

2014
ANNUAL MONITORING NETWORK PLAN

**SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT**

PROGRAM COORDINATION DIVISION

777 12TH STREET, 3RD FLOOR

SACRAMENTO, CA 958114

(916) 874-4800

AIRQUALITY.ORG

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List of Abbreviations and Acronyms

AADT	Annual average daily traffic
AGL	Above ground level
AIR	Sacramento-Airport Road Air Monitoring Site
ANP	Annual network plan
ARM	Approved Regional Monitor
AQS	Air Quality System
BAM	Beta Attenuation Monitor
BC	Sacramento-Branch Center #2 Air Monitoring Site
BL	General/Background
BRU	Elk Grove-Bruceville Air Monitoring Site
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CSN	Chemical Speciation Network
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DPM	Sacramento-Del Paso Manor Air Monitoring Site
DV	Design Value
ECW	Sacramento-El Camino/Watt Air Monitoring Site
EPA	U.S Environmental Protection Agency
ER	Emission ratio
ERG	Eastern Research Group, Inc.
FE AADT	Fleet equivalent annual average daily traffic
FEM	Federal Equivalent Method
FID	Flame Ionization Detector
FOL	Folsom-Natoma Air Monitoring Site
FRM	Federal Reference Method
GC	Gas Chromatography
GOL	Sacramento-Golden Land Court Air Monitoring Site
HC	Highest Concentration
IM	Source Impact
MET	Meteorological sensor

MI	Microscale
MS	Middle Scale
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standard
NCORE	National Core, a multi-pollutant ambient monitoring network
NDIR	Non-dispersive Infrared Spectrometry
NEI	National Emission Inventory
NH	North Highlands-Blackfoot Air Monitoring Site
NMHC	Non-Methane Hydrocarbon
NO ₂	Nitrogen Dioxide
NO _X	Oxides of Nitrogen
NO _Y	Reactive Oxides of Nitrogen
NPAP	National Performance Audit Program (Criteria pollutant monitors)
NPEP	National Performance Evaluation Program (PM _{2.5} FRM)
NS	Neighborhood Scale
O ₃	Ozone
PAMS	Photochemical Assessment Monitoring Sites
Pb	Lead
PEP	Performance Evaluation Program (PM _{2.5} FRM)
PM	Particulate Matter
PM _{2.5}	Particulate Matter 2.5 micron
PM ₁₀	Particulate Matter 10 micron
PM-Coarse	Particulate Matter > 2.5 micron and < 10 micron (PM _{10-2.5})
POC	Parameter occurrence code
PPB	Parts per Billion
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QMP	Quality Management Plan
RC	Representative Concentration
RH	Relative Humidity
RS	Rancho Seco monitoring site
RTI	Research Triangle Institute
SASS	PM _{2.5} Speciation sampler
SCK	Sacramento Health Department-Stockton Blvd. Air Monitoring Site
SFNA	Sacramento Federal Nonattainment Area

SIP	State Implementation Program
SJV	San Joaquin Valley
SLAMS	State and Local Air Monitoring Sites
SLU	Sloughhouse Air Monitoring Site
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	Sulfur Dioxide
SO ₄	Sulfate
SPM	Special Purpose Monitoring
SRD	Solar Radiation
SSI	Size Selective Inlet (PM ₁₀ FRM sampler)
STN	Speciation Trends Network
TAPI	Teledyne Advanced Pollution Instrumentation
TCCR	Transportation Corridor Concept Report
TEI	Thermo Environmental Instruments
TEOM	Tapered Element Oscillating Microbalance
THC	Total Hydrocarbon
TNMHC	Total Non-methane hydrocarbon
TST	Sacramento-T Street Air Monitoring Site
US	Urban Scale
UV	Ultraviolet
VCAPCD	Ventura County Air Pollution Control District
VOC	Volatile Organic Compounds
VSCC	Very Sharp Cut Cyclone
WD	Wind Direction
WF	Welfare Based
WS	Wind Speed

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Section 1. Introduction

State and Local agencies that conduct ambient air monitoring for regulatory purposes are required, by Title 40, Code of Federal Regulations, Part 58.10, to submit an Annual Monitoring Network Plan to the U.S. Environmental Protection Agency (EPA), no later than July 1st, each year. The report must contain specific monitoring network information and the report must be presented for a 30-day public review period prior to submittal to EPA. This report covers the period: January 1, 2013-December 31, 2013.

The primary purpose of this ambient air monitoring network report is to document the existing Sacramento County State and Local Air Monitoring sites (SLAMS), National Core (NCore) multi-pollutant monitoring stations, Chemical Speciation Network (CSN), Special Purpose Monitoring (SPM), and Photochemical Assessment Monitoring (PAMS) sites, operated by our District and California Air Resources Board (CARB), and to show that the ambient air monitoring network meets the requirements of 40 CFR 58, including Appendix A, C, D, and E, where applicable. The report will include the Federal Reference Method (FRM), Federal Equivalent Method (FEM), and Approved Regional Method (ARM) monitors. This report also discusses additional SPM monitoring instrumentation being operated, such as aethalometers and nephelometers, and surface/upper air meteorological sensors required for the PAMS program. The secondary purpose of this report is to discuss proposed changes (additions, relocations, and terminations of non-SPM monitors) in the ambient air monitoring network that may be proposed to occur within an 18 month period following submittal of this report.

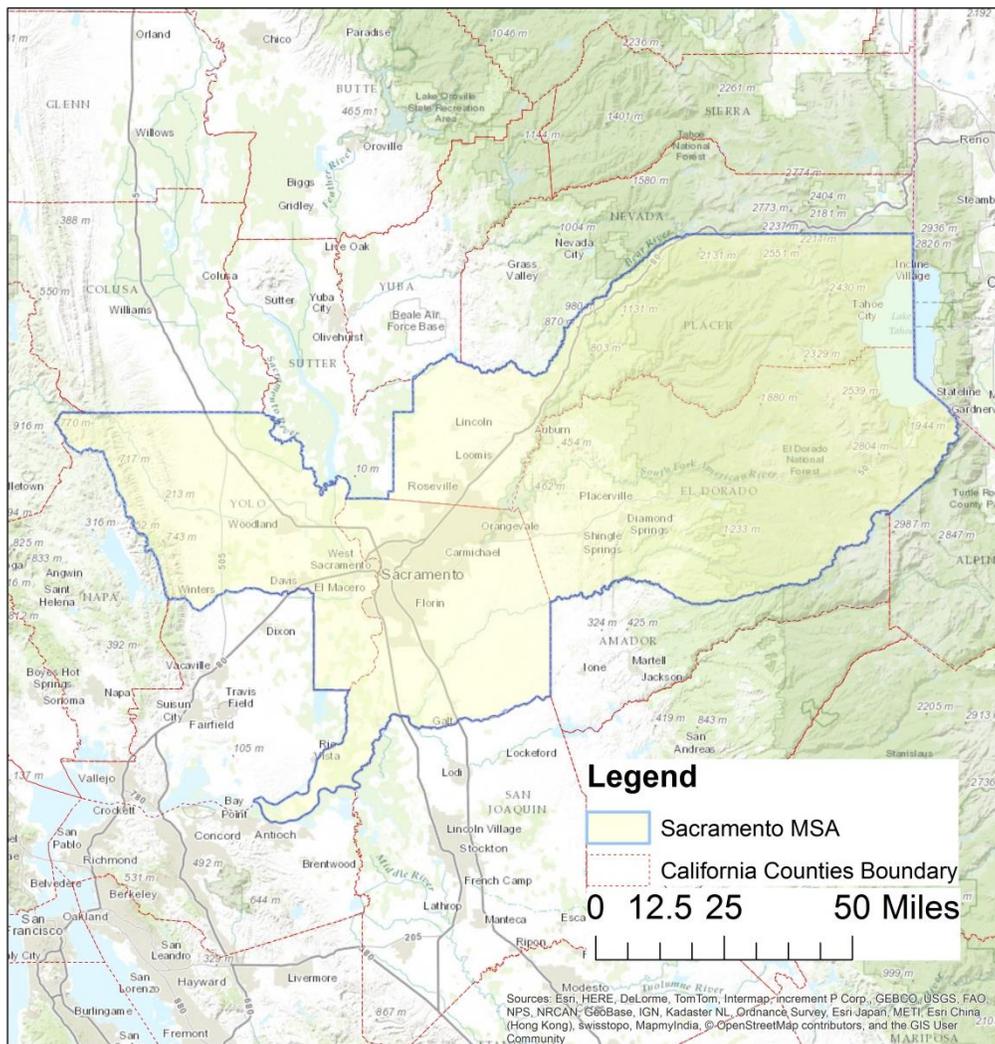
This report is not an "in depth" analysis of the local air monitoring network design. An in-depth analysis of the monitoring network is required every 5 years to determine, at a minimum, if the network meets the monitoring objectives defined in 40 CFR Part 58 Appendix D, whether new sites are needed, whether existing sites are no longer needed, and whether new technologies are appropriate for incorporation in to the ambient air monitoring network.

This network plan focuses on the monitors that are operated within Sacramento County, which is a part of Sacramento-Arden Arcade-Roseville Metropolitan Statistical Area (MSA). Section 3, Minimum Monitoring Requirement, discusses any shared monitoring responsibility agreement between SMAQMD and neighboring monitoring organization. For details on monitors in neighboring counties within the MSA, please refer to the latest California Air Annual Monitoring Network Report for Small District in California < <http://www.arb.ca.gov/aqd/amnr/amnr2013.pdf> >.

Section 2. Network Operations

Sacramento County is located in the middle of California’s Central Valley and at the southern end of the Sacramento Valley. Sacramento County is the most populous part of the Sacramento-Arden Arcade-Roseville, California, MSA (Sacramento MSA). The Sacramento MSA also includes Placer, El Dorado, and Yolo County. It has 2 million people, including 1.5 million in Sacramento County, and is the 27th most populous MSA in the U.S.¹. Figure 2-1 shows a map of Sacramento MSA.

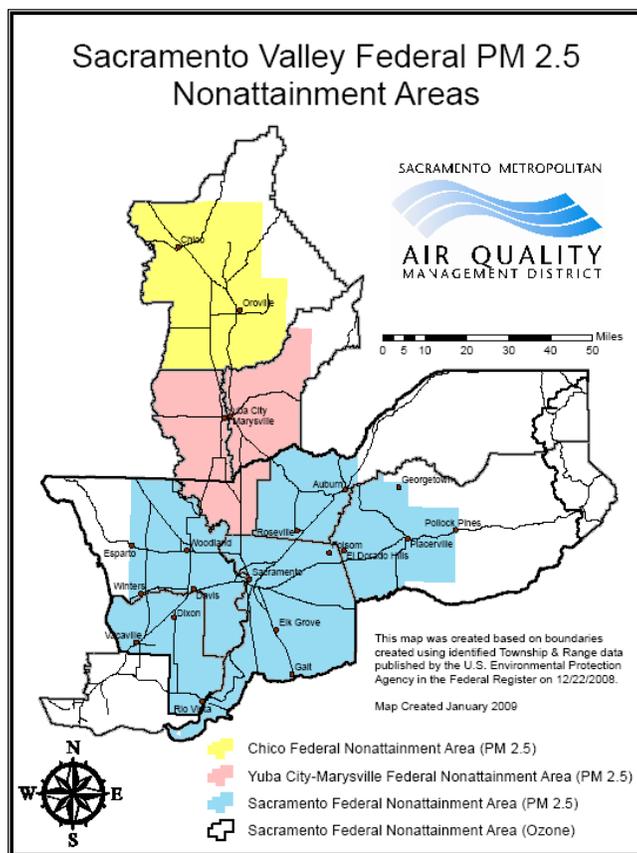
Figure 2-1
Counties within Sacramento-Arden Arcade-Roseville, California, MSA



¹ U.S. Census. "Metropolitan and Micropolitan Statistical Area Totals Dataset: Population and Estimated Components of Change: April 1, 2010 to July 1, 2013." 27 March 2014. 2014. <<https://www.census.gov/popest/data/metro/totals/2013/CBSA-EST2013-alldata.html>>.

The Sacramento MSA is a non-attainment area for the Federal 8hr O₃ standard and is referred to as Sacramento Federal Nonattainment Area (SFNA)². This area includes the western sections of Placer and El Dorado Counties, Yolo County, Sacramento County, and parts of Solano and Sutter Counties. It is shown in Figure 2-2. U.S. EPA re-designated Sacramento County as a PM₁₀ attainment area in September 2013³. The county has met PM₁₀ air quality standard since 2002. The metropolitan area met the PM_{2.5} standard in 2012 and will continue to reduce PM_{2.5} level through various programs and strategies. Sacramento County is in attainment for the Federal CO, NO₂, and SO₂ standards. The California Air Resources Board recommended that EPA designate Sacramento County as unclassified for the 2008 Federal Pb standard.

Figure 2-2
Sacramento Non-attainment Area



² U.S. Environmental Protection Agency. "8-Hour Ozone (2008) Nonattainment Area/State/County Report ." 5 December 2013. *Green Book*. <http://www.epa.gov/airquality/greenbook/hnca.html#6921>. 21 March 2014.

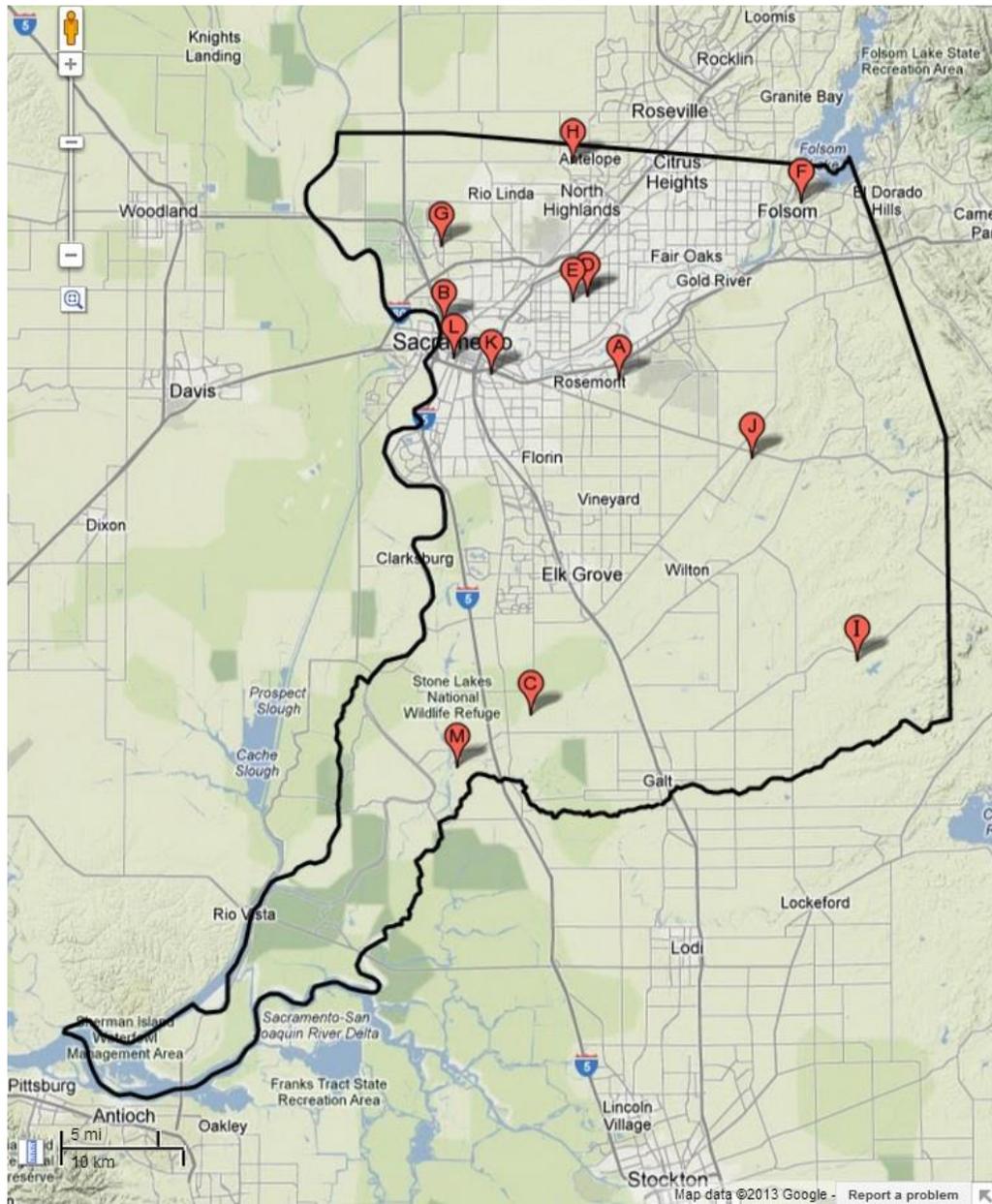
³ "Approval and Promulgation of Implementation Plans; Designation of Areas for Air Quality Planning Purposes; State of California; PM₁₀; Redeisngation of Sacramento To Attainment; Approval of PM₁₀ Redesignation Request and Maintenance Plan for Sacramento" 78 Federal Register 187 (26 September, 2013), pp. 59261 - 59263

SMAQMD operates ten air monitoring sites within Sacramento County. While most sites operate a suite of instruments to monitor multiple pollutants and meteorological condition, only a few sites monitor a specific pollutant. Each site has monitors that belong to one or more national monitoring networks, such as SLAMS, PAMS, or is an SPM. In addition, SMAQMD operates one of the 80 NCore sites and one of the 54 PM_{2.5} CSN trend sites nationwide. Table 2-1 lists the type of monitoring network each site belongs to and the pollutants monitored at each site. Figure 2-3 shows the location of Sacramento monitoring sites, which includes one site that is operated by ARB -- Sacramento-T Street.

