



Monterey Bay Unified Air Pollution Control District

**North Central Coast Air Basin
California**

**2010
Annual Monitoring Network Plan**

June 1, 2010

Monterey Bay Unified Air Pollution Control District
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ACRONYMS

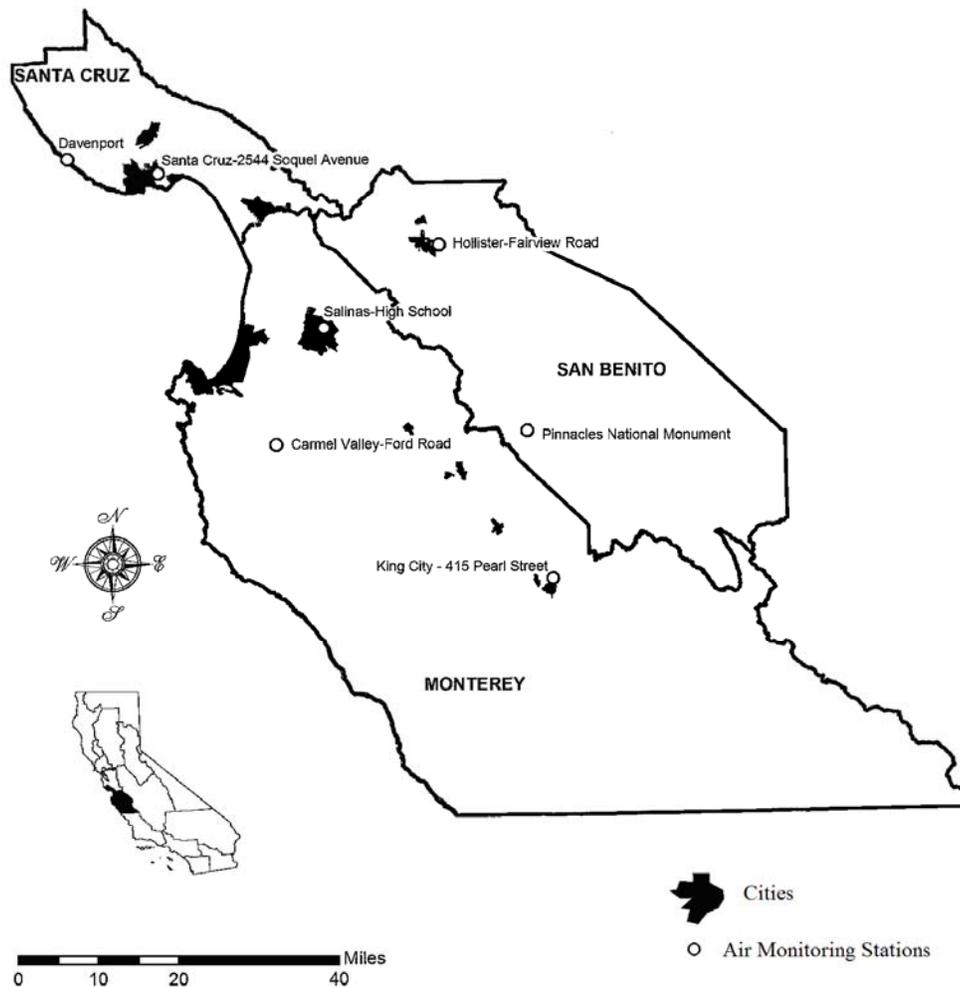
8HrO3	Ozone running eight hour average
AIRS	Air Information Retrieval System
APCD	Air Pollution Control District
ARB AQS	The ARB Air Quality System audit division
ARM	approved regional method
ATM	Atmospheric temperature monitor
CARB	California Air Resources Board
CFR	Code of Federal Regulations
CO	carbon monoxide
District	Short for Monterey Bay Unified Air Pollution Control District
EPA	United States Environmental Protection Agency
EPA AQS	The EPA Air Quality System audit division
FEM	federal equivalent method
FRM	federal reference method
IMPROVE	Interagency Monitoring of Protected Visual Environments
m	meters
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCCAB	North Central Coast Air Basin
NO2	nitrogen dioxide
O3	ozone
PM10	particulate matter (0 to 10 microns aerodynamic diameter)
PM2.5	particulate matter (0 to 2.5 microns aerodynamic diameter)
SIP	State Implementation Plan
SLAMS	State or Local Air Monitoring Stations
SO2	sulfur dioxide
SPM	special purpose monitoring
WDA	Wind direction average
WSA	Wind speed average

