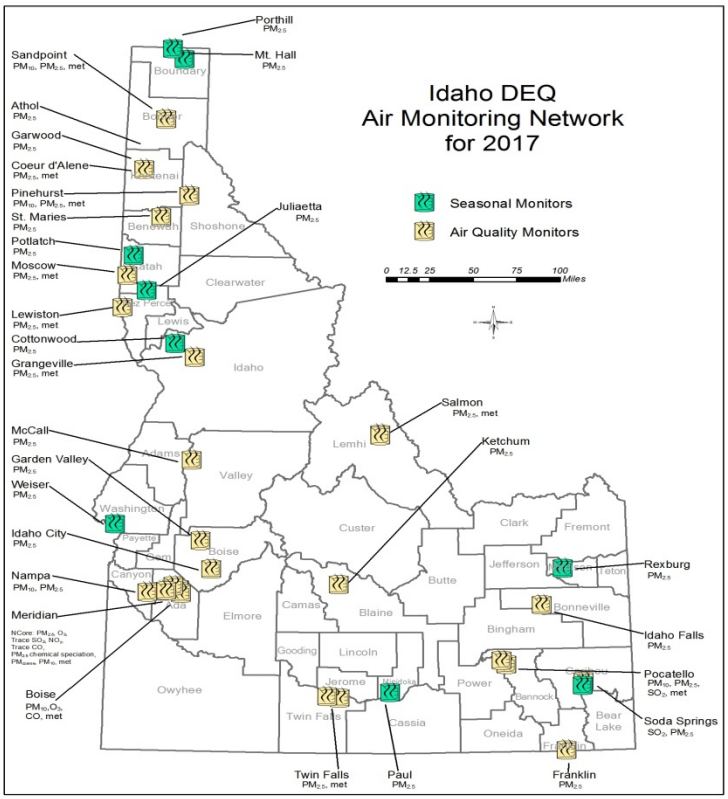
Idaho Department of Environmental Quality Annual Ambient Air Quality Monitoring Network Plan



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June 2017

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Abbreviations, Acronyms, and Symbols

µ	micron
AQI	Air Quality Index
AQS	air quality system
ARM	approved regional method
BAM	beta attenuation mass
CBSA	core-based statistical area
CFR	Code of Federal Regulations
CO	carbon monoxide
CRB	Crop Residue Burning
CSA	combined statistical area
DEQ	Idaho Department of Environmental Quality
EPA	United States Environmental Protection Agency
FEM	federal equivalent method
FRM	federal reference method
MSA	metropolitan statistical area
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
$PM_{2.5}$	particulate matter with diameter less than or equal to 2.5 µ
PM_{10}	particulate matter with diameter less than or equal to 10 µ
$PM_{10-2.5}$	particulate fraction with a nominal diameter between 2.5 and 10.0 µ
SIP	state implementation and maintenance plan
SLAMS	state and local air monitoring station
SO_2	sulfur dioxide
SPM	special purpose monitor
STN	Speciation Trends Network
TEOM	tapered element oscillating microbalance

Executive Summary

The main objective of the Idaho Department of Environmental Quality's (DEQ's) 2017 annual ambient air quality monitoring network plan is to determine whether the state's ambient air quality monitoring network is achieving its monitoring objectives and identify any needed modifications. This is an ongoing annual assessment. DEQ also conducts a comprehensive 5-year network assessment; most recently conducted in 2015, this document can be found on DEQ's webpage at *www.deq.idaho.gov/media/60177248/ambient-aq-monitoring-network-5-year-assessment.pdf*.

DEQ is proposing the following network modifications in this year's annual network plan:

- Relocate the nitrogen dioxide analyzer from the Meridian—Near-Road site to the Meridian—St. Luke's NCore site to retain National Ambient Air Quality Standards (NAAQS) monitoring for NO_2.
- Replace DEQ's single remaining 1405-F $PM_{2.5}$ tapered element oscillating microbalance (TEOM) monitor with a beta attenuation mass (BAM) 1020 $PM_{2.5}$ monitor. Both types are used as special purpose monitors (SPMs) for Air Quality Index (AQI) reporting. The replacement is to take place at the Pocatello—Garrett and Gould monitoring site.
- Relocate the Ketchum 1400AB $PM_{2.5}$ TEOM to a ground location near the current site. The monitor will be replaced with a BAM 1020 $PM_{2.5}$ monitor and will be operated year-round at least for the first year.

Since submitting the 2016 annual network plan, DEQ has made the following modifications to the network. Some items required United States Environmental Protection Agency (EPA) approval, while less significant items did not.

- Per the EPA final ruling as part of 40 CFR Part 58 monitoring requirement revisions, published in the Federal Register on March 28, 2016, DEQ discontinued lead monitoring at DEQ's NCore site.
- Per EPA revisions to the near-road monitoring requirements, DEQ discontinued monitoring at the Meridian—Near-Road site on April 1, 2017.
- DEQ replaced the Meridian—St. Luke's 1405-F $PM_{2.5}$ TEOM with a BAM 1020 $PM_{2.5}$ monitor (both types are used as SPMs for AQI reporting).
- DEQ installed a 2025 $PM_{2.5}$ Federal Reference Method monitor in Preston. This monitor will help characterize the spatial distribution of pollutants in the airshed.
- Per the recent ozone NAAQS review and revision, the White Pine ozone analyzer is now operating April 1 through September 30.
- Work is in progress replacing the remaining 1400AB $PM_{2.5}$ TEOM monitors with BAM 1020 $PM_{2.5}$ monitors (both used as SPMs for AQI reporting). This work is taking place at the Ketchum, McCall, Garden Valley, and Idaho City sites.
- Work is in progress on standardizing all DEQ meteorological towers with same model 2- and 10-meter temperature probes and aspirated fans for the purpose of generating delta temperature measurements.

1 Introduction

This document, in accordance with the federal requirements described below, is the Idaho Department of Environmental Quality's (DEQ's) 2017 annual ambient air quality monitoring network plan. The primary goal of the annual network plan is to determine whether the state monitoring network is achieving its monitoring objectives and identify any needed modifications. The appendices provide additional information on network design values (Appendix A), the IMPROVE monitoring network (Appendix B), supplemental correspondence (Appendix C), and federal requirement checklists (Appendix D).

Idaho's monitoring network has four principal objectives: (1) assess compliance with National Ambient Air Quality Standards (NAAQS); (2) support smoke management programs, including agricultural and prescribed burning practices; (3) identify emergency episodes caused by windblown dust or wildfire; and (4) support the evaluation of state implementation and maintenance plans (SIPs). In addition, DEQ operates a network of continuous fine particulate matter ($PM_{2.5}$) monitors and surface meteorology stations to support air quality forecasting, the Air Quality Index (AQI) program, and modeling projects. DEQ also leverages the IMPROVE monitoring network to fulfill requirements for the $PM_{2.5}$ transport (Hells Canyon) and $PM_{2.5}$ background (Craters of the Moon National Monument) monitoring sites (Appendix B).

Beginning July 1, 2007, state agencies were required to adopt and submit to the United States Environmental Protection Agency (EPA) regional administrator an annual monitoring network plan (40 Code of Federal Regulations [CFR] §58.10). The plan shall provide for the establishment and maintenance of an air quality surveillance system that consists of a network made up of the following types of monitoring stations:

- State and local air monitoring stations (SLAMS), including monitors that use the following methods:
    - Federal reference method (FRM)
    - Federal equivalent method (FEM)
    - Approved regional method (ARM)
- NCore stations (included in the national network of multipollutant monitoring stations)
- $PM_{2.5}$ (particulate matter with diameter less than or equal to 2.5 microns [µ]) Speciation Trends Network (STN) stations
- Special purpose monitoring (SPM) stations

This plan also lists seasonal $PM_{2.5}$ monitors used for smoke and agricultural burning management.

The plan shall include a statement of purposes for each monitor and evidence that siting and operation of each monitor meet the requirements of Appendices A, B, C, D, and E of 40 CFR Part 58 where applicable (Appendix D).

This plan is made available for public inspection for 30 days prior to submission to EPA and subsequently includes public comments and responses (Appendix E). Any annual network plan that proposes SLAMS network modifications—including new monitoring sites—is subject to

approval by the EPA regional administrator, who shall approve or disapprove the plan within 120 days.

All required stations to be operational by January 1, 2018 are included in this plan. Specific locations for the required monitors are included in this plan.

The annual network plan contains the following required information for existing and proposed sites where appropriate:

- The AQS (air quality system, EPA's database) site identification number
- The location, including street address and geographical coordinates
- The sampling and analysis method(s) for each measured parameter
- The operating schedules for each monitor
- Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal
- The monitoring objective and spatial scale of representativeness for each monitor as defined in Appendix D to 40 CFR Part 58
- The identification of any sites that are suitable or unsuitable for comparison against the annual $PM_{2.5}$ NAAQS as described in 40 CFR §58.30
- The metropolitan statistical area (MSA), core-based statistical area (CBSA), combined statistical area (CSA), or other area represented by the monitor
- The designation of any lead monitors as either source-oriented or non-source-oriented (i.e., NCore) according to Appendix D to 40 CFR Part 58
- Any source-oriented monitors for which a waiver has been requested or granted by the EPA regional administrator as allowed for under paragraph 4.5(a)(ii) of Appendix D to 40 CFR Part 58
- Any source-oriented or non-source-oriented site for which a waiver has been requested or granted by the EPA regional administrator for the use of lead-PM_{10} (particulate matter with diameter less than or equal to 10 µ) monitoring in lieu of lead-total suspended particulate monitoring allowed under paragraph 2.10 of Appendix C to 40 CFR Part 58

The annual network plan documents how states and local agencies provide for the review of changes to a $PM_{2.5}$ monitoring network that impact the location of a violating $PM_{2.5}$ monitor. The affected state or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

2 Air Quality Surveillance Systems and Monitoring Objectives

Ambient air monitoring objectives have shifted over time, requiring air quality agencies to reevaluate and reconfigure monitoring networks. A variety of factors contribute to these shifting monitoring objectives:

- Air quality has changed since adoption of the federal Clean Air Act and NAAQS. For example, the problems of high ambient concentrations of lead and carbon monoxide have largely been solved.

- Populations and behaviors have changed. For example, the US population has (on average) grown, aged, and shifted toward urban and suburban areas over the past four decades. In addition, rates of vehicle ownership and annual miles driven have increased.
- New air quality objectives have been established, including rules to reduce air toxics, $PM_{2.5}$, and regional haze.
- The understanding of air quality issues and the capability to monitor air quality have both improved. Together, the enhanced understanding and capabilities can be used to design more effective air monitoring networks.

Ambient air monitoring networks must be designed to meet three basic monitoring objectives. Each objective is equally important and must be considered individually.

- **Provide air pollution data to the general public in a timely manner**. Data can be presented to the public in a number of ways, including air quality maps, newspaper articles or advertisements, Internet sites, and as part of weather forecasts and public advisories.
- **Provide support for determining compliance with ambient air quality standards and developing emissions control strategies**. Data from qualified monitors for NAAQS pollutants are used for comparing an area's air pollution levels against the NAAQS. Data from monitors of various types can be used in developing attainment and maintenance plans. Data from SLAMS, and especially the NCore station, are used to evaluate the regional air quality models used in developing emission strategies and to track effectiveness of air pollution abatement control measures. In monitoring locations near major air pollution sources, source-oriented monitoring data can provide insight into how well industrial sources are controlling their pollutant emissions.
- **Provide support for air pollution research studies**. Air pollution data from the NCore multipollutant monitoring network can be used to supplement data collected by researchers working on health effects assessments and atmospheric processes or for monitoring methods development work.

To support the air quality management work indicated in the three basic air monitoring objectives, a network must be designed with a variety of monitoring site types. Monitoring sites must be capable of informing airshed managers about many things including the peak air pollution levels, typical levels in populated areas, air pollution transported into and outside of a city or region, and air pollution levels near specific emissions sources. The following list summarizes these site types:

- Maximum concentrations of air pollutants expected to occur in the area covered by the network
- Typical pollutant concentrations in areas of high population density
- Impact of significant sources or source categories on air quality
- General background concentration levels of air pollutants
- Extent of regional pollutant transport among populated areas and compliance with secondary air quality standards
- Air pollution impacts on visibility, vegetation damage, or other welfare-based impacts

The adequacy of an ambient air monitoring network may be determined by using a variety of tools, including the following:

- Federal monitoring requirements and network minimums
- Analyses of historical monitoring data
- Maps of pollutant emissions densities
- Dispersion modeling
- Special studies/saturation sampling
- SIP requirements
- Revised monitoring strategies (e.g., new regulations, reengineering of the air monitoring network)
- Network maps and network descriptions with site objectives defined
- Best professional judgment

The appropriate location of a monitor can only be determined on the basis of stated objectives. The following tools can help determine whether monitor locations are meeting their stated objectives:

- Maps, graphical overlays, and information based on geographic information systems, which are extremely helpful for visualizing the adequacy of monitor locations
- Plots (graphs) of potential emissions levels and/or historical monitored levels of pollutants versus monitor locations
- Modeling or special studies (including saturation monitoring studies) may be appropriate for determining the adequacy of a particular monitor location

3 DEQ's Ambient Air Quality Monitoring Network

DEQ is responsible for operating and maintaining the ambient air monitoring network for the state of Idaho. Some air monitors in Idaho are managed by tribal monitoring organizations on tribal lands. This document is limited to the monitors in the air monitoring network that are managed by DEQ (Figure 1).

