Theodore D. Schade
Control Officer

GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

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August 22, 2014

Meredith Kurpius, Ph.D.
US EPA Region IX (AIR-7)
75 Hawthorne Street
San Francisco, California 94105

Re: District's 2014 Annual Air Quality Monitoring Network Plan

Dear Dr. Kurpius:

Please find enclosed a hard copy version of the District's 2014 Annual Air Quality Monitoring Network Plan, for your consideration. Included in this package with the network plan are the following documents:

- Appendix A, Site Information Summaries and Site Reports,
- Appendix B, 2014 NCORE Station Monitoring Plan,
- District Board Order, Legal Advertisement, and Proofs-of-Publication announcing the opening of the 30-day public review period for the network plan

Please note that no comments were received during the public inspection period and, therefore, neither they nor any District responses to the comments are included in this package. Electronic versions of all of the documents above are also available on the District's website.

If you have any further questions regarding the District's network plan, please do not hesitate to contact me or Chris Lanane, of my staff, by e-mail, clanane@gbuapcd.org, or by telephone at extension 235 at the number above. Thank you for your time and your consideration.

Sincerely,

Theodore D. Schade, PE
Air Pollution Control Officer

TDS:cl

Enclosures

cc: Mr. Michael Flagg, EPA IX (electronic version only)
Mr. Mike Miguel, ARB - MLD (electronic version only)
Mr. Patrick Rainey, ARB - MLD (electronic version only)
Ms. Carissa Ganapathy, ARB (electronic version only)
Mr. Richard Harasick, LADWP (electronic version only)
Mr. Chris Lanane, GBUAPCD, (electronic version only)

Great Basin Unified
Air Pollution Control District

Revised

2014
Annual Air Quality Monitoring Network Plan

August 15, 2014

Prepared by
Christopher Lanane
Air Monitoring Specialist

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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 of which the Great Basin Unified Air Pollution Control District (District) is a part, includes the area encompassed by the District. With this document, the District has sought to develop a more comprehensive and District-specific plan for submittal it 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 2014 calendar year. It includes a review of actions taken in the monitoring network during the 2013-2014 fiscal year and plans for actions in the years ahead. This draft plan addresses the requirements for an annual network plan as listed 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 6, 2014, and closed on July 7, 2014, after which the plan, along with the comments received during the comment period, will be submitted to EPA for approval. Please note that all highlighted text has been revised since the 2013 AMNP was submitted.

The District staff, along with the CARB and EPA Region IX conducted a comprehensive review of the air monitoring stations throughout the District in 2007. State and Local Air Monitoring Station (SLAMS) designations, monitoring objectives, and spatial scales of representativeness were 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.

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 6, 2014, 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. Following the review period ending July 7, 2014, the plan will be submitted to EPA for approval of any SLAMS network changes.

3.0 Network Design

The District operates nineteen (19) air quality 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), Southern Owens Valley, Mono Basin, and Mammoth Lakes. Figures 1 - 3 present maps of the entire District indicating the planning areas, three of which are PM_{10} nonattainment areas, the monitoring stations currently in operation, and those stations planned for installation this year. Note that three monitoring stations, North Beach, Mill Site, and Dirty Socks, were shut down due to the cancelation of leases in November 2012, by the Los Angeles Department of Water & Power, the land owner and the air polluter responsible for the dust emissions from Owens Lake. These sites are noted in Figure 2 by the site name in outline text. District staff is working to relocate these stations onto public lands administered by the California State Lands Commission and the U.S. Bureau of Land Management by the end of 2014. The new locations are within approximately 500 meters of the former locations.

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.

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 2011.

After consultation with the District Board and District monitoring specialists, the APCO determines monitoring locations in the District, as delegated by CARB. 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 objective of all of the District's ambient air quality monitors is to determine compliance with ambient air quality standards and aid the District in the development of emissions strategies that protect the public health. Data from these monitors has and will continue to be used in the development of attainment plans for the four nonattainment areas in 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 through the District's Dust Alert system. These notifications are received by any interested parties through e-mail, text message, or via fax.

Figure 1. Great Basin Unified Air Pollution Control District Map

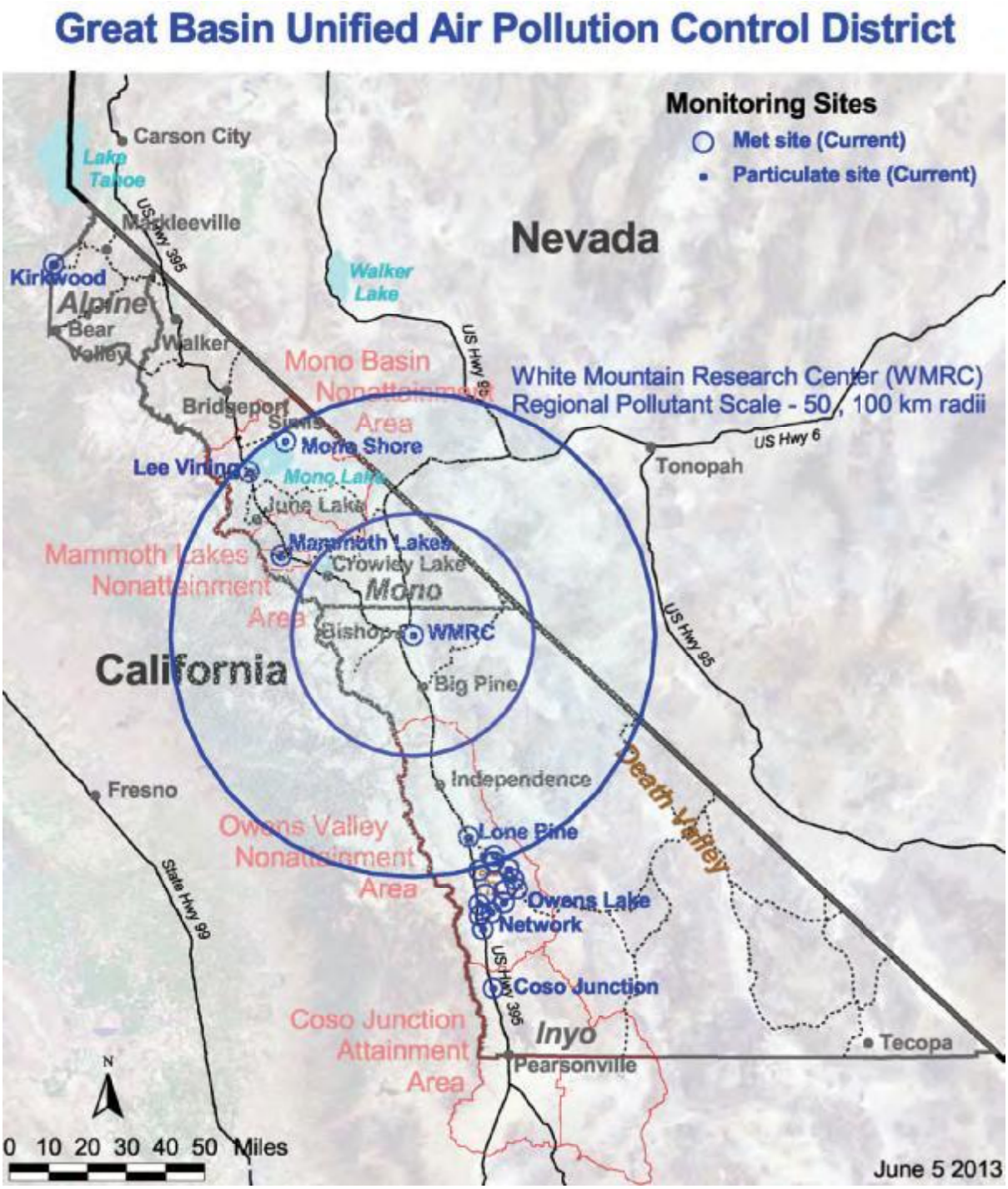


Figure 2. Great Basin Unified Air Pollution Control District Map, Owens Lake detail

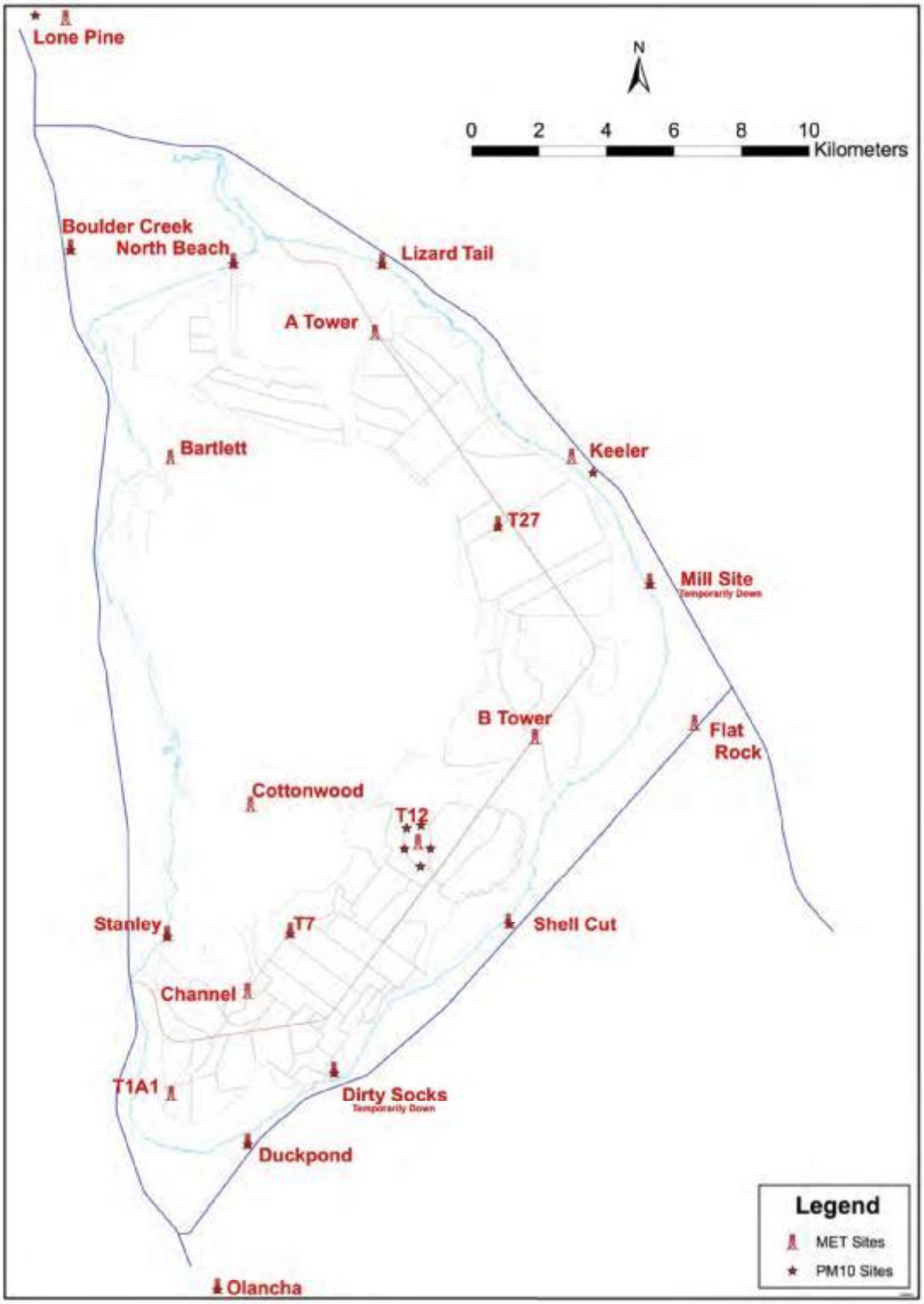


Figure 3. Great Basin Unified Air Pollution Control District Map, Mono Lake detail

Table 1. List of Monitoring Sites and Variables Monitored

Site Name	Network	AQS Number	Pollutants Monitored	Start Date
Dirty Socks *	Owens Lake	06-027-0022	PM10	Jun-99
Shell Cut	Owens Lake	06-027-0025	PM10	Jan-01
Flat Rock **	Owens Lake	06-027-0024	PM10	Jan-01
Bill Stanley	Owens Lake	06-027-0026	PM10	Mar-02
Olancha	Owens Lake	06-027-0021	PM10	Aug-95
Lone Pine	Owens Lake	06-027-0004	PM10	Jan-80
North Beach	Owens Lake	06-027-0029	PM10	Nov-08
Lizard Tail	Owens Lake	06-027-0028	PM10	Feb-08
Keeler	Owens Lake	06-027-1003	PM10, PM2.5	Jul-94
Mill Site *	Owens Lake	06-027-0030	PM10	May-11
T-7	Owens Lake	SPM	PM10	Jul-12
T-4 ***	Owens Lake	SPM	PM10	Mar-10
T-27	Owens Lake	SPM	PM10	Aug-12
T-23 ***	Owens Lake	SPM	PM10	Mar-10
Coso Junction	Owens Lake	06-027-1001	PM10	Mar-79
Mammoth Lakes	Mammoth Lakes	06-051-0001	PM10, PM2.5	Apr-84
Lee Vining	Mono Basin	06-051-0005	PM10	Jan-81
Simis Residence †	Mono Basin	06-051-0007	PM10	May-82
Mono Shore	Mono Basin	06-051-0011	PM10	Jan-00
White Mountain ††	District	06-027-0002	PM10	Apr-06
NCORE	District	06-027-0002	CO, SO2, O3, NOy, PM10, PM2.5, PM10-2.5	Jan-13

* Monitor down temporarily due to lease cancellation by property owner.
** PM10 monitoring ended at Flat Rock May 2011 when monitor was moved to Mill Site. Flat Rock now used for meteorological monitoring and video capture only.
*** Special purpose monitoring stations. PM10 monitoring ended July 9, 2012, for T4 and August 22, 2012, for T23.
† PM10 monitoring ended August 2008; meteorological monitoring ended June 2011.
†† District's Portable Monitoring Station berth, adjacent to District's NCORE station.

