UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

Division of Air Quality

Annual Monitoring Network Plan 2020

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Introduction

Each year, the Air Monitoring Section of the Utah Division of Air Quality (DAQ) produces a Monitoring Network Plan. The purpose of the document is to apprise the stakeholders (public, private, government) and other entities of the current state and the upcoming changes to the State's Air Quality Monitoring Network. DAQ continually seeks input from the aforementioned parties on improvements to the current level of service or to provide additional accommodations where requested and needed. The Annual Monitoring Network Plan reflects the necessary network changes DAQ implements to enhance the quality, coverage, reliability, and cost efficiency of the division's monitoring efforts.
In 2019-2020, the Air Quality Monitoring Network underwent the following changes:

- The global pandemic has had a minor impact to the operations of the Utah Air Monitoring Network. The network has remained up and running and staff continue to operate all equipment, monitors and samplers. However, as a result of the ensuing budget challenges we expect there may be disruptions to the network, the resources to operate the network and the ability to procure required equipment and parts.
- The newly constructed Technical Support Center was opened on May 21, 2019, and houses the Air Monitoring Center (AMC). Sampling at the AMC began shortly thereafter. Daily $PM_{2.5}$ and PM_{10}, continuous $PM_{2.5}$, nitrous oxide, and ozone monitoring began in August 2019, sulfur dioxide in September 2019, and carbon monoxide in November 2019. As with all new buildings there are a few technical issues that are being addressed that are impacting sampling at this new location and may impact data capture over this first year of operations.
- The Magna station was shut down on December 31, 2019, due to Rio Tinto Kennecott shutting down their last coal-fired power plant. This removed the need for a monitor in that location.
- Precision and span checkpoints on all gaseous monitors were changed to reflect the CFR Appendix A, 3.1.1.

Statement of Compliance

According to the requirement of 40 CFR 58, Subpart B, all stations and monitors deployed within Utah's air quality monitoring network meet the requirements of appendices A, C, D, and E of the aforementioned subpart. As of 2018, Utah's Air Quality Monitoring Network has no active Prevention of Serious Deterioration (PSD) air monitoring program stations; appendix B does not apply to any stations or monitors in Utah because this appendix pertains to PSD air monitoring stations.

Primary Monitor Designation

A primary monitor is defined as the one:

> *"identified by the monitoring organization that provides concentration data used for comparison to the NAAQS. For any specific site, only one monitor for each pollutant can be designated in AQS as primary monitor for a given period of time. The primary monitor identifies the default data source for creating a combined site record for purposes of NAAQS comparisons."* (40 CFR 58.1)

Each year, DAQ carefully chooses and designates suitable primary monitors for each monitoring station and each pollutant according to data completeness and integrity. The primary monitors are designated prior to data certification in Q1 of the following year during the regular QC process. A table listing primary monitors for 2019 follows.

Network Changes

Utah's Air Quality Monitoring Network will undergo several changes during 2020. Two new stations are planned to be installed in conjunction with the inland port: Monticello Academy and the Prison site. All meteorological instrumentation will be upgraded. The Brigham City station was removed.

- ### Brigham City Station Removed
  Equipment was turned off at the Brigham City site on June 25, 2019, and the station was removed on June 28, 2019. This station is being relocated because the school at which the station was housed needed the land to develop a carpool lane.

- ### Inland Port Site Installation at Monticello Academy
  A new site was installed at Monticello Academy (2782 S Corporate Park Drive, West Valley City, UT, 84120) on March 7, 2020. As of the time of the publication of this document, power has not yet been supplied and therefore no instruments have been installed. It is our plan to have this station sampling by Q3 of 2020. A proposed list of instrumentation at this site includes meteorological variables, fine particulate matter ($PM_{2.5}$), ozone (O_3), oxides of nitrogen (NO_x), and black carbon (BC).

- ### Inland Port Site Installation at new State Prison
  A new site will be installed at the new State Prison located north of I-80 on the southern border of the Great Salt Lake in Salt Lake County. It is our plan to have this station operational before Q1 of 2021. A proposed list of instrumentation at this site includes meteorological variables, fine particulate matter ($PM_{2.5}$), ozone (O_3), oxides of nitrogen (NO_x), and black carbon (BC).

