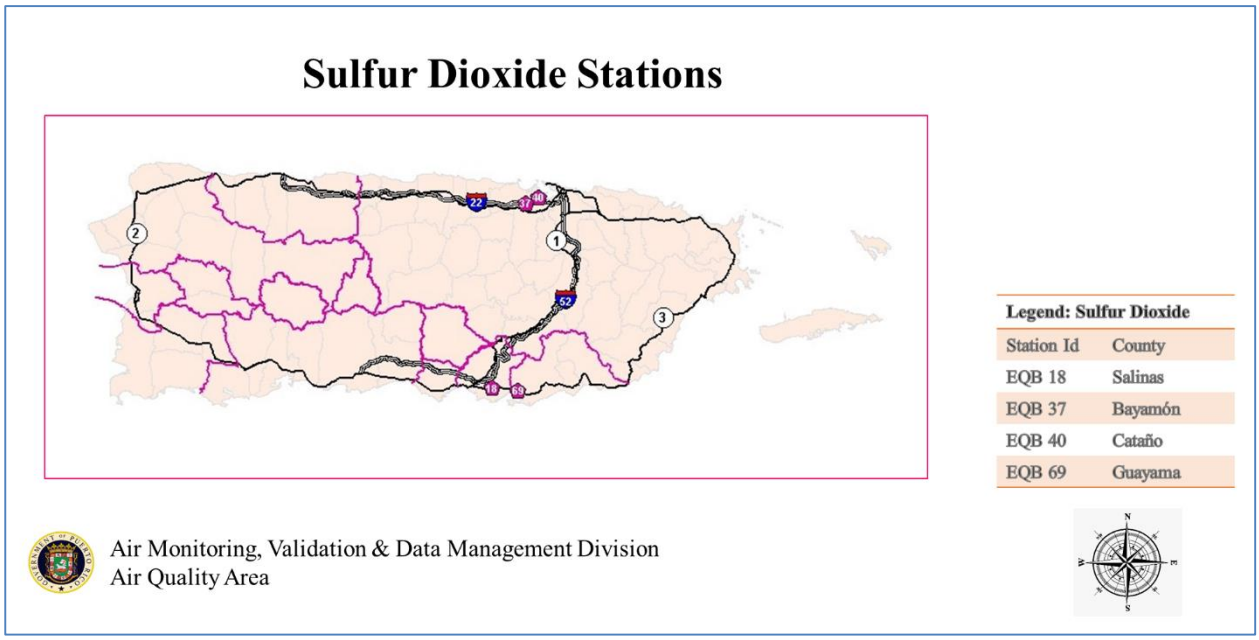


Figure 6: SO_2 Network

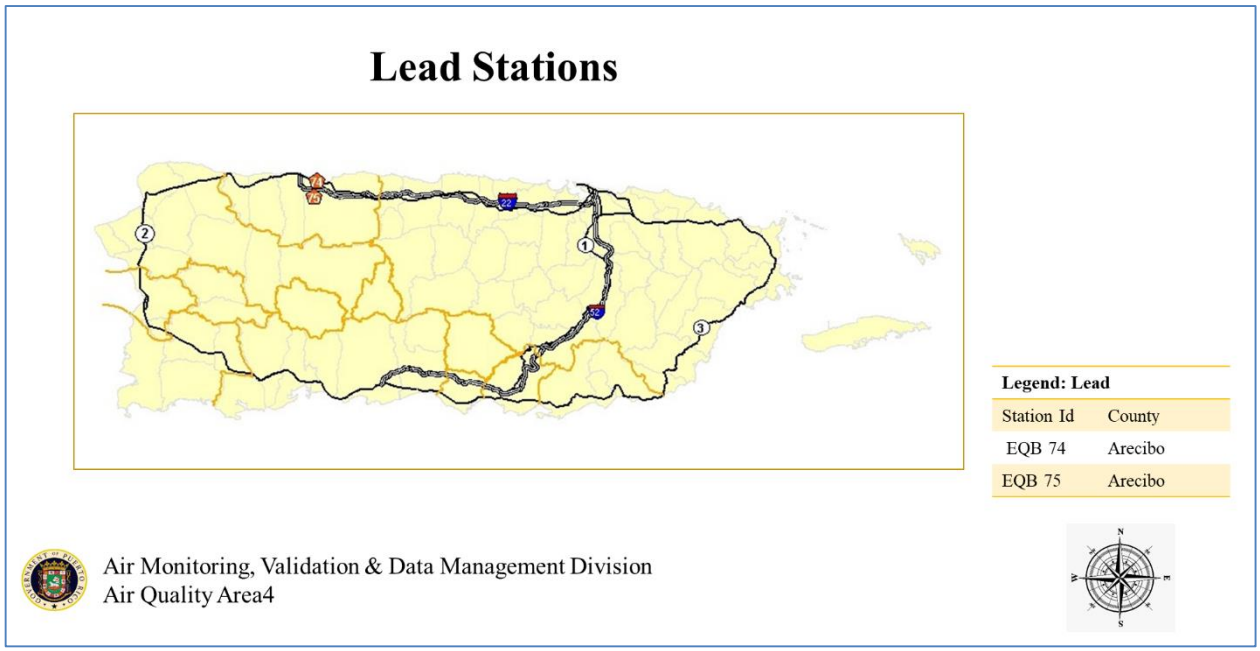


5.5 Lead Air-Monitoring Network

The PRAMN operates two (2) Lead sites (Pb) in the air sampling network, both in Arecibo, the monitoring concentrations obtained by industries that handle lead. All Pb monitors, including the collocate(QA) are operated one (1) in every six (6) days (1-6) throughout the year and the concentrations are sent in day values to EPA AQS.

The monitors for lead are SLAMS and use the method (FRM). The sampler used is a Hi-Vol ICP-MS. The details of the sites are included in Appendix I and in Figure 7.