AIR MONITORING NETWORK PLAN

Background

Formed in 1974, the Monterey Bay Unified Air Pollution Control District (District) is the public agency responsible for air quality management in Monterey, Santa Cruz, and San Benito Counties, which make up the North Central Coast Air Basin (NCCAB). The District collects and reports data from a network of seven air monitoring stations throughout the NCCAB. These monitoring sites include five State and Local Air Monitoring Stations (SLAMS) and two Special Purpose Monitoring (SPM) stations.

North Central Coast Air Basin Air Monitoring Network



Six of the stations are directly operated and maintained by the district and one, the Pinnacles site, is operated and maintained by the National Parks Service. The District also performs short term monitoring and special testing as needed. For example, it monitors the smoke produced during prescribed burns that eliminate munitions and explosives ordnance in the 6,560-acre portion of the Historical Impact Area at Fort Ord. The District also maintains a network consisting of both mobile and stationary instruments, that include BAM 1020s and nephelometers, which are primarily intended for the detection of wildfire smoke.

NETWORK DESCRIPTION

Network Plan

The District adopts and submits an annual monitoring network plan to the EPA Regional Administrator that provides for the establishment, maintenance, and evolution of an air quality monitoring system, and has done so since July 1, 2007. The regulations currently require that this report be submitted to the U.S. Environmental Protection Agency (U.S. EPA) by July 1 of each year. The geographical scope of this report consists of Monterey, Santa Cruz, and San Benito counties that make up the North Central Coast Air Basin (NCCAB) in California.

General Information

Ambient air quality standards are limits on air pollutant concentrations that are set forth by the California Air Resources Board (CARB) and the EPA and are designed to protect human health and the environment. Air quality monitoring is used to determine district attainment and non attainment status with respect to these established standards. In areas that do not attain the air quality standards, regulations and control strategies are developed to reduce these pollutants so that the air district may achieve attainment status. The District collects data on both pollutant and meteorological parameters. The primary pollutants of concern, from a regulatory and public health perspective, are O₃, PM_{2.5}, and PM₁₀. Most sites monitor for multiple pollutants and some sites collect data for other pollutants, such as NO-NO₂-NO_x, and CO. Meteorological parameters, which include atmospheric temperature monitors (ATM), wind speed average (WSA), and wind direction average (WDA), are monitored at all sites.

Data Use

The air monitoring data collected by the District is used in a number of different ways. It is available to various regulatory agencies, health and environmental researchers, and to the general public; including environmental groups, businesses, and concerned citizens. This data is used to determine compliance with the ambient air quality standards and associated public health and environmental effects and impacts. The data is edited and submitted to both CARB and the EPA, and is also available to the public on web pages, in newspapers and on television.

EPA Monitoring Requirements

EPA regulations specify the minimum number of monitoring sites to be established by state and local air agencies. The District network meets the minimum monitoring requirements for all criteria pollutants (Tables 1, 2, and 3). These requirements are based on local Metropolitan Statistical Area (MSA) data as set forth in 40 CFR 58. MSAs are part of a classification of geographical regions developed by the U.S. Census Bureau and include one or more counties, although not all counties fall within an MSA. For O₃, PM_{2.5}, and PM₁₀, the criteria pollutants, the required minimum number is based on both the population and the pollutant concentration in an area. For other pollutants, no monitoring is required unless an area exceeds or is close to exceeding a national ambient air quality standard. In practice, state and local agencies may deploy additional monitors to meet state air quality standards where they exceed federal standards, to track specific local air quality issues, or to address local public concerns.

