

air pollution control district
SANTA BARBARA COUNTY

Annual Air Monitoring Network Plan for Santa Barbara County

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Draft

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1.0 Introduction

This report was prepared to meet the requirements for an annual criteria pollutant air monitoring network plan as listed in federal ambient air monitoring regulations (Title 40, Part 58, Section 10 of the Code of Federal Regulations (40 CFR 58.10)). This review is used to determine whether the State and Local Air Monitoring Station (SLAMS) network in Santa Barbara County meets the U.S. Environmental Protection Agency (U.S. EPA) criteria for station siting based on the U.S. EPA monitoring objectives. The network review ensures that the data collected by the SLAMS air monitoring network in Santa Barbara County is representative and will satisfy specific monitoring objectives of U.S. EPA, California Air Resources Board (CARB), and the Santa Barbara County Air Pollution Control District (District). This network plan includes SLAMS and Special Purpose Monitors (SPM) which are federal reference methods (FRM), federal equivalent methods (FEM), or approved regional methods (ARM). The report also provides information on air monitoring in Santa Barbara County that is not considered SLAMS monitors.

The language of 40 CFR 58.10 is included in Appendix A of this report. The regulations require that this annual monitoring network plan be submitted to the U.S. EPA by July 1 of each year. The plan must be made available for public inspection for at least 30 days prior to submission to U.S. EPA. A draft plan was available for public review and comment from May 28 through June 27, 2026. Email notification was sent to the District's Public Notices listserv and the plan was available for review at the District offices at 260 N San Antonio Rd, Suite A, Santa Barbara, CA, 93110, and 1011 W McCoy Lane, Santa Maria, CA, 93455, and also on the District website: www.ourair.org/news. The public notice can be found in Appendix B.

Industrial, special study, and hydrogen sulfide monitors (H₂S), as well as low-cost air quality sensors, are also included in this plan for informational purposes. Special study monitors operated by the District are typically short-term monitoring projects, that are non-SLAMS monitors, and the data is typically not submitted to U.S. EPA's Air Quality System (AQS). The Industrial monitors in Santa Barbara County consist of several stations operated by the District or private contractors. There are several major oil and gas developments in Santa Barbara County with permits for the production, processing and transportation of oil and gas. The Industrial stations are designed to measure regional air quality in addition to criteria pollutants and odorous compounds from these oil and gas facilities. Operating permits for the oil and gas facilities require the Industrial monitors to be operated for the life of the permitted facility. These Industrial monitors are not utilized for comparison to national ambient air quality standards (NAAQS), are not counted in assessing minimum monitoring requirements, and are considered secondary monitors by U.S. EPA. The District expects special study, Industrial, and H₂S monitors to meet the same quality control requirements as SLAMS monitors. Appendix

D of this document provides a detailed description of special study, Industrial, and H₂S monitors, as well as low-cost air quality sensor monitoring in Santa Barbara County.

1.1 SLAMS Network Design

The air monitoring network in Santa Barbara County consists of SLAMS monitors operated by the District and private contractors. The monitoring network is designed to cover the diverse range of topography, meteorology, emissions, and air quality in Santa Barbara County, while adequately representing the population in the county.

The District has agreed to coordinate the air monitoring network design with CARB through the joint Primary Quality Assurance Organization (PQAO) Roles and Responsibilities agreement between the two agencies. Item 5 of this agreement stipulates that both agencies will coordinate any changes to the network, assuring that the requirements of the network design are met. Complete details of the Roles and Responsibilities can be obtained from the following link: <https://ww2.arb.ca.gov/our-work/programs/quality-assurance/qm-document-repository/quality-assurance-roles-responsibility>.

This network review is used to determine whether the monitoring system meets the monitoring objectives defined in 40 CFR 58 Appendix D. The three basic monitoring objectives as described in Appendix D are:

- 1) Provide air pollution data to the general public in a timely manner;
- 2) Support compliance with ambient air quality standards and emissions strategy development; and,
- 3) Support for air pollution research studies.

1.2 SLAMS Stations

To support the air quality management work indicated in the three basic air monitoring objectives, the network is designed with a variety of monitoring station types. There are six general types:

- 1) Highest concentrations expected to occur in the area;
- 2) Typical concentrations in areas of high population density;
- 3) Impact of significant sources on air quality;
- 4) General background concentration levels;
- 5) Regional pollutant transport among populated areas; and,

6) Air pollution impact on visibility, vegetation damage or other welfare-based impacts.

During 2018 and 2019, the District worked with CARB and U.S. EPA to modify the monitoring network to streamline resources from redundant and non-essential monitors while maintaining one of the most extensive air monitoring networks in the state. In February 2019, the District received U.S. EPA approval to shut down some monitors, change some Industrial monitors approved for shutdown to non-NAAQS compliant (removing CARB and U.S. EPA oversight), and change the ozone (O₃) monitors at Paradise Road, Carpinteria, and Las Flores Canyon #1 from Industrial to SLAMS monitors. Additionally, the District agreed to develop a transition plan to take responsibility for the operation of the Santa Barbara and Santa Maria SLAMS monitoring stations that were historically operated by CARB. The District took responsibility for the Santa Barbara station in January 2020. CARB shut down the Santa Maria site on February 28, 2021, and the District started operating a new Santa Maria site location in October 2022. The District selected a new location for the Santa Maria site due to the CARB site location not meeting siting criteria. The other changes to the monitoring network were implemented in March 2019. This report details the network following implementation of these network modifications.

After the network modifications in March 2019, there are now 8 ambient air monitoring stations with SLAMS monitors located in Santa Barbara County. Figure 1.1 shows the location of the SLAMS stations on a map of Santa Barbara County. Table 1.1 lists the sites in Santa Barbara County after the network modification and identifies the station's U.S. EPA AQS identification code, type of station, and operator. These stations are operated for different objectives. The stations with SLAMS monitors are sited to measure the typical concentrations in areas of high population density and/or to measure the highest values for a pollutant. Appendix D provides details on non-SLAMS monitoring in Santa Barbara County.

