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Air Pollution Control Officer

GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

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NOTICE OF PUBLIC INSPECTION PERIOD
GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT
AIR QUALITY MONITORING NETWORK PLAN

The Great Basin Unified Air Pollution Control District (GBUAPCD) has made available for inspection and public comment the following documents: *Draft Air Quality Monitoring Network Plan for 2024* (Draft AMNP 2024), in accordance with Title 40 of the Code of Federal Regulations Part 58.10. Copies of the Draft AMNP 2024, and supporting documents may be obtained from the GBUAPCD by email from Chris Lanane at clanane@gbuapcd.org, or by visiting the District's website, www.gbuapcd.org, under "What's New." Written comments should be sent via email to pkiddoo@gbuapcd.org. Written comments received by 12:00 noon on Wednesday, June 19, 2024, will be included in an informational item and staff report provided to the Governing Board of the GBUAPCD at its special Board meeting on Wednesday, July 10, 2024, at 10:00 a.m.

Please be advised that the Governing Board will be conducting its meeting both in-person and via Zoom. The in-person meeting will take place at the Alpine County Administrative Center, 99 Water Street (State Hwy 89), Markleeville, California 96120. The teleconference will be accessible by the public via computer, tablet or smartphone at: https://us02web.zoom.us/j/81619291252?pwd=UHhvKzh4cjJLdEZNYVNyUjJXT2FMUT09 You can also dial in using your phone at 1 (669)900 6833, and then enter Webinar ID: 816 1929 1252. Oral comments will also be taken at this meeting. All written comments must be received by 10:00 a.m. on Wednesday, July 10, 2024, to be included in the staff report presented to the U.S. EPA for their consideration and action. Comments on the plan should be sent to Mr. Phill Kiddoo, Air Pollution Control Officer, GBUAPCD, by e-mail to pkiddoo@gbuapcd.org. For further information, contact Mr. Chris Lanane, Air Monitoring Specialist, at (760) 872-8211.

2024-06-04

Publication Dates

Inyo Register	June 8, 2024
The Sheet	June 8, 2024
Tahoe Daily Tribune	June 7, 2024

Mail List: Public Notice

Great Basin Unified
Air Pollution Control District

2024
Annual Air Quality Monitoring Network Plan
Draft

July 2024

Prepared by
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Tables and Figures

1.0 Introduction

An annual review of all national air quality monitoring networks is required by Federal regulations as a means to identify needs for addition, relocation, or termination of monitoring stations or instrumentation. The Annual Air Quality Monitoring Network Plan (AMNP) prepared by the California Air Resources Board (CARB), the primary quality assurance organization (PQAO) of which the Great Basin Unified Air Pollution Control District (District) is a part, includes the area encompassed by the District. As part of the CARB PQAO, the District operates under CARB's EPA-approved Quality Assurance Project Plans (QAPP) and under CARB's annual monitoring network plan. With this District-specific 2024 AMNP, the District has sought to develop a more comprehensive and District-specific plan for submittal to the U.S. Environmental Protection Agency (EPA). This plan describes the network of ambient air quality monitors to be operated by the District during the 2024 calendar year. It includes a review of actions taken in the monitoring network during the 2022-2023 fiscal year and plans for actions in the years ahead. This draft plan addresses the requirements for an annual monitoring network plan as presenteed in the Code of Federal Regulations, Title 40, Part 58, Section 10 (40 CFR 58.10). These regulations require that the AMNP be submitted to the EPA by July 1 of each year after a 30-day public inspection period. The inspection period for this plan began on June 7, 2024, and closed on July 10, 2024, after which the plan, along with the comments received during the public inspection period, will be submitted to EPA for approval. Please note that all highlighted text indicates additions and/or revisions of the information contained in the 2023 AMNP.

State and Local Air Monitoring Station (SLAMS) designations, monitoring objectives, and spatial scales of representativeness have been assigned to the criteria pollutants monitored by site. Each year, District staff conducts an annual review of the air monitoring network to evaluate whether the current monitoring strategies are meeting the needs of the District, to determine compliance with all current Federal and State regulations, and to aid in the development of future monitoring strategies. When monitoring station additions or relocations are warranted, site reports are written and/or updated locally and in the EPA's Air Quality System (AQS) database to document compliance with established monitoring criteria.

Coronavirus Pandemic Impacts

It should be noted that, in March of the 2020 monitoring year, the District and the entire planet, experienced unprecedented challenges brought about by the coronavirus pandemic. The District office was closed from March 17, 2020, through July 1, 2021. After development of a COVID-19 office protocol, personnel returned to the office on an intermittent and as-needed basis, however, most District staff worked largely from home. Beginning July 1, 2021, District staff officially returned to the office. The impact of the pandemic reduced monitoring operations to only the required minimum with regard to operation, maintenance, and quality assurance/quality control activities. Further impacts have been in the area of equipment upgrades and replacements, which had to be delayed or rescheduled for some indefinite time in the future. As a result, there are some improvements to monitoring stations that are repeated in this document which were originally intended to take place during the period of office closure. At this point, in 2024, the District has caught up to its original plans and upgrades to certain monitors, sites, and communications systems have come to fruition.

2.0 Public Comments

Pursuant to Federal regulations, this draft plan was made available for public inspection and comment for at least 30 days prior to submission to the EPA. Notice of availability of the document was published in local newspapers and the document was posted to the District's website (www.gbuapcd.org) on June 7, 2024, under the link, "What's New." The public inspection period provides an opportunity for the public, the EPA, and any other interested parties to provide comments on the plan. Comments received during the inspection period will be included with the plan in the submission to EPA. Following the review period ending July 10, 2024, the plan will be submitted to EPA for approval of any SLAMS network changes.

3.0 Network Design

The District operates fourteen (14) active PM10 monitoring stations, that include meteorological monitoring, and six (6) additional meteorology only monitoring stations in four planning areas and in the general environs of the District's three counties: Alpine, Inyo, and Mono. The planning areas in the District are: Coso Junction (formerly Searles Valley), Owens Valley, Mono Basin, and Mammoth Lakes. Figures 1 - 3 present maps of the entire District indicating the planning areas, the monitoring stations currently in operation, and those stations planned for installation this year.

Table 1 provides a list of the monitoring stations, the pollutants measured at each station, the EPA Air Quality System (AQS, the EPA's national air quality data base) site codes, and the start date for each station. Note the station start dates were verified and updated for the 2023 AMNP. Table 1.a. presents the list of minimum monitoring frequency requirements for each pollutant. Table 2 presents the monitoring objective and spatial scale for each monitor at each site. A list of the monitoring objectives and a description of them is provided in this document. Portions of these monitoring objectives and their descriptions are adapted from the CARB annual network plan for 2023. Please note that all stations and all monitors operated by the District comply with regulations described in Code of Federal Regulations Title 40, Part 58, Appendices A, C, D, and E.

After consultation with the District Board and District monitoring specialists, the APCO determines monitoring locations in the District, under authority delegated by CARB and by EPA IX. Monitoring locations are then added to or removed from the network monitoring plan that is assembled and presented annually to the public for inspection. This plan is then submitted to EPA for review and consideration for approval. The EPA Region IX administrator has the final authority on the configuration of the monitoring network.

Multiple purposes for monitoring a pollutant at a particular site are possible. There is some overlap between monitoring objectives as defined by EPA, presented in Table 2, and the monitoring purposes presented in Table 3. A brief description of the network for each criteria pollutant monitored is provided here. Further site-specific information is presented in the site reports presented in Appendix A.

The primary and basic objective of all of the District's ambient air quality monitors, including all SLAMS and special purpose monitors (SPMs), is to determine compliance with the national ambient air quality standards (NAAQS) for each pollutant and to aid the District in the development of emissions control strategies that protect the public health. Data from these monitors has been, and will continue to be, used in the development of attainment plans for the two remaining nonattainment planning areas in the District, the Owens Valley Planning Area and the Mono Basin Planning Area, and in verifying compliance with the PM10 NAAQS standard in the attainment areas, the Coso Junction Maintenance Area and the Mammoth Lakes Planning Area, within the District.

A secondary objective of the monitoring program is to provide air pollution data to the public in near-real-time through presentation of the data on the District's website. Additionally, these data are used to notify the public of unhealthy levels of particulate matter (PM) through the District's Dust Alert system as well as through the District's Health Advisory system that is active during wildfire events. These notifications are received by any interested parties through e-mail or text message.

Figure 1. Great Basin Unified Air Pollution Control District Map

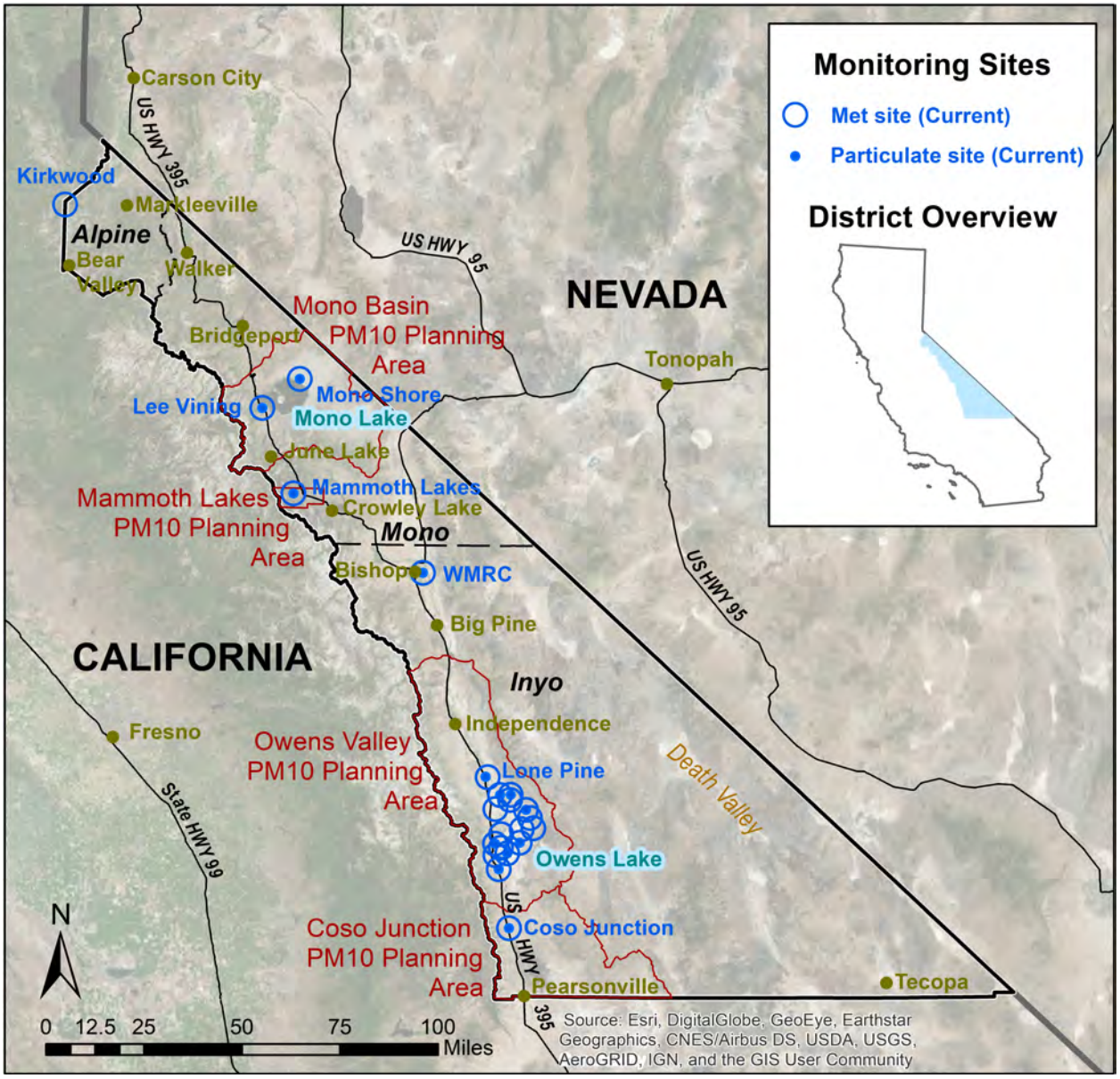


Figure 2. Great Basin Unified Air Pollution Control District Map, Owens Lake detail

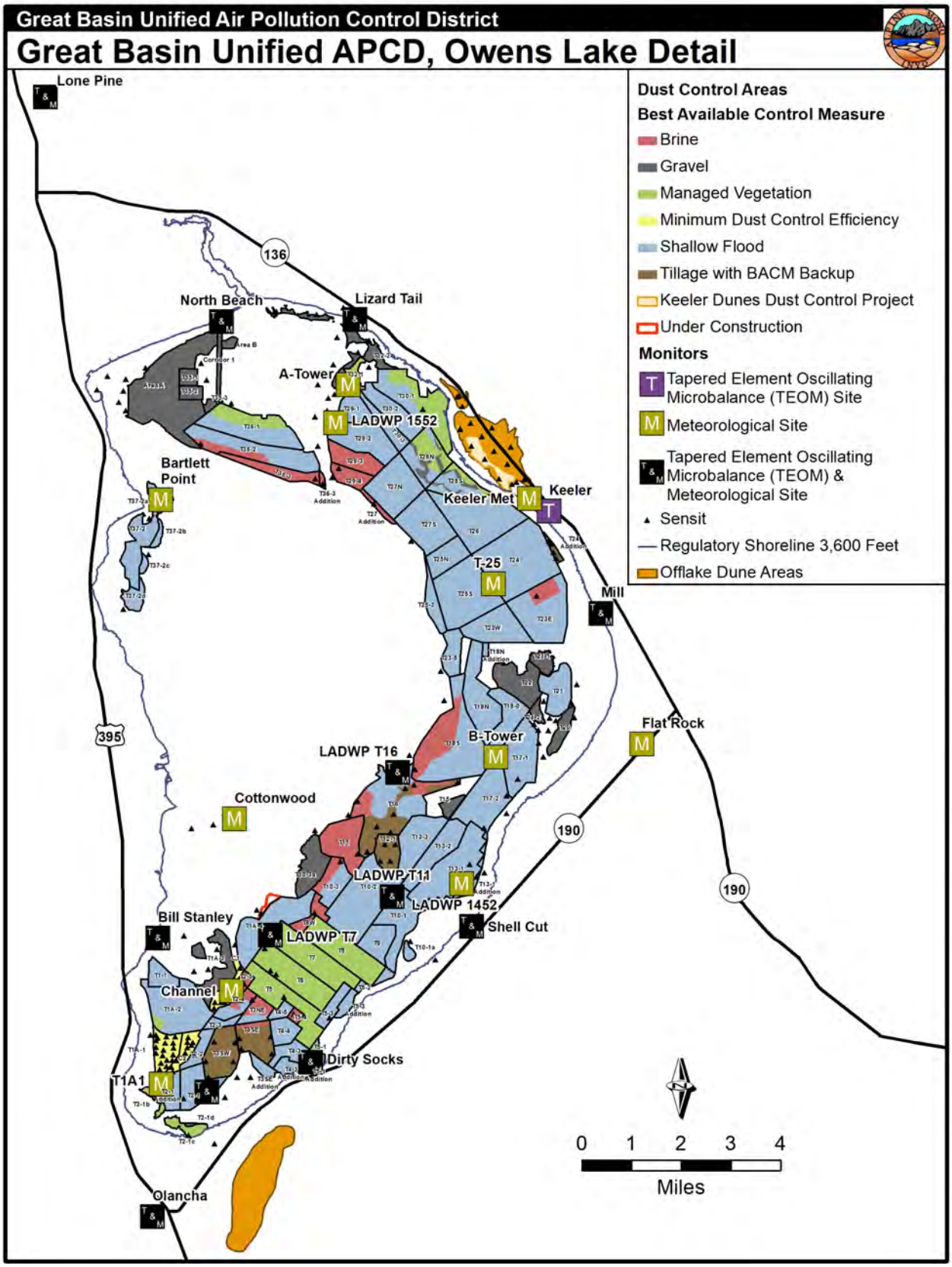


Figure 3. Great Basin Unified Air Pollution Control District Map, Mono Lake detail

Table 1. List of Monitoring Sites and Variables Monitored and Monitoring Frequency

Site Name	Network	AQS Number	Pollutants Currently Monitored	Monitoring Frequency	Station Start Date
Dirty Socks	Owens Lake	06-027-0022	PM10	Hourly	Jun-99
Shell Cut	Owens Lake	06-027-0025	PM10	Hourly	Nov-00
Flat Rock *	Owens Lake	06-027-0024	PM10	Hourly	Jan-01
Bill Stanley	Owens Lake	06-027-0026	PM10	Hourly	Jan-22
Olancha	Owens Lake	06-027-0021	PM10	Hourly	Mar-86
Olancha-Well 404	Owens Lake	06-027-0023	PM10	Hourly	Jul-19
Lone Pine-Hosp.	Owens Lake	06-027-0004	PM10	Hourly	Jan-80
Lone Pine-Consolid.	Owens Lake	06-027-0031	PM10	Hourly	Dec-21
North Beach	Owens Lake	06-027-0029	PM10	Hourly	Nov-08
Lizard Tail	Owens Lake	06-027-0028	PM10	Hourly	Jan-08
Keeler	Owens Lake	06-027-1003	PM10, PM2.5	Hourly	Jul-79
Mill Site	Owens Lake	06-027-0030	PM10	Hourly	May-11
Coso Junction	Owens Lake	06-027-1001	PM10	Hourly	Apr-79
Mammoth Lakes	Mammoth Lakes	06-051-0001	PM10	Hourly	Apr-84
Lee Vining	Mono Basin	06-051-0005	PM10, PM2.5	Hourly	Jan-81
Simis Residence **	Mono Basin	06-051-0007	PM10	1-in-3-day	Dec-81
Mono Shore	Mono Basin	06-051-0011	PM10	Hourly	Feb-00
White Mountain	District	06-027-0002	PM10	Hourly	Jan-78
NCORE	District	06-027-0002	CO, SO2, O3, NOy, PM10, PM2.5, PM10-2.5	Hourly	Apr-15

* PM10 monitoring suspended at Flat Rock now used for video, meteorological monitoring

** PM10 monitoring suspended August 2008; meteorological monitoring suspended June 2011.

Table 1.a. Monitoring Frequency Requirements

Pollutant	Monitoring Frequency Minimum Requirement	Monitoring Frequency Minimum Required - Collocated Monitors	# Active Collocated Monitors
PM10	1-in-6-days*	1-in-12-days	3
PM2.5	1-in-3-days	1-in-12-days	2

* Dependent on the level of monitored concentration and its ratio to the standard.

Table 2. Criteria Pollutant Monitoring Objectives, Site Types, Spatial Scales

MONITORING OBJECTIVE
DP – Data provided to Public
NC – NAAQS Comparison
RSu – Research Support

SPATIAL SCALE
MI - Microscale
MS - Middle Scale
NS - Neighborhood Scale
US - Urban Scale
RS – Regional Scale
NaS – National Scale
GS – Global Scale

SITE TYPES

XD – Extreme Downwind
HC - Highest Concentration
PO - Population Exposure
SO – Source Oriented
UB – Upwind Background
BK – General/Background
RT - Regional Transport
WI – Welfare Related Impacts
QA – Quality Assurance
OT - Other

Site Name	Network	PM10	PM2.5
Dirty Socks	Owens Lake	NC-SO/NS	
Shell Cut	Owens Lake	NC-SO/NS	
Flat Rock *	Owens Lake	N/A	
Bill Stanley	Owens Lake	NC-SO/NS	
Olancha	Owens Lake	NC-PO/NS	
Lone Pine	Owens Lake	NC-PO/NS	
North Beach	Owens Lake	NC-SO/NS	
Lizard Tail	Owens Lake	NC-SO/NS	
Keeler	Owens Lake	NC-PO/NS	NC-PO/NS
Mill Site	Owens Lake	NC-SO/NS	
Coso Junction	Owens Lake	NC-RT/NS	
Mammoth Lakes	Mammoth Lakes	NC-PO/NS	NC-PO/NS
Lee Vining	Mono Basin	NC-PO/NS	NC-PO/NS
Simis Residence **	Mono Basin	N/A	
Mono Shore	Mono Basin	NC-SO/NS	
White Mountain	District	NC-BK/RS	NC-BK/RS
NCORE	District	NC-BK/RS	NC-BK/RS

* PM10 monitoring ended at Flat Rock May 2011; now used for video, meteorological monitoring.
** PM10 monitoring suspended August 2008; meteorological monitoring June 2011.