- ### Meteorological Instrumentation Upgrade
  All meteorological instrumentation will be upgraded using a suite by Campbell Scientific. These new kits will include 2D sonic wind sensors (RM Young Ultrasonic 86004), temperature and relative humidity probes (Campbell Scientific HMP60), and pyranometers (Campbell Scientific CS301) to measure incoming solar radiation. A test kit was installed at the AMC on April 24, 2020, and the others will be installed as the instruments arrive.

Pending Items

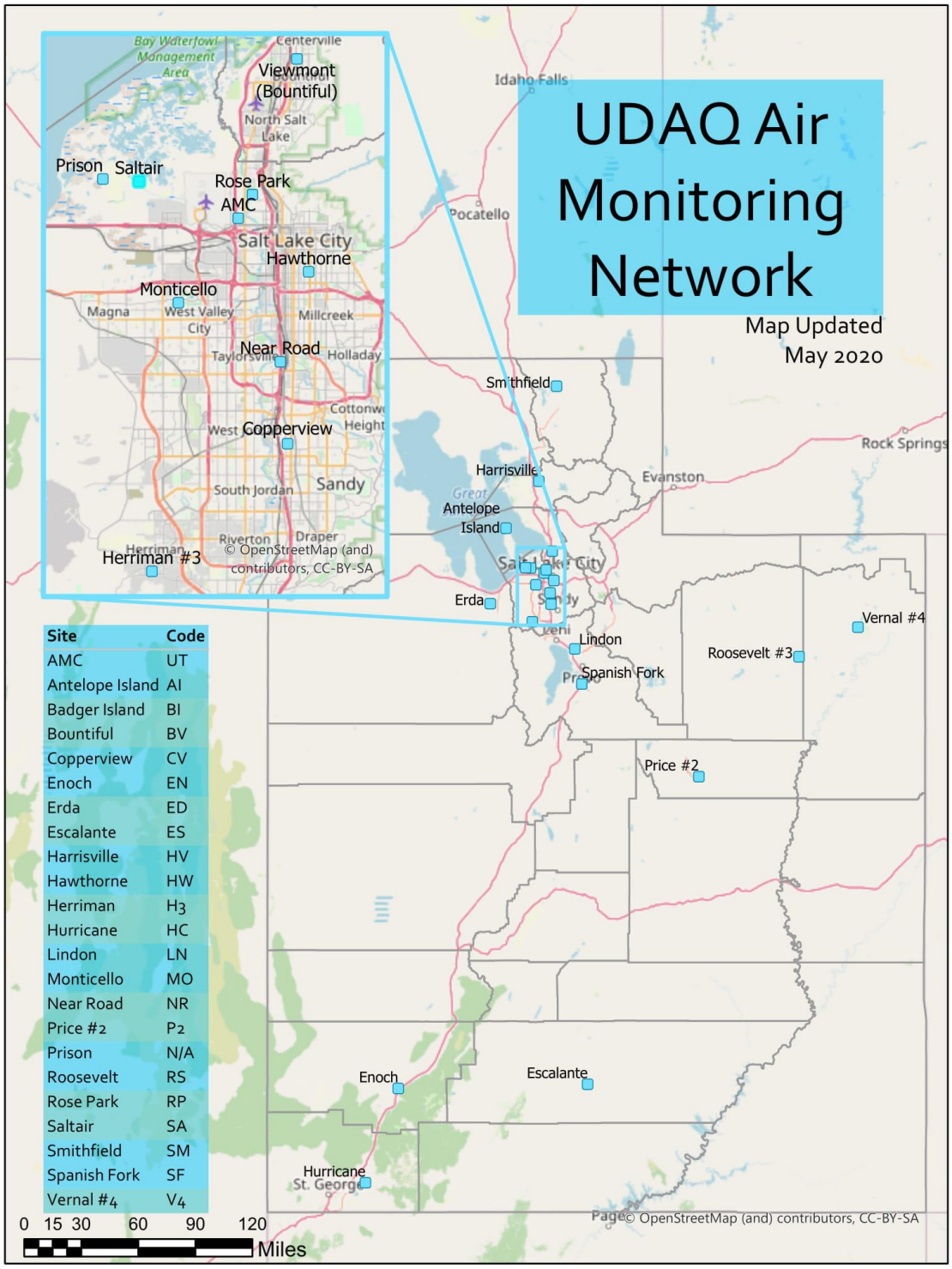
- ### Relocation of Rose Park Station to New AMC
  The monitors at the Rose Park station (about 1 mile away) will eventually be moved to the new AMC location. The station has been outfitted for monitors on the roof, and there are rooms within the building for continuous particulate and gaseous monitors.