Table 1: Minimum Monitoring Requirements for O₃

MSA	County(ies)	Population (2000)	8-hour Design Value (2006-2008)	Minimum # of Monitors Required	# of Monitors Present
San Jose-Sunnyvale-Santa Clara	San Benito	1735819	0.089 ^a	2 ^b	8 ^b
Santa Cruz-Watsonville	Santa Cruz	255602	0.072	0	1
Salinas	Monterey	401762	0.068	1	3

(Note: Refer to 40 CFR, Part 58, Appendix D, section 4.1 and Table D-2)

Monitors required for SIP or Maintenance Plan: None

^aThe 8-hour Daily Design Values listed involve only the monitors in San Benito County.

^bTwo of the monitors located in the San Jose-Sunnyvale-Santa Clara MSA are located within MBAUPCD.

Table 2: Minimum Monitoring Requirements for PM_{2.5}

MSA	County(ies)	Population (2000)	Annual Design Value (2006-2008)	Daily Design Value (2006-2008)	Minimum # of Monitors Required	# of Monitors Present
San Jose-Sunnyvale-Santa Clara	San Benito	1735819	6.9 ^a	N/A	3 ^b	3 ^b
Santa Cruz-Watsonville	Santa Cruz	255602	6.7	14	0	1
Salinas	Monterey	401762	7.1	14	0	1

(Note: Refer to 40 CFR, Part 58, Appendix D, section 4.7 and Table D-5)

Monitors required for SIP or Maintenance Plan: None

^aThe Annual and Daily Design Values listed involve only the monitors in San Benito County.

^bOne of the monitors located in the San Jose-Sunnyvale-Santa Clara MSA is located within MBAUPCD.

Table 3: Minimum Monitoring Requirements for PM10.

MSA	County(ies)	Pop. (2000)	Highest Max (2006-2008)	Minimum # of Monitors Required	# Monitors Active	# of Monitors Present
San Jose-Sunnyvale-Santa Clara	San Benito	1735819	20 ^a	2-4	4 ^b	4 ^b
Santa Cruz-Watsonville	Santa Cruz	255602	88	0-1	1	1
Salinas	Monterey	401762	58	0-1	2	2

(Note: Refer to 40 CFR, Part 58, Appendix D, section 4.6 and Table D-4)

Monitors required for SIP or Maintenance Plan: None

^a The Highest Max listed involves only the monitors in San Benito County.

^b One of the monitors located in the San Jose-Sunnyvale-Santa Clara MSA is located within MBAUPCD.

- **NO2** (Note: Refer to 40 CFR, Part 58, Appendix D, section 4.3) Monitors required for SIP or Maintenance Plan: None
- **SO2** (Note: Refer to 40 CFR, Part 58, Appendix D, section 4.4) Monitors required for SIP or Maintenance Plan: None
- **CO** (Note: Refer to 40 CFR, Part 58, Appendix D, section 4.2) Monitors required for SIP or Maintenance Plan: None
- **Pb** (Note: Refer to 40 CFR, Part 58, Appendix D, section 4.5) Monitors required for SIP or Maintenance Plan: None

Monitoring for carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), and lead (Pb) is not currently required in California by 40 CFR Part 58, Appendix D.

Quality Assurance

MBUAPCD follows a quality assurance program to ensure compliance with the regulations set within 40 CFR 58.

Consistent with these federal regulations, the California Air Resources Board, Quality Assurance Section (CARB QAS) conducts annual performance evaluations of nitrogen dioxide, ozone and carbon monoxide analyzers, meteorological instruments, and flow rates for PM2.5 and PM10 monitors. ARB QAS also conducts site evaluations as part of the annual audit at each air monitoring station. Physical measurements and observations, including probe/sensor height above ground level, distance from trees, type of ground cover, residence time, obstructions to air flow, and distance to local sources, topography, vehicle counts, predominant wind direction, and probe material are used to determine compliance with 40 CFR 58, Appendix E requirements.

The CARB QAS also ensures the quality of the data collected by the air monitoring sites operating in the NCCAB through analysis of precision data submitted to the U.S. EPA Aerometric Information Retrieval System, (EPA AIRS), on a monthly basis. They review the frequency of flow rate verifications for manual samplers and frequency of one-point quality control checks for gaseous instruments. On an annual basis, they perform an analysis of the precision data that concentrates on three parameters: precision data submission, precision data validity, and precision data usability. The data analyses are conducted in accordance with 40 CFR 58, Appendix A.