Table 3. Criteria Pollutant Monitoring Purposes

MONITOR TYPES

SLAMS	NON-EPA FEDERAL
SPM	TRIBAL
INDUSTRIAL	EPA
OTHER	

Site Name	Network	PM10	PM2.5
Dirty Socks	Owens Lake	SLAMS	
Shell Cut	Owens Lake	SLAMS	
Flat Rock *	Owens Lake	N/A	
Bill Stanley	Owens Lake	SLAMS	
Olancha	Owens Lake	SLAMS	
Lone Pine	Owens Lake	SLAMS	
North Beach	Owens Lake	SLAMS	
Lizard Tail	Owens Lake	SLAMS	
Keeler	Owens Lake	SLAMS	SLAMS
Mill Site	Owens Lake	SLAMS	
Coso Junction	Owens Lake	SLAMS	
Mammoth Lakes	Mammoth Lakes	SLAMS	SLAMS
Lee Vining	Mono Basin	SLAMS	SLAMS
Simis Residence **	Mono Basin	N/A	
Mono Shore	Mono Basin	SLAMS	
White Mountain	District	SLAMS	SLAMS
NCORE	District	EPA	EPA

* PM10 monitoring ended at Flat Rock May 2011; used for video, meteorological monitoring.

** PM10 monitoring suspended August 2008; meteorological monitoring June 2011.

Definitions

Air Pollution Control Officer (APCO) – the chief executive official for the District.

Background Level monitoring is used to determine general background levels of air pollutants.

Best Available Control Measures (BACM) – is defined as the maximum degree of emission reduction considering technical and economic feasibility and environmental impacts of the control.

Core-based Statistical Area (CBSA) is defined by the U.S. Office of Management and Budget as a statistical geographic entity consisting of the county or counties associated with at least one urbanized area/urban cluster of at least 10,000 population, plus adjacent counties having a high degree of social and economic integration. The two categories of CBSAs are metropolitan statistical areas and micropolitan statistical areas.

Design Concentration is a concentration based on the total number of available 24-hour concentrations for a given period, for example, if a monitoring program provides 3 full years of 24-hour concentration measurements, (from 1043 to 1096 measurements) then the fourth highest concentration monitored during that period is the design concentration. These design concentrations are tiered based on the number of 24-hour concentration measurements over the three-year period: for 696 to 1042 24-hour measurements, use the third-highest concentration; for 348 to 695 measurements, use the second-highest concentration; for ≤ 347 measurements, used the highest concentration as the design concentration.

Design Values are calculations based on the previous three years of monitoring data that provide estimates of the number of exceedances expected each year at a given site or in a given air basin. Design values greater than 1 per year for PM10 indicate that an area is not in attainment, as the standard allows only one exceedance per year for an area to remain in attainment.

High Concentration monitoring is conducted at sites to find the highest concentration of an air pollutant in an area within a given monitoring network. A monitoring network may have multiple high concentration sites as a result of varying meteorology, source area variability, etc.

Metropolitan Statistical Area (MSA) is defined by the EPA and by the U.S. Office of Management and Budget as areas having at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

Micropolitan Statistical Area (MiSA) is defined by the U.S. Census Bureau and the U. S. Office of Management and Budget as an area heaving one urbanized area or urban cluster of between 10,000 and 50,000 population.

Monitoring Objectives are the address the reasons for determining the level of pollutant impacts from particular sources at particular sites, i.e.: to provide air pollution data to the public in a timely manner, for NAAQS comparison, and/or for research support. These are the fundamental monitoring objectives

Monitoring Planning Area (MPA) is defined by the EPA as a contiguous geographic area with established, well-defined boundaries, such as a metropolitan statistical area, county, or State, having a common area that is used for planning monitoring locations for PM2.5. MPAs may cross political boundaries, e.g., State, County, etc. MPAs are generally oriented toward areas with populations greater than 200,000.

Nonattainment Area is any area that does not attain the standard for at least one of the pollutants for which there are National Ambient Air Quality Standards (NAAQS).

Pollutant Transport is the movement of pollutant(s) between air basins or areas within an air basin. Pollutant transport monitoring is used to assess and address sources from upwind areas when those transported pollutant(s) affect neighboring downwind areas. Transport monitoring can also be used to determine the extent of regional pollutant transport.

Population Exposure monitoring is conducted to represent the air pollutant concentrations to which a populated area is exposed.

Primary Quality Assurance Organization (PQAO), the organizational umbrella that ensures that those monitoring organizations under its purview ensure compliance with State and Federal air monitoring requirements. A PQAO is defined by five factors common to all monitoring organizations under its purview: common quality assurance organization; common team of field operators with similar training and procedures; common calibration facilities and standards; common field management, laboratory, or headquarters; common QAPPs and/or SOPs.

Representative Concentration monitoring is conducted to determine pollutant concentrations over a homogeneous geographical area. These sites do not necessarily indicate the highest concentrations in an area for a particular pollutant.

Site Comparison monitoring is used to assess the effect of moving a monitoring location a short distance (approximately 2 miles or less) on measured pollutant levels. Some monitoring stations become unusable due to development, change of lease terms, eviction, etc. In these cases, attempts are made to conduct concurrent monitoring at both the old and new monitoring locations for a period of time in order to compare pollutant concentrations at both.

Source Impact monitoring is used to determine the impact of particular and significant sources of pollutant emissions on the air quality. Air pollutant sources may be stationary or mobile.

Spatial Scales define the concentrations within a given area that has relatively uniform land use and reasonably homogeneous geography. These scales are defined as follows:

Microscale - defines an area with dimensions ranging from several meters up to about 100 meters (several yards up to 100 yards).
Middle Scale - defines an area of up to several city blocks in size, with dimensions ranging from about 100 meters to 0.5 kilometers (100 yards to 1/3 mile)
Neighborhood Scale - defines an area with dimensions in the 0.5 to 4.0 kilometer range (1/3 mile to 2.5 miles). Most of the District's sites have been determined to be neighborhood scale sites.
Urban Scale - defines an area with dimensions on the order of 4 to 50 kilometers (2.5 miles to 30 miles).
Regional Scale - usually defines rural areas and extends from tens to hundreds of kilometers (or miles).
National and Global Scale - these measurement scales represent pollutant concentrations characterizing the nation and the globe as a whole.

Special Purpose Monitors (SPM) are used for surveys to determine whether a permanent monitor need be installed. They are also used to determine whether an existing monitoring network provides sufficient coverage to an area for determining pollutant impacts to that area.

Tapered Element Oscillating Microbalance (TEOM) – a monitor that measures particulate mass by drawing air through a filter positioned atop a sintered glass tube vibrating at a measured frequency. The frequency of the oscillation of the tube is attenuated as the filter loads with particulate. This attenuation in frequency is inversely proportional to the mass of the particulate collected.

Trend Analysis monitoring is useful for comparing and analyzing air pollution concentrations over time. Trend analysis can show the progress or lack thereof in improving the air quality for a given area over a period of many years.

Monitored Pollutants and Meteorological Variables

PM_{10}
Medium-volume size-selective inlet filter-based PM_{10} monitors (Rupprecht & Patashnick Partisol Plus 2025 or Thermo Partisol Plus 2025i) are operated at three (3) sites: Keeler, WMRC/NCORE, and Mammoth Lakes. Monitoring at the sites is generally conducted on the Federal one-in-three-day schedule. The Keeler primary monitor operates on a daily schedule: the collocated Partisol operates on the Federal 1-in-12-day sampling schedule. Filter-based monitors typically measure integrated 24-hour-average PM concentrations.

Continuous PM_{10} and $PM_{2.5}$ monitors (Rupprecht & Patashnick TEOM 1400a(AB), Thermo TEOM 1405, or Teledyne-API T640X monitors) are operated in conjunction with filter-based monitors at the three filter-based monitor sites. The R&P TEOM 1400a(AB) monitors are no

longer supported by the current manufacturer, Thermo Environmental, and are being phased out of the District's permanent monitoring network in favor of the Thermo 1405 TEOMs. Continuous PM_{10} monitors alone are operated at an additional 11 fixed sites with three additional continuous PM_{10} monitors in portable stations. The portable monitoring stations are used on an as-needed basis for special short-term monitoring activities. The advantage of continuous PM_{10} monitors is that they are capable of measuring hourly pollutant concentrations providing high-resolution PM data for planning area modeling efforts. These continuous PM_{10} monitors are concentrated in areas of high PM_{10} impact: e.g. around the shoreline of Owens Lake, in the Town of Mammoth Lakes, at the site of maximum impact on the north shore of Mono Lake. Hourly resolution of PM_{10} concentrations enables the District to more accurately determine the source of the emissions, especially in short-term wind-event driven emissive areas like Owens and Mono Lakes. The operation of all District PM10 monitors, including SLAMS and SPMs, are conducted in accordance with the provisions of 40 CFR 58 Appendices A, C, D, and E.

Since the District's monitoring program relies heavily on continuous PM10 monitors, the Keeler monitoring station hosts the continuous PM10 monitor as well as collocated filter-based PM10 monitors. Collocation of continuous monitor serves to ensure that the hourly-resolved PM10 data collected by the monitors is scientifically defensible. Typical 24-hour average PM10 concentration comparisons at the Keeler station range between 92 and 95% between the collocated continuous PM10 monitor and the filter-based PM10 monitors, calculated on an annual basis. It should be noted that, as the District is a part of the CARB PQAO, CARB ensures that all collocation requirements for the PQAO and all of its member monitoring organizations are met.

$PM_{2.5}$

The District operates three collocated $PM_{2.5}$ monitoring stations: one at Keeler, one at WMRC/NCORE, and one at Mammoth Lakes. The collocated monitor at all three sites is a medium-volume filter-based Federal Equivalent Method (FEM) sampler (Rupprecht & Patashnick Partisol Plus 2025 or Thermo Scientific Partisol Plus 2025i with a very sharp-cut cyclone (VSCC) for $PM_{2.5}$, EQPM-0202-145). On July 1, 2013, at the Keeler monitoring station, the primary monitor changed from an R&P 2025 to a Rupprecht & Patashnick 1400a (AB) TEOM with an 8500C Filter Dynamics Measurement System (FDMS) unit configured for collection of PM2.5 particulate matter (EQPM-0609-181), at the request of the District's PQAO, the California Air Resources Board (CARB). This TEOM/FDMS monitor operates continuously, collecting hourly PM2.5 concentrations and the collocated monitor operates on the Federal 1-in-3-day schedule.

At the WMRC/NCORE station, the primary PM2.5 monitor is a Teledyne-API T640X continuous PM10/PM2.5/PM10-2.5 monitor (EQPM-0516-239/EQPM-0516-238/EQPM-0516-240). The T640X began collecting data-of-record at the WMRC /NCORE station October 1, 2017. T640X monitors are also installed at the Lee Vining and Mammoth Lakes monitoring stations. Unfortunately, due to ongoing issues surrounding the T640X and its over-estimation of the PM10 and PM2.5 concentrations, those continuous monitors are being phased out of the District's Keeler, Mammoth Lakes, and WMRC/NCORE monitoring stations The T640X monitors have been removed from the Keeler and Mammoth Lakes sites and replaced with Thermo 1405 PM10 monitors (EQPM-1090-079). Plans are to replace the T640X PM2.5 monitoring component with a Thermo 1405F PM2.5 in late 2024.

It should be noted that, as the entire District's population is less than the minimum requirements (50,000) for a metropolitan statistical area under 40 CFR 58 Appendix D, Section 4.7, no additional $PM_{2.5}$ monitoring locations are required. The Keeler site measures the highest concentrations of PM_{10} for a populated community in the District and state and local staff determined that the District's $PM_{2.5}$ station should be located this site, which provides data for population-oriented representative $PM_{2.5}$ particulate concentrations.

Over the past ten years, the District's Mammoth Lakes monitoring station has been severely impacted by smoke from forest fires to the north of the community. It was determined that, due to these impacts from wildfires and the desire to distinguish between PM_{10} and wood smoke impacts ($PM_{2.5}$) that the District should consider installing a continuous monitor capable of monitoring both PM_{10} and $PM_{2.5}$. Staff had planned to install a Thermo 1405DF TEOM, certified as an EPA Equivalent method monitor for PM_{10}, $PM_{2.5}$, and PM_{10}-$PM_{2.5}$ after comparison testing with other District PM monitors was completed in June 2015.

The results of the comparison were not definitive, so District staff elected to continue the comparison study through 2016-2017, in two locations: the WMRC/NCORE station, and the Keeler monitoring station. That comparison study was completed and the Mammoth Lakes TEOM/FDMS monitor was replaced with a Teledyne-API T640X PM10/PM2.5/PM10-2.5 (PM10: EQPM-0516-239; PM2.5: EQPM-0516-238; PM10-2.5: EQPM-0516-240) monitor in September 2018. A collocated Partisol Plus 2025 monitor was installed March 14, 2018, at the Mammoth Lakes station. Due to ongoing elevated responses (40 – 60 % higher) to PM when compared with the filter-based monitors, the T640X monitors were scheduled for replacement. The Mammoth Lakes T640X was replaced with a Thermo 1405 TEOM monitoring PM10, as that is the pollutant of concern, in May 2022. The WMRC/NCORE T640X monitor was scheduled to be replaced with a Thermo 1405 TEOM for PM10 (EQPM-1090-079) and a Thermo 1405F TEOM for PM2.5 (EQPM-0609-181) during 2023, however, that plan has now been postponed. The Teledyne-API/EPA firmware update was applied, along with the engagement of the network data alignment option, to the NCORE T640X monitor. In light of this change, the District has elected to continue operation of the T640X at the WMRC/NCORE station, at least through the end of the 2023 calendar year, to determine whether this change will result in the collection by the T640X of data more comparable to that of the District's FRM Thermo Sequential PM10 and PM2.5 Partisols.

At this point, the District's method for review of its $PM_{2.5}$ monitoring network, currently consisting of four monitoring stations (two are collocated stations): one at Keeler, one at WMRC/NCORE, one at Mammoth Lakes, and one to be installed at Lee Vining; and for obtaining public comment on the network, is to include that review along with the public inspection period for the annual air quality monitoring network plan.

Meteorology

The District operates meteorological sensors at all permanent fixed monitoring stations. Meteorological variables measured include wind speed and wind direction. In addition, at some locations ambient temperature, relative humidity, barometric pressure, precipitation, and solar radiation are also monitored.

Network Description

Owens Lake

The Owens Lake monitoring network consists of a combination of ten (10) ambient air monitoring stations: seven (7) stations ring the lake along the regulatory shoreline, one of which is a population-based station, located at Keeler; two other population-oriented sites are located in the communities of Lone Pine north of the lake and Olancha, south of the lake. An additional monitor is located 20 miles south of the lake at Coso Junction. The Coso Junction station data is used for modeling Owens Lake plume trajectories and to monitor local source impacts in the Coso Junction Maintenance Area. Each station utilizes a Thermo 1405 TEOM continuous monitor for PM_{10} measurements. All ten (10) of the ambient air monitoring stations in the Owens Lake network are designated as SLAMS sites.

The purpose of the monitoring stations that ring the lake (North Beach, Lizard Tail, Keeler, Mill Site, Shell Cut, Dirty Socks, Stanley), all of which are designated as SLAMS sites, is to measure the shoreline impacts of PM emissions from the Owens Lake bed. Additionally, the Keeler and Mill Site stations serve as population-oriented monitors, with the Keeler station being located in the community of Keeler, and the Mill Site station being located near the LADWP Keeler Facility, which is the reporting station for the LADWP employees that work on the Owens Lake project. The Lone Pine and Olancha stations to the north and south of the lake, respectively, serve to monitor the impacts of PM emissions on the populations in the communities of Lone Pine and Olancha. The Coso Junction station, located 20 miles south of Owens Lake serves two purposes: monitoring the transport of both local and wind-driven PM emissions from Owens Lake, and monitoring the impacts of those same emissions on the visitors, employees, and residents in the Coso Junction area.

Dust Identification Program

In addition to the ten SLAMS stations around the Owens Lake, until third quarter 2018, the District operated two air quality stations on the lakebed: one at the location designated T7 on the south end of the lake, and another, designated T27 toward the east central area of the lake; and four on-lake meteorological stations. T7 and T27 were special purpose monitors (SPMs) for PM10 used to refine the model to aid in determining specific dust source areas requiring mitigation and are part of the District's Dust Identification Program. In addition, the program consists of a series of approximately 96 sand motion sensors (Sensits) and accompanying sand collection devices (Cox Sand Catchers (CSCs)) operated by the District as well as 135 Sensit/CSC sites operated by the City of Los Angeles. A map detailing the locations of the monitoring sites used for the Dust ID program is presented in Figure 2. The Dust Identification Program developed by the District has been accepted approved by the US EPA as Other Test Method 30 (OTM30) for the measurement of fugitive emissions from playa surfaces. Note that District staff determined that the District no longer needed to operate the T27 station, so it was shut down July 2, 2018. The T7 station operation was transferred to LADWP staff, who were already operating three similar stations (at T2-1, T-11, and T-16) as required for the operation and compliance monitoring of specific Best Available Control Measures (BACM) dust controls.

Camera Sites
The District monitoring network also utilizes source area determinations made by geo-referencing images collected during wind events at sixteen (16) camera stations with a total of 28 cameras located throughout the District. These cameras collect images of the lakebeds and valley areas every thirty seconds during daylight hours. This system coupled with the model and the SLAMS stations enable the District to pinpoint emissive areas of the lakebeds and valley floor that may cause or contribute to exceedances of the Federal PM_{10} standard at the District monitoring stations.

