

2023 Ambient Air Monitoring Network Plan



Planning, Monitoring & Grants Division

May 2023



Air Pollution Control District
San Luis Obispo County

Contents

List of Abbreviations and Symbols.....	4
Introduction	5
General Information on Air Monitoring Networks.....	6
Air Monitoring Stations in San Luis Obispo County.....	7
Changes to Monitoring Network Since the Previous ANP	10
Ozone Monitoring Network Changes.....	10
Particulate Monitoring Network Changes	10
Nitrogen Dioxide Monitoring Network Changes	10
Sulfur Dioxide Monitoring Network Changes	10
Infrastructure and Support Equipment Changes.....	11
Detailed Descriptions of the Current Network.....	11
Ozone Monitoring Network.....	11
Nitrogen Dioxide Monitoring Network	13
Sulfur Dioxide Monitoring Network	13
Particulate Monitoring Network	14
Other Networks – San Luis Obispo County, which comprises the San Luis Obispo-Paso Robles MSA, is not required to have, does not currently have, and does not plan to establish any NCore, PAMS, lead, carbon monoxide or near-road monitoring stations.....	16
Proposed Network Changes and Improvements.....	16
New Stations and Station Closures and Relocations	16
Ozone Monitoring Network Proposed Changes.....	16
Nitrogen Dioxide Network.....	16
Sulfur Dioxide Monitoring Network	16
Infrastructure and Support Equipment Changes.....	17
Accessing Air Quality Data	18
Appendix A: Minimum Monitoring Requirements.....	19
Minimum Monitoring Requirements for Ozone (O ₃)	19
Minimum Monitoring Requirements for PM _{2.5} SLAMS.....	20
Minimum Monitoring Requirements for Continuous PM _{2.5} Monitors	20
Minimum Monitoring Requirements for PM ₁₀	21
Minimum Monitoring Requirements for Nitrogen Dioxide (NO ₂).....	21

Minimum Monitoring Requirements for Sulfur Dioxide (SO ₂).....	22
Minimum Monitoring Requirements for Carbon Monoxide (CO).....	22
Minimum Monitoring Requirements for Lead at NCore	23
Source-Oriented Lead Monitoring (Including Airports).....	23
Near-Road NO ₂ , PM _{2.5} , and CO Monitors.....	23
Appendix B: Collocation Requirements.....	24
Appendix C: Detailed Site Information	25
Appendix D: Non SLAMS Network Operations.....	46
Attachment 1: SLO-Higuera Shutdown and SLO-Roberto Operations Approval Letter	48
Attachment 2: Morro Bay Station Relocation Request.....	51
Attachment 3: Morro Bay Station Relocation Request Details Attached Document	53
Attachment 4: Morro Bay Station Relocation Approval	62

DRAFT

List of Abbreviations and Symbols

AADT	Annual Average Daily Traffic count
AB	Assembly Bill
ANP	Annual Network Plan
AQMD	Air Quality Management District
AQS	Air Quality System
AQS ID	Air Quality System site identification number
BAM	Beta Attenuation Monitor
CARB	California Air Resources Board
CBSA	Core Based Statistical Area
CDF	California Department of Forestry
CFR	Code of Federal Regulations
CO	Carbon monoxide
E-BAM	Portable, non-FEM version of the BAM
EPA	United States Environment Protection Agency
FAA	Federal Aviation Administration
FEM	Federal Equivalent Method
FRM	Federal Reference Method
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standard(s)
NCore	National Core multipollutant monitoring station
NO	Nitrogen oxide
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
NRP	Nipomo Regional Park
O ₃	Ozone
ODSVRA	Oceano Dunes State Vehicular Recreation Area
PAMS	Photochemical Assessment Monitoring Station
PM _{2.5}	Particulate Matter less than 10 microns in aerodynamic diameter
PM ₁₀	Particulate Matter less than 2.5 microns in aerodynamic diameter
Pb	Lead
ppb	Parts per billion
PQAO	Primary Quality Assurance Organization
SIP	State Implementation Plan
SLAMS	State or Local Air Monitoring Station
SLO COUNTY	San Luis Obispo County Air Pollution Control District
APCD	
SO ₂	Sulfur dioxide
SPM	Special Purpose Monitor
ZAG	Zero Air Generator

Introduction

Every year the San Luis Obispo County Air Pollution Control District (SLO COUNTY APCD) submits an ambient air monitoring network plan (ANP) to the United States Environmental Protection Agency (EPA); the present document comprises the ANP for 2023. It is intended to fulfill the requirements of 40 Code of Federal Regulations (CFR) 58.10 and to provide information about local monitoring activities to the public. The focus of this ANP is the network of regulatory monitors in the County; non-regulatory monitoring is discussed in Appendix D.

Consistent with these goals and requirements, this ANP will be made available for public review and comment for at least 30 days prior to its submission to EPA. All comments received and any SLO COUNTY APCD responses to those comments will be attached as Appendices E and F, respectively, and submitted to EPA as part of this ANP. The cover letter accompanying submission will note the beginning and ending dates of the comment period, whether any comments were received, and which comments were substantive. For any non-substantive comments, the cover letter will provide a rationale for deeming them as such. If public comments prompt changes to the ANP, these changes will be noted in the cover letter.

The ANP is a snapshot of the air monitoring network as it currently exists, and it also documents any changes since the last ANP (published June 2022) and any modifications anticipated over the next 18 months. This review and planning process helps to ensure continued consistency with federal requirements and monitoring objectives. It also confirms and updates information in state and federal monitoring records. Information is provided for all ambient air pollution monitoring which occurred in the County, including one site operated by the California Air Resources Board (CARB). Data from the CARB site were obtained from that agency and are accurate to the best of our knowledge.

Several monitoring changes are discussed in the subsequent sections: The transition from analog to digital data records and the relocation of one station along with subsequent structure updates. Finally, to fulfill requirements of California Assembly Bill 1647, SLO COUNTY APCD and the Phillips 66 Santa Maria Refinery have established a refinery-related community/fence-line monitoring network near the refinery. Due to the refinery closure, this network has been shut down in March 2023 as described below.

All pollutant monitors in SLO COUNTY APCD's SLAMS network meet the requirements of 40 CFR 58 Appendices A, B, C, D, and E, where applicable, and any SLO COUNTY APCD-run Special Purpose Monitors meet the requirements of Appendices A and E.

General Information on Air Monitoring Networks

Most ambient air quality monitoring stations operated by air quality agencies are classified as State or Local Air Monitoring Station (SLAMS). SLAMS are long-term monitoring stations and are generally considered to be permanent sites. Their primary objective is to collect data for comparison to the National Ambient Air Quality Standards (NAAQS). Stations may instead be classified as Special Purpose Monitors (SPM) or Prevention of Significant Deterioration stations, the latter being generally short-term sites with objectives other than NAAQS comparison.

Appendix D of 40 CFR 58 specifies design criteria for SLAMS networks and states that networks must be designed to meet a minimum of three basic monitoring objectives: 1) Provide air pollution data to the public in a timely manner; 2) Support compliance with the NAAQS; and 3) Support air pollution research. A variety of site types are needed to support these basic objectives, including the six general types identified in the Appendix:

- **Highest Concentration:** Sites located to determine the highest concentration expected to occur in the area covered by the network;
- **Population Exposure:** Those located to determine representative concentrations in areas of high population density;
- **Source Oriented:** Sites located to determine the impact on ambient pollution levels of significant sources or source categories;
- **General/Background:** Those located to determine general background concentration levels;
- **Regional Transport:** Sites located to determine the extent of regional pollutant transport among populated areas, and in support of secondary standards; and
- **Welfare Related Impacts:** Sites located to determine the welfare-related impacts in more rural and remote areas (such as visibility impairment and effects on vegetation).

The physical siting of an air monitoring station must conform to the requirements of the Appendix, and its location must achieve a spatial scale of representativeness that is consistent with the monitoring objective and site type. The spatial scale results from the physical location of the site with respect to the pollutant sources and categories. It estimates the size of the area surrounding the monitoring site that experiences uniform pollutant concentrations. The categories of spatial scale defined in the Appendix are:

- **Microscale:** An area of uniform pollutant concentrations ranging from several meters up to 100 meters;
- **Middle Scale:** uniform pollutant concentrations in an area of about 110 meters to 0.5 kilometer;
- **Neighborhood Scale:** an area with dimensions in the 0.5 to 4-kilometer range;
- **Urban Scale:** Citywide pollutant conditions with dimensions from 4 to 50 kilometers;
- **Regional Scale:** An entire rural area of the same general geography (this area ranges from tens to hundreds of kilometers); and
- **National and Global Scales.**

The relationship between site type and spatial scale is summarized in Table 1, below, which is adapted from Table D-1 of the Appendix.

Table 1: Relationship between Site Type and Spatial Scale

Site Type	Appropriate Spatial Scale
Highest concentration	Micro, middle, neighborhood, (sometimes urban or regional for secondary pollutants)
Population exposure	Neighborhood, urban
Source oriented	Micro, middle, neighborhood
General/background & regional transport	Urban, regional
Welfare Related Impacts	Urban, regional

Air Monitoring Stations in San Luis Obispo County

San Luis Obispo County comprises the San Luis Obispo-Paso Robles Metropolitan Statistical Area (MSA). Air monitoring responsibilities for the MSA are divided between SLO COUNTY APCD and California Air Resources Board (CARB), as allowed by Section 2(e) of Appendix D to 40 CFR 58. SLO COUNTY APCD acknowledges this joint responsibility and is a member of the CARB Primary Quality Assurance Organization (PQAO). The roles and responsibilities of the two agencies with regard to fulfilling state and federal monitoring requirements are formalized in a “Roles and Responsibilities” document, which can be viewed on the CARB website.¹

There are currently nine SLAMS stations in the County/MSA; their locations are shown in Figure 1. CARB operates the station in Paso Robles as part of their network, while the other eight are operated by SLO COUNTY APCD. Table 2 lists these stations, along with the pollutants and meteorological parameters monitored at each location and the site type. Every criteria pollutant monitor at each of these nine SLAMS meets all applicable requirements in Appendices A, B, C, D, and E to 40 CFR 58.

SLO COUNTY APCD also assists in the operation of the **Oso** Flaco monitoring station for the California Department of Parks and Recreation (06-079-9001). This site is located within the Oceano Dunes State Vehicle Recreation Area (ODSVRA) where off-highway vehicle activity is not allowed and is therefore a background station relative to other SLO COUNTY APCD monitoring stations that are downwind of the ODSVRA. The PM₁₀ FEM monitor at the site is newly classified as a SLAMS and complies with 40 CFR 58.11(a)(2), meeting all applicable requirements of 40 CFR 58 Appendices A and E.

Table 2: Summary of Parameters Currently Monitored at SLAMS in San Luis Obispo County

Site ^a	Ozone ^b	Nitrogen Dioxide	Sulfur Dioxide	PM ₁₀	PM _{2.5}	Wind ^c	Temp
Atascadero (06-079-8002)	P, C	P, C		P	P	X	X

¹ California Air Resources Board, “Quality Management Documents, Document Repository, Finalized Roles and Responsibilities,” https://ww2.arb.ca.gov/sites/default/files/classic/aaqm/qa/pqao/repository/slo_rolesandresponsibilities.pdf

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Site ^a	Ozone ^b	Nitrogen Dioxide	Sulfur Dioxide	PM ₁₀	PM _{2.5}	Wind ^c	Temp
Carrizo Plain (06-079-8006)	T, B					X	X
CDF (06-079-2007)				S, C	S, C	X	
Mesa2 (06-079-2004)			S, C	S	S	X	X
Morro Bay (06-079-3001)	B					X	
Nipomo Regional Park (06-079-4002)	B	B		B		X	X
Paso Robles (06-079-0005)	P			P		X	X
San Luis Obispo-Roberto Ct. (06-079-2020)				P	P		
Red Hills (06-079-8005)	T, C					X	X
OFS-State Parks Owned (06-079-9001)				B		X	X

Site Types: B = General/Background, C = Highest Concentration, P = Population Exposure, T = Regional Transport, S = Source, X = Parameter measured at this site.

Notes:

^a The Paso Robles SLAMS is operated by CARB; all other sites are operated or assisted in operation by SLO COUNTY APCD. ^b The Atascadero SLAMS typically has the highest ozone concentration in the western County attainment area, while the Red Hills SLAMS reports the highest ozone concentration in the eastern County nonattainment area.

^c Wind speed, wind direction, and sigma theta.