The EPA QAS, through a contractor, also conducts annual flow rate audits on PM2.5 and PM10 monitors. MBUAPCD performs both weekly and monthly checks of instrument functionality, and then either quarterly or semi-annual calibrations depending on the requirements for each individual instrument. MBAUPCD also has collocated PM10 and PM2.5 samplers in Salinas as a further quality check on its PM2.5 and PM10 monitoring network as required by 40 CFR 58, Appendix A.

Finally, CARB QAS conducts technical systems audits to determine if the District's air monitoring program satisfies the requirements of 40 CFR 58 and U.S. EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, April 1994. Compliance with these regulations is necessary for the data to be considered data-for-record, as required by the California Code of Regulations (Title 17, Article 3, section 70301). Data meeting these requirements may be used in actions taken pursuant to the Federal and State Clean Air Acts.

Proposed Modifications to Network in the Next 18 Months

There are several proposed changes to air monitoring network to occur due to mandates by the District's Board, and APCO to reduce air monitoring costs and improve efficiencies by shutting down parameters and stations.

- **Parameter changes for SLAM stations:**
The King City station is currently operated by an outside contractor. MBUAPCD will take over the operations currently performed by the Environmental Monitoring Company.
- **Parameter changes for special purpose monitoring:**
 - The Davenport Station will monitor only O3 and MET after closure of the nearby CEMEX facility.
 - The status of the Pinnacles National Monument may change based on CARB's recommendation that EPA designate Pinnacles as an O3 nonattainment area for the 2008 National Ambient Air Quality Standards (NAAQS) for ozone and that the boundaries of the nonattainment area be limited to those of the Pinnacles National Monument itself. All other areas of the NCCAB outside the boundaries of Pinnacles NM are recommended to be designated in attainment of all NAAQS.

Modifications Made to Network in 2009

The District collected data from nine monitoring sites initially in 2009. The following sites and/or monitoring parameters were changed:

- The Scotts Valley station was closed down on June 15, 2009.
- The Watsonville station was closed down on September 30, 2009.
- The PM10, SO2, and O3 monitors at the Davenport station were closed down on September 30, 2009.
- The PM10 monitor at the Carmel Valley Station was closed down on September 30, 2009.
- The filter-based PM2.5 monitors at Salinas, Santa Cruz, and Hollister stations were closed at midnight, December 30, 2009 and replaced by FEM BAM-1020s.

REVIEW OF CHANGES TO PM2.5 MONITORING NETWORK

NCCAB does not currently have any violations of the PM2.5 ambient air quality standards. In the event that standards are exceeded, there will be appropriate changes made to the PM2.5 monitoring network. This would then be documented in the annual network plan which would then undergo a thirty day public review and final approval by the District Board before submittal to the EPA.

DATA SUBMISSION REQUIREMENTS

Precision reports are submitted to the EPA's Aerometric Information Retrieval System. Annual data certification is submitted by May 1st, each year.

Detailed Site Information for State and Local Air Monitoring Stations (SLAMS)

Salinas 3

The current location of this station was established in December 1999 to monitor air quality conditions in the Salinas MSA, the District's most populated area. This station features one of the District's most extensive set of measurements. The data collected include CO, NO₂, O₃, PM₁₀, PM_{2.5}, BAM-PM_{2.5}, WSA, WDA and ATM. Particulate data, PM₁₀ and PM_{2.5} are acquired by filter based instruments operating on the 1 in 6 day schedule. PM_{2.5} data is also acquired hourly using the newer FEM BAM-1020 technology. Data from this populated area generally indicate good air quality and meet all state and federal standards for CO, NO₂, O₃, PM₁₀, and PM_{2.5}. Data from this site have been useful in assessing population impacts during unusual events, such as wildfires at Fort Ord.

Salinas Site Information

Site Name	Salinas 3
AQS ID	06-053-1003
GIS coordinates	N 36° 41' 39.5" W 121° 37' 23.6" Elevation: 21.3 meters
Location	High school. Urban and Center City.
Address	867 East Laurel Dr., Salinas, CA. 93905
County	Monterey
Dist. to road	5000m
Traffic count	19000 ADT
Groundcover	Gravel
Representative Area	MSA: Salinas, CA.