- ### Relocation of Spanish Fork Site
  Due to construction at the Spanish Fork (SF) airport site, DAQ has found a new location for the SF site at the same airport. The site has been approved by the EPA and the Federal Aviation

Administration, but we are waiting for the City of Spanish Fork to approve the plan. The site will be moved as soon as approval is received.

- ### Second Near Road Site
  A second Near road site is required in the SLC MSA. Sites are being considered and evaluated for this in consultation with EPA. The timing on the site is still uncertain and will depend on a number of factors including budget and resources.

- ### Relocation of Brigham City and Ogden Sites
  DAQ is currently searching for suitable sites to house replacement Ogden and Brigham City stations.


UDAQ Air Monitoring Network
Map Updated May 2020
Viewmont (Bountiful)
Prison
Saltair
Rose Park
AMC
Salt Lake City
Hawthorne
Monticello
Near Road
Copperview
Sandy
Herriman #3
Smithfield
Harrisville
Antelope Island
Erda
Lindon
Spanish Fork
Roosevelt #3
Vernal #4
Price #2
Enoch
Escalante
Hurricane
Evanston
Rock Springs
Idaho Falls
Pocatello
© OpenStreetMap (and) contributors, CC-BY-SA
Site | Code
AMC | UT
Antelope Island | AI
Badger Island | BI
Bountiful | BV
Copperview | CV
Enoch | EN
Erda | ED
Escalante | ES
Harrisville | HV
Hawthorne | HW
Herriman | H3
Hurricane | HC
Lindon | LN
Monticello | MO
Near Road | NR
Price #2 | P2
Prison | N/A
Roosevelt | RS
Rose Park | RP
Saltair | SA
Smithfield | SM
Spanish Fork | SF
Vernal #4 | V4
0 15 30 60 90 120
Miles

Site Parameters

County	Site	PM 2.5			PM 10			PM Coarse	Speciation PM 2.5	BC	O_3	NO_x	NO_y	SO_2	CO	NH_3	Toxics PAMS	MET.
		Primary	Co-located	Continuous	Primary	Co-located	Continuous											
Cache	Smithfield	1/1	1/6	X	1/1	1/6	X	X	X	X	X	X						X
Weber	Harrisville	1/1	1/1	X	1/1						X	X			X			X
Davis	Bountiful (Viewmont HS)	1/1	1/1	X	1/1	1/6			X		X	X					X	X
	Antelope Island																	X
Salt Lake	AMC	1/1	1/1	X	1/1						X	X		X	X	X		X
	Hawthorne	1/1	1/1	X	1/1			X	X		X	X	X	X	X		X	X
	Herriman #3	1/1		X	1/1	1/1	X	X			X	X						X
	Monticello	1/1	1/1	X	1/1					X	X	X			X			X
	Near Road	1/1		X							X	X			X			
	Prison	1/1	1/1	X							X	X			X			X
	Rose Park	1/1	1/1	X							X	X		X	X			X
	Saltair	1/1		X														X
	Copperview	1/1		X							X	X		X	X			X
Tooele	Erda	1/1	1/1	X							X	X						X
	Badger Island																	X
Utah	Lindon	1/1	1/6	X	1/1			X	X		X	X			X			X
	Spanish Fork	1/1	1/1	X							X							X
Uintah	Vernal #4	1/1		X							X	X						X
Duchesne	Roosevelt	1/1		X							X	X						X
Carbon	Price #2										X	X						X
Iron	Enoch	1/1		X							X	X						X
Garfield	Escalante										X							
Washington	Hurricane	1/1		X							X	X						X