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

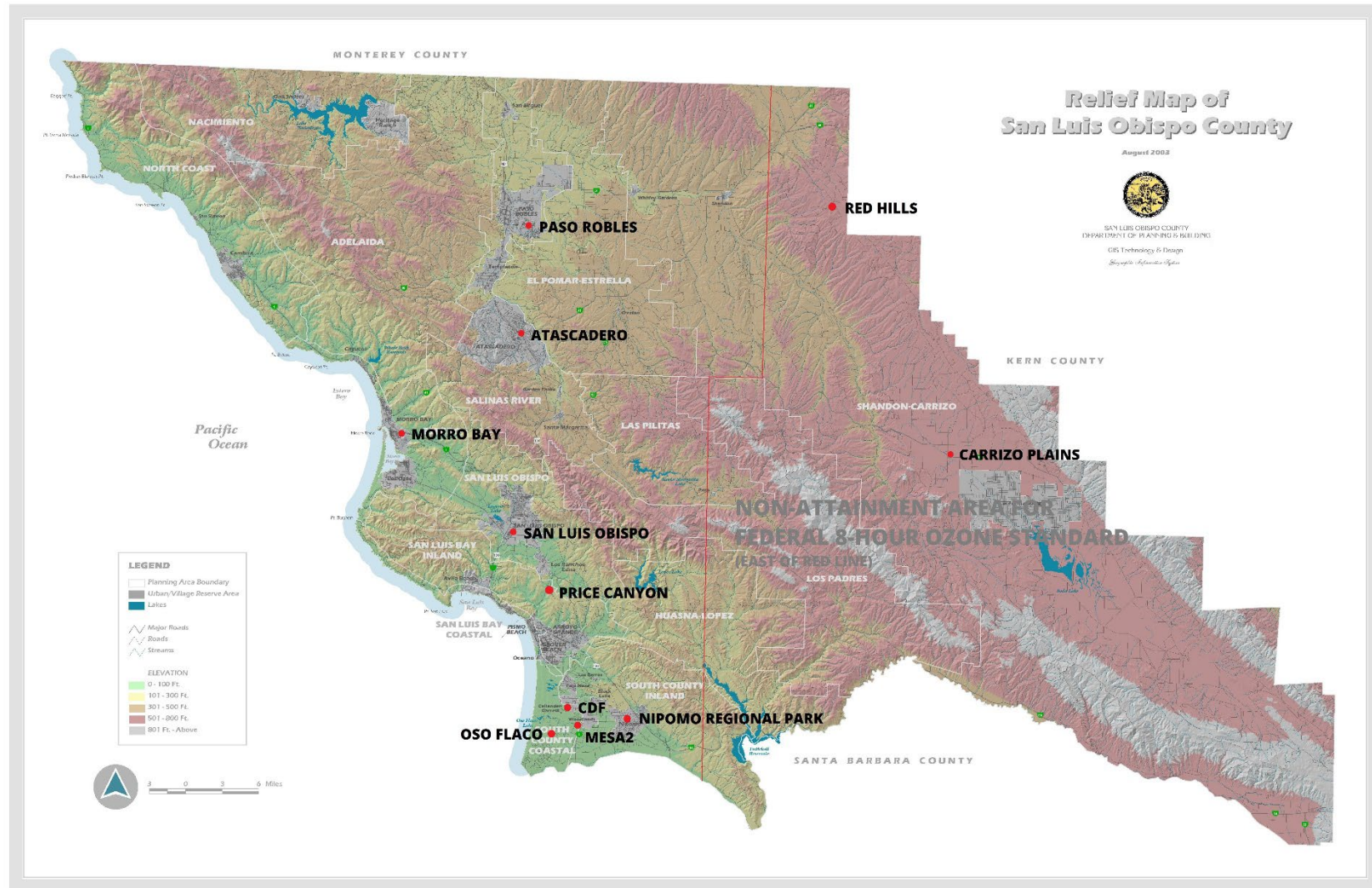


Figure 1: Locations of air monitoring stations in San Luis Obispo County as of May 2023. The thin red line depicts the boundary of the western County ozone attainment area and the eastern County ozone nonattainment area.

Changes to Monitoring Network Since the Previous ANP

Changes to the monitoring network since the publication of the last ANP are summarized below.

Refinery-related community and fence-line monitoring

On March 3rd, 2023, the SLO COUNTY APCD gave approval to the Phillips 66 Santa Maria refinery to shut down the AB 1647 required fence-line monitoring network following the cessation of refining operations at that location. These monitors were operated by the refinery with oversight provided by the SLO COUNTY APCD. The fence-line monitoring that was concluded was for oxides of nitrogen, sulfur dioxide, black carbon, and non-methane volatile organic compounds monitors housed at the Mesa 2 station. As well as, the oxides of nitrogen, sulfur dioxide, black carbon, and non-methane volatile organic compounds monitors located at a station on the northern reaches of the refinery property. All monitors were removed except for the sulfur dioxide monitor; Phillips 66 used sulfur dioxide data from the existing Mesa2 SLAMS monitor for their fence-line monitoring. The fence-line monitoring was not designated as SLAMS or SPM, nor was the data generated submitted to AQS.

Ozone Monitoring Network Changes

No changes have been made to the Ozone monitoring networks since the previous ANP. A formal request was submitted to the EPA for the relocation of the Morro Bay station which is detailed below in the proposed changes section of the document.

Particulate Monitoring Network Changes

The Oso Flaco monitoring site was officially designated a SLAMS site due to its continued operation. This site was previously a "Special Purpose" site but will now continue to operate as a SLAMS site with SLO COUNTY APCD assistance.

Current Beta Attenuation Monitors (BAMs) with an operating age of over 10 years will be replaced with younger more recently purchased BAMs. No other changes have been made to either the PM_{2.5} or PM₁₀ monitoring networks since the previous ANP.

Nitrogen Dioxide Monitoring Network Changes

As noted above, the oxides of nitrogen monitoring associated with the refinery-related community/fence-line monitoring plan was shut down in March of 2023 following the cessation of refining operations at the Phillips 66 refinery. No changes have been made to the SLAMs nitrogen dioxide monitoring network since the previous ANP.

Sulfur Dioxide Monitoring Network Changes

As noted above, the Sulfur Dioxide monitor associated with the refinery-related community/fence-line monitoring plan located on the northern reaches of the Phillips 66 property was shut down in March of 2023 following the cessation of refining operations at the Phillips 66 refinery. No changes have been made to the SLAMs sulfur dioxide monitoring network since the previous ANP.

Infrastructure and Support Equipment Changes

The Atascadero monitoring station (06-079-8002) was updated with a **new** shelter and moved less than 3 meters from its previous location with its orientation unchanged on May 6, 2022. No changes or adjustments are necessary for this upgrade.

Beginning May 2023, the SLO COUNTY APCD will discontinue the operation of ESC/Agilaire 8832 data loggers in lieu of 8872 digital data loggers. All but Oso Flaco and Morro Bay (Pending relocation in May 2023) will migrate to digital data and begin data validation in the new format. All updated logger operations will be addressed in the new revisions of standard operating procedures (SOPs).

Detailed Descriptions of the Current Network

Ozone Monitoring Network

The SLAMS network features ozone monitors in Atascadero, Red Hills, Carrizo Plain, Paso Robles, Morro Bay, and Nipomo Regional Park. The eastern portion of San Luis Obispo County is designated as a marginal nonattainment area for the 8-hour ozone standard, and the Red Hills and Carrizo Plain monitors are located in this area. The EPA determined that Eastern San Luis Obispo County attained the 2015 Ozone NAAQS by the August 3, 2021 attainment date and will remain classified as marginal non-attainment. Since EPA is not acting to re-designate the area, an Enhanced Monitoring Plan is not required.

Atascadero – SLO COUNTY APCD has operated an ozone monitor in Atascadero since 1988. The Atascadero station was moved in 2015 from the central business district to a nearby city property. The monitor is classified as population-oriented and neighborhood scale. It provides ozone measurements representative of the City of Atascadero. Ozone concentrations at this site exhibit strong diurnal fluctuations caused by the titration or mixing of ozone with nitric oxide from nearby mobile and residential sources. Concentrations at this site are similar to those recorded at Paso Robles and are often the highest among the five ozone monitors in the western portion of the County that is classified as attaining the federal ozone standard. The highest ozone concentrations at Atascadero occur when high pressure over the interior southwest U.S. causes transport of ozone and other pollutants into the County from the east. Under these infrequent conditions, transported ozone, enhanced by local pollutants, can cause highly elevated concentrations. Most of the time, prevailing winds from the west and northwest help keep ozone levels at Atascadero low.

Carrizo Plain – Operated by SLO COUNTY APCD since January 2006, this regional scale station monitors background levels and ozone transport from the interior areas of the state. The monitor is located in an outbuilding at the Carrisa Plains Elementary School. The ozone concentrations recorded here are second only to Red Hills in concentration and persistence; this site is located within the Eastern San Luis Obispo County nonattainment area.

Morro Bay – Operated since 1975 by SLO COUNTY APCD, this site provides regional scale and general/background ozone monitoring. Located in downtown Morro Bay, the monitor generally measures background levels of ozone from the predominant northwest winds blowing off the Pacific

Ocean. Under unusual meteorological conditions, the site can record elevated ozone concentrations transported from urban areas as far south as the Los Angeles basin. This station is planned to be relocated to Kings Avenue in 2023, a move of less than 1-mile. Minimal data impact is expected.

Nipomo Regional Park (NRP) – Operated by SLO COUNTY APCD since 1998, this station provides monitoring of background levels of ozone on a regional scale. Previously (1979 to 1996) ozone had been monitored in Nipomo on Wilson Street, several miles away. The ozone concentrations measured at NRP are representative of interior portions of the Nipomo Mesa and are the highest recorded in the coastal region of San Luis Obispo County.

Paso Robles – Operated by CARB since 1974, this population-oriented, neighborhood scale ozone monitor provides a representative ozone concentration for the suburban areas of the City of Paso Robles. The conditions under which elevated ozone levels occur and the location's prevailing winds are similar to Atascadero.

Red Hills – Operated by SLO COUNTY APCD since 2000, this station is located near the summit of Red Hills at an elevation of about 2,000 feet. It is in a very sparsely populated area near the community of Shandon. This regional scale site is often influenced by ozone transport from distant source areas outside of the County, and it consistently records the highest and most persistent ozone concentrations in the network; its site type is thus regional and maximum concentration. In early 2012, the eastern portion of the County was designated as marginally nonattainment for the federal 8-hr ozone standard based on the design value from this site.

As noted in Table 2, the SLAMS site types employed by the existing ozone network are:

1. **Highest Concentration** – The Red Hills station typically records the highest ozone concentrations in the County. The high ozone levels tend to occur in the interior areas of the County during summer, either following long periods of wind stagnation, or as a result of offshore winds which can transport pollutants from interior regions of the state from distant sources to the northeast. Among the sites in the western portion of the County which is classified as attaining the ozone standard, Atascadero and Paso Robles measure the highest concentrations.
2. **Population Exposure** – The Paso Robles and Atascadero monitors provide good representations of the ozone levels in the larger cities of the County.
3. **Source Impact** – Because ozone is a secondary pollutant, the effect of emissions from any single source are experienced five to seven hours later and often many miles distant. As a regional pollutant, monitoring for specific sources of ozone is not performed.
4. **General/Background** – The monitors at Morro Bay, Carrizo Plain, and Nipomo Regional Park provide regional background ozone levels.
5. **Regional Transport** – The stations located at Carrizo Plain and Red Hills provide excellent surveillance of regional transport of ozone into the interior part of the County. Coastal monitoring stations have provided evidence in the past of regional transport of ozone over the Pacific Ocean from distant urban sources.

Nitrogen Dioxide Monitoring Network

The SLAMS network in San Luis Obispo County features nitrogen dioxide (NO₂) monitors at Atascadero and Nipomo Regional Park. NO₂ levels have always been well below the state and federal standards at all locations in our County. For this reason, NO₂ monitoring is most useful as an indicator of depletion of ambient ozone through titration or mixing with nitric oxide. Having NO₂ monitors in North and South County also serves a long-term air quality surveillance role.

Atascadero – Operated by SLO COUNTY APCD since 1990 and relocated in 2015, this population-oriented monitor is considered neighborhood scale. This is the only NO₂ monitor in the Salinas River air basin, and it records the highest NO, NO₂, and NO_x levels in the County. The monitor's downtown location has established a strong diurnal inverse relationship between ozone and NO₂ levels caused by local mobile sources and residential and commercial combustion of natural gas.

Nipomo Regional Park – Operated by the SLO COUNTY APCD since 1998, this monitor is regional in scale and is representative of background concentrations on the Nipomo Mesa. The site's location in a large natural area away from local or mobile sources makes it ideal for regional surveillance of NO₂.

The SLAMS sites in the existing NO₂ network are:

1. **Highest Concentration** – The Atascadero monitor historically has measured the highest NO₂ concentrations in the County. NO₂ levels are the result of titration or mixing of ambient ozone by local sources of nitric oxide and as a result values are always relatively low. Levels have never exceeded the 1-hour NO₂ standard (100 ppb), with annual maximum 1-hour concentrations typically around 50% of the standard.
2. **General/Background** – With no significant local sources present, the monitor at Nipomo Regional Park provides excellent information on coastal background levels of NO₂.