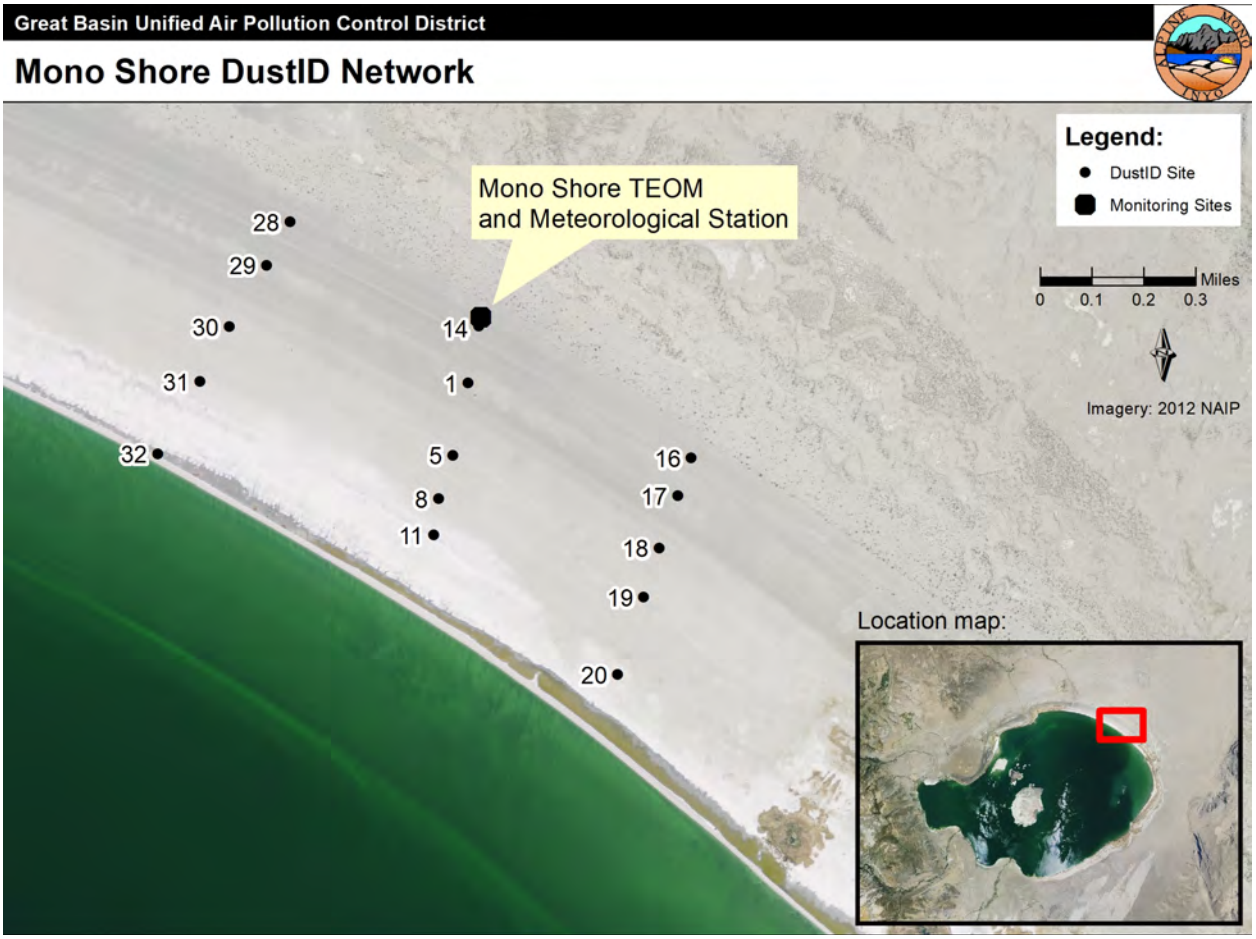
Mammoth Lakes
The Mammoth Lakes monitoring network consists of one monitoring station located in the Town of Mammoth Lakes. Since May 2022, this station has utilized a Thermo 1405 TEOM for monitoring hourly-resolved PM_{10} concentrations and a collocated R&P 2025 or Thermo 2025i Partisol Plus Sequential Sampler for PM10 (RFPS-1298-127). The District has continued operation of the Thermo 2025i Partisol Plus PM2.5 (EQPM-0202-145) operating on the one-in-three-day schedule for the collection of 24-hour integrated PM2.5 concentration data. This station is used by the District to determine compliance with the Federal PM_{10} standard for this previously nonattainment community. The hourly resolved data allows Town personnel to forecast and determine "no-burn" days for wood-burning appliance operators in order to maintain compliance with the Federal PM_{10} standard. The purpose of the station is to monitor PM impacts on the resident and visitor populations of the Town. The US EPA re-designated the Mammoth Lakes Planning Area as attainment in October 2015 (82 FR 29762).

NCORE
The District operates a rural NCORE station on behalf of the US EPA. The purpose of the station is to monitor background concentrations of pollutants in an area that is not impacted directly by emissions generated in and around metropolitan areas. This station has been installed at the District's White Mountain Research Center monitoring site. The station was nominally operational January 1, 2013, and submission of valid data to AQS began January 1, 2015. Further details on the station are contained in Appendix B, which contains a standalone monitoring plan for the District's NCORE station.

Mono Lake
The Mono Lake monitoring network currently consists of two monitoring stations: Lee Vining and Mono Shore. The purpose of the Lee Vining station is to monitor the impacts of PM concentrations on the population in the community of Lee Vining. The purpose of the Mono Lake station is to monitor the PM impacts on or near the shoreline of Mono Lake at the location of maximum impact. PM concentrations at Lee Vining are measured using a Teledyne-API T640X, that measures hourly-resolved PM_{10}, $PM_{2.5}$ and $PM_{10-2.5}$ concentrations. The Mono Shore station consists of an off-grid solar-powered R&P TEOM 1400a(AB) PM_{10} continuous monitor housed in a passively temperature-controlled shelter. The TEOM provides hourly-resolved PM_{10} concentrations and has provided the District with the opportunity to develop a Dust Identification (Dust ID) program at Mono Lake. This Dust ID network consists of fifteen (15) sand motion monitoring sites with Cox Sand Catchers (CSCs) and Sensits associated with them. This

network is used to measure the mass of saltating particles to estimate sand flux rates across a 2km^2 area. The Mono Lake Dust ID network is presented in Figure 4.

Figure 4. Mono Lake Map: Dust Identification Program Detail



4.0 Special Programs

The District periodically conducts special monitoring programs for rule compliance and pollutant level assessment. The data gathered are for informational purposes initially and may lead to designation of special purpose monitors, as defined under Title 40 CFR 58.20, or to permanent monitoring locations in the District's network, or to nothing beyond the initial purpose of information gathering. During the 2024 monitoring year, the District will continue conducting the special programs listed below.

Portable PM_{10} Monitoring

Staff determined there was a need for small portable TEOM monitors that could be transported to monitoring locations and set up for short-term episode PM_{10} monitoring. Staff has constructed two portable TEOM stations each of which utilizes a propane-fired generator for power. The stations can operate unattended for more than five days on two small tanks of propane.

BACM Compliance Monitoring – Owens Lake
A special purpose monitoring network of four (4) TEOM PM10 monitoring stations was installed by the LADWP's consultant and those monitors are distributed up- and down-wind of Tillage with BACM Backup (TWB2) areas to fulfill the compliance monitoring requirement for that mitigation measure.

Wildfire Monitoring
Staff, prompted by the District Governing Board, procured two Met One EBAM continuous PM2.5 monitors configured as stand-alone portable monitors for measuring PM impacts from wildfires. The monitors were procured in August 2015 and have been deployed to wildfire incidents every year since to monitor PM2.5 wildfire impacts. An older EBAM monitor owned by the District was updated and retrofitted with an AIRSIS satellite communications system due to the heavy use of the EBAMs during the summer of 2018. Two additional EBAMs were provided by CARB from their EBAM pool for wildfire monitoring during the 2022 wildfire season and are available to the District in the future as well. Data from all the EBAM monitors can be collected via the AIRSIS satellite connection and posted to the web. It is anticipated these monitors will continue to aid the District by providing up-to-date local information on wildfire impacts to the residents and visitors in the District, particularly in those areas where no permanent monitoring station is installed.

5.0 Recent or Proposed Modifications to Network

Owens Lake
The Keeler monitoring station is used by the District as a test bed for new PM monitoring equipment. The station monitor complement includes three (3) Thermo Model 2025i Partisol Plus filter-based monitors, one (1) Thermo Model 1405 TEOM continuous PM10 monitor and one (1) Rupprecht & Patashnick model 1400A(ab) TEOM with an 8500C FDMS unit continuous PM2.5 monitor. For the 2023 monitoring year, as noted on Table A.2, the District will be operating the following monitors in the following configurations: one (1) Thermo 1405 TEOM continuous primary PM10 monitor; one (1) R & P 1400a(AB)/8500FDMS TEOM continuous PM2.5 monitor (primary); one (1) Thermo 2025i Partisol Plus PM10 primary filter-based monitor; one (1) Thermo 2025i Partisol Plus PM10 filter-based collocated monitor; and one (1) Thermo 2025i Partisol Plus PM2.5 filter-based collocated monitor.

Coso Junction
The Coso Junction monitoring station measures PM_{10} from local sources impacting the Coso Junction Management Area, and serves as a transport monitoring site for windblown PM_{10} emissions from Owens Lake to the north. When the Area was designated, " in attainment," in 2010, it was noted that the station could be affected by local sources around the monitoring station. In order to address this concern, monthly reports were produced for the first year of operation after the designation took place. During that period, the local sources were covered

with gravel and/or cinders and the areas where vegetation had died off were watered and replanted with native plant species. Additionally, a camera was installed at the site to help with monitoring emissions from local sources. Collection of valid data resumed August 1, 2010, at the Coso Junction PM_{10} monitoring station.

In July 2013 severe flash flooding occurred in the vicinity of the Coso Junction, which is near the center of the Rose Valley. West winds coming down the leeward side of the Sierra Nevada caused windblown dust emissions from the silt and soil deposits resulting in four (4) violations of the federal PM_{10} standard at the monitoring station in 2013 and 2014. Requests for consideration of these violations as exceptional events were submitted to EPA IX for consideration in April 2015. EPA determined, in June 2016, that the events were of no regulatory significance at that time and deferred review of the exceptional events request. In 2018 an exceptional event mitigation plan was required and was developed by District and ARB staff for submittal to EPA. That plan was submitted to ARB September 25, 2018.

Mammoth Lakes

The venerable Rupprecht & Patashnick 1400a (AB) TEOM with the 8500c FDMS unit was replaced in September 2018 with a Teledyne-API T640X certified as an EPA-equivalent method continuous monitor for PM_{10}, $PM_{2.5}$, and $PM_{10-2.5}$. The TAPI T640X was operated as a special purpose monitor at the Mammoth Lakes monitoring station until its replacement with a Thermo 1405 TEOM PM10 monitor in May 2022. The District also continues to operate the Thermo 2025i Partisol Plus PM_{10} monitor in conjunction with the Thermo TEOM 1405 on the 1-in-3-day schedule as a collocated monitor. The District installed a 2025 Partisol Plus PM2.5 monitor at the Mammoth site in March 2019. These two FRM monitors provide filter-based comparison data to be used in conjunction with the continuous PM10 data for monitoring the Mammoth Lakes Attainment Area. All data collected from the three monitors are being submitted to the EPA AQS database.

Mono Lake

The District has operated monitoring stations in the Mono Basin area since 1981.

In order to address the need for a continuous monitor, an R&P 1400(a)AB TEOM PM_{10} monitor was installed in May 2008 at the Mono Lake North Shore site to facilitate the collection of hourly-resolved PM_{10} data. A goal was set for the Mono Shore site to operate the continuous PM_{10} monitor through the entire year, rather than seasonally as had been done with the filter-based monitors, due to limited site access during the winter snowstorm season. Due to the heavy snows of winter 2022-23, the site was inaccessible from mid-December 2022 through April 2023. The solar power station failed and no PM10 or met data was collected during that period. The solar power station will be refurbished during the 2024 calendar year.

The Mono Lake North Shore site is an off-the-grid station consisting of a large solar power array and battery system generating 5.28 kilowatts of power. The system has sufficient storage capacity to continue operating for five days without sunlight. In order to minimize power consumption at the site, the R&P TEOM PM_{10} monitor is housed in a custom-designed Zomeworks Cool Cell. The Cool Cell regulates the temperature of the Cell housing the TEOM passively using a water radiator and reservoir system to regulate the Cell temperature.

The Rupprecht & Patashnick Model 1400a(AB) TEOM PM10 monitor at the Mono Shore site is scheduled to be replaced during 2023 with a Thermo Scientific Model 1405 TEOM PM10 monitor. Both monitors have the same equivalent method designation, EQPM-1090-079.

A Teledyne-API T640X continuous PM10, PM2.5, and PM10-2.5, monitor was installed in the community of Lee Vining in April 2018, at a location 275 meters north of the existing site where the District had operated an R&P Partisol Plus 2025 filter-based PM10 FRM monitor since 2001. Plans are to re-initiate filter-based monitoring at the new station for collocation with the T640X PM monitor during 2023. The filter-based monitor will be a Thermo 2025i PM2.5 monitor in order to facilitate PQAO-wide compliance with the collocation requirements for the T640X. The T640X monitor at the Lee Vining site will remain in operation at this time.

National Core Multipollutant Monitoring Station (NCORE)

The District was chosen by EPA Region IX staff to install and operate one of the EPA NCORE monitoring stations. The NCORE network consists of 80-plus monitoring stations around the nation that are used by EPA for determining national monitoring and regulatory strategies. Seven monitoring stations are placed in California and the District was chosen to operate one of them: a rural NCORE site. These sites are funded by EPA for capital equipment and operation and maintenance.

The District's NCORE site is located at the White Mountain Research Center, 4 kilometers east of Bishop, California, near the current berth of the District's Portable Monitoring Station. Installation of the station and procurement and installation of the remaining equipment took place in 2012. Data of record have been collected since January 1, 2015.

The District has also used the NCORE station as a test bed for a variety of PM monitors and PM monitor comparison studies. PM monitors tested include: a Teledyne-API 602 Beta Plus monitor, a Thermo 1405DF TEOM, and a Teledyne-API T640X. All three monitors are EPA-certified equivalent method monitors for PM10, PM2.5, and PM10-2.5. These monitors were compared to the following District monitors: a 1400a(AB)/8500C FDMS/TEOM monitoring PM2.5, an R&P 1400a(AB) TEOM monitoring PM10, and, intermittently, an R&P 2025 Partisol Plus PM10 sequential filter monitor. Comparison studies were conducted from 2014 through 2017 to determine which monitor(s) would be used at the NCORE station and at other stations throughout the District. The comparison study was completed in 2017. It was determined that the Teledyne-API T640X was the best replacement continuous PM monitor for community monitoring in the District. The T640X at the WMRC/NCORE station will be replaced with two continuous PM monitors: a Thermo 1405 TEOM PM10 monitor (EQPM-1090-079), was installed and started collecting PM10 data-of-record, as of January 1, 2024; a Thermo 1405-F TEOM PM2.5 monitor (EQPM-0609-181) will be installed during the 2024 calendar year.

Bishop Monitoring Station

During the 2018 – 2020 wildfire seasons it became clear that the WMRC/NCORE data could not be relied upon to determine impacts on the community of Bishop. Staff determined that a monitoring station within the City of Bishop would provide the most accurate indication of air quality experienced by the public in the City and the surrounding area. Funds were budgeted for the 2022-23 fiscal year for the installation of a monitoring station within the City of Bishop. The

proposed station will consist of a 10-meter meteorological monitoring tower and an existing full portable shelter housing a Thermo 1405-F PM2.5 TEOM. This station will serve the purposes of monitoring wildfire impacts more accurately on the local population and will monitor the impacts from wood-burning appliances the population during the winter months. The station and monitor will be operated initially as a special purpose monitor (SPM). Installation of the Bishop station has been put on hold until the Mono Shore station is rebuilt and is fully operational.

6.0 Minimum Monitoring Requirements, PM Design Concentrations

The District's jurisdictional boundaries encompass no Metropolitan Statistical Areas (MSA) as defined by the U.S. Office of Management and Budget and the U. S. Census Bureau (population greater than 50,000). The District does, however, contain Monitoring Planning Areas defined as "areas determined to be (potentially) in violation of the PM2.5 NAAQS." The District is also required to operate at least one monitor in each of the two (2) remaining PM_{10} nonattainment areas and in the two (2) attainment/management areas. The Coso Junction Area was designated attainment in October 2010, the Mammoth Lakes Planning Area in October 2015. The District's network meets or exceeds the minimum monitoring requirements for criteria pollutants as detailed below in Table 4. Please note that the Coso Junction Management Area (formerly the Searles Valley Nonattainment Area) encompasses the Rose Valley in the southwestern portion of Inyo County. In all cases where the District has installed one filter-based monitor and one continuous monitor at a station, the continuous monitor has been designated as the primary monitor and the filter-based monitor as collocated. Table 5 contains the 24-hour PM10 design value and the 4th highest concentration for the previous year, 2023, for each of the District's monitoring stations. Please note that these values do not include any wildfire-impacted concentrations for which the District is requesting exclusion. These values are derived from the AQS AMP 480 and AMP 450 reports for the District's monitoring stations. Tables 6.a. and 6.b. presents the collocation requirements and how they are met within the District's network and as part of CARB's PQAO network.

Table 4. Planning Area Minimum Monitoring Requirements

PM_{10}			
Planning Area Monitors	Minimum Number of Monitors Required	Number of Active Monitors	2023 PM10 Highest Concentration (µg/m^3)
Coso Junction	1	1	72
Owens Lake	1	10+1 collo.	781
Mammoth Lakes	1	1+1 collo.	84
Mono Basin	1	2	1799
PM2.5			
Planning Area, County	Minimum Number of Monitors Required	Number of Active Monitors	PM2.5 98th Percentile Design Conc. (µg/m^3)
Owens Lake, Inyo	1	1+1 collo.	17.7
WMRC/NCORE, Inyo	1	1+1 collo.	9.0

Mammoth Lakes, Mono	0	1	22.1
Mono Basin, Mono	0	1	9.5

Table 4a. 24-Hour and Annual $PM_{2.5}$ Maximum Design Values

MSA	County(ies)	Population & Census year	Annual Design Value [µg/m3], DV Years[1]	Annual Design Value site (name, AQS ID)	Daily Design Value[µg/m3], DV years	Daily Design Value site (name, AQS ID)
N/A	Inyo	18,718, 2022	7.1, 2021-23	Keeler, 06-027-1003	29, 2021-23	Keeler, 06-027-1003
N/A	Mono	12,978, 2022	8.8, 2021-23	Mammoth, 06-051-0001	27, 2021-23	Mammoth, 06-051-0001

Table 5. PM10 4th Highest Concentrations based on 2023 Monitoring Data

Monitor Site	POC No.	PM10 4th Highest Concentration 2023	PM10 Design Values, 2021-2023
Mammoth Continuous*	6	56	0.0
Mammoth FRM	5	53	0.0
Mono Shore	3	311	12.9
Lee Vining Continuous*	4	32	0.3
Coso Junction	4	45	1.3
Dirty Socks	2	218	9.1
Keeler Primary FRM	6	321	7.3
Keeler Collocated FRM	7	24	12.5
Keeler Continuous	4	311	5.7
Lizard Tail	1	87	2.0
Lone Pine*	1	47	1.4
Mill Site	1	128	3.0
North Beach	1	77	2.4
Olancha	1	168	4.0
Shell Cut	2	155	4.7
WMRC/NCORE Continuous	1	79	1.8
WMRC/NCORE Collocated FRM*	4	29	1.1

* Values based on data that did not meet EPA completeness criteria for the three-year period.

Table 5.a. Maximum PM_{10} Monitored Concentrations

MSA	County	Population & Census year	Max Concentration [µg/m^3]	Max Concentration site (name, AQS ID)
N/A	Inyo	18,718, 2022	861	Keeler, 06-027-1003
N/A	Mono	12,978, 2022	1,799	Mono Shore, 06-051-0011

Collocation Requirements:

Table 6.a. PM2.5 Monitoring Methods

Method Code	# Primary Monitors	# Required Collocated Monitors	# Active Collocated Monitors	Site - Method Description
181/FEM	1	1	1	Keeler - Thermo TEOM 1400a/8500c w/Thermo 2025i Partisol FRM/VSCC
738/FEM	2	1	1	Bishop/White Mountain – Teledyne-API T640Xw/ Thermo 2025i Partisol FRM/VSCC

Table 6.b. PM10 Monitoring Methods

Method Code	# Primary Monitors	# Required Collocated Monitors	# Active Collocated Monitors	Site - Method Description
127/FRM	3	1	1	Keeler - Thermo 2025i Partisol FRM

7.0 Data Certification and Reporting

The ARB, as the District's PQAO, has delegated the responsibilities for data collection, validation and reporting to the District, as the monitoring organization. District staff ensures that all data and statistical reports are submitted to the Air Quality System, the EPA's national air monitoring database, and that the data are certified annually, as required by regulation. Precision and accuracy reports are generated quarterly by the District and are also submitted to AQS. The 2023 dataset was certified April 9, 2024.