Salinas Air Monitoring Instrument Information

Pollutant	O3	CO	NO2	PM10	PM10 Colo
Monitor obj	Representative Concentration	Representative Concentration	Representative Concentration	Representative Concentration	Representative Concentration
Monitor classification	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	TEI 49C	TEI 48	TECO 42C	Andersen	Andersen
Analysis method	N/A	N/A	N/A	Filter Weighed at MBUAPCD	Filter Weighed at MBUAPCD
Start date	12/31/1999	12/31/1999	12/31/1999	12/31/1999	9/1/2005
Operation schedule	Continuous	Continuous	Continuous	1:06	1:06
Sampling season	Year Round	Year Round	Year Round	Year Round	Year Round
Probe height	6.9m	6.9m	6.9m	2.8m	2.8m
Distance from supporting structure	6.9m	6.9m	6.9m	1.4m	1.4m
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	N/A	N/A	N/A	N/A	N/A
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	4.0m	4.0m
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	Teflon	Teflon	Teflon	N/A	N/A
Residence time	3.7s	4.1s	4.6s	N/A	N/A
Will there be changes within the next 18 months?	No	Yes, instrument will be shut down.	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	N/A	Semi-annual	Semi-annual
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	Daily	Weekly	Weekly	N/A	N/A
Last Annual Performance Evaluation (gaseous)	3/18/2009	3/18/2009	3/18/2009	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	6/22/2009 3/10/2010	6/22/2009 3/10/2010

Salinas Air Monitoring Instrument Information

Pollutant	Wind Speed	Wind Dir	ATM	Continuous PM2.5 (FEM BAM-1020)	PM2.5 Colo
Monitor obj	N/A	N/A	N/A	Representative Concentration	Representative Concentration
Monitor classification	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	MET-ONE 010C	MET-ONE 020B	MET-ONE 064-2	MET ONE FEM BAM-1020	R & P
Analysis method	N/A	N/A	N/A	N/A	Filter Weighed at Bay Area AQMD
Start date	12/31/1999	12/31/1999	12/31/1999	1/1/2009	11/1/2008
Operation schedule	Continuous	Continuous	Continuous	Continuous	1:06
Sampling season	Year Round	Year Round	Year Round	Year Round	Year Round
Probe height	10m	10m	10m	6.1m	6.1m
Distance from supporting structure	10m	10m	10m	1.7m	1.7m
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	N/A	N/A	N/A	N/A	N/A
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	1.8m	1.8m
Unrestricted airflow	360 degrees	360 degrees	360 degrees	360 degrees	360 degrees
Probe material	N/A	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No	No.
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	Yes	Yes.
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	N/A	N/A	Monthly
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	Weekly	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	6/22/2009 3/10/2010	6/22/2009 3/10/2010

Carmel Valley

This station was established in 1982 due to the smoke sensitive nature of the rural/residential Carmel Valley. The limited natural ventilation of the valley can also lead to trapping of ozone. Measurements made at this site include O₃, WSA, WDA and ATM. Data from this location has been useful for issuing public Health Advisories during wildfire events.

Carmel Valley Site Information

Site Name	Carmel Valley
AQS ID	06-053-0002
GIS coordinates	N 36° 28' 54.5" W 121° 44' 0.1" Elevation: 137.2 meters
Location	Tularicitos Elementary School grounds. Suburban.
Address	35 Ford Rd., Carmel Valley, CA. 93924
County	Monterey
Dist. To road	25m
Traffic count	1000 ADT
Groundcover	Paved
Representative Area	MSA: Salinas, CA.

Carmel Valley Instrument Information

Pollutant	O3	Wind Dir	Wind Speed	ATM
Monitor obj	Representative Concentration	N/A	N/A	N/A
Monitor classification	SLAMS	SLAMS	SLAMS	SLAMS
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	TEI 49C	MET-ONE 020C	MET-ONE 010C	MET-ONE 064-2
Analysis method	N/A	N/A	N/A	N/A
Start date	10/12/1982	7/1/2007	7/1/2007	1/1/1997
Operation schedule	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round
Probe height	5.8m	10m	10m	10 m
Distance from supporting structure	2.4m	10m	10m	10m
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	30.5m	32m	32m	32m
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	360 Degrees	360 degrees	360 degrees	360 Degrees
Probe material	Teflon	N/A	N/A	N/A
Residence time	7.7s	N/A	N/A	N/A
Will there be changes within the next 18 months?	No.	No.	No.	No.
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	Daily	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	3/17/2010	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A

King City 2

This station was relocated to the city center in 2007, and now serves as a population exposure/representative concentration site. The station is currently operated by a contractor for the District. Measurements made at the site include PM10, O3, WSA, WDA and ATM. This is the southernmost site in the NCCAB network.