Regional Transport and Welfare-Related impacts of NO₂ are not currently addressed by SLO COUNTY APCD's SLAMS network and are not thought to be significant. The San Luis Obispo-Paso Robles MSA, does not have, nor per Appendix D, Section 4.3 of 40 CFR 58 is it required to have, any NO₂ sites for vulnerable populations or near-road NO₂ monitoring sites.

Sulfur Dioxide Monitoring Network

The SO₂ monitoring network in San Luis Obispo County currently consists of one station: Mesa2.

Mesa2 – Established in 1989 and operated by the SLO COUNTY APCD since 2006, this monitor performs surveillance of a nearby oil refinery. It is considered middle scale and highest concentration for SO₂. Since it is located close to and downwind of a major source of SO₂ emissions, it is representative only of the immediate area. The station was sited to optimize surveillance of the refinery's nearby coke calciner, which has since been shut down. Nonetheless, the refinery remains the largest point source of SO₂ in the County, and during upsets this monitor has recorded concentrations approaching and sometimes exceeding the NAAQS. Exceedances of the federal SO₂ standard had never been recorded here until 2014, when maintenance activities at these facilities

resulted in emissions exceeding the 1-hour standard of 75 ppb. (This standard was established in 2011.) In addition to meeting NAAQS compliance objectives, this site is also vital for public information and emergency response. With the feathering of the Phillips 66 refinery and last load of refinable material delivered in March of 2023 the Sulfur Dioxide monitoring at Mesa2 could be terminated pending EPA approval. The SLO County APCD will plan on asking for EPA arrival in 2023. Previously, the SLAMS SO₂ monitoring objectives met by the network were:

1. **Highest Concentration** – The monitor at Mesa2 currently records the highest SO₂ levels in the County.
2. **Source Impact** – The monitor at Mesa2 is invaluable in determining the SO₂ impacts from the refinery upon the immediate region.

Monitoring objectives not addressed by the existing SO₂ network are: General/Background, Population Exposure, Regional Transport, and Welfare-Related. Historical SO₂ monitoring performed elsewhere in the County (at NRP from 1998-2006; Morro Bay, 1979-1995; Grover Beach, 1982-2004; and at decommissioned stations in Arroyo Grande “Ralcoa” [06-079-1005; 1991-2002], and “Mesa1” [06-079-3002; 1987-94]) has provided good evidence that monitoring for these objectives is not needed. Furthermore, background levels of SO₂ in the County are believed to be negligible as demonstrated in 2020 during the COVID19 refinery shutdown when the maximum hourly concentration measured was 2 ppb.

There are no sources within SLO County APCD’s jurisdiction with annual SO₂ emissions greater than 2000 tons; therefore, no monitoring is required to fulfill the “Data Requirements Rule” (40 CFR 51.1203).

Particulate Monitoring Network

The particulate SLAMS network in San Luis Obispo County consists of seven permanent Federal Equivalent Method (FEM) PM₁₀ monitors (Paso Robles, Atascadero, San Luis Obispo, Mesa2, CDF, Nipomo Regional Park, and Oso Flaco) and four permanent FEM PM_{2.5} monitors (Atascadero, CDF, Mesa2, and San Luis Obispo). The PM₁₀ network has been in place since 1988, and PM_{2.5} sampling began in 1999 in response to the establishment of the federal standards for PM_{2.5} in 1997. Originally, all particulate monitoring in the County was performed as part of CARB’s network, but eventually all monitors except those at Paso Robles became part of the SLO County APCD network. Note that for quality assurance, SLO County APCD remains part of the CARB PQAQ. SLO County APCD, therefore, relies on CARB for performing federally required audits of its particulate monitors and for meeting federal collocation requirements.

Initially all particulate sampling was conducted by filter based Federal Reference Monitors (FRM). With the advent of continuous monitoring technologies, all the FRM monitors in the County have been replaced with FEM monitors in recent years. Currently these are Met One Instruments BAM 1020 semi-real time monitors that report hourly PM concentrations. The hourly data have greatly improved our ability to issue timely air quality forecasts and alerts, which is a significant benefit for the advancement of public health goals.

Atascadero – Operated by SLO County APCD, PM₁₀ monitoring has been conducted in Atascadero since 1988, initially via an FRM and currently with a continuous FEM monitor. Collocated FRM PM_{2.5} monitors began operation in 1999 and have since been replaced by a single FEM. The monitors are neighborhood or urban in scale and representative of particulate concentrations in the City of Atascadero. As previously noted, the station was moved about 400 meters north of its original location in February 2015 and was moved 3 meters in 2022.

CDF – Originally established for the SLO County APCD's Nipomo Mesa Phase 2 Particulate Study, this site has become a permanent part of the SLAMS particulate network. The site features continuous FEM samplers for PM₁₀ and PM_{2.5}, which are neighborhood in scale and measure source impacts from the ODSVRA. These monitors record the highest particulate levels in the County and are strongly influenced by the ODSVRA, located directly upwind. In 2012, extensive temporary monitoring on the Nipomo Mesa confirmed that this site is located within the 1 square mile sector of the study area that experiences the highest PM₁₀ levels.²

Mesa2 – PM₁₀ sampling began at this site in 1991, and the monitors have been operated by the SLO County APCD since 2006. This site initially featured collocated FRM PM₁₀ samplers that were replaced by a single continuous FEM PM₁₀ monitor in 2009. A continuous PM_{2.5} FEM monitor was installed at the same time. This site monitors source impacts from the nearby pending oil refinery demolition and remediation activities and the coastal dunes, and the monitors are neighborhood in scale. These monitors record some of the highest particulate levels in the County and are strongly influenced by the extensive coastal sand dunes and the ODSVRA located upwind.

Nipomo Regional Park – Operated at this location by SLO County APCD since 1998, it replaced a site at Wilson Street in Nipomo that operated from 1990-96. The 1-in-6 day FRM PM₁₀ sampler was replaced with a continuous FEM sampler in 2010. The monitor is regional in scale and is representative of PM₁₀ concentrations on the Nipomo Mesa.

Oso Flaco – Operated by SLO County APCD on behalf of the California Department of Parks and Recreation, this PM₁₀ monitor was established in July 2015 to fulfill a requirement of SLO COUNTY APCD Rule 1001. It has been recently reclassified as a SLAMS monitor. It is located within the Oso Flaco area of the ODSVRA; off-road vehicular activity is not permitted upwind of the monitor. It is considered neighborhood in scale and representative of the non-riding areas of the dunes complex.

Paso Robles – Operated by CARB since 1991, this PM₁₀ monitor is neighborhood in scale and representative of the City of Paso Robles. The FRM sampler at this site was replaced with an FEM PM₁₀ sampler in August 2009.

San Luis Obispo – CARB operated a PM₁₀ sampler in San Luis Obispo from 1988 through early 2021 and a PM_{2.5} sampler from 1999 through early 2021. CARB replaced their FRM samplers with continuous FEM instruments in 2011. These population-oriented monitors were neighborhood in

² San Luis Obispo County Air Pollution Control District, "South County Community Monitoring Project," January 2013. Available online: <https://www.slocleanair.org/library/air-quality-reports.php>

scale and representative of particulate concentrations in the City of San Luis Obispo. This station was closed early 2021. On January 1, 2020, the SLO County APCD began operating replacement PM₁₀ and PM_{2.5} monitors at its office, approximately 2 miles from the closed CARB SLAMS site.

Other Networks – San Luis Obispo County, which comprises the San Luis Obispo-Paso Robles MSA, is not required to have, does not currently have, and does not plan to establish any NCore, PAMS, lead, carbon monoxide or near-road monitoring stations

Proposed Network Changes and Improvements

The following sections list any modifications that are planned for the 18-month period after the publication of this ANP. Note that with a population well below 500,000, the San Luis Obispo-Paso Robles MSA/CBSA³ is not required to have any near-road NO₂, carbon monoxide, or PM_{2.5} monitors, and SLO County APCD has no plans to establish any such monitors. Additionally, there are no sources in our jurisdiction with SO₂ emissions greater than 2,000 tons per year; therefore, no new SO₂ monitoring is needed nor planned to comply with the SO₂ Data Requirements Rule. Additionally, with the feathering of the Phillips 66 refinery and last load of refinable material delivered in March of 2023 the Sulfur Dioxide monitoring at Mesa2 could be terminated pending EPA approval. The SLO County APCD will plan on asking for EPA approval in 2023.

New Stations and Station Closures and Relocations

Currently the Morro Bay station (06-079-3001) is being updated from the previous shelter to a newer more compact and efficient station and relocated to a nearby lot off Kings Ave where it will begin operating as Morro Bay- Kings Ave. (06-079-3003). While operations will occur under a new Site ID the historical data records will be combined in AQS. The overall change in location is less than 1/2 mile from the previous location and is approved by the EPA. See supporting document of Attachment 4, EPA Approval letter dated February 3, 2023. In addition, the Morro Bay monitoring site will now report Sonic Temperature. This relocation is expected to be completed by the end of June 2023.

Ozone Monitoring Network Proposed Changes

The Morro Bay Monitoring site (06-079-3001) will be relocated as detailed in the previous section.

Nitrogen Dioxide Network

There are no changes planned to the nitrogen dioxide monitoring network.

Sulfur Dioxide Monitoring Network

With the cessation of refining operations at the Phillips 66 refinery and scheduled decommissioning and remediation of the site, the Sulfur Dioxide monitoring at Mesa2 (06-079-2004) could be terminated pending EPA Approval. The SLO County APCD will plan on asking for EPA approval in 2023.

³ San Luis Obispo County, the San Luis Obispo-Paso Robles MSA, and the San Luis Obispo-Paso Robles CBSA have identical borders and populations.

Infrastructure and Support Equipment Changes

The following equipment upgrades are planned for the next 12 months:

- SLO County APCD will upgrade any Beta Attenuation Monitors currently over 10 years in service with newer units.
- The roof platforms at Mesa2 and CDF will be repaired and upgraded to more robust materials.



DRAFT

Accessing Air Quality Data

All SLAMS monitoring stations currently operating in the County are registered with the EPA and CARB and their data are regularly reported by SLO County APCD staff to the EPA's AQS database, CARB's AQMIS2 website, and the AirNow website. Validated data from SLAMS sites operated by SLO County APCD are typically submitted to AQS by end of the quarter following the quarter in which they were collected. Raw data is uploaded automatically to AQMIS2 and AirNow within an hour after being generated in the field. In addition, raw data for the current day and previous day is available on the SLO County APCD website. All data generated at these stations are public information and are available in various formats. Table 3, below, lists some popular sources for this data.

SLO County APCD, and where applicable CARB, regularly submit precision and accuracy data to AQS for all gaseous and particulate pollutants measured in the SLAMS network. Additionally, in accordance with 40 CFR 58.15, SLO County APCD certifies its AQS dataset for the previous year every spring. SLO County APCD submitted a certification package for calendar year 2022 data to EPA on April 26, 2023.

Table 3: Sources for Air Quality Data from San Luis Obispo

Agency	Address for Data Requests	Website for Data Access	Data Available Online
SLO COUNTY APCD	3433 Roberto Court, San Luis Obispo, CA 93401	Table: https://www.slocleanair.org/pages/air-quality/lasthour.php Map: www.slocleanair.org/air/AirForecasting_map3.php	Raw data from last 24 to 48 hours for sites in San Luis Obispo County.
CARB	P.O. Box 2815 Sacramento, CA 95812	AQMIS2: https://www.arb.ca.gov/aqmis2/aqmis2.php ADAM: www.arb.ca.gov/adam/	Most California sites, including all sites in San Luis Obispo County. Real-time raw data and archived validated data.
EPA	Ariel Rios Building 1200 Pennsylvania Ave NW Washington, DC 20460	AQS: www.epa.gov/ttn/airs/airsaqs/detaildata	Validated data from across the U.S. Typically one to several months behind current date.
AirNow.gov	U.S. EPA – OAQPS – ITG Mail Code E143-03 Research Triangle Park, NC 27711	www.airnow.gov	Current air quality conditions, nationwide. Based on real-time raw data.

Appendix A: Minimum Monitoring Requirements

The SLO County APCD monitoring network meets the minimum monitoring requirements for all criteria pollutants as established in 40 CFR 58. The tables below list the criteria used to determine compliance with Federal regulations. The County population cited in these tables (282,013) is the official Census Bureau estimate for July 1, 2022.⁴ The California Department of Finance estimate for January 1, 2022, is 280,721,⁵ and the official figure from the most recent US Census (2020) is 282,443. Using either of these figures in lieu of the Census Bureau estimate for 2022 does not change the required number of sites for any pollutant.