Figure 1.1
Map of the SLAMS Monitoring Network in Santa Barbara County for 2026

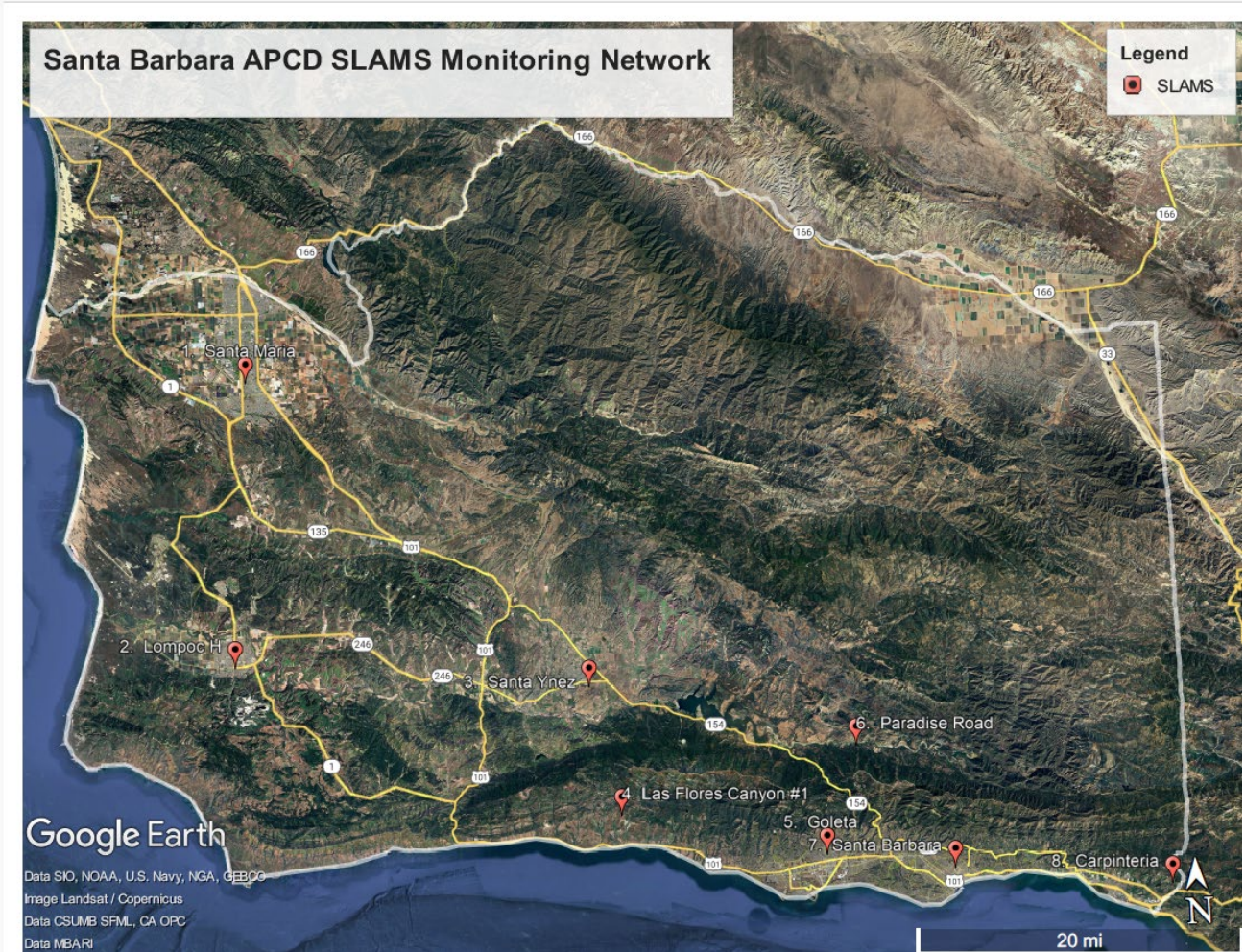


Table 1.1
SLAMS Monitoring Network in Santa Barbara County for 2026

No.	Name	Site Code	Type	Operator
1	Santa Maria	060831009	SLAMS ¹	District
2	Lompoc H Street	060832004	SLAMS	District
3	Santa Ynez	060833001	SLAMS	District
4	Las Flores Canyon #1	060831025	SLAMS ¹	District
5	Goleta	060832011	SLAMS	District
6	Paradise Road	060831014	SLAMS ¹	Contractor
7	Santa Barbara	060830011	SLAMS	District
8	Carpinteria	060831021	SLAMS ¹	District

¹ Ozone monitors at these locations are SLAMS; other monitors at these sites are Industrial.

1.3 Monitors

Many of the stations in the monitoring network serve multiple purposes. They may be ideal for background concentration for one pollutant, while also measuring the impact of transport for another pollutant. To clarify the nature of the link between the general monitoring objectives, station types, and physical location of a monitor, the concept of spatial scale of representativeness is defined. The goal of locating monitors is to correctly match the spatial scale represented by the sample of monitored air with the spatial scale most appropriate for the monitoring station type, air pollutant to be measured, and the monitoring objective. The scales of representativeness of most interest for the monitoring station types are described as follows:

- 1) Micro scale – Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters;
- 2) Middle scale – Defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer;
- 3) Neighborhood scale – Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range;
- 4) Urban scale – Defines concentrations within an area of city like dimensions, on the order of 4 to 50 kilometers; and,
- 5) Regional scale – Defines usually a rural area of reasonably homogeneous geography without large sources and extends from tens to hundreds of kilometers.

Classification of the monitor by its type and spatial scale of representativeness aids in the interpretation of the monitoring data for a monitoring objective. Table 1.2 illustrates the relationship between the various station types that can be used to support the three basic monitoring objectives and the scales of representativeness that are generally most appropriate for that type of station.

Table 1.2
Relationship between Station Types and Scales of Representativeness

Type	Appropriate Siting Scales
Highest concentration	Micro, middle, neighborhood (sometimes urban or regional for secondarily formed pollutants)
Population oriented	Neighborhood, urban
Source Impact	Micro, middle, neighborhood
General/background and regional transport	Urban, regional
Welfare-related impacts	Urban, regional

The stations and the monitors at each location in Santa Barbara County are listed in Table 1.3. The table includes the spatial scale and monitoring objective for each monitored pollutant.

Table 1.3
SLAMS Measured Parameters with Spatial Scale and Monitoring Objective

Parameter	O ₃	NO ₂	SO ₂	CO	PM _{2.5}	PM ₁₀
AIRS Pollutant Code	44201	42602	42401	42101	88101	81102
Carpinteria	RS/HC					
Goleta	US/PO				NS/PO	NS/PO
Las Flores Canyon # 1	RS/HC					
Lompoc H St.	NS/PO	NS/PO	NS/PO	NS/PO	NS/PO	NS/PO
Paradise Road	RS/HC					
Santa Barbara	US/PO				NS/HC	NS/PO
Santa Maria	US/PO				NS/PO	NS/HC
Santa Ynez	US/PO				US/PO	

Spatial Scale:

- MI - Microscale
- MS - Middle Scale
- NS - Neighborhood Scale
- US - Urban Scale
- RS - Regional Scale
- NG - National and Global scale

Monitoring Objective:

- HC - Highest concentration
- PO - Population Oriented
- IM - Source Impact
- BL - Background Levels
- WR - Welfare-related impacts

2.0 Monitoring Requirements

U.S. EPA regulations specify the minimum number of locations at which state and local air agencies must deploy monitors. Santa Barbara County meets or exceeds U.S. EPA's minimum requirements. In practice, state and local agencies find they need to deploy more monitors than required by the law. The additional monitors are needed to fulfill state and local monitoring needs. Several monitors are required by operating permits issued to stationary emission sources. California ambient air quality standards are generally more stringent than national standards and require more monitors to demonstrate compliance with the state standards. Monitors are also used to keep the public informed of the air quality conditions where they live and work. Due to the complex topography and meteorology in Santa Barbara County, more monitors than the minimum required by U.S. EPA are needed to properly characterize the air quality in different areas of the county.

The requirements for numbers of monitors appear in Appendix D of Part 58 of the Code of Federal Regulations (CFR). For O₃, PM_{2.5}, and PM₁₀, the required minimum number is based on the population of an area and the severity of the air quality for the pollutant in that area. For other pollutants, no monitoring is required unless an area exceeds or is close to exceeding a national ambient air quality standard. For purposes of the minimum requirements, the areas are defined by the Metropolitan Statistical Areas (MSAs) and Core-Based Statistical Areas (CBSAs) developed by the U.S. Census Bureau. Santa Barbara County is part of the Santa Maria – Santa Barbara MSA and CBSA. It covers the major cities in our county and has a population count of 444,974 based on the California Department of Finance January 2026 estimate¹.

All criteria pollutant SLAMS monitors in Santa Barbara County are sited and operated to meet the requirements outlined in 40 CFR 58 Appendix A, B, C, D, and E where applicable.

2.1 Ozone (O₃)

Data from O₃ monitors in Santa Barbara County are utilized to inform the public on air quality through air quality index (AQI) reporting and air quality mapping. Additionally, the data from these sites are compared to the federal and state standards to assess whether Santa Barbara County is in attainment of those standards.

The minimum monitoring requirements for O₃ are listed in Table 2.1. Santa Barbara County has nine O₃ monitors, with eight of these being SLAMS monitors that meet U.S. EPA requirements. Santa Barbara County has a design value of 0.062 ppm for the federal O₃ standard, based on 2023 – 2025 data; this design value meets the federal 8-hour O₃ standard of 0.070 ppm. In January 2023, CARB proposed amendments to area

¹ <https://dof.ca.gov/forecasting/demographics/estimates/>

designations for the state ambient air quality standards and recommended that Santa Barbara County be designated as nonattainment – transitional for the state O₃ standards. Effective January 1, 2024, Santa Barbara County is designated as nonattainment-transitional for the state O₃ standard. In 2025, Santa Barbara County didn't record any concentrations of O₃ that exceeded the federal and state 8-hour O₃ standards. However, Santa Barbara remains designated as nonattainment-transitional for the state O₃ standard.

Table 2.1
Minimum Monitoring Requirements for Ozone

MSA	County	Pop. (year)	8-hour Design Value (years) ²	Design Value Site (name, AQS ID)	Min. # Sites Required	# Sites Active ¹	Sites Needed
Santa Barbara – Santa Maria, CA	Santa Barbara County	444,974 (2026)	.062 ppm 2023 - 2025	Paradise Rd 060831014	2	8	0

¹ Only SLAMS monitors are counted towards meeting minimum monitoring requirements. Also, O₃ monitors that do not meet traffic count/distance requirements to be neighborhood or urban scale (40 CFR 58 Appendix E, Table E-1) are not counted towards minimum monitoring requirements.

² DV Years = the three years over which the design value (DV) was calculated (e.g., 2023 - 2025).

Monitors required for State Implementation Plan (SIP) or Maintenance Plan: Santa Barbara County has a maintenance plan for O₃ that requires any modification to the existing O₃ network to be approved by U.S. EPA.

2.2 Carbon Monoxide (CO)

There are no U.S. EPA minimum requirements for the number of CO monitoring sites for CBSAs with a population less than one million. For CBSAs with a population of one million or greater, near-roadway CO monitors are required. Continued operation of existing SLAMS CO stations is required until discontinuation is approved by the U.S. EPA. In 2025 there was only one SLAMS CO monitor, located at Lompoc H Street. The Lompoc H Street CO monitor is used to measure the impacts of high population exposure and is not a near-roadway monitor. Table 2.2 lists the near-roadway monitoring requirements.