Table 2. Criteria Pollutant Monitoring Objectives and Spatial Scales

MONITORING OBJECTIVE	SPATIAL SCALE
HC - Highest Concentration	MI - Microscale
PO - Population Oriented	MS - Middle Scale
SI – Source Impact	NS - Neighborhood Scale
BK - Background Level	US - Urban Scale
PT - Pollutant Transport	RS – Regional Scale
VI – Visibility Impacts	NaS – National Scale
SPM - Special Purpose Monitor	GS – Global Scale

Site Name	Network	PM10	PM2.5
Dirty Socks *	Owens Lake	SI/NS	
Shell Cut	Owens Lake	SI/NS	
Flat Rock **	Owens Lake	SI/NS	
Bill Stanley	Owens Lake	SI/NS	
Olancha	Owens Lake	SI/NS	
Lone Pine	Owens Lake	PO/NS	
North Beach	Owens Lake	SI/NS	
Lizard Tail	Owens Lake	SI/NS	
Keeler	Owens Lake	PO/NS	PO/NS
Mill Site *	Owens Lake	PO/NS	
T-4 ***	Owens Lake	SI/NS	
T-7 †	Owens Lake	SI/NS	
T-23 ***	Owens Lake	SI/NS	
T-27 †	Owens Lake	SI/NS	
Coso Junction	Owens Lake	PO-PT/NS	
Mammoth Lakes	Mammoth Lakes	PO/NS	PO/NS
Lee Vining	Mono Basin	PO/NS	
Simis Residence ††	Mono Basin	SI/NS	
Mono Shore	Mono Basin	HC/NS	
White Mountain	District	BK/RS	
NCORE	District	BK/RS	

* Monitor down temporarily due to lease cancellation by property owner.

** PM10 monitoring ended at Flat Rock May 2011 when monitor was moved to Mill Site. Flat Rock now used for meteorological monitoring and video capture only.

*** T-4, T-23 were special purpose monitors that were shutdown July and August 2012, respectively.

† T-7 and T27 are special purpose monitors that began operation in July and August 2012, respectively.

†† PM10 monitoring ended August 2008; meteorological monitoring ended June 2011.

Table 3. Criteria Pollutant Monitoring Purposes

MONITORING PURPOSE

BK - Background Level
HC - High Concentration
TP - Pollutant Transport
EX - Population Exposure
SPM - Special Purpose Monitor
RC - Representative Concentration
SO - Source Impact
TR - Trend Analysis
CP - Site Comparison

Site Name	Network	PM10	PM2.5
Dirty Socks *	Owens Lake	RC/SO	
Shell Cut	Owens Lake	RC/SO	
Flat Rock **	Owens Lake	RC/SO	
Bill Stanley	Owens Lake	RC/SO	
Olancha	Owens Lake	RC/EX	
Lone Pine	Owens Lake	RC/EX	
North Beach	Owens Lake	RC/SO	
Lizard Tail	Owens Lake	RC/SO	
Keeler	Owens Lake	RC/EX	RC/EX
Mill Site *	Owens Lake	RC/SO	
T-4 ***	Owens Lake	HC/SPM	
T-7 †	Owens Lake	HC/SPM	
T-23 ***	Owens Lake	HC/SPM	
T-27 †	Owens Lake	HC/SPM	
Coso Junction	Owens Lake	RC/TP	
Mammoth Lakes	Mammoth Lakes	RC/EX	RC/EX
Lee Vining	Mono Basin	RC/EX	
Simis Residence ††	Mono Basin	RC/SO	
Mono Shore	Mono Basin	HC/SO	
White Mountain	District	RC/BK	
NCORE	District	RC/BK	

* Monitor down temporarily due to lease cancellation by property owner.
** PM10 monitoring ended at Flat Rock May 2011 when monitor was moved to Mill Site. Flat Rock now used for meteorological monitoring and video capture only.
*** T-4, T-23 were special purpose monitors that were shutdown July and August 2012, respectively.
† T-7 and T27 are special purpose monitors that began operation in July and August 2012, respectively.
†† PM10 monitoring ended August 2008; meteorological monitoring ended June 2011.

Definitions

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

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.

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 measures for determining the level of pollutant impacts from particular sources at particular sites, i.e., to determine the highest concentrations (HC) affecting specific places from sources; the impact from a particular source or set of sources (SI) in a given area; the impact caused by concentrations affecting specific populations (PO), communities, etc.; background level (BK) concentrations measured upwind of sources or not impacted by sources; areas impacted by transport of pollution (PT) generated from distant sources; measuring impacts to visibility, plants, or other welfare affects (VI).

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.

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 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.

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/Thermo Partisol Plus 2025) are or will be operated at four (4) sites. Monitoring at the sites is conducted on either the Federal one-in-three-day schedule or on a daily 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 monitors) are operated in conjunction with filter-based monitors at three of the four filter-based sites. Continuous PM_{10} monitors alone are operated at an additional 12 fixed sites and an additional two continuous PM_{10} monitors in portable stations. The advantage of continuous PM_{10} monitors is that they are capable of measuring hourly pollutant concentrations. 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.

$PM_{2.5}$

The District operates one collocated $PM_{2.5}$ monitoring station at the Keeler monitoring site. The collocated monitor is a medium volume filter-based Federal Equivalent Method (FEM) sampler (Rupprecht & Patashnick Partisol Plus 2025 with a very sharp-cut cyclone (VSCC) for $PM_{2.5}$). On July 1, 2013, 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, at the request of the District's PQAO, the CARB. This TEOM/FDMS operates continuously, collecting hourly PM2.5 concentrations and the collocated monitor operates on the Federal 1-in-12-day schedule. 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 PM2.5 monitoring locations are required. The Keeler site monitors the highest concentrations of PM10 for a populated community in the District and state and local staff determined that the District's PM2.5 station should be located this site, which provides data for population-oriented representative PM2.5 particulate concentrations.

During 2013, the District's Mammoth Lakes monitoring station was 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 road cinder impacts (PM10), and domestic wood smoke impacts (PM2.5) that the District should install a continuous monitor capable of monitoring both PM10 and PM2.5. Staff plans to install a Thermo 1405DF TEOM that is certified as an EPA Equivalent method monitor for PM10, PM2.5, and PM10-PM2.5.

At this point, the District's method for review of its PM2.5 monitoring network, currently consisting of one collocated station, and for obtaining public comment on the network, is to be conducted along with the public inspection period for the annual air quality monitoring network plan.

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

Network Description

Owens Lake
The Owens Lake monitoring network consists of a combination of twelve (12) ambient air monitoring stations: seven (7) stations ring the lake along the historic 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. This station is used for modeling of Owens Lake plume trajectories and is used to monitor local source impacts in the Coso Junction Maintenance Area. Each station utilizes an R&P TEOM continuous monitor for PM10 measurements. 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) 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, the District operates two air quality stations: one at the locations designated T7 on the south end of the lake, and another, designated T27 toward the east central area of the lake; and four meteorological stations. These are special purpose monitors (SPMs) used to determine 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 175 sand motion sensors (Sensits) and accompanying sand collection devices (Cox Sand Catchers (CSCs)) operated by the District as well as 48 Sensit/CSC sites operated by the City of Los Angeles. The network also utilizes dust observations made by District personnel during wind events and eleven (11) camera stations with a total of 16 cameras collecting images of the lakebed every thirty seconds during daylight hours. This system coupled with the model and the SLAMS stations described above enables the District to pinpoint emissive areas of the lakebed that may cause or contribute to exceedances of the Federal PM_{10} standard. A map detailing the locations of the monitoring sites used for the Dust ID program is

presented in Figure 4. Please note stations that are temporarily down due to lease cancelation by the landowner are marked with a horizontal line through the site name.

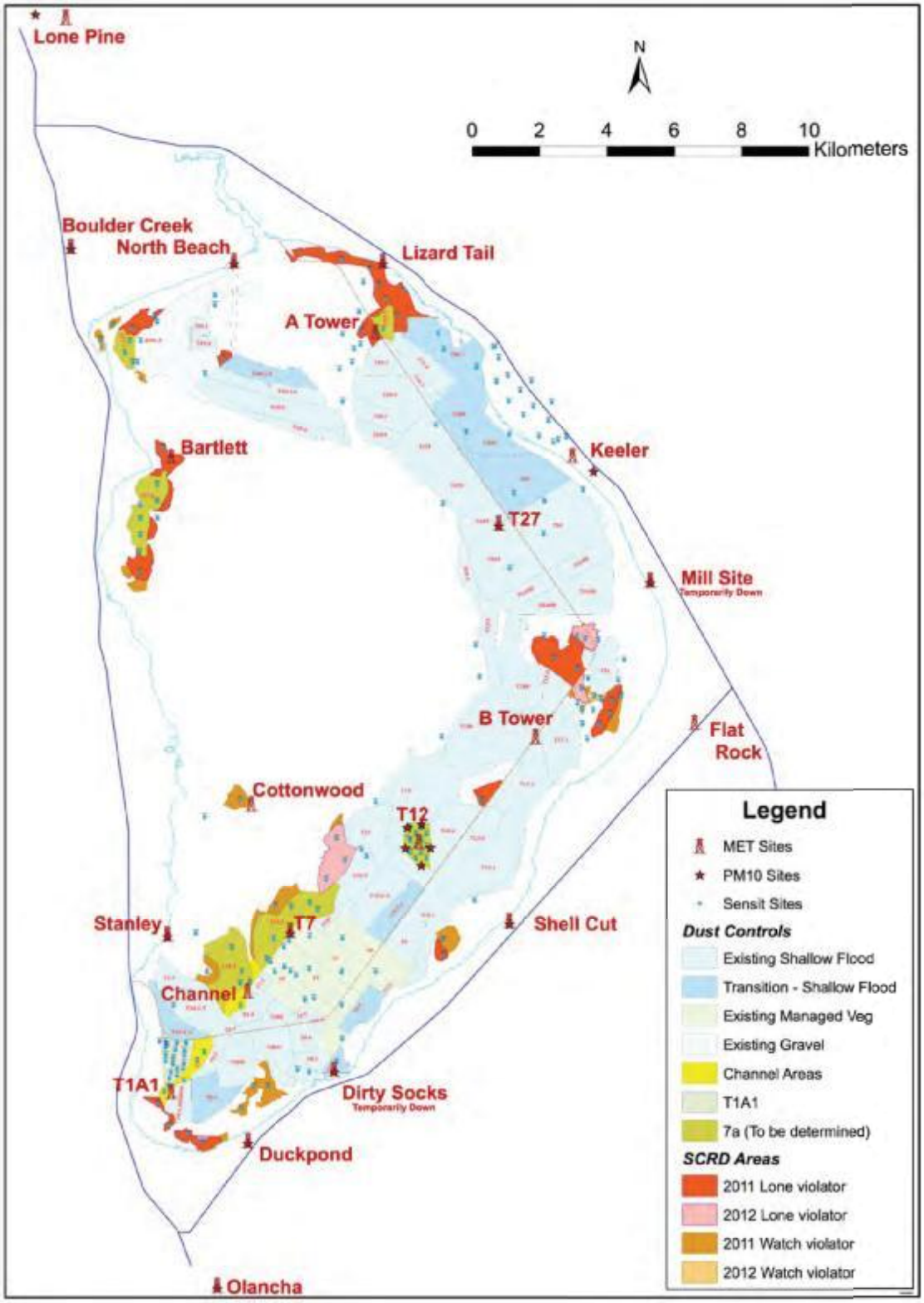
Mammoth Lakes

The Mammoth Lakes monitoring network consists of one monitoring station located in the Town of Mammoth Lakes. This station utilizes an R&P TEOM for hourly-resolved PM_{10} concentrations and an R&P 2025 Partisol Sequential Sampler operating on the one-in-three-day schedule for the collection of 24-hour integrated PM_{10} concentration data. The District plans to upgrade the continuous monitor during 2014 to a Thermo 1405DF TEOM that will monitor hourly-resolved PM10, PM2.5 and PM10-2.5 concentrations. 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 stove 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.

NCORE

The District has also been asked by EPA to install and operate a rural NCORE station. 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 Station monitoring site. The station was online April 1, 2011. Further details on the station are contained in Appendix B, which contains a standalone monitoring plan for the District's NCORE station.

Figure 4. Owens Lake Map: Dust Identification Program Detail



Mono Lake

The Mono Lake monitoring network consists of three monitoring stations: Lee Vining, Simis Ranch, 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 Simis and Mono Lake stations is to monitor the PM impacts on or near the shoreline of Mono Lake. Through August of 2008, PM_{10} concentrations were collected using BGI PQ200 monitors located at Simis Ranch and Mono Shore. PM_{10} concentrations at Lee Vining are collected using an R&P 2025 Partisol Sequential Sampler. The BGI monitors at Simis Ranch were removed and not replaced due to the fact that no exceedances had been measured there since 1996, and a point-of-maximum-impact site, Mono Shore, being outfitted with a PM_{10} monitor in 1999. The BGI monitors at Mono Shore were replaced in 2008 with an off-the-grid solar-powered R&P TEOM PM_{10} continuous monitor. The TEOM provides hourly-resolved PM_{10} concentrations and has provided the District with the opportunity to develop a Dust ID program at Mono Lake. This Dust ID network consists of twenty-seven (27) sites with CSCs. Ten (10) of those sites have collocated 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 5.

Figure 5. 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 2014 monitoring year, the District will continue conducting the special programs listed below.

Portable PM10 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 for more than five days on two small tanks of propane. The stations have been successfully operated during several episodes on and around Owens Lake from February 2010 to the present. Most recently these stations have been in operation at the Boulder Creek RV Park (on line power) and Duck Pond stations around Owens Lake. Beginning in the summer of 2014, plans are to move one of the Portables from Boulder Creek to the areas of the lake that are transitioning from one BACM mitigation method to another, to ensure compliance with the federal PM10 standard during the transition period.

5.0 Recent or Proposed Modifications to Network

Owens Lake
Two on-lake PM_{10} monitoring stations, designated T4 and T23, were removed from the network in July and August 2012, respectively. Two additional on-lake PM10 monitoring stations, designated T7 and T27, were installed in the Owens Lake Network in July and August 2012, respectively, as well. Each of these stations consisted of one TEOM 1400ab continuous PM_{10} monitor in a temperature-controlled shelter and meteorological sensors for wind speed and direction. The purpose of these special purpose monitors (SPMs) is to measure PM_{10} emissions near the remaining source areas on the lakebed and to further refine the District's Dust Identification Program model.