Minimum Monitoring Requirements for Ozone (O₃)

MSA	County	Population (Census Year)	8-hour Design Value (years) ^a	Design Value Site Name (AQS ID)	Number of Required Sites ^b	Number of Active Sites	Number of Additional Sites Needed
San Luis Obispo - Paso Robles	San Luis Obispo	282,013 (2022)	71 ppb (2020-2022)	Red Hills (06-079-8005)	1	6	0

^a This Design Value is for eastern San Luis Obispo County, which is designated as marginally nonattainment for the 2008 8-hour ozone standard. The design value for the rest of the County is 63 ppb (2020-22) from Paso Robles (06-079-0005).

^b Refer to section 4.1 and Table D-2 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

⁴ United States Census Bureau, Quick Facts: San Luis Obispo County, California, <https://www.census.gov/quickfacts/fact/table/sanluisobispoCountycalifornia,sanluisobispocitycalifornia#>

⁵ State of California, Department of Finance, E-1 Cities, Counties, and the State Population Estimates with Annual Percent Change — January 1, 2021 and 2022. <https://dof.ca.gov/forecasting/demographics/estimates-e1/>

Minimum Monitoring Requirements for PM_{2.5} SLAMS

MSA	County	Population (Census Year)	Annual Design Value (years)	Annual Design Value Site (AQS ID)	Daily Design Value (years)	Daily Design Value Site Name (AQS ID)	Number of Required SLAMS Sites ^a	Number of Active SLAMS Sites	Number of Additional SLAMS Sites Needed
San Luis Obispo - Paso Robles	San Luis Obispo	282,013 (2022)	8.7 µg/m ³ (2020-2022)	CDF (06-079-2007)	32 µg/m ³ (2020-22)	Atascadero (06-079-8002)	0	4	0

^a Refer to section 4.7.1 and Table D-5 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

Minimum Monitoring Requirements for Continuous PM_{2.5} Monitors

MSA	County	Population (Census Year)	Annual Design Value (years)	Annual Design Value Site (AQS ID)	Daily Design Value (years)	Daily Design Value Site Name (AQS ID)	Number of Required Continuous Monitors ^a	Number of Active Continuous Monitors	Number of Additional Continuous Monitors Needed
San Luis Obispo - Paso Robles	San Luis Obispo	282,013 (2022)	8.7 µg/m ³ (2020-2022)	CDF (06-079-2007)	32 µg/m ³ (2020-22)	Atascadero (06-079-8002)	0	4	0

^a Refer to section 4.7.2 and Table D-5 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

Minimum Monitoring Requirements for PM₁₀

MSA	County	Population (Census Year)	Maximum Concentration (Year)	Maximum Concentration Site Name (AQS ID)	Number of Required Sites ^a	Number of Active Sites	Number of Additional Sites Needed
San Luis Obispo - Paso Robles	San Luis Obispo	282,013 (2022)	103 µg/m ³ (2022)	CDF (06-079-2007)	1-2	7	0

^a Refer to section 4.6 and Table D-4 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

Minimum Monitoring Requirements for Nitrogen Dioxide (NO₂)

CBSA	Population (Census Year)	Maximum AADT Count (Years)	Number of Required Near-road Monitors ^b	Number of Active Near-road Monitors	Number of Additional Near-road Monitors Needed	Number of Required Area-wide Monitors ^b	Number of Active Area-wide Monitors	Number of Additional Area-wide Monitors Needed
San Luis Obispo - Paso Robles	282,013 (2022)	83,300 (2018) ^a	0	0	0	0	2	0

^a US Hwy 101 in Pismo Beach

^b Refer to section 4.3 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

Monitors required for PAMS: None

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

Minimum Monitoring Requirements for Sulfur Dioxide (SO₂)

CBSA	County	Population (Census Year)	Total SO ₂ ^a (Tons/year)	Population Weighted Emissions Index (million person-tons/year) ^b	Data Requirements Rule Source(s) Using Monitoring ^c	Number of Required Monitors ^d	Number of Active Monitors	Number of Additional Monitors Needed
San Luis Obispo - Paso Robles	San Luis Obispo	282,013 (2022)	208	59	NA	0	1	0

^a From the 2020 National Emissions Inventory, which is the most current year for which the Inventory is available:

<https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-data>.

^b Product of CBSA population and SO₂ emissions, divided by one million.

^c Refer to 40 CFR 51 Subpart BB. There are no sources within the County/CBSA/SLO COUNTY APCD jurisdiction with annual emissions over 2,000 tons, therefore, neither monitoring nor modelling is required to meet the "Data Requirements Rule."

^d Refer to section 4.4 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

Minimum Monitoring Requirements for Carbon Monoxide (CO)

CBSA	Population (Census Year)	Number of Required Near-Road Monitors ^a	Number of Active Near-Road Monitors	Number of Additional Monitors Needed
San Luis Obispo-Paso Robles	282,013 (2022)	0	0	0

^a Refer to section 4.2 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

EPA Regional Administrator-required monitors per section 4.2.2. of Appendix D to 40 CFR 58:

None

Minimum Monitoring Requirements for Lead at NCore

NCore Site	CBSA	Population (Census Year)	Number of Required Monitors ^a	Number of Active Monitors	Number of Additional Monitors Needed
none	San Luis Obispo-Paso Robles	282,013 (2022)	0	0	0

^a Refer to section 4.5 of Appendix D to 40 CFR Part 58 for requirements.

Source-Oriented Lead Monitoring (Including Airports)

Source	Address	Pb Emissions (Tons/yr)	Emissions Inventory Source Data (Year)	Max 3-Month Design Value	Design Value Date	Number of Required Monitors ^b	Number of Active Monitors	Number of Additional Monitors Needed
none ^a	n/a	n/a	n/a	n/a	n/a	0	0	0

^a According to the 2020 National Emissions Inventory, total lead emissions in the County are less than 0.50 tons, therefore no single source exceeds the 0.50 ton threshold.

^a Refer to section 4.5 of Appendix D to 40 CFR Part 58 for requirements.

Monitors required for SIP or Maintenance Plan: None

EPA Regional Administrator-required monitors per section 4.5(c) of Appendix D to 40 CFR 58:

None

Near-Road NO₂, PM_{2.5}, and CO Monitors

CBSA	Population (Census Year)	Maximum AADT Count (Years)	Number of Required NO ₂ Monitors ^a	Number of Active NO ₂ Monitors	Number of Required PM _{2.5} Monitors ^a	Number of Active PM _{2.5} Monitors	Number of Required CO Monitors ^a	Number of Active CO Monitors	Number of Additional Monitors Needed
San Luis Obispo - Paso Robles	282,013 (2022)	83,300 (2018) ^b	0	0	0	0	0	0	0

^a Refer to 40 CFR Part 58.13 and sections 4.2, 4.3, 4.7 of Appendix D to 40 CFR Part 58

^b US Hwy 101 in Pismo Beach.

Appendix B: Collocation Requirements

Particulate monitoring (PM₁₀, PM_{2.5}, and lead) is subject to the collocation requirements described in Section 3 of Appendix A to 40 CFR 58. The requirements apply at the PQAQ level, and monitors are aggregated by method when determining the required number of collocated monitors. SLO County APCD is part of the CARB PQAQ and all particulate monitors in our network are Met One BAM 1020s, which are continuous FEM instruments (PM₁₀ method code: 122; PM_{2.5} method code: 170). While there are no collocated particulate monitors within the SLO County APCD network, there are collocated monitors within the CARB PQAQ.

It could not be determined whether the collocation requirements for PM_{2.5} are being met. According to CARB's most recent Annual Network Plan,⁶ in 2022 there were 53 active PM_{2.5} FEM BAM 1020 monitors (method 170) in the PQAQ; thus, eight collocated monitors were needed: four FRM/FEM pairs and four FEM/FEM pairs. The CARB ANP indicates there were four FEM/FEM pairs and five FRM/FEM pairs. The AMP600 for the year 2022 generated from AQS in April 2023 indicates that the PQAQ did not meet its collocation requirements with only 5 collocated monitors in operation. The AMP600 does not specify the collocation monitors types.

With regards to PM₁₀ monitoring, all monitors in SLO County APCD are continuous, and thus there are no collocation requirements. Finally, lead monitoring is not done in the County, and therefore there is no collocation requirement.

Table B- 1: Collocation Requirements for PM_{2.5}, Method Code 170

Data Source (see text)	Number of Primary Monitors	Number of Required Collocated Monitors	Number of Active Collocated FRM Monitors	Number of Active Collocated FEM Monitors (same method designation as primary)
CARB	53	8	5	4
AMP600	54	5	5 total collocated monitors, type not indicated	

⁶ California Air Resources Board, "Annual Network Plan Covering Monitoring Operations in 25 California Air Districts," July 2022. <https://ww2.arb.ca.gov/sites/default/files/2023-02/2022%20Annual%20Network%20Plan.pdf>.

Appendix C: Detailed Site Information

Local site name	Paso Robles	
AQS ID	06-079-0005	
GPS coordinates (decimal degrees)	35.61467, -120.65691	
Street Address	235 Santa Fe Ave, Paso Robles	
County	San Luis Obispo	
Distance to roadways (meters)	27 to Santa Fe Ave. 110 to Sherwood Rd. 180 to Creston Rd. 2700 to US 101	
Traffic count (AADT, year)	Santa Fe Ave.: 75 (estimated) Sherwood Rd.: 10,027 (2017) Creston Rd: 17,347 (2017) US101: 70,000 (2018)	
Groundcover (e.g. asphalt, dirt, sand)	Asphalt	
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)	
Pollutant, POC	Ozone, 1	PM ₁₀ , 2
Primary / QA Collocated / Other	N/A	Primary
Parameter code	44201	81102
Basic monitoring objective(s)	NAAQS Comparison	Public info, NAAQS Comparison
Site type(s)	Population Exposure	Population Exposure
Monitor type(s)	SLAMS	SLAMS
Network Affiliation	N/A	N/A
Instrument manufacturer and model	API T400	Met One BAM 1020
Method code	087	122
FRM/FEM/ARM/other	FEM	FEM
Collecting Agency	CARB	CARB
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A	N/A
Reporting Agency	CARB	CARB
Spatial scale (e.g. micro, neighborhood)	Neighborhood	Neighborhood
Monitoring start date (MM/DD/YYYY)	09/01/1991	06/01/2013 ^a
Current sampling frequency (e.g. 1:3, continuous)	continuous	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31
Probe height (meters)	6.2	5.2
Distance from supporting structure (meters)	2.9	1.9
Distance from obstructions on roof (meters)	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A
Distance from trees (meters)	N/A	N/A
Distance to furnace or incinerator flue (meters)	N/A	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A	N/A
For low volume PM instruments, is any PM instrument within 1m of the instrument?	N/A	No

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Paso Robles	
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A	N/A
Unrestricted airflow (degrees)	360	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon	N/A
Residence time for reactive gases (seconds)	12.9	N/A
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A
Frequency of flow rate verification for manual PM samplers	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	monthly
Frequency of one-point QC check for gaseous instruments	daily	N/A
Date of 2022 Annual Performance Evaluation for gaseous parameters	4/14/22	N/A
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	N/A	4/14/22 11/10/2022

^a This instrument did not begin reporting PM₁₀-standard (88102) until 06/01/2013, but it has been reporting PM₁₀-actual (85101) since 08/11/2009.

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Mesa2		
AQS ID	06-079-2004		
GPS coordinates (decimal degrees)	35.02079, -120.56389		
Street Address	1300 Guadalupe Rd., Nipomo		
County	San Luis Obispo		
Distance to roadways (meters)	40 to Guadalupe Rd. (US 1)		
Traffic count (AADT, year)	Guadalupe Rd. (US 1): 7,150 (2018)		
Groundcover (e.g. asphalt, dirt, sand)	Vegetative		
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)		
Pollutant, POC	SO ₂ , 1	PM _{2.5} , 1	PM ₁₀ , 3
Primary / QA Collocated / Other	N/A	Primary	Primary
Parameter code	42401	88101	81102
Basic monitoring objective(s)	NAAQS Comparison	NAAQS Comparison	NAAQS Comparison
Site type(s)	Source Oriented, Max Concentration	Source Oriented	Source Oriented
Monitor type(s)	SLAMS	SLAMS	SLAMS
Network Affiliation	N/A	N/A	N/A
Instrument manufacturer and model	API T100U	Met One BAM 1020	Met One BAM 1020
Method code	100	170	122
FRM/FEM/ARM/other	FEM	FEM	FEM
Collecting Agency	SLO County APCD	SLO County APCD	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A	N/A	N/A
Reporting Agency	SLO County APCD	SLO County APCD	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Middle	Neighborhood	Neighborhood
Monitoring start date (MM/DD/YYYY)	05/01/1989	07/01/2009	07/01/2009
Current sampling frequency (e.g. 1:3, continuous)	continuous	continuous	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous	continuous	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31	01/01-12/31
Probe height (meters)	4.8	5.4	5.5
Distance from supporting structure (meters) ^a	1.3	1.9	2.0
Distance from obstructions on roof (meters)	N/A	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A	N/A
Distance from trees (meters)	N/A	N/A	N/A
Distance to furnace or incinerator flue (meters)	N/A	N/A	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A	N/A	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	N/A	No	No

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Mesa2		
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A	N/A	N/A
Unrestricted airflow (degrees)	360	360	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon	N/A	N/A
Residence time for reactive gases (seconds)	5.1	N/A	N/A
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	Yes	N/A
Frequency of flow rate verification for manual PM samplers	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	bi-weekly	bi-weekly
Frequency of one-point QC check for gaseous instruments	daily	N/A	N/A
Date of 2022 Annual Performance Evaluation for gaseous parameters	4/13/2022	N/A	N/A
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	N/A	4/13/2022 11/9/2022	4/13/2022 11/9/2022

^a This is the roof-to-probe distance. There are no walls, parapets, penthouses, or other potential obstacles on the roof.

