UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

Division of Air Quality

Annual Monitoring Network Plan 2016

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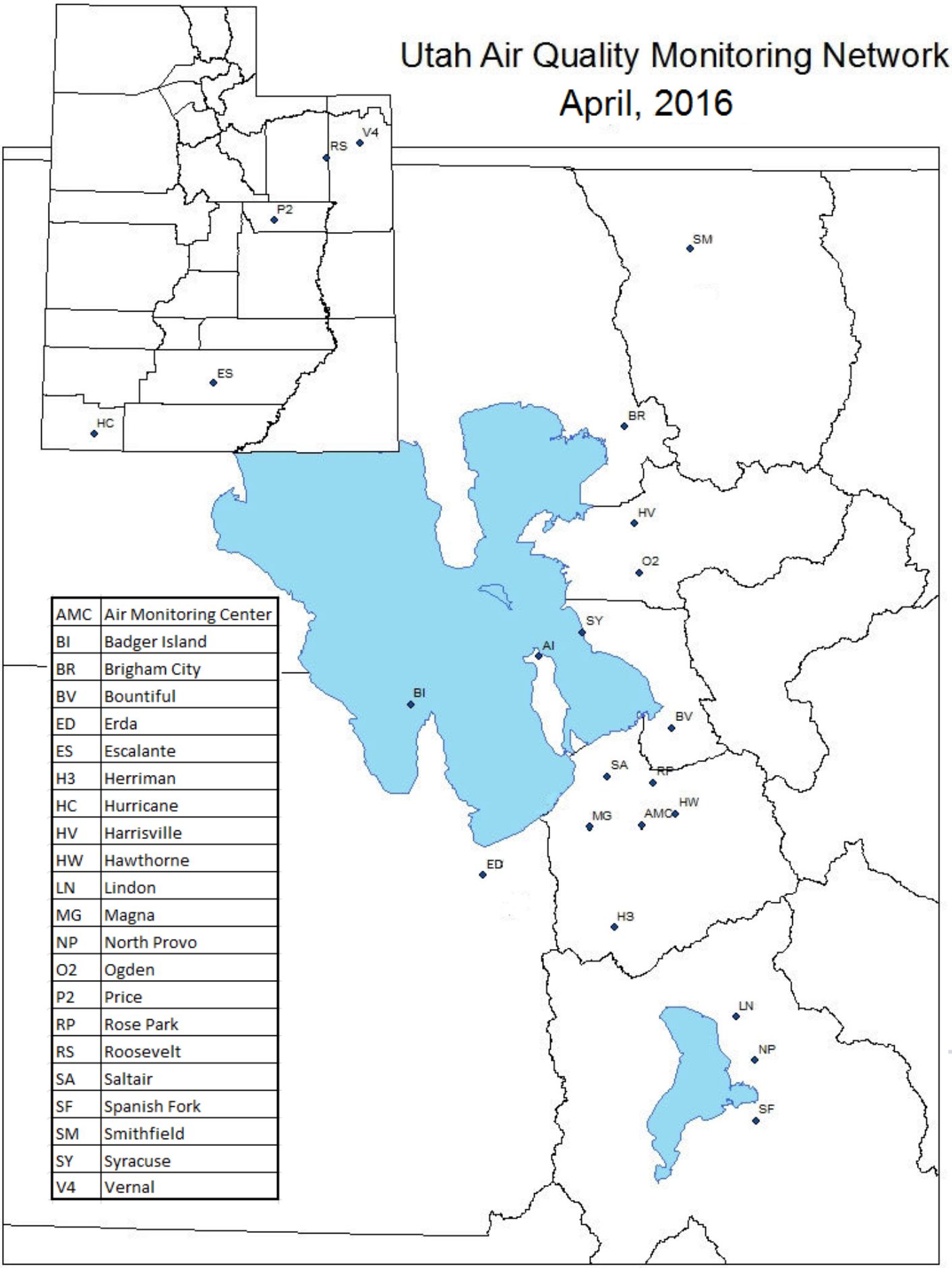