During May 2011, the PM10 monitoring system was shut down at the Flat Rock station and moved to the Mill Site. The Flat Rock station was being impacted by dust emitting areas between the station and the 3,600-foot regulatory shoreline. An analysis was conducted and District staff determined that source areas from the lakebed impacted Flat Rock infrequently and that the Shell Cut station would also typically monitor those lakebed source areas. The District had a critical need to fill a gap in the network on the east shore of the lake south of Keeler in order to measure lakebed emission impacts caused by winds from the west, thus the PM10 monitor at Flat Rock was moved to the Mill Site location. (A formal site closure report/request will be submitted to EPA during 2014). Within the week after the move, the Mill Site monitor measured an exceedance of the Federal PM10 standard from lakebed sources driven by winds from the west.

In November 2012, the leases for the Dirty Socks, Mill, and North Beach monitoring stations were canceled by the owner, the Los Angeles Department of Water & Power. These stations, marked, "~~Station,~~" on the Dust ID map (Figure 4), and "Station," on the Owens Lake detail map (Figure 2), were removed from their locations and, thus, are temporarily down due to this lease cancellation. The District is in the process of securing new leases, for monitoring locations within 300 meters of the old locations, on lands administered by the California State Lands Commission (CSLC) and by the U.S. Bureau of Land Management (BLM). In the first quarter of 2014, a permit was granted by the CSLC for the new North Beach monitoring location. The station is in place and ready for grid connection. It is anticipated the station will be fully operational by September 2014. The remaining two monitoring stations will likely be relocated in 2015.

Coso Junction

The Coso Junction monitoring station serves to measure both locally-produced PM10 for the Coso Junction Management Area, and as a transport site for windblown PM10 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 PM10 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. The entire valley floor, including US. Highway 395 and the Gill Station Road, by which the Coso Junction station is accessed, were inundated with silts and soils from the Inyo Mountain range to the east. These silts and soils have been removed from the highway and from Gill Station Road, however, they remain on the valley floor. District staff has noted at least two occasions in 2013 when west winds coming down the leeward side of the Sierra Nevada have kicked up these soils resulting in violations of the federal PM10 standard at the monitoring station. Requests for consideration of these violations as exceptional events are being assembled for submission to EPA IX for consideration. A map of the deposition areas (Figure 6) is presented below.

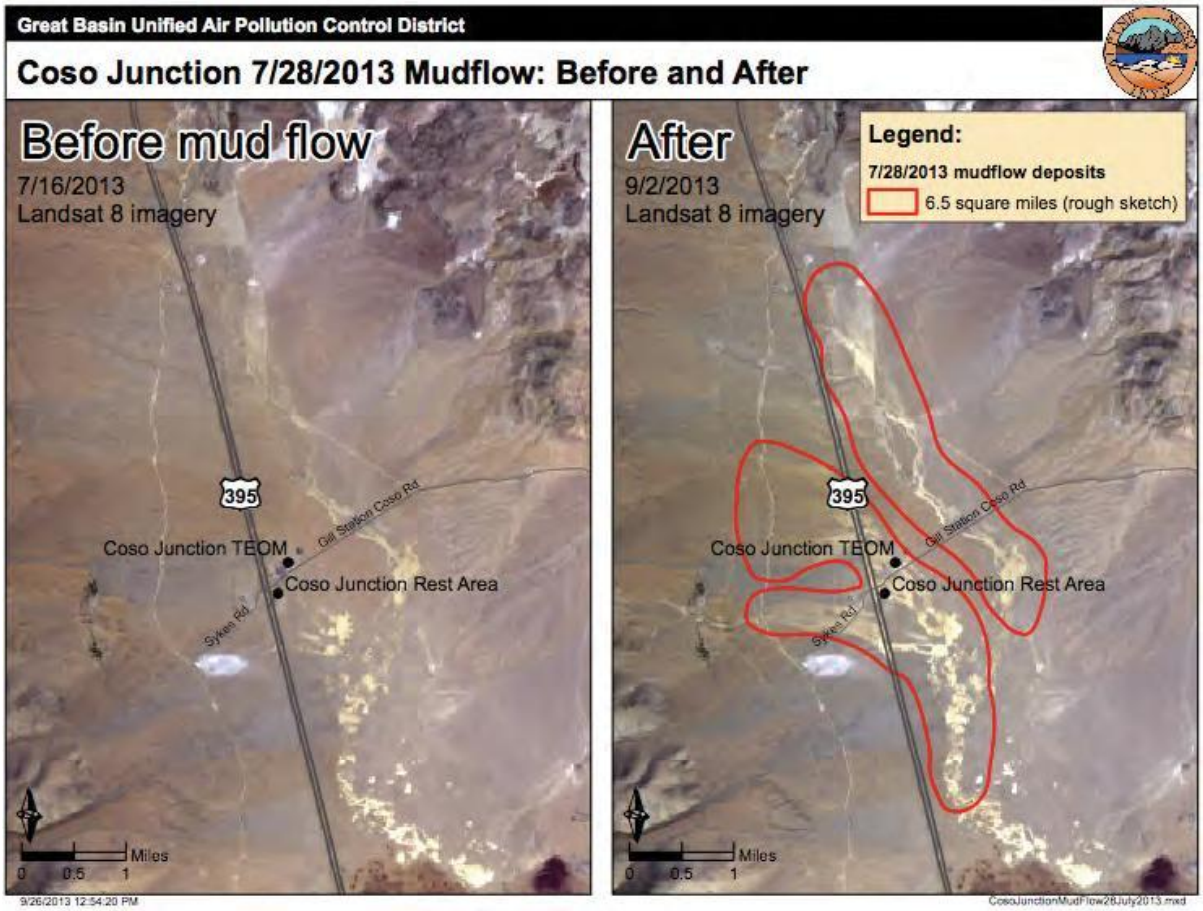


Figure 6. Coso Junction Silt Deposition Area

Mammoth Lakes

The venerable Rupprecht & Patashnick 1400a (AB) TEOM with the 8500c FDMS unit will be replaced in 2014 with a Thermo 1405 DF TEOM certified as an EPA-equivalent method continuous monitor for PM10, PM2.5, and PM10-2.5. The replacement will take place in the summer 2014, with data collection from the new monitor planned for 4th quarter 2014. The District will continue to operate the R&P 2025 Partisol Plus PM10 monitor in conjunction with the Thermo 1405 DF on the 1-in-3-day schedule.

Mono Lake

The District has operated monitoring stations in the Mono Basin area for approximately 18 years. Over the last year, District staff assessed the Mono Lake monitoring network and determined that some changes needed to be made. First, staff determined it was necessary to collect hourly-resolved PM_{10} data at the Mono Lake North Shore site, especially during the episodic dust storms at the Lake. Second, it was determined that staff needed to operate the network and utilize resources more efficiently.

In order to address the first determination, a continuous 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. An additional 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.

In addressing the second determination, staff noted that no PM_{10} violations had been measured at the Simis Ranch site since August 31, 1996. The District had collected 12 years of data subsequent to that measured violation. As a result, the decision was made to cease the collection of PM_{10} data at the Simis Ranch site as of August 2008. Meteorological monitoring at the Simis Ranch site was suspended in July 2011.

The North Shore site is off the power grid and consists of a large solar power array and battery system. In order to minimize power consumption, the TEOM 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 continuous monitor and the seasonally (non-winter) operating filter-based medium volume PM_{10} monitors (BGI PQ200) were operated side-by-side from May through August 2008 in order to provide comparison data between the two different monitoring methods. After that comparison period, the filter-based monitors were shut down and removed from service, leaving the continuous PM_{10} monitor as the primary monitor for that station.

Future changes to the Mono Lake network include the installation of a continuous TEOM PM10 monitor in the community of Lee Vining. The District has operated a filter-based PM_{10} monitor in Lee Vining, located on the southwest side of Mono Lake, for over 15 years. Plans are to install a continuous TEOM PM_{10} monitor in Lee Vining station in 2014-15.

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 75-plus monitoring stations around the nation that will be used by EPA for determining national monitoring and regulatory strategies. Seven monitoring stations are to be placed in California and the District was chosen to operate one of them: a rural NCORE site. These sites will be funded by EPA for capital equipment and operation and maintenance.

The first phase of funding began with the 2008 calendar year. Funds were received for the procurement of the prescribed monitoring equipment which includes: a low-level carbon monoxide monitor (CO), a low-level sulfur dioxide monitor (SO2), a low-level reactive nitrogen compounds monitor (NOy), a low-level ozone monitor (O3), and a calibration system for the monitors. The EPA also provided the District with funds for the procurement of a monitoring station enclosure in which to house the NCORE monitoring equipment. The District's NCORE site is located at the White Mountain Research Center, east of Bishop, near the current berth of the District's Portable Monitoring Station. Final approval of the site by EPA headquarters was given in mid-2009. Installation of the station and procurement and installation of the remaining equipment took place throughout 2012. Data of record have been collected since January 1, 2013. In May 2014, a Teledyne-API 602 Beta Plus monitor was installed at the NCORE station. This monitor is EPA-certified as an equivalent method for monitoring PM10, PM2.5, and PM10-2.5.

6.0 Minimum Monitoring Requirements

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 three (3) PM_{10} nonattainment areas and in the one (1) attainment area (the Coso Junction Area was designated attainment in October 2010). The District's network meets or exceeds the minimum monitoring requirements for criteria pollutants as detailed below. Please note that the Coso Junction Management Area (formerly the Searles Valley Nonattainment Area) encompasses the northern portion of the Searles Valley, immediately north of Pioneer Point, as well as 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.

PM_{10}

Nonattainment Area Monitors	Min. No. Monitors Required	No. of Monitors Active
Coso Junction	1	1
Owens Lake	1	7*
Mammoth Lakes	1	2
Mono Basin	1	2

PM2.5

MPA	Min. No. Monitors Required	No. of Monitors Active
Keeler	1	2+1 collo.

* Number excludes the three stations down temporarily due to lease cancellation.

7.0 Data Certification and Reporting

CARB, 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 annually by the District and submitted to AQS. The 2013 District dataset in AQS was certified by the District on April 25, 2014.

APPENDIX A

Site Information Summaries
Site Reports

Table A.1

Great Basin Unified Air Pollution Control District
Site Specific Information

Site Name	Network	AQS Number	Pollutants Monitored	Start Date
Dirty Socks *	Owens Lake	06-027-0022	PM10, Met.	Jun-99
Shell Cut	Owens Lake	06-027-0025	PM10, Met.	Jan-01
Flat Rock **	Owens Lake	06-027-0024	PM10, Met.	Jan-01
Bill Stanley	Owens Lake	06-027-0026	PM10, Met.	Mar-02
Olancha	Owens Lake	06-027-0021	PM10, Met.	Aug-95
Lone Pine	Owens Lake	06-027-0004	PM10, Met.	Jan-80
North Beach	Owens Lake	06-027-0029	PM10, Met.	Nov-08
Lizard Tail	Owens Lake	06-027-0028	PM10, Met.	Feb-08
Keeler	Owens Lake	06-027-1003	PM10, PM2.5, Met.	Jul-94
Mill Site *	Owens Lake	06-027-0030	PM10, Met.	May-11
T-4 ***	Owens Lake	SPM	PM10	Mar-10
T-23 ***	Owens Lake	SPM	PM10	Mar-10
T-7 †	Owens Lake	SPM	PM10	Jul-12
T-27 †	Owens Lake	SPM	PM10	Aug-12
Coso Junction	Owens Lake	06-027-1001	PM10, Met.	Mar-79
Mammoth Lakes	Mammoth Lakes	06-051-0001	PM10, Met.	Apr-84
Lee Vining	Mono Basin	06-051-0005	PM10, Met.	Jan-81
Simis Residence ††	Mono Basin	06-027-0007	Met.	Nov-81
Mono Shore	Mono Basin	06-027-0011	PM10, Met.	Jan-00
White Mountain	District	06-027-0002	PM10, Met.	Apr-06
NCORE	District	06-027-0002	O3, CO, SO2, Noy, PM10, PM2.5, Met.	Apr-12

* Monitor down temporarily due to lease cancellation by property owner.
** PM10 monitoring ended at Flat Rock May 2011. Flat Rock now used for meteorological monitoring and video capture only.
*** T-4, T-23 were special purpose monitors that were shutdown July and August 2012, respectively.
† T-7 and T27 are special purpose monitors that began operation in July and August 2012, respectively.
†† PM10 monitoring ended August 2008; meteorological monitoring ended June 2011.

Table A.2

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

Site Name	Monitoring	Pollutants Monitored											
	Frequency	R&P Partisol 2025 Sequential PM10		R&P TEOM Continuous PM10		R&P FDMS-TEOM Continuous PM10		R&P Partisol 2025 Sequential PM2.5		R&P TEOM Continuous PM2.5		Thermo Scientific TEOM 1405DF, PM10, PM2.5, PM10-PM2.5	
		P code	81102	P code	81102	P code	81102	P Code	88101	P Code	88101	P Code	81102
		M code	127	M code	079	M Code	079	M Code	145	M Code	181	M Code	208
		POC	Serial No.	POC	Serial No.	POC	Serial No.	POC	Serial No.	POC	Serial No.	P Code	88101
												M Code	182
												P Code	86101
												M Code	207
												POC	Serial No.
Dirty Socks *	Daily			2	24918								
Shell Cut	Daily			2	24923								
Flat Rock **	Daily			2	**								
Bill Stanley	Daily			1	23572								
Olancha	Daily			2	21292								
Lone Pine	Daily					4	24928						
North Beach	Daily			1	24982								
Lizard Tail	Daily			1	24983								
Keeler Primary Mon	Daily	6	21442	4	24786			1	21135	1	24922		
Keeler Colle. Mon.	Daily	7	21183	UA	21002			2	21127				
Mill Site *	Daily			1	24925								
T-4 ***	Daily			SPM	24981								
T-7 †	Daily			SPM	24981								
T-23 ***	Daily			SPM	23573								
T-27 †	Daily			SPM	23573								
Coso Junction	Daily			4	22618								
Mammoth Lakes	Daily	5	21584			1	20280					1	
Lee Vining	1-in-3	3	21029										
Simis Residence ††	1-in-3												
Mono Shore	Daily			1	24920								
White Mountain	Daily					1	24711						
NCORE	1-in-3	1	21487					1	21579				

Site Name	Monitoring	Pollutants Monitored											
	Frequency	Thermo 43i-TLE SO2 Analyzer		Thermo 49i Ozone Analyzer		Thermo 48i-TLE CO Analyzer		Thermo 42y NOy Analyzer		R&P Partisol 2025 PM10-PM2.5		Teledyne-API 602 Beta Plus, PM10, PM2.5, PM10-PM2.5	
		P code	42401	P code	44201	P code	42101	P Code	42602	P Code	86101	P Code	81102
		M code	000	M code	047	M Code	054	M Code	074	M Code	176	M Code	205
		POC	Serial No.	POC	Serial No.	POC	Serial No.	POC	Serial No.	POC	Serial No.	P Code	88101
												M Code	204
												P Code	86101
NCORE Additional Pollutants	Hourly 1-in-3	1	917736524	1	1120848986	1	917736525	1	917736523	1	See Above	M Code	206
												POC	Serial No.
												1	141

* Monitor down temporarily due to lease cancellation by property owner.
** PM10 monitoring ended at Flat Rock May 2011. Flat Rock now used for meteorological monitoring and video capture only.
*** T-4, T-23 were special purpose monitors that were shutdown July and August 2012, respectively.
† T-7 and T27 are special purpose monitors that began operation in July and August 2012, respectively.
†† PM10 monitoring ended August 2008; meteorological monitoring ended June 2011.