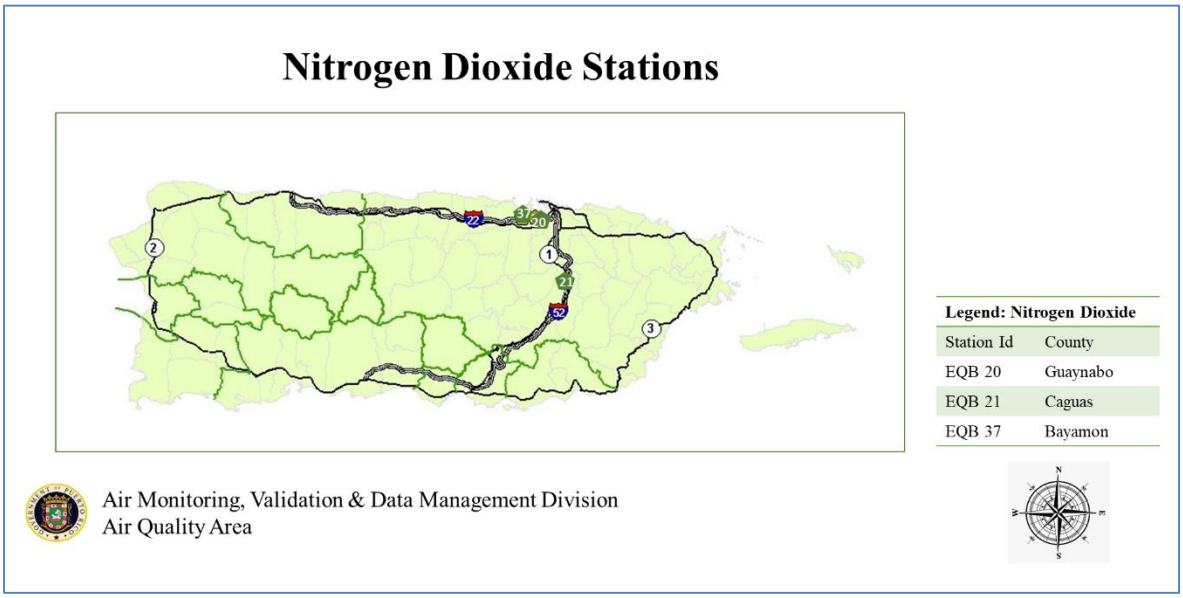
Figure 7: Lead Network



5.6 NO_2 Air-Monitoring Network

The PRAMN operates three (3) nitrogen oxide (NO_2) sites in the air-monitoring network, two (2) as parts of the near roads program, (at Guaynabo and Caguas); and one (1) at Bayamón NCore site. The NO_2 samplers are operated year-round and the measurements are sent to the EPA AQS on an hourly basis. The SLAMS NO_2 sites are used as a FRM; and the equipment used are Teledyne T-200 Chemiliminescence. The details of the sites are included in Appendix 1 and Figure 8.