Table 2.2
Near-Roadway Monitoring Requirements

CBSA/MSA	Pop. (year)	# Required Near-Roadway Monitors	# Active Near-Roadway Monitors	# Additional Monitors Needed
Santa Barbara Santa Maria, CA	444,974 (2026)	0	0	0

Monitors required for SIP or Maintenance Plan: None

U.S. EPA Regional Administrator-required monitors per 40 CFR 58, App.D 4.2.2: None

2.3 Nitrogen Dioxide (NO₂)

Ambient air monitoring and reporting requirements for NO₂ are based on U.S. EPA’s 2010 rule. One “near-road” monitor is required in urban areas with a population greater than or equal to 500,000 people. A second monitor is required near another major road in areas with either a population greater than or equal to 2.5 million people or a road segment with an annual average daily traffic count greater than or equal to 250,000 vehicles. One community-wide monitor is required in urban areas with a population of greater than or equal to 1 million people. Santa Barbara does not meet any of these criteria, so no NO₂ monitors are required. However, continued operation of existing SLAMS NO₂ sites is required until discontinuation is approved by the U.S. EPA. There is one SLAMS NO₂ monitor located at Lompoc H Street used to measure the impacts of population exposure. Table 2.3 lists the minimum monitoring requirements for NO₂.

Table 2.3
Minimum Monitoring Requirements for Nitrogen Dioxide

CBSA/MS A	Pop. (year)	Max AADT	# Required Near-Roadway	# Active Near-Roadway	# Additional Near-Roadway needed	# Required Area-wide	# Active Area-wide ¹	# Additional Area-wide needed
Santa Barbara Santa Maria, CA	444,974 (2026)	N/A (below pop. Threshold)	0	0	0	0	1	0

¹ Only SLAMS sites are counted for minimum monitoring requirements.

Monitors required for SIP or Maintenance Plan: None

Monitors required for PAMS: None

U.S. EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.3.4: None

2.4 Sulfur Dioxide (SO₂)

Ambient air monitoring and reporting requirements for SO₂ are based on U.S. EPA’s June 2, 2010 rule, where U.S. EPA strengthened the primary NAAQS for SO₂. Monitors are required based on CBSAs, using a population-weighted emissions index for the area. Three monitors are required in CBSAs with index values of 1,000,000 or more. Two monitors are required in CBSAs with index values less than 1,000,000 but greater than 100,000. One monitor is required in CBSAs with index values greater than 5,000. Continued operation of existing SLAMS SO₂ sites is required until discontinuation is approved by the U.S. EPA. There is one SLAMS SO₂ monitor at Lompoc H Street that is used to measure the impacts of population exposure. Table 2.4 lists the minimum monitoring requirements for SO₂.

Table 2.4
Minimum Monitoring Requirements for Sulfur Dioxide

CBSA/MSA	County	Pop. (year)	Total SO ₂ ¹ (Ton/yr)	Population Weighted Emissions Index ²	Data Requirements Rule Source(s) using Monitoring	# Required Monitors	# Active Monitors ³	# Additional Monitors Required
Santa Barbara Santa Maria, CA	Santa Barbara	444,974 (2026)	240	106.8	N/A below emissions threshold	0	1	0

¹ Using NEI data (2020).

² Calculated by multiplying CBSA population and total SO₂ and dividing product by one million.

³ Only SLAMS sites are counted for minimum monitoring requirement.

Monitors required for SIP or Maintenance Plan: None

U.S. EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.4.3: None

2.5 Particulate Matter (PM₁₀)

The minimum monitoring requirements for PM₁₀ are listed in Table 2.5. There are four SLAMS PM₁₀ monitors located at Santa Barbara, Goleta, Lompoc H Street, and Santa Maria.

Table 2.5
Minimum Monitoring Requirements for PM₁₀

MSA	County	Pop. (year)	Max 24 Hour Concentration (ug/m3)	2025 Max Concentration Site (name, AQS ID)	# Required Sites	# Active Sites ¹	# Additional Sites Needed
Santa Barbara – Santa Maria, CA	Santa Barbara County	444,974 (2026)	119 (6/21/2025)	Santa Maria 060831009	0-1	4	0

¹ Only SLAMS sites are counted for minimum monitoring requirement.

Monitors required for SIP or Maintenance Plan: None

2.6 Particulate Matter (PM_{2.5})

The minimum monitoring requirements for PM_{2.5} are listed in Tables 2.6a and 2.6b. There are five SLAMS PM_{2.5} monitors located at Santa Barbara, Santa Maria, Goleta, Lompoc H Street, and Santa Ynez. The annual design value calculations (2023-2025) for these sites are listed in Tables 2.6a and 2.6b.

PM_{2.5} colocation requirements are based on the PQAO network. Santa Barbara County is part of the CARB PQAO. See the CARB annual network plan for details on meeting the PM_{2.5} colocation requirements.

Table 2.6a
Minimum Monitoring Requirements for PM_{2.5} Monitors

MSA	County	Pop. (year)	Annual Design Value (years ¹)	Annual Design Value Site (name, AQS ID)	Daily Design Value (years)	Daily Design Value Site (name, AQS ID)	# Required SLAMS Sites	# Active SLAMS Sites ²	# Additional SLAMS Sites Needed
Santa Barbara – Santa Maria, Ca	Santa Barbara County	444,974 (2026)	8.3 ug/m ³ 2023 – 2025	Santa Barbara 06-083-0011	16 ug/m ³ 2023 - 2025	Santa Barbara 06-083-0011	0	5	0

¹ DV Years = the three years over which the design value (DV) was calculated (e.g., 2023-2025).

² Only SLAMS sites are counted for minimum monitoring requirement.

Monitors required for SIP or Maintenance Plan: None

Table 2.6b
Minimum Monitoring Requirements for Continuous PM_{2.5} Monitors

MSA	County	Pop. (year)	Annual Design Value (years ¹)	Annual Design Value Site (name, AQS ID)	Daily Design Value (years)	Daily Design Value Site (name, AQS ID)	# Required Cont. Monitors	# Active Cont. Monitors ³	# Additional Cont. Monitors ² Needed
Santa Barbara – Santa Maria, Ca	Santa Barbara County	444,974 (2026)	8.3 ug/m ³ 2023 – 2025	Santa Barbara 06-083-0011	16 ug/m ³ 2023 - 2025	Santa Barbara 06-083-0011	0	5	0

¹ DV Years = the three years over which the design value (DV) was calculated (e.g., 2023-2025).

² Only count one continuous monitor per site.

³ Only SLAMS sites are counted for minimum monitoring requirement.

Monitors required for SIP or Maintenance Plan: None

2.7 Lead (Pb)

The monitoring requirements for lead (Pb) are based on U.S. EPA’s 2008 rule. The level of the primary standard is set at 0.15 µg/m³ measured as total suspended particles. The secondary standard is identical to the primary standard. Source-oriented monitors are required in areas with airport sources that emit one ton or more per year of Pb or non-airport sources that emit one-half ton per year of Pb. Additionally, non-source Pb monitoring is required at NCore sites in a CBSA with a population greater than 500,000. The population of Santa Barbara County is below the 500,000 threshold and there are no NCore sites required in Santa Barbara County; therefore, non-source Pb monitors are not required. The highest emission inventory of Pb in Santa Barbara County is for the Santa Barbara Municipal airport with 0.17 tons per year (2020 NEI). Since this is below the threshold, no source-oriented Pb monitors are required. Tables 2.7a and 2.7b show the minimum monitoring requirements for Pb at NCore and source-oriented sites.

Table 2.7a
Minimum Monitoring Requirements for Pb at NCore sites

CBSA/MSA	Pop. (year)	# Required Near Road Monitors	# Active Near Road Monitors	# Additional Monitors Needed
Santa Barbara – Santa Maria, Ca	444,974 (2026)	0	0	0

Table 2.7b
Minimum Monitoring Requirements for Source-Oriented Pb Monitoring

Source Name	Address	Pb Emissions	Emissions Source (year)	Max Design Value	Design Value Date	# Required Monitors	# Active Monitors	# Additional Monitors Needed
Santa Barbara Municipal Airport	601 Firestone Rd. Santa Barbara, CA	0.17 ton/yr	National Emissions Inventory 2020	N/A	N/A	0	0	0

Monitors required for SIP or Maintenance Plan: None

U.S. EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.5(c): None

2.8 Near-Roadway NO₂, CO, and PM_{2.5} Monitors

40 CFR 58 Appendix D requires near-roadway NO₂, CO, and PM_{2.5} monitors for CBSAs with populations greater than 1,000,000. The Santa Maria – Santa Barbara MSA/CBSA has a population of 444,974 (2026 California Department of Finance January Estimate), so no NO₂, CO, or PM_{2.5} near-roadway monitors are required. Table 2.8 lists the near-roadway monitoring requirements in Santa Barbara County. No near-roadway monitors are required.