Table A.3

GBUAPCD QUALITY ASSURANCE AUDITS
2013

GBUAPCD TEOM Audits 2013				
Site	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**
Bill Stanley	1/17/13	6/5/13	8/28/13	12/19/13
Coso Junction	1/16/13		8/28/13	12/17/13
Dirty Socks	Temporarily Down	Temporarily Down	Temporarily Down	Temporarily Down
Keeler 1 PM2.5	1/16/13	6/6/13	8/28/13	12/17/13
Keeler 3 Prim PM10	1/16/13	6/6/13	8/28/13	12/17/13
Lizard Tail	1/16/13	6/5/13	8/22/13	10/31/13
Lone Pine	1/17/13	6/5/13	8/22/13	12/19/13
Mammoth	3/26/13	7/9/13	9/30/13	11/6/13
Mill Site	Temporarily Down	Temporarily Down	Temporarily Down	Temporarily Down
Mono Shore	3/26/13	7/9/13	9/30/13	11/6/13
North Beach	Temporarily Down	Temporarily Down	Temporarily Down	Temporarily Down
Olancha	1/16/13	6/6/13	8/28/13	12/17/13
Shell Cut	1/17/13	6/6/13	8/22/13	12/19/13
T-23	Discontinued	Discontinued	Discontinued	Discontinued
T-27	1/16/13	6/5/13	8/22/13	10/31/13
T-4	Discontinued	Discontinued	Discontinued	Discontinued
T-7	1/16/13	6/5/13	8/22/13	10/31/13
WMRS	3/8/13	6/20/13	8/29/13	12/5/13
Keeler 2 Collo PM10	Down	Down	8/28/13	12/17/13

GBUAPCD Partisol Audits 2013				
Site	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**
Keeler pm10 pri	1/16/13	6/6/13	8/28/13	12/17/13
Keeler pm10 co	Temporarily Down	Temporarily Down	8/28/13	12/17/13
Keeler pm2.5 co	1/16/13	6/6/13	Discontinued	Discontinued
Keeler pm2.5 pri	1/16/13	6/6/13	8/28/13	12/17/13
Lee Vining	3/26/13	7/9/13	9/30/13	11/6/13
Mammoth	3/26/13	7/9/13	9/30/13	11/6/13

GBUAPCD Meteorological Audits 2013		
Site	**First Semi-Annual**	**Second Semi-Annual**
A-Tower	5/21/13	10/31/13
Bill Stanley	4/26/13	11/5/13
B-Tower	4/24/13	10/23/13
Cottonwood	4/25/13	10/24/13
Dirty Socks	Temporarily Down	Temporarily Down
Flat Rock	4/26/13	11/5/13
Keeler	4/25/13	10/24/13
Lizard Tail	4/24/13	10/23/13
Lone Pine	4/26/13	11/5/13
Mammoth	7/9/13	11/6/13
Mill	Temporarily Down	Temporarily Down
Mono Lake Shore	7/9/13	11/6/13
North Beach	Temporarily Down	Temporarily Down
Olancha	4/25/13	11/5/13
Shell Cut	4/26/13	11/5/13
T-23	Discontinued	Discontinued
T-27	4/24/13	10/23/13
T-4	Discontinued	Discontinued
T-7	4/24/13	10/23/13
WMRC	6/20/13	12/5/13
NCORE		12/5/13

ARB Audits of GBUAPCD Sites	
Site	**Date**
Dirty Socks	Temp. Down
Coso Junction	10/15/13
Keeler 1	9/12/13
Keeler 3	9/12/13
Lizard Tail	9/11/13
Lone Pine	9/11/13
Mammoth TEOM	9/26/13
Mill	Temp. Down
Mono Shore	9/26/13
North Beach	Temp. Down
Olancha	9/10/13
Bill Stanley	9/10/13
Shell Cut	9/10/13
WMRS	9/25/13
Lee Vining	9/26/13
Keeler 2.5 pri	9/12/13
Keeler 2.5 co	Discontinued
Keeler 10 pri	9/12/13
Mammoth Partisol	9/26/13
Flat Rock	9/11/13
Keeler 10 co	9/12/13

APPENDIX B

NCORE Station Monitoring Plan

Great Basin Unified
Air Pollution Control District

2014 Ambient Air Monitoring
Network Plan
For
National Core (NCORE) Monitoring Station

located at
White Mountain Research Center
Bishop, California

June 5, 2014

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 have resulted in a delay of the start of monitoring at the District's NCore station until January 1, 2013.

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), 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 1 Monitors

Monitor Type	Designation	Analysis Method	Frequency of Sampling
Carbon Monoxide (CO)	NCore	Automated Reference Method utilizing trace level non-dispersive infrared analysis.	Continuously
Sulfur Dioxide (SO_2)	NCore	Automated Equivalent Method utilizing trace level UV fluorescence analysis	Continuously
PM_{10} TEOM	SLAMS	Automated Equivalent Method utilizing Tapered Element Oscillating Microbalance/gravimetric analysis	Continuously
Total Reactive Nitrogen (NO_y)	NCore	Automated trace level chemiluminescence analysis.	Continuously
Meteorological	SLAMS	Air quality measurements approved instrumentation for wind speed, wind direction, humidity, temperature	Continuously
Ozone (O_3)	NCore	Automated trace level Equivalent Method utilizing an Ultraviolet Photometer	Continuously

Quality Assurance Status
All Quality Assurance procedures shall be implemented in accordance with 40 CFR 58, Appendix A. Quality Assurance Project Plans from the 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 the CARB will be used for each new instrument in the project. The first annual performance evaluation of the District's NCORE station took place December 5, 2013, and was conducted by CARB QA staff and included audits of the meteorological sensors and the ozone analyzer. The CARB QA staff is still getting the equipment together for the trace-level gaseous pollutant audits.

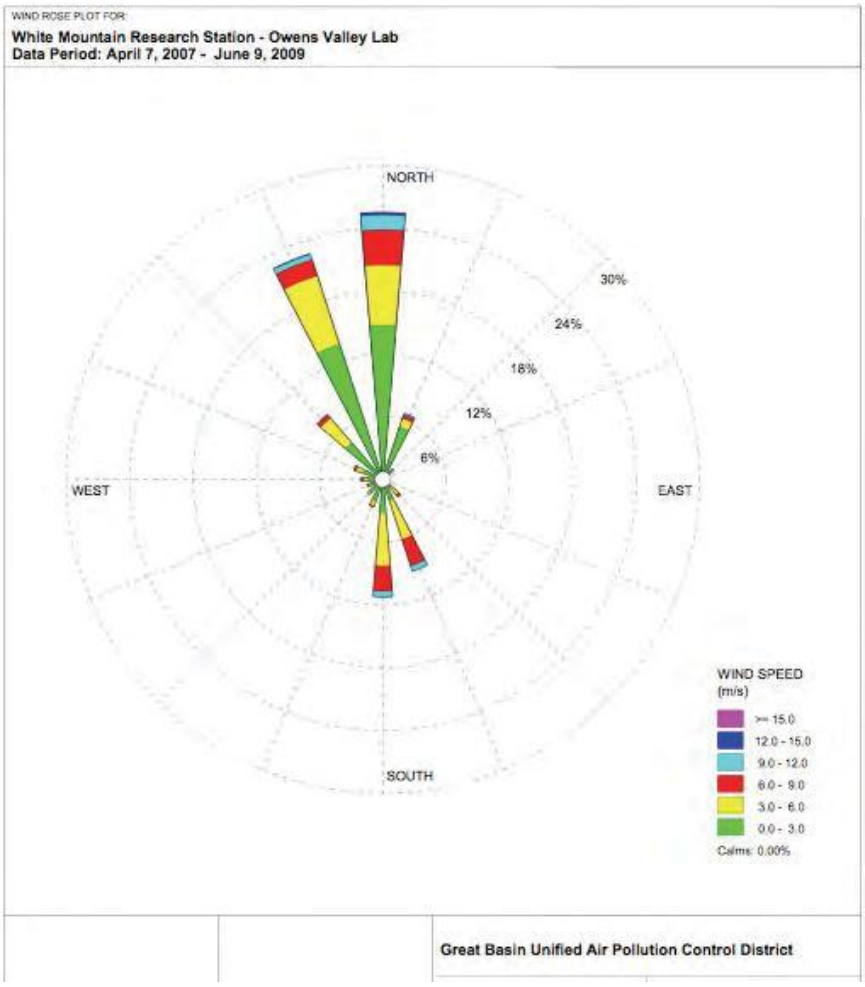
Area of Representativeness
40 CFR Part 58 Appendix D provides design criteria for ambient air monitoring. The monitoring objective for the NCore site is to produce data that represents a large area and therefore the spatial scale of the site is important. The spatial scale defines the physical dimensions 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 2 shows the area of representativeness for each pollutant for the WMRC site.

Table 2: Spatial Scales for Each Pollutant

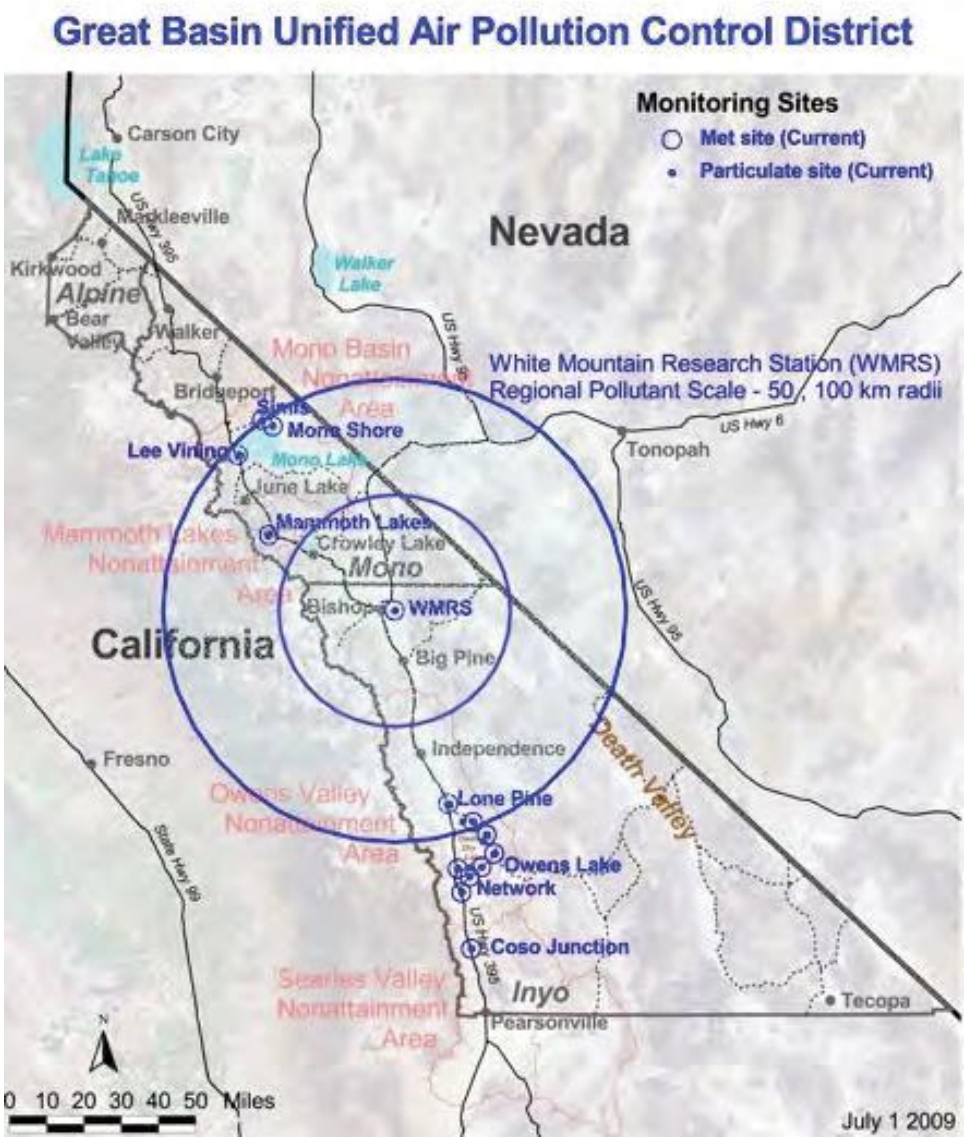
Pollutant	Spatial Scale	Comments
NO_y	Regional Scale	Same scale as used for O_3
CO	> Middle Scale	No Regional scale for CO
SO_2	> Neighborhood Scale	No Regional scale for SO_2
PM_{10}	> Neighborhood Scale	No Regional scale for PM_{10}
O_3	Regional Scale	Same scale as used for NO_y

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.



The White Mountain Research Center's Owens Valley Laboratory, 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, for 100km.



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

The Owens Valley, Mono Basin, and Mammoth Lakes 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

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.

   Manual particulate samplers to be used for the NCore program will be placed on the metal monitoring platform adjacent to the NCore shelter. The height of the inlets of the filter-based particulate samplers above ground will be approximately 5 meters. The inlet for the continuous PM_{10} monitor in the Portable station is approximately 1.5 meters above the roof and approximately 4.25 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 1 meter above the roof (4 meters above ground) with at least 1 meter of separation from any and all structures on the roof. The control unit is located inside the temperature-controlled shelter.