King City 2 Site Information

Site Name	King City 2
AQS ID	06-053-0008
GIS coordinates	N 36° 12' 32.8" W 121° 07' 33.5" Elevation: 99 meters
Location	San Lorenzo Middle School, residential, suburban.
Address	415 Pearl St., King City, CA. 93930
County	Monterey
Dist. To road	50 m
Traffic count	500 ADT
Groundcover	Paved
Representative Area	MSA: Salinas, CA.

King City Instrument Information

Pollutant	O3	PM10	Wind Dir.	Wind Speed	ATM
Monitor obj	Representative Concentration	Representative Concentration	N/A	N/A	N/A
Monitor classification	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	Dasibi 1003-AH,	Tisch Volumetric	RM Young 5305v	RM Young 5305v	RM Young 5305v
Analysis method	N/A	Filters weighed at MBUAPCD.	N/A	N/A	N/A
Start date	6/1/2007	6/1/2007	10/1/2007	10/1/2007	10/1/2007
Operation schedule	Continuous	1:06	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round	Year Round
Probe height	4.7	4.8	10m	10m	10m
Distance from supporting structure	1	2	10m	10m	10m
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	N/A	N/A	N/A	N/A	N/A
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	360 Degrees	360 Degrees	360 Degrees	360 Degrees	360 Degrees
Probe material	Teflon	N/A	N/A	N/A	N/A
Residence time	1.7s	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	Annually	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	Daily	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	3/8/2010	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	6/22/2009 3/08/2010	N/A	N/A	N/A

Santa Cruz

Monitoring at this station began in 1996 to assess population exposure in the Santa Cruz/Watsonville Metropolitan Statistical Area (MSA). Santa Cruz is currently the largest city in Santa Cruz County and is the second most populated city in the NCCAB. Data acquired at this SLAMS site include O₃, PM₁₀, PM_{2.5}, BAM PM_{2.5}, WSA, WDA and ATM. PM₁₀ data is acquired by filter based instruments operating on the 1 in 6 day schedule. PM_{2.5} data is also acquired continuously using the newer FEM BAM-1020 technology. The data generally indicate good air quality and meet all state and federal standards for both ozone and particulates.

Santa Cruz Site Information

Site Name	Santa Cruz
AQS ID	06-087-0007
GIS coordinates	N 36° 59' 2.34" W 121° 59' 27.7" Elevation: 24.4 meters
Location	Office Building
Address	2544 Soquel Ave., Santa Cruz, CA. 95062
County	Santa Cruz
Dist. To road	74m
Traffic count	23818 ADT
Groundcover	Roof
Representative Area	MSA: Santa Cruz – Watsonville, CA.

Santa Cruz Instrument Information

Pollutant	O3	PM10	Wind Dir.	Wind Speed	ATM	Continuous PM2.5 (FEMBAM-1020)
Monitor obj	Representative Concentration	Representative Concentration	N/A	N/A	N/A	Representative Concentration
Monitor classification	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	TEI 49C	Andersen	MET-ONE 020B	MET-ONE 010B	MET-ONE 064-2	MET ONE FEMBAM-1020
Analysis method	N/A	Filter weighed at MBUAPCD	N/A	N/A	N/A	N/A
Start date	9/1/1996	9/1/1996	8/1/2006	8/1/2006	1/1/1999	1/1/2009
Operation schedule	Continuous	1:06	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round	Year Round	Year Round
Probe height	5.8m	5.2m	7.7m	7.7m	7.7m	5.5m
Distance from supporting structure	2.0m	1.4m	3.9m	3.9m	3.9m	2.0m
Distance from obstructions on roof	N/A	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	N/A
Distance from trees	25'	25'	35'	35'	35'	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A	N/A	N/A
Unrestricted airflow	360 Degrees	360 Degrees	360 Degrees	360 Degrees	360 Degrees	360 degrees
Probe material	Teflon	N/A	N/A	N/A	N/A	N/A
Residence time		N/A	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A	Yes
Frequency of flow rate verification for manual PM samplers audit	N/A	Annually	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A	N/A	Weekly
Frequency of one-point QC check (gaseous)	Daily	N/A	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	3/20/2008	N/A	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	6/23/2009 3/17/2010	N/A	N/A	N/A	6/23/2009 3/17/2010