Table 2.8
Near-Roadway Monitor Requirements

CBSA	Population & Census year	Max AADT counts (year)	# Required NO ₂ Mon.	# Active NO ₂ Mon.	# Required PM _{2.5} Mon.	# Active PM _{2.5} Mon.	# Required CO Mon.	# Active CO Mon.	# Additional Monitors Needed
Santa Barbara-Goleta-Santa Maria	444,974 (2026)	N/A Below Pop. Threshold	0	0	0	0	0	0	0

2.9 Recent or Proposed Modifications to the Network

In response to public requests, the District installed an additional PM_{2.5} FEM monitor in Carpinteria in October 2023, located at 5351 Carpinteria Avenue, Carpinteria, CA 93013. This monitor has operated initially as a Special Purpose Monitor (SPM) to assess the range of PM_{2.5} concentrations and wildfire smoke impacts from this location.

The District plans on converting this PM_{2.5} SPM to a SLAMS site. Special study particulate monitoring has been performed at this site for over 24 months and as such, is now comparable to the NAAQS. The typical PM_{2.5} concentrations are low; however, the monitor has been useful to provide the public with health impacts in the area during wildfires.

2.10 Additional Monitors

Santa Barbara County operates or oversees the operation of some monitors that are not required by 40 CFR 58.10. These stations and monitors are included in the network review for reference only and are not used to demonstrate compliance with any requirements even though they are operated under the same quality assurance/control guidelines as the FEM monitors. More details on these non-SLAMS monitors are provided in Appendix D.

All the monitoring stations listed in this report, with the exception of Santa Ynez, also measure wind speed, wind direction, and ambient temperature. This data is used for modeling and tracking purposes and also helps the public to understand the nature and origin of real-time air pollution measurements. Wind and temperature conditions for the Santa Ynez location are measured and reported by the National Weather Service.

Table 2.10 depicts the number of SLAMS monitors in the District’s air monitoring network that exceed the minimum monitoring requirements for criteria pollutants.

Table 2.10
Criteria Pollutant SLAMS Monitors Exceeding Minimum Monitoring Requirements

Pollutant	Min. # Monitors Required	# SLAMS Monitors Active	# Monitors Exceeding Min.
Ozone	2	8	6
Carbon Monoxide	0	1	1
Nitrogen Dioxide	0	1	1
Sulfur Dioxide	0	1	1
PM ₁₀	0-1	4	3
PM _{2.5}	0	5	5

3.0 Additional information on PM_{2.5} monitors

This section includes information for elements required to be in the annual network plan that relate specifically to PM_{2.5}. One required element relates to whether data for a PM_{2.5} monitor can be used to determine compliance with the national annual PM_{2.5} air quality standard. This is termed as the suitability for comparison to the annual standard. The other element requires information regarding the review process followed by air agencies when changes are made to the location of a PM_{2.5} monitor that is violating a PM_{2.5} NAAQS.

3.1 Comparison to Annual PM_{2.5} NAAQS

Only data from a PM_{2.5} FRM or FEM can be used in regulatory determinations of compliance with the annual PM_{2.5} NAAQS, and the monitor must be located at a neighborhood scale. For a PM_{2.5} monitor to be representative at a neighborhood scale, the concentration values measured by the monitor should be representative of concentrations expected over an area with dimensions of a few kilometers. Therefore, the monitor should not be located too close to a hot spot of PM_{2.5} concentrations that extends over distances of less than a few hundred meters. The SLAMS PM_{2.5} FRM and FEM monitors in Santa Barbara County are sited to be representative of a neighborhood scale and meet this suitability requirement.

3.2 Review of Changes to PM_{2.5} network

As required by regulation, prior to any changes to the PM_{2.5} network being made, a formal request is drafted outlining the reason for the change, when the change will occur, and any other relevant information about the proposed changes. The proposal (either as part of an annual network review or between reviews) will be posted on the District website for a 30-day public comment period. Following the comment period, the District will forward the request with comments and District responses to U.S. EPA for consideration. Only after U.S. EPA has granted approval of the proposed change, will the District make the changes to the PM_{2.5} monitoring network.

4.0 Quality Assurance and Data Submittal

All data collected from the monitors in the Santa Barbara County network are reviewed for quality assurance by the District. All SLAMS monitors meet the requirements of 40 CFR 58.

4.1 Annual Performance Evaluation

Annual performance evaluations on all SLAMS sites are performed by challenging the gas monitors with known concentrations of audit gases to evaluate the accuracy of the SLAMS gas monitors. Bi-annual flow audits are performed to evaluate the performance of SLAMS particulate monitors.

4.2 Data Submittal

Digital records of the data, including precision and accuracy data, are submitted to U.S. EPA for all SLAMS monitors by uploading the records to their air quality system (AQS) database. These records are submitted within 90 days following the end of each quarterly reporting period.

4.3 Annual Certification

The SLAMS data are certified for their accuracy and completeness on an annual basis and a certification letter is required to be submitted to the regional U.S. EPA administrator by May 1 of each year. The data for calendar year 2025 was certified by letter submitted to the regional U.S. EPA administrator on April 29, 2026.

5.0 Detailed Site Information

The tables in this section give detailed information relating to the SLAMS sites and monitors. They are presented to show compliance with the monitoring requirements found in 40 CFR 58.10. Note that some sites included in this section contain both SLAMS and non-SLAMS monitors, with only the SLAMS monitors presented in this section. Details on Non-SLAMS sites and monitors are provided in Appendix D. Please note the following in relation to the detailed site information tables:

1. All glass used for inlet/manifold is borosilicate or equivalent.
2. There are no collocated monitors at the SLAMS or industrial stations in Santa Barbara County, therefore information in detailed station information tables do not include fields relating to collocated monitors.
3. All collocation requirements are being met by CARB, see the CARB Annual Network Plan for details.
4. All sample probes, including low-volume PM samplers, are separated horizontally from other station probes by at least one meter.
5. "Distance to Trees" entries represent the distance from the probe to the tree dripline.

Table 5.1
Carpinteria Monitoring Station Details

Site Name	Carpinteria	
AQS ID	060831021	
GIS coordinates	34.403047-119.45795	
Location	Located in a rural setting NE of the City of Carpinteria	
Address	Gobernador Canyon Road, Carpinteria, CA 93013	
County	Santa Barbara County	
Dist. To road	Gobernador Canyon Road, 115 meters	
Traffic count (AADT, year)	Gobernador Canyon Road - 50 est. (2024)	
Groundcover	Grass	
Representative area	MSA (Santa Barbara – Santa Maria, CA)	
Pollutant, POC	O₃,1	
Monitor Type	SLAMS ¹	
Network Affiliation	NA	
Parameter Code	44201	
Monitoring Objective	NAAQS	
Site type(s)	Highest conc.	
Mfg/Model	TAPI T400	
Method Code	087	
FRM/FEM or other	FEM	
Collecting Agency	Santa Barbara County ²	
Reporting Agency	Santa Barbara County	
Spatial Scale	Regional	
Start date	1/1/86	
Operation schedule	Continuous	
Sampling season	All Year	
Probe height	4.8 m	
Distance from supporting structure	1.9 m	
Distance from obstructions on roof	None	
Distance from obstructions not on roof/height above probe	N/A	
Distance from trees	N/A	
Distance to furnace or incinerator	None	
Unrestricted airflow	360°	
Probe material	Glass & Teflon	
Residence time	6.6 s	
Will there be changes in next 18 months?	Yes	
Frequency of one-point QC check (gaseous)	Daily	
Last annual performance evaluation (gaseous)	4/23/26	

¹ Ozone changed from Industrial to SLAMS on February 26, 2019.