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 average daily traffic (ADT) counts. Table 3 summarizes the findings and includes the minimum separation distance from roadways for each pollutant. ADT counts were obtained from traffic count data from the California Department of Transportation's (CalTrans) website, at:
http://traffic-counts.dot.ca.gov/2011all

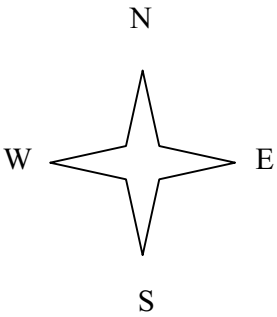
Table 3
Spacing from Roadways Analysis

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	15,200 (2011)	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 12,600 (2010 US Census Bureau). Pollutant sources are limited to small businesses, residential home heating, vehicular traffic (15,200 per day) 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 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 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
Standard Industrial Minerals	particulate	8	4.22	0.19



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[tm] image on page 7 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.

PROOF OF PUBLICATION
(2015.5 C.C.P.)

This space is for County Clerk's Filing Stamp

RECEIVED
JUN 18 2014
COUNTY CLERK

STATE OF CALIFORNIA,
COUNTY OF INYO

I am a citizen of the United States and a resident of the County aforesaid. I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the

The Inyo Register

Proof of Publication of

Public Notice

County of Inyo

The Inyo Register has been adjudged a newspaper of general circulation by the Superior Court of the County of Inyo, State of California, under date of Oct. 5, 1953, Case Number 5414; that the notice, of which the annexed is a printed copy (set in type not smaller than non-pareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof, on the following dates, to wit:

JUNE 5, 7

in the year **2014**

I certify (or declare) under penalty of perjury that the foregoing is true and correct, on this **9TH** Day of **JUNE, 2014**

C. Hurdle Sampatho
Signature

320 PUBLIC NOTICES

of Federal Regulations Part 58.10. Copies of the Draft ANMP 2014 and supporting documents may be obtained from the GBUAPCD at 157 Short Street, Bishop, California, and at the District's website, www.gbuapcd.org, under "What's New." Written comments received by 12:00 noon on Friday, June 20, 2014, will be included in an informational item and staff report provided to the Governing Board of the GBUAPCD at its regular Board meeting on July 7, 2014, at 9:00 a.m. at the LADWP Sulfate Facility, 111 Sulfate Road, Keeler, California 93530. Oral comments will also be taken at this meeting. All written comments must be received by 9:00 a.m. on Monday, July 7, 2014, 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. Theodore D. Schade, Air Pollution Control Officer, GBUAPCD, 157 Short Street, Bishop, CA 93514. Comments may also be submitted by e-mail to tschade@gbuapcd.org. For further information, contact Mr. Chris Lanane, Air Monitoring Specialist, at (760) 872-8211. (IR 6/5, 6/7/14, #11197)

320 PUBLIC NOTICES

NOTICE OF PUBLIC COMMENT PERIOD GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT AIR QUALITY NETWORK MONITORING PLAN 2014

The Great Basin Unified Air Pollution Control District (GBUAPCD) has made available for review and public comment its *Draft Air Quality Network Monitoring Plan for 2014* (Draft ANMP 2014) in accordance with Title 40 of the Code

PROOF OF PUBLICATION

STATE OF CALIFORNIA
COUNTY OF MONO

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of

THE SHEET

a newspaper of general circulation, published in

COUNTY OF MONO

The Sheet was adjudicated on December 28, 2009, as a newspaper of general circulation for the Town of Mammoth Lakes and Mono County, CA.

The notice, of which the annexed is a printed copy (set in the type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dated, to with:

7-Jun

all in the year **2014**

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Dated at Mammoth Lakes, California, the 7th day of Jue, **2014**

Signature

#2014-0106

This Space is for the County Clerk's Filing Stamp

RECEIVED
JUN 12 2014
GREAT BASIN UNIFIED APCD

Proof of Publication of

PUBLIC NOTICE

Public Notice

NOTICE OF PUBLIC COMMENT PERIOD
GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT
AIR QUALITY NETWORK MONITORING PLAN 2014

The Great Basin Unified Air Pollution Control District (GBUAPCD) has made available for review and public comment its *Draft Air Quality Network Monitoring Plan for 2014* (Draft ANMP 2014) in accordance with Title 40 of the Code of Federal Regulations Part 58.10. Copies of the Draft ANMP 2014 and supporting documents may be obtained from the GBUAPCD at 157 Short Street, Bishop, California, and at the District's website, www.gbuapcd.org, under "What's New." Written comments received by 12:00 noon on Friday, June 20, 2014, will be included in an informational item and staff report provided to the Governing Board of the GBUAPCD at its regular Board meeting on July 7, 2014, at 9:00 a.m. at the LADWP Sulfate Facility, 111 Sulfate Road, Keeler, California 93530. Oral comments will also be taken at this meeting. All written comments must be received by 9:00 a.m. on Monday, July 7, 2014, 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. Theodore D. Schade, Air Pollution Control Officer, GBUAPCD, 157 Short Street, Bishop, CA 93514. Comments may also be submitted by e-mail to tschade@gbuapcd.org. For further information, contact Mr. Chris Lanane, Air Monitoring Specialist, at (760) 872-8211.

TS # 2014-0106

TAHOE DAILY
Tribune
P.O. Box 1888 Carson City, NV 89702
(775) 881-1201 FAX: (775) 887-2408

Customer Account: # 1064236
Legal Account
Great Basin Unified Air Pollution
157 Short St., Ste 6
BISHOP, CA 93514
Attn: Tori DeHaven

Cora Jeffreys says:
That (s)he is a legal clerk of the **TAHOE DAILY TRIBUNE**, a newspaper published Wednesday, Friday, Saturday at South Lake Tahoe, in the State of California.

Copy Line
2014 Draft AQNMP

PO#:

Ad #: 10239260D
of which a copy is hereto attached, was published in said newspaper for the full required period of **1** time(s) commencing on **6/7/2014**, and ending on **6/7/2014**, all days inclusive.

Signed:_____
Date: 06/12/2014 State of Nevada, Carson City

Price: $ 95.49

Subscribed and sworn to before me this ____ day of _____

_____
Notary Public

Proof and Statement of Publication
Ad #: 10239260D

NOTICE OF PUBLIC COMMENT PERIOD
GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT
AIR QUALITY NETWORK MONITORING PLAN 2014

The Great Basin Unified Air Pollution Control District (GBUAPCD) has made available for review and public comment its *Draft Air Quality Network Monitoring Plan for 2014* (Draft ANMP 2014) in accordance with Title 40 of the Code of Federal Regulations Part 58.10. Copies of the Draft ANMP 2014 and supporting documents may be obtained from the GBUAPCD at 157 Short Street, Bishop, California, and at the District's website, www.gbuapcd.org, under "What's New." Written comments received by 12:00 noon on Friday, June 20, 2014, will be included in an informational item and staff report provided to the Governing Board of the GBUAPCD at its regular Board meeting on July 7, 2014, at 9:00 a.m. at the LADWP Sulfate Facility, 111 Sulfate Road, Keeler, California 93530. Oral comments will also be taken at this meeting. All written comments must be received by 9:00 a.m. on Monday, July 7, 2014, 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. Theodore D. Schade, Air Pollution Control Officer, GBUAPCD, 157 Short Street, Bishop, CA 93514. Comments may also be submitted by e-mail to tschade@gbuapcd.org. For further information, contact Mr. Chris Lanane, Air Monitoring Specialist, at (760) 872-8211.

Pub: June 7, 2014 **Ad#10239260**

Theodore D. Schade
Air Pollution Control Officer

GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

157 Short Street, Bishop, California 93514-3537
760-872-8211 Fax: 760-872-6109

NOTICE OF PUBLIC COMMENT PERIOD
GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT
AIR QUALITY NETWORK MONITORING PLAN 2014

The Great Basin Unified Air Pollution Control District (GBUAPCD) has made available for review and public comment its *Draft Air Quality Network Monitoring Plan for 2014* (Draft ANMP 2014) in accordance with Title 40 of the Code of Federal Regulations Part 58.10. Copies of the Draft ANMP 2014 and supporting documents may be obtained from the GBUAPCD at 157 Short Street, Bishop, California, and at the District's website, www.gbuapcd.org, under "What's New." Written comments received by 12:00 noon on Friday, June 20, 2014, will be included in an informational item and staff report provided to the Governing Board of the GBUAPCD at its regular Board meeting on July 7, 2014, at 9:00 a.m. at the LADWP Sulfate Facility, 111 Sulfate Road, Keeler, California 93530. Oral comments will also be taken at this meeting. All written comments must be received by 9:00 a.m. on Monday, July 7, 2014, 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. Theodore D. Schade, Air Pollution Control Officer, GBUAPCD, 157 Short Street, Bishop, CA 93514. Comments may also be submitted by e-mail to tschade@gbuapcd.org. For further information, contact Mr. Chris Lanane, Air Monitoring Specialist, at (760) 872-8211.

2014-06-5

<u>Publication Dates</u>

Inyo Register	June 5, 7, 2014
The Sheet	June 6, 2014
Tahoe Daily Tribune	June 7, 2014

Mail List: Public Notice

Theodore D. Schade
Air Pollution Control Officer

GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

157 Short Street, Bishop, California 93514-3537
760-872-8211 Fax: 760-872-6109

B/O #140707-09

July 7, 2014

I HEREBY CERTIFY that at a regular meeting of the Great Basin Unified Air Pollution Control District Governing Board held at the Los Angeles Department of Water and Power, Keeler Facility, Training Room, State Highway 136 and Sulfate Road, about 1.75 miles South of Keeler, California on July 7, 2014 an order was duly made and entered as follows:

AGENDA ITEM #9: **ADOPTION OF THE 2014 ANNUAL AIR QUALITY NETWORK MONITORING PLAN**

A motion was made by Hunt and seconded by Bacon adopting the District's 2014 Annual Air Quality Monitoring Network Plan for submission to the US EPA Region IX administrator.

Ayes: Board Members – Hames, Hunt, Kingsley, Rawson, Arcularius, Bacon

Noes: Ø

Abstain: Ø

Absent: Board Member – Johnston

Motion carried 6/0 and so ordered.

ATTEST:

Tori DeHaven, Clerk of the Board

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**

Site Number:	1001	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	415480
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	No	UTM Y:	4042496
FIPS Code:	06-027	Monitor Type:					
AQS Number:							
Current:	Yes						

Location:	North-central Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	2.2 km north to Hwy 136.		
Traffic Count:	430		
Groundcover:	Course sands		
Representative Area:	North-central Owens Lake		
Pollutant:	N/A		
Monitor Objective:	Local meteorology		
Spatial Scale:	Neighborhood Scale	Start Date:	8/8/1990
Sampling Method:	N/A	Operation Schedule:	5 minute
Probe Height:	Precip gage @ 1.5m AGL	Sampling Season:	Year-round
Anemometer Height (m)	9.3 meters	Analysis Method:	N/A
Temp Probe Height (m):	9.0 meters (and RH, temp)	Dist to Suporting Struct:	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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	N/A
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [x] Variable: Precipitation
- [x] Variable: Relative Humidity

Print Timestamp: 8/19/2014, 11:39:01 AM

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**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

Print Timestamp: 8/19/2014, 11:39:02 AM

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: **B-Tower**

Site Number:	1018	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	420265
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	No	UTM Y:	4030446
FIPS Code:	06-027	Monitor Type:					
AQS Number:							
Current:	Yes						

Location:	Southeast Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	3 km SE to Hwy 190		
Traffic Count:	520		
Groundcover:	Course sands		
Representative Area:	South-eastern Owens Lake		
Pollutant:	N/A		
Monitor Objective:	Local Meteorology		
Spatial Scale:	Neigborhood Scale	Start Date:	1/5/1995
Sampling Method:	N/A	Operation Schedule:	5 minute
Probe Height:	Rain Gage @ 1.4m AGL	Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	N/A
Temp Probe Height (m):	9.0 meters (and RH, temp)	Dist to Suporting Struct:	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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	N/A
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [x] Variable: Precipitation
- [x] Variable: Relative Humidity

Print Timestamp: 8/19/2014, 11:39:02 AM

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: **B-Tower**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

Print Timestamp: 8/19/2014, 11:39:04 AM

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: **Coso Junction H2S**

Site Number:	696	Collecting Agency:	Coso Operating Company	MET Installed?:	Yes	UTM X:	414978
County:	Inyo	Site Operator:	Colleen Brock (incoming ftp)	TEOM Installed?:	No	UTM Y:	3989840
FIPS Code:	06-027	Monitor Type:					
AQS Number:	1001						
Current:	Yes						

Location:	Hwy 395 at Gill Station - Coso Road		
Address:	3 Gill Station Rd, Olancha, CA 93549		
Distance to Road:	0.2km to Gill Station Road SE of stn.; 400m to Hwy. 395 west of site		
Traffic Count:	300 est. on GSR; 5400 on 395		
Groundcover:	Dirt, gravel, brush		
Representative Area:	Regional		
Pollutant:			
Monitor Objective:	Population Oriented, Pollutant Transport		
Spatial Scale:	Neighborhood Scale	Start Date:	5/10/2006
Sampling Method:	PM-10 Impactor	Operation Schedule:	1:1
Probe Height:	4.5 meters	Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.15 meters	Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	No obstructions
Distance from Obstructions Not on Roof:	20 meters to tower west of 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?:	N/A
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 9/13/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [x] Variable: Precipitation
- [x] Variable: Relative Humidity

Print Timestamp: 8/19/2014, 11:39:04 AM

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: **Coso Junction H2S**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

Print Timestamp: 8/19/2014, 11:39:04 AM

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: **Coso Junction TEOM**

Site Number:	696	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	414978
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	Yes	UTM Y:	3989840
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	1001						
Current:	Yes						

Location:	Hwy 395 at Gill Station - Coso Road		
Address:	3 Gill Station Rd, Olancha, CA 93549		
Distance to Road:	0.2km to Gill Station Road SE of stn.; 400m to Hwy. 395 west of site		
Traffic Count:	300 est. on GSR; 5400 on 395		
Groundcover:	Dirt, gravel, brush		
Representative Area:	Regional		
Pollutant:	PM-10		
Monitor Objective:	Population Oriented, Pollutant Transport		
Spatial Scale:	Neighborhood Scale	Start Date:	5/10/2006
Sampling Method:	PM-10 Impactor	Operation Schedule:	1:1
Probe Height:	4.40 meters	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.4m below inlet