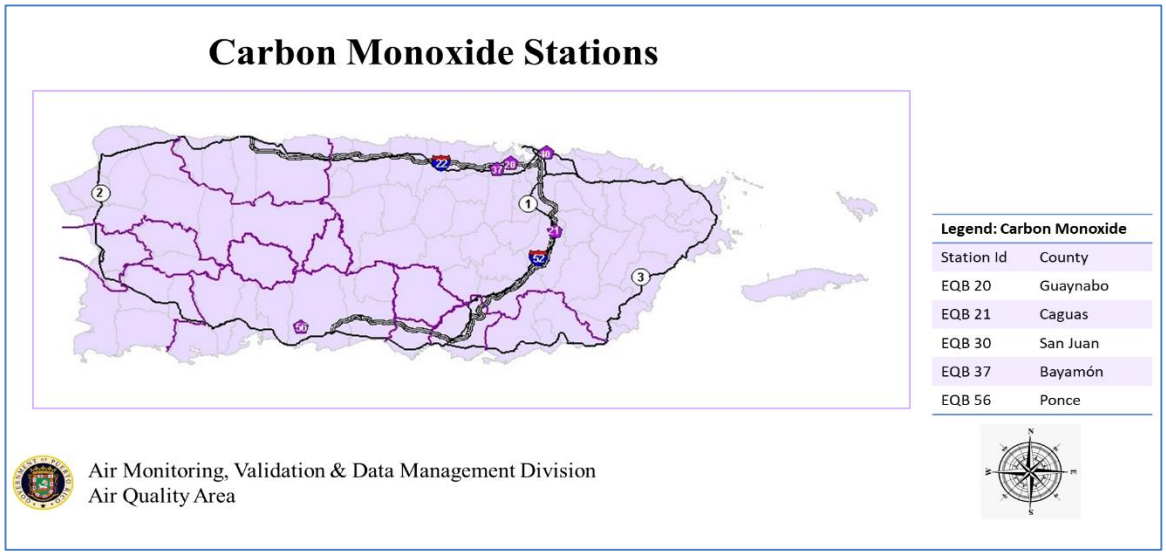
Figure 8: NO_2 Network



5.7 CO Air-Monitoring Network

The PRAMN operates five (5) carbon monoxide (CO) sites in the air-monitoring network, one (1) of them at Bayamón NCore site. All CO samplers are operated year-round and the measurements are sent to the EPA AQS on an hourly basis. The SLAMS CO sites use FRM monitors. The equipment used are Teledyne T-300 Gas Filter Corr. CO Analyzer. The details of these sites are included in Appendix 1 and Figure 9.

Figure 9: CO Network



5.8 PM Sulfate Air Monitoring Network

The PRAMN operates four (4) sulfate sites (SO_4) in the air sampling network. The sulfate particulate sampling network analyzes the PM_{10} filters by atomic absorption analysis to generate the sulfate concentrations. The sulfate monitors are operated throughout the year and the concentrations are sent in 24-hour values to EPA AQS. The details of the location of the sites are included in Appendix I.

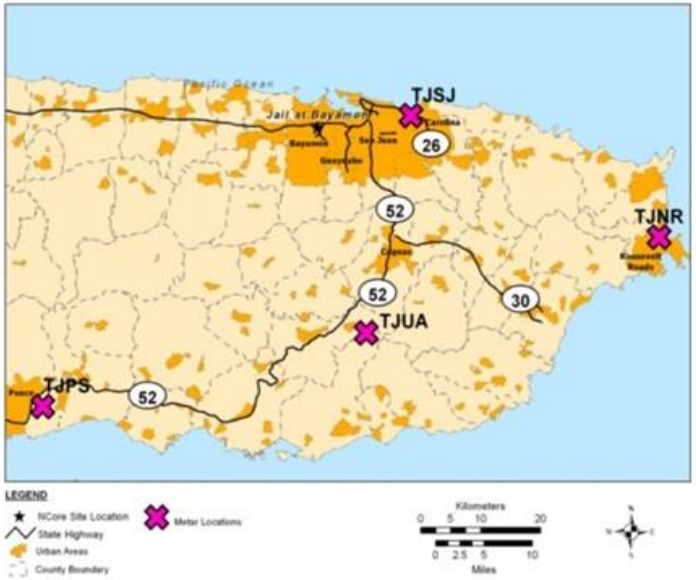
5.9 NCore – Air Monitoring Network

In PR an NCore site was established for March 2011. This site is part of the sampling network that uses various advanced equipment for measuring particles, gases and meteorology. The EPA requires each state at least one NCore site. The parameters sampled are: CO, O_3, NO_2, NOy, NO, SO_2, $PM_{2.5}$, PM_{10}, $PM_{10\text{-}2.5}$, $PM_{2.5}$ Speciation and basic meteorology.