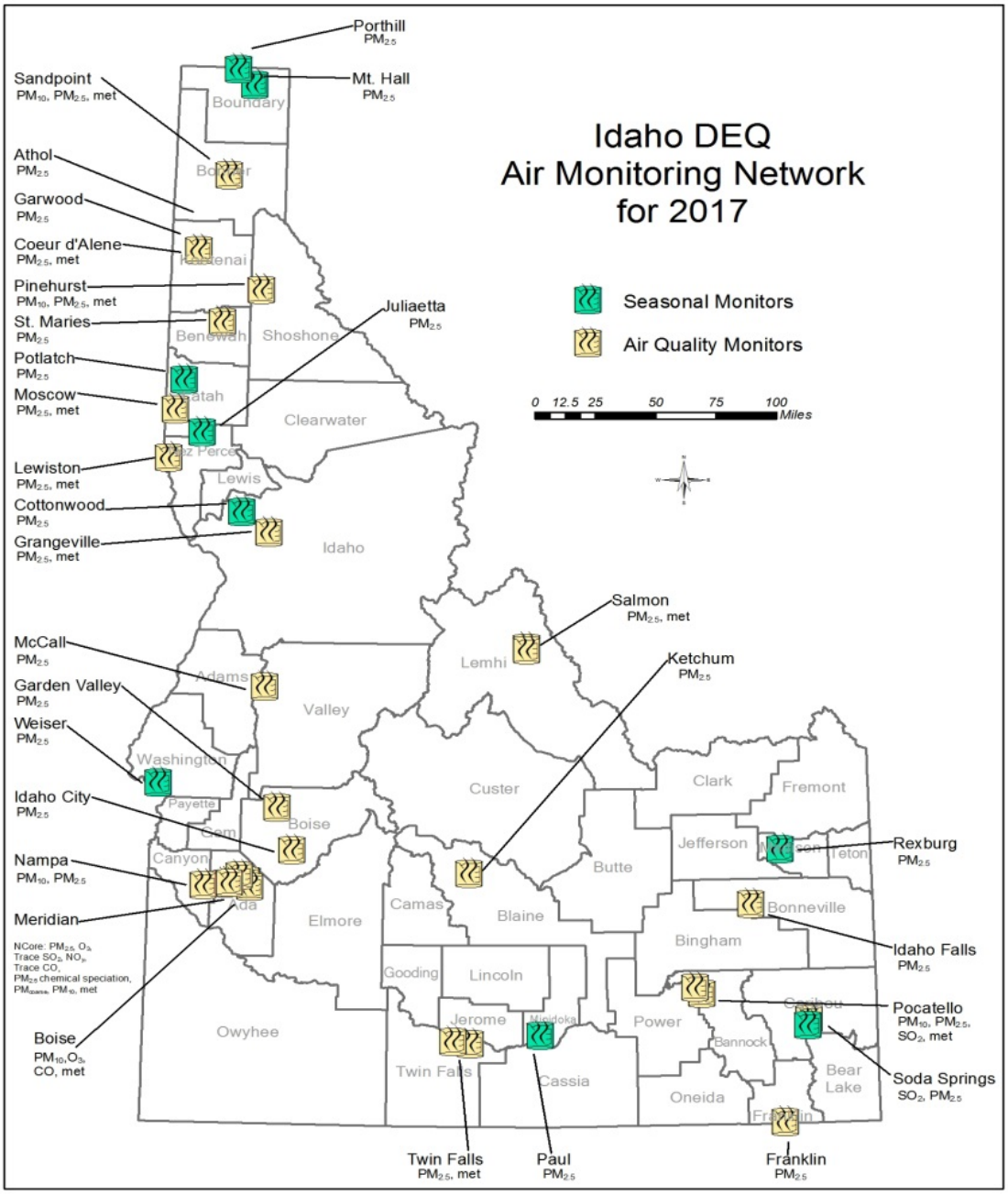

Figure 1. Idaho air quality monitoring network, 2017.

3.1 Monitoring Sites

On January 1, 2017, DEQ's SLAMS network consisted of 27 distinct monitoring sites measuring criteria pollutants and surface meteorology (Table 1). DEQ's ambient air quality monitoring network is operated and maintained by monitoring staff at DEQ's six regional offices.

Table 1. DEQ monitoring stations, locations, and AQS identification codes.

Site	Address	Latitude/ Longitude	AQS Identification
Sandpoint— University of Idaho	U of I Research Center, 2105 N. Boyer Ave. Sandpoint, ID 83864	+48.291820/ - 116.556560	160170003
Coeur d'Alene— Lancaster Rd.	Lancaster Road Hayden, ID 83835	+47.788908/ -116.804539	160550003
Coeur d'Alene—LMP	Camp Cross, McDonald Point Lake Coeur d'Alene, ID	+47.555253/ -116.817331	160550004
St. Maries	Forest Service Building St. Maries, ID 83861	+47.316667/ -116.570280	160090010
Pinehurst	106 Church St. Pinehurst, ID 83850	+47.536389/ -116.236667	160790017
Moscow	1025 Plant Sciences Rd. Moscow, ID 83843	+46.728000/ -116.955667	160570005
Lewiston	1200 29th St. Lewiston, ID 83501	+46.408352/ -116.992533	160690012
Grangeville	US Forest Service Compound Grangeville, ID 83530	+45.9274167/ -116.105944	160490002
McCall	500 N. Mission St. McCall, ID 83638	+44.542486/ -116.062358	160850002
Garden Valley	946 Banks Lowman Rd. Garden Valley, ID 83622	+44.104675/ -115.973084	160150002
Nampa—Fire Station	923 1st St S. Nampa, ID 83651	+43.580310/ -116.562676	160270002
Meridian— St. Luke's	Eagle Rd & I-84 Meridian, ID 83642	+43.600699/ -116.347853	160010010
Meridian— Near-Road	1311 East Central Dr. Meridian, ID 83642	+43.593929/ -116.38125	160010023
Boise— Eastman Garage	166 N. 9th Boise, ID 83702	+43.616379/ -116.203817	160010014
Boise— Fire Station #5	16th & Front Boise, ID 83702	+43.618889/ -116.213611	160010009
Boise— White Pine Elementary	401 East Linden St. Boise, ID 83706	+43.577603/ -116.178156	160010017
Garden City	Ada County Fairgrounds Garden City, ID 83714	+43.647819/ -116.269514	160010020
Idaho City	3851 Hwy 21 Idaho City, ID 83631	+43.823017/ -115.838557	160150001
Ketchum	111 West 8th St. Ketchum, ID 83340	+43.682558/ -114.371094	160130004
Twin Falls	650 W. Addison Twin Falls, ID 83301	+42.56505/ -114.494767	160830007
Kimberly	50 Highway 50 Kimberly, ID 83341	+42.553325/ -114.354853	160830009
Pocatello—Garrett and Gould	Garrett & Gould Pocatello, ID 83204	+42.876725/ -112.460347	160050015

Site	Address	Latitude/ Longitude	AQS Identification
Pocatello— Sewage Treatment Plant	Batiste Chubbuck Rd. Pocatello, ID 83204	+42.916389/ -112.515833	160050004
Franklin	East 4800 South Road Franklin, ID 83237	+42.013333/ -111.809167	160410001
Soda Springs	5-Mile Rd. Soda Springs, ID 83276	+42.695278/ -111.593889	160290031
Idaho Falls	Hickory and Sycamore St. Idaho Falls, ID 83402	+43.464700/ -112.046450	160190011
Salmon— Charles St.	N. Charles St. Salmon, ID 83467	+45.181893/ -113.890285	160590004

DEQ also uses seasonal monitors at 11 locations for the state's Crop Residue Burning (CRB) Program (Table 2). These monitors are operated on a case-by-case basis; thus, seasonal operation duration varies widely.

Table 2. CRB station locations.

Site	Address	Latitude/ Longitude
Porthill	Tavern Farm Rd. Porthill, ID 83853	+48.995911/ -116.509953
Mt. Hall	1275 Idaho 1 Bonners Ferry, ID 83805	+48.894014/ -116.359381
Athol	NE corner of Pastime St./Grove Ave. Athol, ID 83801	+47.948925/ -116.710978
Garwood	17506 N. Ramsey Rd. Rathdrum, ID 83858	+47.830706/ -116.806794
Cottonwood	BLM Field Office, 1 Butte Dr. Cottonwood, ID 83522	+46.06319/ -116.34824
Potlatch	510 Elm St. Potlatch, ID 83855	+46.92106/ -116.89627
Juliaetta	3rd Street Juliaetta, ID 83535	+46.578731/ -116.708958
Weiser	690 W. Indianhead Rd. Weiser, ID 83672	+44.261694/ -116.979172
Paul	201 N. 1st Street West Paul, ID 83347	+42.6078167/ -113.7868167
Soda Springs— Caribou Hospital	Caribou Hospital, 300 South 3rd Street West Soda Springs, ID 83276	+42.651670/ -111.614720
Rexburg	Madison Middle School, 575 W. 7th Street Rexburg, ID 83440	+43.809486/ -111.800475

3.2 DEQ Monitoring Network—Monitoring Purpose, Scale of Representativeness, and Area Represented

The ambient air quality and meteorological data collected from DEQ's network is used for a variety of purposes, including the following:

- Determining compliance with the NAAQS
- Determining the locations of maximum pollutant concentrations
- Forecasting air quality to determine the AQI
- Providing early detection of smoke impacts (smoke management)
- Determining the effectiveness of air pollution control programs
- Evaluating the effects of air pollution levels on public health
- Tracking the progress of air quality-related SIPs
- Supporting pollutant dispersion models
- Developing responsible, cost-effective air pollution control strategies
- Analyzing air quality trends

Spatial scale of representativeness is used to clarify the link between general monitoring objectives, site types, and the physical location of a particular monitor. The goal in locating monitors is to correctly match the spatial scale represented by the sample of monitored air with the spatial scale most appropriate for the monitoring site type, the air pollutant measured, and the monitoring objective. Thus, spatial scale of representativeness is described in terms of the physical dimensions of the air parcel nearest to a monitoring site throughout which actual pollutant concentrations are reasonably similar. The scales of interest for the monitoring site types described above are as follows:

1. ***Microscale***—Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
2. ***Middle scale***—Defines the concentrations typical of areas up to several city blocks in size with dimensions ranging from about 100 to 500 meters.
3. ***Neighborhood scale***—Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the range of 0.5–4.0 kilometers.
4. ***Urban scale***—Defines concentrations within an area of city-like dimensions, on the order of 4–50 kilometers. Within a city, the geographic placement of emissions sources may result in no single site that can be said to represent air quality on an urban scale. The neighborhood and urban scales have the potential to overlap in applications that concern secondarily formed or homogeneously distributed air pollutants.
5. ***Regional scale***—Defines an area that is usually rural, is of reasonably homogeneous geography without large emissions sources, and extends from tens to hundreds of kilometers.
6. ***National and global scales***—These measurement scales represent concentrations characterizing a nation or the globe as a whole.

Proper siting of a monitor requires specifying the monitoring objective, the types of sites necessary to meet the objective, and the desired spatial scale of representativeness. For example, consider a case where the objective is to determine NAAQS compliance by understanding the

maximum ozone concentrations for an area. Candidate areas would most likely be located downwind of a metropolitan area, probably in suburban residential areas where children and other susceptible individuals are likely to be outdoors. Sites in such areas are most likely to represent an urban scale of measurement. In this example, physical location would be determined by considering ozone precursor emission patterns, public activity, and meteorological characteristics affecting ozone formation and dispersion. Thus, spatial scale of representativeness would not be used in the selection process but would be a result of site location.

In some cases, the physical location of a site is determined from jointly considering both the basic monitoring objective and the type of monitoring site desired or required. For example, to determine typical $PM_{2.5}$ concentrations over a geographic area that has relatively high $PM_{2.5}$ concentrations, a neighborhood scale site is most appropriate. Such a site would likely be located in a residential or commercial area having a high overall $PM_{2.5}$ emission density but not in the immediate vicinity of any single dominant source. In this example, the desired scale of representativeness would be an important factor in determining the physical location of the monitoring site.

In either case, classification of the monitor by its type and spatial scale of representativeness is necessary and will aid in interpreting the monitoring data for a particular monitoring objective (e.g., public reporting, NAAQS compliance determination, or research support).

Table 3 illustrates the relationship between the various site types that can be used to support the three basic monitoring objectives and the scales of representativeness that are generally most appropriate for each site type.

Table 3. Relationships between site types and scales of representativeness.

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

Federal ambient air monitoring regulations use the statistical-based definitions for metropolitan areas provided by the Office of Management and Budget and the Census Bureau. These areas are referred to as metropolitan statistical areas or micropolitan statistical areas—both of which are CBSAs—and CSAs. A CBSA associated with at least one urbanized area of 50,000 individuals or more is termed an MSA. A CBSA associated with at least one urbanized cluster of at least 10,000 individuals or more is termed a micropolitan statistical area. A CSA consists of two or more adjacent CBSAs.

By definition, both MSAs and CSAs have a high degree of integration; however, many such areas cross state or other political boundaries. An MSA or CSA may also cross more than one airshed. EPA recognizes that state or local agencies must consider MSA/CSA boundaries and

their own political boundaries and geographical characteristics in designing their air monitoring networks. EPA also recognizes there may be situations where the EPA regional administrator and the affected state or local agencies may need to augment or divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected state or local agency in the absence of an agreement between the affected agencies and the EPA regional administrator.

Table 4 summarizes the monitoring purpose, area represented, and monitoring scale of representativeness for DEQ's monitoring sites, including seasonal monitors.

Table 4. Monitoring objectives, areas represented, and scales of representation.

Site	Monitoring Objective	Area Represented	Monitoring Scale
Sandpoint—University of Idaho	AQI, PM_{10} SIP, PM_{10} NAAQS, smoke management, modeling-meteorological	Bonner County	Neighborhood
Coeur d'Alene—Lancaster Rd.	AQI, smoke management, modeling-meteorological	Coeur d'Alene, ID MSA	Urban
Coeur d'Alene—LMP	Modeling-meteorological	Coeur d'Alene, ID MSA	Neighborhood
St. Maries	$PM_{2.5}$ NAAQS, AQI, smoke management	Benewah County	Neighborhood
Pinehurst	PM_{10} SIP, PM_{10} NAAQS, $PM_{2.5}$ NAAQS, AQI, smoke management, modeling-meteorological	Shoshone County	Neighborhood
Porthill	Smoke management	Boundary County	Urban
Mt. Hall	Smoke management	Boundary County	Urban
Athol	Smoke management	Kootenai County	Urban
Garwood	Smoke management	Kootenai County	Urban
Moscow	AQI, smoke management, modeling-meteorological	Latah County	Urban
Lewiston	AQI, smoke management, modeling-meteorological	Lewiston ID–WA MSA	Neighborhood
Grangeville	AQI, smoke management, modeling-meteorological	Idaho County	Neighborhood
Cottonwood	Smoke management	Idaho County	Neighborhood
Potlatch	Smoke management	Latah County	Neighborhood
Juliaetta	Smoke management	Latah County	Neighborhood
McCall	AQI, smoke management	Valley County	Urban
Garden Valley	AQI, smoke management	Boise County	Urban
Nampa—Fire Station	PM_{10} NAAQS, $PM_{2.5}$ NAAQS, AQI	Boise City-Nampa MSA[a]	Neighborhood