Distance from Obstructions on Roof:	No obstructions.
Distance from Obstructions Not on Roof:	20 meters to tower west of 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?:	N/A
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 9/13/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

Print Timestamp: 8/19/2014, 11:39:04 AM

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: **Coso Junction TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

Print Timestamp: 8/19/2014, 11:39:04 AM

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: **Cottonwood**

Site Number:	7491	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	411799
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	No	UTM Y:	4028440
FIPS Code:	06-027	Monitor Type:					
AQS Number:							
Current:	Yes						

Location:	South-central Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	3 km to Hwy 395 (west)		
Traffic Count:	6600		
Groundcover:	Course sand		
Representative Area:	Central Owens Lake		
Pollutant:	N/A		
Monitor Objective:	Local Meteorology		
Spatial Scale:	Neighborhood Scale	Start Date:	5/17/2001
Sampling Method:	N/A	Operation Schedule:	5 minute
Probe Height:	N/A	Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	N/A
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	N/A
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☑ Variable: Wind Speed
- ☑ Variable: Wind Direction
- ☐ Variable: Relative Humidity

Print Timestamp: 8/19/2014, 11:39:04 AM

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: **Cottonwood**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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: **Dirty Socks TEOM**

Site Number:	1010	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	414272
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4020550
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0022						
Current:	Yes						

Location:	South shore, Owens Lake		
Address:	DIRTY SOX HOT SPRING - HWY 190, Owens Lake, CA		
Distance to Road:	402 meters to Hwy 190		
Traffic Count:	230		
Groundcover:	Gravel, sand, water, small shrubs		
Representative Area:	South shore, Owens Lake		
Pollutant:	PM10		
Monitor Objective:	Source Impact		
Spatial Scale:	Neighborhood Scale	Start Date:	6/23/1999
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.2 meters	Sampling Season:	Year-round
Anemometer Height (m)	10	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.5 meters	Dist to Suporting Struct:	0.3m below inlet

Distance from Obstructions on Roof:	N/A
Distance from Obstructions Not on Roof:	10.0 (Met) - 14.6 meters (powerline); met tower to west
Distance From Trees:	N/A
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?:	N/A
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/17/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [ ] Variable: Precipitation
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Dirty Socks TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Flat Rock**

Site Number:	1011	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	424989
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	No	UTM Y:	4030860
FIPS Code:	06-027	Monitor Type:	None (TEOM removed 5/3/11 to Mill Site)				
AQS Number:	0024						
Current:	Yes						

Location:	Eastern shore, Owens Lake		
Address:	FLAT ROCK - HIGHWAY 190 - 1 MILE W OF HWY 136 JUNCTION, Owens Lake, CA		
Distance to Road:	54.8 meters to Hwy 190; 1.6km NE to CA136/CA190 Junction		
Traffic Count:	520 on CA 190 and at junction		
Groundcover:	Sand, rocks, shrubs		
Representative Area:	East shore, Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Source Impact		
Spatial Scale:	Neighborhood Scale	Start Date:	12/14/2000
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:		Sampling Season:	Year-round
Anemometer Height (m)	10.15 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.45 meters	Dist to Suporting Struct:	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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/17/2009, 3/23/2010
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [ ] Variable: Precipitation
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Flat Rock**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Keeler MET**

Site Number:	697	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	421356
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	No	UTM Y:	4038807
FIPS Code:	06-027	Monitor Type:	None - the TEOMs are installed separately and reported separately				
AQS Number:	1003						
Current:	Yes						

Location:	Northeast of Keeler, CA		
Address:	Keeler, CA		
Distance to Road:	75 meters		
Traffic Count:	3/day		
Groundcover:	sand/brush		
Representative Area:	Community of Keeler		
Pollutant:	N/A		
Monitor Objective:	Local Meteorology		
Spatial Scale:	Neighborhood Scale	Start Date:	3/14/1985
Sampling Method:	N/A	Operation Schedule:	5 minute
Probe Height:		Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	N/A
Temp Probe Height (m):	9.15 meters	Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	N/A
Distance from Obstructions Not on Roof:	20 meters to trees
Distance From Trees:	20 meters
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	N/A
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [ ] Variable: Barometric Pressure
- [x] Variable: Precipitation
- [x] Variable: Wind Speed
- [x] Variable: Wind Direction
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Keeler MET**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Keeler#1 PM2.5 FDMS**

Site Number:	728	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	421982
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	Yes	UTM Y:	4038410
FIPS Code:	06-027	Monitor Type:	Primary: TEOM 1400ab w/8500cPM2.5 continuous, EQPM-0609-181; Partisol; Collo: 2025 PM2.5 VSCC EQPM-0202-145, PM2.5 FRM				
AQS Number:	1003						
Current:	Yes						

Location:	Located on top of metal storage unit and monitoring shelter.		
Address:	190 CERRO GORDO ROAD, KEELER, CA		
Distance to Road:	20 meters to Cerro Gordo Rd., 117 m NE to CA Hwy. 136		
Traffic Count:	Cerro Gordo - 100/dy est.; Hwy. 136 - 430		
Groundcover:	Pavement		
Representative Area:	Community of Keeler		
Pollutant:	PM-2.5		
Monitor Objective:	Population Oriented		
Spatial Scale:	Neighborhood	Start Date:	9/10/2009 9:00:00 PM
Sampling Method:	PM-10 Impactor and VSCC	Operation Schedule:	hourly
Probe Height:	4.6 meters	Sampling Season:	Year-round
Anemometer Height (m)	N/A	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.3m below inlet

Distance from Obstructions on Roof:	See attached roof diagram
Distance from Obstructions Not on Roof:	10 meters to antennae
Distance From Trees:	75 meters
Distance to Furnace or Incinerator:	N/A
Distance Between Collocated Monitors:	1.7 meters to 2.5 pri 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 rate verification for manual PM sampler audit:	Monthly Partisol 6/16/2009, 3/23/2010
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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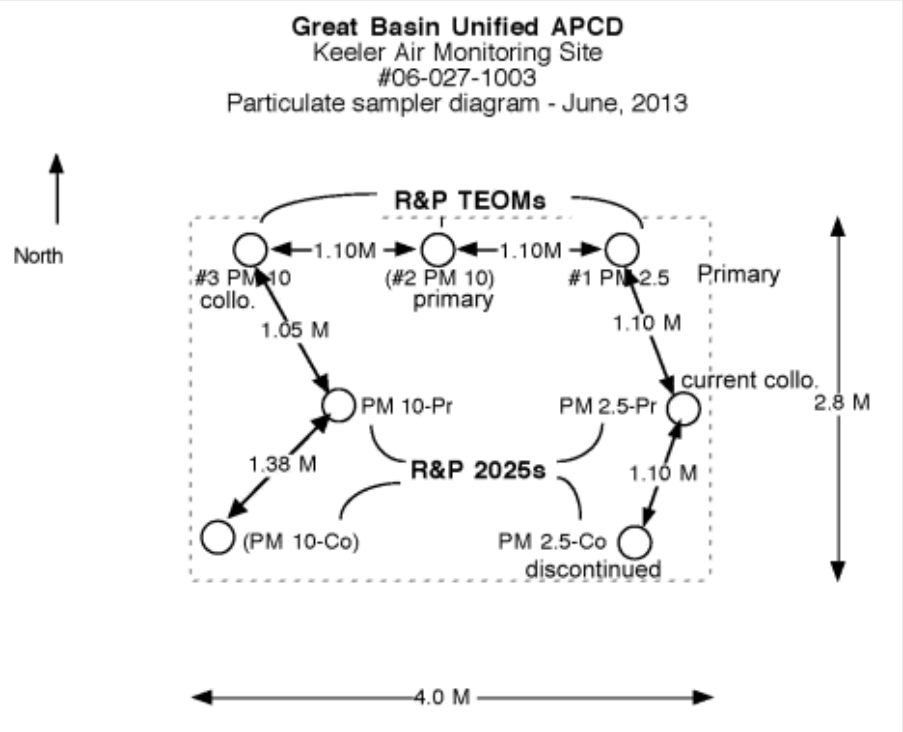
Site Name: **Keeler#1 PM2.5 FDMS**

Site Photo:



North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Keeler#2 PM10 TEOM**

Site Number:	728	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	421982
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	Yes	UTM Y:	4038410
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous; Partisol 2025 PM10, RFPS-1298-127, FRM PM10				
AQS Number:	1003						
Current:	Yes						

Location:	Located on top of metal storage unit and monitoring shelter.		
Address:	190 CERRO GORDO ROAD, KEELER, CA		
Distance to Road:	19 meters		
Traffic Count:	See Keeler #1		
Groundcover:	Pavement		
Representative Area:	Community of Keeler		
Pollutant:	PM-10		
Monitor Objective:	Population Oriented		
Spatial Scale:	Neighborhood	Start Date:	3/11/1993 3:00:00 PM
Sampling Method:	PM-10 Impactor, Primary PM10 Monitor	Operation Schedule:	hourly
Probe Height:	4.45 meters	Sampling Season:	Year-round
Anemometer Height (m)	N/A	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.3m below inlet

Distance from Obstructions on Roof:	See roof diagram
Distance from Obstructions Not on Roof:	9 meters to antennae
Distance From Trees:	75 meters
Distance to Furnace or Incinerator:	N/A
Distance Between Collocated Monitors:	1.7 meters to colocated TEOM (#3); 1.17 m 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 rate verification for manual PM sampler audit:	Monthly Partisol 6/16/2009, 3/23/2010
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Keeler#2 PM10 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, CA 93514
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Site Name: **Keeler#3 PM10 TEOM**

Site Number:	728	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	421982
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	Yes	UTM Y:	4038410
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous; Partisol 2025 PM10, RFPS-1298-127, FRM PM10				
AQS Number:	1003						
Current:	Yes						

Location:	Located on top of metal storage unit and monitoring shelter.		
Address:	190 CERRO GORDO ROAD, KEELER, CA		
Distance to Road:	18 meters		
Traffic Count:	See Keeler #1		
Groundcover:	pavement		
Representative Area:	Community of Keeler		
Pollutant:	PM-10		
Monitor Objective:	Population Oriented		
Spatial Scale:	Neighborhood	Start Date:	6/15/2009
Sampling Method:	PM-10 Impactor, Collocated PM10 Monitor	Operation Schedule:	hourly
Probe Height:	4.45 meters	Sampling Season:	Year-round
Anemometer Height (m)	N/A	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.3m below inlet

Distance from Obstructions on Roof:	See roof diagram
Distance from Obstructions Not on Roof:	10 meters to antennae
Distance From Trees:	75 meters
Distance to Furnace or Incinerator:	N/A
Distance Between Collocated Monitors:	1.14 m to primary TEOM (#2); 1.14 m 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?:	yes
Frequency of flow rate verification for manual PM sampler audit:	Monthly Partisol 6/16/2009, 3/23/2010
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
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Site Name: **Keeler#3 PM10 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Kirkwood**

Site Number:	1033	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	
County:	Alpine	Site Operator:	Guy Davis	TEOM Installed?:	No	UTM Y:	
FIPS Code:	06-003	Monitor Type:					
AQS Number:							
Current:	Yes						

Location:			
Address:			
Distance to Road:			
Traffic Count:			
Groundcover:			
Representative Area:			
Pollutant:			
Monitor Objective:			
Spatial Scale:		Start Date:	
Sampling Method:		Operation Schedule:	Hourly (continuous)
Probe Height:	N/A	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	
Temp Probe Height (m):		Dist to Suporting Struct:	

Distance from Obstructions on Roof:	
Distance from Obstructions Not on Roof:	
Distance From Trees:	
Distance to Furnace or Incinerator:	
Distance Between Collocated Monitors:	
Unrestricted Airflow:	
Probe Material:	
Residence Time:	
Will there be a change in 18 months?:	
Suitable comparison against annual PM2.5?:	
Frequency of flow rate verification for manual PM sampler audit:	
Frequency of flow rate verification for automated PM analyzers audit:	
Frequency of one-point QC check (gaseous):	

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☑ Variable: Wind Speed
- ☑ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Kirkwood**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Lee Vining**

Site Number:	779	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	313749
County:	Mono	Site Operator:	Guy Davis	TEOM Installed?:	No	UTM Y:	4203464
FIPS Code:	06-051	Monitor Type:	Partisol 2025 PM10, RFPS-1298-127, PM10 FRM				
AQS Number:	0005						
Current:	No						

Location:	Community of Lee Vining, CA		
Address:	HWY 395, LEE VINING		
Distance to Road:	84 m to Hwy 395; 179 m to Matty Ave.		
Traffic Count:	395 - 4500; Matty Ave. - 100 est.		
Groundcover:	Lawn (north); Gravel (south)		
Representative Area:	Lee Vining, CA		
Pollutant:	PM-10		
Monitor Objective:	Population Oriented		
Spatial Scale:	Neighborhood Scale	Start Date:	1/1/1981
Sampling Method:	PM-10 Impactor	Operation Schedule:	1:3
Probe Height:	3 meters AGL	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	1m below inlet

Distance from Obstructions on Roof:	No obstructions - unit mounted on stand
Distance from Obstructions Not on Roof:	N/A
Distance From Trees:	19.8 m
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?:	Yes
Suitable comparison against annual PM2.5?:	No
Frequency of flow rate verification for manual PM sampler audit:	Monthly by Station Operator; EPA 10/8/2009, 3/25/2010
Frequency of flow rate verification for automated PM analyzers audit:	ARB 9/19/11; EPA 11/9/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☐ Variable: Wind Speed
- ☐ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Lee Vining**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Lizard Tail TEOM**

Site Number:	1016	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	415701
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	Yes	UTM Y:	4044610
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0028						
Current:	Yes						

Location:	Owens Lake NE Shoreline		
Address:	Lizard Tail - NE Shoreline Owens Lake, CA		
Distance to Road:	275 meters to powerline road; 800m to Hwy 395		
Traffic Count:	Powerline:20; Hwy 395: 540		
Groundcover:	Sand and shrubs		
Representative Area:	4 km area		
Pollutant:	PM-10		
Monitor Objective:	Source Impact		
Spatial Scale:	Neighborhood Scale	Start Date:	1/16/2008
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2 meters above roof; 4.6 meters AGL.	Sampling Season:	Year-round
Anemometer Height (m)	10.1 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.0 meters	Dist to Suporting Struct:	0.3m 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:	N/A; 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?:	N/A
Suitable comparison against annual PM2.5?:	No
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/19/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [ ] Variable: Precipitation
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Lizard Tail TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Lone Pine FDMS**