Puerto Rico is required to have an NCore site. Bayamon (AQS: 72-021-0010) was established as the NCore site for Puerto Rico. The monitor of $PM_{2.5}$ continuous is temporary shutdown to be replaced by a new equipment. The replacement depends on the budget available. The details of the monitors are in the Appendix I and in the previous sections.

Figure 9: NCore Site

NCore Station
Bayamón- San Juan



AIRS Id: 72-021-0006
State: Puerto Rico
County: Bayamon
City: San Juan
EPA Region: 2
Latitude: 18.416667; Longitude: -66.150833
Street Address: Regional Jail Of Bayamon
Location Setting: Suburban
Land Use Type: Industrial

Parameters:

$PM_{2.5}$ (continuous & filter), $PM_{2.5}$ speciation, $PM_{10\text{-}2.5}$ particle mass, O_3, SO_2, CO, NO/NO_x, wind speed, wind direction, relative humidity, and ambient temperature. $PM_{10\text{-}2.5}$ or PM Coarse is determined by the difference between collocated PM_{10} and $PM_{2.5}$ FRM samplers.

7.0 NETWORK CHANGES

After the impact of Hurricanes Irma and María in September 2017, it has been an invaluable challenge to restore the air monitoring network. Finally, in 2020 with almost 100% of the monitors operating, minimal changes are planned in the next eighteen (18) months (from July 1, 2020 to December 31, 2021). The Agency will continue its efforts and resources to reestablish the entire sampling network to continue maximize the data capture over 75% and; complete the selection and installation of the new sites approved by the EPA, which are still pending from the 2019 Network Plan.

On the agenda pending from the 2019 Network;

- Install the SO_2 monitor from Salinas. The location has already been approved by the EPA. The details of the proposed site for the new location can be found in Section 5.4 SO_2 Air-Monitoring Network and Figure 5.
- Select a new location to re-locate the $PM_{2.5}$ at Guayanilla. The old location was closed by the owner of the site.

All changes involving the relocation, closure, and/or establishment of a new site will require approval by EPA. Each change request will be submitted to EPA when additional details regarding the sites are available.

The new changes involve:

- Re-locate the Ponce site to a new location.

  During the 2019, the owner of the site inform that they plan to build a second floor where we have the monitors (PM_{10} & $PM_{2.5}$) located. That would mean that the equipment will need to re-locate to other new site the station.

- Close the Cataño O_3 monitor EQB 5 (72-033-0008) and re-locate to the south, east or south-east

  The south, east and south-east area (Ponce, Humacao-Yabucoa & Guayama-Salinas) of Puerto Rico are areas without ozone data. The Cataño area have two (2) O_3 monitor. If the EQB 5 is closed, the area will be covered by the Bayamon (72-033-0010) monitor. The Cataño EQB 5 equipment would be used either for the Ponce, Humacao-Yabucoa or Salinas-Guayama area. The decision where located the monitors will be determined according with the modeling results, is possible located the monitors at existing sites or a new site.

- Add a new NO_2 monitors at the south, east or south-east of PR.

The south, east and south-east area of Puerto Rico are areas without NO_2 data; but according with the emissions inventory these areas are areas with high concentrations of NO_2. According to the emissions inventory, this area emits approximately more than 5,000 tons per year. The decision where located the monitors will be determined according with the modeling results, is possible located the monitors at existing sites or a new site.

- Add monitors of lead at San Juan and Guayanilla Areas

  According with the emissions inventory Puerto Rico have areas with more than 0.5 ton/yr. of lead, such as San Juan and south-east area. According with the lead regulation, is possible establish monitors in the following are San Juan and Guayanilla, these areas have sources that emit 0.5 tons or more of lead.

- Change the type of equipment used for sampling PM_{10}

  Puerto Rico has problems and difficulties in obtaining the necessary maintenance parts for the HI-Vol used for PM_{10} sampling.

7.1 Limitations to Implement the Proposed Changes.

In order to implement all the proposed changes, it is necessary to comply with the following:

- A request to EPA for approval of changes and posting to news sites is required.
- PR must have the budget to purchase the necessary equipment to establish the station
- PR must have the personnel requested for the maintenance, operation and management of the network and the data handling
- Have the required sitting criteria to establish the sampling sites. That is, the topography and infrastructure of the area allows it with access to the site, the area have electricity service for the operation of the equipment.

8.0 NETWORK MODIFICATIONS FORMS

Network modifications forms will be prepared for submit to EPA Region 2 to implement the network changes identified in this plan.

9.0 SUMMARY AND CONCLUSIONS

The air monitoring network of Puerto Rico presented in this plan meets the monitoring requirements of federal regulations. The procedures that are used and the instruments that are operated meet the standards that has been established by EPA.