AMC	Air Monitoring Center
BI	Badger Island
BR	Brigham City
BV	Bountiful
ED	Erda
ES	Escalante
H3	Herriman
HC	Hurricane
HV	Harrisville
HW	Hawthorne
LN	Lindon
MG	Magna
NP	North Provo
O2	Ogden
P2	Price
RP	Rose Park
RS	Roosevelt
SA	Saltair
SF	Spanish Fork
SM	Smithfield
SY	Syracuse
V4	Vernal

Site Parameters

County	Site	PM 2.5			PM 10			PM Coarse	Speciation PM 2.5	Lead	O_3	NO_x	NO_y	SO_2	CO	Hg	NH_3	Toxics PAMS	MET.
		Primary	Co-located	Real-time	Primary	Co-located	Real-time												
Cache	Smithfield	1/1	1/12	X	1/3	1/12	X	X			X	X							X
Box Elder	Brigham City	1/3		X							X								X
Weber	Ogden #2	1/1		X	1/1		X	X			X	X			X				X
	Harrisville										X								X
Davis	Bountiful	1/3		X	1/6	1/60			X		X	X						X	X
	Antelope Island																		X
	Syracuse																		X
Salt Lake	AMC															X	X		X
	Hawthorne	1/1		X	1/1		X	X	X		X	X	X	X	X				X
	Herriman			X	1/1		X	X			X	X							X
	Magna	1/3			1/3					X									X
	Rose Park	1/1	1/12																
	Saltair																		X
Tooele	Erda	1/3		X							X	X							X
	Badger Island																		X
Utah	North Provo	1/1		X	1/3	1/12	X	X			X	X			X				X
	Lindon	1/1	1/12	X	1/1		X	X	X										X
	Spanish Fork	1/3									X								X
Uintah	Vernal			X							X	X							X
Duchesne	Roosevelt			X							X	X							X
Carbon	Price #2										X	X							X
Garfield	Escalante										X								
Washington	Hurricane	1/3		X	1/3						X	X							X

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
Box Elder	490030003	Brigham City - BR	140 West Fishburn Dr., Brigham City	4593978	415045	1334
Weber	490571003	Harrisville - HV	425 West 2550 North, Harrisville	4572829	417416	1331
	490570002	Ogden #2 - O2	228 East 32nd Street, Ogden	4562188	418249	1316
Davis	490110004	Bountiful - BV	171 West 1370 North, Bountiful	4528360	425503	1309
	490116001	Antelope Island - AI	Great Salt Lake	4543850	396506	1359
	490116002	Syracuse - SY	Great Salt Lake	4549182	406033	1284
Salt Lake	490353011	Air Monitoring Center, AMC	2861 West Parkway Blvd., West Valley	4507220	418827	1292
	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	Saltair - SA	Great Salt Lake	4517750	411449	1282
	490351001	Magna - MG	2935 South 8560 West, Magna	4506790	407536	1317
	490353010	Rose Park - RP	1354 West Goodwin Ave., Salt Lake City	4516479	421458	1295
Utah	490494001	Lindon - LN	50 North Main Street, Lindon	4465692	439400	1442
	490490002	North Provo - NP	1355 North 200 West, Provo	4456141	443590	1402
	490495010	Spanish Fork - SF	Spanish Fork Airport, Spanish Fork	4443095	443761	1380

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
	490456001	Badger Island - BI	Great Salt Lake	4533506	368518	1282
Duchesne	490130002	Roosevelt - RS	290 South 1000 West, Roosevelt	4460879	584230	1588
Uintah	490471003	Vernal – V4	628 North 1700 West, Vernal	4480337	622012	1667
Carbon	490071003	Price #2 - P2	351 South 2500 East, Price	4382915	519750	1740
Garfield	490170004	Escalante - ES	755 West Main, Escalante	4181091	445865	1789
Washington	490530007	Hurricane - HC	147 North 870 West, Hurricane	4117231	295368	992