Site Number:	699	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	405400
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4052020
FIPS Code:	06-027	Monitor Type:	PM10 TEOM 1400 ab/8500c FDMS - not a reference monitor, PM10 continuous				
AQS Number:	0004						
Current:	Yes						

Location:	Southern Inyo Hospital		
Address:	501 East Locust Rd, Lone Pine, CA		
Distance to Road:	85m so. To east Locust; 610m west to 395		
Traffic Count:	200 on East Locust; 6000 on Hwy 395		
Groundcover:	rooftop, asphalt roofing		
Representative Area:	Community of Lone Pine		
Pollutant:	PM-10		
Monitor Objective:	Population Oriented		
Spatial Scale:	Neighborhood Scale	Start Date:	4/17/2008
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2.82 meters above roof; 6.5 m AGL	Sampling Season:	Year-round
Anemometer Height (m)	N/A	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.6m below inlet

Distance from Obstructions on Roof:	30 meters
Distance from Obstructions Not on Roof:	29 meters
Distance From Trees:	29 meters
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?:	No
Suitable comparison against annual PM2.5?:	No
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/20/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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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: **Lone Pine FDMS**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Lone Pine MET**

Site Number:	711	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	406300
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	No	UTM Y:	4051850
FIPS Code:	06-027	Monitor Type:					
AQS Number:	0019						
Current:	Yes						

Location:	Lone Pine Wastewater Treatment Plant
Address:	OUT AT THE SEWER PONDS ONE MILE E OF LOCUST ST
Distance to Road:	30 meters to access road; 1370 west to Hwy 395
Traffic Count:	1 per week; 6000
Groundcover:	dirt and grass
Representative Area:	rural area east of Lone Pine
Pollutant:	N/A
Monitor Objective:	Local Meteorology

Spatial Scale:	Neighborhood Scale	Start Date:	5/14/1986
Sampling Method:	N/A	Operation Schedule:	5 minutes
Probe Height:	Precip gage @ 1.5 m AGL	Sampling Season:	Year-round
Anemometer Height (m)	9.54 meters	Analysis Method:	N/A
Temp Probe Height (m):	9.03 meters	Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	N/A
Distance from Obstructions Not on Roof:	40 meters to phone pole
Distance From Trees:	100 meters
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	N/A
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [ ] Variable: Barometric Pressure
- [ ] Variable: Precipitation
- [x] Variable: Wind Speed
- [x] Variable: Wind Direction
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Lone Pine MET**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, CA 93514
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Site Name: **Mammoth FDMS**

Site Number:	785	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	326514
County:	Mono	Site Operator:	Guy Davis	TEOM Installed?:	Yes	UTM Y:	4168312
FIPS Code:	06-051	Monitor Type:	Primary: PM10 TEOM 1400ab/8500c FDMS PM10 continuous; Collo: PM10 Partisol 2025, RFPS-1298-127, PM10 FRM				
AQS Number:	0001						
Current:	Yes						

Location:	Town of Mammoth Lakes, CA		
Address:	Gateway Home Center, Mammoth Lakes, CA		
Distance to Road:	30.5 meters east to Old Mammoth Rd.; 124m NNE to Hwy 203		
Traffic Count:	OMR:6600; Hwy 203 13,200		
Groundcover:	Urban; asphalt composite roof and pavement		
Representative Area:	Town of Mammoth Lakes		
Pollutant:	PM10		
Monitor Objective:	Population Oriented		
Spatial Scale:	Neighborhood Scale	Start Date:	1/1/2006
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	FDMS: 4 meters above roof; Partisol: 3 meters ab	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	0.5m below inlet

Distance from Obstructions on Roof:	N/A
Distance from Obstructions Not on Roof:	30.5 meters (at 55 degrees and 180 degrees)
Distance From Trees:	40 meters
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?:	N/A
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	Monthly - partisol by Station Operator; EPA 10/8/2009, 3/25/2010
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 10/14/2009, 3/25/2010; ARB 9/20/11; EPA 11/9/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [ ] Variable: Precipitation
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Mammoth FDMS**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Mill**

Site Number:	1013	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	423663
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4035093
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0030						
Current:	Yes						

Location:	2 miles south of Keeler		
Address:	East shore Owens Lake, CA		
Distance to Road:	0.4 km to Hwy 190. 590m east to Hwy 136; 15m east to access rd.		
Traffic Count:	430 on Hwy 395; 5 on access rd.		
Groundcover:	Gravel		
Representative Area:	Regional		
Pollutant:	N/A		
Monitor Objective:	Local Meteorology		
Spatial Scale:	Neighborhood Scale	Start Date:	11/14/2001
Sampling Method:	N/A	Operation Schedule:	5 minute
Probe Height:	4.2 meters	Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	N/A
Temp Probe Height (m):		Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	N/A
Distance from Obstructions Not on Roof:	None
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; ARB 10/19/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [x] Variable: Precipitation
- [x] Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Mill**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, CA 93514
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Site Name: **Mono Shore TEOM**

Site Number:	901	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	329153
County:	Mono	Site Operator:	Guy Davis	TEOM Installed?:	Yes	UTM Y:	4215350
FIPS Code:	06-051	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0011						
Current:	Yes						

Location:	Northeast shore of Mono Lake		
Address:	Mono Lake, CA		
Distance to Road:	4.4 km north to CA Hwy 167		
Traffic Count:	200		
Groundcover:	Course sand		
Representative Area:	Beach area, Mono Lake, CA		
Pollutant:	PM-10		
Monitor Objective:	Highest Concentration		
Spatial Scale:	Neighborhood Scale	Start Date:	6/2/2008
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2.5 meters TEOM	Sampling Season:	Year-round
Anemometer Height (m)	7m	Analysis Method:	Gravimetry
Temp Probe Height (m):	6 meters	Dist to Suporting Struct:	0.4m 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
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 10/14/2009, 3/25/2010; ARB 9/19/11; EPA 11/9/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [ ] Variable: Precipitation
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Mono Shore TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Ncore**

Site Number:	695	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	382152
County:	Inyo	Site Operator:	Guy Davis	TEOM Installed?:	Yes	UTM Y:	4135722
FIPS Code:	06-027	Monitor Type:	PM10 TEOM 1400 ab/8500c FDMS - not a reference monitor, PM10 continuous				
AQS Number:	0002						
Current:	Yes						

Location:	Bishop, CA - White Mountain Research Center, Owens Valley Lab		
Address:	200 Poleta Road, BISHOP, CA. 93514		
Distance to Road:	80 m north of site		
Traffic Count:	200/day (estimate)		
Groundcover:	Decomposed granite		
Representative Area:	50-100 km radius		
Pollutant:	PM10, PM2.5, PM Course, 03, SO2, CO, Noy		
Monitor Objective:	Background Level		
Spatial Scale:	Regional	Start Date:	1/1/2013
Sampling Method:	See attached list	Operation Schedule:	Minutely
Probe Height:	4.9 meters (PM inlets); 3.8m gaseous	Sampling Season:	Year-round
Anemometer Height (m)	10.0m	Analysis Method:	See attached list
Temp Probe Height (m):	9.5 meters	Dist to Suporting Struct:	1m from railing

Distance from Obstructions on Roof:	1m from railing and IMPROVE inlets to north
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:	< 20 seconds
Will there be a change in 18 months?:	Not likely
Suitable comparison against annual PM2.5?:	Yes
Frequency of flow rate verification for manual PM sampler audit:	Monthly
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; Annual EPA or ARB Audits, Quarterly District Audits
Frequency of one-point QC check (gaseous):	Weekly

Meteorological Variables:

- ☑ Variable: Temperature
- ☑ Variable: Barometric Pressure
- ☑ Variable: Precipitation
- ☑ Variable: Wind Speed
- ☑ Variable: Wind Direction
- ☑ Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Ncore**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, CA 93514
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Site Name: **North Beach TEOM**

Site Number:	1017	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	411283
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	Yes	UTM Y:	4044610
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0029						
Current:	Yes						

Location:	North shore, Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	30 meters north to Main Line Road		
Traffic Count:	10		
Groundcover:	gravel		
Representative Area:	North shore, Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Source Impact		
Spatial Scale:	Neighborhood Scale	Start Date:	11/20/2008
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2 meters above roof; 4.4 meters AGL	Sampling Season:	Year-round
Anemometer Height (m)	5.3	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.4m below inlet

Distance from Obstructions on Roof:	No obstructions on roof
Distance from Obstructions Not on Roof:	30 meters 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?:	N/A
Suitable comparison against annual PM2.5?:	No
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/19/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☑ Variable: Wind Speed
- ☑ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **North Beach TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Olancha 3 TEOM**

Site Number:	729	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	410806
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	Yes	UTM Y:	4014080
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0021						
Current:	Yes						

Location:	Community of Olancha, CA
Address:	131 WALKER CREEK RD., Olancha, CA 93549
Distance to Road:	0.5 KM to Hwy 395
Traffic Count:	5600
Groundcover:	Sand, gravel, brush
Representative Area:	Community of Olancha
Pollutant:	PM-10
Monitor Objective:	Source Impact, Population-oriented

Spatial Scale:	Neighborhood Scale	Start Date:	8/17/1995
Sampling Method:	Gravimetry	Operation Schedule:	hourly
Probe Height:	4.45 meters	Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	PM10 Impactor
Temp Probe Height (m):	9.15 meters	Dist to Suporting Struct:	0.5 meters below inlet

Distance from Obstructions on Roof:	3m to PM10 Partisol inlet(temporarily down)
Distance from Obstructions Not on Roof:	10 meters to tower
Distance From Trees:	0.5 km
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?:	No
Frequency of flow rate verification for manual PM sampler audit:	
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Barometric Pressure
- [ ] Variable: Precipitation
- [x] Variable: Wind Speed
- [x] Variable: Wind Direction
- [x] Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Olancha 3 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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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: **Portable-1 TEOM**

Site Number:		Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	
County:	Inyo	Site Operator:	Valerie Thorp	TEOM Installed?:	Yes	UTM Y:	
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:							
Current:	No						

Location:	Variable, short (3-day periods) monitoring of source areas on Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	variable		
Traffic Count:	N/A		
Groundcover:	varies depending on location		
Representative Area:	Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Highest concentration		
Spatial Scale:	Neighborhood scale	Start Date:	1/1/2009
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2.4 meters	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	None
Distance from Obstructions Not on Roof:	None
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?:	Yes
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Upon installation and removal
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☐ Variable: Wind Speed
- ☐ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Portable-1 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Portable-2 TEOM**

Site Number:		Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	
County:	Inyo	Site Operator:	Dan Johnson	TEOM Installed?:	Yes	UTM Y:	
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:							
Current:	Yes						

Location:	Variable, short (3-day periods) monitoring of source areas on Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	variable		
Traffic Count:	N/A		
Groundcover:	Sandy crusts		
Representative Area:	Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Highest concentration		
Spatial Scale:	Neighborhood scale	Start Date:	3/23/2010
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2.35 meters	Sampling Season:	Year-round
Anemometer Height (m)	3.3 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	None
Distance from Obstructions Not on Roof:	None
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?:	Yes
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Upon installation and removal
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☐ Variable: Wind Speed
- ☐ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Portable-2 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

Print Timestamp: 8/19/2014, 11:39:12 AM

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: **Portable-3 TEOM**

Site Number:		Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:							
Current:	Yes						

Location:	Variable, short (3-day periods) monitoring of source areas on Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	variable		
Traffic Count:	N/A		
Groundcover:	Sandy crusts		
Representative Area:	Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Highest concentration		
Spatial Scale:	Neighborhood scale	Start Date:	9/1/2010
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	2.4 meters	Sampling Season:	Year-round
Anemometer Height (m)	3 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	None
Distance from Obstructions Not on Roof:	None
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?:	Yes
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Upon installation and removal
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☐ Variable: Wind Speed
- ☐ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Portable-3 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **Shell Cut TEOM**

Site Number:	1012	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	419478
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4024950
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0025						
Current:	Yes						

Location:	South-east shore, Owens Lake
Address:	SHELL CUT - HIGHWAY 190 - MIDWAY BETWEEN DIRTY SOX AND FLAT ROCK, Owens Lake, CA
Distance to Road:	164.5 meters to Hwy 190; 250m SE to CA Hwy 190
Traffic Count:	230
Groundcover:	Dirt, sand, gravel, shrubs
Representative Area:	South-east shore Owens Lake
Pollutant:	PM-10
Monitor Objective:	Source Impact

Spatial Scale:	Neighborhood Scale	Start Date:	1/8/2001 4:00:00 PM
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.47 meters; rain guage at 3.96 meters	Sampling Season:	Year-round
Anemometer Height (m)	10.03 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.03 meters	Dist to Suporting Struct:	0.6m 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:	0
Distance Between Collocated Monitors:	0
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/17/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [ ] Variable: Barometric Pressure
- [x] Variable: Precipitation
- [x] Variable: Wind Speed
- [x] Variable: Wind Direction
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Shell Cut TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

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Site Name: **Simis**

Site Number:	782	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	324798
County:	Mono	Site Operator:	Guy Davis	TEOM Installed?:	No	UTM Y:	4217850
FIPS Code:	06-051	Monitor Type:					
AQS Number:	0007						
Current:	No						

Location:	1.8 km north of Mono Lake
Address:	SIMIS RES-HIWY 167, MONO LAKE, CA
Distance to Road:	475 meters to CA 167; NW of site
Traffic Count:	120
Groundcover:	Sagebrush/Rabbitbrush Scrub
Representative Area:	High Desert
Pollutant:	N/A
Monitor Objective:	MET data collection suspended July 2011

Spatial Scale:	Neighborhood	Start Date:	5/21/1982
Sampling Method:	N/A	Operation Schedule:	hourly
Probe Height:	10 meters AGL	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	N/A
Temp Probe Height (m):		Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	N/A
Distance from Obstructions Not on Roof:	N/A
Distance From Trees:	38 meters
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	N/A
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [ ] Variable: Barometric Pressure
- [ ] Variable: Precipitation
- [x] Variable: Wind Speed
- [x] Variable: Wind Direction
- [ ] Variable: Relative Humidity