Current Site Addresses

County	EPA AIRS Code	Station Name - Code	Station Address	UTM Northing	UTM Easting	Elevation (meters)
Cache	490050007	Smithfield (SM)	675 West 220 North, Smithfield	4632671	429270	1377
Weber	490571003	Harrisville (HV)	425 West 2550 North, Harrisville	4572829	417416	1331
Davis	490110004	Bountiful (BV)	171 West 1370 North, Bountiful	4528360	425503	1309
	490116001	Antelope Island (AI)	Great Salt Lake, Davis County	4543850	396506	1359
Salt Lake	490353011	Air Monitoring Center (UT)	240 N 1950 West, Salt Lake City	4514420	420161	1286
	490353006	Hawthorne (HW)	1675 South 600 East, Salt Lake City	4509639	426361	1306
	490353012	Herriman #3 (H3)	14058 Mirabella Drive, Herriman	4483371	412184	1534
	490353005	Monticello (MO)	2782 S. Corporate Park Dr., West Valley City	4507037	414801	1295
	490354002	Near Road (NR)	4951 South Galleria Dr., Murray	4501725	423823	1295
	490351007	Prison (##)	Address TBD	4518001	408255	1285
	490353010	Rose Park (RP)	1354 West Goodwin Ave., Salt Lake City	4516479	421458	1295
	490352005	Copperview (CV)	8449 South Monroe St., Midvale	4527825	424683	1290
Utah	490494001	Lindon (LN)	50 North Main Street, Lindon	4465692	439400	1442
	490495010	Spanish Fork (SF)	Spanish Fork Airport, Spanish Fork	4443095	443761	1380

Current Site Addresses

County	EPA AIRS Code	Station Name - Code	Station Address	UTM Northing	UTM Easting	Elevation (meters)
Tooele	490450004	Erda (ED)	2163 West Erda Way, Erda	4495298	385355	1320
Duchesne	490130002	Roosevelt (RS)	290 South 1000 West, Roosevelt	4460879	584230	1588
Uintah	490471003	Vernal #4 (V4)	628 North 1700 West, Vernal	4480337	622012	1667
Carbon	490071003	Price #2 (P2)	351 South 2500 East, Price	4382915	519750	1740
Garfield	490170006	Escalante (ES)	755 West Main, Escalante	4181091	445865	1789
Washington	490530007	Hurricane (HC)	147 North 870 West, Hurricane	4117231	295368	992
Iron	490210005	Enoch (EN)	3840 North 325 East, Enoch	4179782	318903	1692

2019 Primary Monitor Designations

Federal equivalent method (FEM) $PM_{2.5}$ monitor data was not used prior to January 1, 2015, as it did not meet quality assurance requirements. As of January 1, 2015, FEM $PM_{2.5}$ monitoring was used for data substitution and co-locations as required in 49 CFR Part 50 Appendix N and 40 CFR Part 58 Appendix A 3.2

Site Name	Site Number	POC	Start	End
BR	490030003	1	01/01/2018	05/22/2019
		3	05/23/2019	06/30/2019
SM	490050007	3	01/01/2019	12/31/2019
BV	490110004	3	01/01/2019	12/31/2019
MA	490351001	1	01/01/2019	12/31/2019
CV	490352005	4	01/01/2019	12/31/2019
HW	490353006	4	01/01/2019	12/31/2019
RP	490353010	1	01/01/2019	12/31/2019
H3	490353013	5	01/01/2019	12/31/2019
ED	490450004	3	01/01/2019	12/31/2019
LN	490494001	1	01/01/2019	12/31/2019
SF	490495010	1	01/01/2019	12/31/2019
O2	490570002	1	01/01/2019	05/21/2019
		5	05/22/2019	05/31/2019
RS	490130002	3	01/01/2019	12/31/2019
EN	490210005	1	01/01/2019	12/31/2019
UT	490353015	1	09/01/2019	12/31/2019
NR	490354002	1	01/01/2019	12/31/2019
V4	490471004	4	01/01/2019	12/31/2019
HC	490530007	3	01/01/2019	12/31/2019
HV	490571003	1	08/22/2019	12/31/2019

Detailed Site Information

Site:	Air Monitoring Center (UT)	**Longitude:**	-111.9461	**Station Type:**	SLAMS
AQS#:	49-035-3015	**Latitude:**	40.7769	**MSA:**	Salt Lake City
Address:	240 North 1950 West	**Elevation (m):**	1296		
City:	Salt Lake City				
County:	Salt Lake				

Site Objective:
This site is established to replace the Rose Park (RP) site as an area of further investigation of $PM_{2.5}$ Salt Lake County.
Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located at the Air Monitoring Center, in the city of Salt Lake, Salt Lake County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling &Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ammonia	Manual NADP AMoN	Integrated 14 days	Population Exposure	SPM - Transport Regional
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - High Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - High Neighborhood
Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS - High Neighborhood
Sulfur Dioxide	Pulsed Fluorescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood
PM_{coarse}	Manual Gravimetric Subtraction	Daily	Population Exposure	SLAMS - Population Neighborhood