Detailed Site Information

Site:	Air Monitoring Center (AMC)	**Longitude:**	-111.9612	**Station Type:**	SPM
AQS#:	49-035-3011	**Latitude:**	40.7118	**MSA:**	Salt Lake City
Address:	2861 West Parkway Blvd.	**Elevation (m):**	1292		
City:	West Valley				
County:	Salt Lake				

Site Objective:
This site is established to determine Mercury in Wet Deposition and Dry Deposition.
Does the site meet the objective:
Yes, all objectives are met.
Site Description:
The site is located at the Air Monitoring Center, in the city of West Valley, Salt Lake County.
Can data from this site be used to evaluate NAAQS?: No

Gaseous/Particulate parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Dry Dep. Mercury	Cold Vapor Atomic Absorption	Continuous	Population Exposure	SPM- Transport Regional
Wet Dep. Mercury	Manual NADP MDN	Integrated 7 days	Population Exposure	SPM- Transport Regional
Ammonia	Manual NADP AMoN	Integrated 14 days	Population Exposure	SPM- Transport Regional

Meteorological parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Pressure	Barometric Pressure Transducer	Continuous	2 meters	Urban
Relative Humidity	Elec. Thin Film	Continuous	4 meters	Urban
Leaf Wetness		Continuous	4 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	4 meters	Urban
Wind Direction	Sonic 2D	Continuous	4 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	4 meters	Urban
Wind Speed	Sonic 2D	Continuous	4 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:

The site is on 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	Elec. Thin Film	Continuous	6 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	6 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	6 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	6 meters	Urban
Wind Speed	Elec. Chopped Signal Level 1	Continuous	6 meters	Urban

Site:	Badger Island (BI)	**Longitude:**	-112.5620	**Station Type:**	SPM
AQS#:	49-045-6001	**Latitude:**	40.942	**MSA:**	Salt Lake City
Address:	Badger Island	**Elevation (m):**	1282		
City:	NA				
County:	Tooele				

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:

The site is located on the south end of the Great Salt Lake on the remnants of Badger Island in Tooele County.

Can data from this site be used to evaluate NAAQS?: No

Meteorological parameters:

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

Site:	Bountiful Viewmont (BV)	**Longitude:**	-111.8845	**Station Type:**	SLAMS
AQS#:	49-011-0004	**Latitude:**	40.903	**MSA:**	Ogden-Clearfield
Address:	1380 North 200 West	**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 PM2.5 under the EPA Chemical Speciation Network (CSN) and gaseous Volatile Organic Compounds under the EPA National Air Toxics Trends Network (NTTN) 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:

The 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
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS- Population Neighborhood
Ozone	Instrumental Ultra Violet	Continuous	Population Exposure	SLAMS-High Neighborhood
$PM_{2.5}$	Manual Gravimetric	1 in 3 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
PM10 Metals	Manual Gravimetric	1 in 6 days	Population Exposure	SLAMS- Population Neighborhood
PM10 Metals Co-located	Manual Gravimetric	6 samples/year	Population Exposure	SLAMS- Population Neighborhood
$PM_{2.5}$ Speciation	Manual EPA CSN	1 in 6 days	Population Exposure	SLAMS- Population Neighborhood
VOC	Manual EPA NTTN	1 in 6 days	Population Exposure	SLAMS- Population Neighborhood
Semi-volatile	Manual EPA NTTN	1 in 6 days	Population Exposure	SLAMS- Population Neighborhood
Carbonyl compounds	Manual EPA NTTN	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	Elec. Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Brigham City (BR)	**Longitude:**	-112.0176	**Station Type:**	SLAMS
AQS#:	49-003-0003	**Latitude:**	41.4929	**MSA:**	Ogden-Clearfield
Address:	140 West Fishburn Dr.	**Elevation (m):**	1334		
City:	Brigham City				
County:	Box Elder				

Site Objective:

This site is established to determine the boundary of ozone concentrations greater than the NAAQS and PM2.5 comparison to Cache County

Does the site meet the objective:

Yes, all objectives are met.