The only significant network changes are complete the installation of the SO_2 monitor in Salinas and; select a new site to $PM_{2.5}$ at Guayanilla. The other changes are proposed changes that requires the EPA approval and identify previously the budget available.

Site Name		EQB 13				
Address		Road #123				
City		Adjuntas				
AQS Code		72-001-0002				
PR County		Adjuntas				
MSA/CSA		N/A				
Latitude		+18.172695				
Longitude		-66.726262				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		Yes				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
Ambient Average Temperature	Instrumental	Electronic	1 in 3	Urban	Extreme Downwind	2005/01/01
Sample Average Barometric Pressure	Instrumental	Barometric Sensor	1 in 3	Urban	Extreme Downwind	2005/01/01
$PM_{2.5}$	E-Seq-FRM/VSCC	Gravimetric	1 in 3	Urban	Upwind Background	2005/01/01
Site Purpose		Reference for Extreme downwind				
Plans for the next 18 months		No Changes				
Others Comments						

APPENDIX I: Site Description

Site Name		EQB 74				
Address		Victor Santoni Cordero Road				
City		Arecibo				
AQS Code		72-013-0001				
PR County		Arecibo				
MSA/CSA		Arecibo				
Latitude		+18.457039				
Longitude		-66.696693				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
Ambient Average Temperature	Instrumental	Offsite Avg. Pressure	1 in 6	Micro	Source Oriented	2010/01/02
Sample Average Barometric Pressure	Instrumental	Offsite Avg. Pressure	1 in 6	Micro	Source Oriented	2010/01/02
Lead	Hi-Vol	ICP-MS	1 in 6	Micro	Source Oriented	2010/01/02
Site Purpose		Population Protection				
Plans for the next 18 months		No Changes				
Others Comments						

APPENDIX I: Site Description

Site Name		EQB #75				
Address		PR Road #2				
City		Arecibo				
AQS Code		72-013-0002				
PR County		Arecibo				
MSA/CSA		Arecibo				
Latitude		+18.453389				
Longitude		-66.694987				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
Ambient Average Temperature	Instrumental	Offsite Avg. Pressure	1 in 6	Micro	Source Oriented	2012/08/19
Sample Average Barometric Pressure	Instrumental	Offsite Avg. Pressure	1 in 6	Micro	Source Oriented	2012/08/19
Lead	Hi-Vol	ICP-MS	1 in 6	Micro	Source Oriented	2012/08/19
Site Purpose		Population Protection				
Plans for the next 18 months		No Changes				
Others comments		Pb collocated.				

Site Name		EQB 21				
Address		Highway 22 Caguas South Toll				
City		Caguas				
AQS Code		72-013-0002				
PR County		Caguas				
MSA/CSA		San Juan-Caguas				
Latitude		+18.198712				
Longitude		-66.052237				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
NO_2	Instrumental	T200 EU/501 Chemiluminescence	Continuous	Urban	High Concentration	2016/12/19
CO	Instrumental	T300U Gas filter Correlation CO analyzer	Continuous	Urban	High concentration	2017/02/06
$PM_{2.5}$	E-Seq-FRM/VSCC	Gravimetric	1 in 3	Urban	High concentration	2017/06/01
Ambient Average Temperature	Instrumental	Electronic	1 in 3	Urban	High concentration	2017/06/01
Sample Average Barometric Pressure	Instrumental	Barometric Sensor	1 in 3	Urban	High concentration	2017/06/01
Site Purpose		Near Roads				
Plans for the next 18 months		No Changes				
Others comments						

Site Name		EQB 40				
Address		11 Final St. Las Vegas				
City		Cataño				
AQS Code		72-033-0004				
PR County		Cataño				
MSA/CSA		San Juan-Caguas				
Latitude		+18.431208				
Longitude		-66.14168263				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
SO_2	Instrumental	T100U Pulsed Fluorescent	Continuous	Neighborhood	Population Exposure	1993/12/07
PM_{10} Continuous	Inst. R&P SA246B-Inlet	TEOM Gravimetric	Continuous	Urban	Population Exposure	2000/07/13
$PM_{2.5}$ Continuous	TEOM $PM_{2.5}$ VSCC	FDMS Gravimetric	Continuous	Urban	Population Exposure	2015/01/01
Site Purpose		Population Protection				
Plans for the next 18 months		No Changes				
Others comments		AQI (PM_{10}, $PM_{2.5}$) $PM_{2.5}$ continuous monitor; SO_2 re-start Mar. 8, 18; $PM_{2.5}$ Jan. 22, 18 & PM_{10} Oct. 31, 18				