² The District took responsibility for the operation of the Carpinteria site from a contractor beginning September 2020

Table 5.2
Goleta Monitoring Station Details

Site Name	Goleta		
AQS ID	060832011		
GIS coordinates	34.4455 -119.828333		
Location	In field behind Lutheran Church		
Address	380 N. Fairview Ave., Goleta, CA		
County	Santa Barbara County		
Dist. to road	Berkley Road, 60 meters; Fairview Ave, 193 meters; Alii Way 77 meters		
Traffic count (AADT, year)	Fairview – 87,000 (2022); Berkley Rd - 3480 (2003); Alii Way - 25 est. (2024)		
Groundcover	Grass		
Representative area	MSA (Santa Barbara – Santa Maria, CA)		
Pollutant, POC	O₃,1	PM₁₀,1	PM_{2.5},1
Monitor Type	SLAMS	SLAMS	SLAMS
Network Affiliation	N/A	N/A	N/A
Parameter Code	44201	81102	88101
Monitoring Objective	NAAQS, Public Info	NAAQS, Public Info	NAAQS, public Info
Site type(s)	Population	Population	Population
MFG/ Model	TAPI T400	BAM 1020	BAM 1020
Method Code	087	122	170
FRM/FEM or other	FEM	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Urban	Neighborhood	Neighborhood
Start date	1/1/1980	1/1/10	1/1/10
Operation schedule	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year
Probe height	3.5 m	4.6 m	4.7 m
Distance from supporting structure	1 m	2.1 m	2.2 m
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof/height above probe	20.9 m/9.0 m - Tree	20.9 m/9.0 m - Tree	20.9 m/9.0 m - Tree
Distance from trees	20.9 m	20.9 m	20.9 m
Distance to furnace or incinerator	None	None	None
Unrestricted airflow	360°	360°	360°
For low volume PM instruments, is any PM instrument within 1 m of the lo-vol? If yes, please list distance (meters) and instrument(s).	NA	No	No
Probe material	Teflon	N/A	N/A
Residence time	9.04 s	N/A	N/A

Will there be changes in next 18 months?	No	No	No
Frequency of one-point QC check (gaseous)	Daily	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	4/22/25	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	4/22/25 10/30/25 ¹	4/22/25 10/30/25 ¹
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A	Yes

¹The Goleta monitoring station was temporarily taken out of service to replace the structure on 4/7/2026 and has not been audited in calendar year 2026 for gaseous or PM pollutants.

Table 5.3
Las Flores Canyon #1 Monitoring Station Details

Site Name	Las Flores Canyon #1	
AQS ID	060831025	
GIS coordinates	34.48975 -120.046917	
Location	North end of canyon behind an oil and gas facility	
Address	Calle Real US Hwy 101, El Capitan, CA	
County	Santa Barbara County	
Dist. to road	Hwy 101, 2860 meters	
Traffic count (AADT, year)	Hwy 101 – 27,500 (2022)	
Groundcover	Grass and dirt	
Representative area	MSA (Santa Barbara – Santa Maria, CA)	
Pollutant, POC	O₃,1	
Monitor Type	SLAMS ¹	
Network Affiliation	NA	
Parameter Code	44201	
Monitoring Objective	NAAQS, public	
Site type(s)	Max O ₃ conc.	
MFG/ Model	TAPI T400	
Method Code	087	
FRM/FEM or other	FEM	
Collecting Agency	Santa Barbara County	
Reporting Agency	Santa Barbara County	
Spatial Scale	Regional	
Start date	4/1/88	
Operation schedule	Continuous	
Sampling season	All Year	
Probe height	3.5 m	
Distance from supporting structure	1.1 m	
Distance from obstructions on roof	None	
Distance from obstructions not on roof/height above probe	None	
Distance from trees	None	
Distance to furnace or incinerator	None	
Unrestricted airflow	360°	

For low volume PM instruments, is any PM instrument within 1 m of the lo- vol? If yes, please list distance (meters) and instrument(s).	N/A
Probe material	Glass &Teflon
Residence time	10.0 s
Will there be changes in next 18 months?	No
Frequency of flow rate verification for automated PM samplers	N/A
Frequency of one-point QC check (gaseous)	Daily
Last annual performance evaluation (gaseous)	4/28/26
Last two semi-annual flow rate audits for PM monitors	N/A

¹ Ozone changed from Industrial to SLAMS on February 26, 2019.

Table 5.4
Lompoc H Street Monitoring Station Details

Site Name	Lompoc H Street					
AQS ID	060832004					
GIS coordinates	34.637833 -120.4575					
Location	Parking lot behind gas company					
Address	128 S. H Street, Lompoc CA 93436					
County	Santa Barbara County					
Dist. to road	H Street, 28 meters; E. Cyprus, 57 meters; Ocean Ave, 120 meters; Alley, 13 meters					
Traffic count (AADT, year)	Ocean Ave (Hwy 246) – 12,700 (2022); H Street 12,000 (2022); Cyprus - 500 est. (2024); Alley - 20 est. (2024)					
Groundcover	Asphalt					
Representative area	MSA (Santa Barbara – Santa Maria, CA)					
Pollutant, POC	O₃,1	NO₂,1	SO₂,1	CO,1	PM₁₀,2	PM_{2.5},1
Monitor Type	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Network Affiliation	N/A	N/A	N/A	N/A	N/A	N/A
Parameter Code	44201	42602	42401	42101	81102	88101
Monitoring Objective	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, public
Site type(s)	Population	Population	Population	Population	Population	Population
MFG/ Model	TAPI 400e	TEI 42i	TEI 43i	TAPI T300	BAM 1020	BAM 1020
Method Code	087	074	060	093	122	170
FRM/FEM or other	FEM	FRM	FEM	FRM	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Start date	1/1/84	5/1/91	1/1/84	1/1/84	8/1/09	9/1/08
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year	All Year
Probe height	4.4 m	4.4 m	4.4 m	4.4 m	5.3 m	5.4 m
Distance from supporting structure	1.0 m	1.0 m	1.0 m	1.0 m	2.0 m	2.08 m
Distance from obstructions on roof	None	None	None	None	None	None
Distance from obstructions not on roof/height above probe	15.2/4.6 m Tree	15.2/4.6 m Tree	15.2/4.6 m Tree	15.2/4.6 m Tree	15.2/3.7 m Tree	15.2/3.7 m Tree
Distance from trees	15 m	15 m	15 m	15 m	15 m	15 m
Distance to furnace or incinerator	None	None	None	None	None	None
Unrestricted airflow	360°	360°	360°	360°	360°	360°
For low volume PM instruments, is any PM	N/A	N/A	N/A	N/A	No	No

instrument within 1 m of the lo-vol? If yes, please list distance (meters) and instrument(s).						
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A	N/A
Residence time	12.2 s	13.6 s	12.9 s	18.4 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No	No	No	No
Frequency of flow rate verification for manual PM samplers	N/A	N/A	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	N/A	N/A	N/A	Bi-Weekly	Bi-Weekly
Frequency of one-point QC check (gaseous)	Daily	Daily	Daily	Daily	N/A	N/A
Last annual performance evaluation (gaseous)	4/30/26	4/30/26	4/30/26	4/30/26	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	11/4/25 4/30/26	11/4/25 4/30/26
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A	N/A	N/A	N/A	Yes

Table 5.5
Paradise Road Monitoring Station Details

Site Name	Paradise Road
AQS ID	060831014
GIS coordinates	34.54170 -119.79152
Location	Located in Los Padres National Forest off Paradise Rd
Address	Paradise Road, Los Padres National Forrest CA 93105
County	Santa Barbara County
Dist. to road	Paradise Rd., 200 meters
Traffic count (AADT, year)	Paradise Rd - 100 est. (2024)
Groundcover	Trees and brush
Representative area	MSA (Santa Barbara – Santa Maria, CA)
Pollutant, POC	O₃,1
Monitor Type	SLAMS ¹
Network Affiliation	N/A
Parameter Code	44201
Monitoring Objective	NAAQS, Public
Site type(s)	Max O ₃ Conc.
MFG/ Model	TAPI T400
Method Code	087
FRM/FEM or other	FEM
Collecting Agency	Consultant
Reporting Agency	Santa Barbara County
Spatial Scale	Regional
Start date	1/1/86
Operation schedule	Continuous
Sampling season	All Year
Probe height	8.1 m
Distance from supporting structure	5 m
Distance from obstructions on roof	None
Distance from obstructions not on roof/height above probe	N/A
Distance from trees	N/A
Distance to furnace or incinerator	None
Unrestricted airflow	360°
Probe material	Glass & Teflon
Residence time	19.7 s
Will there be changes in next 18 months?	No
Frequency of one-point QC check (gaseous)	Bi-weekly
Last annual performance evaluation (gaseous)	4/23/26

¹ Ozone changed from Industrial to SLAMS on February 26, 2019.