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	CDF	
AQS ID	06-079-2007	
GPS coordinates (decimal degrees)	35.04673, -120.58777	
Street Address	2391 Willow Rd., Arroyo Grande	
County	San Luis Obispo	
Distance to roadways (meters)	53 to Willow Rd. (US 1).	
Traffic count (AADT, year)	Willow Rd. (US1): 7,300 (2018)	
Groundcover (e.g. asphalt, dirt, sand)	Vegetative, Sand	
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)	
Pollutant, POC	PM _{2.5} , 1	PM ₁₀ , 2
Primary / QA Collocated / Other	Primary	Primary
Parameter code	88101	81102
Basic monitoring objective(s)	NAAQS Comparison	NAAQS Comparison
Site type(s)	Max Concentration, Source Oriented	Max Concentration, Source Oriented
Monitor type(s)	SLAMS	SLAMS
Network Affiliation	N/A	N/A
Instrument manufacturer and model	Met One BAM 1020	Met One BAM 1020
Method code	170	122
FRM/FEM/ARM/other	FEM	FEM
Collecting Agency	SLO County APCD	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A	N/A
Reporting Agency	SLO County APCD	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Neighborhood	Neighborhood
Monitoring start date (MM/DD/YYYY)	08/01/2010	01/01/2010
Current sampling frequency (e.g. 1:3, continuous)	continuous	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31
Probe height (meters)	4.0	4.0
Distance from supporting structure (meters) ^a	1.9	1.8
Distance from obstructions on roof (meters)	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A
Distance from trees (meters)	N/A	N/A
Distance to furnace or incinerator flue (meters)	N/A	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	No	No
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A	N/A
Unrestricted airflow (degrees)	360	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	N/A	N/A
Residence time for reactive gases (seconds)	N/A	N/A
Will there be changes within the next 18 months?	No	No

Local site name	CDF	
Is it suitable for comparison against the annual PM _{2.5} ?	Yes	N/A
Frequency of flow rate verification for manual PM samplers	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	bi-weekly	bi-weekly
Frequency of one-point QC check for gaseous instruments	N/A	N/A
Date of 2021 Annual Performance Evaluation for gaseous parameters	N/A	N/A
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	4/13/2022 11/9/2022	4/13/2022 11/9/2022

^a This is the roof-to-probe distance. There are no walls, parapets, penthouses, or other potential obstacles on the roof.

DRAFT

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Morro Bay
AQS ID	06-079-3001
GPS coordinates (decimal degrees)	35.36640, -120.84268
Street Address	899 Morro Bay Blvd., Morro Bay
County	San Luis Obispo
Distance to roadways (meters)	37 to Morro Bay Blvd. 220 to CA 1
Traffic count (AADT, year)	Morro Bay Blvd.: 12,388 (2015) ^a CA 1: 26,300 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Paved
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	O ₃ , 1
Primary / QA Collocated / Other	N/A
Parameter code	44201
Basic monitoring objective(s)	NAAQS Comparison
Site type(s)	General/Background
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	API T400
Method code	087
FRM/FEM/ARM/other	FEM
Collecting Agency	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A
Reporting Agency	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Regional
Monitoring start date (MM/DD/YYYY)	01/01/1981
Monitoring end date (MM/DD/YYYY)	06/31/2023* Tentative Closure Date
Current sampling frequency (e.g. 1:3, continuous)	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	4.2
Distance from supporting structure (meters)	1.1
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	N/A
Distance to furnace or incinerator flue (meters)	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	N/A
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A
Unrestricted airflow (degrees)	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon
Residence time for reactive gases (seconds)	12.9
Will there be changes within the next 18 months?	No

Local site name	Morro Bay
Is it suitable for comparison against the annual PM _{2.5} ?	N/A
Frequency of flow rate verification for manual PM samplers	N/A
Frequency of flow rate verification for automated PM analyzers	N/A
Frequency of one-point QC check for gaseous instruments	daily
Date of 2022 Annual Performance Evaluation for gaseous parameters	7/28/2022
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	N/A

^a This is the most current AADT available for this segment.

DRAFT

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Morro Bay- Kings Ave
AQS ID	06-079-3003
GPS coordinates (decimal degrees)	35.361589, -120.836819
Street Address	492 Kings Ave., Morro Bay
County	San Luis Obispo
Distance to roadways (meters)	43 to Kings Ave. 47 to Carmel St. 525 to CA 1
Traffic count (AADT, year)	Kings Ave: N/A residential street Carmel St: N/A Residential cul de sac CA 1: 26,300 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Dirt/grass
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	O ₃ , 1
Primary / QA Collocated / Other	N/A
Parameter code	44201
Basic monitoring objective(s)	NAAQS Comparison
Site type(s)	General/Background
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	API T400
Method code	087
FRM/FEM/ARM/other	FEM
Collecting Agency	SLO County APCD
Reporting Agency	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Regional
Monitoring start date (MM/DD/YYYY)	07/01/2023* Tentative
Monitoring end date (MM/DD/YYYY)	N/A
Current sampling frequency (e.g. 1:3, continuous)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	5 (estimated)
Distance from supporting structure (meters)	1.5 (estimated)
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	Detailed in table regarding potential obstruction below
Unrestricted airflow (degrees)	360

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Nipomo Regional Park (NRP)		
AQS ID	06-079-4002		
GPS coordinates (decimal degrees)	35.03150, -120.50101		
Street Address	W. Tefft St. and Pomeroy Rd., Nipomo		
County	San Luis Obispo		
Distance to roadways (meters)	500 to Tefft St. 350 to Camino Caballo 240 to Pomeroy Rd.		
Traffic count (AADT, year)	Tefft St.: 13,864 (2016) ^c Camino Caballo: 2,556 (2016) ^c Pomeroy Rd.: 5,048 (2017) ^c		
Groundcover (e.g. asphalt, dirt, sand)	Vegetative		
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)		
Pollutant, POC	O ₃ , 1	NO ₂ , 1	PM ₁₀ , 2
Primary / QA Collocated / Other	N/A	Primary	Primary
Parameter code	44201	42602	81102
Basic monitoring objective(s)	NAAQS Comparison	NAAQS Comparison	NAAQS Comparison
Site type(s)	General/ Background	General/ Background	General/ Background
Monitor type(s)	SLAMS	SLAMS	SLAMS
Network Affiliation	N/A	N/A	N/A
Instrument manufacturer and model	API T400	API T200U	Met One BAM 1020
Method code	087	599 ^a	122
FRM/FEM/ARM/other	FEM	FRM	FEM
Collecting Agency	SLO County APCD	SLO County APCD	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A	N/A	N/A
Reporting Agency	SLO County APCD	SLO County APCD	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Regional	Regional	Regional
Monitoring start date (MM/DD/YYYY)	11/01/1998	11/01/1998	05/16/2010
Current sampling frequency (e.g. 1:3, continuous)	continuous	continuous	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous	continuous	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31	01/01-12/31
Probe height (meters)	4.5	4.5	4.8
Distance from supporting structure (meters) ^b	1.3	1.3	1.6
Distance from obstructions on roof (meters)	N/A	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A	N/A
Distance from trees (meters)	N/A	N/A	N/A
Distance to furnace or incinerator flue (meters)	N/A	N/A	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A	N/A	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	N/A	N/A	No

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Nipomo Regional Park (NRP)		
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A	N/A	N/A
Unrestricted airflow (degrees)	360	360	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon	Teflon	N/A
Residence time for reactive gases (seconds)	14.0	12.5	N/A
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	N/A	bi-weekly
Frequency of one-point QC check for gaseous instruments	daily	daily	N/A
Date of 2022 Annual Performance Evaluation for gaseous parameters	4/19/2022	4/19/2022	N/A
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	N/A	N/A	4/19/2022 11/9/2022

^a EPA, "AQS Memo - Changes to Oxides of Nitrogen Analyzer Method Codes," December 22, 2014.

<https://www.epa.gov/aqs/aqs-memo-changes-oxides-nitrogen-analyzer-method-codes>

^b This is the roof-to-probe distance. There are no walls, parapets, penthouses, or other potential obstacles on the roof.

^c This is the most current AADT available for this segment.

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Atascadero			
AQS ID	06-079-8002			
GPS coordinates (decimal degrees)	35.49453, -120.66617			
Street Address	5599 Traffic Way, Atascadero, CA			
County	San Luis Obispo			
Distance to roadways (meters)	163 to Traffic Way 770 to US 101 330 to CA 41			
Traffic count (AADT, year)	Traffic Way: < 7400 (2014) ^a US 101: 66,700 (2018) CA 41: 16,500 (2018)			
Groundcover (e.g. asphalt, dirt, sand)	Vegetative			
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)			
Pollutant, POC	O ₃ , 1	NO ₂ , 1	PM _{2.5} , 3	PM ₁₀ , 3
Primary / QA Collocated / Other	N/A	Primary	Primary	Primary
Parameter code	44201	42602	88101	81102
Basic monitoring objective(s)	NAAQS Comparison	NAAQS Comparison	NAAQS Comparison	NAAQS Comparison
Site type(s)	Population Exposure, Max Concentration	Population Exposure, Max Concentration	Population Exposure	Population Exposure
Monitor type(s)	SLAMS	SLAMS	SLAMS	SLAMS
Network Affiliation	N/A	N/A	N/A	N/A
Instrument manufacturer and model	API T400	API T200	Met One BAM 1020	Met One BAM 1020
Method code	087	099	170	122
FRM/FEM/ARM/other	FEM	FEM	FEM	FEM
Collecting Agency	SLO County APCD	SLO County APCD	SLO County APCD	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A	N/A	N/A	N/A
Reporting Agency	SLO COUNTY APCD	SLO COUNTY APCD	SLO COUNTY APCD	SLO COUNTY APCD
Spatial scale (e.g. micro, neighborhood)	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date (MM/DD/YYYY)	02/25/2015	02/25/2015	02/25/2015	02/25/2015
Current sampling frequency (e.g. 1:3, continuous)	continuous	continuous	continuous	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous	continuous	continuous	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31	01/01-12/31	01/01-12/31
Probe height (meters)	4.6	4.6	5.7	5.2
Distance from supporting structure (meters) ^b	1.0	1.0	2.1	1.6

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Atascadero			
Distance from obstructions on roof (meters)	N/A	N/A	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A	N/A	N/A
Distance from trees (meters)	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue (meters)	N/A	N/A	N/A	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A	N/A	N/A	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	N/A	N/A	No	No
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A	N/A	N/A	N/A
Unrestricted airflow (degrees)	360	360	360	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon	Teflon	N/A	N/A
Residence time for reactive gases (seconds)	7.9	11.3	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 PM _{2.5} ?	N/A	N/A	Yes	N/A
Frequency of flow rate verification for manual PM samplers	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	N/A	bi-weekly	bi-weekly
Frequency of one-point QC check for gaseous instruments	daily	daily	N/A	N/A
Date of 2022 Annual Performance Evaluation for gaseous parameters	4/12/2022	4/12/2022	N/A	N/A
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	N/A	N/A	4/12/2022 11/9/2022	4/12/2022 11/9/2022

^a This is the most current AADT available for this segment. Traffic counts were conducted only during peak morning and afternoon hours along this street. Along this stretch of Traffic Way, a total of 1,233 vehicles were counted during these four hours, therefore, six times this figure (7,398) represents the likely maximum AADT.

^b This is the roof-to-probe distance. There are no walls, parapets, penthouses, or other potential obstacles on the roof.