**Table 2-1
Purpose and Overview of Pollutants Monitored**

		Sacramento-Branch Center Rd #2 (BC)	Sacramento-Bercut Dr. (BER)	Elk Grove-Bruceville Rd. (BRU)	Sacramento-Del Paso Manor (DPM)	Sacramento-El Camino/Watt (ECW)	Folsom-Natomia (FOL)	Sacramento-Golden Land Ct. (GOL)	North Highlands-Blackfoot Way (NH)	Rancho Seco (RS)	Sloughhouse (SLU)	Sacramento-Health Dept. (STK)	Sacramento- T St. (TST)
Purpose	SLAMS	x	x	x	x	x	x	x	x		x	x	x
	PAMS			x	x		x	x					
	CSN				x								x
	NCORE				x								
	SPM				x				x	x	x		
Pollutants	Ozone (O ₃)			x	x		x	x	x		x		x
	Carbon Monoxide (CO)		x		x	x		x	x				
	Nitrogen Dioxide (NO ₂)		x	x	x		x	x	x				x
	Total Reactive Nitrogen (NO _y)				x		x						
	Sulfur Dioxide (SO ₂)				x								
	Non-methane Hydrocarbon (NMH)			x	x		x	x					
	Speciated VOC			x	x		x						
	Carbonyl				x								
	PM ₁₀ (Hourly, continuous)							x				x	
	PM ₁₀ (24-hr)	x			x			x	x			x	x
	PM _{2.5} (Hourly, continuous)			x	x		x			x	x		x
	PM _{2.5} (24-hr)		x		x							x	x
	Speciated PM _{2.5}				x								x
	PM _{10-2.5} (24-hr)				x								
	Lead (Pb)				x								
	Black Carbon (BC)		x		x								
	Scattering Coefficient				x								
Meteorology	Outdoor Temperature		x	x	x		x	x			x		x
	Relative Humidity		x	x	x		x	x					x
	Wind Direction		x	x	x		x	x			x		x
	Wind Speed		x	x	x		x	x			x		x
	Solar Radiation			x	x		x	x					
	Ultraviolet Radiation			x									
	Barometric Pressure			x									x
	Precipitation			x									
Upper Level Meteorology			x										

Figure 2-3
Air Monitoring Sites in Sacramento County



PARTIAL SCREENSHOT OF GOOGLE MAP

- | | | | |
|----|--|----|---|
| A. | Sacramento-Branch Center Rd #2 | H. | North Highlands-Blackfoot Way |
| B. | <i>Proposed Monitoring Site</i> ⁴ | I. | Rancho Seco |
| C. | Elk Grove-Bruceville Rd | J. | Sloughhouse |
| D. | Sacramento-Del Paso Manor | K. | Sacramento-Health Dept. |
| E. | Sacramento-El Camino Watt | L. | Sacramento-T Street (operated by CARB) |
| F. | Folsom-Natoma St | M. | Walnut Grove Tower (Monitors ozone and meteorology aloft) |
| G. | Sacramento-Golden Land Ct. | | |

⁴ Proposed site is the near-road site to be operational by 1/1/14, see Section 4

The primary focus of the current ambient air monitoring network is the collection of O₃ and photochemical pollutant precursors such as NO_x and VOC, and PM_{2.5} data to support SIP development, attainment/non-attainment decisions, public notification, and data for air quality modeling efforts. The network is designed to meet three basic monitoring objectives: (1) provide air pollution data to the general public in a timely manner; (2) support compliance with ambient quality standards and emissions strategy development; and (3) support air pollution research studies. To support these monitoring objectives there are a variety of types of monitoring sites including sites located to determine the highest pollutant concentration, the representative concentrations in areas of high population density, the impact of major pollution emissions sources, the general background concentration levels, the extent of pollutant transport, and impacts on visibility, vegetation, and other welfare-based impacts. An overview of monitoring objective is in Table 2-2.

Table 2-2
Monitoring Objective

	Sacramento-Branch Center Rd #2 (BC)	Sacramento-Bercut Dr. (BER)	Elk Grove-Bruceville Rd. (BRU)	Sacramento-Del Paso Manor (DPM)	Sacramento-El Camino/Watt (ECW)	Folsom-Natoma (FOL)	Sacramento-Golden Land Ct. (GOL)	North Highlands-Blackfoot Way (NH)	Rancho Seco (RS)	Sloughhouse (SLU)	Sacramento-Health Dept. (STK)	Sacramento-T St. (TST)
O ₃			N,P	N,P		N,P	N,P	N,R		N,P		N,P
CO		N,P		N,P	N,P		N,P	N,R				
NO ₂		N,P	N,P	N,P		N,P	N,P	N,R				N,P
NO _y				P		P						
SO ₂				N,P								
NMH			P,R	P,R		P,R	P,R					
VOC			R	R		R						
PM ₁₀ (Hourly)							P,R				P,R	
PM ₁₀ (24-hr)	N,P			N,P			N,P	N,P			N,P	N,P
PM _{2.5} (Hourly)			P	P		N ⁵ ,P			P,R	R		P
PM _{2.5} (24-hr)		N,P		N,P							N,P	N,P
PM _{10-2.5}				P								
Pb				N,P								

Legend:

N - NAAQS Comparison

P - Public Info

R - Research

⁵ Data collected from this monitor after three calendar years from installation (2013) is eligible for comparison to NAAQS per 40 CFR 58.20.

The physical siting of an air monitoring station must achieve a spatial scale of representativeness that is consistent with the monitoring objective of the monitor. The spatial scale results from the physical location of the site with respect to the pollutant sources. It estimates the size of the area surrounding the monitoring site that experiences uniform pollutant concentrations. Table 2-3 summarizes the site type and spatial scale. For in-depth details on individual monitors, including monitoring objective and statement of purpose, see Appendix B, Detailed Site Information. Site type and spatial scale description can be found in Appendix D to 40 CFR 58.

**Table 2-3
Type of Site and Spatial Scale**

		Sacramento-Branch Center Rd	Sacramento-Berent Dr. (BER)	Elk Grove-Bruceville Rd.	Sacramento-Del Paso Manor	Sacramento-El Camino/Watt	Folsom-Natoma (FOL)	Sacramento-Golden Land Ct.	North Highlands-Blackfoot Way	Rancho Seco (RS)	Sloughhouse (SLU)	Sacramento-Health Dept.	Sacramento-T St. (TST)
Site Type	Ozone			UP	PE		MO PE	PE	PE		MO		PE
	Carbon Monoxide		SO		PE	HC		PE	PE				
	Nitrogen Dioxide		SO	UP	PE		HC	PE	PE				PE
	Sulfur Dioxide				PE								
	PM ₁₀ (Cont. or Manual)	HC			PE			PE	PE			PE	PE
	PM _{2.5} (Cont. or Manual)			BG	PE HC		PE			BG	UP	PE HC	PE HC
	PM _{10-2.5}				PE								
	Lead				BG								
Spatial Scale	Ozone			US	PE		NS	US	US		NS		US
	Carbon Monoxide		MC		NS	MC		NS	NS				
	Nitrogen Dioxide		MC	NS	NS		NS	NS	NS				NS
	Sulfur Dioxide				NS								
	PM ₁₀ (Cont. or Manual)	NS			NS			NS	NS			NS	NS
	PM _{2.5} (Cont. or Manual)			NS	NS		NS			NS	NS	NS	NS
	PM _{10-2.5}				NS								
	Lead				US								

Legend:

Site Type:

BG -	General/Background	PE -	Population Exposure	RT -	Regional Transport
ED -	Extreme Downwind	QA -	Quality Assurance	SO -	Source Oriented
HC -	Highest Concentration	MP -	Max Precursor Emissions	UP -	Upwind Background
MO -	Max O ₃ Concentration	OT -	Other	WF -	Welfare Related Impacts

Spatial Scale:

MC -	Microscale	NS -	Neighborhood Scale
MD -	Middle Scale	US -	Urban Scale
RS -	Regional Scale		

Section 3. Minimum Monitoring Requirements

Depending on the specific pollutant, the minimum number of monitors required for each pollutant is based on the one or more applicable factors as described in Appendix D to 40 CFR 58: MSA population, pollutant design value, pollutant maximum concentration, attainment status, annual average daily traffic (AADT), state implementation plan (SIP), maintenance plan, population weighted emission index (PWEI), and EPA's national emission inventory (NEI) data.

Sacramento MSA meets or exceeds minimum monitoring requirement for all criteria pollutants – O₃, PM_{2.5} (manual and continuous methods), PM₁₀, NO₂, SO₂, CO, and Pb. Details of the minimum monitoring requirements of all criteria pollutants are provided in tables 3-1 and 3-2. Monitors in these tables represent Sacramento MSA (or CBSA, ID#40900). As mentioned in Section 2, Sacramento MSA has 2.2 million residents (U.S. Census, 2010) and is composed of El Dorado, Placer, Sacramento, and Yolo Counties.

SMAQMD does not currently have any shared monitoring responsibility agreement with other monitoring organization in the MSA. Other monitoring organizations that operate air monitoring stations in the MSA are: CARB, Placer County APCD, and Yolo-Solano AQMD. With the exception of PM_{2.5} FRM or FEM monitors, SMAQMD operates more monitors than are required in the Sacramento MSA. Detailed assessment is available in Appendix C. SMAQMD is currently working with CARB on an agreement to share responsibility for PM_{2.5} FRM or FEM monitoring. A copy of this agreement will be attached to Appendix C in the final copy of this network plan.

**Table 3-1
Sacramento MSA Design Value and Monitoring Requirement, Part 1**

Pollutant	Type (if applicable)	2013 Design Value ^(A)	Design Value Site (AIRS ID#)	# of Unique Monitors required	# of Active Monitors in MSA	# of Active Monitors in Sacramento Cnty	# of Additional Monitors Needed
O ₃	8-hr	0.090 ppm ^(B)	Folsom-Natoma St (06-067-0012)	2	15 ^(C)	6	0
PM _{2.5}	24-hr (FRM)	36 µg/m ³	Sacramento-Del Paso Manor (06-067-0006)	3	5	3	0
	Annual (FRM)	10.4 µg/m ³	Sacramento-Del Paso Manor (06-067-0006)				
	Continuous	N/A		2	11	5	0
PM ₁₀		59 µg/m ³ (39% of NAAQS)	Sacramento-Branch Center #2 (06-067-0284)	2-4	11	6	0
PM _{10-2.5}		N/A	Located at Sacramento-Del Paso Manor (06-067-0006)	1	1	1	0

^(A) Design values from U.S. EPA Air Quality System Design Value Report (AMP 480) and Raw Data Report (AMP350) on PM₁₀ (81102), accessed on 14-Apr-2014

^(B) O₃ Special purpose monitor at North Highlands is included in the design value calculation

^(C) Per Appendix D 4.1(a) to 40 CFR Part 58, only SLAMS O₃ monitors counts toward minimum monitoring requirement

Table 3-2
Sacramento MSA Design Value and Monitoring Requirement, Part 2

Pollutant	Type (if applicable)	Notes	# of Unique Monitors required	# of Active Monitors in MSA	# of Active Monitors in Sacramento County	# of Additional Monitors Needed
NO ₂	Near-road	Max annual average daily traffic count: 246,000 ^(A) Near-road monitoring requirement will be satisfy by the Proposed Monitoring Site	1	0	0	1 ^(A)
	Area-wide	NO ₂ monitor at Sacramento-Del Paso Manor (06-067-0006) serves as both PAMS and area-wide monitor	1	8	6	0
SO ₂		Total SO ₂ : 2,234 tons ^(B) Population Weighted Emission Index: 4,950 million persons-tons per year Monitor at Sacramento-Del Paso Manor satisfy NCore and SO ₂ monitoring requirements	1	1	1	0
CO		Trace monitor at Sacramento-Del Paso Manor (06-067-0006) satisfy the NCore requirement, which also satisfy the 1 monitor requirement in the Maintenance Plan	2	4	4	1 ^(C)
Pb	NCore	Located at Sacramento-Del Paso Manor (06-067-0006)	1	1	1	0
	Non-source oriented	No industrial source > 0.5 tpy,	0	0	0	0
	Source oriented	Airport source < 1.0 tpy ^(B)	0	0	0	0

^(A) California Department of Transportation. "2012 Annual Average Daily Truck Traffic on the California State Highway System." 2012. Traffic Census. <http://traffic-counts.dot.ca.gov/2012Truck.pdf>. 3 April 2014; 2013 figures was not yet available at the time of plan drafting

^(B) U.S. Environmental Protection Agency. "The 2011 National Emissions Inventory." 30 September 2013. Technology Transfer Network Clearinghouse for Inventories & Emissions Factors. <http://www.epa.gov/ttnchie1/net/2011inventory.html>. 3 April 2014.

^(C) Located at new near-road monitoring site, to be operational by 1/1/2014, as required by 40 CFR Part 58

In addition to the criteria pollutants, Sacramento MSA also meets minimum monitoring requirement for PAMS, which is required due to the severity of ozone non-attainment classification in Sacramento MSA. Currently, there is one of each PAMS type I, II, and III sites. There is also a secondary type II site. Table 3-3 lists the instruments operating at each PAMS.

**Table 3-3
PAMS Minimum Monitoring Requirement**

	# Required	# Active	Elk Grove-Bruceville Rd. (Type I)	Sacramento-Del Paso Manor (Type II)	Sacramento-Golden Land Ct. (Type II, secondary)	Folsom-Natoma St. (Type III)
O ₃	4 ^(A)	4	✕	✕	✕	✕
CO	1	2		✕	✕	
NO _x	2	4	✕	✕	✕	✕
NO _y	1	1		✕ ^(B)		✕
Speciated VOC	2	2		✕		✕
Carbonyl Sampling	1	1		✕		
Surface Met	4 ^(A)	4	✕	✕	✕	✕
Upper Air Meteorology	1	1	✕			

^(A) This requirement is dependent on the number of PAMS site, see Appendix D to 40 CFR 58

^(B) Per Appendix D to 40 CFR 58, this monitor does not count toward PAMS requirement but is required for NCore; NO_y for PAMS must be at Type I or III site

Furthermore, all instruments operated by SMAQMD meets operating schedule requirement as specified in 40 CFR Part 58.12. All continuous monitors, including O₃, CO, NO₂ and SO₂, report hourly data and monitor pollutant year-round, unless otherwise specified in Appendix B, Detailed Site Information. Sampling schedule for non-continuous monitors is summarized in Table 3-4. Design value is included in the table if it is needed to maintain a specific schedule, for non-continuous monitors. All monitors are operated year-round except VOC and carbonyl samplers at PAMS and special purpose PM_{2.5} monitors at Sloughouse and Rancho Seco. For details on sampling season and operating schedule, please refer to Appendix B.