Table 5.6
Santa Barbara Monitoring Station Details

Site Name	Santa Barbara		
AQS ID	060830011		
GIS coordinates	34.427711 -119.690844		
Location	In parking lot of the National Guard Armory		
Address	700 E. Canon Perdido, Santa Barbara CA 93103		
County	Santa Barbara County		
Dist. to road	De La Guerra, 10 meters; N Quarantina, 85 meters; N. Nopal, 60 meters; E. Canon Perdido, 140 meters; N. Milpas, 200 meters		
Traffic count (ADT, year)	De La Guerra – 2970 (2022); Canon Perdido – 5736 (2022); Quarantina – 100 est. (2024); Milpas – 14,033 (2022) N. Nopal – 995 (2018)		
Groundcover	Asphalt		
Representative area	MSA (Santa Barbara – Santa Maria, CA)		
Pollutant, POC	O₃,1	PM_{2.5},3	PM₁₀,3
Monitor Type	SLAMS	SLAMS	SLAMS
Network Affiliation	NA	NA	NA
Parameter Code	44201	88101	81102
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public
Site type(s)	population	Highest concentration	population
MFG/ Model	TAPI T400	BAM 1020	BAM 1020
Method Code	087	170	122
FRM/FEM or other	FEM	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Urban	Neighborhood	Neighborhood
Start date	5/1/02	7/1/10	5/1/02
Operation schedule	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year
Probe height	4.6 m	4.5 m	4.5 m
Distance from supporting structure	2.0 m	1.93 m	1.93 m
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof/height above probe	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A
Distance to furnace or incinerator	None	None	None
Unrestricted airflow	360°	360°	360°
For low volume PM instruments, is any PM instrument within 1 m of the lo-vol? If yes, please list distance (meters) and instrument(s).	N/A	No	No
Probe material	Teflon	N/A	N/A

Residence time	15.8 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No
Frequency of one-point QC check (gaseous)	Daily	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	4/21/26	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	10/30/25 4/21/26	10/30/25 4/21/26
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	Yes	N/A

Note: The District took over responsibility for this site from CARB in January 2020.

Table 5.7
Santa Maria Monitoring Station Details

Site Name	Santa Maria		
AQS ID	060831009		
GIS coordinates	34.890667 -120.4328444		
Location	Lakeview Junior High School		
Address	3700 Orcutt Rd, Santa Maria 93455		
County	Santa Barbara County		
Dist. to road	Harsin Ln – 61m, Orcutt Rd – 297m		
Traffic count (ADT, year)	Harsin Ln - <200 est. (2024); Orcutt Rd – 2433 (2023)		
Groundcover	Parking lot paving		
Representative area	MSA (Santa Barbara – Santa Maria, CA)		
Pollutant, POC	O₃, 1	PM₁₀, 1	PM_{2.5}, 1
Monitor Type	SLAMS	SLAMS	SLAMS
Network Affiliation	N/A	N/A	N/A
Parameter Code	44201	81102	88101
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public
Site type(s)	Population	Population	Population
MFG/ Model	TAPI T400	BAM 1020	BAM 1020
Method Code	087	122	170
FRM/FEM or other	FEM	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Urban	Neighborhood	Neighborhood
Start date	5/1/99	7/1/09	7/1/10
Operation schedule	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year
Probe height	4.1 m	4.5 m	4.6 m
Distance from supporting structure	1.5 m	2.0 m	2.08 m
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof/height above probe	61m/12m-tree	61m/12m-tree	61m/12m-tree
Distance from trees	61 m	61 m	61 m
Distance to furnace or incinerator	None	None	None
Unrestricted airflow	360°	360°	360°
For low volume PM instruments, is any PM instrument within 1 m of the lo-vol? If yes, please list distance (meters) and instrument(s).	NA	No	No

Probe material	Teflon	N/A	N/A
Residence time	5.4 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No
Frequency of one-point QC check (gaseous)	Daily		
Frequency of flow rate verification for automated PM analyzers		Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	4/22/26		
Last two semi-annual flow rate audits for PM monitors	N/A	10/29/25 4/22/26	10/29/25 4/22/26
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A	Yes

Note: Site began operation on October 1, 2022

Table 5.8
Santa Ynez Monitoring Station Details

Site Name	Santa Ynez	
AQS ID	060833001	
GIS coordinates	34.605819 -120.075069	
Location	South side of Santa Ynez airport runway	
Address	900 Airport Rd., Santa Ynez, CA	
County	Santa Barbara County	
Dist. to road	Hwy 246 - 534 meters, Private vineyard road – 29.19 meters	
Traffic count (AADT, year)	Hwy 246 – 8300 (2022); N/A for private vineyard road	
Groundcover	Grass/Dirt	
Representative area	MSA (Santa Barbara – Santa Maria, CA)	
Pollutant, POC	O ₃ ,1	PM _{2.5}
Monitor Type	SLAMS	SLAMS
Network Affiliation	N/A	N/A
Parameter Code	44201	88502
Monitoring Objective	NAQSS, public	NAAQS, research
Site type(s)	Population	Population
MFG/ Model	TAPI T400	BAM1020
Method Code	087	170
FRM/FEM or other	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County
Spatial Scale	Urban	Urban
Start date	7/1/2013	9/1/2020
Operation schedule	Continuous	Continuous
Sampling season	All Year	All Year
Probe height	3.5 m	5.2 m
Distance from supporting structure	1.0 m	2 m
Distance from obstructions on roof	None	None
Distance from obstructions not on roof/height above probe	None	None
Distance from trees	None	None
Distance to furnace or incinerator	None	None
Unrestricted airflow	360°	360°
Probe material	Teflon	N/A
Residence time	9.46 s	N/A
Will there be changes in next 18 months?	No	No
Frequency of one-point QC check (gaseous)	Daily	Bi-weekly
Last annual performance evaluation (gaseous)	4/28/26	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	10/29/25 4/28/26
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	Yes

Glossary of Acronyms

AQI	Air Quality Index
AQS	Air quality system
ARM	Approved regional method
CARB	California Air Resources Board
CBSA	Core Based Statistical Area
CFR	Code of Federal Regulations
CO	Carbon monoxide
FEM	Federal equivalent method
FRM	Federal reference method
H ₂ S	Hydrogen Sulfide
MSA	Metropolitan statistical area
NAAQS	National ambient air quality standard
NO ₂	Nitrogen dioxide
O ₃	Ozone
Pb	Lead
PM ₁₀	Particulate matter less than 10 microns in diameter
PM _{2.5}	Particulate matter less than 2.5 microns in diameter
PQAO	Primary Quality Assurance Organization
PSD	Prevention of significant deterioration
District	Santa Barbara County Air Pollution Control District
SLAMS	State and Local Air Monitoring Station
SO ₂	Sulfur dioxide
SPM	Special Purpose Monitor
U.S. EPA	United States Environmental Protection Agency

APPENDIX A

Regulatory Language of 40 CFR 58.10

§ 58.10 Annual monitoring network plan and periodic network assessment.

(a)(1) Beginning July 1, 2007, the State, or where applicable local, agency shall adopt and submit to the Regional Administrator an annual monitoring network plan which shall provide for the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme O₃ nonattainment areas, PAMS stations, and SPM monitoring stations. The plan shall include a statement of purposes for each monitor and evidence that siting and operation of each monitor meets the requirements of appendices A, C, D, and E of this part, where applicable. The annual monitoring network plan must be made available for public inspection for at least 30 days prior to submission to U.S. EPA.

(2) Any annual monitoring network plan that proposes SLAMS network modifications including new monitoring sites is subject to the approval of the U.S. EPA Regional Administrator, who shall provide opportunity for public comment and shall approve or disapprove the plan and schedule within 120 days. If the State or local agency has already provided a public comment opportunity on its plan and has made no changes subsequent to that comment opportunity, the Regional Administrator is not required to provide a separate opportunity for comment.

(3) The plan for establishing required NCore multi-pollutant stations shall be submitted to the Administrator not later than July 1, 2009. The plan shall provide for all required stations to be operational by January 1, 2011.

(b) The annual monitoring network plan must contain the following information for each existing and proposed site:

(1) The AQS site identification number.

(2) The location, including street address and geographical coordinates.

(3) The sampling and analysis method(s) for each measured parameter.

(4) The operating schedules for each monitor.

(5) Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.

(6) The monitoring objective and spatial scale of representativeness for each monitor as defined in appendix D to this part.

(7) The identification of any sites that are suitable and sites that are not suitable for comparison against the annual PM_{2.5} NAAQS as described in §58.30.

(8) The MSA, CBSA, CSA or other area represented by the monitor.

(c) The annual monitoring network plan must document how States 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 50 of this chapter. 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.

(d) The State, or where applicable local, agency shall perform and submit to the U.S. EPA Regional Administrator an assessment of the air quality surveillance system every 5 years to determine, at a minimum, if the network meets the monitoring objectives defined in appendix D to this part, whether new sites are needed, whether existing sites are no longer needed and can be terminated, and whether new technologies are appropriate for incorporation into the ambient air monitoring network. The network assessment must consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., children with asthma), and, for any sites that are being proposed for discontinuance, the effect on data users other than the agency itself, such as nearby States and Tribes or health effects studies. For PM_{2.5}, the assessment also must identify needed changes to population-oriented sites. The State, or where applicable local, agency must submit a copy of this 5-year assessment, along with a revised annual network plan, to the Regional Administrator. The first assessment is due July 1, 2010.