Site	Monitoring Objective	Area Represented	Monitoring Scale
Meridian—St. Luke's	NCore—trace gas, NCore—$PM_{10-2.5}$, $PM_{2.5}$ NAAQS, $PM_{2.5}$ chemical speciation, O_3 NAAQS, AQI, modeling-meteorological	Boise City-Nampa MSA[a]	Neighborhood
Meridian—Near-Road	NO, NO_2, NO_x, CO	Boise City-Nampa MSA[a]	Micro
Boise—Eastman Garage	CO SIP, CO NAAQS	Northern Ada County	Micro
Boise—Fire Station #5	PM_{10} SIP, PM_{10} NAAQS, smoke management, AQI	Northern Ada County	Neighborhood
Boise—White Pine Elementary	O_3 NAAQS	Boise City-Nampa MSA[a]	Neighborhood
Garden City	Modeling-meteorological	Boise City-Nampa MSA[a]	Neighborhood
Idaho City	Smoke management, AQI	Boise County	Neighborhood
Weiser	Smoke management	Washington County	Neighborhood
Ketchum	Smoke management, AQI	Blaine County	Urban
Twin Falls	Smoke management, AQI	Twin Falls, ID micropolitan statistical area	Neighborhood
Kimberly	Modeling-meteorological	Twin Falls, ID micropolitan statistical area	Urban
Paul	Smoke management	Minidoka County	Neighborhood
Pocatello—Garrett and Gould	PM_{10} SIP, PM_{10} NAAQS, AQI, modeling-meteorological	Pocatello, ID MSA	Neighborhood
Pocatello—Sewage Treatment Plant	SO_2 NAAQS	Pocatello, ID MSA	Middle
Franklin	$PM_{2.5}$ NAAQS, $PM_{2.5}$ SIP, AQI	Logan UT-ID MSA	Neighborhood
Soda Springs	SO_2 NAAQS	Caribou County	Middle
Soda Springs—Caribou Hospital	Smoke management	Caribou County	Urban
Idaho Falls	AQI	Idaho Falls, ID MSA	Neighborhood
Salmon—Charles St.	$PM_{2.5}$ NAAQS, AQI, modeling-meteorological	Lemhi County	Neighborhood
Rexburg	Smoke management	Madison County	Urban

Notes: AQI = air quality index, CO = carbon monoxide, MSA = metropolitan statistical area, NAAQS = national ambient air quality standard, $PM_{2.5}$ = particulate matter less than 2.5 µ in diameter, PM_{10} = particulate matter less than 10 µ in diameter, O_3 = ozone, NO = nitric oxide, NO_2 = nitrogen dioxide, NO_x = nitrogen oxides, SIP = state implementation plan, SO_2 = sulfur dioxide

[a] Boise City-Nampa MSA, as defined by the United States Census Bureau, includes Ada, Boise, Canyon, Gem, and Owyhee Counties

3.3 Monitoring Methods, Monitor Designation, and Sampling Frequency

Monitoring methods used for making NAAQS compliance determinations at a SLAMS site must be designated FRM or FEM in accordance with 40 CFR Part 53. A method for monitoring $PM_{2.5}$ concentrations that has not been designated as an FRM or FEM may be approved as an ARM by the EPA regional administrator. SPMs do not meet any of the above criteria and are typically used for special studies or as surrogate measures or indicators of emergency episodes (e.g., tapered element oscillating microbalance (TEOM) monitors used for early detection of smoke).

Table 5 lists monitoring methods used by DEQ along with associated method codes required when submitting the monitoring data to EPA's AQS database. Method codes for meteorological parameters are not included in the table.

Table 5. Air monitoring method codes.

Parameter/ Pollutant	Method Designation	AQS Method Code	Instrument and Instrument Parameters
PM_{10}	FEM	079	TEOM—gravimetric analysis, instrumental—R&P SA246B inlet
PM_{10}	FRM	127	Thermo/R & P 2025 sequential PM_{10}
CO	FRM	593[a]	Teledyne API Model 300EU
	FEM	593[a]	Teledyne API Model T300U
	FEM	093	Teledyne API Model T300
SO_2	FEM	100	Teledyne API Model T100—UV fluorescent
	FEM	060	Thermo Model 43C, pulsed fluorescence
	FRM	600[a]	Teledyne API Model 100EU—UV fluorescent
	FEM	600[a]	Teledyne API Model T100U
O_3	FEM	087	Teledyne API, Model 400E
	FEM	087	Teledyne API Model T400
NO_2	FRM	099	Teledyne API, Model 200E—chemiluminescence
	FEM	200	Teledyne API Model T200UP—photolytic
	FEM	599	Teledyne API, Model 200EU
NO_y	FEM	699[a]	Teledyne API, Model 200EU
	FEM	699[a]	Teledyne API, Model T200U
$PM_{2.5}$	FRM	145	R&P Model 2025 sequential w/ VSCC
$PM_{2.5}$	SPM	701 or 703[b]	R&P TEOM w/ SCC—no correction factor
	SPM	715 or 716[b]	R&P TEOM w/ VSCC—no correction factor
	SPM	178	Thermo TEOM 1405 w/ SCC
	FEM	581	Thermo TEOM 1405-F (FDMS) w/ VSCC
	SPM	183	Thermo TEOM 1405-F (FDMS) w/ SCC
	FEM	170	Met One Beta Gauge (BAM) w/ VSCC
	SPM	731	Met One Beta Gauge (BAM) w/ SCC
$PM_{10\text{-}2.5}$	FRM	176	Thermo Scientific Partisol-Plus Model 2025 Sequential Sampler Pair w/ VSCC
PM_{10}-Pb	FEM	811	Thermo/R & P 2025 PM_{10} w/ VSCC w/ XRF analysis

Notes: BAM = beta attenuation monitor, CO = carbon monoxide, FDMS = filter dynamics measurement system, FEM = federal equivalent method, FRM = federal reference method, NO_2 = nitrogen dioxide, No_y = total reactive nitrogen, O_3 = ozone, $PM_{2.5}$ = particulate matter less than 2.5 µ in diameter, PM_{10} = particulate matter less than 10 µ in diameter, $PM_{10\text{-}2.5}$ = particulate matter in between 2.5 and 10 µ in diameter, PM_{10}-Pb = lead, SCC = sharp cut cyclone, SO_2 = sulfur dioxide, SPM = special purpose monitor, TEOM = tapered element oscillating microbalance, UV = ultraviolet, VSCC = very sharp cut cyclone, XRF = X-ray fluorescence

[a] Trace gas monitor – NCore

[b] Applicable code varies seasonally w/ instrument operating temperature settings

Monitoring sites designated as SLAMS are intended to address specific air quality management interests and are frequently single-pollutant measurement sites. The SLAMS sites must be approved by the EPA regional administrator.

Monitoring sites designated as SPMs in the annual network plan and AQS do not count toward meeting network minimum requirements. SPM sites using methods designated as FRMs or FEMs or approved as ARMs are bound to the quality assurance requirements of 40 CFR Part 58 Appendix A.

Gaseous pollutants and meteorological parameters are sampled continuously and typically averaged for each hour. Data completeness for a continuous monitor is computed as the number of valid hourly samples collected divided by the number of potential hourly samples for the period in question (e.g., 8,760 potential hourly samples annually).

Particulate matter can be sampled continuously or by time-integrated, filter-based methods. Filter-based methods typically collect samples for 24-hour periods. For NAAQS comparison, particulate matter data are reported as a 24-hour average, collected from midnight to midnight at local standard time. The minimum monitoring schedule for a $PM_{2.5}$ site is based on the type of monitor, the monitor's objectives, and the design value (relative to the 24-hour NAAQS) determined for the monitored site (Figure 2).

For the monitors in DEQ's ambient air quality monitoring network, Table 6 lists a variety of parameters associated with the monitors as well as information that is used in reporting data to AQS.

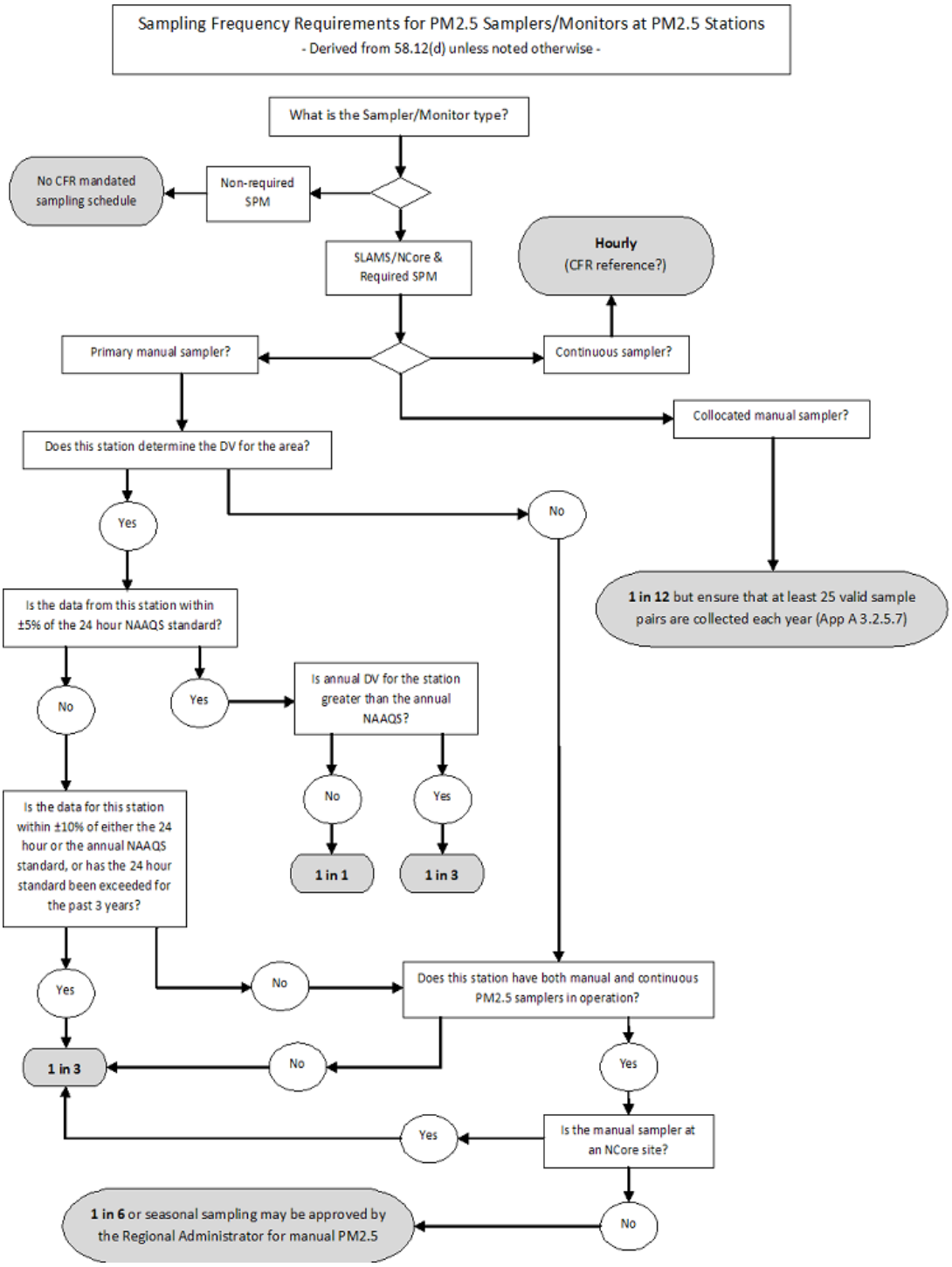

Figure 2. Minimum monitoring frequency based on ratio of local concentration to standard. (Note: DV = design value.)

Table 6. Site summary including pollutants monitored, monitor designation, monitoring frequency, and method codes.

Site	Pollutant Monitored	Begin Date	Monitor Designation	Monitoring Frequency	AQS Method Code	Parameter Code	POC #
Sandpoint—University of Idaho	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
	PM_{10}—TEOM	2013	SLAMS	Continuous	079	81102	3
	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	3
Coeur d'Alene—Lancaster Rd.	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	3
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
Coeur d'Alene—LMP	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
St. Maries	$PM_{2.5}$—FRM	2003	SLAMS	1/1	145	88101	1
	$PM_{2.5}$—BAM 1020	2014	SPM	Continuous	731	88502	3
Pinehurst	$PM_{2.5}$—FRM	1999	SLAMS	1/1	145	88101	1
	$PM_{2.5}$—BAM 1020	2014	SPM	Continuous	731	88502	4
	PM_{10}—TEOM	1998	SLAMS	Continuous	079	81102	3
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
Moscow	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	4
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
Lewiston	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	4
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
Grangeville	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	4
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
McCall	$PM_{2.5}$—TEOM	2010	SPM	Continuous	715 or 716	88502	3
Garden Valley	$PM_{2.5}$—TEOM	2001	SPM	Continuous	715 or 716	88502	3
Nampa—Fire Station	PM_{10}—TEOM	2000	SLAMS	Continuous	079	81102	2
	$PM_{2.5}$—FRM	2008	SLAMS	1/3	145	88101	1
	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	3

Site	Pollutant Monitored	Begin Date	Monitor Designation	Monitoring Frequency	AQS Method Code	Parameter Code	POC #
Meridian—St. Luke's	$PM_{2.5}$—FRM	2006	NCore	1/3	145	88101	1
	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	7
	$PM_{2.5}$ Chemical Speciation	2006	NCore	1/3			5
	$PM_{10-2.5}$	2011	NCore	1/3	176	86101	1
	O_3	2007	NCore	Continuous	087	44201	1
	SO_2	2009	NCore	Continuous	600	42401	1&2
	NO_y	2009	NCore	Continuous	699	42600/42601/42612	1,3,1
	CO	2009	NCore	Continuous	593	42101	1
	PM_{10}	2011	NCore	1/3	127	85101	1
	10-meter meteorology	N/A	NCore	Continuous	—[a]	—[a]	—[a]
	$PM_{2.5}$—FRM	2013	Precision	1/6	145	88101	2
	PM_{10}	2011	Precision	1/12	127	85101	2
Meridian—Near-Road	NO_2,NO,NO_x	2012	SLAMS/Near-road	Continuous	099	42602/42601/42603	2,2,2
	CO	2012	SLAMS/Near-road	Continuous	593	42101	1
Boise—Eastman Garage	CO	1993	SLAMS	Continuous	093	42101	1
Boise—Fire Station #5	PM_{10}—TEOM	1999	SLAMS	Continuous	079	81102	3
Boise—White Pine Elementary	O_3	2009	SLAMS	Continuous	087	44201	1
Garden City	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
Idaho City	$PM_{2.5}$—TEOM	2000	SPM	Continuous	715 or 716	88502	3
Ketchum	$PM_{2.5}$—TEOM (seasonal)	2009	SPM	Continuous	715 or 716	88502	3
Twin Falls	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	3
Kimberly	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]
Pocatello—Garrett and Gould	$PM_{2.5}$—1405-F TEOM/FDMS	2015	SPM	Continuous	183	88502	4
	PM_{10}—TEOM	2001	SLAMS	Continuous	079	81102	3
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]

Site	Pollutant Monitored	Begin Date	Monitor Designation	Monitoring Frequency	AQS Method Code	Parameter Code	POC #
Pocatello—Sewage Treatment Plant	SO_2	1981	SLAMS	Continuous	100	42401	2&4
Franklin	$PM_{2.5}$—FRM	2004	SLAMS	1/3	145	88101	1
	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	3
Soda Springs	SO_2	2000	SLAMS	Continuous	100	42401	1&2
Idaho Falls	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	4
Salmon—Charles St.	$PM_{2.5}$—FRM	2003	SLAMS	1/3	145	88101	1
	$PM_{2.5}$—BAM 1020	2009	SPM	Continuous	731	88502	4
	10-meter meteorology	N/A	SPM	Continuous	—[a]	—[a]	—[a]

Notes: BAM = beta attenuation monitor, CO = carbon monoxide, FDMS = filter dynamics measurement system, FRM = federal reference method, NO = nitric oxide, NO_2 = nitrogen dioxide, NO_x = nitrogen oxides, NO_y = total reactive nitrogen, O_3 = ozone, Pb = lead, $PM_{2.5}$ = particulate matter less than 2.5 µ in diameter, PM_{10} = particulate matter less than 10 µ in diameter, $PM_{10-2.5}$ = particulate matter in between 2.5 and 10 µ in diameter, SO_2 = sulfur dioxide, TEOM = tapered element oscillating microbalance

[a] Meteorological parameters are listed in Table 7.