Site Description:

The site is located in a neighborhood area of Brigham City in Box Elder 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 Ultra Violet	Continuous	Population Exposure	SLAMS- Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	1 in 3 days	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	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. 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:

The site is located in the city of Erda, Tooele County, and replaces the Tooele site.

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 Ultra Violet	Continuous	Population Exposure	SLAMS- Population Neighborhood
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS- High Neighborhood
$PM_{2.5}$	Manual Gravimetric	1 in 3 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

Meteorological parameters:

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

Site:	Escalante (ES)	**Longitude:**	-111.614722	**Station Type:**	SPM
AQS#:	49-017-0004	**Latitude:**	37.775556	**MSA:**	NA
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:

The 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 Ultra Violet	Continuous	Population Exposure	Regional

Site:	Harrisville (HV)	**Longitude:**	-111.9865	**Station Type:**	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:

The site is located on the grounds of an 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
Ozone	Instrumental Ultra Violet	Continuous	Population Exposure	SLAMS- Population Neighborhood

Meteorological parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. Chopped Signal Level 1	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. The Hawthorne site is also designated as the EPA Ncore site for Utah.

Does the site meet the objective:

Yes, all current objectives are met. NCore monitoring began in January 2011.

Site Description:

The 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
Carbon Monoxide, Trace	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS-High Neighborhood
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS-High Neighborhood
Ozone	Instrumental Ultra Violet	Continuous	Population Exposure	SLAMS-High Neighborhood
NOy Trace Level	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS- Population Neighborhood
SO2 Trace Level	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	Continuous Gravimetric	Continuous	Air Pollution Index	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS- Population Neighborhood
PM_{10} Real Time NCore	Continuous Gravimetric	Continuous	Air Pollution Index	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	Elec. Thin Film	Continuous	10 meters	Urban
Solar Radiation	Elec. EPPLY	Continuous	4 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. Chopped Signal Level 1	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:

Site established to assess population exposure in southwest Salt Lake County.

Does the site meet the objective:

Yes, all objectives are met.

Site Description:

The 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 Ultra Violet	Continuous	Population Exposure	SLAMS- Population Neighborhood
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS- Population Neighborhood
$PM_{2.5}$ Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS- Population Neighborhood
PM_{10} Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS- Population Neighborhood

Meteorological parameters:

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

Site:	Hurricane (HC)	**Longitude:**	-113.3051	**Station**	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 the 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 Ultra Violet	Continuous	High Winter Ozone Study	Regional
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	High Winter Ozone Study	Regional
$PM_{2.5}$	Manual Gravimetric	1 in 3 days	Population Exposure	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric	1 in 3 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

Meteorological parameters:

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

Site:	Lindon (LN)	**Longitude:**	-111.7133	**Station**	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 the objective:

Yes, all objectives are met.

Site Description:

The 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 Co-located	1 in 12 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	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS-Impact Neighborhood
PM_{10} Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS-Impact Neighborhood

Meteorological parameters:

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

Site:	Magna (MG)	**Longitude:**	-112.0947	**Station Type:**	SLAMS
AQS#:	49-035-1001	**Latitude:**	40.7068	**MSA:**	Salt Lake City
Address:	2935 South 8560 West	**Elevation (m):**	1317		
City:	Magna				
County:	Salt Lake				

Site Objective:

This site is established to determine particulate matter and Pb concentrations from Kennecott smelter.

Does the site meet the objective:

Yes, all objectives are met.

Site Description:

The site is located on the roof of Brockbank Junior High School in the city of Magna in western 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
$PM_{2.5}$	Manual Gravimetric	1 in 3 days	Population Exposure	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric	1 in 3 days	Population Exposure	SLAMS-High Neighborhood
Pb	Manual Gravimetric	1 in 6 days	Population Exposure	SLAMS-High Neighborhood
Pb Co-located	Manual Gravimetric	1 in 12 days	Population Exposure	SLAMS-High Neighborhood

Meteorological parameters:

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

Site:	North Provo (NP)	**Longitude:**	-111.6633	**Station Type:**	SLAMS
AQS#:	49-049-0002	**Latitude:**	40.2538	**MSA:**	Provo - Orem
Address:	1355 North 200 West	**Elevation (m):**	1402		
City:	Provo				
County:	Utah				

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:

The site is located at north end of the city of Provo, Utah County. It is located on the grounds of the Dale Rex Army Armory.