Hollister

This station was established in 1987 to monitor population exposure in the Hollister area, the largest and most rapidly growing city in San Benito County. Data acquired at this site include O₃, PM₁₀, BAM PM_{2.5}, WSA, WDA and ATM. PM₁₀ and data is acquired by filter based instruments operating on the 1 in 6 day schedule. PM_{2.5} data is acquired continuously using the newer FEM BAM-1020 technology. Hollister is the second highest station on the NCCAB's ozone monitoring network. Ozone levels at Hollister are impacted by both local sources as well as ozone transported from the SFBAAB. Ozone data from this site have been useful in a number of regional photochemical modeling studies including SARMAP, CCOS as well as a special District funded project using the BAAQMD's urban airshed model. PM₁₀ exceedances at this site can occasionally be impacted by wildfire events, although fugitive dust appears to be the most common contributor to PM₁₀ measurements.

Hollister Site Information

Site Name	Hollister
AQS ID	06-069-0002
GIS coordinates	N 36° 50' 36.2" W 121° 21' 43.8" Elevation: 134.1 meters
Location	On CDF Station, edger of town.
Address	1979 Fairview Rd., Hollister, CA. 95023
County	San Benito
Dist. To road	100m
Traffic count	7392 ADT
Groundcover	Gravel
Representative Area	MSA: San Jose – Sunnyvale – Santa Clara, CA.

Hollister Instrument Information

Pollutant	O3	PM10	Wind Dir.	Wind Speed	ATM	Continuous PM2.5 (FEM BAM-1020)
Monitor obj	Hi Concentration	Hi Concentration	N/A	N/A	N/A	Hi Concentration
Monitor classification	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	TEI 49C	Andersen	MET-ONE 020B	MET-ONE 010B	MET-ONE 064-2	MET ONE FEM BAM-1020
Analysis method	N/A	Filter Weighed at MBUAPCD.	N/A	N/A	N/A	N/A
Start date	1/1/1980	1/1/1980	1/1/1980	1/1/1980	1/1/1980	1/1/2009
Operation schedule	Continuous	1:06	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round	Year Round	Year Round
Probe height	4.7m	2.9m	10m	10m	10m	4.7m
Distance from supporting structure	1.6m	1.6m	10m	10m	10m	1.8m
Distance from obstructions on roof	N/A	N/A	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	2.6m	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A	N/A	1.8m
Unrestricted airflow	360 Degrees	360 Degrees	360 Degrees	360 Degrees	360 Degrees	360 degrees
Probe material	Teflon	N/A	N/A	N/A	N/A	N/A
Residence time	6.5s	N/A	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	No.	No.	No.	No.	No.	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A	Yes
Frequency of flow rate verification for manual PM samplers audit	N/A	Annually	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A	N/A	Weekly
Frequency of one-point QC check (gaseous)	Daily	N/A	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	3/15/2010	N/A	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	6/22/2009 3/15/2010	N/A	N/A	N/A	6/22/2009 3/15/2010

**Detailed Site information for Special Purpose Monitoring (SPM) Sites
Davenport**

This station was established in 1993 as a permit condition for the nearby cement plant. This special purpose station was established to monitor plant related impacts on the nearby town of Davenport. Data currently acquired at site include NOX, CO, WSA, WDA and ATM. Also measurements of NOX, and CO are made to monitor potential impacts from the cement plant. Funding for the station has been part of the permit conditions of the cement plant, and the station is operated by the District.