APPENDIX A

NCORE Station Monitoring Plan

Great Basin Unified
Air Pollution Control District

2024 Air Quality Monitoring
Network Plan
For
National Core (NCORE) Monitoring Station

Draft

located at
White Mountain Research Center
Bishop, California

July 2024

Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, California 93514

National Core (NCore) Multi-pollutant Monitoring Stations:

In October 2006 the United States Environmental Protection Agency (EPA) issued final amendments to the ambient air monitoring regulations for criteria pollutants. These amendments are codified in 40 CFR parts 53 and 58. The purpose of the amendments was to enhance ambient air quality monitoring to better serve current and future air quality needs. One of the most significant changes in the regulations was the requirement to establish National Core (NCore) multi-pollutant monitoring stations. These stations will provide data on several pollutants at lower detection limits and replace the National Air Monitoring Station (NAMS) networks that have existed for several years. The final network plan was to be submitted to EPA by July 1, 2010 and the stations were to be operational by January 1, 2011. Delays in funding and procurement of equipment resulted in delays of the start of monitor testing at the District's NCore station until January 1, 2013, and the beginning of the upload of valid data to AQS January 1, 2015.

The NCore Network addresses the following monitoring objectives:

- timely reporting of data to the public through AIRNow, air quality forecasting, and other public reporting mechanisms
- support development of emission strategies through air quality model evaluation and other observational methods
- accountability of emission strategy progress through tracking long-term trends of criteria and non-criteria pollutants and their precursors
- support long-term health assessments that contribute to ongoing reviews of the National Ambient Air Quality Standards (NAAQS)
- compliance through establishing nonattainment/attainment areas by comparison with the NAAQS
- support multiple disciplines of scientific research, including; public health, atmospheric and ecological

In 2007, 2010, and 2011, EPA provided funding to the Great Basin Unified Air Pollution Control District (the District) to establish an NCore station in the Eastern Sierra region of California. After evaluating the existing network, historical data, meteorology, and topography the District recommends the following changes to its air monitoring network to become effective July 1, 2009, and implemented by January 1, 2010:

1) Establish an NCore multi-pollutant monitoring station in the Eastern Sierra region at the White Mountain Research Center (formerly Station) (WMRC), 3000 East Line Street, Bishop, California. The location meets the objective for a rural NCore site and meets regional scale criteria for $PM_{2.5}$, PM_{10}, ozone (O_3), sulfur dioxide (SO_2), total reactive nitrogen compounds (NO_y), and carbon monoxide (CO).

2) For the near-term, collocate the NCore station with the District's existing Portable monitoring station, which collects data for PM10 (continuous), wind speed, wind direction, ambient temperature, and relative humidity.

Monitoring Objective
Determine compliance with NAAQS; observe pollution trends for national data analysis, provide pollution levels for daily index reporting; and provide data for scientific studies.

Table A-1 Monitors

Monitor Type	Designation	Analysis Method	Frequency of Sampling
Carbon Monoxide (CO) – Thermo 48i-TLE	NCore	Automated Reference Method utilizing trace level non-dispersive infrared analysis.	Continuous
Sulfur Dioxide (SO_2) – Thermo 43i-TLE	NCore	Automated Equivalent Method utilizing trace level UV fluorescence analysis	Continuous
Ozone (O_3) – Thermo 49i	NCore	Automated trace level Equivalent Method utilizing an Ultraviolet Photometer	Continuous
Total Reactive Nitrogen (NO_y) – Thermo 42y	NCore	Automated trace level chemiluminescence analysis.	Continuous
Meteorological – Various Mfrs.	SLAMS - NCore	Air quality measurements approved instrumentation for wind speed, wind direction, humidity, temperature	Continuous
PM_{10}, $PM_{2.5}$, $PM_{10-2.5}$ – Teledyne-API T640X	SLAMS - NCore	Automated Equivalent Method utilizing scattered light spectrometry	Continuous
PM_{10} – Thermo 1405 TEOM	SLAMS - NCore	Automated Equivalent Method utilizing Tapered Element Oscillating Microbalance/gravimetric analysis	Continuous

Quality Assurance Status
All Quality Assurance procedures shall be implemented in accordance with 40 CFR 58, Appendix A. Quality Assurance Project Plans from CARB and the District cover PM_{10}, $PM_{2.5}$, and meteorological measurements. For the trace level instruments, the quality assurance project plan and standard operating procedures (SOPs) utilized currently by CARB will be used for each instrument in the project. The most recent annual performance evaluations of the District's NCORE station took place September 21, 2023, and were conducted by CARB QA staff. These evaluations consisted of audits of the filter-based PM monitors, the ozone (O3) monitor, the trace-level CO and SO2 gaseous pollutant monitors, and the continuous PM10-PM2.5 monitor.

Area of Representativeness

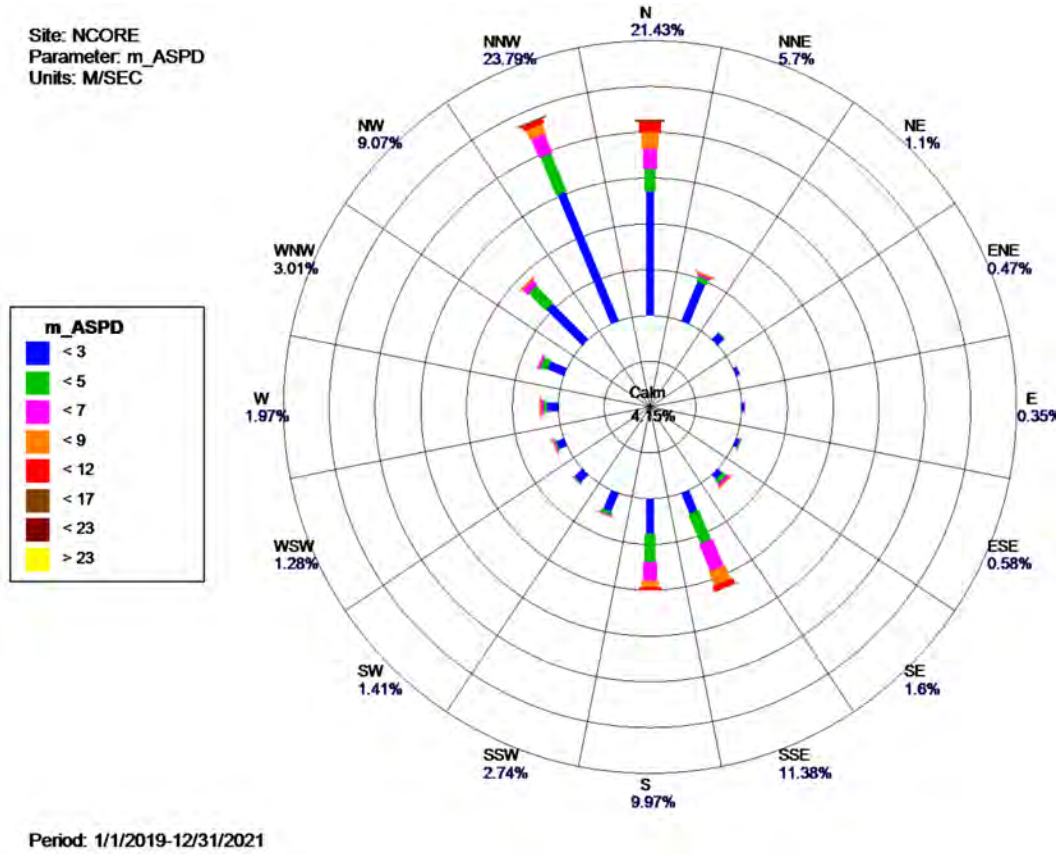
40 CFR Part 58 Appendix D provides design criteria for ambient air monitoring. The monitoring objective for the NCore site is to produce data that represents a large area and therefore the spatial scale of the site is important. The spatial scale defines the physical dimensions of the air parcel nearest to a monitoring site throughout which actual pollutant concentrations are reasonably similar. It is determined by the characteristics of the area surrounding the air monitoring site and the site's distance from nearby air pollution sources such as roadways, factories, etc. In the case of rural NCore stations, which are to be located to determine general background concentrations levels, the spatial scales to be used are regional or larger. Table A-2 shows the area of representativeness for each pollutant for the WMRC site.

Table A-2: Spatial Scales for Each Pollutant

Pollutant	Spatial Scale	Comments
NO_y	>Urban Scale	No Regional scale for NO_y
CO	> Neighborhood Scale	No Regional scale for CO
SO_2	> Urban Scale	No Regional scale for SO_2
PM_{10}	> Neighborhood Scale	No Regional scale for PM_{10}
O_3	Regional Scale	
PM2.5	Regional Scale	

For regional scale the area covered is tens of kilometers to hundreds of kilometers.

There are no MSAs within the District's current monitoring network due to the sparse population in this high desert setting, approximately 2 people per square mile. On a 10 km scale the land use varies from riparian areas along the Owens River 0.6 kilometers west of the site to light industry, small commercial, and residential in the City of Bishop (population 4,000) 5 kilometers west of the site. The topography of the area varies from high desert to mountain peaks.


Site: NCORE
Parameter: m_ASPD
Units: M/SEC
m_ASPD
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< 5
< 7
< 9
< 12
< 17
< 23
> 23
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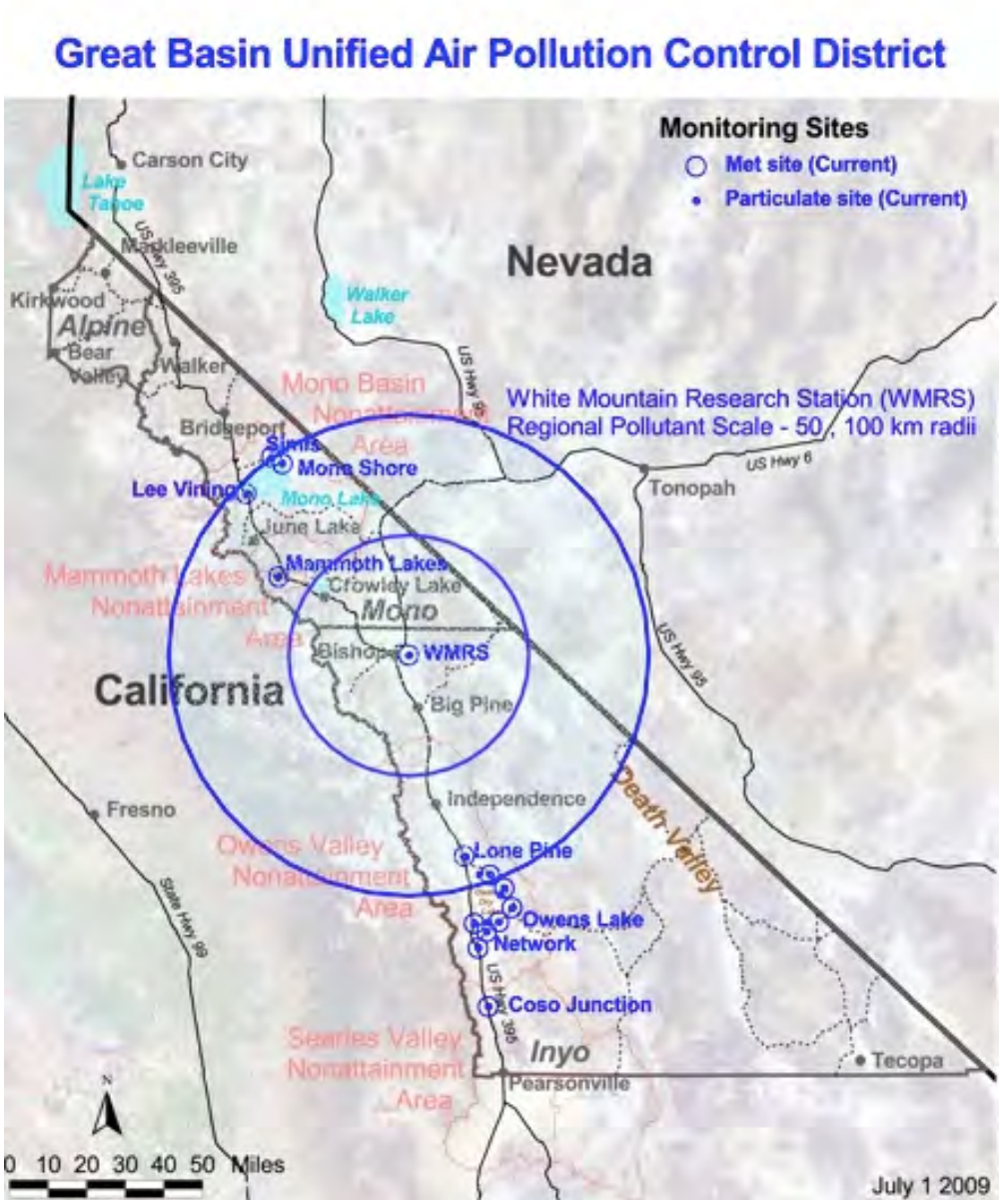
NNE
5.7%
NE
1.1%
ENE
0.47%
E
0.359
ESE
0.58%
SE
1.6%
SSE
11.38%
S
9.97%
SSW
2.74%
SW
1.41%
WSW
1.28%
W
1.97%
WNW
3.01%
NW
9.07%
NNW
23.79%
Calm
4.15%
Period: 1/1/2019-12/31/2021

The White Mountain Research Center's Owens Valley Station, where the NCore monitoring station is located, is in the Owens Valley, a high-desert valley, the floor of which is at an average elevation of 4,000 feet above mean sea level. The valley is open north to south and is bordered on the east by the White Mountains that rise from the valley floor to an elevation of 10,000 feet, with peaks up to 14,000 feet. The valley is bordered on the west by the Sierra Nevada range, which rises in elevation up to 14,000 feet. As can be seen from the District map and the area-wide view below, the NCore site is located east of the City of Bishop and east of the developed area around the City. The wind rose above indicates the prevailing wind directions of north and south, up and down the Owens Valley. The placement of the NCore site east of Bishop provides an excellent location for measuring background pollutant concentrations, as there are no major pollution sources, other than particulate matter during storm events, for 100km.



White Mountain Research Center (formerly Station)
Regional Pollutant Scale 50 and 100 km radii

The Owens Valley and Mono Basin Nonattainment areas have been designated as such due to PM_{10} concentrations that exceed the Federal standard of 150µg/m3. The sources of these concentrations are wind-blown dust from the exposed lakebeds of the Owens and Mono lakes and wintertime wood smoke and road cinders, in the case of Mammoth Lakes. The PM_{10} influence around Mono Lake is largely restricted to the immediate basin by the topography. The influence around Owens Lake is mostly caused by north winds driving the dust south. Occasional south wind storms will drive the dust northward, but the impacts generally reach only to the community of Independence, 20 miles north of Owens Lake and 40 miles south of the station at the White Mountain Research Center. During north wind events, occasional dust may impact the station from the Chalfant and Hammil Valleys from agricultural fields not properly mitigated.

White Mountain Research Station
Topographic Regional Map (90 km radius shown)

Site Description and Spacing:

Site Name: White Mountain Research Center
AQS ID: 06-027-0002
Location: (WMRC **-** 3000 East Line Street) NCore Station – 200 Poleta Road
County: Inyo
GPS Coordinates: 37°21'38" North Latitude, 118°19'50" West Longitude
Date Established: April 7, 2006
Inspection Date: August 20, 2009
Inspection By: Catherine Brown, EPA IX
Site Approval Status: Approved

White Mountain Research Center Compound

The station is located on the grounds of the University of California White Mountain Research Center. The location is in the northeast portion of Inyo County and is approximately 0.6 km east of the Owens River and 5 km east of Bishop, California.

NCore and $PM_{2.5}$ SLAMS Siting Criteria

Appendix E to 40 CFR Part 58-*Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring* contains specific location criteria applicable to NCore and SLAMS siting. The following measurements and data were obtained for evaluation of compliance with the criteria.

1. Horizontal Placement of Sampling Probes:
The gaseous instruments are located in an 8'w x 8' h x 20'l air monitoring shelter located in an open area. The nearest building is the WMRC maintenance building approximately 150 meters east of the station. The sample probe inlets are installed approximately 4 meters above the ground. The Districts Portable monitoring station is placed next to the NCore air monitoring shelter and includes a 10-meter telescoping meteorological tower. The NCore station also has its own meteorological tower which supports sensors monitoring: wind speed, wind direction, ambient temperature, ambient pressure, relative humidity, precipitation, and solar radiation.

Manual filter-based particulate samplers to be used for the NCore program include Thermo 2025i Partisol Plus sequential filter samplers for PM10 and for PM2.5. These samplers are installed on the metal monitoring platform adjacent to the NCore shelter. The height of the inlets of the filter-based particulate samplers above ground is 4.6 meters. The inlet for the continuous $PM_{10}/PM_{2.5}$ monitor in the Portable station is approximately 1.9 meters above the roof and approximately 5 meters above the ground. Inlets for the continuous particulate monitor in the NCore station were placed on the roof of the air monitoring shelter with the sample inlets approximately 2 meters above the roof (4 meters above ground) with at least 1 meter of separation from any and all structures on the roof.

2. Spacing from Obstructions:
There are no obstructions to air flow around the site. The WMRC maintenance building is located 150 meters east of the proposed NCore station location and is 4 meters in height. This potential obstruction is 37 times the height of the obstruction away from the station and is not in a quadrant where it would affect the prevailing wind direction.

3. Spacing from Roadways:
Tables E-1, E-2, and Figure E-1 of 40 CFR Part 58 Appendix E list the minimum distances from roadways a monitoring probe needs to be based on the annual average daily traffic (AADT) counts. Table A-3 summarizes the findings and includes the minimum separation distance from roadways for each pollutant. AADT counts (last update 2020) were obtained from traffic count data from the California Department of Transportation's (CalTrans) website, at: https://dot.ca.gov/programs/traffic-operations/census.

Table A-3
Spacing from Roadways Analysis

Roadway	ADT	Distance from site (meters)	Minimum Distance Required (meters)			
			Ozone Table E-1	NO/NO_y Table E-1	CO Table E-2	PM Figure E-1
US Highway 395	14,550 (2020)	5,700	40	30	45	80
East Line Street, Poleta Road	<1000 (estimated)	85	40	30	45	80

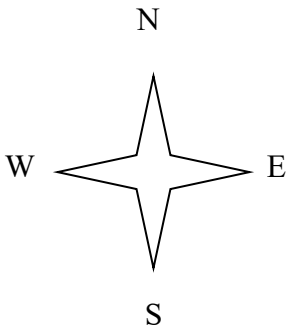
4. Spacing from Minor Sources:
The closest source to the site is the community of Bishop, California, 5 kilometers east of the site. The greater Bishop area has a population of approximately 19,000 (2020 US Census Bureau). Pollutant sources are limited to small businesses, residential home heating, vehicular traffic (15,500 AADT at Jctn Route 6 North, based on 2020 data) along US Highway 395. There are two permitted sources near the site: 7/11 Materials 4.5 km to the west and Standard Industrial Minerals 5 km to the north. These sources are listed below (Table A-4) along with their emission rates. The first source is a concrete batch plant and the second is a non-metallic minerals (primarily kaolin clay) processing plant. These plants' operating schedules are limited to 3 to 5 days per week and to a certain number of weeks per year, usually in the summer months.

Table A-4
Minor Source Emissions

Source	Emissions Type	Hours of Operation Per day	Emissions Rates	
			Pounds Per Hr. For Op	Pounds per hour 24hrs/day, 365 days/yr.
7/11 Materials	particulate	14	5.7	0.26










Direction	Description	Distance from Site
North	Power line along Line Street/Laws-Poleta Road	124 meters
North East	White Mountains	14 kilometers
East	WMRC Maintenance Building (maintenance and repair shop)	150 meters
South East	Owens Valley, open land	
South	Owens Valley, open land	
South west	Owens Valley, open land	
West	Bench above Owens River	600 meters
North West	Owens Valley, open land	

Site Details:

The Google Earth™ image on page 31 indicates where the air monitoring shelter is located on the White Mountain Research Station compound. The shelter is 8' w x 8'h x 20' l. The roof of the shelter is flat to support the sample inlets for the continuous particulate samplers and has additional room for other samplers if the need arises. Immediately adjacent to the shelter is the sampling platform that provides a 10' x 20' area elevated to the level of the shelter roof where future monitors can be installed. The 10-meter meteorological tower and the District's Portable monitoring station are placed north of the NCore shelter and sampling platform (See photos in the NCore Site Report). The meteorological tower on the NCore station is a tilt-down type with a gin pole and winch system that allows the tower to tilt down and provides for easy servicing and calibration of the meteorological instruments. The shelter is wired for 200-amp service and has internet and cellular telephone connections. The shelter has a heating and air conditioning system that maintains indoor temperatures between 20-30 º C, as required for the operation of the pollutant gas analyzers.