DEQ currently operates twelve 10-meter meteorological stations. Meteorological measurements are used to support AQI forecasting and air quality modeling analyses. Data collected from DEQ's meteorological stations are submitted to AQS.

Table 7 provides a list of parameters measured at DEQ meteorological stations. DEQ operates the meteorological monitoring network in accordance with EPA's *Quality Assurance Handbook for Air Pollution Measurement Systems Volume IV: Meteorological Measurements Version 2.0 (Final)* (2008).

Table 7. DEQ meteorological monitoring stations and parameters.

Site	Meteorological Parameters Monitored							
	2-meter temp. (°C)	10-meter temp. (°C)	Barometric Pressure (mbar)	Relative Humidity (%)	Wind Direction (degrees)	Wind Speed (m/s)	Solar Radiation (Watt/m^2)	Precipi-tation (rain, inches)
Sandpoint—University of Idaho	X	X	X	X	X	X	X	X
Pinehurst	X	X	X	X	X	X	X	X
Coeur d'Alene—LMP	X	X	X	X	X	X	X	X
Coeur d'Alene—Lancaster Rd.	X	X	X	X	X	X	X	X
Moscow	X	X	X	X	X	X	X	X
Lewiston	X	X	X	X	X	X	X	X
Grangeville	X	X	X	X	X	X	X	X
Meridian—St. Luke's	X	X	X	X	X	X	X	N/A
Garden City	X	X	X	X	X	X	X	N/A
Kimberly	X	X	X	X	X	X	X	N/A
Pocatello—Garrett and Gould	X	X	X	X	X	X	X	X
Salmon—Charles St.	X	X	X	X	X	X	X	N/A

Notes: m/s = meter per second, mbar = millibar, Watt/m^2 = watt per square meter, N/A = parameter not monitored, X = monitored parameter

4 DEQ Network Modifications Subsequent to the EPA-Approved 2016 Ambient Monitoring Network Plan

The following network modifications were made after EPA approval of the 2016 annual network plan. Modifications proposed/implemented after the 2016 plan and prior to DEQ submitting this 2017 plan have been addressed, case by case, and have been communicated through e-mail and mail, if necessary. Applicable documentation is included in Appendix C.

- Per the EPA final ruling as part of 40 CFR Part 58 monitoring requirement revisions, published in the Federal Register on March 28, 2016, DEQ discontinued lead monitoring at DEQ's NCore site.
- Per EPA revisions to the near-road monitoring requirements, DEQ discontinued monitoring at the Meridian—Near-Road site on April 1, 2017.
- DEQ replaced the St. Luke's 1405-F $PM_{2.5}$ TEOM with a beta attenuation mass (BAM) 1020 $PM_{2.5}$ monitor (both types are used as SPMs for AQI reporting). The BAMs are easier to maintain than the TEOMs and thus more practical from a resources standpoint.
- DEQ installed a 2025 $PM_{2.5}$ FRM monitor in Preston. This monitor will help characterize the spatial distribution of pollutants in the airshed.
- Per the recent ozone NAAQS review and revision, the White Pine Elementary ozone analyzer is now operating from April 1 through September 30.
- Work is in progress replacing the remaining 1400AB $PM_{2.5}$ TEOM monitors with BAM 1020 $PM_{2.5}$ monitors (both types are used as SPMs for AQI reporting). This work is taking place at the Ketchum, McCall, Garden Valley, and Idaho City sites. The BAMs are easier to maintain than the TEOMs and thus more practical from a resources standpoint.
- Work is in progress on standardizing all DEQ meteorological towers with same model 2- and 10-meter temperature probes and aspirated fans for the purpose of generating delta temperature measurements.

5 Proposed Network Modifications

Below is a brief discussion of DEQ's rationale for proposing network modifications (if any) for each monitored pollutant, followed by a summary of those proposed changes. Annual air quality data summaries for DEQ's air monitoring network can be found at *www.deq.idaho.gov/air-quality/monitoring/monitoring-network*. More information about criteria pollutants (those pollutants for which EPA has established NAAQS) and NAAQS can be found at *www.epa.gov/air/criteria*.

5.1 PM_{10} Monitoring Network

Five PM_{10} monitoring sites are currently operating. These monitors support local SIP efforts and/or PM_{10} maintenance plans by assessing compliance with the PM_{10} NAAQS and will continue operating through 2017. Monitoring in these areas is required to demonstrate attainment of the appropriate NAAQS.

PM_{10} monitoring locations are selected to represent average population exposure to spatially representative concentrations in the middle, neighborhood, and urban scales.

The following airsheds are classified as moderate nonattainment for the 24-hour PM_{10} NAAQS (150 micrograms per cubic meter):

- Shoshone County—partial (excluding city of Pinehurst)
- Pinehurst (Shoshone County – partial – City of Pinehurst)
- Fort Hall Reservation (Bannock County—partial, Power County—partial)

The Fort Hall Reservation nonattainment area is on tribal land and is not administered by DEQ.

The following airsheds were previously classified as nonattainment but are now classified as maintenance areas and require monitoring to demonstrate compliance with a specific PM_{10} NAAQS over specific timeframes:

- Boise-Northern Ada County
- Bonner County—partial (city of Sandpoint)
- Portneuf Valley (Bannock County—partial, Power County—partial)

PM_{10} design values for 2014–2016 are listed in Appendix A.

Because PM_{10} monitoring must meet the regulatory requirements associated with SIPs and maintenance plan objectives, DEQ proposes no substantive change to the PM_{10} monitoring network.

For more information on area designations of Idaho's airsheds, visit *www.yosemite.epa.gov/r10/airpage.nsf/283d45bd5bb068e68825650f0064cdc2/e2ab2cc6df433b8688256b2f00800ff8*

or *www.epa.gov/green-book*.

5.2 $PM_{2.5}$ Core NAAQS Compliance Monitoring Network

DEQ operates a core network of six $PM_{2.5}$ monitoring sites for NAAQS compliance. DEQ began monitoring $PM_{2.5}$ by FRM in 1998 with an initial network of 13 sites. Over time, the network has been reduced due to site redundancy within airsheds or overall low ambient concentrations relative to the NAAQS. The following six sites remain:

- Pinehurst
- St. Maries
- Treasure Valley (Nampa—Fire Station)
- Treasure Valley (Meridian—St. Luke's)
- Salmon
- Franklin

Federal regulations require a minimum of two $PM_{2.5}$ monitoring sites in the Treasure Valley, based on population. The Meridian—St. Luke's monitor also satisfies the requirement for $PM_{2.5}$ monitoring at NCore sites.

The West Silver Valley airshed (including Pinehurst) has been recently classified as nonattainment for the annual $PM_{2.5}$ NAAQS (12 micrograms per cubic meter). The Cache Valley airshed (Franklin-Logan MSA) has been a classified ongoing nonattainment area for the 24-hour $PM_{2.5}$ NAAQS (35 micrograms per cubic meter).

DEQ proposes no substantive change to the $PM_{2.5}$ monitoring network.

$PM_{2.5}$ design values (updated for 2014–2016) and current and proposed sampling frequencies are listed in Appendix A, where Table A2 presents data obtained from both FRM and FEM monitors. Due to FRM filter weighing lab quality assurance/quality control (QA/QC) issues,

2014–2016 $PM_{2.5}$ FRM data are not comparable to the NAAQS. This limitation applies to the Meridian—St. Luke's, St. Maries, Nampa—Fire Station, and Franklin sites. Franklin was classified as nonattainment prior to this situation occurring and thus retains the classification. Salmon and Pinehurst were operating FEMs as their primary reporting monitors during the period the lab QA/QC issue was discovered, so the data in the table from these sites are comparable to the NAAQS.

5.3 $PM_{2.5}$ Continuous Monitoring Network

DEQ monitors $PM_{2.5}$ year-round at 18 sites throughout the state with continuous $PM_{2.5}$ monitors. The real-time and continuous $PM_{2.5}$ data support DEQ's air quality forecasting, AQI, and smoke management programs. These monitors are special purpose, non-NAAQS monitors.

The $PM_{2.5}$ continuous monitors are located at these monitoring sites:

- Sandpoint—University of Idaho
- Coeur d'Alene—Lancaster Rd.
- St. Maries
- Pinehurst
- Moscow
- Lewiston
- Grangeville
- McCall
- Garden Valley
- Idaho City
- Nampa—Fire Station
- Meridian—St. Luke's
- Ketchum
- Twin Falls
- Pocatello—Garrett and Gould
- Franklin
- Idaho Falls
- Salmon

DEQ also uses seasonal SPMs (nephelometers and e-samplers) at 11 locations to support the state's CRB Program (Table 2).

An SPM monitor is also used each year, typically at the Boise Fire Station site, to assess wildfire smoke impacts in and around the downtown Boise area. This monitor is only set up and used during wildfire smoke events.

DEQ is in the process of replacing the remaining 1400AB $PM_{2.5}$ TEOMs with BAM 1020 $PM_{2.5}$ monitors (both types are used as SPMs for AQI reporting). This effort is taking place at the Ketchum, McCall, Garden Valley, and Idaho City sites. DEQ also plans to replace the single remaining 1405-F $PM_{2.5}$ TEOM with a BAM 1020 $PM_{2.5}$ monitor (both types are used as SPMs for AQI reporting). This replacement is to take place at the Pocatello—Garrett and Gould PM2.5

monitoring site. The BAMs are easier to maintain than the TEOMs and thus more practical from a resources standpoint.

The Ketchum TEOM is currently located on a rooftop, and access can be difficult. The TEOM is being relocated to a ground location near the current site and as stated above will be replaced with a BAM. The BAM will be operated year-round at least for the first year. Year-round operation will assess seasonal particulate concentrations.

5.4 Ozone Monitoring Network

DEQ currently operates two ozone monitors, both in the Treasure Valley. Federal regulations require two ozone monitors in an urban area or MSA the size of the Boise City-Nampa MSA. One site must be designed to record the maximum concentration for the MSA. NCore sites can be counted toward minimum SLAMS ozone network requirements. Ozone is monitored during the ozone season as prescribed in 40 CFR Part 58 Appendix D. For 2017, per the recent ozone NAAQS review and revision, the ozone season in Idaho is now April 1 through September 30.

The Treasure Valley ozone monitors are located at the following sites:

- The Meridian—St. Luke's NCore site near the Meridian St. Luke's Hospital
- The White Pine Elementary site in southeast Boise

DEQ began monitoring at the White Pine Elementary site in 2009 when it had to relocate the Whitney Elementary School site, which was demolished in 2008. The White Pine Elementary site was chosen based on evidence that it would represent the maximum ozone concentration for the Boise City-Nampa MSA.

DEQ proposes no changes to the ozone monitoring network.

Ozone design values for 2014–2016 are listed in Appendix A.

5.5 Carbon Monoxide (CO) Monitoring Network

Monitoring for carbon monoxide (CO) in the Treasure Valley began in 1977. Violations of the health-based standard for CO occurred every winter from 1977 until 1986, and as a result, Northern Ada County was designated a CO nonattainment area by EPA. In December 2002, the *Northern Ada County CO Limited Maintenance Plan* was approved by EPA, which reclassified the area as attainment for the CO NAAQS. No exceedances of the CO NAAQS have occurred since 1991.

DEQ now operates two CO monitors, with the third monitor at the Meridian—Near-Road site shut down on April 1, 2017. A monitor exists at the Boise—Eastman Garage site in downtown Boise, while the other monitor resides at the Meridian—St. Luke's NCore site. The Boise—Eastman Garage site is an urban canyon site designed to measure maximum concentrations to which the population is exposed. This site is needed to demonstrate NAAQS compliance as specified in the *Northern Ada County CO Maintenance Plan*. The Meridian—St. Luke's CO monitor is a trace level monitor, able to measure much lower CO than conventional CO monitors

used for NAAQS compliance. The Meridian—St. Luke's CO monitor is required for NCore sites.

DEQ proposes no changes to the CO monitoring network.

CO (1-hour and 8-hour) design values for 2014–2016 are listed in Appendix A.

5.6 Sulfur Dioxide (SO_2) Monitoring Network

Three SO_2 monitors currently operate in Idaho:

- Pocatello—Sewage Treatment Plant (STP)
- Soda Springs
- Meridian—St. Luke's

The Pocatello—STP site is a maximum concentration site used to assess impacts of local industrial emissions. The Soda Springs monitor is also a maximum concentration site for assessing industrial impacts from a nearby source. Both SO_2 monitoring locations in southeastern Idaho were identified as fence-line hot spots from conventional dispersion model applications. The Meridian—St. Luke's monitor is a trace-level monitor required for NCore monitoring.

DEQ proposes no changes to the SO_2 monitoring network.

SO_2 design values for 2014–2016 are listed in Appendix A.

5.7 Nitrogen Dioxide (NO_2) Monitoring Network

DEQ was granted approval by EPA to shut down the Meridian—Near-Road site, which included NO_2 monitoring. To retain NAAQS monitoring for NO_2, DEQ is relocating the NO_2 monitor to the Meridian—St. Luke's NCore site.

NO_2 design values for 2014–2016 are listed in Appendix A.

5.8 $PM_{10-2.5}$ (PM_{coarse}) Monitoring Network

$PM_{10-2.5}$ (PM_{coarse}) is defined as the particulate fraction with a nominal diameter between 2.5 and 10.0 µ. $PM_{10-2.5}$ is determined by calculating the fractional mass difference between co-located and matching (i.e., same type of monitor) FRM PM_{10} and FRM $PM_{2.5}$ monitors. Section 3 of Appendix D to 40 CFR Part 58 requires $PM_{10-2.5}$ monitoring at NCore monitoring stations.