Detailed Site Information

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Pressure	Barometric Pressure Transducer	Continuous	10 meters	Urban
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Sonic 2D	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Sonic 2D	Continuous	10 meters	Urban

Site:	Antelope Island (AI)	**Longitude:**	-112.2313	**Station Type:**	SPM
AQS#:	49-011-6001	**Latitude:**	41.0393	**MSA:**	Ogden-Clearfield
Address:	Antelope Island	**Elevation (m):**	1359		
City:	N/A				
County:	Davis				

Site Objective:
This site is established to collect meteorological information for air quality modeling inputs.
Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located at Antelope Island State Park, near the ranger residences, in Davis County.
Can data from this site be used to evaluate NAAQS? No

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Electronic Thin Film	Continuous	6 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	6 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	6 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	6 meters	Urban

Site:	Bountiful Viewmont (BV)	**Longitude:**	-111.8845	**Station Type:**	SLAMS
AQS#:	49-011-0004	**Latitude:**	40.903	**MSA:**	Ogden-Clearfield
Address:	171 West 1370 North	**Elevation (m):**	1309		
City:	Bountiful				
County:	Davis				

Site Objective:
The Bountiful Viewmont site is established to determine public exposure to air pollution. The site also monitors emissions from nearby oil refineries and local sand and gravel operations. Previous monitoring and saturation studies have recorded high ozone concentrations. This site is chosen for intensive speciation of $PM_{2.5}$ under the EPA Chemical Speciation Network (CSN) and gaseous volatile organic compounds under the EPA National Air Toxics Trends Station (NATTS) Network including hexavalent chromium and carbonyl compounds. Nitrogen dioxide is monitored in support of the ozone monitoring.

Does the site meet the objective?
Yes, all objectives are met.

Site Description:
This site is located near Viewmont High School at the north end of the city of Bountiful, Davis County.

Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - High Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	1 in 6 days	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Speciation	Manual EPA CSN	1 in 6 days	Population Exposure	SLAMS - Population Neighborhood
VOC	Manual EPA NATTS	1 in 6 days	Population Exposure	SLAMS - Population Neighborhood
Semi-volatile Organic Carbons	Manual EPA NATTS	1 in 6 days	Population Exposure	SLAMS - Population Neighborhood
Carbonyl Compounds	Manual EPA NATTS	1 in 6 days	Population Exposure	SLAMS - Population Neighborhood
Black Carbon	Aethalometer	Continuous	Population Exposure	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Pressure	Barometric Pressure Transducer	Continuous	1 meter	Urban
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Copperview (CV)	**Longitude:**	-111.894127	**Station Type:**	SLAMS
AQS#:	490352005	**Latitude:**	40.597938	**MSA:**	Salt Lake City
Address:	8449 South Monroe St.	**Elevation (m):**	1334		
City:	Midvale				
County:	Salt Lake				

Site Objective:
This site is established to assess population exposure in southeast Salt Lake County.
Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located in a neighborhood area of Midvale in Salt Lake County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS - High Neighborhood
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - High Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - High Neighborhood
Trace Sulfur Dioxide	Pulsed Fluorescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Continuous Gravimetric	Continuous	Population Exposure	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban
Ambient Pressure	Barometric Pressure Transducer	Continuous	10 meters	Urban

Site:	Enoch (EN)	**Longitude:**	-113.055525	**Station Type:**	SLAMS
AQS#:	490210005	**Latitude:**	37.74743	**MSA:**	Not in MSA
Address:	3840 North 325 East	**Elevation (m):**	1692		
City:	Enoch				
County:	Iron				

Site Objective:
This site is established to contain SPM equipment to assess population exposure in Iron County prior to full-scale monitoring.
Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located in a county area near Enoch.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	SPM	N/A
Ozone	Instrumental Ultraviolet	Continuous	SPM	N/A
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	SPM	N/A

Meteorological Parameters:

Parameter	Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Erda (ED)	**Longitude:**	-112.3550	**Station Type:**	SLAMS
AQS#:	49-045-0004	**Latitude:**	40.6005	**MSA:**	Salt Lake City
Address:	2163 West Erda Way	**Elevation (m):**	1320		
City:	Erda				
County:	Tooele				

Site Objective:
This site is established to determine population exposure to air pollutants.

Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located in the city of Erda, Tooele County. It is the main monitor for Tooele county.

Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - High Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Electronic Thin Film	Continuous	3 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Escalante (ES)	**Longitude:**	-111.614722	**Station Type:**	SPM
AQS#:	49-017-0006	**Latitude:**	37.775556	**MSA:**	N/A
Address:	755 West Main	**Elevation (m):**	1789		
City:	Escalante				
County:	Garfield				

Site Objective:
This site is established to measure ozone near Escalante National Monument.
Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located at the Escalante National Monument visitor's center in Escalante, Garfield County. This site is funded by the Bureau of Land Management.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	Regional

Site:	Harrisville (HV)	**Longitude:**	-111.9865	**Station**	SLAMS
AQS#:	49-057-1003	**Latitude:**	41.3028	**MSA:**	Ogden-Clearfield
Address:	425 West 2550 North	**Elevation (m):**	1331		
City:	Harrisville				
County:	Weber				

Site Objective:
This site is established in response to an ozone saturation study indicating this as a potentially high ozone concentration area.
Does the site meet the objective?
Yes, all objectives are met.
Site Description:
This site is located on the grounds of Majestic Elementary School in the city of Harrisville, Weber County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal	Continuous	10 meters	Urban

Site:	Hawthorne (HW)	**Longitude:**	-111.8721	**Station Type:**	SLAMS
AQS#:	49-035-3006	**Latitude:**	40.7343	**MSA:**	Salt Lake City
Address:	1675 South 600 East	**Elevation (m):**	1306		
City:	Salt Lake City				
County:	Salt Lake				

Site Objective:
This site is established to represent population exposure in the Salt Lake City area. This site is also designated as the EPA NCORE site for Utah.
Does the site meet objective?
Yes, all current objectives are met. NCORE monitoring began in January 2011.
Site Description:
This site is located at Hawthorne Elementary School in the southeast section of Salt Lake City, Salt Lake County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS - High Neighborhood
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - High Neighborhood
Trace Nitrogen Dioxide	Instrumental Photolysis	Continuous	Population Exposure	SLAMS - High Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - High Neighborhood
Trace NO_y	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Trace Sulfur Dioxide	Pulsed Fluorescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Speciation	Manual EPA CSN	1 in 3 days	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time NCORE	Synchronized Ambient Real Time Particulate Monitor	Continuous	Air Pollution Index	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
PM_{coarse}	Manual Gravimetric Subtraction	Daily	Population Exposure	SLAMS - Population Neighborhood
Organic & Elemental Carbon	NIDR	Continuous	Population Exposure	SLAMS - Population Neighborhood
PAMS C2 to C12	Instrumental Gas Chromatography	Continuous	Ozone Modeling Input	Population Neighborhood
Visibility	Instrumented	Continuous	Public Information	Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Pressure	Barometric Pressure Transducer	Continuous	3 meters	Urban
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Solar Radiation	Electronic EPPLY	Continuous	4 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban
Mix Layer Height (MXLH)	Atmospheric Lidar	Continuous	10 meters	Urban

Site:	Herriman #3 (H3)	**Longitude:**	-112.036305	**Station Type:**	SLAMS
AQS#:	49-035-3012	**Latitude:**	40.496408	**MSA:**	Salt Lake City
Address:	14058 Mirabella Drive	**Elevation (m):**	1534		
City:	Herriman				
County:	Salt Lake				

Site Objective:
This site is established to assess population exposure in southwest Salt Lake County.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located at Fort Herriman Middle School in southwest Salt Lake County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
PM_{10} Real Time	Synchronized Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Instrumental/Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
Wind Speed	Instrumental/Electronic Chopped Signal	Continuous	10 meters	Urban
Barometric Pressure	Pressure Transducer	Continuous	10 meters	Urban
Relative Humidity	Instrumental/Electronic Thin Film	Continuous	10 meters	Urban

Site:	Hurricane (HC)	**Longitude:**	-113.3051	**Station Type:**	SLAMS
AQS#:	49-053-0007	**Latitude:**	37.1791	**MSA:**	St. George
Address:	147 North 870 West	**Elevation (m):**	992		
City:	Hurricane				
County:	Washington				