**Table 3-4
Sampling Schedule and 2013 Design Value for PM Monitors**

Unit in $\mu\text{g}/\text{m}^3$	PM ₁₀ ^(A)	PM _{2.5} ^(A)	PM _{10-2.5}	Pb	VOC
Sacramento-Branch Center #2	Max Conc: 59				
Sacramento-Bercut Dr.		1 in 3 days (planned)			
Elk Grove-Bruceville					During O ₃ episode only
Sacramento-Del Paso Manor	Max Conc: 56	24-hr DV: 36 Annual DV: 10.4	1 in 3 days	1 in 6 days Max rolling 3-month average: 0.0035 $\mu\text{g}/\text{m}^3$	1 in 3 days (Jul-Sep)
Folsom-Natoma					1 in 3 days (Jul-Sep)
Sacramento-Golden Land Ct.	Max Conc: 51				
North Highlands-Blackfoot Way	Max Conc: 48				
Sacramento-Health Department	Max Conc: 47	24-hr DV: 34 Annual DV: 9.3			
Sacramento-T St	Max Conc: 53 ^(B)	24-hr DV: 33 Annual DV: 9.5			
Sacramento-El Camino Watt	N/A				
Sloughhouse	N/A				
Rancho Seco	N/A				

Legend:

Blue denotes daily sampling	Yellow denotes 1 in 3 day sampling	Green denotes 1 in 6 day sampling
-----------------------------	------------------------------------	-----------------------------------

^(A) Design values from U.S. EPA Air Quality System Design Value Report (AMP 480) and Raw Data Report (AMP350) on PM₁₀ (81102), accessed on 14-Apr-2014

^(B) Incomplete data (completeness less than 75%)

Section 4. Recent and Proposed Modification to the Network

This section discusses recent and proposed modification to the monitoring network. As required by 40 CFR Part 58.10, modifications within the next 18 months are included. While the District is not requesting approval for modification through this network plan, the modifications discussed in this plan include the following:

Sacramento-Branch Center #2

No change anticipated.

Sacramento-Bercut Dr. (Approved Site under planning/construction)

U.S. EPA approved Bercut Dr. as the near-road monitoring site for Sacramento CBSA⁶. This site is required to monitor NO₂ by January 1, 2014, and CO and PM_{2.5} by January 1, 2017 (40 CFR §58.13(c), (e), and (f)). Black carbon and meteorological parameters – wind direction, wind speed, temperature, and relative humidity – are optional. Appendix B lists the details such as site type and objective for planned instruments at this site.

While every effort was made to operate this site by January 1, 2014, unforeseen circumstances are expected to delay starting operation until 2015. In 2013, due to concerns over installing an air monitoring trailer because the aesthetics could be inconsistent with the large scale redevelopment of the Sacramento Railyard project, District staff began pursuing a lease for a neighboring building belonging to California Department of Transportation (“Caltrans”). On May 6, 2013, an architectural firm was contracted to design modifications to the building to meet our air monitoring needs. District staff met with Sacramento City staff and neighborhood groups regarding site design. In May 2014, the District has signed a lease from Caltrans permitting the use and modification of the building for air monitoring use. Caltrans is requiring, as a condition of the lease, pre-construction soil sampling. Construction will begin in Fall 2014 and is expected to be completed prior to January 1, 2015.

Elk Grove-Bruceville Rd.

The District is considering discontinuing the speciated VOC measurement. Appendix D to 40 CFR Part 58 requires only two speciated VOC measurement sites per PAMS network area, and Sacramento-Del Paso Manor (type II PAMS) and Folsom-Natoma St. (type III PAMS) satisfy this requirement. Speciated VOC concentrations collected at this site are low, representing background concentration.

⁶ Kurpius, Meredith. Letter to Larry Greene. 11 Dec. 2013. MS. San Francisco, CA. A copy of the manuscript letter is attached in Appendix D

Sacramento-Del Paso Manor

The District is evaluating shutting down the Nephelometer. The monitor was originally installed in 1999 for the California Regional Particulate Air Quality Study. After the study ended in 2001, the monitor was not removed and became a special purpose monitor.

Sacramento-El Camino/Watt

In September 2011, EPA approved the District's site termination request due to a street/sidewalk improvement project in 2012 that requires termination or relocation of this air monitoring station. The project downsized and did not require the station to relocate. Nevertheless, the station will terminate to reallocate resources to Sacramento-Bercut Dr., the approved near-road monitoring site. A copy of the approval letter is attached in Appendix D.

Folsom-Natoma St

In April 2013, the PM_{2.5} non-FEM continuous monitor was relocated to the Sloughhouse site and was replaced by a continuous FEM monitor from Sacramento-Del Paso Manor. In 2013, comparability tests for this monitor were conducted while this monitor was installed at Sacramento-Del Paso Manor in accordance with 40 CFR 58.35. Although results are unclear as to whether this monitor meets the performance criteria, the non-winter data⁷ only does so marginally⁸, if it meets the criteria. In addition, statistical tests show that winter data has a bias of 1.4 µg/m³⁹. Therefore, the District is not confident enough that the data produced by this monitor should be used for NAAQS comparison. We will continue to operate the FEM monitor at Folsom to assist with daily air quality forecasting but the data collected should not be used as a comparison to NAAQS.

In April 2013, the PM_{2.5} non-FEM continuous monitor was relocated to the Sloughhouse site and was replaced by a continuous FEM monitor from Del Paso Manor. The FEM monitor will operate as an SPM, which is not eligible for comparison to NAAQS because 40 CFR Part 58.20 allows SPM operating less than 24 months to be excluded from NAAQS comparison. Comparability test, conducted while this monitor was installed at Sacramento-Del Paso Manor in 2012, concludes that this monitor does not meet performance criteria due to seasonal variability. The comparability test was performed in accordance to 40 CFR §58.35.

Sacramento-Golden Land Ct

The District is evaluating to terminate this site. Sacramento-Golden Land Ct. is a redundant secondary type II PAMS, as nearby Sacramento-Del Paso Manor is a primary type II PAMS that measures a full suite of VOC. Furthermore, preliminary analysis

⁷ 40 CFR 58.35 defines winter as the "coolest three or four months of the year at the site"

⁸ Appendix G, FEM/FRM Comparability Test Results

⁹ Appendix G, Table G-1

shows this site does not measure the highest concentration of criteria pollutants. If this site is terminated, there are still enough monitors within this CBSA to satisfy the monitoring requirement in Appendix D to 40 CFR Part 58.

North Highlands-Blackfoot Way

The District is considering reorganize this site. North Highland-Blackfoot Way was originally sited to support a proposed power plant project at McClellan AFB, which was canceled during the early 1980s. The District is planning to request approval for termination of the PM₁₀ SSI sampler. Also, the district is evaluating to adapt a seasonal sampling schedule for O₃ and CO. Staff resource used to support this air monitoring site would be reassigned to support the new NO₂ near roadway monitoring sites.

In its comments on the District's 2013 Annual Network Plan, U.S. EPA "recommend for the District to evaluate in particular the purpose of continuing to operate SPM parameters for extended periods of time." The District does not have any plan to terminate this site. It will re-classify all monitors currently operating as SPM, O₃, CO, and NO₂, as SLAMS.

Sloughhouse-Sloughouse Rd

No change anticipated.

Sacramento Health Dept.-Stockton Blvd.

The District will submit a request for termination of the PM₁₀ TEOM and PM₁₀ SSI monitors. The TEOM monitor is not required, and its data is not used for forecasting or analysis due to its negative bias during the winter time when there is an abundance of wood combustion. The SSI monitor also is not required because there is a sufficient number of SSI monitors in Sacramento MSA to meet the minimum monitoring requirement.

Also, the District is considering terminating the PM_{2.5} FRM monitor. This monitor is redundant as it collects the same PM_{2.5} data as the nearby Sacramento-T Street.

Rancho Seco

No change anticipated.

Section 5. PM and Lead Collocation Requirement

Quality Assurance Requirements for SLAMS found in Appendix A to 40 CFR Part 58 requires collocation for PM₁₀, PM_{2.5} FRM and FEM, PM_{10-2.5}, and Pb monitors. Section 3 in the appendix states that each method within a “primary quality assurance organization (PQAO) must have 15 percent of the monitors collocated.”

SMAQMD is not a PQAO. Collocated monitors operated by SMAQMD are part of the CARB PQAO. Currently, PM_{2.5} FRM and PM₁₀ FRM monitors at Sacramento-Del Paso Manor are collocated.

The ARB PQAO requires no source or non-source Pb monitoring. However, the ARB PQAO does have two NCore sites which are located at Fresno-Garland and Sacramento-Del Paso Manor. PQAO with only NCore and no source-oriented Pb monitoring do not have to collocate for Pb¹⁰. The ARB PQAO, including the Del Paso Manor site, does not require any collocation for Pb. Similarly, SMAQMD is not required to collocate its PM_{10-2.5} monitors because it is determined on a national scale¹¹.

For complete details on PM and Pb collocation, please refer to Federal Collocation Requirement for the ARB PQAO in the latest edition of Annual Monitoring Network Report published by CARB¹² <<http://www.arb.ca.gov/aqd/amnr/amnr2013.pdf>>.

Section 6. Process to Review Changes to PM_{2.5} Monitoring Network

40 CFR Part 58 requires that this Annual Monitoring Plan to “document how State and Local Agencies provide for the review of changes to a PM_{2.5} monitoring network that impact the location of a violating PM_{2.5} monitor or the creation/change to a community monitoring zone, including a description of the proposed use of spatial averaging for purposes of making comparisons to the annual PM_{2.5} NAAQS as set forth in Appendix N to Part 58 in 40 CFR 58. The affected State or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.” Note that spatial averaging does not apply in California because the state and local air monitoring districts collectively elected not to establish community monitoring zone in the 1990s.

¹⁰ 40 CFR Part 58, Appendix A, 3.3.4.3

¹¹ 40 CFR Part 58, Appendix A, 3.3.6

¹² California Environmental Protection Agency. "Annual Monitoring Network Report for Twenty-three Districts in California." 17 July 2013. California Environmental Protection Agency. Portable Document Format. 26 April 2014.

An informational comparison, not required by air monitoring regulation, on the number of PM_{2.5} monitors by area and population has been included. The analysis can be found in Appendix A.

The general process for any proposed change to the monitoring network is that the proposed change is discussed in this Annual Monitoring Plan. Then, during spring, each year, this Annual Monitoring Plan will be sent by SMAQMD to CARB/TSD for review and comment. Prior to June 1, each year, this report will be posted to our District Website for no less than 30 days, for public review and comment. During late June, each year, the finalized Annual Monitoring Plan and comments on the Plan will be forwarded to EPA-Region IX, prior to the July 1 deadline.

Section 7. Data Submission Requirements

CARB submits precision, accuracy, and raw data for all District operated monitors in 2012. CARB is also the lead agency on annual data certification. The following submission dates are provided by CARB.

- 2013 Precision/Accuracy reports submitted to AQS: Quarterly
- 2013 Annual data certification submitted: May 16, 2014¹³

Section 8. Review of Existing SMAQMD Air Monitoring Sites

For each monitor at each monitoring site, the tables in Appendix B were used to determine if each monitor meets 40 CFR 58 requirements, including Appendix A (QA Requirements), C (FRM/FEM/ARM Requirements), D (Network Design Criteria), and E (Probe Sitting Criteria), when applicable. The SMAQMD ambient air monitoring network meets the requirements of 40 CFR 58 including Appendix A, C, D, and E.

¹³ Ramalingam, Ravi. Letter to Meredith Kurpius. 16 May 2014. MS. Sacramento, CA. See Appendix F

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Appendix A Comparison of number of PM_{2.5} Monitors by area and population

The Sacramento MSA has a total of 16 PM_{2.5} monitors: 5 FRM, 9 BAM, and 2 SASS monitor. 8 of the 16 PM_{2.5} monitors are located in areas of high population density to monitor for population exposure. These monitors include those outside of SMAQMD's operation. All monitors in Sacramento MSA are a part of CARB's PQAQ.

Table A-1
Sacramento MSA PM_{2.5} Monitors by Operating/Collection Organization

Operating/Collection Agency	FRM	BAM	SASS
CARB	2	3	1
El Dorado APCD	0	0	0
Placer County APCD	0	4	0
Sacramento Metropolitan AQMD	2	4	1
Yolo Solano AQMD	1	0	0

To illustrate how the Sacramento MSA compares to other air districts in terms of monitoring PM_{2.5}, a comparison of the number of PM_{2.5} monitors by geographic area and population in several air districts in California is shown in the table below.

Table A-1
Comparison of Number of PM_{2.5} Monitors

District	Square Miles	Population (millions)	Number of PM _{2.5} Monitors	PM _{2.5} Monitors per person	PM _{2.5} Monitors per square mile
Bay Area	5,340	6.8	20	1 per 340,000	1 per 267
Sacramento MSA	5,309	2.1	16	1 per 131,350	1 per 332
South Coast	15,000	16.5	33	1 per 500,000	1 per 455
San Joaquin Valley	25,000	3.9	26	1 per 150,000	1 per 962

The numbers of PM_{2.5} monitors per person show that the Sacramento MSA has a higher than average number of monitors per person. The numbers of PM_{2.5} monitors per square mile show that the Sacramento MSA has a higher than average number of monitors per square mile.

However, caution should be used when doing these types of comparisons, as these four Districts have different ratios of urbanized area vs. rural areas and rural vs. urban population, etc. For example, Bay Area has a similar size (number of square miles) compared to the Sacramento MSA, but Bay Area has a higher population density per square mile, in the urbanized areas. San Joaquin Valley has a highest amount of area, more rural population, and lowest population density per square mile. In addition, San Joaquin Valley has the typical PM_{2.5} sources of motor vehicles and residential wood combustion, but it also has agricultural sources of PM_{2.5}. Thus, the size of a monitoring network is largely determined by the number of monitors needed to satisfy the local/regional monitoring needs, depending upon the unique features and needs of that District.

Appendix B Detailed Site and Monitor information

Detailed site information covered in this appendix reflects air monitoring operation from January 1, 2012-December 31, 2012.

B.1 Sacramento-Branch Center #2

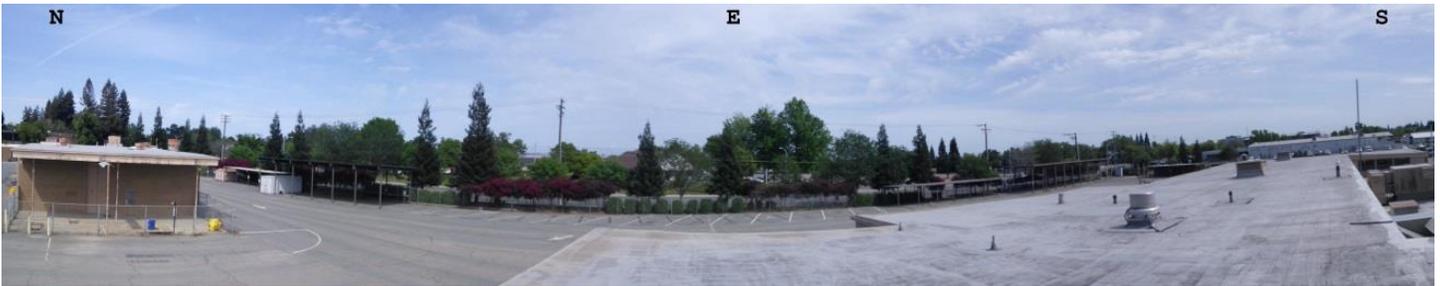
Sacramento-Branch Center #2 is a PM₁₀ SSI site. This site was established, in early 2006, to replace the former Sacramento-Branch Center site, which was approximately one-quarter mile to the north.