DEQ initiated $PM_{10-2.5}$ monitoring at the Meridian—St. Luke's NCore site beginning January 1, 2011. Both the $PM_{2.5}$ and $PM_{10-2.5}$ samplers are operated every third day in accordance with the national monitoring schedule. A second $PM_{10-2.5}$ monitor is operated every twelfth day for the purpose of assessing lo-vol PM_{10} sampling precision.

DEQ proposes no changes to the $PM_{10-2.5}$ monitoring network.

5.9 Summary of Proposed Network Modifications for DEQ's 2017 Air Monitoring Network Plan

DEQ is proposing the following network modifications in this plan:

- Relocate the NO_2 analyzer from the Meridian—Near-Road site to the Meridian—St. Luke's NCore site to retain NAAQS monitoring for NO_2.
- Replace DEQ's single remaining 1405-F $PM_{2.5}$ TEOM monitor with a BAM 1020 $PM_{2.5}$ monitor (both types are used as SPMs for AQI reporting). This replacement is to take place at the Pocatello—Garrett and Gould monitoring site. The BAMs are easier to maintain than the TEOMs and thus more practical from a resources standpoint.
- The Ketchum TEOM is currently located on a rooftop, and access can be difficult. The TEOM is being relocated to a ground location near the current site and as stated above will be replaced with a BAM. The BAM will be operated year-round at least for the first year. Year-round operation will assess seasonal particulate concentrations.

6 Future Ambient Air Monitoring Requirements and Associated Costs

EPA is required to review criteria pollutant NAAQS on a routine 5-year schedule. EPA at any time may be in the process of completing its review of a number of pollutants and through rulemaking will propose changes to ambient air monitoring requirements for some pollutants. This review can result in additional monitors and new monitoring requirements for Idaho. At this time, until rulemakings are made final, it is difficult to specifically project DEQ's future monitoring requirements and associated costs.

Appendix A. DEQ Ambient Monitoring Network Design Values

Note: Many of DEQ's $PM_{2.5}$ and PM_{10} monitors were impacted by smoke from wildfires and dust storms from 2014 to 2016. The Clean Air Act allows agencies to flag such data for exceptional and natural events and for EPA to concur if appropriate steps and demonstrations are completed. Design values are provided below reflecting inclusion and exclusion of these data; these values are preliminary.

The $PM_{2.5}$ table below represents data obtained from both FRM and FEM monitors. Due to FRM filter weighing lab QA/QC issues, 2014–2016 $PM_{2.5}$ FRM data are not comparable to the NAAQS for the Meridian—St. Luke's, St. Maries, Nampa—Fire Station, and Franklin sites. Salmon and Pinehurst were operating FEMs as their primary reporting monitors during the period the lab QA/QC issue was discovered, so the data from these sites in the table below are comparable to the NAAQS.

Table A1. 2014–2016 PM_{10} preliminary design values.

Site	County/ AQS ID	Estimated Exceedances			3-Year Estimated Exceedances
		2014	2015	2016	
Sandpoint	Bonner 160170003	0.0[a]	1.0/0.0	0.0	0.3/0.0
Pinehurst	Shoshone 160790017	0.0	2.0/0.0	0.0	0.7/0.0
Nampa	Canyon 160270002	0.0	0.0	0.0	0.0
Boise	Ada 160010009	0.0[a]	0.0	0.0	0.0
Pocatello	Bannock 160050015	0.0	0.0	0.0	0.0

Notes: A monitor violates the 24-hour PM_{10} NAAQS if the 3-year average of estimated exceedances (>150 µg/m^3) is greater than 1. Concentration data are denoted with/without exceptional event data included.
[a] Monitor did not meet data completeness requirements.

Table A2. 2014–2016 preliminary design values for core $PM_{2.5}$ monitoring stations—federal reference or federal equivalent method (primary monitor).

Monitoring Site	County/ AQS ID	98th Percentile 24-Hour Concentration (µg/m³)			2014–2016 24-Hour Design Value (µg/m³)	Required Sampling Frequency[a] (Current Frequency)	2014–2016 Annual Design Value (µg/m³)
		2014	2015	2016			
Meridian—St. Luke's	Ada 160010010	28/28	35/26	19/19	27/24	1:3[b] **(1:3)**	6.9/6.4
St. Maries	Benewah 160090010	45/45	37/33	26/26	36/35	1:1 **(1:1)**	9.4/8.7
Nampa—Fire Station	Canyon 160270002	27/27	36/26	21/21	28/25	1:3 **(1:3)**	8.8/8.3
Franklin	Franklin 160410001	33/33	19/18	33/33	28/28	1:3 **(1:3)**	6.5/6.1[c]
Salmon	Lemhi 160590004	40/40	43/37	39/39	41/39	1:3 **(1:3)**	12.4/11.2
Pinehurst	Shoshone 160790017	42/42	46/32	29/29	39/34	1:3 **(1:1)**	11.8/10.8

Notes: A monitor violates the 24-hour $PM_{2.5}$ NAAQS if the 3-year average of the annual 98th percentile 24-hour average exceeds 35 µg/m³. The annual $PM_{2.5}$ NAAQS is violated if the 3-year average of the annual arithmetic mean exceeds 12 µg/m³. Concentration data are denoted with/without all "flagged" exceptional event data included. The concentration values may change depending on how many of the "flagged" exceptional events are documentable, as concurred by EPA. Special purpose monitors are not listed in this table. Those data are provided in DEQ's annual data summary reports provided on the DEQ webpage.

[a] Required sampling frequencies based on flagged exceptional event data excluded. See Figure 2 in the body of the 2017 annual ambient air quality monitoring network plan for an explanation of required monitoring/sampling frequencies.

[b] NCore monitors are required to operate every third day.

[c] Does not meet data completeness criteria.

Table A3. 2014–2016 O_3 preliminary design values.

Site	County/ AQS ID	4th-Highest Daily Maximum 8-Hour Average (ppm)			3-Year Design Value (ppm)
		2014	2015	2016	
Boise—White Pine	Ada 160010017	0.065	0.064	0.072	0.067
Meridian—St. Luke's	Ada 160010010	0.062	0.066	0.062	0.063

Notes: A monitor violates the 8-hour ozone NAAQS if the 3-year average of the annual 4th-highest daily maximum average exceeds 0.070 ppm. Concentration data are denoted with/without exceptional event data included.

Table A4. 2014–2016 CO preliminary design values (1-hour).

Site	County/ AQS ID	1st-/2nd-Highest 1-Hour Average (ppm)		
		2014	2015	2016
Boise—Eastman	Ada 160010014	4.7/4.4	12.6/5.7	6.9/6.0
Meridian—St. Luke's	Ada 160010010	1.1/1.1	1.4/1.3	1.6/1.4
Meridian—Near-Road	Ada 160010023	1.3/1.2	1.2/1.2	1.3/1.3

Note: A monitor violates the 1-hour CO NAAQS if it exceeds 35 ppm more than once per year.

Table A5. 2014–2016 CO preliminary design values (8-hour).

Site	County/ AQS ID	1st-/2nd-Highest 8-Hour Average (ppm)		
		2014	2015	2016
Boise—Eastman	Ada 160010014	2.1/2.1	2.6/2.5	3.0/2.5
Meridian—St. Luke's	Ada 160010010	1.0/0.7	1.2/1.0	1.0/0.9
Meridian—Near-Road	Ada 160010023	0.9/0.8	1.1/0.9	0.9/0.9

Note: A monitor violates the 8-hour CO NAAQS if it exceeds 9 ppm more than once per year.

Table A6. 2014–2016 SO_2 preliminary design values.

Site	County/ AQS ID	99th Percentile—Highest Daily Maximum 1-Hour Average (ppb)			3-Year Design Value (ppb)
		2014	2015	2016	
Pocatello—STP	Bannock 160050004	38	45	33	39
Soda Springs	Caribou 160290031	23	23	32	26
Meridian—St. Luke's	Ada 160010010	5	3	4	4

Note: A monitor violates the 1-hour SO_2 NAAQS if the 3-year average of the annual 99th percentile highest daily maximum 1-hour averages exceeds 75 ppb.

Table A7. 2014–2016 NO_2 preliminary design values.

Site	County/ AQS ID	98th Percentile—Highest Daily Maximum 1-Hour Average (ppb)			3-Year Design Value (ppb)
		2014	2015	2016	
Meridian—Near-Road	Ada 160010023	43	47	41	44

Note: A monitor violates the 1-hour NO_2 NAAQS if the 3-year average of the annual 98th percentile highest daily maximum 1-hour averages exceeds 100 ppb.

Appendix B. Craters of the Moon and Hells Canyon Monitoring Stations (Improve Network)

DEQ is leveraging the IMPROVE monitoring network to fulfill requirements for the $PM_{2.5}$ transport (Hells Canyon) and $PM_{2.5}$ background (Craters of the Moon National Monument) monitoring sites (Figure B1).

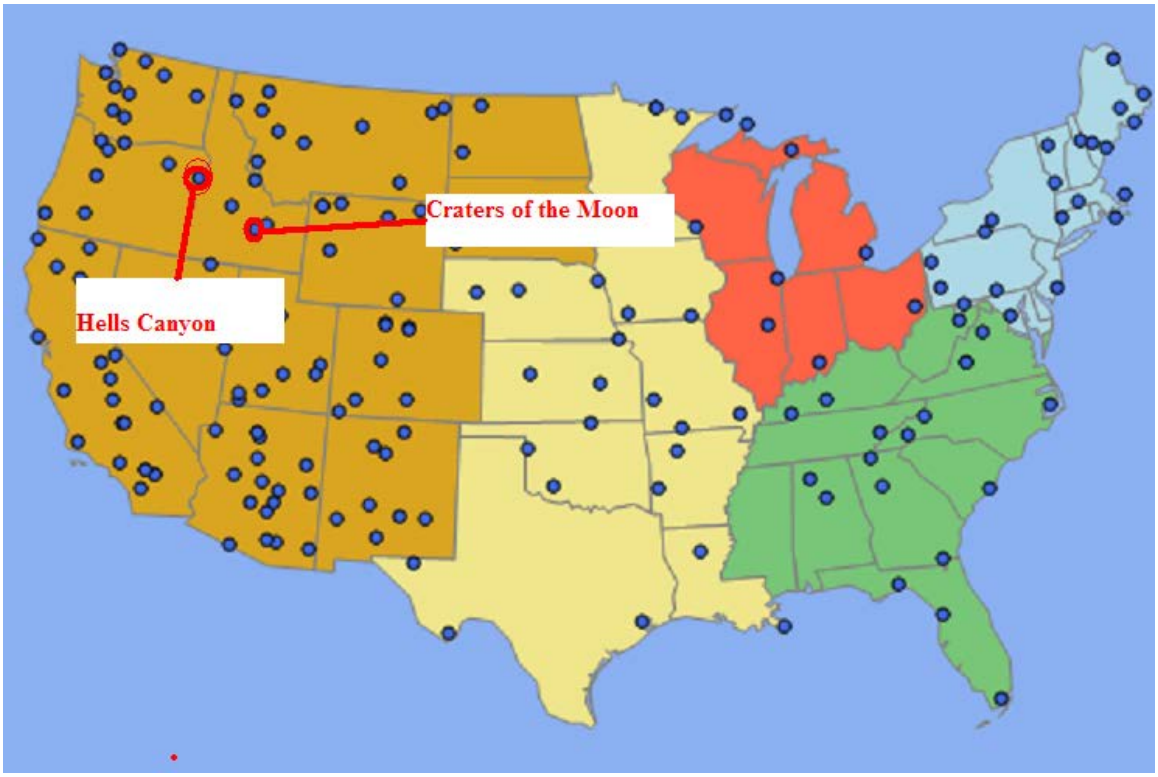

Figure B1. IMPROVE monitoring network.

A history of the IMPROVE monitoring network can be found at: *http://vista.cira.colostate.edu/Improve/*. The IMPROVE program was initiated in 1985 as an extensive long-term monitoring program to establish current visibility conditions, track changes in visibility, and determine causal mechanism for the visibility impairment in national parks and wilderness areas.

Craters of the Moon

Monitoring began at the Craters of the Moon site in 1992 (Figure B2). Raw data gathered at this site can be found at *http://views.cira.colostate.edu/web/*.

Figure B2. Craters of the Moon sampling platform.

Figure B3 shows the typical background concentration of $PM_{2.5}$ of 1–6 µg/m^3. On occasion, the monitor is impacted by smoke from regional fires and other burning activities.

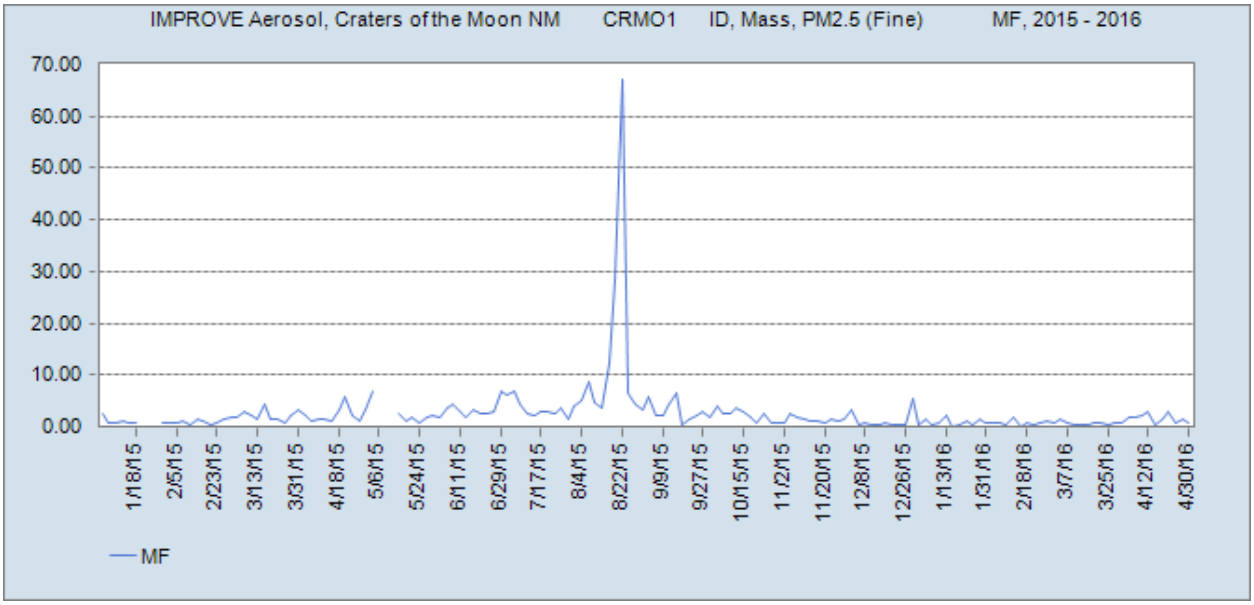

Figure B3. 2015–2016 $PM_{2.5}$ measured at Craters of the Moon IMPROVE site.