(e) All proposed additions and discontinuations of SLAMS monitors in annual monitoring network plans and periodic network assessments are subject to approval according to §58.1

APPENDIX B
Public Noticing

APPENDIX C
Public Comments

APPENDIX D

Non-SLAMS Monitoring in Santa Barbara County

D.1 Introduction

Santa Barbara County Air Pollution Control District has established monitoring networks in Santa Barbara County in addition to the required SLAMS monitoring network. These monitoring efforts provide additional data resources available to District staff, researchers, and the public. Currently, the District has established three additional monitoring networks: Industrial, special study, and low-cost air quality sensor networks.

The Industrial monitors in Santa Barbara County consist of several stations operated by the District or private contractors. There are several major oil and gas developments in Santa Barbara County with permits for the production, processing, and transportation of oil and gas. The Industrial stations are designed to measure regional air quality in addition to criteria pollutants and odorous compounds from these oil and gas facilities. Operating permits for the oil and gas facilities require the Industrial monitors to be operated for the life of the permitted facility. These Industrial monitors are not utilized for comparison to national ambient air quality standards (NAAQS), are not counted in assessing minimum SLAMS monitoring requirements, and are considered secondary monitors by U.S. EPA. All Industrial monitors measuring criteria pollutants are required to be U.S. EPA approved monitors and are operated to meet the same quality control requirements as the SLAMS monitors.

The special study monitors are all operated by the District and typically are not utilized for permanent long-term monitoring; rather they are used as part of a special study to better understand a specific situation.

With the recent advent of low-cost air quality sensors designed to measure various types of air pollution, the District has established a network of approximately 76 low-cost PM sensors. These sensors do not meet U.S. EPA regulatory requirements and have significant accuracy limitations but can provide important additional air quality data for some specific situations.

D.2 Industrial Monitoring Network

Santa Barbara County Air Pollution Control District expanded its monitoring network in the early 1980s due to unprecedented plans for oil and gas development in Santa Barbara County. New oil and gas processing facilities were permitted in the 1980s with the new facilities' permits to operate requiring ambient monitoring downwind from the facilities. Additionally, some of the larger new facilities' permits to operate also required ambient monitoring across the region to assess the cumulative impact of these new sources. The monitoring required by these permits requires the facilities to continue operation of the monitoring station (and comply with District Monitoring Protocol) for the life of the facility.

In 2017, U.S. EPA, CARB, and the District discussed various options for changing the District's monitoring network to streamline District/CARB/U.S. EPA resources, while still providing appropriate monitoring to the community. District staff reviewed initial proposals from CARB with

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the goal of identifying sites/monitors that could be discontinued due to either a historical data set showing extremely low concentrations and/or nearby monitors that provide representative data as well as identifying any areas where additional monitoring might be appropriate. Additionally, staff considered industrial monitors that were in place only to serve District data needs and regulations, that could be designated as non-NAAQS compliant (often referred to as “non-regulatory”).

In February 2019, the District, U.S. EPA, and CARB reached agreement on modifications to the District’s monitoring network that would streamline U.S. EPA and CARB resources, while still meeting the monitoring data needs of the District. The agreed upon changes categorized the ozone monitors at the Las Flores Canyon #1, Carpinteria, and Paradise Road industrial sites as SLAMS monitors, while categorizing all other required industrial monitors as non-NAAQS compliant, with the District taking full oversight responsibility. The three industrial ozone monitors categorized as SLAMS were due to those sites historically recording the highest ozone concentrations in the County. The remaining industrial monitors were also evaluated by District staff and determined that some of the industrial monitors were no longer needed and could be eliminated. Some of the permit holders that are required to operate industrial monitors contract with the District for operation, while other permit holders choose to contract with air monitoring contractors for their industrial monitoring operations.

Pursuant to District Rule 364, adopted by the District’s Board on May 21, 2020, the District initiated efforts to install and maintain a refinery-related community air monitoring system downwind from the Santa Maria Asphalt Refinery. This monitoring system is collocated with the Santa Maria SLAMS station, and monitors for the following pollutants:

- H₂S
- SO₂
- Benzene
- Toluene
- Ethylbenzene
- Xylene

The Santa Maria monitoring station relocation delayed operation of these community monitors until early 2023. Real-time data from these monitors is available on the District’s website.

The District’s industrial monitoring network is presented on the following page in Figure D-1 and Table D-1.

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Figure D-1
Map of the Industrial Air Monitoring Network in Santa Barbara County

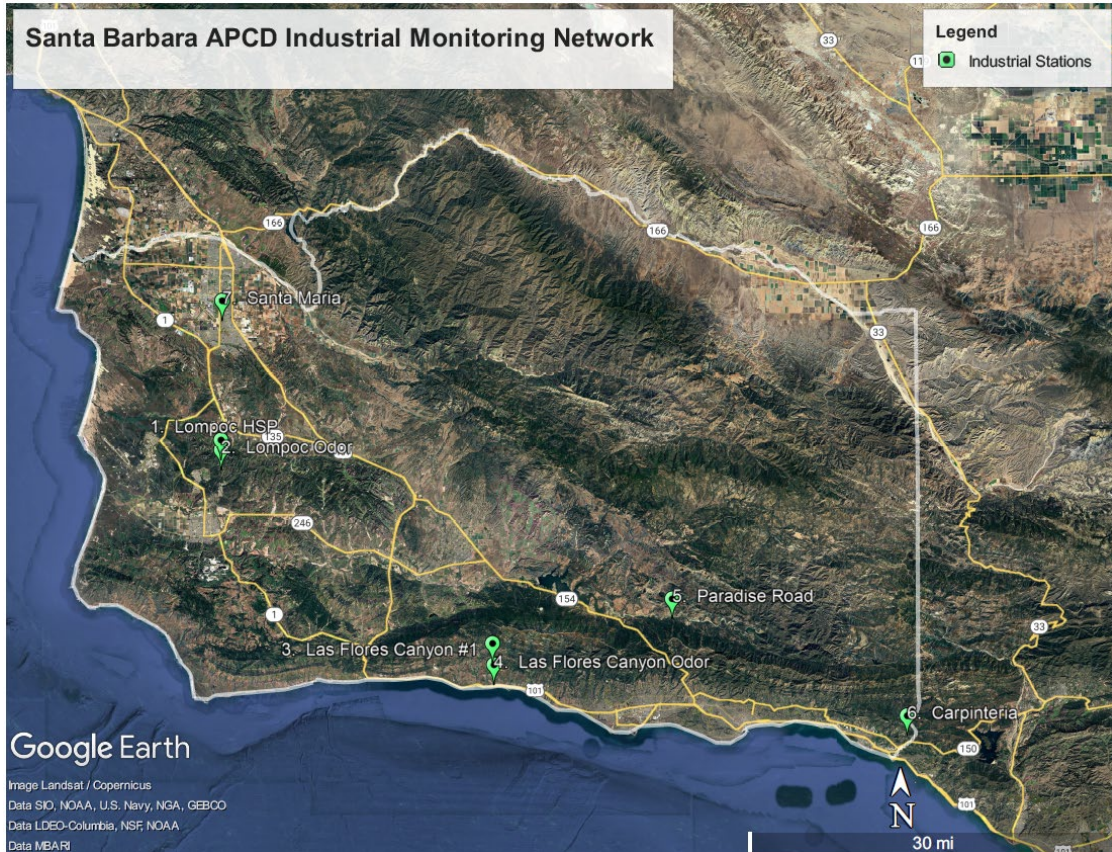


Table D-1
Industrial Monitoring Network in Santa Barbara County

No	Site Name	Type	Operator
1	Lompoc HSP	Industrial	Contractor
2	Lompoc Odor	Industrial	Contractor
3	Las Flores Canyon #1	Industrial ¹	District
4	Las Flores Canyon Odor	Industrial	District
5	Paradise Road	Industrial ¹	Contractor
6	Carpinteria	Industrial ¹	District
7	Santa Maria Asphalt Refinery Community Monitoring	Industrial ²	District

¹Ozone at these sites are SLAMS monitors, all other monitors are Industrial.

²Ozone, PM₁₀, PM_{2.5} at this site are SLAMS monitors, all other monitors are Industrial/Community.