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Red Hills
AQS ID	06-079-8005
GPS coordinates (decimal degrees)	35.64366, -120.23134
Street Address	3601 Gillis Canyon Rd., Shandon
County	San Luis Obispo
Distance to roadways (meters)	100 to Gillis Canyon Rd. 1740 to Bitterwater Rd. 10,400 to CA 41/46
Traffic count (AADT, year)	Gillis Canyon Rd.: 24 (2016) ^a Bitterwater Rd.: 98 (2013) ^a CA 41/46: 17,200 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Vegetative
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	O ₃ , 1
Primary / QA Collocated / Other	N/A
Parameter code	44201
Basic monitoring objective(s)	NAAQS Comparison
Site type(s)	Regional Transport, Max Concentration
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	API T400
Method code	087
FRM/FEM/ARM/other	FEM
Collecting Agency	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A
Reporting Agency	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Regional
Monitoring start date (MM/DD/YYYY)	07/01/2000
Current sampling frequency (e.g. 1:3, continuous)	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	5.3
Distance from supporting structure (meters)	1.5
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	N/A
Distance to furnace or incinerator flue (meters)	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	N/A
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A
Unrestricted airflow (degrees)	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon
Residence time for reactive gases (seconds)	17.5

Local site name	Red Hills
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	N/A
Frequency of flow rate verification for manual PM samplers	N/A
Frequency of flow rate verification for automated PM analyzers	N/A
Frequency of one-point QC check for gaseous instruments	daily
Date of 2022 Annual Performance Evaluation for gaseous parameters	7/29/2022
Dates of 2021 Semi-Annual Flow Rate Audits for PM monitors	N/A

^a This is the most current AADT available for this segment.

DRAFT

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Carrizo Plain
AQS ID	06-079-8006
GPS coordinates (decimal degrees)	35.35474, -120.04013
Street Address	9640 Carrizo Highway (CA 58), California Valley
County	San Luis Obispo
Distance to roadways (meters)	38 to Carrizo Highway (CA 58)
Traffic count (AADT, year)	Carrizo Highway (CA 58): 480 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Vegetative (to the west, north, and east) Asphalt (south)
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	O ₃ , 1
Primary / QA Collocated / Other	N/A
Parameter code	44201
Basic monitoring objective(s)	NAAQS Comparison
Site type(s)	Regional Transport, General Background
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	API T400
Method code	087
FRM/FEM/ARM/other	FEM
Collecting Agency	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A
Reporting Agency	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Regional
Monitoring start date (MM/DD/YYYY)	01/01/2006
Current sampling frequency (e.g. 1:3, continuous)	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	4.7
Distance from supporting structure (meters)	1.1
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	N/A
Distance to furnace or incinerator flue (meters)	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	N/A
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A
Unrestricted airflow (degrees)	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon
Residence time for reactive gases (seconds)	14.2
Will there be changes within the next 18 months?	No

Local site name	Carrizo Plain
Is it suitable for comparison against the annual PM _{2.5} ?	N/A
Frequency of flow rate verification for manual PM samplers	N/A
Frequency of flow rate verification for automated PM analyzers	N/A
Frequency of one-point QC check for gaseous instruments	daily
Date of 2022 Annual Performance Evaluation for gaseous parameters	7/28/2022
Dates of 2021 Semi-Annual Flow Rate Audits for PM monitors	N/A

DRAFT

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	Oso Flaco
AQS ID	06-079-9001
GPS coordinates (decimal degrees)	35.00876, -120.59998
Street Address	Near intersection of Oso Flaco Lake & Beigle Rds., Nipomo
County	San Luis Obispo
Distance to roadways (meters)	1150 to Oso Flaco Lake Rd. 2800 to Guadalupe Rd. (US 1)
Traffic count (AADT, year)	Oso Flaco Lake Rd.: 3000 (2018) Guadalupe Rd. (US 1): 5850 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Vegetative, sand
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	PM ₁₀ , 1
Primary / QA Collocated / Other	N/A
Parameter code	81102
Basic monitoring objective(s)	Public Information, Rule 1001 Compliance
Site type(s)	Background
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	Met One BAM 1020
Method code	122
FRM/FEM/ARM/other	FEM
Collecting Agency	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A
Reporting Agency	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Neighborhood
Monitoring start date (MM/DD/YYYY)	07/01/2015
Current sampling frequency (e.g. 1:3, continuous)	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	3.3
Distance from supporting structure (meters)	2.0
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	N/A
Distance to furnace or incinerator flue (meters)	N/A
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	No
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A
Unrestricted airflow (degrees)	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	N/A
Residence time for reactive gases (seconds)	N/A
Will there be changes within the next 18 months?	No

Local site name	Oso Flaco
Is it suitable for comparison against the annual PM _{2.5} ?	N/A
Frequency of flow rate verification for manual PM samplers	N/A
Frequency of flow rate verification for automated PM analyzers	bi-weekly
Frequency of one-point QC check for gaseous instruments	N/A
Date of 2021 Annual Performance Evaluation for gaseous parameters	N/A
Dates of 2021 Semi-Annual Flow Rate Audits for PM monitors	4/13/2022*

*Logistic issues limited the QA Audit to only once for 2022

DRAFT

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	SAN LUIS OBISPO – ROBERTO CT.	
AQS ID	06-079-2020	
GPS coordinates (decimal degrees)	35.25944, -120.64477	
Street Address	3433 Roberto Ct	
County	San Luis Obispo	
Distance to roadways (meters)	18 to Roberto Ct.	
Traffic count (AADT, year)	US 101: 65,700 (2018)	
Groundcover (e.g. asphalt, dirt, sand)	asphalt	
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)	
Pollutant, POC	PM _{2.5} , 1	PM ₁₀ , 2
Primary / QA Collocated / Other	Primary	Primary
Parameter code	88101	81102
Basic monitoring objective(s)	NAAQS Comparison	NAAQS Comparison
Site type(s)	Max Concentration, Source Oriented	Max Concentration, Source Oriented
Monitor type(s)	SLAMS	SLAMS
Network Affiliation	N/A	N/A
Instrument manufacturer and model	Met One BAM 1020	Met One BAM 1020
Method code	170	122
FRM/FEM/ARM/other	FEM	FEM
Collecting Agency	SLO County APCD	SLO County APCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A	N/A
Reporting Agency	SLO County APCD	SLO County APCD
Spatial scale (e.g. micro, neighborhood)	Neighborhood	Neighborhood
Monitoring start date (MM/DD/YYYY)	01/01/2021	01/01/2021
Current sampling frequency (e.g. 1:3, continuous)	continuous	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31
Probe height (meters)	2.75	2.75
Distance from supporting structure (meters) ^a	1.8	1.8
Distance from obstructions on roof (meters)	N/A	N/A
Distance from obstructions not on roof (meters)	N/A	N/A
Distance from trees (meters)	11	11
Distance to furnace or incinerator flue (meters)	4	4
Distance between monitors fulfilling a QA Collocation requirement (meters)	N/A	N/A
For low volume PM instruments, is any PM instrument within 1 m of the instrument?	No	No
For high volume PM instruments, is any PM instrument within 2m of the instrument?	N/A	N/A
Unrestricted airflow (degrees)	360	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	N/A	N/A
Residence time for reactive gases (seconds)	N/A	N/A
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	Yes	N/A

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Local site name	SAN LUIS OBISPO – ROBERTO CT.	
Frequency of flow rate verification for manual PM samplers	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	bi-weekly	bi-weekly
Frequency of one-point QC check for gaseous instruments	N/A	N/A
Date of 2022 Annual Performance Evaluation for gaseous parameters	N/A	N/A
Dates of 2022 Semi-Annual Flow Rate Audits for PM monitors	4/12/2022 11/9/2022	4/12/2022 11/9/2022

DRAFT

Appendix D: Non SLAMS Network Operations

In addition to these SLAMS stations mentioned in the main report, SLO County APCD also conducts temporary monitoring projects to support certain objectives. In 2016, SLO County APCD received an EPA multipurpose grant for the construction of a mobile particulate monitoring platform to be used for further characterizing dust impacts downwind of the ODSVRA. The platform, which hosts meteorological sensors and PM₁₀ and PM_{2.5} FEM BAM monitors, was completed in the spring of 2017. The mobile monitoring platform is expected to be deployed in early 2024 to a location on the Phillips 66 Santa Maria refinery property. The trailer will be strategically located in an area downwind of the ODSVRA but upwind of the refinery structure and CDF/Mesa 2 monitoring stations. The data from this deployment will be utilized to help ensure that large amounts of particulate matter are not being generated and impacting communities downwind of the refinery during demolition and remediation work.

Similarly, SLO COUNTY APCD has conducted temporary PM₁₀ monitoring in Oceano and on the Nipomo Mesa using funding from the Assembly Bill 617 Community Air Protection Implementation Grant Program, which was awarded to SLO COUNTY APCD by CARB. In 2023, on the Nipomo Mesa, SLO COUNTY APCD will continue operation of temporary PM₁₀ monitoring with non-FEM BAMs near Dorothea Lange Elementary School and Lopez Continuation High School on the Nipomo Mesa. Data collected with these temporary/mobile monitors are not uploaded to AQS but are shown on South County Particulate Matter Air Quality Index map on the [APCD's South County Air Quality](#) webpage. In 2022, SLO COUNTY APCD replaced the North View Avenue BAM with an IQAir AirVisual sensor.

SLO COUNTY APCD is also actively engaged in testing and deploying networks of non-FRM/non-FEM low-cost sensors. In collaboration with CARB, South Coast AQMD, residents, and a variety of community partners, we have deployed dozens of Purple Air sensors throughout the County. These are visible on the Purple Air website.⁷ We have also deployed several IQAir AirVisual sensors, including four in Oceano as part of the Assembly Bill 617 Community Air Protection Implementation Grant Program. Purple Air sensors have been proven to be useful sensors in smoke and wildfire monitoring and IQAir AirVisual sensors are useful for PM₁₀ monitoring on the Nipomo Mesa/Oceano area.

Additionally, the SLO COUNTY APCD has a hydrogen sulfide data feed from the monitoring station at Sentinel Peak Resources' Arroyo Grande Oilfield in Price Canyon, but it does not play any role in data collection or validation. Table 3 summarizes the pollutant and meteorological parameters monitored at these non-SLAMS stations.

⁷ Purple Air, "Map – Purple Air," <https://www.purpleair.com/map>.

Table 3: Summary of Parameters Currently Monitored at Non-SLAMS in San Luis Obispo County

Site/Station	Hydrogen Sulfide	PM ₁₀	PM _{2.5}	Relative Humidity	Wind ^a	Temp
Price Canyon Oilfield	X			X	X	X
Mobile Monitor		X	X			
Calle Cielo		X				
Lopez		X				

Note: ^a Wind speed, wind direction, and sigma theta.

In response to wildfires in 2020, the SLO COUNTY APCD has installed a non-FEM BAM at the Morro Bay site for operation during active wildfires to deliver smoke impacts information to the local community if there are future impacts from wildfires and may also be operated during other PM related events such as prescribed fires, etc. In addition, SLO COUNTY APCD will deploy collocated Purple Air sensors or IQAir nodes at select sites to further strengthen smoke monitoring at critical sites. Staff have developed solar powered low-cost sensor options to be able to deploy anywhere in the County.

Attachment 1: SLO-Higuera Shutdown and SLO-Roberto Operations Approval Letter



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

January 12, 2021

Kathleen Gill
Chief, Air Quality Surveillance Branch
Monitoring and Laboratory Division
California Air Resources Board
1927 13th Street
Sacramento, CA 95811

Gary Willey
Air Pollution Control Officer
San Luis Obispo County Air Pollution Control District
3433 Roberto Court
San Luis Obispo, CA 93401

Dear Chief Gill and Air Pollution Control Officer Willey:

This letter provides the U.S. Environmental Protection Agency's (EPA) review and approval for the California Air Resources Board's (CARB's) discontinuation of the O₃, PM_{2.5}, and PM₁₀ State/Local Air Monitoring Station (SLAMS) monitors at the San Luis Obispo-Higuera Street site (Air Quality System (AQS) Site ID: 06-079-2006), as well as the approval of San Luis Obispo County Air Pollution Control District's (SLOCAPCD's) proposed PM_{2.5} and PM₁₀ SLAMS monitors at the new San Luis Obispo site (AQS ID: 06-079-2020) at 3433 Roberto Court, San Luis Obispo, CA 93401. On October 15, 2020, SLOCAPCD sent a letter to EPA describing the proposal to establish PM_{2.5} and PM₁₀ monitoring at the new San Luis Obispo site. On December 30, 2020, CARB sent a letter to EPA describing the proposal to discontinue O₃, PM_{2.5}, and PM₁₀ monitoring at the San Luis Obispo-Higuera St. site. Per 40 CFR 58.14, monitoring agencies are required to obtain EPA approval for the discontinuation of SLAMS monitors and approval of new SLAMS monitors.

Discontinuation of the O₃, PM_{2.5} and PM₁₀ SLAMS CARB-operated monitors was reviewed by EPA against criteria contained in 40 CFR 58.14(c), which states that requests for discontinuation "may also be approved on a case-by-case basis if discontinuance does not compromise data collection needed for

implementation of a NAAQS and if the requirements of appendix D to this part, if any, continue to be met.”