Hells Canyon

Monitoring began at the Hells Canyon site in 2001 (Figure B4). Raw data gathered at this site can be found at *http://views.cira.colostate.edu/web/*.

Figure B4. Hells Canyon monitoring station.

Figure B5 shows the Hells Canyon $PM_{2.5}$ measurements for 2015–2016. Typical transport concentrations of 2–6 µg/m^3 are represented; however, on occasion, values can be higher. Typically, elevated levels of $PM_{2.5}$ are associated with either summer/fall smoke impacts or regional winter stagnation events.

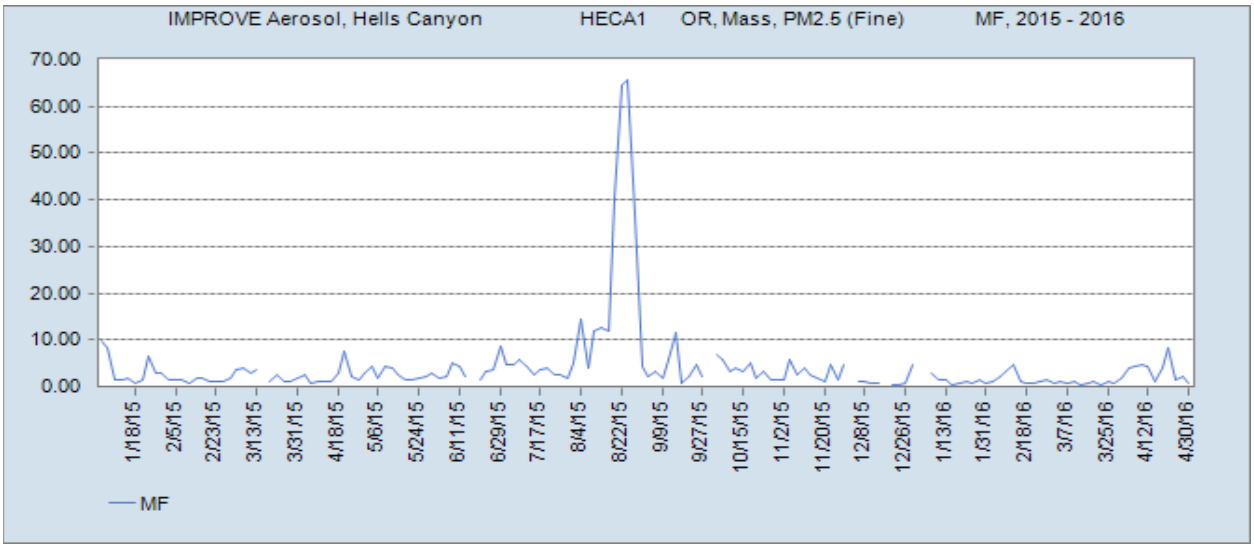

Figure B5. 2015–2016 $PM_{2.5}$ measured at Hells Canyon IMPROVE site.

Appendix C. EPA-DEQ Correspondence

There is nothing reportable for this year's annual network plan.

Appendix D. 40 CFR Part 58—Appendix D and E Checklists

PART 58 APPENDIX D SITE EVALUATION FORM FOR PM2.5				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.7.1(a)	States, and where applicable local agencies must operate the minimum number of required $PM_{2.5}$ SLAMS sites listed in Table D-5 of this appendix. Use the form below and Table D-5 to verify if each of your MSAs have the appropriate number of SLAMS FRM/FEM/ARM samplers.	X		
4.7.1(b)	Each required SLAMS FRM/FEM/ARM monitoring stations or sites must be sited to represent area-wide air quality in the given MSA (typically neighborhood or urban spatial scale, though micro-or middle-scale okay if it represent many such locations throughout the MSA).	X		
4.7.1(b)(1)	At least one SLAMS FRM/FEM/ARM monitoring station is to be sited at neighborhood or larger scale in an area of expected maximum concentration for each MSA where monitoring is required by 4.7.1(a).	X		
4.7.1(b)(2)	For CBSAs with a population of 1,000,000 or more persons, at least one FRM/FEM/ARM $PM_{2.5}$ monitor is to be co-located at a near-road NO_2 station.			X
4.7.1(b)(3)	For MSAs with additional required SLAMS sites, a FRM/FEM/ARM monitoring station is to be sited in an area of poor air quality.	X*		
4.7.2	Each State must operate continuous $PM_{2.5}$ analyzers equal to at least one-half (round up) the minimum required sites listed in Table D-5 of this appendix. At least one required continuous analyzer in each MSA must be co-located with one of the required FRM/FEM/ARM monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor, in which case no co-location requirement applies.	X		
4.7.3	Each State shall install and operate at least one $PM_{2.5}$ site to monitor for regional background and at least one $PM_{2.5}$ site to monitor regional transport (note locations in comment field). Non-reference PM2.5 monitors such as IMPROVE can be used to meet this requirement.	X**		
4.7.4	Each State shall continue to conduct chemical speciation monitoring and analyses at sites designated to be part of the $PM_{2.5}$ Speciation Trends Network (STN).	X		

Comments:

*DEQ has several sites in Idaho that are not found within an officially listed MSA, but DEQ has retained SLAMS FRM/FEM/ARM monitoring stations there due to moderate to poor air quality. Those sites include Pinehurst, Salmon, and St. Maries.

**DEQ uses the IMPROVE network's Hells Canyon site for PM2.5 regional transport and the Craters of the Moon National Monument site for PM2.5 regional background.

MSA Description[1]	MSA population[2,3]	Design Value for years 2014-2016	Minimum required number of PM2.5 SLAMS FRM/FEM/ARM sites (from Table D-5)	Present number of PM2.5 SLAMS FRM/FEM/ARM sites in MSA	Present number of continuous PM2.5 analyzers in MSA	Present number of PM2.5 STN analyzers in MSA
Boise City-Nampa, ID MSA	616,561	25 (24-hour)	1	2	4	2
Logan, UT-ID MSA	125,442	28 (24-hour)	1	1	1	0

[1]see http://www2.census.gov/econ/susb/data/msa_codes_2007_to_2011.txt)

[2]Minimum monitoring requirements apply to the metropolitan statistical area (MSA). CBSA includes both MSAs and micropolitan statistical areas.

[3]Population based on latest available census figures.

Table D-5 of Appendix D to Part 58 – PM2.5 Minimum Monitoring Requirements		
MSA population[1, 2]	Most recent 3-year design value ≥85% of any PM2.5 NAAQS[3]	Most recent 3-year design value <85% of any PM2.5 NAAQS[3, 4]
>1 million	3	2
500K to 1 million	2	1
50K to <500K[5]	1	0

[1]Minimum monitoring requirements apply to the Metropolitan statistical area (MSA).
[2]Population based on latest available census figures. https://www.census.gov/
[3]The $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
[4]These minimum monitoring requirements apply in the absence of a design value.
[5]Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

PART 58 APPENDIX D SITE EVALUATION FORM FOR PM10				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.6(a)	Table D-4 indicates the approximate number of permanent stations required in MSAs to characterize national and regional PM10 air quality trends and geographical patterns. Use the form below and Table D-4 to verify if your PM10 network has to appropriate number of samplers.	X		
Comments:				

MSA Description[1]	MSA population[2, 3]	Minimum required number of PM10 stations (from Table D-4)	Present number of PM10 stations in MSA
Boise City-Nampa, ID MSA	616,561	1-2	2

[1]see http://www2.census.gov/econ/susb/data/msa_codes_2007_to_2011.txt
[2]Minimum monitoring requirements apply to the Metropolitan statistical area (MSA). CBSA includes both MSAs and micropolitan statistical areas.
[3]Population based on latest available census figures.

Table D-4 of Appendix D to Part 58 – PM10 Minimum Monitoring Requirements			
MSA population[1, 2]	High concentration2	Medium concentration3	Low concentration4 5
>1 million	6-10	4-8	2-4
500K to 1 million	4-8	2-4	1-2
250K to 500K	3-4	1-2	0-1
100K to 250K	1-2	0-1	0

[1]Selection of urban areas and actual numbers of stations per area will be jointly determined by EPA and the State agency.
[2]High concentration areas are those for which ambient PM10 data show ambient concentrations exceeding the PM10 NAAQS by 20 percent or more.
[3]Medium concentration areas are those for which ambient PM10 data show ambient concentrations exceeding 80 percent of the PM10 NAAQS.
[4]Low concentration areas are those for which ambient PM10 data show ambient concentrations less than 80 percent of the PM10 NAAQS.
[5]These minimum monitoring requirements apply in the absence of a design value.

PART 58 APPENDIX D SITE EVALUATION FORM FOR SO2				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.4.1	State and, where appropriate, local agencies must operate a minimum number of required SO_2 monitoring sites (based on PWEI calculation specified in 4.4.2 – use Table 1 and 2 below to determine minimum requirement for each CBSA)	X		
4.4.2(a)(1)	Is the monitor sited within the boundaries of the parent CBSA and is it one of the following site types: population exposure, highest concentration, source impacts, general background, or regional transport?	X		
4.4.3(a)	Has the EPA Regional Administrator required additional SO_2 monitoring stations above the minimum number of monitors required in 4.4.2? If so, note location in comment field.	X*		
4.4.5(a)	Is your agency counting an existing SO2 monitor at an NCore site in a CBSA with a minimum monitoring requirement?	X		
Comments: *DEQ is conducting source/highest concentration monitoring in Pocatello and Soda Springs.				

Table 1.					
CBSA Description[1]	CBSA population[1, 2]	total amount of SO2 in tons per year emitted within the CBSA (used 2014 NEI[4])	PWEI (population x total emissions ÷ 1,000,000)	Minimum required number of SO2 monitors in CBSA (see Table 2 below)	Present number of SO2 monitors in CBSA
Boise City, ID	616,561	1522.14	938.49	0	1

[1]see http://www.census.gov/population/metro/data/def.html
[2]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas.
[3]Population based on latest available census figures.
[4]see http://www.epa.gov/ttn/chief/eiinformation.html

Table 2. Minimum SO2 Monitoring Requirements (Section 4.4.2 of App D to Part 58)	
PWEI (Population weighted Emission Index) Value	Require number of SO2 monitors
>= 1,000,000	3
>= 100,000 but < 1,000,000	2
>= 5,000 but < 100,000	1

PART 58 APPENDIX D SITE EVALUATION FORM FOR CARBON MONOXIDE (CO)					
APPLICABLE SECTION	REQUIREMENT	OBSERVED	CRITERIA MET?		
			YES	NO	N/A
4.2.1(a)	One CO monitor is required to operate co-located with one required near-road NO_2 monitor in CBSAs having a population of 1,000,000 or more persons. If a CBSA has more than one required near-road NO_2 monitor, only one CO monitor is required to be co-located with a near-road NO_2 monitor within that CBSA.				X
4.2.2(a)	Has the EPA Regional Administrator required additional CO monitoring stations above the minimum number of monitors required in 4.2.1? If so, note location in comment field.		X*		
Comments: *DEQ has two additional monitors that are required. One is at DEQ's St. Luke's – Meridian, ID N-Core site, and the other one is at DEQ's Boise – Eastman CO maintenance area site.					

MSA Description[1]	CBSA population[2, 3]	Minimum required number of SLAMS CO sites	Present number of SLAMS CO sites in MSA
Boise City-Nampa, ID MSA	616,561	1 – N-Core* 1 – Maintenance Area*	2

[1]see http://www2.census.gov/econ/susb/data/msa_codes_2007_to_2011.txt

[2]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas.

[3]Population based on latest available census figures.

PART 58 APPENDIX D SITE EVALUATION FORM FOR NITROGEN DIOXIDE (NO2)				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.3.2(a)	Near-road NO2 Monitors: One microscale near-road NO_2 monitoring station in each CBSA with a population of 500,000 or more persons.			X
4.3.2(a)	Near-road NO2 Monitors: An additional near-road NO_2monitoring station is required for any CBSA with a population of 2,500,000 persons, or in any CBSA with a population of 500,000 or more persons that has one or more roadway segments with 250,000 or greater AADT count.			X
4.3.2(b)	Near-road NO2 Monitors: Measurements at required near-road NO_2 monitor sites utilizing chemiluminescence FRMs must include at a minimum: NO, NO_2, and NO_X			X
4.3.3(a)	Area-wide NO2 Monitoring: One monitoring station in each CBSA with a population of 1,000,000 or more persons to monitor a location of expected highest NO_2 concentrations representing the neighborhood or larger spatial scales.			X
Comments: DEQ recently shut down its near-road monitoring site per EPA approval. DEQ is proposing to operate an NO2 monitor at its St. Luke's N-Core site.				

Table 1

CBSA Description[1]	CBSA population[2, 3]	Required number of Near-road NO2 sites	Present number of Near-road NO2 sites	Required number of Area-wide NO2 sites	Present number of Area-wide NO2 sites
Boise City-Nampa, ID MSA	616,561	0	0	0	0

[1]see http://www2.census.gov/econ/susb/data/msa_codes_2007_to_2011.txt
[2]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas.
[3]Population based on latest available census figures.

PART 58 APPENDIX D SITE EVALUATION FORM FOR OZONE				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.1(b)	At least one O_3 site for each MSA, or CSA if multiple MSAs are involved, must be designed to record the maximum concentration (note location in comment field).	X*		
4.1(c)	The appropriate spatial scales for O_3 sites are neighborhood, urban, and regional (note deviations in comment field).	X		
4.1(f)	Confirm that the monitoring agency consulted with EPA R10 when siting the maximum O3 concentration site.	X		
4.1(i)	O3 is being monitored at SLAMS monitoring sites during the "ozone season" as specified in Table D-3 of Appendix D to Part 58.	X		
Comments: *DEQ's White Pine Elementary site in Boise serves as the maximum concentration site.				