Site Objective:
This site is established to determine population exposure to ozone in Washington County.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located behind the Hurricane City offices.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	High Winter Ozone Study	Regional
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	High Winter Ozone Study	Regional
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Regional
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Regional
WD Sigma	Electronic EPA Method	Continuous	10 meters	Regional
Wind Speed	Electronic Chopped Signal Level	Continuous	10 meters	Regional
Barometric Pressure	Pressure Transducer	Continuous	2 meters	Regional

Site:	Lindon (LN)	**Longitude:**	-111.7133	**Station Type:**	SLAMS
AQS#:	49-049-4001	**Latitude:**	40.3396	**MSA:**	Provo - Orem
Address:	50 North Main	**Elevation (m):**	1442		
City:	Lindon				
County:	Utah				

Site Objective:
This site is established to determine PM emissions from commercial and industrial sources. Historically, this site has reported the highest PM values in Utah County.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located at the Lindon Elementary School in the City of Lindon, Utah County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric Collocated	1 in 6 days	Precision and Accuracy Assessment	SLAMS - Population Neighborhood
$PM_{2.5}$ Speciation	Manual EPA CSN	1 in 6 days	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS - Impact Neighborhood
Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS - Population Neighborhood
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - High Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
Black Carbon	Aethalometer	Continuous	Population Exposure	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban
Mix Layer Height (MXLH)	Atmospheric Lidar	Continuous	10 meters	Urban

Site:	Monticello Academy (MO)	**Longitude:**	-112.008576	**Station Type:**	SLAMS
AQS#:	49-035-1007	**Latitude:**	40.709791	**MSA:**	Salt Lake City
Address:	2782 S Corporate Park Dr.	**Elevation (m):**	1295		
City:	West Valley City				
County:	Salt Lake				

Site Objective:
This site is established to determine potential impact of the Inland Port on the Salt Lake Valley Airshed.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located near the parking lot of Monticello Academy in the City of West Valley City, Salt Lake County.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - High Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS - High Neighborhood
Sulfur Dioxide	Pulsed Fluorescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - High Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal	Continuous	10 meters	Urban

Site:	Near Road (NR)	**Longitude:**	-111.9011881	**Station Type:**	SLAMS
AQS#:	49-035-4002	**Latitude:**	40.662878	**MSA:**	Salt Lake City
Address:	4951 South Galleria Dr	**Elevation (m):**	1295		
City:	Murray				
County:	Salt Lake				

Site Objective:
This site is established to monitor vehicular contribution to air pollution.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located on I-15 as it crosses 5000 S in Murray, UT.
Can data from this site be used to evaluate NAAQS?: Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Carbon Monoxide Trace	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS -Population Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Population Exposure	SLAMS - Population Neighborhood
Sulfur Dioxide	Pulsed Fluorescence	Continuous	Population Exposure	SLAMS - Population Neighborhood

Site:	Price #2 (P2)	**Longitude:**	-110.77	**Station Type:**	SPM
AQS#:	49-007-1003	**Latitude:**	39.5958	**MSA:**	Price
Address:	351 South Weasel Run Road	**Elevation (m):**	1740		
City:	Price				
County:	Carbon				

Site Objective:
This site is established in response to a three state ozone study. It is funded by the Bureau of Land Management.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located in a farm field 3.6 Km east of Price.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	High Ozone Winter Study	Regional
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	High Ozone Winter Study	Regional

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Regional
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Regional
WD Sigma	Electronic EPA Method	Continuous	10 meters	Regional
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Regional
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Regional

Site:	Roosevelt (RS)	**Longitude:**	-110.009	**Station Type:**	SPM
AQS#:	49-013-0002	**Latitude:**	40.2941	**MSA:**	N/A
Address:	290 South 1000 West	**Elevation (m):**	1588		
City:	Roosevelt				
County:	Duchesne				

Site Objective:
This site is established to determine maximum ozone and $PM_{2.5}$ concentrations in Duchesne County.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located in the city park northwest section of Roosevelt.
Can data from this site be used to evaluate NAAQS? Yes

Gas/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	High Ozone Winter Study	Regional
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	High Ozone Winter Study	Regional
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Population Exposure	Regional
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor, Collocated	Continuous	Population Exposure	Regional

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Sonic Method	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Sonic Method	Continuous	10 meters	Urban
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	2 meters	Urban
Temperature Difference	Math Channel	Continuous	10-2 meters	Urban

Site:	Rose Park (RP)	**Longitude:**	-111.9309	**Station Type:**	SLAMS
AQS#:	49-035-3010	**Latitude:**	40.7955	**MSA:**	Salt Lake City
Address:	1354 West Goodwin Avenue	**Elevation (m):**	1295		
City:	Salt Lake City				
County:	Salt Lake				