According to certified data submitted to EPA’s AQS, the O₃ monitor was in attainment of the 2008 and 2015 8-hour O₃ National Ambient Air Quality Standards (NAAQS) from 2015-2019. During 2015-2019, the 4th maximum daily 8-hour O₃ concentrations were generally at least 10 parts per billion (ppb) below the 2015 NAAQS. Preliminary 2020 data are consistent with the historical trends and continue to show attainment of the NAAQS. This O₃ SLAMS monitor is not specifically required by an attainment or maintenance plan and is not the maximum O₃ concentration site in the San Luis Obispo-Paso Robles Metropolitan Statistical Area (MSA). CARB and SLOCAPCD will continue to operate seven SLAMS O₃ monitors in the MSA, including the SLOCAPCD-operated Morro Bay O₃ monitor that records similar concentrations to and is located ~12 miles away from the San Luis Obispo-Higuera St. site. Furthermore, discontinuance of this monitor does not compromise data collection needed for implementation of the NAAQS and will not prevent SLOCAPCD from meeting 40 CFR 58 Appendix D requirements.

According to certified data submitted to EPA’s AQS, the San Luis Obispo-Higuera St. site was in attainment of the 2012 annual PM_{2.5} NAAQS, 2006 24-hour PM_{2.5} NAAQS and 1987 24-hour PM₁₀ NAAQS from 2017-2019; 2015-2016 design values were invalid due to a siting issue and subsequent suspension of sampling operations during those years. Preliminary 2020 data are consistent with the historical trends and continue to show attainment of all relevant NAAQS. As demonstrated in CARB’s letter and supporting documentation, the San Luis-Obispo-Higuera St. site is not and is unlikely to become the maximum PM_{2.5} concentration site for the county, and all annual PM_{2.5} averages, annual PM_{2.5} 98th percentile values, and valid and invalid PM_{2.5} design values for the site between 2015 and 2019 are below the corresponding NAAQS. No 24-hr PM₁₀ exceedances were recorded in the last five years at San Luis-Obispo-Higuera St. site. Furthermore, discontinuance of these monitors does not compromise data collection needed for implementation of the PM_{2.5} and PM₁₀ NAAQS and will not prevent SLOCAPCD from meeting 40 CER 58 Appendix D requirements. As mentioned above and elaborated upon below, SLOCAPCD will continue PM_{2.5} and PM₁₀ SLAMS monitoring at a new San Luis Obispo site in the area.

Discontinuance of monitoring at San Luis Obispo-Higuera St. will allow SLOCAPCD to use CARB-donated equipment to begin monitoring at the new San Luis Obispo site. EPA reviewed the proposal for PM_{2.5} and PM₁₀ SLAMS monitoring at the new San Luis Obispo site. This site will have similar monitoring objectives and spatial scales as the current San Luis Obispo-Higuera St. site and will be located at the SLOCAPCD’s headquarters office in downtown San Luis Obispo with a targeted monitoring start date of January 1, 2021.

Based on these analyses, EPA approves CARB’s discontinuation of the San Luis Obispo-Higuera St. O₃, PM_{2.5}, and PM₁₀ SLAMS monitors, and also approves SLOCAPCD’s proposal for PM_{2.5} and PM₁₀ SLAMS monitoring at the new San Luis Obispo site. The approval of the new SLAMS monitors assumes that the new site will meet all 40 CFR 58 requirements, including the siting requirements specified in Appendix E. Please work with EPA to ensure that the new site meets all relevant requirements. Please include this letter and the relevant monitor and site information in both upcoming SLOCAPCD and CARB annual monitoring network plans.

If you have any questions, please feel free to contact me at (415) 947-4134 or Dena Vallano of my staff at (415) 972-3134.

Sincerely,

GWEN YOSHIMURA Digitally signed by GWEN YOSHIMURA
Date: 2021.01.12 11:09:59 -08'00'

Gwen Yoshimura, Manager
Air Quality Analysis Office
Air and Radiation Division

cc (via email): Manisha Singh, CARB
Greg Gilani, CARB
Sylvia Vanderspek, CARB
Adolfo Garcia, CARB
Reggie Smith, CARB
Thomas Lovejoy, CARB
Kyle Vagadori, CARB
Andrew Mutziger, SLOCAPCD
Kevin Kaizuka, SLOCAPCD
David Cardiel, SLOCAPCD
Cody Gibbons, SLOCAPCD

Attachment 2: Morro Bay Station Relocation Request



Air Pollution Control District
San Luis Obispo County

VIA EMAIL ONLY

January 4, 2023

Gwen Yoshimura
U.S. Environmental Protection Agency
Air Quality Analysis Office (AIR-7)
75 Hawthorne Street
San Francisco, CA 94105
Yoshimura.Gwen@epa.gov

SUBJECT: San Luis Obispo County Air Pollution Control District's Morro Bay
Monitoring Station Relocation Request

Dear Gwen Yoshimura:

The San Luis Obispo County Air Pollution Control District (SLO County APCD) is requesting approval from the U.S. EPA to relocate the Morro Bay monitoring station (Site ID: 06-079-3001) under 40 CFR 58.14(c)(6) which states "a SLAMS monitor may be moved to a nearby location with the same scale of representation if logistical problems beyond the states control make it impossible to continue operation at its current site."

The SLO County APCD was contacted in late July and made aware of planned improvement projects and expansion in the auxiliary police department parking lot. Due to this proposed work and expansion the police department is no longer able to host the Morro Bay monitoring station in this location and have requested its removal. Due to these circumstances, which are outside the SLO County APCD's control, we are requesting to relocate the Morro Bay monitoring station under 40 CFR 58.14(c)(6).

The SLO County APCD has operated a SLAMS station in Morro Bay since 1975 and has been providing regional scale and general/background ozone monitoring at the location since 1981. Located in downtown Morro Bay, this monitor generally measures background levels of ozone from the predominant west and northwest winds blowing off the Pacific Ocean and provides representative ozone concentrations for both the City of Morro Bay and the City of San Luis Obispo, the most populous city in the county. Under unusual meteorological conditions the site can record elevated ozone concentrations transported from as far south as the Los Angeles basin and as far east as the Central Valley basin. Since its inception in 1975 this station has been hosted at the Morro Bay Police Department Auxiliary parking lot located at 899 Morro Bay Boulevard, Morro Bay, CA. This area of San Luis Obispo is designated as meeting attainment of the 2015 NAAQS Ozone standard.

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT
2023 AMBIENT AIR MONITORING NETWORK PLAN

Request for Relocation of the Morro Bay SLAMs Station
January 4, 2023
Page 2 of 2

The SLO County APCD worked collaboratively with the City of Morro Bay to find a suitable location to relocate the Morro Bay monitoring station. The primary goals in this search were to find a location that meets the siting criteria described in Appendix D to 40 CFR 58, provide a similar regional spatial scale to continue providing general/background ozone concentrations, and which would be able to remain in that location for the foreseeable future. Multiple locations were investigated and ultimately the proposed Kings Avenue location, detailed in the attached document, was determined to be the best fit. As demonstrated in the attached document, this site complies with the siting criteria outlined in Appendix D to 40 CFR 58 and maintains the same scale of representation.

Relocating this monitoring station to the nearby Kings Avenue property will allow the SLO County APCD to continue to provide representative general/background ozone concentrations for San Luis Obispo and northern coastal cities. Pending your approval, the SLO County APCD plans to have this relocation process complete by March 31, 2023 in order to have complete data for the first quarter of the year before initiating monitoring at the new location. Please feel free to contact me with any questions or concerns at 805-441-9332 or by email at cgibbons@co.slo.ca.us.

Sincerely,



CODY W. GIBBONS
Air Quality Specialist III

cc: Julia Carlstad, Environmental Protection Agency (Carlstad.Julia@epa.gov)
Dena Vallano, Environmental Protection Agency (Vallano.Dena@epa.gov)
Kyle Vagadori, California Air Resources Board (Kyle.Vagadori@arb.ca.gov)

Attachment 3: Morro Bay Station Relocation Request Details

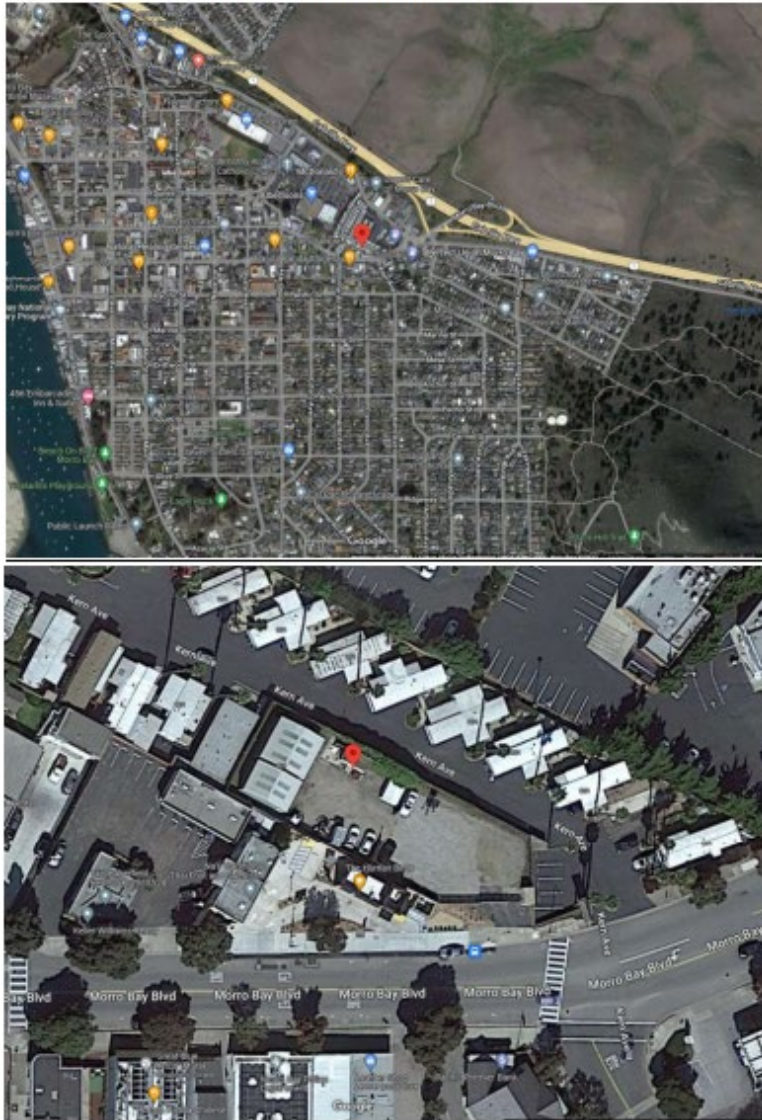
Attached Document

Morro Bay Monitoring Station Relocation Details

Current Morro Bay 06-079-3001 Details from 2021 ANP

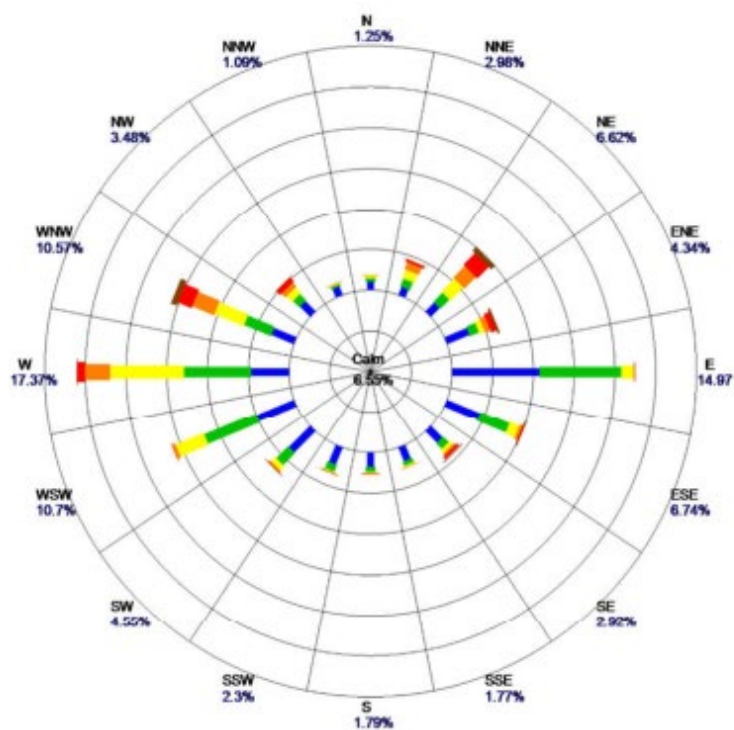
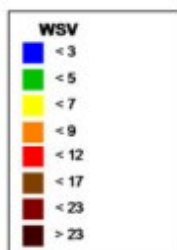
Local site name	Morro Bay
AQS ID	06-079-3001
GPS coordinates (decimal degrees)	35.36640, -120.84268
Street Address	899 Morro Bay Blvd., Morro Bay
County	San Luis Obispo
Distance to roadways (meters)	37 to Morro Bay Blvd. 220 to CA 1
Traffic count (AADT, year)	Morro Bay Blvd.: 12,388 (2015) ^a CA 1: 26,300 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Paved
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	O ₃ , 1
Primary / QA Collocated / Other	N/A
Parameter code	44201
Basic monitoring objective(s)	NAAQS Comparison
Site type(s)	General/Background
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	API T400
Method code	087
FRM/FEM/ARM/other	FEM
Collecting Agency	SLOCAPCD
Analytical Lab (i.e. weigh lab, toxics lab, other)	N/A
Reporting Agency	SLOCAPCD
Spatial scale (e.g. micro, neighborhood)	Regional
Monitoring start date (MM/DD/YYYY)	01/01/1981
Monitoring end date (MM/DD/YYYY)	03/31/2022* Tentative
Current sampling frequency (e.g. 1:3, continuous)	continuous
Calculated sampling frequency (e.g. 1:3/1:1)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	4.2
Distance from supporting structure (meters)	1.1
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	N/A
Distance to furnace or incinerator flue (meters)	N/A
Unrestricted airflow (degrees)	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon
Residence time for reactive gases (seconds)	12.9
Frequency of one-point QC check for gaseous instruments	daily
Date of 2021 Annual Performance Evaluation for gaseous parameters	8/18/2021