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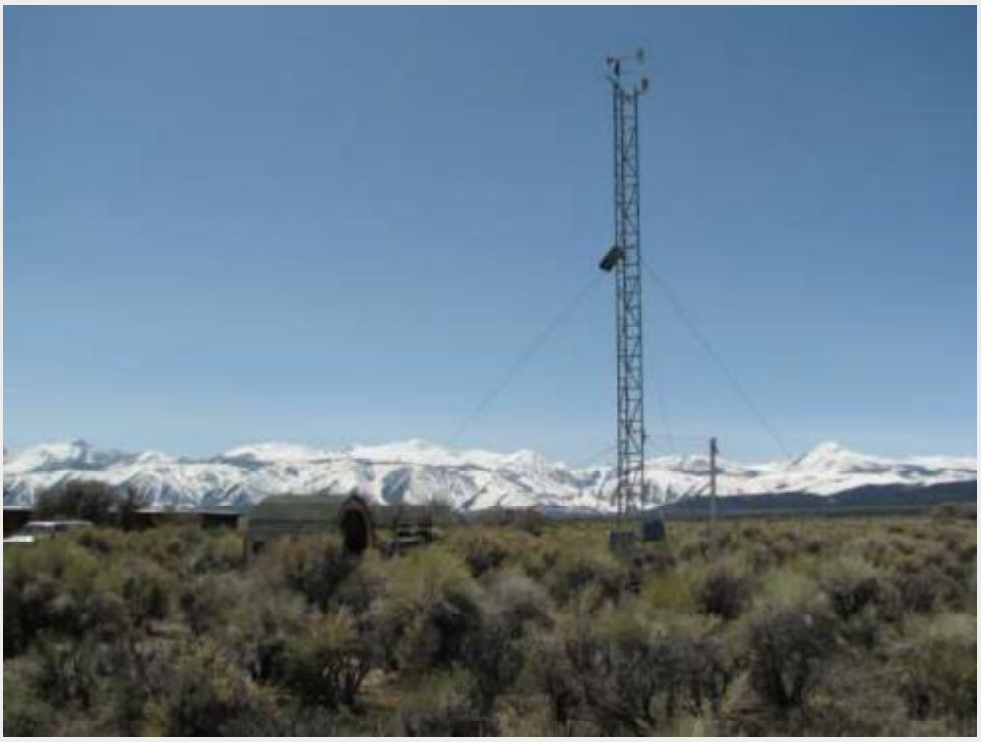
Site Name: **Simis**

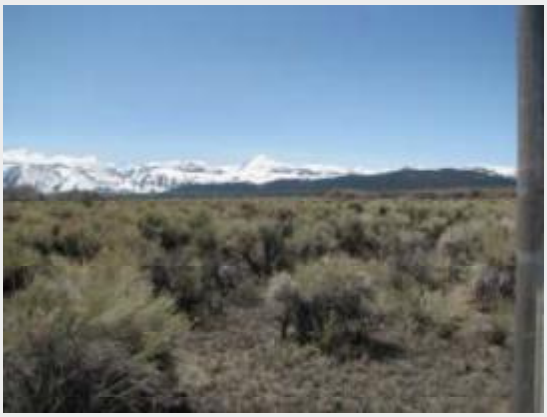
Site Photo:



North-facing photo:

East-facing photo:

West-facing photo:



South-facing photo:

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GBUAPCD Site Report

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Site Name: **Stanley TEOM**

Site Number:	1014	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	409315
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4024570
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:	0026						
Current:	Yes						

Location:	Ash Point; West side Owens Lake, CA		
Address:	BILL STANLEY SITE - OWENS LAKE, CA		
Distance to Road:	85 meters to Lake Minerals Rd.; 1.15km west to US 395		
Traffic Count:	1-LMR; 6600-395		
Groundcover:	sand and shrubs		
Representative Area:	Southwestern shoreline of Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Source Impact		
Spatial Scale:	Neighborhood Scale	Start Date:	3/4/2002
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.61 meters; rain guage at 1.58 meters	Sampling Season:	Year-round
Anemometer Height (m)	10.06 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.27 meters	Dist to Suporting Struct:	0.4m 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:	N/A - 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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; EPA 6/16/2009, 3/23/2010; ARB 10/18/11; EPA 11/10/11; ,11/10/11; ARB 10/18/11
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [x] Variable: Precipitation
- [ ] Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **Stanley TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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Site Name: **T-23 TEOM**

Site Number:	1043	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	420143
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	Yes	UTM Y:	4035210
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079				
AQS Number:							
Current:	No						

Location:	Eastern Owens Lake Shallow Flood Area		
Address:	Owens Lake, CA		
Distance to Road:	2.4 meters to berm		
Traffic Count:	N/A		
Groundcover:	Dirt, gravel, water		
Representative Area:			
Pollutant:	PM-10		
Monitor Objective:	Source Impact, Special Purpose Monitor began April 2010.		
Spatial Scale:	Neighborhood Scale	Start Date:	3/8/2010
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.1 meters	Sampling Season:	Year-round
Anemometer Height (m)	10 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	N/A

Distance from Obstructions on Roof:	None
Distance from Obstructions Not on Roof:	None
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 rate verification for manual PM sampler audit:	
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; quarterly by District Auditor
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☐ Variable: Wind Speed
- ☐ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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Site Name: **T-23 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

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Site Name: **T-25 TEOM - Shut down Mar 2010**

Site Number:	1041	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	420186
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4036040
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079				
AQS Number:							
Current:	No						

Location:	East-central Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	2.4 meters to berm		
Traffic Count:	TBD		
Groundcover:	Dirt, gravel, water		
Representative Area:	Central Owens Lake special purpose monitor		
Pollutant:	PM-10		
Monitor Objective:	Source Impact, Special Purpose Monitor shut down March 2010.		
Spatial Scale:	Neighborhood scale	Start Date:	4/24/2008 9:00:00 AM
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.1 meters	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	0

Distance from Obstructions on Roof:	0
Distance from Obstructions Not on Roof:	26.0 meters (Met/DWP)
Distance From Trees:	0
Distance to Furnace or Incinerator:	0
Distance Between Collocated Monitors:	0
Unrestricted Airflow:	360
Probe Material:	N/A
Residence Time:	N/A
Will there be a change in 18 months?:	N/A
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; quarterly by District Auditor
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **T-25 TEOM - Shut down Mar 2010**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

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Site Name: **T-27 TEOM**

Site Number:	1044	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	419170
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	Yes	UTM Y:	4036794
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:							
Current:	Yes						

Location:	On-lake monitor, NE Owens Lake Shallow Flood Area		
Address:	Owens Lake, CA		
Distance to Road:	~6m to Road #6 (Berm Road)		
Traffic Count:	10 per day (estimate)		
Groundcover:	Dirt, gravel, water, vegetation		
Representative Area:	Northeastern Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Source Impact, Special Purpose Monitor, began Aug 2012		
Spatial Scale:	Neighborhood Scale	Start Date:	8/21/2012
Sampling Method:	PM-10 Impactor	Operation Schedule:	Hourly (continuous)
Probe Height:	4.2 metersAGL (1.7m above shelter roof)	Sampling Season:	Year-round
Anemometer Height (m)	5.32 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.2m below inlet

Distance from Obstructions on Roof:	2m to met. support post
Distance from Obstructions Not on Roof:	None
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Site Operator; Quarterly by District Auditor
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☑ Variable: Wind Speed
- ☑ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **T-27 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
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Site Name: **T-4 TEOM**

Site Number:	1042	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	413927
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	Yes	UTM Y:	4022240
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079				
AQS Number:							
Current:	No						

Location:	On-lake monitor, southern portion Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	4.7 meters		
Traffic Count:	TBD		
Groundcover:	Veg, sand, large gravel, water		
Representative Area:	Southern Owens Lke		
Pollutant:	PM-10		
Monitor Objective:	Source Impact; special purpose monitor began operation April 2010.		
Spatial Scale:	Neighborhood scale	Start Date:	2/25/2010
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.7 meters	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	0

Distance from Obstructions on Roof:	0
Distance from Obstructions Not on Roof:	0
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 rate verification for manual PM sampler audit:	
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; quarterly by District Auditor
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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Site Name: **T-4 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

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Site Name: **T-7 TEOM**

Site Number:	1045	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	412968
County:	Inyo	Site Operator:	Susan Determann	TEOM Installed?:	Yes	UTM Y:	4024666
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079, PM10 continuous				
AQS Number:							
Current:	Yes						

Location:	On-lake monitor, southern portion of Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	10m to driveway		
Traffic Count:	2 per day (estimate)		
Groundcover:	Veg, sand, open playa		
Representative Area:	Southern Owens Lake		
Pollutant:	PM-10		
Monitor Objective:	Source Impact, Special Purpose Monitor, began July 2012		
Spatial Scale:	Neighborhood Scale	Start Date:	7/9/2012
Sampling Method:	PM-10 Impactor	Operation Schedule:	Hourly (continuous)
Probe Height:	4.4 meters	Sampling Season:	Year-round
Anemometer Height (m)	5.27 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	N/A	Dist to Suporting Struct:	0.5m below inlet

Distance from Obstructions on Roof:	1.7m to met. support post
Distance from Obstructions Not on Roof:	No obstructions
Distance From Trees:	none
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 rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Site Operator; Quarterly by District Auditor
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Barometric Pressure
- ☐ Variable: Precipitation
- ☑ Variable: Wind Speed
- ☑ Variable: Wind Direction
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **T-7 TEOM**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

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Site Name: **T-8 TEOM - Shut down Feb 2010**

Site Number:	1040	Collecting Agency:	GBUAPCD	MET Installed?:	No	UTM X:	414928
County:	Inyo	Site Operator:	Steve Mobley	TEOM Installed?:	Yes	UTM Y:	4024930
FIPS Code:	06-027	Monitor Type:	TEOM 1400ab, EQPM-1090-079				
AQS Number:							
Current:	No						

Location:	South-central Owens Lake		
Address:	Owens Lake, CA		
Distance to Road:	19.2 meters (berm)		
Traffic Count:	TBD		
Groundcover:	Veg, sand, large gravel		
Representative Area:	Southern Owens Lake special purpose monitor		
Pollutant:	PM-10		
Monitor Objective:	Source Impact, Special Purpose Monitor shut down Feb 2010.		
Spatial Scale:	Neighborhood scale	Start Date:	4/24/2008
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	4.4. meters	Sampling Season:	Year-round
Anemometer Height (m)		Analysis Method:	Gravimetry
Temp Probe Height (m):		Dist to Suporting Struct:	0

Distance from Obstructions on Roof:	0
Distance from Obstructions Not on Roof:	0
Distance From Trees:	No trees
Distance to Furnace or Incinerator:	0
Distance Between Collocated Monitors:	0
Unrestricted Airflow:	360
Probe Material:	N/A
Residence Time:	N/A
Will there be a change in 18 months?:	N/A
Suitable comparison against annual PM2.5?:	N/A
Frequency of flow rate verification for manual PM sampler audit:	N/A
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; quarterly by District Auditor
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- ☐ Variable: Temperature
- ☐ Variable: Wind Speed
- ☐ Variable: Barometric Pressure
- ☐ Variable: Wind Direction
- ☐ Variable: Precipitation
- ☐ Variable: Relative Humidity

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GBUAPCD Site Report

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Site Name: **T-8 TEOM - Shut down Feb 2010**

Site Photo:

North-facing photo:

East-facing photo:

West-facing photo:

South-facing photo:

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GBUAPCD Site Report

Great Basin Unified Air Pollution Control District
157 Short Street
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Site Name: **WMRC-OVL FDMS**

Site Number:	695	Collecting Agency:	GBUAPCD	MET Installed?:	Yes	UTM X:	382151
County:	Inyo	Site Operator:	Valerie Thorp	TEOM Installed?:	Yes	UTM Y:	4135722
FIPS Code:	06-027	Monitor Type:	PM10 TEOM 1400 ab/8500c FDMS - not a reference monitor, PM10 continuous				
AQS Number:	0002						
Current:	Yes						

Location:			
Address:	3000 E. LINE ST., BISHOP, CA. 93514		
Distance to Road:	80m north of site		
Traffic Count:	200 est.		
Groundcover:	Decomposed granite		
Representative Area:	Owens Valley 50 to 100km radius		
Pollutant:	PM10		
Monitor Objective:	Background Level		
Spatial Scale:	Regional	Start Date:	4/7/2006
Sampling Method:	PM-10 Impactor	Operation Schedule:	hourly
Probe Height:	5 meters (inlet)	Sampling Season:	Year-round
Anemometer Height (m)	10.0 meters	Analysis Method:	Gravimetry
Temp Probe Height (m):	9.6 meters	Dist to Suporting Struct:	0.3m below inlet

Distance from Obstructions on Roof:	No obstructions on roof
Distance from Obstructions Not on Roof:	3 meters to met tower
Distance From Trees:	N/A
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?:	Yes
Suitable comparison against annual PM2.5?:	No
Frequency of flow rate verification for manual PM sampler audit:	
Frequency of flow rate verification for automated PM analyzers audit:	Bi-weekly by Station Operator; Not in operation for EPA Audits; Quarterly District Audits; ARB 9/21/11; EPA (none)
Frequency of one-point QC check (gaseous):	N/A

Meteorological Variables:

- [x] Variable: Temperature
- [x] Variable: Wind Speed
- [ ] Variable: Barometric Pressure
- [x] Variable: Wind Direction
- [ ] Variable: Precipitation
- [x] Variable: Relative Humidity

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GBUAPCD Site Report

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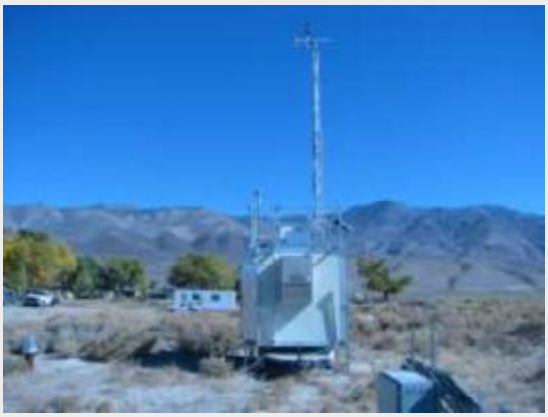
Site Name: **WMRC-OVL FDMS**

Site Photo:

North-facing photo:

East-facing photo:



West-facing photo:

South-facing photo:

Print Timestamp: 8/19/2014, 11:39:22 AM