Site Objective:
This site is established to better represent $PM_{2.5}$ exposure in this area of Salt Lake City.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located in the community of Rose Park at the north end of Salt Lake City, Salt Lake County.
Can data from this site be used to evaluate NAAQS? Yes

Gas/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	High Winter Ozone Study	Regional
Trace Nitrogen Dioxide	Instrumental Ultraviolet	Continuous	High Winter Ozone Study	SLAMS - Population Neighborhood
Sulfur Dioxide	Pulsed Fluorescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric Co-located	1 in 6 days	Precision and Accuracy Assessment	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban

Site:	Saltair (SA)	**Longitude:**	-112.0498	**Station Type:**	SPM
AQS#:	49-035-3005	**Latitude:**	40.8061	**MSA:**	Salt Lake City
Address:	6640 West 1680 North	**Elevation (m)**	1282		
City:	Salt Lake City				
County:	Salt Lake				

Site Objective:
This site is established to collect meteorological information for air quality models.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
The site is located west of the Salt Lake Airport in Salt Lake County.
Can data from this site be used to evaluate NAAQS? No

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Solar Radiation	Electronic LiCor	Continuous	2 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Smithfield (SM)	**Longitude:**	-111.851944	**Station Type:**	SLAMS
AQS#:	49-005-0007	**Latitude:**	41.842778	**MSA:**	Logan
Address:	675 West 220 North	**Elevation (m):**	1377		
City:	Smithfield				
County:	Cache				

Site Objective:
This site is established to replace the Logan site and determine general population exposure.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located at Birch Creek Elementary School in Cache County. It is approximately 7 miles north of Logan.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
Black Carbon	Aethalometer	Continuous	General/Background	SLAMS - Population Neighborhood
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	1 in 6 days	Precision and Accuracy Assessment	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor, Collocated	Continuous	Air Quality Index	SLAMS - Population Neighborhood
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS - Population Neighborhood
PM_{10}	Manual Gravimetric Co-located	1 in 6 days	Precision and Accuracy Assessment	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Spanish Fork (SF)	**Longitude:**	-111.6603	**Station Type:**	SLAMS
AQS#:	49-049-5010	**Latitude:**	40.1364	**MSA:**	Provo - Orem
Address:	312 West 2050 North	**Elevation (m):**	1380		
City:	Spanish Fork				
County:	Utah				

Site Objective:
This site is established to determine the boundary of the high ozone and $PM_{2.5}$ concentrations in Utah County.
Does the site meet objective?
Yes, all objectives are met.
Site Description:
This site is located at the Spanish Fork airport in the city of Spanish Fork, Utah County.
Can data from this site be used to evaluate NAAQS? Yes

Gas/Particulate Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	Population Exposure	SLAMS - Population Neighborhood
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS - Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS - Transport Regional
$PM_{2.5}$ Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS - Transport Regional

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Urban
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Electronic EPA Method	Continuous	10 meters	Urban
Wind Speed	Electronic Chopped Signal	Continuous	10 meters	Urban

Site:	Vernal #4 (V4)	**Longitude:**	-109.560733	**Station Type:**	SLAMS
AQS#:	49-047-1003	**Latitude:**	40.464971	**MSA:**	NA
Address:	628 North 1700 West	**Elevation (m):**	1667		
City:	Vernal				
County:	Uintah				

Site Objective:
This site is established was set up in response to an ozone study.
Does the site meet objective?
Yes, all objectives are met.
Can data from this site be used to evaluate NAAQS? Yes

Gaseous/Particulate Parameters

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ozone	Instrumental Ultraviolet	Continuous	High Winter Ozone Study	Regional
Trace Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	High Winter Ozone Study	Regional
$PM_{2.5}$ Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Air Quality Index	SLAMS - Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Electronic Thin Film	Continuous	10 meters	Regional
Ambient Temperature	Electronic Resistance	Continuous	10 meters	Regional
Wind Direction	Electronic Resistance Level 1	Continuous	10 meters	Regional
WD Sigma	Electronic EPA Method	Continuous	10 meters	Regional
Wind Speed	Electronic Chopped Signal Level 1	Continuous	10 meters	Regional
Barometric Pressure	Pressure Transducer	Continuous	2 meters	Regional