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Table D-2
Industrial Monitoring Network Pollutants Measured

Parameter	O ₃	NO ₂	SO ₂	THC	CO	H ₂ S	TRS	PM ₁₀	BTEX ¹
Lompoc HSP	X	X	X	X					
Lompoc Odor						X	X		
Las Flores Canyon #1		X	X	X	X			X	
Las Flores Canyon Odor						X			
Paradise Road		X							
Carpinteria		X							
Santa Maria Asphalt Refinery Community Monitoring			X			X			X

¹ BTEX is Benzene, Toluene, Ethylbenzene, and Xylene

Industrial monitors are operated with the same quality control as District operated SLAMS monitors. Data and documentation from industrial sites operated by contractors are reviewed by the District to ensure compliance with quality control and best practice requirements. Typically, all data from Industrial sites are submitted to U.S. EPA’s AQS system to allow researchers and public access to this data.

D.3 Special Study Monitoring

The District deploys various monitoring equipment on an as needed basis to better understand specific air pollution issues. Typically, these special study monitors are deployed for short durations and are intended to gather data for a very specific purpose. Wildfire impacts, odor complaints, upset conditions at an oil or gas processing facility, or exploring pollutant levels in a specific area are the typical reasons for these special study monitors. All data from these studies are available to the public through a data request to the District.

The District installed a special purpose PM_{2.5} monitor in Carpinteria in October 2023, to provide information on the normal patterns of PM_{2.5} concentrations as well as wildfire smoke impacts in the City of Carpinteria and surrounding communities. The District plans on converting this PM_{2.5} SPM to a SLAMS site in the future.

The District also deploys portable particulate (typically configured to measure PM_{2.5}) monitors to areas impacted by wildfire smoke to provide data to District staff to better communicate health dangers to the public in areas impacted by wildfire smoke.

Additionally, the District has an AirPointer, which is a mobile trailer equipped with various monitors that can be deployed to assess health impacts during various air pollution events such as odor complaints, oil and gas facility upset conditions, wildfire smoke, or any other event where

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this data would be helpful. The AirPointer is able to be deployed throughout Santa Barbara County and is an important resource that is able to serve communities countywide. The mobile trailer is equipped with the following monitors:

- Benzene
- Ethylbenzene
- Toluene
- Xylene
- H₂S
- Ozone
- PM₁₀
- PM_{2.5}
- Meteorological parameters

Lastly, the District was awarded an Air Monitoring Grant under the Inflation Reduction Grant from U.S. EPA in December 2024 to perform a special study of PM speciation in the Santa Maria Valley. The Santa Maria Valley in Santa Barbara County, California spans approximately 132 square miles and includes the largest incorporated city in the County – the City of Santa Maria – as well as the City of Guadalupe and the unincorporated communities of Orcutt, Garey, and Sisquoc. The project was designed to build a better understanding of the PM pollution in the Santa Maria Valley and what species are present in the PM. Over the past 10 years, this study area has experienced nearly 25 exceedances annually of the state PM₁₀ standard (50 micrograms/cubic meter), which Santa Barbara County is currently designated as nonattainment for.

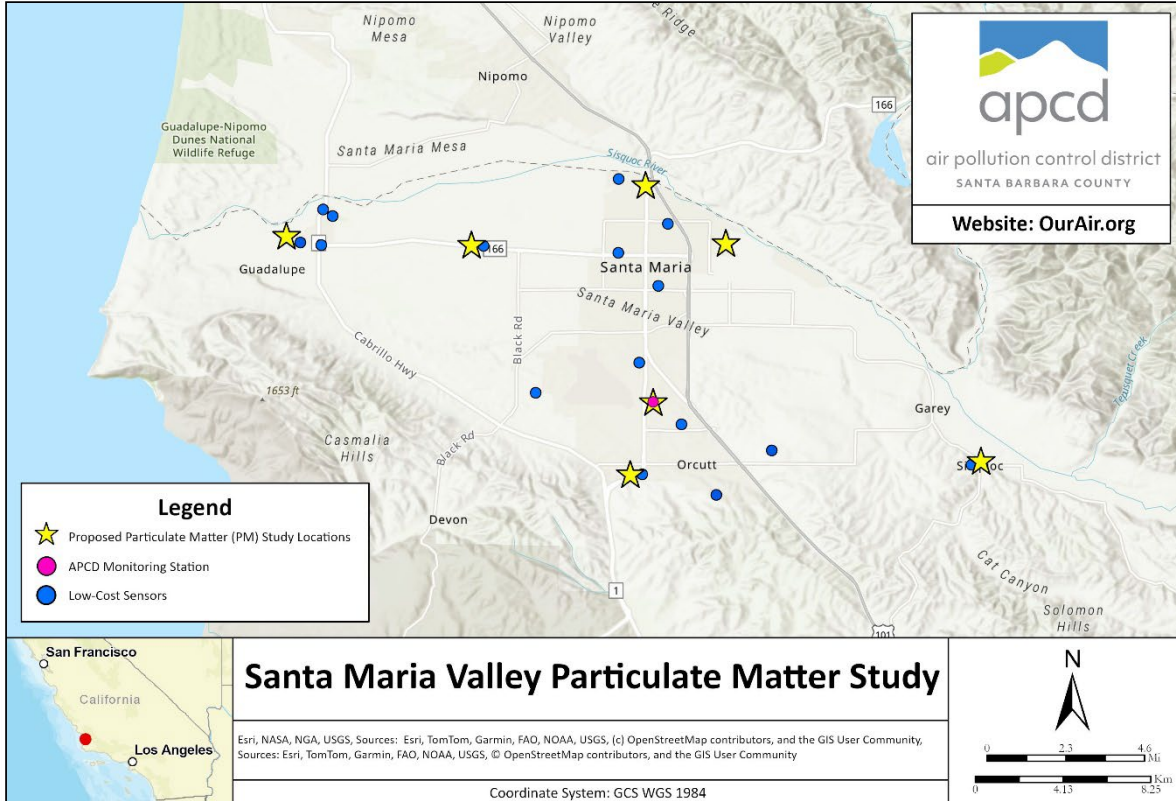
The District began work on the grant in March 2025 and has deployed PM monitors and samplers in the Cities of Santa Maria and Guadalupe as well as the unincorporated communities of Orcutt and Sisquoc. The Santa Maria Valley PM Study monitoring sites are currently collecting data and will continue to operate over the course of 12 months. After the samples are collected, they will be analyzed, and the District will prepare a report and conduct bilingual community outreach to share information about the study with Santa Maria Valley residents and organizations.

A map of the District's Santa Maria Valley PM Study monitoring sites is presented on the following page in Figure D-2.

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Figure D-2
Santa Maria Valley PM Study Monitoring Sites



D.4 Hydrogen Sulfide Monitoring

For permitted facility site-specific air quality concerns, air monitoring objectives are evaluated and identified through the District’s New Source Review permitting process and are included as conditions in those facilities’ operating permits. These types of monitors are included in the Annual Air Monitoring Network Plan for informational purposes only.

In response to complaints or site-specific impacts that are not captured by the SLAMS network, the District’s AirPointer can be used throughout the county to measure H₂S and other pollutant emissions on a temporary basis. When deployed, the AirPointer provides continuous air quality data that can be viewed in real time. Historically, the District has received H₂S complaints for western Goleta at different times during the year; however, the majority of complaints are received in the fall. In response, the District has proactively deployed the AirPointer in western Goleta several times during the last few fall seasons to measure H₂S. Additional information regarding H₂S in the Goleta area is available on the District’s website: www.ourair.org/hydrogen-sulfide-in-goleta-area/.

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D.5 Low-Cost Air Quality Sensors

The air pollution community continues to explore the use of low-cost air quality sensors and has found some benefits as well as gaining a better understanding of the sensors' limitations. With the cost of air quality sensors being a fraction of traditional air pollution monitors, monitoring in many more locations can be accomplished. However, research has shown significant accuracy issues and other limitations from these sensors. Care must be taken to understand the limitations and accuracy issues to avoid misleading data from these sensors.

The District has deployed 76 PurpleAir PM sensors across Santa Barbara County. These sensors have been shown to produce poor quality data for the larger particles (PM₁₀), but better quality for smaller particles (PM_{2.5}). Specifically, the PurpleAir sensors have been successfully used to assess wildfire smoke impacts. The District's PurpleAir sensor network is used by District staff to better communicate health impacts to communities impacted by wildfire smoke. The real-time air monitoring data from the air quality sensors is publicly accessible and displayed on the EPA's AirNow Fire and Smoke map: <https://fire.airnow.gov/>.

In December 2024 the District was awarded an Air Quality Sensors Grant under the Inflation Reduction Grant from U.S. EPA to deploy and operate air quality sensors throughout Santa Barbara County. Furthermore, in April 2025, the District was awarded additional U.S. EPA passthrough grant funds from the California Air Pollution Control Officers Association to deploy and operate more air quality sensors throughout the county. As a result of these two grants, the District is in the process of procuring over 140 PurpleAir sensors that will be deployed throughout Santa Barbara County over the next couple of years.