Site Name		EQB 5				
Address		PR Rd. 165				
City		Cataño				
AQS Code		72-033-0008				
PR County		Cataño				
MSA/CSA		San Juan-Caguas				
Latitude		+18.440774				
Longitude		-66.126531				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
Ozone	Instrumental	T400U Ultra Violet Abs.	Continuous	Urban	Population Exposure	2004/07/22
Site Purpose		Population Protection				
Plans for the next 18 months		Close and relocate the monitor				
Others comments		AQI (O_3)				

Site Name		EQB 22				
Address		Fajardo Lighthouse				
City		Fajardo				
AQS Code		72-053-0003				
PR County		Fajardo				
MSA/CSA		San Juan-Caguas				
Latitude		+18.381451				
Longitude		-66.617792				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		Yes				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
PM_{10}	Hi-Vol SA/GMW-1200	Gravimetric	1 in 6	neighborhood	Regional Transport	1989/03/05
$PM_{2.5}$	E-Seq-FRM $PM_{2.5}$/VSCC	Gravimetric	1 in 3	Regional	Background	1999/04/20
PM_{10} Sulfate	Hi-Vol SA/GMW-321B	Colorimetric	1 in 6	neighborhood	Background	
Ambient Temperature Average	Instrumental	Electronic	1 in 3	Regional	Background	1999/04/20
Ambient Pressure Average	Instrumental	Barometric Sensor	1 in 3	Regional	Background	1999/04/20
Site Purpose		Background / Regional Transport				
Plans for the next 18 months		No Changes				
Others comments						

Site Name		EQB 15				
Address		PR Rd. 3				
City		Guayama				
AQS Code		72-057-0012				
PR County		Guayama				
MSA/CSA		Guayama-Salinas				
Latitude		17.955378				
Longitude		-66.617792				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		Yes				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
PM_{10}	Hi-Vol SA/GMW-1200	Gravimetric	1 in 6	neighborhood	Population Exposure	2019/10/30
$PM_{2.5}$	E-Seq-FRM $PM_{2.5}$/VSCC	Gravimetric	1 in 3	neighborhood	Population Exposure	2019/10/03
PM_{10} Sulfate	Hi-Vol SA/GMW-321B	Colorimetric	1 in 6	neighborhood	Population Exposure	2019/10/03
Ambient Temperature Average	Instrumental	Electronic	1 in 3	neighborhood	Population Exposure	2019/10/03
Ambient Pressure Average	Instrumental	Barometric Sensor	1 in 3	neighborhood	Population Exposure	2019/10/03
Site Purpose		Protection for the Population				
Plans for the next 18 months		No Changes				
Others comments						

Site Name		EQB 69				
Address		PR Police Station, Stolen Vehicles Division				
City		Guayama				
AQS Code		72-057-0011				
PR County		Guayama				
MSA/CSA		Guayama-Salinas				
Latitude		+17.967309				
Longitude		-66.186149				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
SO_2	Electronic	T-100 Pulsed Fluorescence	continuous	neighborhood	Source oriented	2017/04/06
Site Purpose		Protection for the population				
Plans for the next 18 months		No Changes				
Others comments						

Site Name		EQB 57				
Address						
City		Guayanilla				
AQS Code		72-059-0017				
PR County		Guayanilla				
MSA/CSA		Ponce				
Latitude						
Longitude						
Suitable for Comparison to $PM_{2.5}$ NAAQS?		Yes				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
$PM_{2.5}$	E-Seq-FRM $PM_{2.5}$/VSCC	Gravimetric	1 in 3	Neighborhood	Population Exposure	new
Ambient Average Temperature	Instrumental	Electronic	1 in 3	Neighborhood	Population Exposure	new
Sample Average Barometric Pressure	Instrumental	Barometric Sensor	1 in 3	Neighborhood	Population Exposure	new
Site Purpose		Protection for the population				
Plans for the next 18 months		Select a new location				
Others comments						

Site Name		EQB 7				
Address		USGS & Water Resources Bldg.				
City		Guaynabo				
AQS Code		72-061-0001				
PR County		Guaynabo				
MSA/CSA		San Juan- Caguas				
Latitude		+18.423559				
Longitude		-66.114453				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		No				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
PM_{10}	Hi-Vol SA/GMW-1200	Volumetric	1 in 6	Micro Scale	Highest Concentration	1999/02/28
PM_{10} Sulfate	Hi-Vol SA/GMW-321B	Volumetric	1 in 6	Neighborhood	Highest Concentration	1998/01/05
Site Purpose		Determine High Concentration				
Plans for the next 18 months		Add a Lead Monitor				
Others comments						