Map of Current Morro Bay Station



Morro Bay Wind Speed/Direction Rose

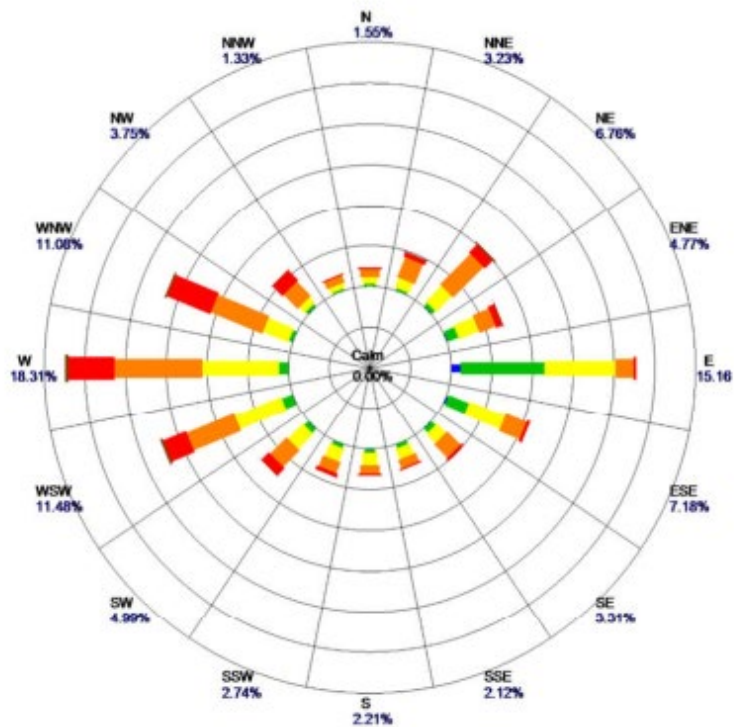
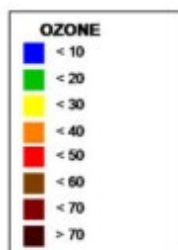
Site: MORRO BAY
Parameter: WSV
Units: MPH



Period: 1/1/2019-12/31/2021

Morro Bay Ozone Pollution Wind Rose

Site: MORRO BAY
Parameter: OZONE
Units: PPB



Kings Avenue Proposed Location Details

Local site name	Morro Bay- Kings Ave
AQS ID	06-079-3002*
GPS coordinates (decimal degrees)	35.361589, -120.836819
Street Address	Kings Avenue, Morro Bay
County	San Luis Obispo
Distance to roadways (meters)	43 to Kings Avenue 47 to Carmel Street 525 to CA 1
Traffic count (AADT, year)	Kings Ave: N/A residential street Carmel St: N/A Residential cul-de-sac CA 1: 26,300 (2018)
Groundcover (e.g. asphalt, dirt, sand)	Dirt/grass
Representative statistical area name (i.e. MSA, CBSA, other)	San Luis Obispo – Paso Robles (MSA)
Pollutant, POC	O ₃ , 1
Primary / QA Collocated / Other	N/A
Parameter code	44201
Basic monitoring objective(s)	NAAQS Comparison
Site type(s)	General/Background
Monitor type(s)	SLAMS
Network Affiliation	N/A
Instrument manufacturer and model	API T400
Method code	087
FRM/FEM/ARM/other	FEM
Collecting Agency	SLOCAPCD
Reporting Agency	SLOCAPCD
Spatial scale (e.g. micro, neighborhood)	Regional
Monitoring start date (MM/DD/YYYY)	04/01/2023* Tentative
Monitoring end date (MM/DD/YYYY)	N/A
Current sampling frequency (e.g. 1:3, continuous)	continuous
Sampling season (MM/DD-MM/DD)	01/01-12/31
Probe height (meters)	5 (estimated)
Distance from supporting structure (meters)	1.5 (estimated)
Distance from obstructions on roof (meters)	N/A
Distance from obstructions not on roof (meters)	N/A
Distance from trees (meters)	Detailed in table regarding potential obstruction below
Unrestricted airflow (degrees)	360
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon
Residence time for reactive gases (seconds)	TBD
Frequency of one-point QC check for gaseous instruments	daily

Proposed Kings Avenue Property Details

The proposed location on Kings Avenue is a City of Morro Bay owned lot with a pumphouse for nearby water storage tanks. The area is designated as attainment for the 2015 NAAQS Ozone standard. Areas to the north, west, and south of the proposed location are residential while the area to the east includes city water tanks and open space of Morro Bay State Park.

Topographically the location sits at an elevation of 88m (289 ft) in the city limits of Morro Bay. The main topographic feature is Black Hill with a peak elevation of 203m (663 ft) to the southeast of the site location. To the west, elevation gradually decreases to sea level until reaching Morro Bay. Elevation gradually decreases to the north until reaching CA-1 with rolling hills to the north of CA-1. There are no nearby emissions sources other than residences.

The proposed location is 753m (2,471 ft) to the southeast from the location of the current monitoring station. The nearest ozone monitoring station is located 21.4 km (13.3 miles) away in the City of Atascadero. The nearest monitoring station is SLO-Roberto located 20.8 km (12.9 miles) away which monitors for PM₁₀ and PM_{2.5}.

Siting Criteria 40 CFR 58 Appendix E Requirements

Section 2 Horizontal and Vertical Placement Ozone 2-15m above ground level

- Probe will be between 5-7m above ground level (at 5 meters all obstruction criteria is met, raising to 7m would further improve siting).

Section 3 Spacing from minor sources "Probe or at least 90% of monitor path must be away from furnace or incineration flues". There is no hardline distance requirement stated in the regulation.

- Nearby houses likely have flues associated with heaters with all at least 20m from inlet.
- Mobile backup generator for pumphouse, only used during power outages when monitoring station would not be operational.

Section 4 Spacing from Obstructions a) "The distance from the obstacle to the probe, inlet, or monitoring path must be at least twice the height that the obstacle protrudes above the probe, inlet, or monitoring path " and b) "A probe, inlet, or monitoring path must have unrestricted airflow in an arc of at least 180 degrees".

- Water Tanks extend 4.43m above inlet but are 39.66m from inlet.
- Houses roofline at 1025 is 3.77m above inlet but 33.65m from inlet.
- Nearby trees extend above the inlet height; however, all are either shorter than the inlet or their distance is greater than twice the height the obstruction protrudes above the inlet (table detailing obstruction distances and heights above inlet included with site maps).

Section 5 Spacing from Trees "at least 90 percent of the monitoring path must be at least 10 meters or further from the drip line of trees"

- One tree with dripline inside 10 meters, located 9.5m north of sampling inlet and is below the proposed height of sampling inlet.

- All other trees greater than 10m from proposed inlet location.

Section 6 Spacing from Roadways

- Kings Avenue is the nearest street at 46m. Annual average daily traffic (AADT) is unavailable but this is a residential street with little to no through traffic.
- Carmel Street is 48m. AADT is unavailable but this is a residential cul-de-sac.
- Nearest road with AADT is Morro Bay Blvd with AADT of 12,338 in 2015. This is one of the main thoroughfares for the city. Kings Avenue and Carmel are residential neighborhood streets with assumed AADT below 10,000 and likely below 1,000.

Section 7 Cumulative Interferences

- The total cumulative interferences are below the 10% threshold. There is only one interference after considering distance and height above inlet. That is the tree due north of the proposed location that is 9.5m away. This conifer tree accounts for 5 degrees or 1.4% of path.

Map of Proposed Kings Avenue Location



Height Above Inlet and Distances to Potential Obstructions

Object	Height Above Inlet (meters)	Distance from Inlet (meters)	Distance more than double height above inlet?
Water Tanks	4.43	39.7	Yes
Tall Tree (SE of site)	11.35	41.05	Yes
Fence line Hedge	4.13	22.28	Yes
Roofline 1025	3.77	33.65	Yes
Tall Tree (corner of Carmel/Kings)	18.64	50.85	Yes

Note: Heights were calculated utilizing angle of elevation as measured by a survey transit and distances from google maps. Objects whose heights were calculated to be less than the height of the inlet are excluded from this table, including the scrub oak and conifer tree.

DRAFT

Attachment 4: Morro Bay Station Relocation Approval



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

February 3, 2023

Cody Gibbons
Air Quality Specialist
San Luis Obispo County Air Pollution Control District
3433 Roberto Court
San Luis Obispo, California 93401

Dear Air Quality Specialist Gibbons:

This letter provides the U.S. Environmental Protection Agency's (EPA) review and approval for the San Luis Obispo County Air Pollution Control District (SLOCAPCD) relocation of the O₃ State/Local Air Monitoring Station (SLAMS) monitor from the Morro Bay site (Air Quality System (AQS) Site ID: 06-079-3001) to the Morro Bay – Kings Ave site (AQS ID: 06-079-3002). On January 4, 2023, SLOCAPCD sent a letter to EPA with a request for EPA approval of this network change. In this letter, SLOCAPCD explained the need to relocate the Morro Bay monitoring site due to logistics beyond SLOCAPCD's control (i.e., the property where the site was located was scheduled for expansion/reconstruction, and the property owners were unable to provide an alternate location). Per 40 CFR 58.14, monitoring agencies are required to obtain EPA approval for the relocation of SLAMS monitors.

The Morro Bay O₃ monitor relocation was reviewed under 40 CFR 58.14(b). Generally, relocations may be appropriate for approval if the new site is at a nearby location with the same scale of representation and similar sources (as discussed below), and if the relocation does not compromise data needed for implementation of the National Ambient Air Quality Standards (NAAQS) or if one of the criteria for monitor discontinuation under 40 CFR 58.14(c)(1) through (c)(5) are satisfied.

EPA reviewed the O₃ data against criteria in 40 CFR 58(c)(1). According to certified data from 2017-2021 in AQS, EPA determined that this monitor meets the requirements for discontinuation under 40 CFR 58.14(c)(1) and there is a less than 10 percent probability of exceeding 80 percent of the applicable NAAQS during the next three years at the site. Preliminary O₃ data available from calendar year 2022 were consistent with the historical trend and continued to show low concentrations.

The original Morro Bay site was located at 899 Morro Bay Blvd., Morro Bay, CA 93442. The relocation site, Morro Bay – Kings Ave, is located at 492 Kings Ave., Morro Bay, CA 93442 (35.361589, -120.836819), approximately one mile northwest of the original site location. As described in SLOCAPCD's letter, both sites have a regional scale of representation, meaning they are expected to have relatively uniform land use in the tens to hundreds of kilometers of spatial range. Both sites are in

an area characterized by predominantly residential land use. The original and proposed relocation site are expected to measure similar O₃ concentrations from similar sources due to the consistency in land use and proximity to sources, similar wind speeds, and similar wind direction. This relocation will not prevent SLOAPCD from meeting 40 CFR part 58, Appendix D requirements.

Based on consideration of this information, EPA approves relocation of the Morro Bay site O₃ SLAMS monitor to the proposed site, Morro Bay – Kings Ave. This approval assumes that the new site will meet all 40 CFR part 58 requirements, including the siting requirements specified in Appendix E. Please work with EPA to ensure that the new site meets all relevant requirements. As this is a relocation, the data from the old and new sites will be combined to form one continuous data record for design value calculations. Please note this in the AQS comment field for both the old and the new AQS site. Also, please attach this letter and include the relevant monitor and site information in your next Annual Monitoring Network Plan.

If you have any questions, please feel free to contact me at (415) 947-4134 or Julia Carlstad of my staff at (415) 947-4107.

Sincerely,

GWEN YOSHIMURA

Digitally signed by GWEN
YOSHIMURA
Date: 2023.02.03 15:54:59 -08'00'

Gwen Yoshimura
Manager, Air Quality Analysis Office

cc (via email): Kyle Vagadori, CARB