Site Updates/Changes:

Due to the Teledyne-API T640X consistently measuring PM10 and PM2.5 concentrations 30 to 40% higher than those measured by the Partisol filter-based PM10 and PM2.5 monitors, the T640X will be replaced with two continuous PM monitors: one (1) Thermo 1405 TEOM monitoring PM10 and one (1) Thermo 1405-F TEOM monitoring PM2.5. Both are EPA equivalent method monitors for their respective pollutants. The WMRC/NCORE T640X monitor was scheduled to be replaced with a Thermo 1405 TEOM for PM10 (EQPM-1090-079) and a Thermo 1405F TEOM for PM2.5 (EQPM-0609-181) during 2023, however, that plan has now been postponed. The Teledyne-API/EPA firmware update was applied, along with the engagement of the network data alignment option, to the NCORE T640X monitor. In light of this change, the District has elected to continue operation of the T640X at the WMRC/NCORE station, at least through Q3 2024, to determine whether this change will result in the collection by the T640X of data more comparable to that of the District's FRM Thermo Sequential PM10 and PM2.5 Partisols.

APPENDIX B

Site Information Summaries
Site Reports

Table B.1
Great Basin Unified Air Pollution Control District
Site Specifie Information

Site Name	Network	AQS Number	Pollutants Monitored	Start Date
Dirty Socks	Owens Lake	06-027-0022	PM10, Met.	May-95
Shell Cut	Owens Lake	06-027-0025	PM10, Met.	Dec-96
Flat Rock *	Owens Lake	06-027-0024	PM10, Met.	Dec-96
Bill Stanley	Owens Lake	06-027-0026	PM10, Met.	Feb-98
Olancha	Owens Lake	06-027-0021	PM10, Met.	Jul-91
Lone Pine	Owens Lake	06-027-0004	PM10, Met.	Dec-75
North Beach	Owens Lake	06-027-0029	PM10, Met.	Oct-04
Lizard Tail	Owens Lake	06-027-0028	PM10, Met.	Jan-04
Keeler	Owens Lake	06-027-1003	PM10, PM2.5, Met.	Jun-90
Mill Site	Owens Lake	06-027-0030	PM10, Met.	Apr-07
Coso Junction	Owens Lake	06-027-1001	PM10, Met.	Feb-75
Mammoth Lakes	Mammoth Lak	06-051-0001	PM10, PM2.5, Met.	Mar-80
Lee Vining	Mono Basin	06-051-0005	PM10, Met.	Dec-76
Simis Residence **	Mono Basin	06-027-0007	Met.	Oct-77
Mono Shore	Mono Basin	06-027-0011	PM10, Met.	Dec-95
White Mountain	District	06-027-0002	PM10, Met.	Mar-02
NCORE	District	06-027-0002	O3, CO, SO2, Noy, PM10, PM2.5, Met.	Mar-08

* PM10 monitoring suspended at Flat Rock May 2011; used for video, meteorological monitoring.
** PM10 monitoring suspended August 2008; meteorological monitoring suspended June 2011.

Table B.2

Great Basin Unified Air Pollution Control District
Site Specific Information
Pollutant Monitors and Method Codes

Site Name	Monitoring Frequency	Gaseous Method	PM10 Method	Monitor Type	PM2.5 Method	Monitor Type	2023 PM10 Design Value Site?	2023 PM2.5 Design Value Site?
Dirty Socks	Daily		FEM/079	SLAMS				
Shell Cut	Daily		FEM/079	SLAMS				
Flat Rock								
Bill Stanley	Daily		FEM/079	SLAMS				
Olancha	Daily		FEM/079	SLAMS			Yes	
Lone Pine-Hospital	Daily		#N/A					
Lone Pine-New	Daily		FEM/079	SLAMS				
North Beach	Daily		FEM/079	SLAMS				
Lizard Tail	Daily		FEM/079	SLAMS				
Keeler	Daily		FEM/079	SLAMS	FEM/181	SLAMS		Yes
Keeler	Daily		FRM/127	SLAMS				
Keeler Collo. Mon.	1-in-12		FRM/127	SLAMS	FRM/145	SLAMS		Yes
Mill Site	Daily		FEM/079	SLAMS				
Coso Junction	Daily		FEM/079	SLAMS			Yes	
Mammoth Lakes	Daily		FEM/079	SLAMS	FRM/145	SLAMS	Yes	
	Daily		FRM/127	SLAMS				
Lee Vining - New	Daily		FEM/639	SLAMS				Yes
Simis Residence *								
Mono Shore	Daily		FEM/079	SLAMS			Yes	
White Mountain/	Daily		FEM/639	SLAMS	FEM/638	SLAMS		
NCORE	1-in-3		FRM/127	SLAMS	FRM/145	SLAMS		
CO	Hourly	FRM/554						
SO2	Hourly	FEM/560						
O3	Hourly	FEM/047						
NO2/NOy	Hourly							

* PM10 monitoring suspended August 2008; meteorological monitoring suspended June 2011.

Table B.3

GBUAPCD QUALITY ASSURANCE AUDITS
2023

GBUAPCD Continuous Monitor Audits 2023

Site	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Coso Junction	3/2/22	5/18/23	08/31/23	12/7/23
Dirty Socks	3/2/22	5/16/23	08/29/23	11/9/23
Keeler T640x				
Keeler#1 PM2.5 FDMS	2/22/23	5/11/23	08/29/23	11/7/23
Keeler#2 PM10 TEOM	2/22/23	5/11/23	08/29/23	11/7/23
Keeler#3 PM10 TEOM				
Lee Vining T640x	N/A	5/23/23	09/25/23	11/3/23
Lizard Tail	2/23/23	5/11/23	09/26/23	11/13/23
Lone Pine TEOM	2/23/23	5/18/23	09/05/23	11/14/23
Mammoth FDMS				
Mammoth 1405	N/A	5/26/23	09/07/23	10/19/23
Mill	3/2/22	5/16/23	08/29/23	11/9/23
Mono Shore	N/A	5/23/23	N/A	
NCORE PM10 TEOM				12/15/23
NCORE T640x	2/28/23	6/1/23	09/25/23	12/15/23
North Beach	2/23/23	5/30/23	09/05/23	11/14/23
Olancha	3/2/22	5/30/23	09/05/23	12/7/23
Portable-3 TEOM				
Shell Cut	3/2/22	5/16/23	08/29/23	11/9/23
Stanley	3/2/22	5/30/23	09/05/23	12/7/23
T-11	3/8/23	6/30/23	09/29/23	12/28/23
T-16	3/8/23	6/30/23	09/29/23	12/28/23
T-21	3/8/23	6/30/23	09/29/23	12/28/23
T-27				
T-7	3/8/23	6/30/23	09/29/23	12/28/23

GBUAPCD Partisol Audits 2022

Site	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Keeler PM 10 Co	2/22/23	5/11/23	08/29/23	11/7/23
Keeler PM 10 Pri	2/22/23	5/11/23	08/29/23	11/7/23
Keeler PM 2.5	2/22/23	5/11/23	08/29/23	11/7/23
Lee Vining				
Mammoth PM10	N/A	5/26/23	09/07/23	10/19/23
Mammoth PM2.5	N/A	5/26/23	09/07/23	10/19/23
NCore PM 10	3/6/23	6/1/23	08/24/23	12/18/23
NCore PM 2.5	3/6/23	6/1/23	08/24/23	12/18/23

GBUAPCD Meteorlogical Audits 2023

Site	First Semi-Annual	Second Semi-Annual
A-Tower	04/27/2023	11/27/23
Bartlett Point		
Bill Stanley	05/30/2023	
B-Tower	04/27/2023	11/27/23
Channel	06/30/2023	12/28/23
Coso Junction	05/18/2023	
Cottonwood		
Dirty Socks	04/24/2023	11/9/23
Flat Rock	04/24/2023	11/27/23
Keeler	04/17/2023	11/7/23
Kirkwood		10/10/23
Lee Vining	05/23/2023	11/3/23
Lizard Tail	05/11/2023	11/13/23
Lone Pine	05/18/2023	11/14/23
Mammoth	05/26/2023	10/19/23
Mill	04/17/2023	11/9/23
Mono Shore	05/23/2023	
NCore	06/01/2023	12/15/23
North Beach	05/30/2023	11/14/23
Olancha	05/30/2023	
Portable-3		
Shell Cut	04/24/2023	11/9/23
T1A1	06/30/2023	12/28/23
T-25	04/27/2023	11/27/23

ARB Audits of GBUAPCD Sites 2023

Site	Annual
Coso Junction	9/19/23
Dirty Socks	9/13/23
Flat Rock	9/12/23
Keeler 1 PM2.5 FDMS	9/12/23
Keeler 3 PM10 TEOM	9/12/23
Keeler Met	9/12/23
Keeler PM10 Co Partisol	9/12/23
Keeler PM10 Pri Partisol	9/12/23
Keeler PM2.5 Partisol	9/12/23
Lee Vining	9/12/23
Lizard Tail	9/12/23
Lone Pine Met	9/14/23
Lone Pine TEOM	9/14/23
Mammoth Partisol PM10	9/13/23
Mammoth Partisol PM2.5	9/13/23
Mammoth T640x	9/13/23
Mill	9/12/23
Mono Shore	
North Beach	9/14/23
Olancha	9/13/23
Shell Cut	9/13/23
Stanley	9/14/23
WMRC PM10 Partisol	9/21/23
WMRC PM2.5 Partisol	9/21/23
WMRC T640x	9/21/23

GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***A-Tower***
AQS Number	
UTM X, Y (Zone 11)	*415480, 4042496*
Location	*North-central Owens Lake*
Address	*Owens Lake, CA*
County	*Inyo*
Distance to Road	*2.2 km north to Hwy 136.*
Traffic Count	*430*
Groundcover	*Course sands*
Representative Area	*North-central Owens Lake*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*No*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m) *9.6 meters* Temp Probe Height (m) *9.1 m (RH at 8.9 m)*

Pollutant / POC	*N/A*
Priamary/Collocated/Other	*N/A*
Paramter Code	
Monitor Objective	*Research*
Site Type	*Local meteorology*
Monitor Type	*Special Purpose Monitor*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	
Method Code	
FRM/FEM	
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*N/A*
Analysis Method	*N/A*
Start Date	*8/8/1990*
Operation Schedule	*5 minute*
Sampling Season	*Year-round*
Probe Height	*Precip gage at 1.5 meters*
Distance to Supporting Structure	*N/A*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*N/A*
Distance From Trees	*No trees within seven kilometers.*
Distance to Furnace or Incinerator	*No furnace or incinerator within 7km.*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*N/A*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***B-Tower***
AQS Number	
UTM X, Y (Zone 11)	*420264.5, 4030446*
Location	*Southeast Owens Lake*
Address	*Owens Lake, CA*
County	*Inyo*
Distance to Road	*3 km SE to Hwy 190*
Traffic Count	*520*
Groundcover	*Course sands*
Representative Area	*South-eastern Owens Lake*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*No*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m) *10 meters* Temp Probe Height (m) *9.2 m (RH at 9.2 m)*

Pollutant / POC	*N/A*
Priamary/Collocated/Other	*N/A*
Paramter Code	
Monitor Objective	*Research*
Site Type	*Local Meteorology*
Monitor Type	*Special Purpose Monitor*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	
Method Code	
FRM/FEM	
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neigborhood Scale*
Sampling Method	*N/A*
Analysis Method	*N/A*
Start Date	*1/5/1995*
Operation Schedule	*5 minute*
Sampling Season	*Year-round*
Probe Height	*Precip gage at 1.5 meters*
Distance to Supporting Structure	*N/A*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*N/A*
Distance From Trees	*8km NE of site.*
Distance to Furnace or Incinerator	*8km NE of site.*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*N/A*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***Coso Junction***
AQS Number	*06-027-1001*
UTM X, Y (Zone 11)	*414978.3, 3989840*
Location	*Hwy 395 at Gill Station - Coso Road*
Address	*3 Gill Station Rd, Olancha, CA 93549*
County	*Inyo*
Distance to Road	*0.2km to Gill Station Road SE of stn.; 400m to Hwy. 395 west of site*
Traffic Count	*GSR est 300; 2019 AADT US 395: 6800; 2020 AADT US 395: 6800*
Groundcover	*Dirt, gravel, brush*
Representative Area	*Regional*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*No*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m): *10 meters* Temp Probe Height (m): *9.15 meters*

Pollutant / POC	*PM-10 / 4*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Regional Transport, Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Coso Junction PM10 Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*5/10/2006*
Operation Schedule	*1:1*
Sampling Season	*Year-round*
Probe Height	*1.9 m above roof; 6.4 m AGL*
Distance to Supporting Structure	*1.9m below inlet*
Distance from Obstructions on Roof	*No obstructions.*
Distance from Obstructions Not on Roof	*MET tower 10m in height 20 m west of site.*
Distance From Trees	*0.5 km*
Distance to Furnace or Incinerator	*None in the vicinity for several kilometers.*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annual (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***Coso Junction***
AQS Number	*06-027-1001*
UTM X, Y (Zone 11)	*414978.3, 3989840*
Location	*Hwy 395 at Gill Station - Coso Road*
Address	*3 Gill Station Rd, Olancha, CA 93549*
County	*Inyo*
Distance to Road	*0.2km to Gill Station Road SE of stn.; 400m to Hwy. 395 west of site*
Traffic Count	*GSR est 300; 2019 AADT US 395: 6800; 2020 AADT US 395: 6800*
Groundcover	*Dirt, gravel, brush*
Representative Area	*Regional*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*No*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m): *10 meters* Temp Probe Height (m): *9.15 meters*

Pollutant / POC	*H2S / 1*
Priamary/Collocated/Other	*N/A*
Paramter Code	*42402*
Monitor Objective	*NAAQS*
Site Type	*Population Oriented, Pollutant Transport*
Monitor Type	*Other*
Network Affiliation	*Coso Junction Planning Area*
Instrument Make and Model	*Thermo 43i-TLE w/340 H2S converter*
Method Code	*020*
FRM/FEM	
Collecting Agency	*Coso Operating Co.*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*N/A*
Analysis Method	*Pulsed Fluorescence*
Start Date	*5/10/2006*
Operation Schedule	*1:1*
Sampling Season	*Year-round*
Probe Height	*4.5 meters*
Distance to Supporting Structure	*N/A*
Distance from Obstructions on Roof	*No obstructions*
Distance from Obstructions Not on Roof	*10m MET tower 30m west of H2S station*
Distance From Trees	*0.5 km*
Distance to Furnace or Incinerator	*None in the vicinity for several kilometers.*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*N/A*
Frequency of External Audits	*Quarterly*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***Cottonwood***
AQS Number	
UTM X, Y (Zone 11)	*411798.9, 4028440*
Location	*South-central Owens Lake*
Address	*Owens Lake, CA*
County	*Inyo*
Distance to Road	*3 km to Hwy 395 (west)*
Traffic Count	*6600*
Groundcover	*Course sand*
Representative Area	*Central Owens Lake*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *No* ☑ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *9.8 meters* Temp Probe Height (m)

Pollutant / POC	*N/A*
Priamary/Collocated/Other	*N/A*
Paramter Code	
Monitor Objective	*Research*
Site Type	*Local Meteorology*
Monitor Type	*Special Purpose Monitor*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	
Method Code	
FRM/FEM	
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*N/A*
Analysis Method	*N/A*
Start Date	*5/17/2001*
Operation Schedule	*5 minute*
Sampling Season	*Year-round*
Probe Height	*N/A*
Distance to Supporting Structure	*N/A*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*N/A*
Distance From Trees	*None*
Distance to Furnace or Incinerator	*None*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*N/A*

Great Basin Unified Air Pollution Control District
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Site Name	***Dirty Socks***
AQS Number	*06-027-0022*
UTM X, Y (Zone 11)	*414272.2, 4020550*
Location	*South shore, Owens Lake*
Address	*DIRTY SOX HOT SPRING - HWY 190, Owens Lake, CA*
County	*Inyo*
Distance to Road	*402 meters to Hwy 190*
Traffic Count	*2019 AADT Hwy 190: 240; 2020 AADT CA 190: 160*
Groundcover	*Gravel, sand, water, small shrubs*
Representative Area	*South shore, Owens Lake*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *10.2 meters* Temp Probe Height (m) *9.5 meters*

Pollutant / POC	*PM-10 / 2*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*6/23/1999*
Operation Schedule	*hourly; offline 12/19/12-12/18/14*
Sampling Season	*Year-round*
Probe Height	*2.1 m above roof; 4.6 m AGL*
Distance to Supporting Structure	*2.1 m below inlet*
Distance from Obstructions on Roof	*No obstructions*
Distance from Obstructions Not on Roof	*No obstructions*
Distance From Trees	*5km to the southwest*
Distance to Furnace or Incinerator	*6km to the west*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annual (CARB)*

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Site Name	***Flat Rock***
AQS Number	*06-027-0024*
UTM X, Y (Zone 11)	*424988.9, 4030860*
Location	*Eastern shore, Owens Lake*
Address	*FLAT ROCK - HIGHWAY 190 - 1 MILE W OF HWY 136 JUNCTION, Owens Lake, CA*
County	*Inyo*
Distance to Road	*54.8 meters to Hwy 190; 1.6km NE to CA136/CA190 Junction*
Traffic Count	*2019 AADT: 650 on CA190 at Jctn. CA 136; 2020 AADT CA 190: 320*
Groundcover	*Sand, rocks, shrubs*
Representative Area	*East shore, Owens Lake*

Met Installed? *Yes* — ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *No* — ☑ Variable: Wind Direction ☑ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *10.1 meters* Temp Probe Height (m) *9.3 meters*

Pollutant / POC	*PM-10*
Priamary/Collocated/Other	*Other*
Paramter Code	
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*None (TEOM removed 5/3/11 to Mill Site)*
Method Code	
FRM/FEM	
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*N/A*
Analysis Method	*Gravimetry*
Start Date	*12/14/2000*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	
Distance to Supporting Structure	*0*
Distance from Obstructions on Roof	*0*
Distance from Obstructions Not on Roof	*2.4 m (MET); 3.8 meters (powerline)*
Distance From Trees	*No trees*
Distance to Furnace or Incinerator	*0*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annual (CARB)*

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Site Name	***Keeler***
AQS Number	*06-027-1003*
UTM X, Y (Zone 11)	*421981.9, 4038410*
Location	*Located on top of metal storage unit and monitoring shelter.*
Address	*190 CERRO GORDO ROAD, KEELER, CA*
County	*Inyo*
Distance to Road	*20 meters to Cerro Gordo Rd., 117 m NE to CA Hwy. 136*
Traffic Count	*Cerro Gordo Rd. 100/dy est; 2019 AADT CA136: 530; 2020 AADT CA 136: 280*
Groundcover	*Pavement*
Representative Area	*Community of Keeler*