The objective of this site is to measure the representative concentration, as documented in the original site initiation reports filed in the late 1980s. The old site was relocated since nearby trees were a flow obstacle.

Site Name	Sacramento-Branch Center #2
AQS Site No.	06-067-0284
Geographic Coordinates	38.553611°, -121.336111° (NAD27)
Location	Rooftop of building in middle of County Maintenance Yard, located 10 miles east-southeast of downtown Sacramento.
Address	3847 Branch Center Road, Sacramento, CA 95827
County	Sacramento
Distance from roadway	62 m
Annual Average Daily Traffic (Vehicles/Day)	Branch Center Rd. South of Goethe Rd.: 3,574 (SACDOT, 2008) Bradshaw Rd South of Old Placerville Rd.: 38,984 (SACDOT, 2012)
Ground Cover	Paved
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	Sacramento-Branch Center
Start Date	4/1/06
Collecting Agency	SMAQMD
Analytical Lab	SMAQMD
Reporting Agency	CARB
Pollutant	PM10
Parameter code	81102
POC	1
Instrument manufacturer and model	Sierra Anderson 1200
Sampling Method	Hi Volume (063)
Analysis Method	Gravimetric
FRM/FEM/ARM/Other	FRM
Comparable to annual PM2.5 NAAQS?	N/A
Monitoring objective	NAAQS comparison, public info
Statement of Purpose	Measures PM10 concentration
Monitor type	SLAMS
Site type	Highest concentration
Spatial scale	Neighborhood
Sampling Frequency	1 in 6 days
Sampling season	Year Round
Distance from supporting structure	1.7 m
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	35 m
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	6.2 m
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	No
Frequency of flow rate verification	Monthly
Last two semi-annual flow rate audit	5/14/13, 10/17/13

B.2 Sacramento-Bercut Dr

This is a approved near-road monitoring site. Located one mile from Downtown Sacramento, this site is expected to measure the highest NO₂ concentration due to the emission from car and truck on Interstate 5, which is about 20 m from the site.

Site Name	Sacramento-Bercut
AQS Site No.	Unknown ¹⁴
Geographic Coordinates	38.593328°N, -121.503728°W
Location	On the downwind side of Interstate 5, one mile north-northwest of downtown Sacramento.
Address	100 Bercut Dr, Sacramento, CA
County	Sacramento
Distance from roadway	Interstate 5: 20 m Bercut Dr.: 5 m
Annual Average Daily Traffic (Vehicles/Day)	Interstate 5: 186,000 (Caltrans, 2012) Bercut Dr. south of Richards Blvd.: 2,709 (City of Sacramento, 2012)
Ground Cover	Pavement, with vegetation
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA

¹⁴ AQS site number is typically assigned when a site begins operation; this site is anticipated to began operation by 1/1/2015



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Note: this site does not yet meet siting criteria; some vegetation show in these photos will be removed to meet requirement in Appendix E to 40 CFR 58

Site	Sacramento-Bercut Dr	
Start Date	1/1/15	1/1/17
Collecting Agency	SMAQMD	SMAQMD
Analytical Lab	Not Applicable	Not Applicable
Reporting Agency	CARB	CARB
Pollutant	Nitrogen Dioxide	Carbon Monoxide
Parameter code	42602	42101
POC	1	1
Instrument manufacturer and model	TAPI200UP	TAPI 300EU
Sampling Method	Instrumental (600)	Instrumental (593)
Analysis Method	Photolytic, Chemiluminescence	Gas Filter Correlation
FRM/FEM/ARM/Other	FEM	FRM
Comparable to annual PM2.5 NAAQS?	N/A	N/A
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info
Statement of Purpose	Monitors near road emission	Monitors near road emission
Monitor type	SLAMS	SLAMS
Site type	Source Oriented	Source Oriented
Spatial scale	Microscale	Microscale
Sampling Frequency	Continuous	Continuous
Sampling season	Year Round	Year Round
Distance from supporting structure	N/A	N/A
Distance from obstructions on roof	N/A	N/A
Distance from obstructions not on roof	N/A	N/A
Distance from trees	17 m	17 m
Distance to furnace or incinerator flue	N/A	N/A
Distance between collocated monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe height (agl)	5.3 m (estimated)	5.3 m (estimated)
Probe material	Teflon	Teflon
Residence time	Unknown	Unknown
Changes in the next 18 months?	No	No
Frequency of one-point QC check	Every other day	Every other day
Last Annual Performance Evaluation	Not yet in operation	Not yet in operation

Site	Sacramento-Bercut Dr	
Start Date	1/1/17	1/1/17
Collecting Agency	SMAQMD	SMAQMD
Analytical Lab	N/A	CARB
Reporting Agency	CARB	CARB
Pollutant	Black Carbon	PM2.5
Parameter code	84313	88101
POC	1	1
Instrument manufacturer and model	Anderson RTAA 800	R & P 2025
Sampling Method	Aethalometer (862)	Low volume with VSCC (118)
Analysis Method	Optical Absorption	Gravimetric
FRM/FEM/ARM/Other	Other	FRM
Comparable to annual PM2.5 NAAQS?	N/A	Yes
Monitoring objective	Research	NAAQS Comparison, public info
Statement of Purpose	Determines component of PM emission	Monitors near road emission
Monitor type	SLAMS	SLAMS
Site type	Source Oriented	Source Oriented
Spatial scale	Neighborhood	Neighborhood
Sampling Frequency	Continuous	1 in 3 days
Sampling season	Year Round	Year Round
Distance from supporting structure	N/A	N/A
Distance from obstructions on roof	N/A	N/A
Distance from obstructions not on roof	N/A	N/A
Distance from trees	17 m	17 m
Distance to furnace or incinerator flue	N/A	N/A
Distance between collocated monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe height (agl)	5.0 m (estimated)	5.0 m (estimated)
Probe material	Aluminum	Unknown
Residence time	Unknown	Unknown
Changes in the next 18 months?	No	No
Frequency of flow rate verification	N/A	Bi-monthly
Last two semi-annual flow rate audit	Not yet in operation	Not yet in operation

Site	Sacramento-Bercut Dr			
Start Date	1/1/15	1/1/15	1/1/15	1/1/15
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Ambient Temperature	Relative Humidity	Wind Direction	Wind Speed
Parameter code	62101	62201	61104	61103
POC	1	1	1	1
Instrument manufacturer and model	Climatronics 100093	Climatronic 101669	Climatronics F-460	Climatronics F-460
Sampling Method	Instrumental (042)	Instrumental (012)	Instrumental (020)	Instrumental (020)
Analysis Method	Machine Average	Hygroscopic Plastic Film	Vector Summation	Vector Summation
FRM/FEM/ARM/Other	Other	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	Public info	Public info	Public info	Public info
Statement of Purpose	Measures representative meteorology	Measures representative meteorology	Measures representative meteorology	Measures representative meteorology
Monitor type	SLAMS			
Site type	N/A	N/A	N/A	N/A
Spatial scale	N/A	N/A	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	N/A	N/A	N/A	N/A
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	17 m	17 m	17 m	17 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	10 m	10 m	10 m	10 m
Probe material	Unknown	Unknown	Unknown	Unknown
Residence time	Unknown	Unknown	Unknown	Unknown
Changes in the next 18 months?	No	No	No	No
Frequency of one-point QC check	Unknown	Unknown	Unknown	Unknown
Last Annual Performance Evaluation	Not yet in operation			

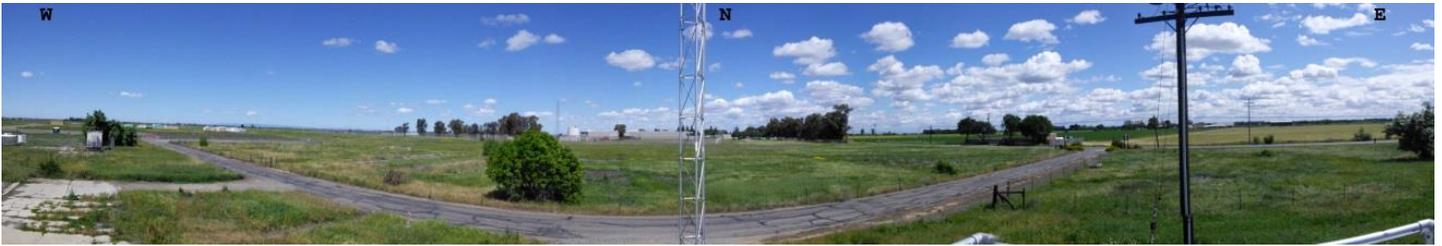
B.3 Elk Grove-Bruceville

Bruceville air monitoring site is sited in a rural area 4 miles south of Elk Grove, CA, and 20 miles south of Downtown Sacramento. It was initiated in 1992 to replace the former Sacramento-Meadowview Road O₃ monitoring site.

This site is the upwind O₃ and ozone precursor monitoring site for our network, also known as a PAMS Type I site. It measures O₃, NO₂, total NMHC, speciated VOC (episodic only), PM_{2.5} BAM, WD, WS, TMP, RH, SRD, UV radiation, precipitation, and atmospheric pressure

Adjacent to the air monitoring site is the Franklin Field Radar Wind Profiler (RWP) for measurement of upper level winds and temperature. This RWP is operated year-round. Collection of upper air meteorology data is a requirement for the PAMS program.

Site Name	Elk Grove-Bruceville
AQS Site No.	06-067-0011
Geographic Coordinates	38.302630° -121.420850° (WGS84)
Location	Rural area located 4 miles south of Elk Grove, CA.
Address	12490 Bruceville Rd, Elk Grove, CA 95758
County	Sacramento
Distance from roadway	76 m
Annual Average Daily Traffic (Vehicles/Day)	Bruceville Rd south of Lambert Rd.: 1,699 (SACDOT, 2012)
Ground Cover	Vegetated
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Start Date	7/1/92	7/1/92	7/1/96	7/1/96
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	ERG, Inc
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Ozone	Nitrogen Dioxide	Total NMHC	Speciated VOC
Parameter code	44201	42602	43102	43102
POC	1	1	1	2
Instrument manufacturer and model	TAPI 400E	TEI 42I	TEI 55C	Xontech 910A/912
Sampling Method	Instrumental (087)	Instrumental (074)	Instrumental (164)	6L Pressurized Canister (123)
Analysis Method	Ultra Violet Absorption	Chemiluminescence	Flame ionization detector	Dual Fid - Pams
FRM/FEM/ARM/Other	FEM	FRM	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info	Public info, research	Research
Statement of Purpose	Measures background O3 concentration at upwind site during summer season	Measures background ozone precursor concentration	Measures background ozone precursor concentration	Measures background ozone precursor concentration
Monitor type	SLAMS, PAMS (Type 1)	SLAMS, PAMS (Type 1)	SLAMS, PAMS (Type 1)	PAMS (Type 1)
Site type	Upwind/ Background	Upwind/ Background	Upwind/ Background	Upwind/ Background
Spatial scale	Urban	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	Continuous	1 in 3 days
Sampling season	Year Round	Year Round	Year Round	July thru Sep
Distance from supporting structure	1.3 m	1.3 m	1.3 m	2.0 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	20 m	20 m	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	4.4 m	4.4 m	4.4 m	5.1 m
Probe material	FEP Teflon	FEP Teflon	FEP Teflon	Stainless Steel
Residence time	15 seconds	15 seconds	15 seconds	2 seconds
Changes in the next 18 months?	No	No	No	Yes
Frequency of one-point QC check	Every other day	Every other day	Every other day	Pre- and post-seasonally check
Last Annual Performance Evaluation	10/28/13	10/28/13	10/20/13	N/A

Site	Elk Grove-Bruceville
Start Date	12/1/00
Collecting Agency	SMAQMD
Analytical Lab	N/A
Reporting Agency	CARB
Pollutant	PM2.5
Parameter code	88501
POC	3
Instrument manufacturer and model	Met One 1020 BAM
Sampling Method	Very sharp cut cyclone (731)
Analysis Method	Beta Attenuation
FRM/FEM/ARM/Other	Other
Comparable to annual PM2.5 NAAQS?	No
Monitoring objective	Public info
Statement of Purpose	Measures background concentration and transport of PM2.5 from San Joaquin Valley for PM2.5 forecasting
Monitor type	SLAMS
Site type	General/Background
Spatial scale	Neighborhood
Sampling Frequency	Continuous
Sampling season	Year Round
Distance from supporting structure	15 m
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	20 m
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	4.3 m
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	No
Frequency of flow rate verification	Bi-monthly
Last two semi-annual flow rate audit	4/16/13, 10/28/13

Site	Elk Grove-Bruceville			
Start Date	8/1/96	8/1/96	7/1/97	8/1/97
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Ambient Temperature	Relative Humidity	Barometric Pressure	Precipitation
Parameter code	62101	62201	64101	65102
POC	1	1	1	1
Instrument manufacturer and model	Climatronics 100093	Climatronics 101669	Climatronics 101448	Climatronics 100508
Sampling Method	Instrumental (042)	Instrumental (012)	Instrumental (011)	Bucket (011)
Analysis Method	Machine Average	Hygroscopic Plastic Film	Aneroid	Continuous Or Incremental
FRM/FEM/ARM/Other	Other	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	Public info	Public info	Public info	Public info
Statement of Purpose	Measures representative meteorology	Measures representative meteorology	Measures representative meteorology	Measures representative meteorology
Monitor type	SLAMS, PAMS (Type 1)			
Site type	N/A	N/A	N/A	N/A
Spatial scale	N/A	N/A	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	N/A	N/A	N/A	N/A
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	20 m	20 m	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	10 m	10 m	2.0 m	3.0 m
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Changes in the next 18 months?	No	No	No	No
Frequency of one-point QC check	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation	10/28/13	N/A	10/28/13	N/A

Site	Elk Grove-Bruceville			
Start Date	8/1/96	8/1/97	8/1/96	8/1/96
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Solar Radiation	UV Radiation	Wind Direction	Wind Speed
Parameter code	63301	63302	61104	61103
POC	1	1	1	1
Instrument manufacturer and model	Climatronics 100848	Climatronics 100TUVR	Climatronics F-460	Climatronics F-460
Sampling Method	Instrumental (011)	Instrumental (011)	Instrumental	Instrumental
Analysis Method	Pyranometer	UV Radiometer (Photometer)	Vector Summation	Vector Summation
FRM/FEM/ARM/Other	Other	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	Public info	Public info	Public info	Public info
Statement of Purpose	Measures representative meteorology	Measures representative meteorology	Measures representative meteorology	Measures representative meteorology
Monitor type	SLAMS, PAMS (Type 1)			
Site type	N/A	N/A	N/A	N/A
Spatial scale	N/A	N/A	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	N/A	N/A	N/A	N/A
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	20 m	20 m	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	10 m	10 m	10 m	10 m
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Changes in the next 18 months?	No	No	No	No
Frequency of one-point QC check	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation	N/A	N/A	10/28/13	10/28/13

Site	Elk Grove-Bruceville
Start Date	6/1/96
Collecting Agency	SMAQMD
Analytical Lab	N/A
Reporting Agency	N/A
Pollutant	Upper Level Wind Direction/Wind Speed and Virtual Temp
Parameter code	N/A
POC	N/A
Instrument manufacturer and model	Radian LAP-3000 with RASS option
Sampling Method	#N/A
Analysis Method	915 MHz Radar Wind Profiler, with RASS
FRM/FEM/ARM/Other	Other
Comparable to annual PM2.5 NAAQS?	N/A
Monitoring objective	Public info, research
Statement of Purpose	Measures representative upper level meteorology
Monitor type	PAMS (Type 1)
Site type	N/A
Spatial scale	N/A
Sampling Frequency	Continuous
Sampling season	Year Round
Distance from supporting structure	N/A
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	N/A
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	N/A
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	No
Frequency of one-point QC check	N/A
Last Annual Performance Evaluation	4/11/13

B.4 Sacramento-Del Paso Manor

This air monitoring site was initiated in 1979 and eventually became the largest air monitoring site in the Sacramento Valley air basin. This site is one of the largest air monitoring sites in Northern California, in terms of number of parameters measured.

It measures O₃, CO (trace level), NO₂, NO_y, SO₂ (trace level), NMHC, speciated VOC (C2-C12), Carbonyl, PM₁₀ (SSI- main and collocated), PM₁₀ TEOM, PM₁₀ coarse, Pb-PM₁₀, PM_{2.5} FRM (main and collocated), PM_{2.5} BAM, Speciated PM_{2.5} (SASS), Black Carbon (Aethalometer), Scattering Coefficient (Nephelometer), WD-resultant, WS-resultant, ambient temperature, relative humidity, and total solar radiation.

This site is a PAMS Type II primary site and a PM_{2.5} Chemical Speciation Network (CSN) site. This site is the current PM_{2.5} design value site for this MSA.

In October 2009, EPA-Region IX approved this monitoring site as an NCore site. This is one of six NCore sites operating in California. To accommodate the NCore monitoring instrumentation, the District expanded the size of the existing roof deck, added a 10 meter NO_y converter tower, and upgraded the electrical capacity in Spring 2010.

Site Name	Sacramento-Del Paso Manor
AQS Site No.	06-067-0006
Geographic Coordinates	38.613804°, -121.368007° (WGS84)
Location	Neighborhood park located 7 miles east-northeast of downtown Sacramento.
Address	2701 Avalon Drive, Sacramento, CA 95821
County	Sacramento
Distance from roadway	56 m
Annual Average Daily Traffic (Vehicles/Day)	Avalon Dr. south of Annette St.: 1,000 (estimated)
Ground Cover	Vegetated
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	Sacramento-Del Paso Manor			
Start Date	12/1/79	7/1/11	12/1/79	7/1/11
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Ozone	Carbon Monoxide (trace level)	Nitrogen Dioxide	Reactive Nitrogen Oxide
Parameter code	44201	42101	42602	42600
POC	1	1	1	1
Instrument manufacturer and model	TAPI 400E	TAPI 300EU	TEI 42C	TEI 42I-Y
Sampling Method (code)	Instrumental (087)	Instrumental (593)	Instrumental (074)	Instrumental (574)
Analysis Method	Ultra Violet Absorption	Gas Filter Correlation	Chemiluminescence	Chemiluminescence
FRM/FEM/ARM/Other	FEM	FRM	FRM	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	NAAQS compar- ison, public info, research	NAAQS compar- ison, public info, research	NAAQS compar- ison, public info, research	Public info, research
Statement of Purpose	Measures elevated summer O3 levels near the dow nw ind edge of the central business district	Measures representative w intertime CO concentration in populated area	Measures O3 precursor emission near dow nw ind edge of central business district	Measures representative concentration in populated area
Monitor type	SLAMS, NCORE, PAMS (Type 2)	SLAMS, NCORE, PAMS (Type 2)	SLAMS, NCORE, PAMS (Type 2), Area-wide	NCORE
Site type	Population Exposure	Population Exposure	Population Exposure	Population Exposure
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	2.0 m	2.0 m	2.0 m	2.0 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstruc- tions not on roof	N/A	N/A	N/A	N/A
Distance from trees	22 m	22 m	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	5.3 m	5.3 m	5.3 m	10 m
Probe material	FEP Teflon	FEP Teflon	FEP Teflon	FEP Teflon
Residence time	15 seconds	13 seconds	14 seconds	4 seconds
Changes in the next 18 months?	No	No	No	No
Frequency of one-point QC check	Every fourth day	Every fourth day	Every fourth day	Every fourth day
Last Annual Perform- ance Evaluation	10/15/13	8/20/12	10/15/13	NA

Site	Sacramento-Del Paso Manor			
Start Date	7/1/11	8/1/94	8/1/94	8/1/96
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	ERG, Inc	ERG, Inc.
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Sulfur Dioxide (trace level)	Total NMHC	Speciated VOC	Carbonyl
Parameter code	42401	43102	43102	Multiple
POC	2	2	1	1
Instrument manufacturer and model	TAPI 100EU	TEI 55C	Xontech 910A/912	Xontech 925
Sampling Method	Instrumental (600)	Instrumental (164)	6L Pressurized Canister (123)	DNPH Silica gel (202)
Analysis Method	Ultraviolet Fluorescence	Flame ionization detector	Dual FID	(multiple)
FRM/FEM/ARM/Other	FEM	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	NAAQS comparison, public info, research	Public info, research	Research	Research
Statement of Purpose	Measures representative concentration in populated area	Measures O3 precursor emission near dow nw ind edge of central business district	Measures O3 precursor emission near dow nw ind edge of central business district	Measures O3 precursor emission near dow nw ind edge of central business district
Monitor type	SLAMS, NCORE	SLAMS, PAMS (Type 2)	SLAMS, PAMS (Type 2)	PAMS (Type 2)
Site type	Population Exposure	Highest concentration, population exposure	Highest concentration, population exposure	Highest concentration, population exposure
Spatial scale	Urban	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	1 in 3 days	1 in 3 days
Sampling season	Year Round	Year Round	July thru Sep	July thru Sep
Distance from supporting structure	2.0 m	2.0 m	2.1 m	2.1 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	22 m	22 m	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	5.3 m	5.3 m	5.4 m	5.4 m
Probe material	FEP Teflon	FEP Teflon	Stainless Steel	Stainless Steel
Residence time	14 seconds	17 seconds	3 seconds	3 seconds
Changes in the next 18 months?	No	No	No	No
Frequency of one-point QC check	Every fourth day	Every fourth day	N/A	N/A
Last Annual Performance Evaluation	8/20/12	12/6/13	N/A	N/A

Site	Sacramento-Del Paso Manor			
Start Date	12/1/01	12/1/01	1/1/86	1/1/86
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	SMAQMD	CARB	RTI
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Black Carbon	Scattering Coefficient	PM10 (Primary Monitor)	PM10 (Audit Monitor)
Parameter code	84313	11203	81102	81102
POC	1	1	1	2
Instrument manufacturer and model	Anderson RTAA 800	Radiance Research M903	Sierra-Anderson 1200	Sierra-Anderson 1200
Sampling Method	Aethalometer (862)	Low volume with heated inlet (771)	Hi Volume (063)	Hi Volume (063)
Analysis Method	Optical Absorption	Nephelometry	Gravimetric	Gravimetric
FRM/FEM/ARM/Other	Other	Other	FRM	FRM
Comparable to annual PM2.5 NAAQS?	N/A	No	N/A	N/A
Monitoring objective	Research	Research	NAAQS comparison, public info	NAAQS comparison, public info
Statement of Purpose	Installed for CRPAQS study in 1999	Installed for CRPAQS study in 1999	Measures w intertime elevated PM level from motor vehicles and residential wood combustion	Collocated for QA purpose and Provides substitute data if necessary
Monitor type	SPM	SPM	SLAMS	SLAMS
Site type	Population Exposure	Population Exposure	Population Exposure	Population Exposure
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	1 in 6 days	1 in 6 days
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	1.8 m	1.0 m	2.0 m	2.0 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	22 m	22 m	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	2 m	2 m
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	5.1 m	4.5 m	5.0 m	5.0 m
Probe material	Aluminum	PVC Plastic	N/A	N/A
Residence time	1 seconds	N/A	N/A	N/A
Changes in the next 18 months?	No	Yes	No	No
Frequency of flow rate verification	N/A	N/A	Monthly	Monthly
Last two semi-annual flow rate audit	N/A	N/A	5/15/13, 10/15/13	5/15/13, 10/15/13

Site	Sacramento-Del Paso Manor			
Start Date	1/1/99	2/1/99	5/1/00	2/1/00
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	CARB	CARB	N/A	RTI
Reporting Agency	CARB	CARB	CARB	RTI
Pollutant	PM2.5 (Primary Monitor)	PM2.5 (Audit Monitor)	PM2.5	PM2.5 Mass Speciated
Parameter code	88101	88101	88502	88502
POC	1	2	3	5
Instrument manufacturer and model	R & P 2025	R & P 2025	Met One 1020 BAM	Met One SASS
Sampling Method	Low volume with VSCC (118)	Low volume with VSCC (118)	Very sharp cut cyclone (731)	810
Analysis Method	Gravimetric	Gravimetric	Beta Attenuation	Gravimetric
FRM/FEM/ARM/Other	FRM	FRM	Other	Other
Comparable to annual PM2.5 NAAQS?	Yes	Yes	No	No
Monitoring objective	NAAQS Comparison, research	NAAQS Comparison, research	Public info, research	Research
Statement of Purpose	Measures w intertime elevated PM level from motor vehicles and residential w ood combustion	Collocated for QA purpose and Provides substitute data if necessary	Provides real time PM Measurement from motor vehicles and residential w ood combustion	Provides speciation data on urban PM emission
Monitor type	SLAMS, NCORE	SLAMS	SLAMS, NCORE	SLAMS, CSN, NCORE
Site type	Highest concen- tration, population exposure	Highest concen- tration, population exposure	Highest concen- tration, population exposure	Highest concen- tration, population exposure
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	1 in 3 days	1 in 12 days	Continuous	1 in 3 days
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	2.0 m	2.0 m	2.0 m	1.9 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstruc- tions not on roof	N/A	N/A	N/A	N/A
Distance from trees	22 m	22 m	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2 m	2 m	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	5.0 m	5.0 m	5.3 m	5.2
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Changes in the next 18 months?	No	No	Yes	No
Frequency of flow rate verification	Bi-Monthly	Bi-Monthly	Bi-monthly	Monthly
Last two semi-annual flow rate audit	5/15/13, 10/15/13	5/15/13, 10/15/13	5/15/13, 10/15/13	5/24/13, 10/24/13

Site	Sacramento-Del Paso Manor		
Start Date	4/1/09	4/1/12	4/1/12
Collecting Agency	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	RTI	CARB	RTI
Reporting Agency	RTI	CARB	CARB
Pollutant	Organic and elemental carbon	PM10 (PM _{10-2.5})	Lead
Parameter code	(multiple)	85101	85129
POC	5	7	4
Instrument manufacturer and model	URG 3000N	R & P 2025	R & P 2025
Sampling Method	Quartz filter and cyclone inlet (842, 826)	Low volume with VSCC (127)	Low volume with VSCC (811)
Analysis Method	(multiple)	Gravimetric	X-Ray Fluorescence (EDXRF)
FRM/FEM/ARM/Other	Other	FRM	FRM
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A
Monitoring objective	Research	NAAQS comparison, public info, research	NAAQS comparison, public info, research
Statement of Purpose	Provides speciation data on urban PM emission	Measures PM mass to provide PM10-2.5 data	Measures representative Pb concentration
Monitor type	CSN, NCORE	NCORE	Non-source, NCORE
Site type	Highest concentration	Population Exposure	Population Exposure
Spatial scale	Neighborhood	Neighborhood	Urban
Sampling Frequency	1 in 3 days	1 in 6 days	1 in 6 days
Sampling season	Year Round	Year Round	Year Round
Distance from supporting structure	1.9 m	2.0 m	2.0 m
Distance from obstructions on roof	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A
Distance from trees	22 m	22 m	22 m
Distance to furnace or incinerator flue	N/A	N/A	N/A
Distance between collocated monitors	N/A	2 m	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes
Probe height (agl)	5.2	5.0 m	5.0 m
Probe material	N/A	N/A	N/A
Residence time	N/A	N/A	N/A
Changes in the next 18 months?	No	No	No
Frequency of flow rate verification	Monthly	Bi-monthly	Bi-monthly
Last two semi-annual flow rate audit	5/24/13, 10/24/13	5/15/13, 10/15/13	5/24/13, 10/15/13

Site	Sacramento-Del Paso Manor				
Start Date	8/1/94	8/1/94	9/1/94	8/1/94	8/1/94
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB	CARB
Pollutant	Ambient Temperature	Relative Humidity	Solar Radiation	Wind Direction	Wind Speed
Parameter code	62101	62201	63301	61104	61103
POC	1	1	1	1	1
Instrument manufacturer and model	Climatronics 100093	Climatronic 101669	Climatronics 100848	Climatronics F-460	Climatronics F-460
Sampling Method	Instrumental (042)	Instrumental (012)	Instrumental (011)	Instrumental (020)	Instrumental (020)
Analysis Method	Machine Average	Hygroscopic Plastic Film	Pyranometer	Vector Summation	Vector Summation
FRM/FEM/ARM/Other	Other	Other	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A	N/A
Monitoring objective	Public info, research	Public info, research	Public info	Public info, research	Public info, research
Statement of Purpose	Measures representative meteorology				
Monitor type	SLAMS, NCORE, PAMS (Type 2)				
Site type	N/A	N/A	N/A	N/A	N/A
Spatial scale	N/A	N/A	N/A	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round				
Distance from supporting structure	N/A	N/A	N/A	N/A	N/A
Distance from obstructions on roof	N/A	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A	N/A
Distance from trees	22 m				
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes	Yes
Probe height (agl)	10 m				
Probe material	N/A	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A	N/A
Changes in the next 18 months?	No	No	No	No	No
Frequency of one-point QC check	N/A	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation	10/15/13	N/A	N/A	10/15/13	10/15/13

B.5 Sacramento-El Camino Watt

Sacramento-El Camino/Watt has been in existence since 1981. This site is a micro-scale CO monitoring station.

In September 2011, EPA approved the District's site termination request due to a street/sidewalk improvement project in 2012 that requires termination or relocation of this air monitoring station. The site termination is contingent on the construction project obtaining funding and being approved to proceed.

Site Name	Sacramento- El Camino/Watt
AQS Site No.	06-067-0007
Geographic Coordinates	38.61°, -121.38° (NAD27)
Location	Shopping Center located 6.5 miles east-northeast of downtown Sacramento.
Address	3535 El Camino Avenue, Sacramento, CA 95825
County	Sacramento
Distance from roadway	2 m
Annual Average Daily Traffic (Vehicles/Day)	El Camino Ave. east of Watt Ave.: 18,677 (SACDOT, 2012)
Ground Cover	Paved
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



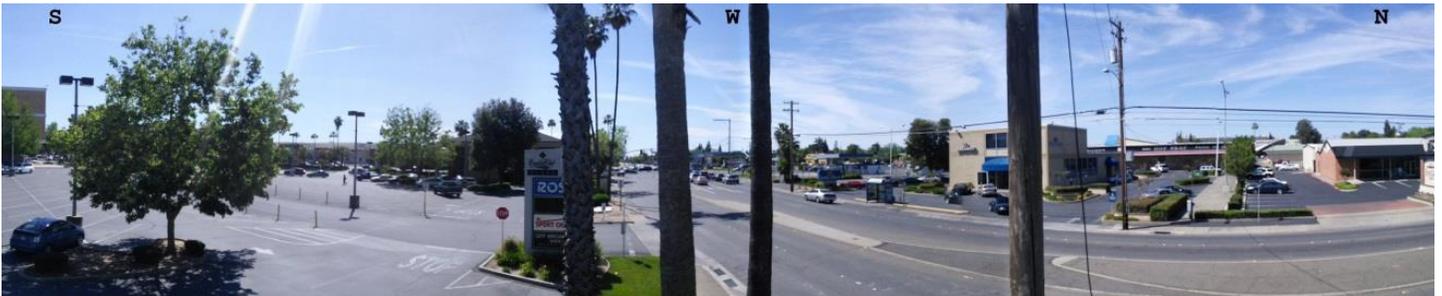
Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	Sacramento-El Camino Watt
Start Date	11/1/01
Collecting Agency	SMAQMD
Analytical Lab	N/A
Reporting Agency	CARB
Pollutant	Carbon Monoxide
Parameter code	42101
POC	1
Instrument manufacturer and model	TEI 48C
Sampling Method	Instrumental (054)
Analysis Method	Nondispersive Infrared
FRM/FEM/ARM/Other	FRM
Comparable to annual PM2.5 NAAQS?	N/A
Monitoring objective	NAAQS comparison, public info
Statement of Purpose	Measures CO concentration near a busy traffic intersection with rush hour congestion
Monitor type	SLAMS
Site type	Highest concentration
Spatial scale	Micro-scale
Sampling Frequency	Continuous
Sampling season	Year Round
Distance from supporting structure	1.1 m
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	4 m
Distance from trees	N/A
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	3.0 m
Probe material	FEP Teflon
Residence time	16 seconds
Changes in the next 18 months?	Yes
Frequency of one-point QC check	Every Other Day
Last Annual Performance Evaluation	10/30/13

B.6 Folsom-Natoma St

This site is in operation since 1996. This site replaced the former Folsom-Liedesdoff Street site. Approximately 20 miles northeast of Downtown Sacramento, Folsom-Natoma site is the maximum summertime O₃ monitoring site within Sacramento County, for days with the prevailing afternoon southwesterly winds.