Site Name		EQB 24				
Address		Electrical Substation				
City		Guaynabo				
AQS Code		72-061-0005				
PR County		Guaynabo				
MSA/CSA		San Juan- Caguas				
Latitude		+18.440095				
Longitude		-66.114460				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		yes				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
$PM_{2.5}$	E-Seq FRM/ VSCC	Gravimetric	1 in 3	Neighborhood	Population Exposure	1999/01/15
PM_{10}	Hi-Vol SA/GMW-321B	Volumetric	1 in 3	Neighborhood	Population Exposure	1988/01/05
PM_{10} Sulfate	Hi-Vol SA/GMW-321B	Colorimetric	1 in 6	Neighborhood	Population Exposure	1988/01/05
Ambient Average Temperature	Instrumental	Electronic	1 in 3	Neighborhood	Population Exposure	1999/01/15
Average Barometric Pressure	Instrumental	Barometric Sensor	1 in 3	Neighborhood	Population Exposure	1999/01/15
Site Purpose		Population Protection				
Plans for the next 18 months		No Changes				
Others comments		PM_{10} & $PM_{2.5}$ collocate (QA)				

Site Name		EQB 20				
Address		Highway 22 Buchanan Toll				
City		Guaynabo				
AQS Code		72-061-0006				
PR County		Guaynabo				
MSA/CSA		San Juan- Caguas				
Latitude		+18.422595				
Longitude		-66.120012				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		n/a				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
CO	Instrumental	T300U Gas filter Correlation CO	Continuous	Urban	High concentration	2014/07/08
NO_2	Instrumental	T200 EU/501 Chemiluminescence	Continuous	Urban	High concentration	2015/02/20
Site Purpose		Near Roads				
Plans for the next 18 months		Re- Start, site TSS , the site was affected by traffic accident in Jan. 2020				
Others comments						

Site Name		EQB 59				
Address		University of PR Mayaguez Campus				
City		Mayagüez				
AQS Code		72-097-0007				
PR County		Mayagüez				
MSA/CSA		Mayagüez				
Latitude		18.21428				
Longitude		-67.14461				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		No				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
$PM_{2.5}$	TEOM 1405 $PM_{2.5}$ VSCC	FDMS Gravimetric	Continuous	neighborhood	Population exposure	2019/06/11
O_3	Instrumental	T400U Ultra Violet Abs	Continuous	Urban	Population exposure	2019/06/11
Site Purpose		AQI purpose				
Plans for the next 18 months		No Changes				
Others comments		$PM_{2.5}$ & Ozone (AQI)				

Site Name		EQB 8				
Address		Road 183				
City		Juncos				
AQS Code		72-077-0001				
PR County		Juncos				
MSA/CSA		San Juan - Caguas				
Latitude		+18.177939				
Longitude		-65.915482				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		No				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
Ozone	Instrumental	T400U Ultra Violet Abs	Continuous	Neighborhood	Population exposure	2007/10/03
Site Purpose		AQI purpose, Population Protection				
Plans for the next 18 months		No Changes				
Others comments		Ozone (AQI)				

Site Name		EQB56				
Address		Civil Defense Bldg. Urb. San Antonio				
City		Ponce				
AQS Code		72-113-0004				
PR County		Ponce				
MSA/CSA		Ponce				
Latitude		+18.009558				
Longitude		-66.627249				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		yes				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
$PM_{2.5}$	E-Seq VSCC	Gravimetric	1 in 3	Neighborhood	Population Exposure	1999/01/15
PM_{10}	Hi-Vol SA/GMW-1200	Volumetric	1 in 6	Neighborhood	High Concentration	1999/01/06
CO	Instrumental	T300U Gas filter Correlation CO	Continuous	Neighborhood	Population Exposure	2011/10/01
PM_{10} continuous	TEOM 1405 246-B Inlet	TEOM Continuous	Continuous	Neighborhood	Source oriented	2011/10/05
$PM_{2.5}$ continuous	TEOM $PM_{2.5}$ VSCC	FDMS Gravimetric	Continuous	Neighborhood	Source Oriented	2017/07/05
Ambient Average Temperature		Barometric Sensor		Neighborhood	Source Oriented	1999/01/15
Sample Average Barometric Pressure		Electronic		Neighborhood		1999/01/15
Site Purpose		AQI purpose, Population Protection				
Plans for the next 18 months		No Changes				
Others comments		AQI ($PM_{2.5}$ & PM_{10}).				

Site Name		EQB 18				
Address		PR Rd. 3 (Inside Syngenta Company área)				
City		Salinas				
AQS Code		72-123-0002				
PR County		Salinas				
MSA/CSA		Guayama - Salinas				
Latitude		+17.9688288				
Longitude		-66.261284				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		N/A				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
SO_2	Electronic	T-100 Pulsed Fluorescence	Continuous	Neighborhood	High Concentration	new
Site Purpose		Population Protection & High Concentration				
Plans for the next 18 months		No changes				
Others comments						

Site Name		EQB 30				
Address		Baldorioty de Castro Ave.				
City		San Juan				
AQS Code		72-127-0003				
PR County		San Juan				
MSA/CSA		San Juan- Bayamón				
Latitude		+18.449814				
Longitude		-66.052510				
Suitable for Comparison to $PM_{2.5}$ NAAQS?		No				
Monitor Type		SLAMS				
Parameter	Method	Analysis Method	Schedule	Spatial Scale	Objective	Begin Date
CO	Instrumental	T- 300U Gas Filter Corr. CO	Continuous	Middle	High Concentration	1995/04/01
Site Purpose		Determine High Concentration and protection of population				
Plans for the next 18 months		No changes				
Others comments						

APPENDIX I: Site Description

Site Name	EQB #37 NCore Station
Address	Regional Jail of Bayamón
City	Bayamón
AQS Code	72-021-0010
PR County	Bayamón
MSA/CSA	San Juan - Bayamón
Latitude	+18.420089
Longitude	-66.150615
Suitable for Comparison to $PM_{2.5}$ NAAQS?	N/A

Parameter	Sampling Method	Analysis Method	Schedule	Spatial Scale	Monitoring Objective	Begin Date
SO_2	Instrumental	Ultraviolet Fluorescent	Continuous	Neighborhood	Population Exposure	2011/03/16
CO	Instrumental	Gas Filter Corr. CO Analyzer	Continuous	Neighborhood	Population Exposure	2011/03/16
NO	Instrumental 699	Chemiliminescence Teledyne API T200	Continuous	Neighborhood	Population Exposure	2014/05/21
NOy	Instrumental 699	Chemiliminescence Teledyne API T200	Continuous	Neighborhood	Population Exposure	2014/05/21
NOy-NO	Instrumental 699	Chemiliminescence Teledyne API T200	Continuous	Neighborhood	Population Exposure	2014/05/21
PM_{10}	E-FRM PM_{10}	Gravimetric	1-3	Neighborhood	Population Exposure	2015/05/09
$PM_{2.5}$	E-Seq FRM $PM_{2.5}$/VSCC	Gravimetric	1-3	Neighborhood	Population Exposure	2015/04/12
$PM_{10-2.5}$	E-FRM $PM_{10-2.5}$ Sampler Pair	Paired Gravimetric	1-3	Neighborhood	Population Exposure	2015/05/09

APPENDIX I: Site Description

Parameter	Sampling Method	Analysis Method	Schedule	Spatial Scale	Monitoring Objective	Begin Date
O_3	T – 400	Instrumental Ultra violet	Continuous	Neighborhood	Population Exposure	2014/05/21
Wind Speed Resultant	Instrumental	RM Young Ultrasonic Anemometer Model 81000	Continuous	Neighborhood	Population Exposure	2014/05/21
Wind Direction Resultant	Instrumental	RM Young Ultrasonic Anemometer Model 81000	Continuous	Neighborhood	Population Exposure	2014/05/21
Outdoor Temperature	Instrumental	Met One 083D	Continuous	Neighborhood	Population Exposure	2014/05/21
Relative Humidity	Instrumental	Met One 083D	Continuous	Neighborhood	Population Exposure	2014/05/21
Barometric Pressure	Instrumental	Barometric sensor	Continuous	Neighborhood	Population Exposure	2014/05/21
$PM_{2.5}/PM_{10}$			Continuous	Neighborhood	Population Exposure	TSS
$PM_{2.5}$ Speciation	MetOne SASS Teflon	Energy Dispersive XRF	1-3	Neighborhood	Population Exposure	2015/11/20

Parameter	Monitor Type
Sulfur Dioxide	SLAMS
Carbon Monoxide	SLAMS
Oxide Nitrogen	SLAMS
Oxide Nitrogen (NOy)	SLAMS
Ozone	SLAMS
$PM_{2.5}$	SLAMS
PM_{10}	SLAMS
$PM_{2.5}/PM_{10}$	SLAMS
$PM_{2.5}$ Speciation	SLAMS

Site Purpose	NCore Site
Plans for the next 18 months	Replace with a new $PM_{2.5}$ continuous equipment
Comments	