Met Installed? *No* ☐ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☐ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-2.5 / 1*
Priamary/Collocated/Other	*Collocated (formerly primary)*
Paramter Code	*88101*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Partisol 2025 PM2.5 VSCC*
Method Code	*145*
FRM/FEM	*FRM (RFPS-1006-145)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*PM-10 Impactor and VSCC*
Analysis Method	*Gravimetry*
Start Date	*9/10/2009*
Operation Schedule	*1-in-12 day Partisol*
Sampling Season	*Year-round;Partisol began 9/1/98*
Probe Height	*2.1 m above roof; 4.5 m AGL*
Distance to Supporting Structure	*2.1m below inlet*
Distance from Obstructions on Roof	*See attached roof diagram*
Distance from Obstructions Not on Roof	*10 meters to antennae*
Distance From Trees	*Trees 50m east, 4m height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*1.1m to PM2.5 TEOM and 2.48m to the PM10 primary Partisol*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*Yes*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Keeler***
AQS Number	*06-027-1003*
UTM X, Y (Zone 11)	*421981.9, 4038410*
Location	*Located on top of metal storage unit and monitoring shelter.*
Address	*190 CERRO GORDO ROAD, KEELER, CA*
County	*Inyo*
Distance to Road	*20 meters to Cerro Gordo Rd., 117 m NE to CA Hwy. 136*
Traffic Count	*Cerro Gordo Rd. 100/dy est; 2019 AADT CA136: 530; 2020 AADT CA 136: 280*
Groundcover	*Pavement*
Representative Area	*Community of Keeler*

Met Installed? *No* ☐ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☐ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-2.5 / 3*
Priamary/Collocated/Other	*Primary*
Paramter Code	*88101*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*TEOM 1400 ab/8500c FDMS, PM2.5 continuous*
Method Code	*181*
FRM/FEM	*FEM (EQPM-0609-181)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*PM-10 Impactor, PM2.5 VSCC*
Analysis Method	*Gravimetry*
Start Date	*3/11/1993*
Operation Schedule	*hourly (TEOM); Daily (1° Partisol.)*
Sampling Season	*Year-round;Partisol began 9/1/98*
Probe Height	*2.1 m above roof; 4.5 m AGL*
Distance to Supporting Structure	*2.1m below inlet*
Distance from Obstructions on Roof	*See roof diagram*
Distance from Obstructions Not on Roof	*9 meters to antennae*
Distance From Trees	*Trees 50m east, 4m height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*1.10m to colocated PM2.5 TEOM; 1.10m to PM2.5 colo Partisol*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*Yes*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annual (CARB)*

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Site Name	***Keeler***
AQS Number	*06-027-1003*
UTM X, Y (Zone 11)	*421981.9, 4038410*
Location	*Located on top of metal storage unit and monitoring shelter.*
Address	*190 CERRO GORDO ROAD, KEELER, CA*
County	*Inyo*
Distance to Road	*20 meters to Cerro Gordo Rd., 117 m NE to CA Hwy. 136*
Traffic Count	*Cerro Gordo Rd. 100/dy est; 2019 AADT CA136: 530; 2020 AADT CA 136: 280*
Groundcover	*Pavement*
Representative Area	*Community of Keeler*

Met Installed?	*No*	☐ Variable: Wind Speed	☐ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*Yes*	☐ Variable: Wind Direction	☐ Variable: Temperature	☐ Variable: Precipitation

Anemometer Height (m) | Temp Probe Height (m)

Pollutant / POC	*PM-10 / 7*
Priamary/Collocated/Other	*Collocated*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Partisol 2025i PM10*
Method Code	*127*
FRM/FEM	*FRM (RFPS-1298-127)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*PM-10 Impactor, Collocated PM10 Monitor*
Analysis Method	*Gravimetry*
Start Date	*6/15/2009*
Operation Schedule	*1-in-12 day Partisol*
Sampling Season	*Year-round;Partisol began 9/1/98*
Probe Height	*2.1 m above roof; 4.5 m AGL*
Distance to Supporting Structure	*2.1m below inlet*
Distance from Obstructions on Roof	*See roof diagram*
Distance from Obstructions Not on Roof	*10 meters to antennae*
Distance From Trees	*Trees 50m east, 4m height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*3.79m to PM10 primary Partisol*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Keeler***
AQS Number	*06-027-1003*
UTM X, Y (Zone 11)	*421981.9, 4038410*
Location	*Located on top of metal storage unit and monitoring shelter.*
Address	*190 CERRO GORDO ROAD, KEELER, CA*
County	*Inyo*
Distance to Road	*20 meters to Cerro Gordo Rd., 117 m NE to CA Hwy. 136*
Traffic Count	*Cerro Gordo Rd. 100/dy est; 2019 AADT CA136: 530; 2020 AADT CA 136: 280*
Groundcover	*Pavement*
Representative Area	*Community of Keeler*

Met Installed? *No* ☐ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☐ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-10 / 6*
Priamary/Collocated/Other	*Primary*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Partisol 2025 PM10*
Method Code	*127*
FRM/FEM	*FRM (RFPS-1298-127)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*PM-10 Impactor, Collocated PM10 Monitor*
Analysis Method	*Gravimetry*
Start Date	*6/15/2009*
Operation Schedule	*1:1*
Sampling Season	*Year-round;Partisol began 9/1/98*
Probe Height	*2.1 m below inlet*
Distance to Supporting Structure	*2.1 m below inlet*
Distance from Obstructions on Roof	*See roof diagram*
Distance from Obstructions Not on Roof	*10 meters to antennae*
Distance From Trees	*Trees 50m east, 4m height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*1.48m to primary PM2.5 Partisol; 3.79m to colo PM10 Partisol*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Keeler***
AQS Number	*06-027-1003*
UTM X, Y (Zone 11)	*421981.9, 4038410*
Location	*Located on top of metal storage unit and monitoring shelter.*
Address	*190 CERRO GORDO ROAD, KEELER, CA*
County	*Inyo*
Distance to Road	*20 meters to Cerro Gordo Rd., 117 m NE to CA Hwy. 136*
Traffic Count	*Cerro Gordo Rd. 100/dy est; 2019 AADT CA136: 530; 2020 AADT CA 136: 280*
Groundcover	*Pavement*
Representative Area	*Community of Keeler*

Met Installed?	*No*	☐ Variable: Wind Speed	☐ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*Yes*	☐ Variable: Wind Direction	☐ Variable: Temperature	☐ Variable: Precipitation

Anemometer Height (m) | Temp Probe Height (m)

Pollutant / POC	*PM-10 / 4*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*TEOM 1405, PM10 continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*PM-10 Impactor, Collocated PM10 Monitor*
Analysis Method	*Gravimetry*
Start Date	*6/15/2009*
Operation Schedule	*hourly (TEOM); 1/12 day 2° Partisol*
Sampling Season	*Year-round;Partisol began 9/1/98*
Probe Height	*2.1 m above roof; 4.5 m AGL*
Distance to Supporting Structure	*2.1 m below inlet*
Distance from Obstructions on Roof	*See roof diagram*
Distance from Obstructions Not on Roof	*10 meters to antennae*
Distance From Trees	*Trees 50m east, 4m height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*2.28m to 10pri Partisol*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Keeler MET***
AQS Number	*06-027-1003*
UTM X, Y (Zone 11)	*421356, 4038807*
Location	*Northeast of Keeler, CA*
Address	*Keeler, CA*
County	*Inyo*
Distance to Road	*75 meters*
Traffic Count	*3/day*
Groundcover	*sand/brush*
Representative Area	*Community of Keeler*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☐ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*No*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m) *9.6 meters* Temp Probe Height (m) *9.0 meters*

Pollutant / POC	*N/A*
Priamary/Collocated/Other	*N/A*
Paramter Code	
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	
Method Code	
FRM/FEM	
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*N/A*
Analysis Method	*N/A*
Start Date	*3/14/1985*
Operation Schedule	*5 minute*
Sampling Season	*Year-round*
Probe Height	
Distance to Supporting Structure	*N/A*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*20 meters to trees*
Distance From Trees	*Trees to the east, 15m in height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*N/A*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Kirkwood***
AQS Number	*06-005-1033*
UTM X, Y (Zone 11)	*754606, 4286527*
Location	*Coordinates Are UTM Zone 10*
Address	*Loop Road, Kirkwood, CA*
County	*Amador*
Distance to Road	*32 meters north to Loop Rd; 1.2 km north to CA Hwy 88*
Traffic Count	*2019 AADT CA Hwy 88 and Kirkwood Meadows Drive 1550. 2019 AADT CA88/Amador-Alpine County line: 2500; 2020 AADT CA 88 and Kirkwood Meadows Dr. : 1850; CA 88/Amador/Alpine line: 2500*
Groundcover	*Decomposed granite*
Representative Area	*4+ km*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *No* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) *8.6 meters* Temp Probe Height (m) *8.2 meters*

Pollutant / POC	*N/A*
Priamary/Collocated/Other	*N/A*
Paramter Code	
Monitor Objective	*Local Meteorology - backup power station (diesel)*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Great Basin*
Instrument Make and Model	*N/A*
Method Code	*N/A*
FRM/FEM	*N/A*
Collecting Agency	*GBUAPCD*
Analytical Lab	*N/A*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*N/A*
Analysis Method	*N/A*
Start Date	*1/1/2017*
Operation Schedule	*Hourly (continuous)*
Sampling Season	*Year-round*
Probe Height	*Precip gage at 9.1 meters*
Distance to Supporting Structure	*The sensors sit atop a 10-meter tower*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*N/A*
Distance From Trees	*60m to trees north ; 40m east; 75 west; 80m south*
Distance to Furnace or Incinerator	*Backup power station 60m east.*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*N/A*

Great Basin Unified Air Pollution Control District
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Site Name	***Lee Vining - continuous***
AQS Number	*06-051-0005*
UTM X, Y (Zone 11)	*313746, 4203737*
Location	*Community of Lee Vining, CA*
Address	*330 Mattly Avenue*
County	*Mono*
Distance to Road	*84 m to Hwy 395; 179 m to Matty Ave.*
Traffic Count	*Mattly Ave. - 100/dy est; 2019 AADT US 395: 4400; 2020 AADT US 395: 4000*
Groundcover	*Sage, desert scrub, decomposed granite*
Representative Area	*Community of Lee Vining, CA*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) *9.6 meters* Temp Probe Height (m) *9.1 meters*

Pollutant / POC	*PM-10 / 4*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Mono Basin Planning Area*
Instrument Make and Model	*Teledyne API T640x PM10*
Method Code	*639*
FRM/FEM	*FEM (EQPM-0516-239)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Polychromatic LED 90° white light scattering*
Start Date	*10/1/2018*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof*
Distance to Supporting Structure	*2.0 m below inlet*
Distance from Obstructions on Roof	*No obstructions on roof*
Distance from Obstructions Not on Roof	*MET tower 1 meter west of inlet*
Distance From Trees	*33 meters WSW, 5 meters in height*
Distance to Furnace or Incinerator	*330 meters south*
Distance Between Collocated Monitors	*275 meters south to LV Partisol Site, CalTrans yard*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*Monthly by station operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Lee Vining - continuous***
AQS Number	*06-051-0005*
UTM X, Y (Zone 11)	*313746, 4203737*
Location	*Community of Lee Vining, CA*
Address	*330 Mattly Avenue*
County	*Mono*
Distance to Road	*84 m to Hwy 395; 179 m to Matty Ave.*
Traffic Count	*Mattly Ave. - 100/dy est; 2019 AADT US 395: 4400; 2020 AADT US 395: 4000*
Groundcover	*Sage, desert scrub, decomposed granite*
Representative Area	*Community of Lee Vining, CA*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) *9.6 meters* Temp Probe Height (m) *9.1 meters*

Pollutant / POC	*PM-2.5 / 4*
Priamary/Collocated/Other	*Other*
Paramter Code	*88101*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Mono Basin Planning Area*
Instrument Make and Model	*Teledyne API T640x PM2.5*
Method Code	*638*
FRM/FEM	*FEM (EQPM-0516-238)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Polychromatic LED 90° white light scattering*
Start Date	*10/1/2018*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof*
Distance to Supporting Structure	*2.0 m below inlet*
Distance from Obstructions on Roof	*No obstructions on roof*
Distance from Obstructions Not on Roof	*MET tower 1 meter west of inlet*
Distance From Trees	*33 meters WSW, 5 meters in height*
Distance to Furnace or Incinerator	*330 meters south*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*Yes*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*Monthly by station operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Lee Vining - Planned installation of a Partisol 2025i by end of Q3 2021***
AQS Number	*06-051-0005*
UTM X, Y (Zone 11)	*313749, 4203464*
Location	*Community of Lee Vining, CA*
Address	*Hwy 395, Lee Vining*
County	*Mono*
Distance to Road	*84 m to Hwy 395; 179 m to Matty Ave.*
Traffic Count	*395 - 4500; Matty Ave. - 100 est.; 2020 AADT US 395: 4000*
Groundcover	*Lawn (north); Gravel (south)*
Representative Area	*Community of Lee Vining, CA*

Met Installed? *No* ☐ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *No* ☐ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-10 / 3*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Mono Basin Planning Area*
Instrument Make and Model	*Partisol 2025i PM10*
Method Code	*127*
FRM/FEM	*FRM (RFPS-1298-127)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*1/1/1981*
Operation Schedule	*1-in-3 day Partisol (started 7/1/2001)*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof; 4.0 m AGL*
Distance to Supporting Structure	*2.0m below inlet*
Distance from Obstructions on Roof	*No obstructions - unit mounted on stand*
Distance from Obstructions Not on Roof	*N/A*
Distance From Trees	*20m east, 5m in height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*New station 330 Mattly Ave w/T640x PM10/PM2.5*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Lizard Tail***
AQS Number	*06-027-0028*
UTM X, Y (Zone 11)	*415700.8, 4044610*
Location	*Owens Lake NE Shoreline*
Address	*Lizard Tail - NE Shoreline Owens Lake, CA*
County	*Inyo*
Distance to Road	*275 meters to powerline road; 800m to Hwy 395*
Traffic Count	*Powerline est. 21; 2019 AADT US 395: 8000; 020 AADT US 395: 7100*
Groundcover	*Sand and shrubs*
Representative Area	*4 km area*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☐ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☐ Variable: Precipitation

Anemometer Height (m) *10.0 meters* Temp Probe Height (m) *8.0 meters*

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Impact*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*1/16/2008*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*1.9 m above roof; 4.6 m AGL*
Distance to Supporting Structure	*1.9 m below inlet*
Distance from Obstructions on Roof	*None*
Distance from Obstructions Not on Roof	*Met tower: 4.6 meters; power pole 9.1 meters*
Distance From Trees	*Trees 4km southeast*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Lone Pine (consolidated site)***
AQS Number	*06-027-0031*
UTM X, Y (Zone 11)	*405672, 4051818*
Location	*East Lone Pine*
Address	*866 East Locust Street, Lone Pine, CA*
County	*Inyo*
Distance to Road	*Site is 130m south of Locust St., and 775 m east of Main St./US 395*
Traffic Count	*2019 AADT US 395: 7000; 2020 AADT US 395: 7000; Locust St. AADT: 10/day, est.*
Groundcover	*decomposed granite*
Representative Area	*Community of Lone Pine*

Met Installed? *Yes* ☑ Variable: Wind Speed ☑ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) *10 meters* Temp Probe Height (m) *9.5 meters*

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*12/23/2020*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2 m above shelter roof*
Distance to Supporting Structure	*2 meters*
Distance from Obstructions on Roof	*No obstructions*
Distance from Obstructions Not on Roof	*No obstructions*
Distance From Trees	*40 m to nearest trees, 7 m in height*
Distance to Furnace or Incinerator	*260 meters to nearest home*
Distance Between Collocated Monitors	*N/A - no collocated monitors*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Lone Pine MET - equipment moved to the consolidated Lone Pine site Dec 202***
AQS Number	*06-027-0019*
UTM X, Y (Zone 11)	*406299.9, 4051850*
Location	*Lone Pine Wastewater Treatment Plant*
Address	*OUT AT THE SEWER PONDS ONE MILE E OF LOCUST ST*
County	*Inyo*
Distance to Road	*30 meters to access road; 1370 west to Hwy 395*
Traffic Count	*1 per week; 6000; 020 AADT US 395: 7000*
Groundcover	*dirt and grass*
Representative Area	*rural area east of Lone Pine*

Met Installed? *Yes* — ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *No* — ☑ Variable: Wind Direction ☑ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *9.6 meters* Temp Probe Height (m) *9.1 meters*

Pollutant / POC	*N/A*
Priamary/Collocated/Other	*N/A*
Paramter Code	
Monitor Objective	
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	
Method Code	
FRM/FEM	
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*N/A*
Analysis Method	*N/A*
Start Date	*5/14/1986*
Operation Schedule	*5 minutes*
Sampling Season	*Year-round*
Probe Height	*Precip gage @ 1.5 m AGL*
Distance to Supporting Structure	*N/A*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*40 meters to phone pole*
Distance From Trees	*100m west, 10m height*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Lone Pine TEOM***
AQS Number	*06-027-0004*
UTM X, Y (Zone 11)	*405399.8, 4052020*
Location	*Southern Inyo Hospital*
Address	*501 East Locust Rd, Lone Pine, CA*
County	*Inyo*
Distance to Road	*85m so. To east Locust; 610m west to 395*
Traffic Count	*2019 AADT US 395: 7000; 020 AADT US 395: 7000*
Groundcover	*rooftop, asphalt roofing*
Representative Area	*Community of Lone Pine*

Met Installed? *No* ☐ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☐ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-10 / 4*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*TEOM 1400ab (converted from FDMS to FEM TEOM 12/1/2017)*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*4/17/2008*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2.7 m above roof; 6.3 m AGL*
Distance to Supporting Structure	*2.0m below inlet*
Distance from Obstructions on Roof	*30 meters*
Distance from Obstructions Not on Roof	*29 meters*
Distance From Trees	*East of site, 3m above inlet*
Distance to Furnace or Incinerator	*65 meters*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*Yes. TEOM replaced with Thermo 1405 TEOM*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Mammoth***
AQS Number	*06-051-0001*
UTM X, Y (Zone 11)	*326513.8, 4168312*
Location	*Town of Mammoth Lakes, CA*
Address	*Gateway Home Center, Mammoth Lakes, CA*
County	*Mono*
Distance to Road	*30.5 meters east to Old Mammoth Rd.; 124m NNE to Hwy 203*
Traffic Count	*2019 AADT CA 203: 14600; 2019 AADT Old Mammoth Rd: 6500; 2020 AADT CA 203: 12500; OMR: 6500*
Groundcover	*Urban; asphalt composite roof and pavement*
Representative Area	*Town of Mammoth Lakes*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *9.8 meters* Temp Probe Height (m) *9.3 meters*

Pollutant / POC	*PM-10 / 6*
Priamary/Collocated/Other	*SPM*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SPM*
Network Affiliation	*Mammoth Lakes PM10 Maintenance Area*
Instrument Make and Model	*Teledyne API T640x*
Method Code	*239*
FRM/FEM	*N/A*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*9/1/2018*
Operation Schedule	*hourly -T640x*
Sampling Season	*Year-round;Part. Started 2/1/03*
Probe Height	*3.1 m above roof; 9.3 m AGL*
Distance to Supporting Structure	*2.0m below inlet*
Distance from Obstructions on Roof	*N/A; Distance to Supporting Struct. Cont: TEOM and Partisol 0.7m above enclosure*
Distance from Obstructions Not on Roof	*30.5 meters (at 55 degrees and 180 degrees)*
Distance From Trees	*40 meters from site, 2-5m above inlet*
Distance to Furnace or Incinerator	*130m south*
Distance Between Collocated Monitors	*3 m from TEOM inlet to Partisol inlet*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*Change to EPA-Equiv. continuous PM monitor planned Q3 2018*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Mammoth***
AQS Number	*06-051-0001*
UTM X, Y (Zone 11)	*326513.8, 4168312*
Location	*Town of Mammoth Lakes, CA*
Address	*Gateway Home Center, Mammoth Lakes, CA*
County	*Mono*
Distance to Road	*30.5 meters east to Old Mammoth Rd.; 124m NNE to Hwy 203*
Traffic Count	*2019 AADT CA 203: 14600; 2019 AADT Old Mammoth Rd: 6500; 2020 AADT CA 203: 12500; OMR: 6500*
Groundcover	*Urban; asphalt composite roof and pavement*
Representative Area	*Town of Mammoth Lakes*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☐ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☐ Variable: Precipitation