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

Gaseous/Particulate parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Monitoring Objective	Spatial Scale
Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS- Population Neighborhood
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS-High Neighborhood
Ozone	Instrumental Ultra Violet	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	Air Quality Index	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric	1 in 3 days	Population Exposure	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric Co-located	1 in 12 days	Precision and accuracy	SLAMS- Population Neighborhood
PM_{10} Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS- Population Neighborhood

Meteorological parameters:

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

Site:	Ogden #2 (O2)	**Longitude:**	-111.9751	**Station Type:**	SLAMS
AQS#:	49-057-0002	**Latitude:**	41.207	**MSA:**	Ogden-Clearfield
Address:	228 East 32nd Street	**Elevation (m):**	1316		
City:	Ogden				
County:	Weber				

Site Objective:

This site is established replace the original Ogden site to determine population exposure to air pollutants.

Does the site meet the objective:

Yes, all objectives are met.

Site Description:

The site is located in the city of Ogden in Weber 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
Carbon Monoxide	Instrumental Gas Phase Correlation	Continuous	Population Exposure	SLAMS-Population Neighborhood
Ozone	Instrumental Ultra Violet	Continuous	Population Exposure	SLAMS-Population Neighborhood
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS-High Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS-High Neighborhood
$PM_{2.5}$ Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS-High Neighborhood
PM_{10}	Manual Gravimetric	Daily	Population Exposure	SLAMS-High Neighborhood
PM_{10} Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS-High Neighborhood

Meteorological parameters:

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

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 the 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 Ultra Violet	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	Elec. Resistance	Continuous	10 meters	Regional
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Regional
WD Sigma	Elec. EPA Method	Continuous	10 meters	Regional
Wind Speed	Elec. Chopped Signal Level 1	Continuous	10 meters	Regional

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

Site Objective:

This site is established to determine maximum ozone and PM2.5 concentrations in Duchesne County.

Does the site meet the objective:

Yes, all objectives are met.

Site Description:

The site is located in the city park North West 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 Ultra Violet	Continuous	High Ozone Winter Study	Regional
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	High Ozone Winter Study	Regional
PM2.5 Real Time	Synchronized Hybrid Ambient Real Time Particulate Monitor	Continuous	Population Exposure	Regional

Meteorological parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Sonic Method	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Sonic Method	Continuous	10 meters	Urban
Relative Humidity	Elec. Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Elec. 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 the objective:

Yes, all objectives are met.

Site Description:

The 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
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS- Population Neighborhood
$PM_{2.5}$	Manual Gravimetric Co-located	1 in 12 days	Precision and Accuracy Assessment	SLAMS- Population Neighborhood

Site:	Saltair (SA)	**Longitude:**	-112.0497	**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 the 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	Elec. Thin Film	Continuous	10 meters	Urban
Solar Radiation	Elec. LiCor	Continuous	2 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. 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:

Site established to replace Logan site and determine general population exposure.

Does the site meet the 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
Nitrogen Dioxide	Instrumental Chemiluminescence	Continuous	Population Exposure	SLAMS- Population Neighborhood
Ozone	Instrumental Ulta Violet	Continuous	Population Exposure	SLAMS- Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	Daily	Population Exposure	SLAMS- Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	1 in 12 days	Precision and Accuracy Assessment	SLAMS- Population Neighborhood
$PM_{2.5}$ Real Time	Continuous Gravimetric	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	1 in 3 days	Population Exposure	SLAMS- Population Neighborhood
PM_{10}	Manual Gravimetric Co-located	1 in 12 days	Precision and Accuracy Assessment	SLAMS- Population Neighborhood
PM_{10} Real Time	Continuous Gravimetric	Continuous	Air Quality Index	SLAMS- Population Neighborhood

Meteorological Parameters:

Parameter	Sampling & Analysis Method	Operating Schedule	Tower Height	Spatial Scale
Relative Humidity	Elec. Thin Film	Continuous	10 meters	Urban
Solar Radiation	LiCor	Continuous	10 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. 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 the objective:

Yes, all objectives are met.