MSA Description[a]	MSA population[1, 2]	Minimum required number of SLAMS O3 sites (from Table D-2)	Present number of SLAMS O3 sites in CBSA	
Boise City-Nampa, ID MSA	616,561	2	2	
[a]see http://www2.census.gov/econ/susb/data/msa_codes_2007_to_2011.txt				

Table D-3 of Appendix D to Part 58—Ozone Monitoring Season by State		
State	Begin month	End Month
Idaho	April	September

Table D-2 of Appendix D to Part 58 - SLAMS O3 Monitoring Minimum Requirements		
MSA population[1, 2]	Most recent 3-year design value concentrations ≥85% of any O3 NAAQS[3]	Most recent 3-year design value concentrations <85% of any O3 NAAQS[3, 4]
>10 million	4	2
4-10 million	3	1
350,000-<4 million	2	1
50,000-<350,000[5]	1	0

[1]Minimum monitoring requirements apply to the Metropolitan statistical area (MSA). CBSA includes both MSAs and micropolitan statistical areas.
[2]Population based on latest available census figures.
[3]The ozone (O3) National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
[4]These minimum monitoring requirements apply in the absence of a design value.
[5]Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

PART 58 APPENDIX E SITE EVALUATION FORM FOR CO

SITE NAME__**Eastman**_____ SITE ADDRESS__**166 N. 9th Street, Boise ID 83702**

AQS ID__**160010014**_____ EVALUATION DATE__**4/28/2017**_____ EVALUATOR___**Leah Arnold – Idaho DEQ**_____

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	For neighborhood or larger spatial scale sites the probe must be located 2-15 meters above ground level and must be at least 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.	Eastman is a microscale site.			X
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet (exception is street canyon or source-oriented sites where buildings and other structures are unavoidable).		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.			X*	
	(c) No trees should be between source and probe inlet for microscale sites.		X**		
6. SPACING FROM ROADWAYS	2. (b) Microscale CO monitor probes in downtown areas or urban street canyon locations shall be located a minimum distance of 2 meters and a maximum distance of 10 meters from the edge of the nearest traffic lane.		X***		
	2. (c) Microscale CO monitor inlet probes in downtown areas or urban street canyon locations shall be located at least 10 meters from an intersection and preferably at a midblock location.		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex) for reactive gases.		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X****		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section.					

Other Comments:

*Probe inlet is approximately 1 meter from tree branch. The City of Boise has worked with DEQ to keep the tree trimmed, but cutting the tree down is not favored.

**Trees are on North and South sides of probe inlet and not the West side where the traffic (CO source) occurs.

***A further analysis of this site revealed a “no parking” area immediately in front of the probe inlet. If one takes this space into account and then measures to the edge of the nearest traffic lane, the probe inlet is greater than 2 meters away.

****This site is not an N-Core site. Its sample residence time is longer than 20 seconds.

PART 58 APPENDIX E SITE EVALUATION FORM FOR CO

SITE NAME__**N-Core**_____ SITE ADDRESS__**Eagle Road & I-84, Meridian ID 83642**

AQS ID__**160010010**_____ EVALUATION DATE__**4/28/2017**_____ EVALUATOR___**Ed Jolly – Idaho DEQ**_____

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	For neighborhood or larger spatial scale sites the probe must be located 2-15 meters above ground level and must be at least 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet (exception is street canyon or source-oriented sites where buildings and other structures are unavoidable).		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	2. (b) Microscale CO monitor probes in downtown areas or urban street canyon locations shall be located a minimum distance of 2 meters and a maximum distance of 10 meters from the edge of the nearest traffic lane.				X
	2. (c) Microscale CO monitor inlet probes in downtown areas or urban street canyon locations shall be located at least 10 meters from an intersection and preferably at a midblock location.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex) for reactive gases.		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					
Other Comments:					

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)
≤10,000	10
15,000	25
20,000	45
30,000	80
40,000	115
50,000	135
≥60,000	150

[1] Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

PART 58 APPENDIX E SITE EVALUATION FORM FOR NO, NOx, NO2, and NOy

SITE NAME_ **N-Core** SITE ADDRESS__**Eagle Road & I-84, Meridian ID 83642**

AQS ID__**160010010**_____ EVALUATION DATE__**4/28/2017**_____

EVALUATOR__**Ed Jolly – Idaho DEQ**_____

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	For neighborhood or larger spatial scale sites the probe must be located 2-15 meters above ground level and must be at least 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. Microscale near-road NO_2 monitoring sites are required to have sampler inlets between 2 and 7 meters above ground level. If located near the side of a building or wall, then locate the sampler probe on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale and larger avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
	(d) For near-road NO_2 monitoring stations, the monitor probe shall have an unobstructed air flow, where no obstacles exist at or above the height of the monitor probe, between the monitor probe and the outside nearest edge of the traffic lanes of the target road segment.				X
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore and at NO_2 sites must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					
Other Comments:					

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

[2]Applicable for ozone monitors whose placement has not already been approved as of December 18, 2006.

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1, 2] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

PART 58 APPENDIX E SITE EVALUATION FORM FOR O3

SITE NAME__**N-Core**_____ SITE ADDRESS__**Eagle Road & I-84, Meridian, ID 83642**_____

AQS ID__**160010010**_____EVALUATION DATE__**4/28/2017**_____EVALUATOR__**Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
	(b) To minimize scavenging effects, the probe inlet must be away from furnace or incineration flues or other minor sources of SO_2 or NO.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.				X*
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					

Other Comments:
*Not a microscale site.

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1, 2] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.
[2]Applicable for ozone monitors whose placement has not already been approved as of December 18, 2006.

PART 58 APPENDIX E SITE EVALUATION FORM FOR O3

SITE NAME__**White Pine Elementary**_____ SITE ADDRESS_**401 E. Linden St., Boise ID 83706**

AQS ID__**160010017**_____EVALUATION DATE__**4/28/2017**___EVALUATOR__**Ed Jolly/Leah Arnold – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
	(b) To minimize scavenging effects, the probe inlet must be away from furnace or incineration flues or other minor sources of SO_2 or NO.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.				X*
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					

Other Comments:
*Not a microscale site.

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1, 2] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.
[2]Applicable for ozone monitors whose placement has not already been approved as of December 18, 2006.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Pocatello**_____ SITE ADDRESS__**Corner of Garrett and Gould Streets, Pocatello ID 83204**

AQS ID__**160050015**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Marshall Magee – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Athol**_____ SITE ADDRESS__**NE corner of Pastime St. and Grove Ave., Athol ID 83801**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			X*	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:
* A pump house is located 2.5 meters away from the monitor. The pump house height is 2.8 meters above the height of the inlet. This monitor (e-sampler) is operated seasonally and is not a SLAMS site. The predominant wind direction during the season of highest pollutant concentration is from the South and not impeded by the pump house.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Boise Fire Station**_____ SITE ADDRESS__**16th and Front Street, Boise ID 83702**

AQS ID__**160010009**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Leah Arnold – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Cottonwood**_____ SITE ADDRESS__**BLM Field Office – 1 Butte Dr., Cottonwood ID 83522**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			X*	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.			X**	
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

* A tree is located 6 meters away from the monitor. The tree height is 7 meters above the height of the inlet. This monitor (e-sampler) is operated seasonally and is not a SLAMS site. The predominant wind direction during the season of highest pollutant concentration is not impeded by the tree.

**The monitor is approximately 6 meters from the drip line of a tree.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Franklin**_____ SITE ADDRESS__**East 4800 South Road, Franklin ID 83237**

AQS ID__**160410001**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Marshall Magee – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Garden Valley**_____ SITE ADDRESS__**946 Banks Lowman Rd., Garden Valley ID 83622**

AQS ID__**160150002**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Leah Arnold – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Garwood**_____ SITE ADDRESS__**17506 N. Ramsey Rd., Rathdrum ID 83858**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			X*	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:
*The monitor is located on school grounds as a way to assess pollutants at a site with sensitive populations. This monitor (e-sampler) is operated seasonally and is not a SLAMS site. The predominant wind direction during the season of highest pollutant concentration is from the West and not impeded by the school building.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Grangeville**_____ SITE ADDRESS__**USFS Compound – Grangeville ID 83530**

AQS ID__**160490002**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Idaho City**_____ SITE ADDRESS__**3851 Hwy 21, Idaho City ID 83631**

AQS ID__**160150001**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Leah Arnold – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Idaho Falls**_____ SITE ADDRESS__**Hickory and Sycamore Streets, Idaho Falls ID 83402**

AQS ID__**160190011**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Ryan Rossi – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME__**Juliaetta**_____ SITE ADDRESS__**3rd Street, Juliaetta, ID 83535** AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017** EVALUATOR__**Zac Bishop – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Ketchum**_____ SITE ADDRESS__**111 West 8th Street, Ketchum ID 83340**

AQS ID__**160130004**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Drew Jones – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Lancaster**_____ SITE ADDRESS__**West Lancaster Rd., Hayden, ID 83835**

AQS ID__**160550003**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X*		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

*The Water and Sewer District installed a backup generator near the site. The generator only runs once per week for a short dedicated time as part of its maintenance run schedule. Impacts are expected to be minimal.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Lewiston**_____ SITE ADDRESS__**1200 29th Street, Lewiston ID 83501**

AQS ID__**160690012**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME__**McCall**_____ SITE ADDRESS__**500 N. Mission Street, McCall ID 83638** AQS ID__**160850002**_____ EVALUATION DATE__**4/28/2017** EVALUATOR__**Leah Arnold – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.			X*	
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments: *Small tree is located at 8.7 meters away from monitor.					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Moscow**_____ SITE ADDRESS__**1025 Plant Sciences Rd., Moscow ID 83843**

AQS ID__**160570005**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Mt. Hall**_____ SITE ADDRESS__**1275 Idaho 1, Bonners Ferry ID 83805**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Nampa**_____ SITE ADDRESS__**Nampa Fire Station – 923 1st Street South, Nampa ID 83651**

AQS ID__**160270002**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Leah Arnold – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**N-Core**_____ SITE ADDRESS__**Eagle Road & I-84, Meridian ID 83642**

AQS ID__**160010010**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Paul**_____ SITE ADDRESS__**201 N. 1st Street West, Paul ID 83347**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Drew Jones – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			X*	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.			X**	
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? See below.					

Other Comments:

*Tree stands 5.1 meters taller than probe inlet. Tree is only located 5.2 meters away from probe inlet.

**Tree is located 5.2 meters away from probe inlet. Higher branches overhang probe inlet. DEQ will contact the school where the monitor is located to try to get approval for tree to be trimmed.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Pinehurst**_____ SITE ADDRESS__**106 Church Street, Pinehurst ID 83850**

AQS ID__**160790017**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Porthill**_____ SITE ADDRESS__**Tavern Farm Rd., Porthill ID 83853**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Potlatch**_____ SITE ADDRESS__**510 Elm Street, Potlatch ID 83855**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Rexburg**_____ SITE ADDRESS__**Madison Middle School – 575 W. 7th Street, Rexburg ID 83440**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Ryan Rossi – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Salmon**_____ SITE ADDRESS__**N. Charles Street, Salmon ID 83467**

AQS ID__**160590004**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Ryan Rossi – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Sandpoint**_____ SITE ADDRESS__**U of I Research Center – 2105 N. Boyer Ave., Sandpoint ID 83864**

AQS ID__**160170003**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk– Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Soda Springs**_____SITE ADDRESS__**Caribou Hospital – 300 S. 3rd Street West, Soda Springs ID 83276**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Marshall Magee – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**St. Maries**_____ SITE ADDRESS__**USFS Building - St. Maries ID, 83666**

AQS ID__**160090010**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Jacob Odekirk – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Twin Falls**_____ SITE ADDRESS__**650 W. Addison, Twin Falls ID 83301**

AQS ID__**160830007**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Drew Jones – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME__**Weiser**_____ SITE ADDRESS__**690 W. Indianhead Rd., Weiser ID 83672**

AQS ID__**N/A**_____ EVALUATION DATE__**4/28/2017**

EVALUATOR__**Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR SO2

SITE NAME__**N-Core**_____ SITE ADDRESS__**Eagle Road & I-84, Meridian ID 83642**_____

AQS ID__**160010010**_____ EVALUATION DATE__**4/28/2017**_____EVALUATOR__**Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	There are no roadway spacing requirements for SO2.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR SO2

SITE NAME__**Pocatello Sewage Treatment Plant**_____SITE ADDRESS__**Batiste Chubbuck Rd., Pocatello ID 83204**

AQS ID__**160050004**_____ EVALUATION DATE__**4/28/2017**_____EVALUATOR__**Marshall Magee – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.	Site is Middle Scale.			X
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.		X		
6. SPACING FROM ROADWAYS	There are no roadway spacing requirements for SO2.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR SO2

SITE NAME__**Soda Springs**_____SITE ADDRESS__**5-mile Road, Soda Springs ID 83276**

AQS ID__**160290031**_____ EVALUATION DATE__**4/28/2017**_____EVALUATOR__**Marshall Magee – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICLE PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.	Site is Middle-Micro Scale.			X
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.		X		
6. SPACING FROM ROADWAYS	There are no roadway spacing requirements for SO2.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. See below.					

Other Comments:

Site was originally placed in its current location as a result of a combination of monitoring and modeling. Some recent wind roses have shown some variations compared to the original wind roses.

Appendix E. Public Comments and Responses

IDAHO CONSERVATION LEAGUE

208.345.6933 • PO Box 844, Boise, ID 83702 • www.idahoconservation.org

6/20/17

Steve Miller
DEQ State Office
Air Quality Division
1410 N. Hilton
Boise, ID 83706

Submitted via email: steve.miller@deq.idaho.gov

RE: Draft Annual Air Quality Monitoring Network Plan

Dear Mr. Miller:

Thank you for the opportunity to comment on the draft 2017 Ambient Air Quality Monitoring Network Plan (Plan).

Since 1973, the Idaho Conservation League has been Idaho's leading voice for clean water, clean air and wilderness—values that are the foundation for Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through public education, outreach, advocacy and policy development. As Idaho's largest state-based conservation organization, we represent over 25,000 supporters, many of whom have a deep personal interest in protecting Idaho's air quality.

Our detailed comments are provided following this letter. Please do not hesitate to contact me at 208-345-6933 ext. 23 or ahopkins@idahoconservation.org if you have any questions regarding our comments or if we can provide you with any additional information on this matter.

Sincerely,

Austin Hopkins
Conservation Associate

Statewide Ozone Monitoring

The ambient monitoring network has two stations that measure ozone, the Meridian – St. Luke's site and Boise – White Pine Elementary site, both of which are located within the Treasure Valley. In order for this Plan to comply with requirements set forth in 40 C.F.R. Part 58 Appendix D (Appendix D), this ambient monitoring network must be designed to meet three basic monitoring objectives:

1. Provide air pollution data to the general public in a timely manner,
2. Provide support for determining compliance with ambient air quality standards and developing emission control strategies, and
3. Provide support for air pollution research studies

We do not see how two ozone monitoring sites located roughly 10 miles apart are sufficient at achieving these basic objectives for all Idahoans, particularly those located outside of the Treasure Valley. Further, Table D-2 of Appendix D outlines the minimum requirements for where ozone monitors should be located based on population size and 3-year design value concentrations for ozone. According to the most recent publicly available air quality monitoring summary (DEQ, 2015[1]), 3-year average ozone concentrations at the two Treasure Valley monitoring sites are approximately 0.068 ppm, or 97 percent of the 0.07 ppm ozone NAAQS.