Anemometer Height (m) *9.8 meters* Temp Probe Height (m) *9.3 meters*

Pollutant / POC	*PM-10 / 5*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Mammoth Lakes PM10 Maintenance Area*
Instrument Make and Model	*Partisol 2025 PM10 (started 2/1/2003)*
Method Code	*127*
FRM/FEM	*FRM (RFPS-1298-127)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*10/21/2000 8:00:00 PM*
Operation Schedule	*1-in-1 day Partisol*
Sampling Season	*Year-round*
Probe Height	*3.4 m above roof; 9.6 m AGL*
Distance to Supporting Structure	*2m above platform*
Distance from Obstructions on Roof	*None*
Distance from Obstructions Not on Roof	*30.5 meters*
Distance From Trees	*40 meters to east, w, w, n; 2-5m above inlet*
Distance to Furnace or Incinerator	*130m south*
Distance Between Collocated Monitors	*3m to T640x inlet*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
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Site Name	***Mammoth***
AQS Number	*06-051-0001*
UTM X, Y (Zone 11)	*326513.8, 4168312*
Location	*Town of Mammoth Lakes, CA*
Address	*Gateway Home Center, Mammoth Lakes, CA*
County	*Mono*
Distance to Road	*30.5 meters east to Old Mammoth Rd.; 124m NNE to Hwy 203*
Traffic Count	*2019 AADT CA 203: 14600; 2019 AADT Old Mammoth Rd: 6500; 2020 AADT CA 203: 12500; OMR: 6500*
Groundcover	*Urban; asphalt composite roof and pavement*
Representative Area	*Town of Mammoth Lakes*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☐ Variable: Relative Humidity	☐ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☐ Variable: Precipitation

Anemometer Height (m) *9.8 meters* Temp Probe Height (m) *9.3 meters*

Pollutant / POC	*PM-2.5 / 5*
Priamary/Collocated/Other	*N/A*
Paramter Code	*88101*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Mammoth Lakes PM10 Maintenance Area*
Instrument Make and Model	*Partisol 2025i PM2.5 VSCC (started 3/16/2019)*
Method Code	*145*
FRM/FEM	*FRM (RFPS-1006-145)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor and VSCC*
Analysis Method	*Gravimetry*
Start Date	*3/16/2019*
Operation Schedule	*1-in-3 day Partisol*
Sampling Season	*Year-round*
Probe Height	*3.1 m above roof; 9.3 m AGL*
Distance to Supporting Structure	*2m above platform*
Distance from Obstructions on Roof	*None*
Distance from Obstructions Not on Roof	*30.5 meters*
Distance From Trees	*40 meters to east, w, w, n; 2-5m above inlet*
Distance to Furnace or Incinerator	*130m south*
Distance Between Collocated Monitors	*3m to T640x inlet*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
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Site Name	***Mill***
AQS Number	*06-027-0030*
UTM X, Y (Zone 11)	*423662.9, 4035093*
Location	*2 miles south of Keeler*
Address	*East shore Owens Lake, CA*
County	*Inyo*
Distance to Road	*0.4 km to Hwy 190. 590m east to Hwy 136; 15m east to access rd.*
Traffic Count	*Est. 5 on access road; 2019 AADT CA 136: 650; 2020 AADT CA 136: 280*
Groundcover	*Gravel*
Representative Area	*Regional*

Met Installed?	*Yes*	☑	Variable: Wind Speed	☑	Variable: Relative Humidity	☐	Variable: Barometric Pressure
PM Installed?	*Yes*	☑	Variable: Wind Direction	☑	Variable: Temperature	☑	Variable: Precipitation

Anemometer Height (m): *9.7 m (precip at 4.1 m)* Temp Probe Height (m): *8.1 m (RH at 8.4 m)*

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*11/14/2001*
Operation Schedule	*hourly; offline 12/26/12-12/18/14*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof; 4.6 m AGL*
Distance to Supporting Structure	*2.0 m below inlet*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*None*
Distance From Trees	*3.7km NNW, 10m height.*
Distance to Furnace or Incinerator	*3.7 km NNW*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***Mono Shore***
AQS Number	*06-051-0011*
UTM X, Y (Zone 11)	*329152.6, 4215350*
Location	*Northeast shore of Mono Lake*
Address	*Mono Lake, CA*
County	*Mono*
Distance to Road	*4.4 km north to CA Hwy 167*
Traffic Count	*2019 AADT CA 167: 180; 2020 AADT CA 167:170*
Groundcover	*Course sand*
Representative Area	*Beach area, Mono Lake, CA*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *7.5 m (precip at 2 m)* Temp Probe Height (m) *6.8 meters*

Pollutant / POC	*PM-10 / 3*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Mono Basin Planning Area*
Instrument Make and Model	*TEOM 1400ab, PM10 continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*6/2/2008*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*1.6 m above roof; 3.6 m AGL*
Distance to Supporting Structure	*1.6 m below inlet*
Distance from Obstructions on Roof	*No obstructions on roof*
Distance from Obstructions Not on Roof	*No obstructions to air flow*
Distance From Trees	*50 meters to dune shrubs which are below inlet height*
Distance to Furnace or Incinerator	*5 km NW*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☑ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m) | Temp Probe Height (m)

Pollutant / POC	*Ozone / 1*
Priamary/Collocated/Other	*N/A*
Paramter Code	*44201*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Thermo 49i*
Method Code	*047*
FRM/FEM	*FEM (EQOA-0880-047)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*See attached list*
Analysis Method	*UV Photometer*
Start Date	*1/1/2013*
Operation Schedule	*Minutely*
Sampling Season	*Year-round*
Probe Height	*3.8 m AGL (gaseous)*
Distance to Supporting Structure	*1.1m below inlet*
Distance from Obstructions on Roof	*1m from railing and IMPROVE inlets to north / 1.2m above roof (IMPROVE)*
Distance from Obstructions Not on Roof	*265 meters east side of sparse trees - no obstructions*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*No furnaces or incinearators within 4 miles*
Distance Between Collocated Monitors	*1 meter, 20m in height*
Unrestricted Airflow	*360*
Probe Material	*Borosilicate glass and FEP Teflon*
Residence Time	*11.11 seconds (system revised 3/2017)*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*Bi-weekly by Station Operator*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed? *Yes* ☑ Variable: Wind Speed ☑ Variable: Relative Humidity ☑ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*SO2 / 1*
Priamary/Collocated/Other	*N/A*
Paramter Code	*42401*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Thermo 43i-TLE*
Method Code	*560*
FRM/FEM	*FEM (EQSA-0486-060)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*See attached list*
Analysis Method	*Pulsed fluorescence*
Start Date	*1/1/2013*
Operation Schedule	*Minutely*
Sampling Season	*Year-round*
Probe Height	*3.8 m AGL (gaseous)*
Distance to Supporting Structure	*1.1m below inlet*
Distance from Obstructions on Roof	*1m from railing and IMPROVE inlets to north / 1.2m above roof (IMPROVE)*
Distance from Obstructions Not on Roof	*265 meters east side of sparse trees*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*No furnaces or incinearators within 4 miles*
Distance Between Collocated Monitors	*1 meter, 20m in height*
Unrestricted Airflow	*360*
Probe Material	*Borosilicate glass and FEP Teflon*
Residence Time	*17.0 seconds (system revised 3/2017)*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*Bi-weekly by Station Operator*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed? *Yes* ☑ Variable: Wind Speed ☑ Variable: Relative Humidity ☑ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*CO / 1*
Priamary/Collocated/Other	*N/A*
Paramter Code	*42101*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Thermo 48i-TLE*
Method Code	*554*
FRM/FEM	*FRM (RFCA-0981-054)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*See attached list*
Analysis Method	*Gas Filter Correlation*
Start Date	*1/1/2013*
Operation Schedule	*Minutely*
Sampling Season	*Year-round*
Probe Height	*3.8 m AGL (gaseous)*
Distance to Supporting Structure	*1.1m below inlet*
Distance from Obstructions on Roof	*1m from railing and IMPROVE inlets to north / 1.2m above roof (IMPROVE)*
Distance from Obstructions Not on Roof	*265 meters east side of sparse trees*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*No furnaces or incinearators within 4 miles*
Distance Between Collocated Monitors	*1 meter, 20m in height*
Unrestricted Airflow	*360*
Probe Material	*Borosilicate glass and FEP Teflon*
Residence Time	*17.84 seconds (system revised 3/2017)*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*N/A*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*Bi-weekly by Station Operator*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☑ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m) | Temp Probe Height (m)

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Primary (partisol POC 4 is collocated)*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Teledyne API T640x PM10*
Method Code	*239*
FRM/FEM	*FEM (EQPM-0516-239)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*See attached list*
Analysis Method	*Polychromatic LED 90° white light scattering*
Start Date	*10/1/2017*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*1.9 m above roof; 4.7 m AGL*
Distance to Supporting Structure	*1.9m below inlet*
Distance from Obstructions on Roof	*1m from railing and IMPROVE inlets to north / 1.2m above roof (IMPROVE)*
Distance from Obstructions Not on Roof	*265 meters east side of sparse trees*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*No furnaces or incinearators within 4 miles*
Distance Between Collocated Monitors	*1 meter, 20m in height*
Unrestricted Airflow	*360*
Probe Material	
Residence Time	
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*T640x Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☑ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☑ Variable: Precipitation

Anemometer Height (m) | Temp Probe Height (m)

Pollutant / POC	*PM-2.5 / 1*
Priamary/Collocated/Other	*Primary (partisol POC 2 is collocated)*
Paramter Code	*88101*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Teledyne API T640x PM2.5*
Method Code	*238*
FRM/FEM	*FEM (EQPM-0516-238)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*See attached list*
Analysis Method	*Polychromatic LED 90° white light scattering*
Start Date	*10/1/2017*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*1.9 m above roof; 4.7 m AGL*
Distance to Supporting Structure	*1.9m below inlet*
Distance from Obstructions on Roof	*1m from railing and IMPROVE inlets to north / 1.2m above roof (IMPROVE)*
Distance from Obstructions Not on Roof	*265 meters east side of sparse trees*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*No furnaces or incinearators within 4 miles*
Distance Between Collocated Monitors	*1 meter, 20m in height*
Unrestricted Airflow	*360*
Probe Material	
Residence Time	
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*Yes*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*T640x Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed? *Yes* ☑ Variable: Wind Speed ☑ Variable: Relative Humidity ☑ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*NOy / 1*
Priamary/Collocated/Other	*N/A*
Paramter Code	*42600*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Thermo 42y*
Method Code	*674*
FRM/FEM	*N/A*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*See attached list*
Analysis Method	*CHEMILUMINESCENCE*
Start Date	*1/1/2013*
Operation Schedule	*Minutely*
Sampling Season	*Year-round*
Probe Height	*3.8 m AGL (gaseous)*
Distance to Supporting Structure	*1.1m below inlet*
Distance from Obstructions on Roof	*1m from railing and IMPROVE inlets to north / 1.2m above roof (IMPROVE)*
Distance from Obstructions Not on Roof	*265 meters east side of sparse trees*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*No furnaces or incinearators within 4 miles*
Distance Between Collocated Monitors	*1 meter, 20m in height*
Unrestricted Airflow	*360*
Probe Material	*Borosilicate glass and FEP Teflon*
Residence Time	*17.84 seconds (system revised 3/2017)*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*Bi-weekly by Station Operator*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed? *Yes* ☑ Variable: Wind Speed ☑ Variable: Relative Humidity ☑ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-2.5 / 2*
Priamary/Collocated/Other	*Collocated*
Paramter Code	*88101*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Partisol 2025i PM2.5 VSCC*
Method Code	*145*
FRM/FEM	*FRM (RFPS-1006-145)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Regional*
Sampling Method	*PM-10 Impactor and VSCC*
Analysis Method	*Gravimetry*
Start Date	*9/10/2009*
Operation Schedule	*1-in-3 day Partisol*
Sampling Season	*Year-round; Partisol began 9/1/98*
Probe Height	*2.1 m above roof; 4.9 m AGL*
Distance to Supporting Structure	*2.1 m below inlet*
Distance from Obstructions on Roof	*See attached roof diagram*
Distance from Obstructions Not on Roof	*10 meters to antennae*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*1.1m to PM2.5 TEOM*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*Yes*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*
UTM X, Y (Zone 11)	*382151.5, 4135722*
Location	*Bishop, CA - White Mountain Research Center, Owens Valley Lab*
Address	*200 Poleta Road, BISHOP, CA. 93514*
County	*Inyo*
Distance to Road	*80 m north of site*
Traffic Count	*2019 AADT US 395: 15900; Poleta Rd. 200/day, est.; 2020 AADT US 395: 14550*
Groundcover	*Decomposed granite*
Representative Area	*50-100 km radius*

Met Installed? *Yes* ☑ Variable: Wind Speed ☑ Variable: Relative Humidity ☑ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) Temp Probe Height (m)

Pollutant / POC	*PM-10 / 4*
Priamary/Collocated/Other	*Collocated*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*General/Background*
Monitor Type	*SLAMS*
Network Affiliation	*NCORE*
Instrument Make and Model	*Partisol 2025i PM10*
Method Code	*127*
FRM/FEM	*FRM (RFPS-1298-127)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*GBUAPCD*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood*
Sampling Method	*PM-10 Impactor, Collocated PM10 Monitor*
Analysis Method	*Gravimetry*
Start Date	*4/20/2017*
Operation Schedule	*1-in-12 day Partisol*
Sampling Season	*Year-round; Partisol began 9/1/98*
Probe Height	*2.1 m above roof; 4.9 m AGL*
Distance to Supporting Structure	*2.1 m below inlet*
Distance from Obstructions on Roof	*See roof diagram*
Distance from Obstructions Not on Roof	*10 meters to antennae*
Distance From Trees	*265 meters east of station*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*1.48m to PM10 primary Partisol*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*Partisol: Monthly by Station Operator*
Frequency of flow verification, automated PM analyzers	*N/A*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

Great Basin Unified Air Pollution Control District
157 Short Street, Bishop, CA 93514
760.872.8211, http://www.gbuapcd.org

Site Name	***North Beach***
AQS Number	*06-027-0029*
UTM X, Y (Zone 11)	*411379, 4044551*
Location	*North shore, Owens Lake*
Address	*Owens Lake, CA*
County	*Inyo*
Distance to Road	*30 meters north to Main Line Road*
Traffic Count	*10*
Groundcover	*gravel*
Representative Area	*North shore, Owens Lake*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☐ Variable: Temperature ☐ Variable: Precipitation

Anemometer Height (m) *5.3 meters* Temp Probe Height (m)

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*8/4/2014*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*1.9 m above roof; 4.4 m AGL*
Distance to Supporting Structure	*1.9 m below inlet*
Distance from Obstructions on Roof	*No obstructions on roof; 1.1m from sample cone to IMPROVE inlet, 1.2 m to TAPI602 inlet*
Distance from Obstructions Not on Roof	*4meters to power pole*
Distance From Trees	*No trees*
Distance to Furnace or Incinerator	*N/A*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Olancha***
AQS Number	*06-027-0023*
UTM X, Y (Zone 11)	*409144, 4015546*
Location	*Community of Olancha, CA*
Address	*123 School Road*
County	*Inyo*
Distance to Road	*0.5 KM East to Hwy 395*
Traffic Count	*For Olancha @ Well 404: 2019 AADT US 395: 7200; School St. 10/day est.; 2020 AADT US 395: 6500*
Groundcover	*Sand, gravel, brush, sage*
Representative Area	*Community of Olancha*

Met Installed?	*Yes*	☑ Variable: Wind Speed	☑ Variable: Relative Humidity	☑ Variable: Barometric Pressure
PM Installed?	*Yes*	☑ Variable: Wind Direction	☑ Variable: Temperature	☐ Variable: Precipitation

Anemometer Height (m) *10.0 meters* Temp Probe Height (m) *9.1 meters (RH at 9.2 m)*

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Population Exposure*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	*N/A*
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*Gravimetry*
Analysis Method	*PM10 Impactor*
Start Date	*7/1/2019*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof; 4.5 m AGL*
Distance to Supporting Structure	*2.0 m below inlet*
Distance from Obstructions on Roof	*N/A*
Distance from Obstructions Not on Roof	*10 meters to tower*
Distance From Trees	*70 m to North, 8-10 m in height*
Distance to Furnace or Incinerator	*Homes 400 m East; 630 m South*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Shell Cut***
AQS Number	*06-027-0025*
UTM X, Y (Zone 11)	*419477.7, 4024950*
Location	*South-east shore, Owens Lake*
Address	*SHELL CUT - HIGHWAY 190 - MIDWAY BETWEEN DIRTY SOX AND FLAT ROCK, Owens Lake, CA*
County	*Inyo*
Distance to Road	*164.5 meters to Hwy 190; 250m SE to CA Hwy 190*
Traffic Count	*2019 AADT CA 190: 300; 2020 AADT CA 190: 320*
Groundcover	*Dirt, sand, gravel, shrubs*
Representative Area	*South-east shore Owens Lake*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) *10.2 meters* Temp Probe Height (m) *9.2 m (precip at 4 m)*

Pollutant / POC	*PM-10 / 2*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*1/8/2001*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof; 4.6 m AGL*
Distance to Supporting Structure	*2.0 m below inlet*
Distance from Obstructions on Roof	*No obstructions on roof*
Distance from Obstructions Not on Roof	*2.6 meters (Met); 4.2 (powerline)*
Distance From Trees	*No trees*
Distance to Furnace or Incinerator	*12 km southeast*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

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Site Name	***Stanley***
AQS Number	*06-027-0026*
UTM X, Y (Zone 11)	*409315.3, 4024570*
Location	*Ash Point; West side Owens Lake, CA*
Address	*BILL STANLEY SITE - OWENS LAKE, CA*
County	*Inyo*
Distance to Road	*85 meters to Lake Minerals Rd.; 1.15km west to US 395*
Traffic Count	*Lake Minerals Road - 10/day est; 2019 AADT US 395: 8000; 2020 AADT US 395: 7100*
Groundcover	*sand and shrubs*
Representative Area	*Southwestern shoreline of Owens Lake*

Met Installed? *Yes* ☑ Variable: Wind Speed ☐ Variable: Relative Humidity ☐ Variable: Barometric Pressure

PM Installed? *Yes* ☑ Variable: Wind Direction ☑ Variable: Temperature ☑ Variable: Precipitation

Anemometer Height (m) *10.0 meters* Temp Probe Height (m) *9.0 m (precip at 1 m)*

Pollutant / POC	*PM-10 / 1*
Priamary/Collocated/Other	*Other*
Paramter Code	*81102*
Monitor Objective	*NAAQS Comparison*
Site Type	*Source Oriented*
Monitor Type	*SLAMS*
Network Affiliation	*Owens Valley Planning Area*
Instrument Make and Model	*Thermo 1405 TEOM PM10 Continuous*
Method Code	*079*
FRM/FEM	*FEM (EQPM-1090-079)*
Collecting Agency	*GBUAPCD*
Analytical Lab	
Reporting Agency	*GBUAPCD*
Spatial Scale	*Neighborhood Scale*
Sampling Method	*PM-10 Impactor*
Analysis Method	*Gravimetry*
Start Date	*3/4/2002*
Operation Schedule	*hourly*
Sampling Season	*Year-round*
Probe Height	*2.0 m above roof; 4.5 m AGL*
Distance to Supporting Structure	*2.0 m below inlet*
Distance from Obstructions on Roof	*2.1 m to tower (attached to shelter)*
Distance from Obstructions Not on Roof	*7.6 meters to power pole*
Distance From Trees	*4.5 km south*
Distance to Furnace or Incinerator	*4.5 km south*
Distance Between Collocated Monitors	*N/A*
Unrestricted Airflow	*360*
Probe Material	*N/A*
Residence Time	*N/A*
Will there be a change in 18 months?	*No*
Suitable comparison against annual PM2.5?	*No*
Frequency of flow verification, manual PM sampler	*N/A*
Frequency of flow verification, automated PM analyzers	*TEOM: Bi-weekly by Station Operator*
Frequency of one-point QC check (gaseous)	*N/A*
Frequency of District Audits	*Quarterly TEOM (GBUAPCD); Semi-annual MET (GBUAPCD)*
Frequency of External Audits	*Annually (CARB)*