This site measures: O₃, NO₂, PM_{2.5} BAM, Total NMHC, Speciated VOC, WD, WS, Temp, RH, and SRD. This site is a PAMS Type III site.

This site has measured PM_{2.5} since May 2002 with a continuous beta attenuation monitor (BAM). A new generation of BAM, meeting federal equivalent method (FEM) criteria, was installed in April 2013. The new BAM is designated as a special purpose monitor (SPM) for assisting with daily air quality forecasting. This SPM meets quality assurance criteria in Appendix A to 40 CFR Part 58. For comparability assessment discussion, please refer to Section 4, Recent and Proposed Modification to the Network, page 14.

Site Name	Folsom-Natoma Street
AQS Site No.	06-067-0012
Geographic Coordinates	38.683304°, -121.164457° (WGS84)
Location	Folsom City Hall (parking lot), located 20 miles east-northeast of downtown Sacramento.
Address	50 Natoma Street, Folsom, CA 95630
County	Sacramento
Distance from roadway	206 m
Annual Average Daily Traffic (Vehicles/Day)	Natoma St. southwest of Randall Dr.: 11,059 (City of Folsom, 2010)
Ground Cover	Vegetated
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	Folsom-Natoma St.				
Start Date	7/1/96	7/1/96	7/1/11	7/1/96	7/1/96
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB	CARB
Pollutant	Ozone	Nitrogen Dioxide	NOY	Total NMHC	Speciated VOC
Parameter code	44201	42602	42600	43102	43102
POC	1	1	1	1	2
Instrument manufacturer and model	TAPI 400E	TEI 42C	TEI 42I-Y	TEI 55C	Xontech 910A/912
Sampling Method	Instrumental (087)	Instrumental (074)	Instrumental (574)	Instrumental (164)	6L Pressurized Canister (123)
Analysis Method	Ultra Violet Absorption	Chemiluminescence	Chemiluminescence	FID	Dual FID
FRM/FEM/ARM/Other	FEM	FRM	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A	N/A
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info	Public info	Public info, research	Research
Statement of Purpose	Measure highest summer O3 level downwind of urban area	Measures concentration downwind of urban area	Measures representative concentration	Measures concentration downwind of urban area	Measures concentration downwind of urban area
Monitor type	SLAMS, PAMS (Type 3)				
Site type	Max O3 Concentration, Population Exposure	Highest concentration	Population Exposure	Highest concentration	Highest concentration
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	Continuous	Continuous	1 in 3 days
Sampling season	Year Round	Year Round	Year Round	Year Round	July thru Sep
Distance from supporting structure	1.1 m	1.8 m	N/A	1.8 m	1.8 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A	N/A
Distance from trees	12 m	12 m	12 m	12 m	12 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes	Yes
Probe height (agl)	5.3 m	5.3 m	10 m	5.3 m	5.3 m
Probe material	FEP Teflon	FEP Teflon	FEP Teflon	FEP Teflon	Stainless Steel
Residence time	11 seconds	11 seconds	9 seconds	12 seconds	3 seconds
Changes in the next 18 months?	No	No	No	No	No
Frequency of one-point QC check	Every other day	Every other day	Every other day	Every other day	N/A
Last Annual Performance Evaluation	11/19/13	11/19/13	N/A	12/26/13	N/A

Site	Folsom-Natoma St.
Start Date	4/1/13
Collecting Agency	SMAQMD
Analytical Lab	N/A
Reporting Agency	CARB
Pollutant	PM2.5
Parameter code	88501
POC	4
Instrument manufacturer and model	Met One 1020 BAM
Sampling Method	Very sharp cut cyclone (731)
Analysis Method	Beta Attenuation
FRM/FEM/ARM/Other	FEM
Comparable to annual PM2.5 NAAQS?	No
Monitoring objective	Public info
Statement of Purpose	Measures representative concentration
Monitor type	SPM ^(A)
Site type	Population Exposure
Spatial scale	Neighborhood
Sampling Frequency	Continuous
Sampling season	Year Round
Distance from supporting structure	1.5 m
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	12 m
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	4.3 m
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	No
Frequency of flow rate verification	Bi-monthly
Last two semi-annual flow rate audit	5/14/13, 11/19/13

^(A) See page 14

Site	Folsom-Natoma St.				
Start Date	7/1/96	7/1/96	7/1/96	7/1/96	7/1/96
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB	CARB
Pollutant	Ambient Temperature	Relative Humidity	Solar Radiation	Wind Direction	Wind Speed
Parameter code	62101	62201	63301	61104	61103
POC	1	1	1	1	1
Instrument manufacturer and model	Climatronics 100093	Climatronics 101669	Climatronics 100848	Climatronics F-460	Climatronics F-460
Sampling Method	Instrumental (042)	Instrumental (012)	Instrumental (011)	Instrumental (020)	Instrumental (020)
Analysis Method	Machine Average	Hygroscopic Plastic Film	Pyranometer	Vector Summation	Vector Summation
FRM/FEM/ARM/Other	Other	Other	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A	N/A
Monitoring objective	Public info				
Statement of Purpose	Measures representative meteorology				
Monitor type	SLAMS, PAMS (Type 3)				
Site type	N/A	N/A	N/A	N/A	N/A
Spatial scale	N/A	N/A	N/A	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round				
Distance from supporting structure	N/A	N/A	N/A	N/A	N/A
Distance from obstructions on roof	N/A	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A	N/A
Distance from trees	12 m				
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes	Yes
Probe height (agl)	10 m				
Probe material	N/A	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A	N/A
Changes in the next 18 months?	No	No	No	No	No
Frequency of one-point QC check	N/A	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation	11/19/13	N/A	N/A	11/19/13	11/19/13

B.7 Sacramento-Golden Land Ct.

This site was established in late 2008 to replace the former Airport Rd. monitoring site, which was one mile away.

This site measures O₃, CO, NO₂, Total NMHC, PM₁₀, WD, WS, Temp, RH, and SRD.

Site Name	Golden Land Court
AQS Site No.	06-067-0014
Geographic Coordinates	38.650716°, -121.506650° (WGS84)
Location	Site located 5 miles north of downtown Sacramento, in a residential/commercial area.
Address	68 Golden Land Court, Sacramento, CA 95834
County	Sacramento
Distance from roadway	120 m
Annual Average Daily Traffic (Vehicles/Day)	Golden Land Ct. west of Gateway Park Dr.: 750 (Estimated)
Ground Cover	Vegetated
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	Sacramento-Golden Land Ct.			
Start Date	10/1/08	10/1/08	10/1/08	10/1/08
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	Ozone	Carbon Monoxide	Nitrogen Dioxide	Total NMHC
Parameter code	44201	42101	42602	43102
POC	1	1	1	1
Instrument manufacturer and model	TAPI 400E	TEI 48	TEI 42C	TEI 55C
Sampling Method	Instrumental (087)	Instrumental (054)	Instrumental (074)	Instrumental (164)
Analysis Method	Ultra Violet Absorption	Nondispersive Infrared	Chemiluminescence	Flame ionization detector
FRM/FEM/ARM/Other	FEM	FRM	FRM	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info	NAAQS comparison, public info	Public info, research
Statement of Purpose	Measures O3 concentration near downwind edge of Central Business District	Measures representation concentrations	Measures precursor concentration near downwind edge of Central Business District	Measures precursor concentration near downwind edge of Central Business District
Monitor type	SLAMS, PAMS (Type 2)	SLAMS	SLAMS, PAMS (Type 2)	SLAMS, PAMS (Type 2)
Site type	Population Exposure	Population Exposure	Population Exposure	Population Exposure
Spatial scale	Urban	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	1.9 m	1.9 m	1.9 m	1.9 m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	20 m	20 m	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	5.3 m	5.3 m	5.3 m	5.3 m
Probe material	FEP Teflon	FEP Teflon	FEP Teflon	FEP Teflon
Residence time	10 seconds	10 seconds	11 seconds	9 seconds
Changes in the next 18 months?	Yes	Yes	Yes	Yes
Frequency of one-point QC check	Every other day	Every other day	Every other day	Every other day
Last Annual Performance Evaluation	10/30/13	10/30/13	10/30/13	10/27/13

Site	Sacramento-Golden Land Ct.	
Start Date	10/1/08	6/1/10
Collecting Agency	SMAQMD	SMAQMD
Analytical Lab	SMAQMD	N/A
Reporting Agency	CARB	CARB
Pollutant	PM10 (primary)	PM10
Parameter code	81102	85101
POC	1	3
Instrument manufacturer and model	Sierra Anderson 1200	R & P 1400A
Sampling Method	Hi Volume (063)	Instrumental (079)
Analysis Method	Gravimetric	TEOM-Gravimetric
FRM/FEM/ARM/Other	FRM	FEM
Comparable to annual PM2.5 NAAQS?	N/A	N/A
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info
Statement of Purpose	Measures representation concentrations	Measures representation concentrations
Monitor type	SLAMS	SLAMS
Site type	Population Exposure	Population Exposure
Spatial scale	Neighborhood	Neighborhood
Sampling Frequency	1 in 6 days	Continuous
Sampling season	Year Round	Year Round
Distance from supporting structure	2.0 m	1.8 m
Distance from obstructions on roof	N/A	N/A
Distance from obstructions not on roof	N/A	N/A
Distance from trees	20 m	20 m
Distance to furnace or incinerator flue	N/A	N/A
Distance between collocated monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe height (agl)	5.4 m	5.0 m
Probe material	N/A	N/A
Residence time	N/A	N/A
Changes in the next 18 months?	Yes	Yes
Frequency of flow rate verification	Monthly	Bi-monthly
Last two semi-annual flow rate audit	4/15/13, 10/30/13	4/15/13, 10/30/13

Site	Sacramento-Golden Land Ct.				
Start Date	10/1/08	10/1/08	10/1/08	10/1/08	10/1/08
Collecting Agency	SMAQMD	SMAQMD	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB	CARB	CARB
Pollutant	Ambient Temperature	Relative Humidity	Solar Radiation	Wind Direction	Wind Speed
Parameter code	62101	62201	63301	61104	61103
POC	1	1	1	1	1
Instrument manufacturer and model	Climatronics 100093	Climatronics 101669	Climatronics 100848	Climatronics F-460	Climatronics F-460
Sampling Method	Instrumental (042)	Instrumental (012)	Instrumental (011)	Instrumental (020)	Instrumental (020)
Analysis Method	Machine Average	Hygroscopic Plastic Film	Pyranometer	Vector Summation	Vector Summation
FRM/FEM/ARM/Other	Other	Other	Other	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A	N/A	N/A
Monitoring objective	Public info				
Statement of Purpose	Measures representative meteorology				
Monitor type	SLAMS, PAMS (Type 2)				
Site type	N/A	N/A	N/A	N/A	N/A
Spatial scale	N/A	N/A	N/A	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round				
Distance from supporting structure	N/A	N/A	N/A	N/A	N/A
Distance from obstructions on roof	N/A	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A	N/A
Distance from trees	20 m				
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes	Yes
Probe height (agl)	10 m				
Probe material	N/A	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A	N/A
Changes in the next 18 months?	Yes	Yes	Yes	Yes	Yes
Frequency of one-point QC check	N/A	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation	10/30/13	N/A	N/A	10/30/13	10/30/13

B.8 North Highlands-Blackfoot

North Highlands-Blackfoot has been in operation since 1979. The original site objective was to collect data in support of a proposed power plant project (Prevention of Significant Deterioration) at McClellan Air Force Base, which was located 3 miles southwest of the site. The purposed power plant project was canceled during the early 1980's; and the air force base was closed in 2001.

This entire site was designated as SPM upon its establishment. During an annual review of network design in the mid-1990s, the District needed additional NAMS sites for SO₂ and PM₁₀ to meet minimum monitoring requirements. Thus, the designation of the SO₂ and PM₁₀ monitors at North Highlands was changed from SPM to NAMS, which is now categorized as SLAMS. The SO₂ monitor was terminated in late 2010.

In its comments on the District's 2013 Annual Network Plan, U.S. EPA "recommend for the District to evaluate in particular the purpose of continuing to operate SPM parameters for extended periods of time." The District does not have any plan to terminate this site. It will re-classify all monitors currently operating as SPM, O₃, CO, and NO₂, as SLAMS.

Site Name	North Highlands-Blackfoot
AQS Site No.	06-067-0002
Geographic Coordinates	38.71209°, -121.38109° (WGS84)
Location	Residential area located 11 miles north-northeast of downtown Sacramento.
Address	7823 Blackfoot Way, Antelope, CA 95843
County	Sacramento
Distance from roadway	100 m
Annual Average Daily Traffic (Vehicles/Day)	Navaho Dr. east of Aztec Way: 1,000 (estimated)
Ground Cover	Paved (to north), vegetated (to south)
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	North Highlands-Blackfoot Way		
Start Date	12/1/79	12/1/79	12/1/79
Collecting Agency	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB
Pollutant	Ozone	Carbon Monoxide	Nitrogen Dioxide
Parameter code	44201	42101	42602
POC	1	1	1
Instrument manufacturer and model	TAPI 400E	TEI 48C	TEI 42I
Sampling Method	Instrumental (087)	Instrumental (054)	Instrumental (074)
Analysis Method	Ultra Violet Absorption	Nondispersive Infrared	Chemiluminescence
FRM/FEM/ARM/Other	FEM	FRM	FRM
Comparable to annual PM2.5 NAAQS?	N/A	N/A	N/A
Monitoring objective	NAAQS comparison, research	NAAQS comparison, public info	NAAQS comparison, research
Statement of Purpose	Measures representative concentrations	Measures representative concentrations	Measures representative concentrations
Monitor type	SPM	SPM	SPM
Site type	Population Exposure	Population Exposure	Population Exposure
Spatial scale	Urban	Neighborhood	Neighborhood
Sampling Frequency	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round
Distance from supporting structure	2.0 m	2.0 m	2.0 m
Distance from obstructions on roof	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A
Distance from trees	12 m	12 m	12 m
Distance to furnace or incinerator flue	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes
Probe height (agl)	5.0 m	5.0 m	5.0 m
Probe material	FEP Teflon	FEP Teflon	FEP Teflon
Residence time	17 seconds	17 seconds	18 seconds
Changes in the next 18 months?	Yes	Yes	No
Frequency of one-point QC check	Every Other Day	Every Other Day	Every Other Day
Last Annual Performance Evaluation	10/29/13	10/29/13	10/29/13

Site	North Highlands-Blackfoot Way
Start Date	1/1/89
Collecting Agency	SMAQMD
Analytical Lab	SMAQMD
Reporting Agency	CARB
Pollutant	PM10
Parameter code	81102
POC	1
Instrument manufacturer and model	Sierra Anderson 1200
Sampling Method	Hi Volume (063)
Analysis Method	Gravimetric
FRM/FEM/ARM/Other	FRM
Comparable to annual PM2.5 NAAQS?	N/A
Monitoring objective	NAAQS comparison, public info
Statement of Purpose	Measures representative concentrations
Monitor type	SLAMS
Site type	Population Exposure
Spatial scale	Neighborhood
Sampling Frequency	1 in 6 days
Sampling season	Year Round
Distance from supporting structure	2.0 m
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	12 m
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	5.0 m
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	Yes
Frequency of flow rate verification	Monthly
Last two semi-annual flow rate audit	4/15/13, 10/29/13

B.9 Rancho Seco

This outlying site is the furthest away from urban area. It was established in 2008 as a seasonal PM_{2.5} special purpose monitoring site. The PM_{2.5} data collected during the months of November through March is used for the South Sacramento County Winter PM_{2.5} Study. This SPM meets quality assurance criteria in Appendix A to 40 CFR Part 58.