Site Description:

The 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 Ultra Violet	Continuous	Population Exposure	SLAMS-Population Neighborhood
$PM_{2.5}$	Manual Gravimetric	1 in 3 days	Population Exposure	SLAMS-Transport Regional

Meteorological parameters:

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

Site:	Syracuse (SY)	**Longitude:**	-112.1185	**Station Type:**	SPM
AQS#:	49-011-6002	**Latitude:**	41.0886	**MSA:**	Ogden-Clearfield
Address:	4700 West 1700 South	**Elevation (m):**	1284		
City:	Syracuse				
County:	Davis				

Site Objective:

This site is established to collect meteorological information for air quality models.

Does the site meet the objective:

Yes, all objectives are met.

Site Description:

The site is located in the city of Syracuse near the causeway to Antelope Island State Park, 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	Elec. Thin Film	Continuous	10 meters	Urban
Ambient Temperature	Elec. Resistance	Continuous	10 meters	Urban
Wind Direction	Elec. Resistance Level 1	Continuous	10 meters	Urban
WD Sigma	Elec. EPA Method	Continuous	10 meters	Urban
Wind Speed	Elec. Chopped Signal Level 1	Continuous	10 meters	Urban

Site:	Vernal (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 the 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 Ultra Violet	Continuous	High Winter Ozone Study	Regional
Nitrogen Dioxide	Instrumental Ultra Violet	Continuous	High Winter Ozone Study	Regional
PM2.5 Real Time	Instrumental Ultra Violet	Continuous	Air Quality Index	SLAMS-Population Neighborhood

Meteorological parameters:

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

Planned Network Changes SFY2016

Several changes are proposed for the Utah monitoring network for the next 18 months. Many items are housekeeping, while others are planned to improve the data available for health advisories, characterization of urban and rural areas, and modeling of high pollution periods. All the identified changes are subject to available monies, personnel, and consultation with EPA.

- Efforts have been made to establish a multi-pollutant monitoring site in the southeast area of Salt Lake County at Copperview Elementary School. Unfortunately, security issues have prevented the full implementation of this site, placing it on hold until all problems are resolved.
- Currently, a proposed location for an EPA NO_2 near-road monitoring site in Salt Lake County is on the west side of I-15 near 4900 South. This monitoring site is planned and will be re-evaluated to determine if it is still the best location. Some funding has been made available for this site. Due to the high average daily traffic counts, a second near-road monitoring site will potentially be added within the Salt Lake City Core Based Statistical Area (CBSA). The best location for a second site is also being evaluated.
- Monitoring shelters at Herriman (H3) and Rose Park (RP) need to be upgraded as resources become available. The current shelters are old and need major repairs to meet monitoring requirements. We will look at each site to ensure siting criteria continue to be met before replacing shelters.
- The total population of Cedar City CBSA is expected to exceed the threshold of federal monitoring requirements in 2018. The plan is to establish a site in Cedar City, Iron County, due to expected population growth. FRM PM2.5 and ozone will be monitored at this site.
- The Spanish Fork (SF) station will need to be moved in the next year or two due to airport construction. The airport has offered an alternative location that is across the street from the current location, but we will evaluate other sites in the area before making any changes.
- Previous plans purposed consolidating the North Provo (NP) and Lindon (LN) sites to one site; however, for now monitoring continues from both locations. Further review and discussion is taking place to determine whether keeping these two sites or consolidating to one site, possibly at a new location, is the best option.
- Any sites with seasonal ozone monitoring have been changed to continuous monitors following 2015. These sites include: Bountiful (BV), Brigham City (BR), Harrisville (HV), Hurricane (HC), Roosevelt (RS), and Spanish Fork (SF).
- All stations will be reviewed this year to ensure that they continue to meet required siting criteria. Any sites that do not meet applicable criteria will be evaluated for future actions.