Pursuant to Table D-2, cities with a population greater than 50,000 where ozone concentrations exceed 85 percent of the NAAQS are required to have, at a minimum, one ozone monitor. Given the lack of monitoring sites throughout the state we are forced to extrapolate the high ozone concentrations across Idaho, which means the following Idaho cities are required by law to have an ozone monitor present[2]:

- Boise (pop. 218,281)
- Meridian (90,739)
- Nampa (89,839)
- Idaho Falls (59, 184)
- Pocatello (54,441)
- Caldwell (51,686)

In addition to these cities, the cities of Coeur d'Alene (49,122) and Twin Falls (47,468) also come close to the threshold of requiring an ozone monitor. We feel it would be prudent to proactively install an ozone monitor within these cities.

In light of this, it appears necessary that ozone-monitoring sites be installed in a number of cities throughout Idaho. If DEQ elects not to install ozone monitoring sites within the

[1] DEQ, 2015. *2013 Air Quality Monitoring Data Summary*. https://www.deq.idaho.gov/air-quality/monitoring/monitoring-network/
[2] Data obtained from U.S. Census Bureau

aforementioned cities, we request to receive justification as to how this decision complies with the federal regulations stipulated in 40 C.F.R. 58 or any other germane code.

Public Notice of Disabled Monitors

As stated on page 3 of the Plan, the first basic monitoring objective of this network is to provide air pollution data to the general public in a timely manner. If a monitor is disabled or malfunctioning then this objective is not being met, and the public should be notified. The DEQ should devise a method to communicate with the public not only data collected at monitoring sites but also when sites are not operating. The general public may operate under the assumption that no news is good news. However, notifying the public during periods when monitors are not operational allows them to take extra caution in their decision-making and provides a greater assurance that they won't be unnecessarily harmed during particularly poor air quality days.

Additional Needs for Cache Valley Nonattainment Area

Cache Valley in Southeastern Idaho is currently designated as nonattainment for $PM_{2.5}$. While the plan discusses $PM_{2.5}$ monitors present at the Franklin and Preston sites, we feel it would be helpful to include monitors for gaseous precursors that produce secondary $PM_{2.5}$ such as NO_x, SO_2, and VOCs[3]. Installing monitors for these constituents has the additional benefit of helping to discern the major sources of $PM_{2.5}$ pollution. While this area strives to regain attainment status it will be crucial that efforts are being focused on the major sources of $PM_{2.5}$ contributing to the NAAQS violations.

Additional Monitoring Objective for Pinehurst Station

Given that the West Silver Valley airshed was recently classified as nonattainment for the annual $PM_{2.5}$ NAAQS we feel that Table 4 should list $PM_{2.5}$ SIP as monitoring objective for the Pinehurst site. This addition should also be reflected at any other location throughout the monitoring plan where monitoring objectives for the Pinehurst site are discussed.

Funding Sources for Air Monitoring Stations

Monitoring ambient air quality is a vital component in ensuring all Idahoans are not exposed to dangerous levels of air pollution. As such, it is critical that air-monitoring stations are constructed in appropriate locations and are maintained so they can continuously collect information. Both of these needs require a secure source of funding.

[3] *See* Hodan, W.B., Barnard, W.R., 2004. Evaluating the Contribution of PM2.5 Precursor Gases and Re-entrained Road Emissions to Mobile Source PM2.5 Particulate Matter Emissions. MACTEC Under Contract to the Federal Highway Administration, p. 53. http://www.epa.gov/ttnchie1/conference/ei13/mobile/hodan.pdf

Historically, federal money dispensed through the Environmental Protection Agency has provided this secure source of funding needed to protect Idahoans. Given the recent rhetoric surrounding cutting the budget of the EPA, we believe it is prudent that funding provided by the EPA to sustain monitors be denoted in plans and reports such as these. This simple step will highlight to the public the role the EPA plays in keeping Idahoans safe from hazards such as air pollution.

24-Hour Averaging for $PM_{2.5}$

DEQ states that particulate matter data are reported as a 24-hour average, collected from midnight to midnight, in order to compare $PM_{2.5}$ measurements with the NAAQS. We are curious if that NAAQS stipulates the averaging period necessary to demonstrate compliance. We feel it would be more appropriate to perform rolling 24-hour averages of particulate matter, rather than from midnight to midnight.

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, Idaho 83706 • (208) 373-0550
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C.L. "Butch" Otter, Governor
John H. Tippets, Director

June 29, 2017

Austin Hopkins
Conservation Associate
Idaho Conservation League
PO Box 844
Boise, ID 83702

Subject: Response to Idaho Conservation League (ICL) comments on 2017 draft Ambient Air Quality Monitoring Network Plan

Dear Mr. Hopkins:

Idaho DEQ provided a 30-day public opportunity to comment on its 2017 Ambient Air Quality Monitoring Network Plan. Below are DEQ's responses to the comments submitted by ICL. The responses are arranged under the headings provided by ICL in their comments.

Statewide Ozone Monitoring

The Boise City – Nampa Metropolitan Statistical Area (population 616,561 per 2010 US Census) encompasses Ada, Boise, Canyon, Gem and Owyhee Counties. DEQ refers to this MSA as the "Treasure Valley." The cities of Boise, Meridian, Nampa and Caldwell are included in the ozone monitoring requirement applied to the Treasure Valley, as they are part of the MSA. According to Table D-2 of Appendix D to Part 58, two (2) monitors are required for an MSA with a population between 350,000 and 4,000,000, when the 3-year design value is $\geq$ 85% of the NAAQS. DEQ satisfies this requirement. Furthermore, Section 4.1.b of Appendix D states that one of the two required monitors must be designed to record the maximum concentration for the MSA. DEQ conducted a study in 2008 to characterize spatial distribution of ozone in the Treasure Valley, and the White Pine Elementary site was determined to be the maximum concentration location.

Table D-2 does specify a requirement of 1 monitor for MSA's with a population between 50,000 and 350,000 when design values are $\geq$ 85% of NAAQS, but it also specifies that zero (0) monitors are required for these MSA's in the absence of a design value (see footnote 4). DEQ does not have 8-hour ozone design values for Pocatello, Idaho Falls, and Twin Falls, therefore monitoring is not required per Table D-2. DEQ did monitor ground level ozone in Coeur d' Alene for a number of years, but discontinued monitoring in 2012. Because the data recorded at the Coeur d' Alene monitor very strongly correlated to data from the Spokane monitor and the

2009 – 2011 design value at the Coeur d' Alene monitor was 0.056 ppm (80% of current NAAQS), DEQ terminated the monitor.

DEQ agrees that with the NAAQS at 0.070 ppm there are other MSA's advancing toward the ≥ 85% threshold listed in Table D-2. And DEQ agrees that extrapolating outward across Idaho using Treasure Valley ozone data is problematic. DEQ does use Craters of the Moon data and National Park Service data collected at City of Rocks to support air quality forecasts and burn decisions. DEQ also uses regional forecast models such as WSU's Airpact-5 ozone modeling prediction system for daily operations. This reference can be found at: http://lar.wsu.edu/airpact/.

The EPA ultimately has approval authority of DEQ's network, and they execute this authority by approval or rejection of components of the annual network plan. Lastly, if additional funding and resources were available, DEQ would be inclined to implement a more robust statewide ozone monitoring network.

Public Notice of Disabled Monitors

Monitor issues and downtime are a natural part of any agency's network. DEQ consistently monitors these issues and employs several methods to prevent the data from being used by interested parties. When monitors have serious malfunctions, they typically generate alarm codes that then get carried over to the DEQ webpages. In these cases, the public would see a dot on our real-time map that is grey and not posting an AQI due to the problem. If the problem cannot be corrected in the short term, we pull the station and its associated AQI dot from our real-time map until the problem is resolved. It is expected that the interested parties using the data would see these changes on our webpages. There may be other options beyond these using EPA's AirNow webpage and its Enviroflash email notifications sent to those people who have subscribed. This option would have to be explored further to understand the system's full potential.

Additional Needs for Cache Valley Nonattainment Area

Secondary PM2.5 precursors such as NOx and SO2 are monitored at the Logan, Utah monitoring site operated by Utah DAQ, giving Cache Valley the highest level of PM precursor monitoring of any mountain-valley, winter-time $PM_{2.5}$ non-attainment area in our region if not the entire west. The two-state emission inventory is well defined and is the best approach for characterizing all sources of precursor gases. VOC monitoring is very expensive and is also best quantified by the emission inventories which inform the photochemical models.

DEQ agrees with ICL that it is crucial to focus on the major sources of PM2.5 and its precursors contributing to the NAAQS violations, but the high quality SIP-level emission inventories with every major and minor source of precursors quantified, in conjunction with the photochemical model that can account for their interactions and contributions to the secondary $PM_{2.5}$, is the best approach to accomplish this. Routine monitoring of NOx, SO_2 and VOCs at the low population end of the valley is cost prohibitive and would not better inform our knowledge of the precursor sources.

Additional Monitoring Objective for Pinehurst Station

Currently there is no SIP in place for PM2.5 at Pinehurst. Rather, the area now meets the requirements for a Clean Data Determination for the 2014-2016 period. DEQ submitted a Clean Data Determination request to EPA for approval in March 2017. If approved, most SIP requirements for the nonattainment area will get suspended as long as the area continues to attain the standard. A base year emission inventory still needs submitted. DEQ is working on that now. Any updates to the status of this nonattainment area will be provided in next year's annual network plan.

Funding Sources for Air Monitoring Stations

There is no doubt future funding is critical to sustain the network as it currently configured. And we are waiting to see what the current Administration and Congress do regarding EPA funding levels. DEQ has issued press releases in the past to address funding reductions and network downsizing and will do so in the future. The termination of SLAMS sites will require a public comment opportunity. DEQ believes this type of outreach to be much more effective in reaching a larger audience than the annual network plan.

24-Hour Averaging for PM2.5

DEQ will continue to abide by Clean Air Act protocols for particulate matter data calculations and conventions. In terms of data being reported for Air Quality Index purposes, that data is based off of a sliding 12-hour scale, or the most recent 12 hours of data. If pollutant conditions change significantly from hour to hour, then those hours of the 12-hour scale are weighted even more heavily to reflect real-time conditions. This is referred to as the Nowcast Air Quality Index method and is intended to provide more timely information to the public.

Please let me know if you have any questions. I can be reached at (208) 373-0432, or at steve.miller@deq.idaho.gov.

Sincerely,

Steve Miller
Air Quality Monitoring Coordinator
Idaho Department of Environmental Quality

Steve Miller

From: Webmaster
Sent: Wednesday, June 21, 2017 2:23 PM
To: Steve Miller
Subject: Draft Annual Air Quality Monitoring Network Plan

Name:
Jann Higdem
Email:
jhigdem57@gmail.com
Affiliation:
Shoshone County
Comments:
Steve Miller
Ambient AQ Monitoring Network Coordinator
Air Quality Division
DEQ State Office
1410 N. Hilton
Boise, ID 83706

June 21, 2016

Subject: Draft 2017 Annual Ambient Air Quality Monitoring Network Plan (ANP)

Mr. Miller,
Thank you for the opportunity to comment on the 2017 ANP.

Page 21 of the draft states in part, "The following airsheds were previously classified as nonattainment but are now classified as maintenance areas and require monitoring to demonstrate compliance with a specific PM10 NAAQS over specific timeframes: Boise-Northern Ada County, Bonner County-partial (City of Sandpoint), Portneuf Valley (Bannock County-partial, Power County-partial)."

Since DEQ has delayed sending the final draft of the Request of Redesignation and Limited Maintenance Plan to EPA for approval for the 2 Pinehurst PM 10 Nonattainment areas cited on page 20 for nearly 15 years for various reasons, would it not be considerate of DEQ to acknowledge this wonderful milestone for the area? The citizens of the area who have waited long enough, and the entities who use nonattainment data in their actions, all deserve to be aware of this pending action. Perhaps something as simple as:

"The two PM 10 nonattainment areas in Shoshone County have both received Clean Data Determinations from the EPA, DEQ has recently submitted to the EPA a 'Request For Redesignation and a Limited Maintenance Plan' for these areas and is currently awaiting the completion of the agency's approval process." Etc.

Last year you responded to a similar request by stating, "DEQ does not feel it pertinent to the scope of the ANP, per Section 58.10, Subpart B to Part 58 of the CFR to provide detailed information on the airshed's regulatory status in the ANP." As page 21 reveals, the ANP does contain information on the regulatory status of other airsheds. A "less detailed" entry would then be congruous with the ANP's

well-established protocol.

Thank for your consideration on this issue. I truly appreciate it.

Respectfully submitted,
Jann Higdem
Shoshone County's Air Quality Representative

CC: Shoshone County Commissioners
Pinehurst City Council
ID Representatives Giddings & Shepherd
ID Sen. Carl Crabtree

Please acknowledge timely receipt of this letter.
Thank you:

STATE OF IDAHO
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C.L. "Butch" Otter, Governor
John H. Tippets, Director

June 29, 2017

Jann Higdem
Pinehurst Resident, and
Shoshone County Researcher
jhigdem57@gmail.com

Subject: Response to Comments on DEQ's 2017 draft Ambient Air Quality Network Plan

Dear Ms. Higdem:

Idaho DEQ provided a 30-day public opportunity to comment on its 2017 Ambient Air Quality Monitoring Network Plan. This is DEQ's response to the comment you submitted, suggesting DEQ acknowledge the wonderful milestone of the submission of the final draft of the Request of Redesignation and Limited Maintenance Plan to EPA for approval for the two Pinehurst PM10 nonattainment areas.

DEQ's website posts the following present information: "On August 23, 2001, EPA published a finding that the two areas had attained the PM10 standard by their respective attainment dates (66 FR 4403). However, the designation status in 40 CFR part 81 remains moderate nonattainment for both areas until such time as Idaho meets the Clean Air Act requirements for redesignations to attainment." Please note DEQ has not yet submitted to EPA for final action a "Request for Redesignation and a Limited Maintenance Plan," as stated in your comment. DEQ is currently working on the Pinehurst PM10 Maintenance Plan and Redesignation Request, which the public will have an opportunity to comment on prior to submittal to EPA.

Please let me know if you have any questions. I can be reached at (208) 373-0432, or at steve.miller@deq.idaho.gov.

Sincerely,

Steve Miller
Air Quality Monitoring Coordinator,
Idaho Department of Environmental Quality