This study is extended due to poor data capture rate at the beginning of the study period.

Site Name	Rancho Seco
AQS Site No.	NA
Geographic Coordinates	38.343812°, -121.109977° (WGS84)
Location	Located at former Rancho Seco Nuclear Power Plant in rural area located 27 miles southeast of downtown Sacramento.
Address	No street address, Herald, CA 95638
County	Sacramento
Distance from roadway	13 m
Annual Average Daily Traffic (Vehicles/Day)	Rancho Seco Park (access road): 100 (estimated)
Ground Cover	Vegetated
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA

Site	Rancho Seco
Start Date	11/1/08
Collecting Agency	SMAQMD
Analytical Lab	N/A
Reporting Agency	N/A
Pollutant	PM2.5
Parameter code	88501
POC	N/A
Instrument manufacturer and model	Met One E-BAM
Sampling Method	Very sharp cut cyclone (731)
Analysis Method	Beta Attenuation
FRM/FEM/ARM/Other	Other
Comparable to annual PM2.5 NAAQS?	No
Monitoring objective	Public info, research
Statement of Purpose	Measures rural, background PM2.5 concentration
Monitor type	SPM
Site type	Upwind/ Background
Spatial scale	Neighborhood
Sampling Frequency	Continuous
Sampling season	November-February
Distance from supporting structure	N/A
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	12 m
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	2 m
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	No
Frequency of flow rate verification	N/A
Last two semi-annual flow rate audit	N/A

B.10 Sloughhouse

Located in a rural area 16.5 miles southeast of Downtown Sacramento, this site measures O₃, wind direction, wind speed, and PM_{2.5}.

Sloughhouse was established in 1997 as a seasonal (April-October) O₃ special purpose monitoring site to measure elevated afternoon O₃ concentrations, under northwesterly winds, in support of the District's summer Spare the Air (O₃ episodic control measure) program. It was sited to cover “data gaps” in the O₃ monitoring network, which is used for forecasting summer AQI levels.

A tree 10 m southeast of the O₃ inlet was removed in May 2011 in order to comply with Appendix E to 40 CFR 58 (Probe and Monitoring Path Siting Criteria). The O₃ monitor was then re-classified from SPM to SLAMS.

Since November 2008, seasonal (November-February) monitoring for PM_{2.5} is conducted at this site. A special purpose PM_{2.5} E-BAM monitor collected data in support of the South Sacramento County Winter PM_{2.5} study. In 2013, a non-FEM BAM sampler was relocated here to improve data quality. This study has been extended, due to the extremely low data capture rates during the 2008 and 2009 winter seasons

Site Name	Sloughhouse
AQS Site No.	06-067-5003
Geographic Coordinates	38.494475°, -121.211131° (WGS84)
Location	Fire Station in rural area located 16.5 miles east-southeast of downtown Sacramento.
Address	7520 Sloughhouse Road, Sloughhouse, CA 95683
County	Sacramento
Distance from roadway	27 m
Annual Average Daily Traffic (Vehicles/Day)	Sloughhouse Rd south of Jackson Rd: 400 (Estimated)
Ground Cover	Vegetated
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward east from roof



Panoramic view toward south from roof



Panoramic view toward west from roof

Site	Sloughhouse-Sloughhouse Rd.		
Start Date	7/1/97	7/1/97	7/1/97
Collecting Agency	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	N/A	N/A	N/A
Reporting Agency	CARB	CARB	CARB
Pollutant	Ozone	Wind Direction	Wind Speed
Parameter code	44201	61104	61103
POC	1	1	1
Instrument manufacturer and model	TAPI 400E	Climatronics F-460	Climatronics F-460
Sampling Method	Instrumental (087)	Instrumental (020)	Instrumental (020)
Analysis Method	Ultra Violet Absorption	Vector Summation	Vector Summation
FRM/FEM/ARM/Other	FEM	Other	Other
Comparable to annual PM _{2.5} NAAQS?	N/A	N/A	N/A
Monitoring objective	NAAQS comparison, public info	Public info	Public info
Statement of Purpose	Measures elevated O ₃ concentration under northwesterly wind	Measures representative meteorology	Measures representative meteorology
Monitor type	SLAMS	SLAMS	SLAMS
Site type	Max O ₃ concentration	N/A	N/A
Spatial scale	Neighborhood	N/A	N/A
Sampling Frequency	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round
Distance from supporting structure	1.8 m	2.4 m	2.4 m
Distance from obstructions on roof	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A
Distance from trees	16 m	16 m	16 m
Distance to furnace or incinerator flue	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes
Probe height (agl)	4.6 m	5.2 m	5.2 m
Probe material	FEP Teflon	N/A	N/A
Residence time	6 seconds	N/A	N/A
Changes in the next 18 months?	No	No	No
Frequency of one-point QC check	Daily	N/A	N/A
Last Annual Performance Evaluation	10/16/13	10/16/13	10/16/13

Site	Sloughhouse-Sloughhouse Rd.
Start Date	11/5/13
Collecting Agency	SMAQMD
Analytical Lab	N/A
Reporting Agency	N/A
Pollutant	PM2.5
Parameter code	88501
POC	N/A
Instrument manufacturer and model	Met One 1020 BAM
Sampling Method	Very sharp cut cyclone (731)
Analysis Method	Beta Attenuation
FRM/FEM/ARM/Other	Other
Comparable to annual PM2.5 NAAQS?	No
Monitoring objective	Public info, research
Statement of Purpose	Measures rural, background PM2.5 concentration
Monitor type	SPM
Site type	Upwind/ Background
Spatial scale	Neighborhood
Sampling Frequency	Continuous
Sampling season	November-February
Distance from supporting structure	N/A
Distance from obstructions on roof	N/A
Distance from obstructions not on roof	N/A
Distance from trees	16 m
Distance to furnace or incinerator flue	N/A
Distance between collocated monitors	N/A
Unrestricted airflow >= 270 deg arc	Yes
Probe height (agl)	4.3 m
Probe material	N/A
Residence time	N/A
Changes in the next 18 months?	No
Frequency of flow rate verification	N/A
Last two semi-annual flow rate audit	N/A

B.11 Sacramento Health Dept-Stockton Blvd

According to old documentation, this PM monitoring site has been in existence since the late 1950s. This site measures PM₁₀ SSI, PM₁₀ TEOM, and PM_{2.5} FRM.

Since the District is evaluating to terminate this site (see Section 4, Recent and Proposed Modification to the Network), it will postpone trimming a vigorous, old-growth tree. This tree should have minimal impact to air monitoring because it is nine meters southeast of the monitors, and this location has northwest and southwest predominate wind.

Site Name	Sacramento Health Department-Stockton Blvd.
AQS Site No.	06-067-4001
Geographic Coordinates	38.556326°, -121.458499° (WGS84)
Location	Rooftop in urban area located 2 miles east-southeast of downtown Sacramento.
Address	2221 Stockton Blvd, Sacramento, CA 95817
County	Sacramento
Distance from roadway	46 m
Annual Average Daily Traffic (Vehicles/Day)	Stockton Blvd. south of U St.: 24,015 (City of Sacramento, 2012) Stockton Blvd. at Broadway: 16,875 (City of Sacramento, 2013)
Ground Cover	Rooftop (surrounding area is paved)
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA



Panoramic view toward north from roof



Panoramic view toward north from roof



Panoramic view toward north from roof



Panoramic view toward north from roof

Site	Sacramento-Health Dept.		
Start Date	1/1/86	8/1/94	1/1/99
Collecting Agency	SMAQMD	SMAQMD	SMAQMD
Analytical Lab	SMAQMD	N/A	CARB
Reporting Agency	CARB	CARB	CARB
Pollutant	PM10 (Primary)	PM10	PM2.5
Parameter code	81102	85101	88101
POC	2	3	1
Instrument manufacturer and model	Sierra Anderson 1200	R & P 1400A	R & P 2025
Sampling Method	Hi Volume (063)	Instrumental (079)	Low volume with WINS (118)
Analysis Method	Gravimetric	Teom-Gravimetric	Gravimetric
FRM/FEM/ARM/Other	FRM	FEM	FRM
Comparable to annual PM2.5 NAAQS?	N/A	N/A	Yes
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info	NAAQS comparison, public info
Statement of Purpose	Measures representative concentration in urban area	Measures representative concentration in urban area	Measures representative concentration in urban area
Monitor type	SLAMS	SLAMS	SLAMS
Site type	Population Exposure	Population Exposure	Highest concentration, population exposure
Spatial scale	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	1 in 6 days	Continuous	1 in 3 days
Sampling season	Year Round	Year Round	Year Round
Distance from supporting structure	2.0 m	2.0 m	2.0 m
Distance from obstructions on roof	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A
Distance from trees	9 m	9 m	9 m
Distance to furnace or incinerator flue	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes
Probe height (agl)	5.4 m	5.4 m	5.4 m
Probe material	N/A	N/A	N/A
Residence time	N/A	N/A	N/A
Changes in the next 18 months?	Yes	Yes	Yes
Frequency of flow rate verification	Monthly	Bi-Monthly	Monthly
Last two semi-annual flow rate audit	5/14/13, 10/17/13	3/8/11, 10/6/11	5/14/13, 10/17/13

B.12 Sacramento-1309 T Street

The Sacramento-1309 T Street site is operated by the California Air Resources Board/Monitoring and Laboratory Division/Special Purpose Monitoring Section. This site has been in existence since 1989.

This middle scale SLAMS air monitoring site measures O₃, NO₂, PM_{2.5} FRM, Speciated PM_{2.5}, PM_{2.5} BAM, PM₁₀ SSI, WD, WS, TMP, RH, and Atmospheric Pressure.

Site Name	Sacramento-1309 T Street
AQS Site No.	06-067-0010
Geographic Coordinates	38.558333°, -121.491944 (NAD27)
Location	Residential area located in downtown Sacramento
Address	1309 T Street, Sacramento, CA 95814
County	Sacramento
Distance from roadway	30 m
Annual Average Daily Traffic (Vehicles/Day)	T St. east of 6 th St.: 2,046 (City of Sacramento, 2011) T St. east of 11 th St.: 3,102 (City of Sacramento, 2009)
Ground Cover	Rooftop site (residential area is paved)
Representative Area (MSA)	Sacramento--Arden-Arcade--Roseville, CA

Site	Sacramento-1309 T St.	
Start Date	4/1/89	4/1/89
Collecting Agency	CARB	CARB
Analytical Lab	N/A	N/A
Reporting Agency	CARB	CARB
Pollutant	Ozone	Nitrogen Dioxide
Parameter code	44201	42602
POC	1	1
Instrument manufacturer and model	TAPI 400E	TEI 42C
Sampling Method	Instrumental (087)	Instrumental (099)
Analysis Method	Ultra Violet Absorption	Gas Phase Chemiluminescence
FRM/FEM/ARM/Other	FEM	FRM
Comparable to annual PM2.5 NAAQS?	N/A	N/A
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info
Statement of Purpose	Measures representative concentration in urban area	Measures representative concentration in urban area
Monitor type	SLAMS	SLAMS
Site type	Population Exposure	Population Exposure
Spatial scale	Urban	Neighborhood
Sampling Frequency	Continuous	Continuous
Sampling season	Year Round	Year Round
Distance from supporting structure	3.0 m	3.0 m
Distance from obstructions on roof	N/A	N/A
Distance from obstructions not on roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance between collocated monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe height (agl)	11.7	11.7
Probe material	FEP Teflon	FEP Teflon
Residence time	5.4 seconds	6 seconds
Changes in the next 18 months?	No	No
Frequency of one-point QC check	Daily	Daily
Last Annual Performance Evaluation	7/31/13	7/31/13

Site	Sacramento-1309 T St.			
Start Date	5/1/13	12/1/98	5/1/04	4/1/07
Collecting Agency	CARB	CARB	CARB	CARB
Analytical Lab	CARB	CARB	N/A	CARB
Reporting Agency	CARB	CARB	CARB	CARB
Pollutant	PM10	PM2.5	PM2.5	PM2.5 Speciated Mass
Parameter code	81102	88101	88501	88502
POC	4	1	3	5
Instrument manufacturer and model	Met One 4 Models	R & P 2025	Met One 1020 BAM	Met One SASS
Sampling Method	Instrumental (122)	Low volume with WINS (118)	sharp cut cyclone (731)	810
Analysis Method	Beta Attenuation	Gravimetric	Beta Attenuation	Gravimetric
FRM/FEM/ARM/Other	FEM	FRM	Other	Other
Comparable to annual PM2.5 NAAQS?	N/A	Yes	No	No
Monitoring objective	NAAQS comparison, public info	NAAQS comparison, public info	Public info	Research
Statement of Purpose	Measures representative concentration in urban area	Measures representative concentration in urban area	Measures representative concentration in urban area	Provide speciation data of urban emission
Monitor type	SLAMS	SLAMS	SLAMS	CSN
Site type	Population Exposure	Highest concentration, population exposure	Highest concentration, population exposure	Highest concentration, population exposure
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling Frequency	Continuous	1 in 3 days	Continuous	1 in 3 days
Sampling season	Year Round	Year Round	Year Round	Year Round
Distance from supporting structure	2.0m	2.0m	2.0 m	2.0m
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	50 m	50 m	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes	Yes	Yes
Probe height (agl)	10 m	10 m	10 m	10 m
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Changes in the next 18 months?	No	No	No	No
Frequency of flow rate verification	Bi-Monthly	Monthly	Bi-monthly	Monthly
Last two semi-annual flow rate audit	N/A	2/20/13, 7/31/13	2/20/13, 7/31/13	N/A

Site	Sacramento-1309 T St.	
Start Date	2/1/92	2/1/92
Collecting Agency	CARB	CARB
Analytical Lab	N/A	N/A
Reporting Agency	CARB	CARB
Pollutant	Wind Direction	Wind Speed
Parameter code	61102	61101
POC	1	1
Instrument manufacturer and model	Rm Young 3D Sonic	Rm Young 3D Sonic
Sampling Method	Instrumental (066)	Instrumental (066)
Analysis Method	Ultrasonic Anemometer	Ultrasonic Anemometer
FRM/FEM/ARM/Other	Other	Other
Comparable to annual PM _{2.5} NAAQS?	N/A	N/A
Monitoring objective	Public info	Public info
Statement of Purpose	Measures representative meteorology	Measures representative meteorology
Monitor type	SLAMS	SLAMS
Site type	N/A	N/A
Spatial scale	N/A	N/A
Sampling Frequency	Continuous	Continuous
Sampling season	Year Round	Year Round
Distance from supporting structure	9.0 m	9.0 m
Distance from obstructions on roof	N/A	N/A
Distance from obstructions not on roof	N/A	N/A
Distance from trees	50 m	50 m
Distance to furnace or incinerator flue	N/A	N/A
Distance between collocated monitors	N/A	N/A
Unrestricted airflow >= 270 deg arc	Yes	Yes
Probe height (agl)	15 m	15 m
Probe material	N/A	N/A
Residence time	N/A	N/A
Changes in the next 18 months?	No	No
Frequency of one-point QC check	N/A	N/A
Last Annual Performance Evaluation	N/A	N/A

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Appendix C Minimum Monitoring Requirement Assessment

Pollutant	Required Monitors in Sacramento MSA	California Air Resources Board (CARB)	El Dorado County APCD	Placer County AQMD	Sacramento Metropolitan AQMD	Yolo-Solano AQMD	Total Monitors in Sacramento MSA	
O ₃	2	4	0	4	6	1	11	
CO	2	0	0	0	4	0	4	
NO ₂	Area Wide	1	3	0	0	5	0	8
	Near-Road	1	0	0	0	1	0	1
SO ₂	1	0	0	0	1	0	1	
Pb	NCore	1	0	0	0	1	0	1
	Non-Source Oriented	0	0	0	0	0	0	0
	Source Oriented	0	0	0	0	0	0	0
PM ₁₀	2-4	2	0	2	5	2	11	
PM _{2.5}	Manual	3	2	0	0	2	1	5
	Continuous	2	3	0	4	4	0	11
PM _{10-2.5}	1	0	0	0	1	0	1	

Appendix D Copy of Approval Letter to Select Bercut Dr. Site for Establishing a Near-Road NO₂ Monitor



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901
DEC 11 2013

Mr. Larry Greene
Air Pollution Control Officer
Sacramento Metropolitan Air Quality Management District
777 12th Street
Sacramento, California 95814

Dear Mr. Greene:

Thank you for your submission of the Sacramento Metropolitan Air Quality Management District (SMAQMD) 2013 Annual Monitoring Network Plan in July 2013. We have reviewed the submitted document based on the requirements set forth under 40 CFR 58. Based on the information provided in the plan, EPA approves all portions of the network plan except those specifically identified below. With this plan approval, we also formally approve the following system modification: selection of the Bercut Dr. site to meet the requirement for establishing a single near-road NO₂ monitor in the Sacramento-Roseville-Arden-Arcade, CA Core Based Statistical Area (CBSA).

Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information, as described, does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. EPA Region 9 also cannot approve portions of the plan for which the EPA Administrator has not delegated approval authority to the regional offices. Accordingly, the first enclosure (*A. Annual Monitoring Network Plan Items where EPA is Not Taking Action*) provides a listing of specific items of your agency's annual monitoring network plan where EPA is not taking action. The second enclosure (*B. Additional Items Requiring Attention*) is a listing of additional items in the plan that EPA wishes to bring to your agency's attention.

The third enclosure (*C. Annual Monitoring Network Plan Checklist*) is the checklist EPA used to review your plan for overall items that are required to be included in the annual network plan along with our assessment of whether the plan submitted by your agency addresses those requirements. The fourth enclosure (*D. Region 9 Near-road NO₂ Plan Review Checklist*) is the checklist EPA used to review those elements of your annual monitoring network plan that deal specifically with near-road NO₂ monitoring. Please see specific comments within this checklist for recommendations for next year's plan for your NO₂ near-road site.

The first two enclosures highlight a subset of the more extensive list of items reviewed in the third and fourth enclosures. All comments conveyed via this letter (and enclosures) should be addressed (through corrections within the plan, additional information being included, or

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discussion) in next year's annual monitoring network plan. If you have any questions regarding this letter or the enclosed comments, please feel free to contact me at (415) 947-4534 or Elfego Felix at (415) 947-4141.

Sincerely,



Meredith Kurpius, Manager
Air Quality Analysis Office

Enclosures:

- A. Annual Monitoring Network Plan Items where EPA is Not Taking Action
- B. Additional Items Requiring Attention
- C. Annual Monitoring Network Plan Checklist
- D. Region 9 Near-road NO₂ Plan Review Checklist

cc: Brigette Tollstrup, SMAQMD
Janice Lam, SMAQMD
Gayle Sweigert, California Air Resources Board

Appendix E Copy of Approval Letter to Close Sacramento-El Camino/Watt (AIRS Site #06-067-0007)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

September 9, 2011

Brigette Tollstrup, Manager
Program Coordinator Division
Sacramento Metropolitan Air Quality Management District
777 12th Street, 3rd Floor
Sacramento, CA 95814-1908

Dear Ms. Tollstrup,

We have reviewed your April 12, 2011 request to close the carbon monoxide (CO) micro-scale monitoring site at Sacramento-El Camino/Watt (AIRS Site No. 06-067-0007).

The CO monitor at El Camino/Watt has been operating since 1980. From 2000 to 2009 the CO monitor's highest eight-hour mean was 6.25 ppm (69% of the standard). A statistical analysis shows that there is a probability of less than 10 percent of exceeding 80 percent of the 9 ppm CO National Ambient Air Quality Standard (NAAQS) during the next three years. The CO monitor is not specifically required by an attainment or maintenance plan, and is not required in order for Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet 40 CFR 58 Appendix D. Therefore, the site closure meets the criteria set forth in 40 CFR 58.14(c)(1) for monitor discontinuation at a state and local air monitoring station (SLAMS).

EPA approves termination of CO monitoring at Sacramento-El Camino/Watt. Please include these modifications in your next annual network plan. If you have any questions, please contact me at (415) 972-3851 or Katherine Hoag (Hoag.Katherine@epa.gov) at (415) 972-3970.

Sincerely,

/s/

Matthew Lakin
Manager, Air Quality Analysis Office

cc: John Ching, Sacramento Metropolitan AQMD
Aleta Kennard, Sacramento Metropolitan AQMD
Karen Magliano, California ARB
Ken Stroud, California ARB
Mike Miguel, California ARB

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Appendix F Annual Data Certification Letter

 Matthew Rodriguez <i>Secretary for Environmental Protection</i>	Air Resources Board <hr/> Mary D. Nichols, Chairman 1001 I Street • P.O. Box 2815 Sacramento, California 95812 • www.arb.ca.gov	 Edmund G. Brown Jr. <i>Governor</i>
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May 16, 2014

Dr. Meredith Kurpius, Manager
Air Quality Analysis Office
Region 9
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Dear Dr. Kurpius:

The Air Resources Board (ARB) is responsible for submitting air quality data to the Air Quality System (AQS) for State and Local Air Monitoring Stations and Special Purpose Monitoring monitors operated by ARB, as well as for a number of local air districts in California. In addition, ARB submits quality assurance data for some California districts that are within the Primary Quality Assurance Organization (PQAO) managed by ARB.

In accordance with Title 40, Part 58.15 of the Code of Federal Regulations (CFR), this letter certifies that the following 2012 and 2013 ambient and quality assurance data are completely submitted and accurate to the best of my knowledge, taking into consideration the quality assurance findings:

- The 2012 ozone data at Ukiah-Gobbi Street (060450008) and PM10 data at Fort Bragg-Dana Street (060450010) in Mendocino County. These data were not certified last year.
- The 2013 PM2.5 filter-based data for which ARB has certification authority in AQS.
- The 2013 criteria data for 10 districts within the PQAO managed by ARB: Imperial, Lake, Mendocino, North Coast, Northern Sonoma, Placer, Sacramento-Metropolitan, Siskiyou, Tehama and Yolo-Solano.

ARB will subsequently certify all of the remaining 2013 data in AQS within the next 60 days. Data validation and assessment are continuing functions and may result in future corrections to these data.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

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Dr. Meredith Kurpius
May 16, 2014
Page 2

In addition, this letter also certifies previously certified data that has subsequently been modified. Along with this letter, I am submitting the 2012 and 2013 AMP600 reports as required by the CFR.

If you have questions regarding the ambient air quality data submittal portion of this letter, please contact Ms. Gayle Sweigert, Manager, Air Quality Analysis Section at (916) 322-6923, or via email at gsweiger@arb.ca.gov. For questions regarding the quality assurance submittal portion of this letter, please contact Mr. Ranjit Bhullar, Manager, Quality Assurance Section of the Monitoring and Laboratory Division at (916) 322-0223, or via email at rbhullar@arb.ca.gov.

Sincerely,



Ravi Ramalingam, Chief
Consumer Products and Air Quality Assessment Branch

Enclosures (2)

cc: Ms. Gayle Sweigert, Manager
Air Quality Analysis Section
Planning and Technical Support Division

Mr. Ranjit Bhullar, Manager
Quality Assurance Section
Monitoring and Laboratory Division

Appendix G FEM/FRM Comparability Test Result

Table G-1

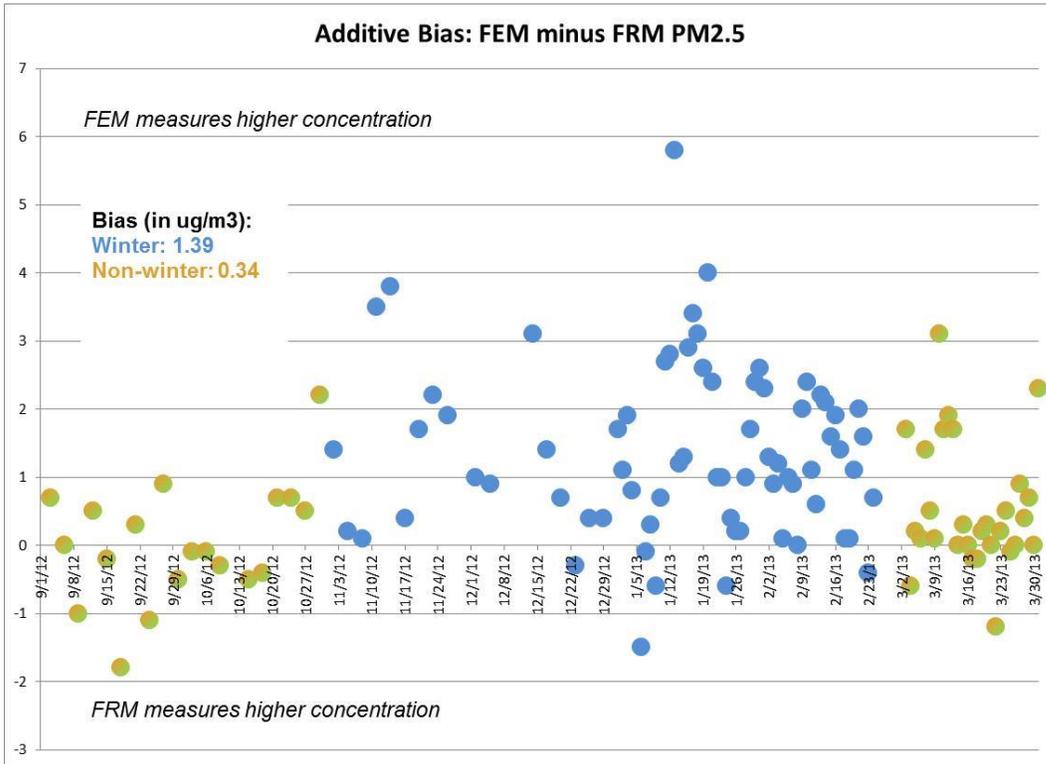


Table G-2

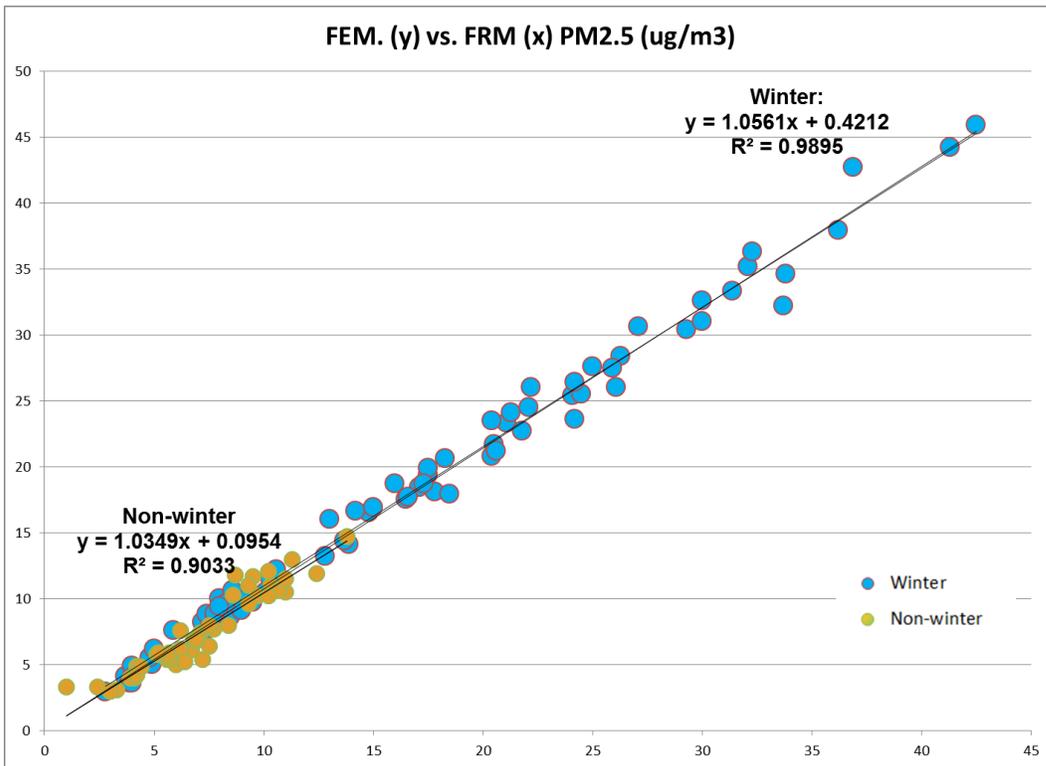


Table G-3

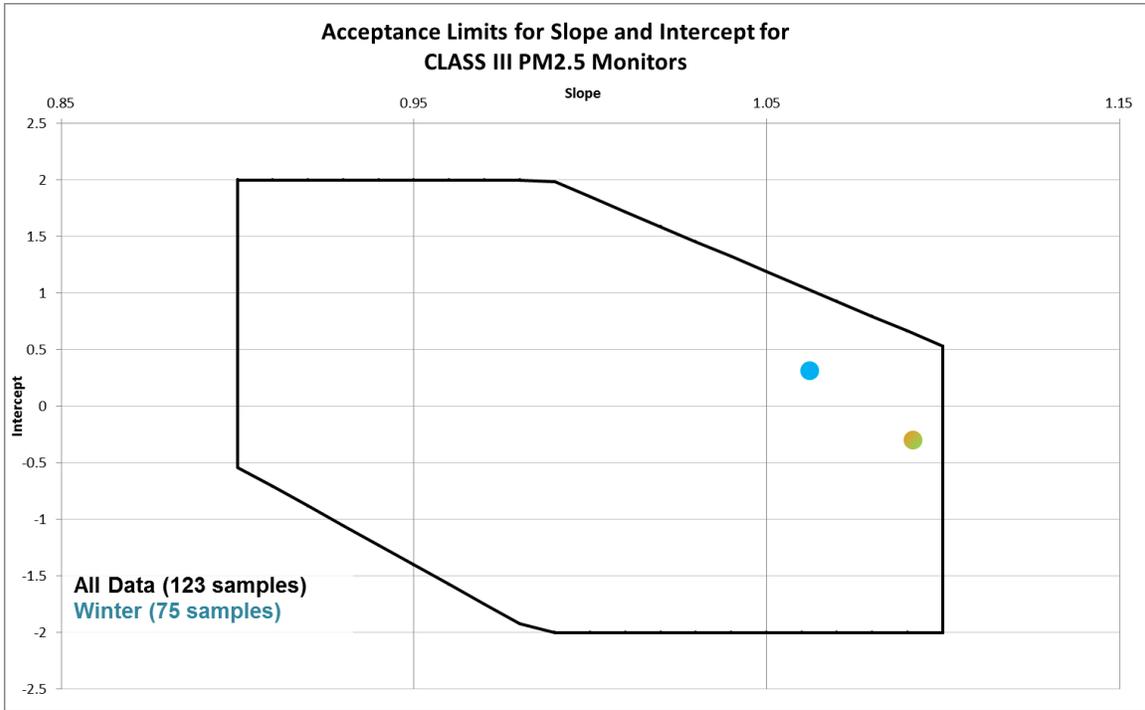


Table G-4