Davenport Site Information

Site Name	Davenport
AQS ID	06-087-0003
GIS coordinates	N 37° 00' 43.3" W 122° 11' 37.9" Elevation: 30.5 meters
Location	Elementary School
Address	Center St., Davenport, CA. 95017
County	Santa Cruz
Dist. To road	100m
Traffic count	7200 ADT
Groundcover	Gravel
Representative Area	MSA: Santa Cruz – Watsonville, CA.

Davenport Instrument Information

Pollutant	NO2	CO	Wind Dir.	Wind Speed	ATM
Monitor obj	Special Purpose	Special Purpose	N/A	N/A	N/A
Monitor classification	SPM	SPM	SPM	SPM	SPM
Spatial scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Sampling method	TEI 42C	TEI 48	MET-ONE 020B	MET-ONE 010B	MET-ONE 064-2
Analysis method	N/A	N/A	N/A	N/A	N/A
Start date	12/1/1986	12/1/1986	12/1/1986	12/1/1986	12/1/1986
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	Year Round	Year Round	Year Round	Year Round	Year Round
Probe height	5.2m	5.2m	10m	10m	10m
Distance from supporting structure	1.2m	1.2m	10m	10m	10m
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	10m	10m	10m	10m	10m
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	360 Degrees	360 Degrees	360 Degrees	360 Degrees	360 Degrees
Probe material	Teflon	Teflon	N/A	N/A	N/A
Residence time	7.3s	6.5s	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	Weekly	Weekly	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	3/16/2010	3/16/2010	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	N/A

Pinnacles

This station was established in 1987 by the National Parks Service (NPS) to monitor conditions at Pinnacles National Monument, which is a federal Class I protected area, and part of the national park monitoring network operated by the National Parks Service. Data acquired at this site include O₃, WS, WD and T. In addition, as part of the federal Interagency Monitoring of Protected Visual Environments (IMPROVE) program, a wide variety of particulate aerosols is monitored for the purpose of assessing visibility trends. However, the only parameters reported by MBUAPCD at this site are O₃ and 8HrO₃. Although located in a remote unpopulated area, ozone readings at this site are the highest in the District and the ozone data are used to establish the NCCAB's designations in relation to the state and federal standards.

ARB's triennial transport assessments have demonstrated that the cause of the high readings at this mountain site is often overwhelming transport, particularly from the upwind San Francisco Bay Area. Nitrate data from the IMPROVE monitors have also been used in District plans to indicate an improving trend, most likely due to regional reductions in motor vehicle NO_x emissions, as well as controls on stationary sources.

Pinnacles Site Information

Site Name	Pinnacles
AQS ID	06-069-0003
GIS coordinates	N 36° 29' 57" W 121° 10' 18" Elevation: 305 meters
Location	National Park
Address	Pinnacles National Monument, 5000 Hwy 146, Paicines, CA. 95043
County	San Benito
Dist. To road	75 m
Traffic count	200 ADT
Groundcover	Gravel
Representative Area	CBSA: San Jose – Sunnyvale – Santa Clara, CA.

Pinnacles Instrument Information:

Pollutant	O ₃	Distance from trees	N/A
Monitor obj	Rep. Conc.	Distance to furnace or incinerator flue	N/A
Monitor classification	SPM	Distance between collocated monitors	N/A
Spatial scale	Neighborhood	Unrestricted airflow	360 Degrees
Sampling method	Teco 49c	Probe material	Teflon
Analysis method	N/A	Residence time	9.4s
Start date	11/7/1986	Will there be changes within the next 18 months?	No
Operation schedule	Continuous	Is it suitable for comparison against the annual PM _{2.5} ?	N/A
Sampling season	Year Round	Frequency of flow rate verification for manual PM samplers audit	N/A
Probe height	10.0 meters	Frequency of flow rate verification for automated PM analyzers audit	N/A
Distance from supporting structure	N/A	Frequency of one-point QC check (gaseous)	N/A
Distance from obstructions on roof	N/A	Last Annual Performance Evaluation (gaseous)	3/9/2010
Distance from obstructions not on roof	N/A	Last two semi-annual flow rate audits for PM monitors	N/A

Appendix A - Public Process

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As of June 29, 2010 no comments received to the District.
WEB page print out is attached.