GBUAPCD Site Photos

Great Basin Unified Air Pollution Control District
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Site Name	***A-Tower***
AQS Number	

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***B-Tower***
AQS Number	

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Coso Junction***
AQS Number	*06-027-1001*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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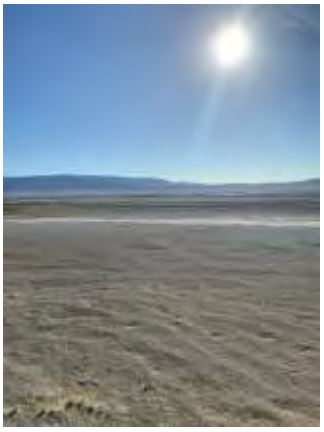
Site Name	***Cottonwood***
AQS Number	

Site Photo:

North-facing photo:

East-facing photo:



West-facing photo:

South-facing photo:

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Site Name	***Dirty Socks***
AQS Number	*06-027-0022*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Flat Rock***
AQS Number	*06-027-0024*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Keeler***
AQS Number	*06-027-1003*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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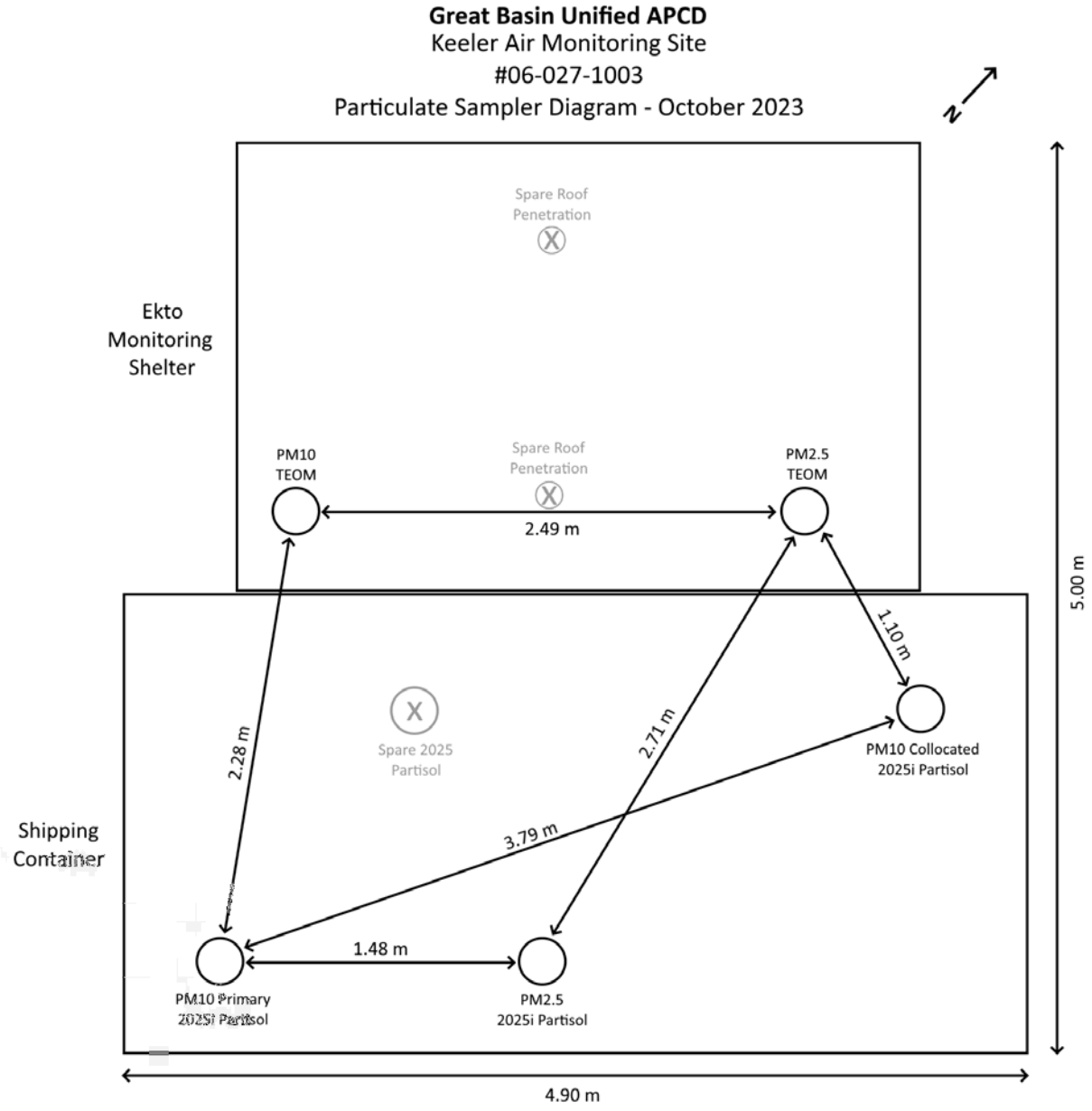
Site Name	***Keeler***
AQS Number	*06-027-1003*

Site Photo:



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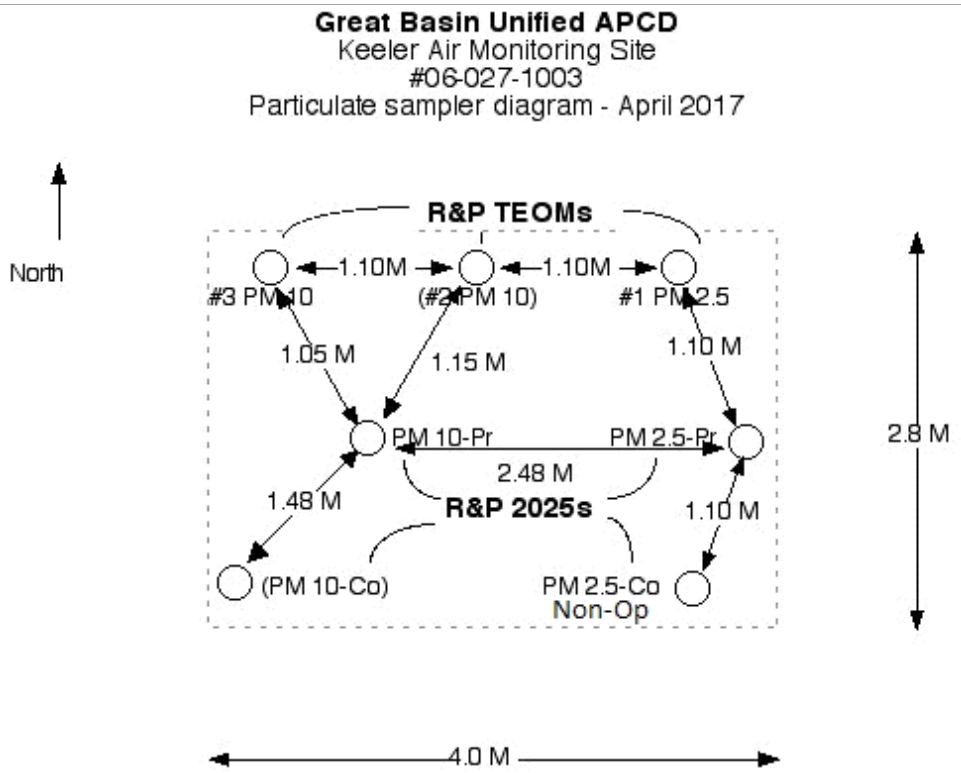
Site Name	***Keeler MET***
AQS Number	*06-027-1003*

Site Photo:



North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Kirkwood***
AQS Number	*06-005-1033*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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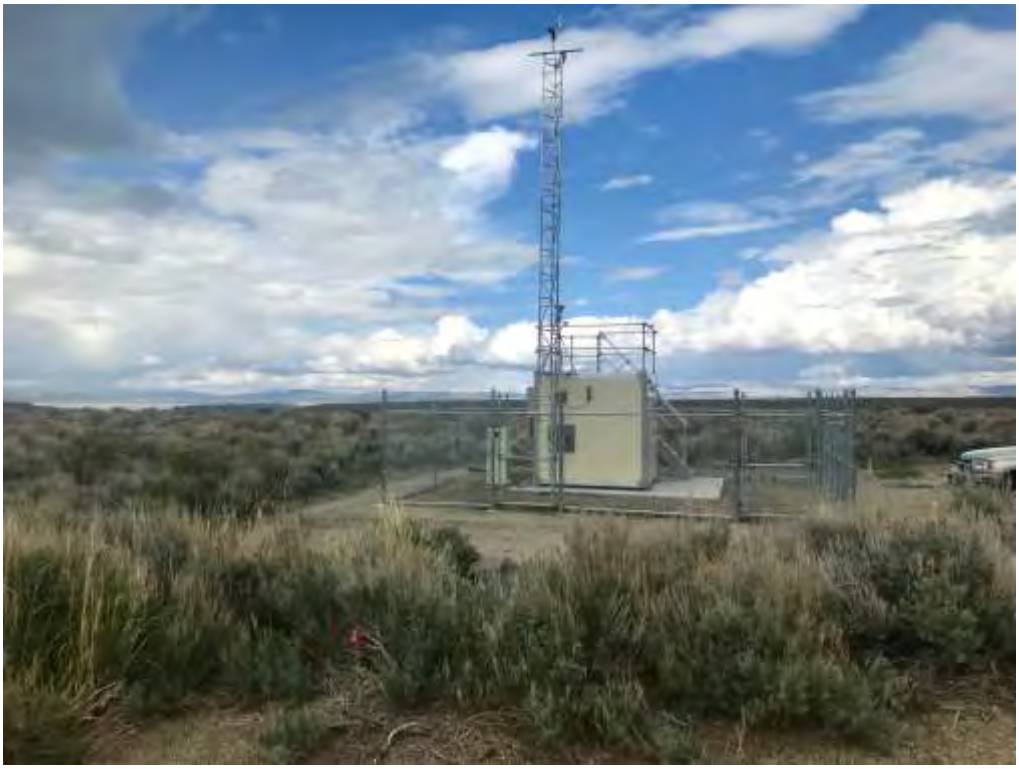
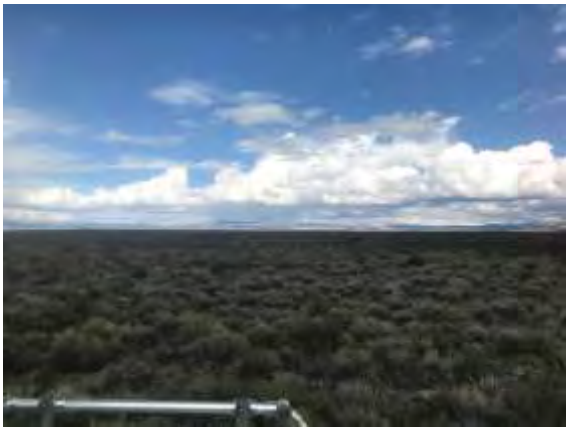
Site Name	***Lee Vining - continuous***
AQS Number	*06-051-0005*

Site Photo:



North-facing photo:

East-facing photo:



West-facing photo:

South-facing photo:

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Site Name	***Lee Vining - Planned installation of a Partisol 2025i by end of Q3 2021***
AQS Number	*06-051-0005*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Lizard Tail***
AQS Number	*06-027-0028*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Lone Pine (consolidated site)***
AQS Number	*06-027-0031*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Lone Pine MET - equipment moved to the consolidated Lone Pine site Dec 202***
AQS Number	*06-027-0019*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Lone Pine TEOM***
AQS Number	*06-027-0004*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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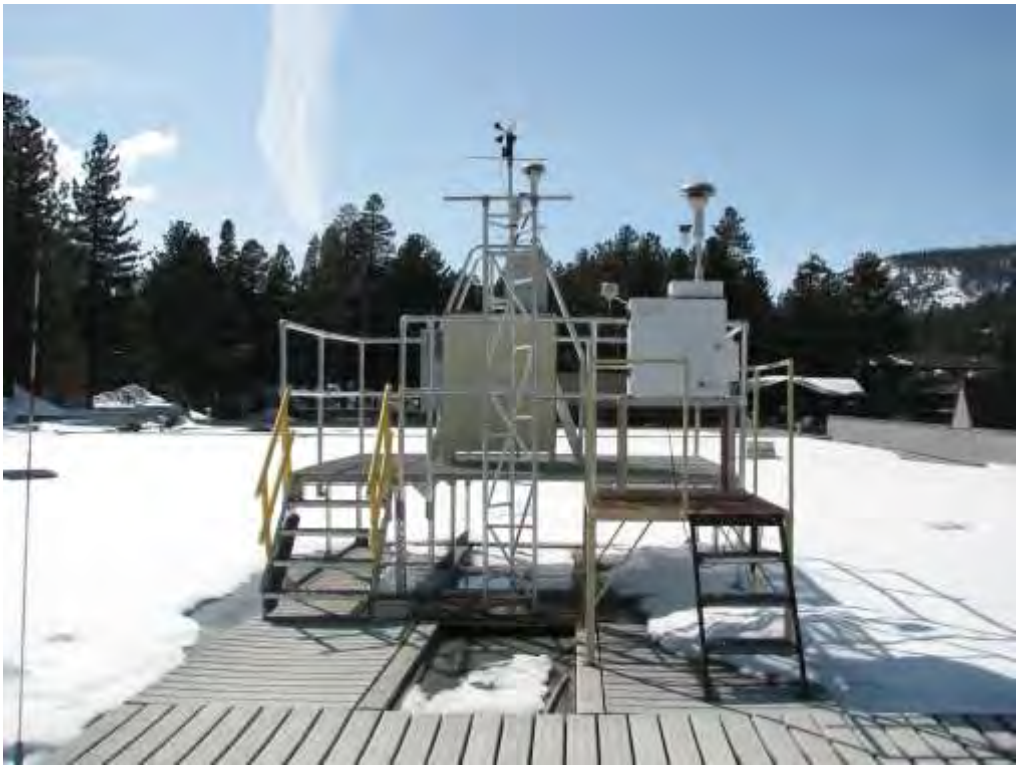
Site Name	***Mammoth***
AQS Number	*06-051-0001*

Site Photo:



North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Mill***
AQS Number	*06-027-0030*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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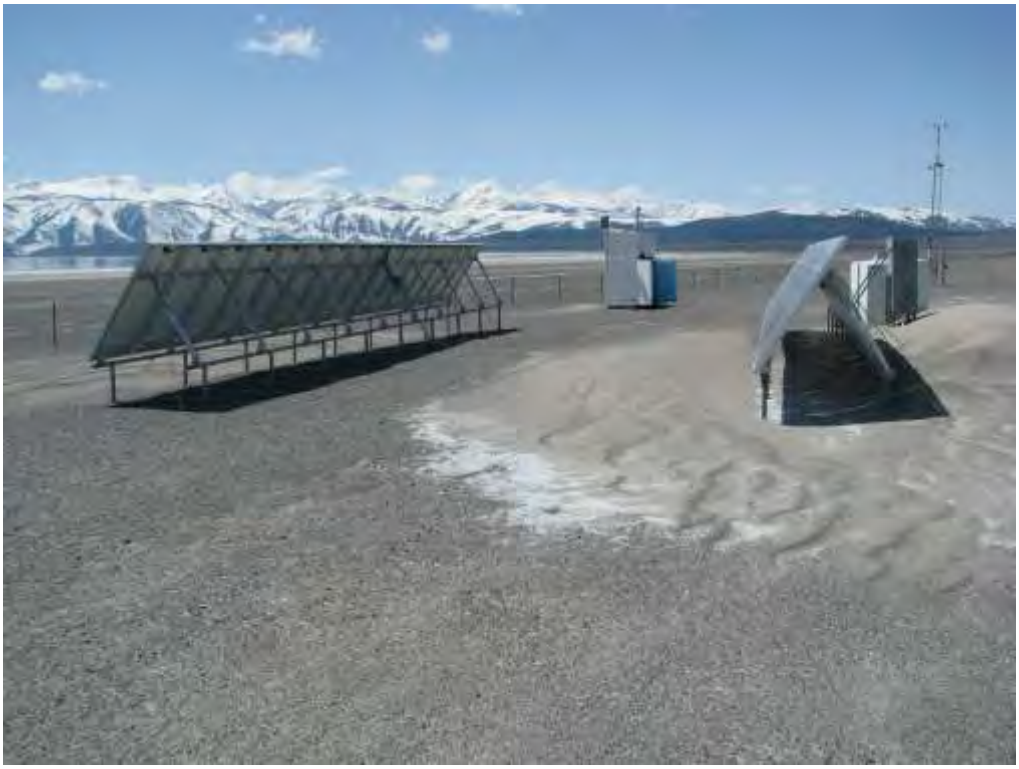
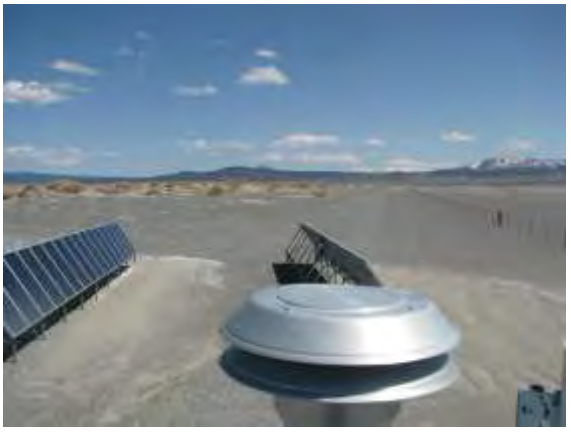
Site Name	***Mono Shore***
AQS Number	*06-051-0011*

Site Photo:



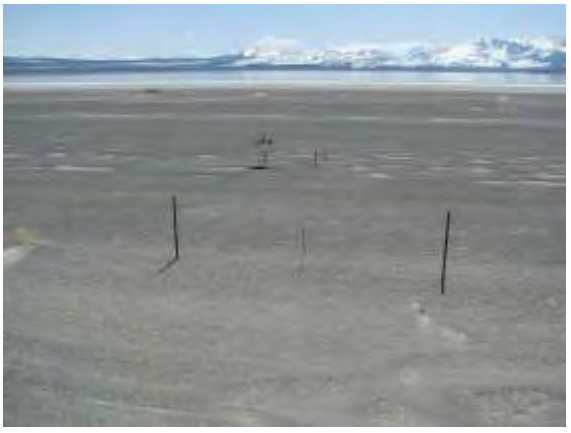
North-facing photo:

East-facing photo:



West-facing photo:

South-facing photo:



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Site Name	***Ncore/WMRC***
AQS Number	*06-027-0002*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

Great Basin Unified Air Pollution Control District
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Site Name	***North Beach***
AQS Number	*06-027-0029*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name	***Olancha***
AQS Number	*06-027-0023*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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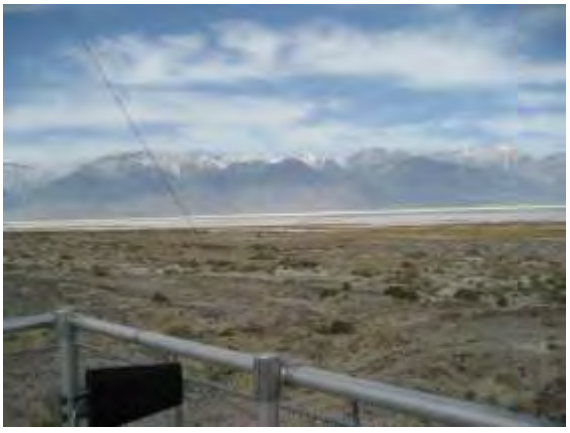
Site Name	***Shell Cut***
AQS Number	*06-027-0025*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:



South-facing photo:

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Site Name	***Stanley***
AQS Number	*06-027-0026*

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo: