Ohio Air Monitoring Network 2011-2012 6/17/11

Requirements

As required by 40 CFR 58.10, Ohio EPA is providing an annual monitoring network plan for public review and comments. Ohio EPA will submit this plan with comments to the US EPA Region V Regional Administrator. There will be a 30 day comment period for the public to make comments on the plan and those comments will also be submitted to Region V. The Ohio Air Monitoring Network as it exists as of July 1, 2011 is included in the accompanying table.

Changes

The plan for Ohio's Air Monitoring Network for 2011-2012 is to make changes as required or necessary for the air monitoring network. In 2011 Ohio and other states were required to consider additional lead sampling sites based upon modeling results of Ohio facilities with emissions of one half-ton of airborne lead emissions per year. The results of that modeling and the requests for waivers from sampling are included in a separate report under Ohio Lead Monitoring Plans 2011-2012 at:
http://www.epa.state.oh.us/portals/27/ams/plans/OhioLeadMonitoring.pdf
The Lead Monitoring Plans were made available to the public on May 11, 2011 for review and comment.

For sites that monitor for very fine particulate matter or PM2.5, Ohio EPA expects to continue with monitoring or sampling for the PM2.5 Federal Reference Method at most of the sites as they existed at the beginning of 2011. Some changes that are not noted in these plans that will be posted by July 1, 2011 could occur based upon the change in funding from 103 funds to 105 funds. Some Ohio local air agencies and the state district office PM2.5 sampling may result in fewer sites or monitors to operate because of reduced funding availability.

The ozone monitoring sites will have only a few changes for 2011. While we anticipate that the NAAQS for ozone will be made more stringent in 2011 an analysis of ozone sites made by the Lakes Area Director's Consortium (LADCO) in 2010 shows that Ohio already has more than enough ozone monitoring sites to cover current requirements.

The LADCO analysis showed that PM10 sampling in Ohio has more than adequate coverage. Reductions for PM10 could be made in Ohio although it is recognized that significant reductions in costs won't result from PM10 site and sampler reductions.

Changes occur to the network each year that are unplanned. Changes or temporary interruptions of sampling may occur because of events such as building or roof maintenance, construction, change of ownership of the site or other changes at the site that require moving the instruments. Some changes that are planned may include adding additional sites for complaint areas or for some new or proposed facility. Other changes that are planned may not actually happen because a new site cannot be secured or because of budget constraints.

New Federal requirements for monitoring for sulfur dioxide, nitrogen dioxide and carbon monoxide air pollutants were set in 2009. These requirements will not take effect in 2012 but will take effect January 1, 2013. Those requirements include near-roadside monitors for NO2 at 6 sites in Ohio plus 2 additional ozone sites and several sites for SO2 in specific counties named by US EPA. Again those are plans that will need to be determined in 2012 for set-up in 2013.

Three new National Core Monitoring Network (NCORE) sites have started operating in Ohio in recent years in Cincinnati, Cleveland and Dayton agency jurisdictions. These NCORE sites monitor for sulfur dioxide, nitrogen oxides and carbon monoxide at trace concentration levels were required to start January 1, 2011 but all started earlier than that date. Those sites will add lead samplers to their sites to begin January 1, 2012.

All site and parameter changes are made in consultation with and approval of the US EPA Region 5 air monitoring staff.

Guidance and Priorities

Ohio EPA follows the federal general guidance for air monitoring according to 40 CFR 58 Appendix D to monitor in areas of 1) expected high concentrations, 2) areas of high population density, 3) areas with significant sources, 4) general background concentration sites and 5) areas of regional transport of a pollutant. Not all air pollutants have sites for all of these categories.

In addition to the above guidance in 2010 the Air Directors in the Region 5 states of Ohio, Michigan, Indiana, Illinois, Wisconsin and Minnesota listed air monitoring objectives as:

1) Areas of high concentration and high population, provide timely air quality data to the public, support compliance with NAAQS and control strategy development and support air pollution research studies
2) Multi-pollutant monitoring such as the NCore sites
3) Source-oriented monitoring such as required monitoring for lead, nitrogen dioxide and sulfur dioxide
4) Rural monitoring and medium size city monitoring
5) Environmental justice monitoring
6) School air toxics monitoring

An important consideration of all air monitoring projects and sites is that funding resources be available to operate and maintain the sites and equipment, to provide sample analyses and for data collection and reporting. An important funding change coming for very fine particulates or PM2.5 is that the funding is changing from a Section 103 grant that is fully federally funded to a partial Section 105 grant that requires a state or local agency matching amount. This change may limit the types and numbers of PM2.5 sampling that the state or local is able to support. Current plans are for funding in 2012 at 75% Section 103 funding and 25% for Section 105 funding.

As of the time of publication of this list Ohio EPA plans to discontinue monitoring or has already discontinued monitoring at locations as shown in the table at:

3 very fine particulate matter or PM2.5 sites, Akron (2), HCDES
1 ozone site, Akron
1 CO site, Akron
1 SO2 site, Akron
1 NO2 site, Akron
1 carbonyl toxics site, CDO
6 PM10 industrial sites, NWDO

Ohio EPA has moved or started sites and instruments for:

4 PM2.5 sites, 1 Portsmouth, 1 Lake, 1 MTAPCA, 1 Toledo
3 PM2.5 FRM sites, Akron, MTAPCA, Lake
3 PM2.5 continuous sites, Cleveland, MTAPCA, Lake
2 PM10 sites, Cleveland, Portsmouth
4 sulfur dioxide sites, Portsmouth, SEDO 3, Portsmouth
2 ozone sites, Akron, Portsmouth
2 TSP for metals sites, Cleveland, MTAPCA
3 NCore sites, Cleveland, HDCOES, RAPCA

For new requirements from July , 2009 for sulfur dioxide monitoring sites to be in place by January 1, 2013 Ohio EPA has tentative plans to either continue SO2 monitor monitoring sites or add/ restart new SO2 monitoring sites as follows:

2 sites in Cincinnati to continue
2 sites in Cleveland to continue
1 site operated by West Virginia to continue, 1 SO2 monitor in Marietta/SEDO may be added
1 site to continue in Steubenville
1 site to be added or restarted in Columbus
1 site to be added or restarted in Toledo
1 site to be added or moved near Point Pleasant/SEDO
1 site to be added or restarted in Dayton
1 site to continue in Akron

Depending upon new monitoring requirements for ozone sites to be in place possibly in 2013, Ohio EPA has tentative plans to add ozone monitoring sites as follows:

1 site in Mansfield/NWDO
1 site in Sandusky/NWDO

These plans are dependent upon securing adequate levels of funding to support the changes to the air monitoring network. All of the plans are subject to approval by US EPA.

For questions about the Ohio Air Monitoring Network please contact:
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Ohio Air Monitoring Network – 20011-2012
6/17/2011

AQS ID # Air Agency	County Address	Latitude	Longitude	Sampling Method	Analysis	Schedule	Monitoring Objective	Spatial Scale	Comments
Akron	Medina Co.								
39-103-0003	Deerview Ln Layfayete Twp	41.102778	-81.911667	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Urban	Ended 12/31/2010
				PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Population	Urban	"
				Ozone	U.V. Photometric	Continuous	Population	Regional	Ended 10/31/2010
39-103-0004	Ballash Rd.	41.0604	-81.9239	Carbon monoxide	Infrared	Continuous			Ended 7/31/2010
				Sulfur dioxide	Pulsed Florencence	Continuous			"
				Nitrogen dioxide	Chemiluminescence	Continuous			"
				Ozone	U.V. Photometric	Continuous	Population	Urban	Restart Apr. 1, 2011
				PM2.5- FRM	Gravimetric	1 in 3 day	Population	Urban	Start 1/1/2011
				PM2.5 BAM	Beta attenuation	Continuous	Population	Urban	Instrument repair
	Portage. Co.								
39-133-0002	531 Washington Ave. Ravenna	41.164167	-81.235000	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
39-133-1001	1570 Ravenna Rd.,Kent	41.182500	-81.330278	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
	Summit Co.								
39-153-0014	177 S. Broadway St.	41.0792	-81.5167	Wind speed/wind dir.					
39-153-0017	East High Sch., Akron	41.065278	-81.468611	PM2.5 Seq FRMColo	Gravimetric	1 in 1 day	Population	Neighborhood	Everyday sampler
				PM2.5 BAM	Beta attenuation	Continuous	Population	Neighborhood	Changed to BAM
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Highest conc.	Neighborhood	
39-153-0020	800 Patterson Ave, Akron	41.106111	-81.503889	Ozone	U.V. Photometric	Continuous	Population	Urban	
				Carbon monoxide	Infrared	Continuous	Population	Neighborhood	
39-153-0022	177 Broadway, Akron	41.080278	-81.516389	Carbon monoxide	Infrared	Continuous	Highest conc.	Microscale	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
39-153-0023	660 W. Exchange St. Akron	41.088056	-81.541667	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				Chemical speciation	Ion Chromatograph	1 in 6 day	SIP information		
				URG carbon spec?					

Canton	Stark Co.								
39-151-0016	515 25th St., Malone College	40.827778	-81.378611	Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
				Wind speed/wind dir.	Propeller/vane				
39-151-0017	1330 Dueber Ave.,Fire Station	40.786667	-81.394444	PM2.5 BGI FRMCol	Gravimetric	1 in 1 day	Highest conc.	Neighborhood	Everyday sampler
				Chemical speciation	Ion Chromatograph	1 in 6 day	SIP information		
				URG carbon spec?					
				TSP – lead	ICP	1 in 6 day	Source-oriented		
39-151-0020	420 Market Ave., Canton	40.800556	-81.373333	PM2.5 BGI FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				Carbon monoxide	Infrared	Continuous	Population	Middle	
				PM2.5 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	
39-151-0022	45 S. Wabash Ave., S.R. 93	40.708685	-81.601256	Ozone	U.V. Photometric	Continuous	Background	Urban	Start 4/1/2010
									From Wilderness site
39-151-4005	1175 W. Vine St. Alliance	40.930833	-81.123611	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
Toledo	Lucas Co.								
39-095-0024	348 Erie St., Toledo	41.644167	-83.546667	PM2.5 TEOM	Oscillating crystal	Continuous	Highest conc.	Neighborhood	
				PM2.5 SeqFRMColo	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
				Wind speed/wind dir.	Propeller/vane				
39-095-0025	600 Collins Park, Toledo	41.661944	-83.479444	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	Site moved
39-095-0028	600 Collins Park, Toledo	41.662283	-83.468005	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	New site/no. for 0025
39-095-0026	2550 Airport Highway	41.620556	-83.641389	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	
				Chemical speciation	Ion Chromatograph	1 in 6 day			
				URG carbon spec?					
39-095-0027	200 S. River Road, Waterville	41.494722	-83.718611	Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
39-095-0034	306 N. Yondota, Low Service	41.675556	-83.306944	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
39-095-0081	2930 131st St., Toledo	41.719444	-83.475000	Wind speed/wind dir.	Propeller/vane				
39-095-1003	Lee & Front St., Toledo	41.719444	-83.475000	PM10 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	

Hamco DES	Butler Co.								
39-017-0003	Verity HS, Middletown	39.493611	-84.353889	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 SC FRMColo	Gravimetric	1 in 3 day	Population	Neighborhood	Discontinued 12/31/10
				VOCs	GC MS	1 in 12 day			
39-017-0004	Schuler & Bender Ave, Hamltn	39.383333	-84.54416	Ozone	U.V. Photometric	Continuous	Population	Urban	
39-017-0015	3901 Lefferson, Middletown	39.489167	-84.357778	PM10-Colo	Gravimetric	1 in 6 day	Population	Neighborhood	
				TSP lead-metals	ICP	1 in 6 day	Population	Neighborhood	
39-017-0016	400 Nilles Rd., Fairfield	39.338333	-84.566389	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Urban	
39-017-0018	Hook Field Airport, Middletwn	39.52944	-84.39345	Ozone	U.V. Photometric	Continuous	Population	Urban	Relocated frm 017-1004
39-017-0019	Amanda School	39.47885	84.40767	PM10	Gravimetric		Population	Neighborhood	Started 6/1/11
				PM2.5 FRM	Gravimetric		Population	Neighborhood	Started 6/1/11
				PM2.5 – BAM	Beta attenuation	Continuous	Population	Neighborhood	Starting 6/30/11
				Sulfur dioxide	Pulsed Florescence	Continuous	Population	Neighborhood	Starting 6/30/11
				VOC					Starting 6/30/11
39-017-0020	Yankee Road	39.47240	84.39498	PM10	Gravimetric		Population	Neighborhood	Started 6/1/11
				PM2.5 FRM	Gravimetric		Population	Neighborhood	Started 6/1/11
				PM2.5 – BAM?	Beta attenuation	Continuous	Population	Neighborhood	Starting 6/30/11
				Sulfur dioxide	Pulsed Florescence	Continuous	Population	Neighborhood	Starting 6/30/11
				VOC					Starting 6/30/11
39-017-1004	Hook Field Airport	39.530000	-84.392500	PM2.5 BAM	Beta attenuation	Continuous	Highest conc.	Urban	Discontinued Mar.2010
				Chemical speciation	Ion Chromatograph	1 in 6 day	SIP information		Discontinued Mar.2010
				Chemical speciation		Frequent	SIP information		URG-3000 carbon Disc.
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	Discontinued March
				Ozone	U.V. Photometric	Continuous	Population	Urban	Moved to 017-0018
				Wind speed/wind dir.	Sonic				Discontinued Mar.2010
	Clermont Co.								
39-025-0022	2400 Clermont Drive, Batavia	39.083056	-84.144167	PM2.5 Seq.FRM	Gravimetric	1 in 3 day	Population	Neighborhood	Discontinue FRM
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
				Wind speed/wind dir.	Sonic				
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Source oriented		Possible new SO2 mon
	Hamilton Co.								
39-061-0001	Public Library, Vine St.	39.1047	-84.5136	TSP metals	ICP	1 in 6 day	Population	Neighborhood	Discontinued 12/31/10

39-061-0006	11590 Grooms Rd.,Sycamore	39.279444	-84.366389	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 BAMS	Beta Attenuation	Continuous	Population	Neighborhood	Restarted 3/1/11
				Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
				Nitrogen dioxide	Chemiluminescence	Continuous	AQI forecast		Possible new monitor
39-061-0010	6950 Ripple Rd. Colerain	39.216389	-84.699722	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	NCore moved to 0040
				Ozone	U.V. Photometric	Continuous	Population	Urban	
				Carbon monoxide	Infrared	Continuous	Population	Middle	NCore moved to 0040
				NOy	Chemiluminescence	Continuous			NCore moved to 0040
				PM2.5 Continuous					
				PM2.5 FRM					
39-061-0014	Carthage Fire, Seymour/Vine	39.194167	-84.478889	PM10	Gravimetric	1 in 6 day	Highest conc.	Middle	
				PM2.5 SeqFRM Colo	Gravimetric	1 in 1 day	Population	Neighborhood	Everyday sampler
				VOCs	GC MS	1 in 12 day			
				Wind speed/wind dir.					
39-061-0021	Federal Bldg.,100 E.5th St.Cinti	39.101944	-84.509722	Carbon monoxide	Infrared	Continuous	Highest conc.	Microscale	To discontinue, low conc
39-061-0040	250 Taft Rd. Cincinnati	39.128611	-84.504167	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Discontinued 12/31/10
				PM10 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	
				PM2.5 SC FRM-colo	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TEOM/FDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				PM2.5 speciation	Ion Chromatograph	1 in 6 day	SIP info		
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
				NO2	Chemiluminescence	Continuous	Population	Neighborhood	
				Wind speed/wind dir	Sonic				
				Haze camera					
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	NCore moved frm 0010
				Carbon monoxide	Infrared	Continuous	Population	Middle	NCore moved frm 0010
				NOy	Chemiluminescence	Continuous			NCore moved frm 0010
39-061-0042	Lower Price Hill, 8th St. Cinti	39.105000	-84.551111	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
39-061-5001	Wyoming & Cooper, Lockland	39.226389	-84.453889	PM10 –Colo	Gravimetric	1 in 6 day	Population	Neighborhood	
39-061-7001	2059 Sherman Ave. Norwood	39.160000	-84.457778	PM2.5 SC FRM	Gravimetric	1 in 3 day	Population	Neighborhood	Discontinued 12/31/10
39-061-8001	300 Murray Rd.	39.180278	-84.491944	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	Discontinued 2/7/2010

39-061-8001				PM2.5 speciation	Ion Chromatograph	1 in 6 day	SIP info		
	Warren Co.								
39-165-0007	416 Southeast St., Lebanon	39.427900	-84.202200	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	Discontinue FRM
				PM2.5 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Max ozone	Urban	
				Wind speed/wind dir.					
Cleveland	Cuyahoga Co.								
39-035-0034	891 E. 152 St.	41.555000	-81.575000	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Highest conc.	Urban	
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
39-035-0038	St. Theodosius, St. Tikon St.	41.476944	-81.681944	PM10	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	
				PM2.5 SeqFRMColo	Gravimetric	1 in 1 day	Population	Neighborhood	
				PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Population	Neighborhood	Restarted 10/15/2010
				TSP lead-metals	ICP	1 in 6 day	Highest conc.	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Highest conc.	Neighborhood	
				PM2.5 speciation	Ion Chromatograph	1 in 6 day	SIP info		
				Carbon speciation					URG-3000
				Wind speed/dir					
39-035-0042	Fire Station 4, 3136 Lorain	41.482222	-81.708889	TSP-metals Colo	ICP	1 in 6 day	Highest conc	Middle	
39-035-0045	FS 13, 4950 Broadway Ave.	41.471667	-81.657222	PM10 Colo	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 Seq.FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
39-035-0049	Ferro Corp. E. 56th St.	41.446667	-81.651111	TSP-leadmetals Colo	ICP	1 in 6 day	Highest conc.	Neighborhood	
39-035-0051	Galleria, E. Ninth & St. Clair	41.504444	-81.690278	Carbon monoxide	Infrared	Continuous	Highest conc.	Microscale	
39-035-0053	4160 Pearl Rd. ,Broadview	41.441667	-81.703889	Carbon monoxide	Infrared	Continuous	Highest conc.	Microscale	
39-035-0060	GT Craig, E. 14th & Orange	41.491944	-81.678333	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Restart 9/1/10
				PM10 TEOM	Oscillating crystal	Continuous		Neighborhood	
				PM2.5 Seq.FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				PM2.5 spec. Colo	Ion Chromatograph	1 in 3 day	SIP info		
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	Start 7/28/09 by US EPA

39-035-0060				VOCs	GC MS	1 in 12 day			
				Sulfur dioxide	Pulsed Fluorescence	Continuous			NCore start 1/1/11
				NOy	Chemiluminescence	Continuous			"
				Carbon monoxide	Carbon monoxide	Infrared			"
				PM10-2.5 Coarse	Gravimetric	1 in 3 day			"
				Wind speed/wind dir.	Sonic				
39-035-0061	South side W. 3rd St.	41.472222	-81.675278	TSP-lead-metals	ICP	1 in 6 day	Source-oriented	Middle	
39-035-0064	390 Fair St. Berea BOE	41.361667	-81.864722	Ozone	U.V. Photometric	Continuous	Highest conc.	Neighborhood	
39-035-0065	4600 Harvard Ave Newburgh	41.446389	-81.661944	PM10	Gravimetric	1 in 6 day	Highest conc.	Neighborhood	
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Highest conc.	Neighborhood	
39-035-0068	7629 Broadway	41.454791	-81.634757	VOCs	GC MS	1 in 12 day			
39-035-0069	Fire S. 22, 7300 Superior	41.519181	-81.637939	VOCs	GC MS	1 in 12 day			
39-035-0072	26565 Miles Rd.,Warrensville	41.42585	-81.49078	TSP-Lead	ICP	1 in 6 day	Source oriented	Neighborhood	New lead site
39-035-1002	16900 Holland Road	41.395556	-81.818056	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
39-035-5002	6116 Wilson Road, Mayfield	41.536667	-81.459167	Ozone	U.V. Photometric	Continuous	Population	Urban	
RAPCA	Clark Co.								
39-023-0001	5171 Urbana Rd., Springfield	40.000833	-83.804444	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
39-023-0003	5400 Spangler Rd., Enon	39.855556	-83.997500	Ozone	U.V. Photometric	Continuous	Highest conc.	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
39-023-0005	350 N. Fountain Rd,Springfield	39.928889	-83.809722	PM2.5 Sharp	Beta attenuation	Continuous	Population	Neighborhood	
				PM2.5 BGI FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
	Greene Co.								
39-057-0005	100 Dayton Rd. YellowSprings	39.808056	-83.886944	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 BGI FRM	Gravimetric	1in 3 day	Population	Neighborhood	
				PM2.5 Sharp	Beta attenuation	Continuous	Population	Neighborhood	
39-057-0006	541 Ledbetter Rd., Xenia	39.665556	-81.249444	Ozone	U.V. Photometric	Continuous	Highest conc	Urban	

	Miami Co.								
39-109-0005	3825 N. Rt. 589, Castown	40.084722	-84.114722	Ozone	U.V. Photometric	Continuous	Highest conc	Urban	
	Montgomery Co								
39-113-0028	901 W. Fairview, Dayton	39.787222	-84.226111	Carbon monoxide	Infrared	Continuous	Population	Neighborhood	
39-113-0032	215 E. 3rd St., Dayton Library	39.760278	-84.187778	PM2.5 FRM -Colo	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 Sharp	Beta attenuation	Continuous	Population	Neighborhood	
				PM2.5 speciation	Ion Chromatograph	1 in 6 day	SIP information		
				Chem speciation	Carbon speciation				Not operating
				VOCs	GC MS	1 in 12 day			
39-113-0034	117 S. Main St., Dayton	39.757778	-84.191667	Carbon monoxide	Infrared	Continuous	Highest conc	Microscale	
39-113-0037	1401 Harshman Rd., Dayton	39.7850	-84.1345	Ozone	U.V. Photometric	Continuous	Population	Urban	
39-113-7001	2728 Viking Lane, Moraine	39.714167	-84.218056	PM10 –Colo	Gravimetric	1 in 6 day	Highest conc	Neighborhood	
	Preble Co.								
39-135-1001	St. Rt. 40, New Paris	39.835556	-84.720833	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Regional	
				PM2.5 Sharp	Beta attenuation	Continuous	Regional trasprt	Urban	
				Ozone	U.V. Photometric	Continuous		Regional	
				Sulfur dioxide	Pulsed Fluorescence	Continuous			NCore start 1/1/2011
				Carbon monoxide	Infrared	Continuous			“
				NOy	Chemiluminescence	Continuous			“
				PM10-2.5 Coarse	Gravimetric				“
				PM10 – LC	Gravimetric				
MTAPCA	Mahoning Co.								
39-099-0005	Elm & Madison,Fire Station #7	41.111111	-80.645278	PM10-colo	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 SeqFRM Colo	Gravimetric	1 in 6 day	Population	Neighborhood	
39-099-0006	Superior & Oakland, Fire St. 5	41.116667	-80.669722	PM10-colo	Gravimetric	1 in 6 day	Population	Neighborhood	
39-099-0013	345 Oakhill Ave. Youngstown	41.096111	-80.658611	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
39-099-0014	345 Oakhill Ave. Youngstown	41.095868	-80.658426	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	
39-099-0014				Chem Speciation	Ion Chromatograph	1 in 6 day	SIP info		
	Trumbull Co.								
39-155-0005	540 Laird Ave., Warren	41.230833	-80.801944	PM10-Colo	Gravimetric	1 in 6 day	Source-oriented	Middle	

39-155-0005				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	From 155-0007
				PM2.5 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	From 155-0007
39-155-0006	Warren Water Treatment Plant	41.201944	-80.810550	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	From 155-0007
39-155-0009	Kinsman Township Bldg, SR87	41.453889	-80.591667	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
39-155-0011	St. Rt. 193, Vienna, TCSEG	41.240077	-80.663142	Ozone	U.V. Photometric	Continuous	Reg. transport	Urban	
39-155-0012	2600Elmwood Dr.,Hubbard	41.17279	-80.422500	TSP-Lead	ICP	1 in 6 day	Source oriented	Urban	New required lead site
Lake Co.	Geauga Co.								
39-055-0004	Notre Dame School, Munson	41.515000	-81.249444	Ozone	U.V. Photometric	Continuous	Population	Urban	
	Lake Co.								
39-085-0003	Jefferson School, Eastlake	41.673056	-81.422500	Sulfur dioxide	Pulsed Fluorescence	Continuous		Neighborhood	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Neighborhood	
39-085-0006	8443 Mentor Ave., Mentor	41.666667	-81.339167	Carbon monoxide	Infrared	Continuous	Highest conc.	Microscale	
39-085-0007	177 Main St., Painesville	41.726811	-81.242156	PM2.5SeqFRMColo	Gravimetric	1 in 3 day	Highest conc.	Urban	Replaced Site 085-3002
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	Highest conc.	Urban	Restarted 10/27/10
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Source-oriented	Middle	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
39-085-1001	Fairport High School, Fairport	41.755000	-81.273056	PM10-Colo	Gravimetric	1 in 6 day	Highest conc.	Neighborhood	Complaint area
Portsmouth	Adams Co.								
39-001-0001	Adams Cnty Hosptal, W.Union	38.795000	-83.535278	PM2.5 TA-BAM	Beta attenuation	Continuous	Population	Neighborhood	Restarted 2/1/2011
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
	Lawrence Co.								
39-087-0006	Ironton Health Dept., Eighth St	38.520278	-82.666667	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	Moved to 087-0012
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	Moved to 087-0012
39-087-0011	St. Rt. 141, Wilgus	38.629167	-82.457500	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
39-087-0012	ODOT Garage, Commerce Dr.	38.508114	-82.659301	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Replaced site 087-0010
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TA-BAM	Beta attenuation	Continuous	Population	Neighborhood	
				Chem Spec	Ion Chromatograph	1 in 6 day			
				Carbon speciation					URG-3000
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	From site 087-0006

39-087-0012				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	From site 087-0006
	Scioto Co.								
39-145-0013	Portsmouth Water Treat. Ports.	38.754167	-82.917500	PM10-Colo	Gravimetric	1 in 6 day	Highest conc.	Middle	
				PM2.5 SeqFRMColo	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Highest conc.	Middle	
39-145-0019	Portsmouth City Annex, Ports	38.735000	-82.998889	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-145-0020	2840 Back Rd.FranklinFurnace	38.609048	-82.822911	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Required by permit
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	Required by permit
				VOCs	GC-MS	1 in 12 day			Required by permit
39-145-0021	2446GalliaPike,FranklnFurnac	38.600611	-82.829762	PM10	Gravimetric	1 in 6 day	Background	Neighborhood	Required by permit
				VOCs	GC-MS	1 in 12 day			Required by permit
39-145-0022	1740GalliaPike,FranklnFurnac	38.588034	-82.834973	PM10	Gravimetric	1 in 6 day	Background	Neighborhood	Required by permit
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Background	Neighborhood	Required by permit
				VOCs	GC-MS	1 in 12 day			Required by permit
CDO	Delaware Co.								
39-041-0002	359 Main Rd., Delaware	40.356944	-83.063889	Ozone	U.V. Photometric	Continuous	Population	Urban	
	Franklin Co.								
39-049-0005	1585 Morse Rd., Columbus	40.060000	-82.976944	Carbon Monoxide	Infrared	Continuous	Highest conc.	Middle	
39-049-0024	State Fairgrounds, Columbus	39.998333	-82.993056	PM10-Colo	Gravimetric	1 in 6 day	Highest conc.	Neighborhood	
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
39-049-0025	580 E.Woodrow Av. Columbus	39.928056	-82.981111	PM2.5 FRM -Colo	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	
				TSP-lead-metals	ICP			Neighborhood	
39-049-0029	New Albany HS, New Albany	40.086667	-82.815556	PM2.5 BAM	Oscillating crystal	Continuous	Population	Neighborhood	BAM replaced TEOM
				Ozone	U.V. Photometric	Continuous	Highest conc.	Neighborhood	
39-049-0034	State Fairgrounds, Korbel Ave.	40.002500	-82.994444	PM2.5 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	Replaced TEOM 1/24/10
				VOCs	GC MS	1 in 12 day			
				Carbonyl sampler		1 in 6 day			Discontinued
39-049-0037	Franklin Park, Broad St.	39.965278	-82.958056	Ozone	U.V. Photometric	Continuous	Population	Middle	
39-049-0081	Fire Station, Maple Canyon	40.087778	-82.959722	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Highest conc.	Neighborhood	

39-049-0081				Chemical speciation	Ion Chromatograph	1 in 6 day	SIP information		
				Chemical speciation	Carbon speciation				URG-3000
	Knox Co.								
39-083-0002	Fire Station , Centerburg	40.309722	-82.691944	Ozone	U.V. Photometric	Continuous	Population	Urban	
	Licking Co.								
39-089-0005	Heath School, Heath	40.025833	-82.432778	Ozone	U.V. Photometric	Continuous	Population	Urban	
	Madison Co.								
39-097-0007	Madison School, London	39.788611	-83.475833	Ozone	U.V. Photometric	Continuous	Population	Urban	
NEDO	Ashtabula Co.								
39-007-1001	Conneaut Water Plt., Conneaut	41.959444	-80.572500	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Urban	
				Ozone	U.V. Photometric	Continuous	Population	Urban	
	Columbiana Co.								
39-029-0019	Columbiana PortAuthority,E.L.	40.631111	-80.546944	TSP-lead-metals	ICP	1 in 6 day	Population	Neighborhood	
39-029-0020	Water Treat. Plant, E.Liverpool	40.639722	-80.523889	TSP-lead-metals	ICP	1 in 6 day	Population	Neighborhood	
				PM10	Gravimetric	1 in 6 day	Population	Microscale	
				Wind speed/direction	Sonic				
39-029-0022	500 Maryland Ave,E.Liverpool	40.635000	-80.546667	TSP-leadmetals-Colo	ICP	1 in 6 day	Population	Microscale	School Air Toxics site
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Microscale	
				PM10 Colocated	Gravimetric	1 in 6 day	Population	Microscale	
	Lorain Co.								
39-093-0018	Fire Station, Sheffield	41.420882	-82.095729	Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
39-093-3002	Barr School, Sheffield	41.463056	-81.114444	PM10 Colocated	Gravimetric	1 in 6 day			
				PM2.5Seq. FRMColo	Gravimetric	1 in 3 day	Source-oriented	Neighborhood	
				PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Source-oriented	Neighborhood	
				Chemical speciation	Ion Chromatograph				
				Chemical speciation	Carbon speciation				URG-3000
NWDO	Allen Co.								
39-003-0002	Bath High. School, Lima	40.772222	-84.051944	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Urban	
				Ozone	U.V. Photometric	Continuous	Population	Urban	
				PM2.5 FRM	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	AQI	Neighborhood	
39-003-0006	Nat.Lime/Stone,FindlyRdLima	40.752500	-84.085556	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Discontinued 3/31/11
39-003-0007	Nat.Lime/Stone,RouchRd Lima	40.752500	-84.070000	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	"

39-003-0008	Nat.Lime/Stone, NorthStLima	40.744167	-84.093889	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Discontinued 3/31/11
	Fulton Co.								
39-051-0001	Van Buren St., Delta	41.575278	-83.996389	TSP-leadmetals Colo	ICP	1 in 6 day	Highest conc.	Microscale	"
	Hancock Co.								
39-063-0002	Nat.Lime/Stone,CR313Findlay	41.010556	-83.688056	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	"
39-063-0003	Nat.Lime/Stone,CR313Findlay	41.012778	-83.696944	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	"
39-063-0004	Nat.Lime/Stone,CR144Findlay	41.023611	-83.685556	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	"
	Marion Co.								
39-101-0003	Nucor Steel, Hawthorne Ave.	42.57141	-83.13556	TSP-lead	ICP	1 in 6 day	Source-oriented	Neighborhood	New required site
	Ottawa Co.								
39-123-0014	Brush Wellman, Elmore			TSP – beryllium	ICP	7daysample			
	Sandusky Co.								
36-143-0019	Clyde	41.30556	-82.97961	TSP-lead/metals	ICP	1 in 6 day	Population	Neighborhood	Special cancer study
	Wood Co.								
39-173-0003	NWDO Office,Bowling Green	41.378056	-83.611667	Ozone	U.V. Photometric	Continuous	Other	Urban	
SEDO	Athens Co.								
39-009-0003	St. Rt. 377, Gifford Forest	39.442500	-81.908611	PM2.5 Seq. FRM	Gravimetric	1 in 6 day	Background	Regional	Background 2.5 site
	Belmont Co.								
39-013-3002	E. 40th St. Shadyside Treatment	39.968056	-80.747500	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
	Jefferson Co.								
39-081-0001	1004 3rd St., Brilliant	40.261389	-80.633611	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-081-0017	618 Logan St. , Steubenville	40.366104	-80.615002	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
				PM10-colo	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TEOMFDMS	Oscillating crystal	Continuous	AQI	Neighborhood	BAM to replace TEOM
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
				VOCs	GC MS	1 in 12 day			
39-081-1001	City Hall, Mingo Junction	40.321944	-80.606389	PM2.5 Seq. FRMcolo	Gravimetric	1 in 3 day	Population	Neighborhood	
				Carbon speciation			SIP info		URG-3000
				Chem Speciation	Ion Chromatograph	1 in 6 day	SIP info		
				VOCs	GC MS	1 in 12 day			
39-081-0018	3487 Cnty Rd. 19, Brilliant			Sulfur dioxide	Pulsed Fluorescence	Continuous			Started 1/1/11
39-081-0019	Landfill Access Rd., Brilliant			WS,WD		Continuous			Started 1/1/11
				Sulfur dioxide	Pulsed Fluorescence	Continuous			

39-081-0020	1469 Third St., Brilliant			WS,WD		Continuous			Started 1/1/11
				Sulfur dioxide	Pulsed Fluorescence	Continuous			Started 1/1/11
	Meigs Co.								
39-105-1001	Veterans Hospital, Pomeroy	39.037778	-82.045556	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Urban	Gavin power plant
	Morgan Co.								
39-115-0004	St. Rt. 83, Hackney	39.634221	-81.670038	Sulfur dioxide	Pulsed Fluorescence	Continuous	Source-oriented	Urban	Musk.River power plant
	Tuscarawas Co.								
39-157-0006	527 Crescent Drive, Sugarcreek	40.511416	-81.639149	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
	Washington Co.								
39-167-0004	2000 4th St. Marietta Water	39.431667	-81.460278	Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
39-167-0008	R 676WashingtonCareerCenter	39.433611	-81.502500	TSP-lead metals	ICP	I in 6 day	Population	Urban	
39-167-0009	Blue Knob, Washington Co.	39.376800	-81.537300	TSP-lead-metals	Gravimetric	I in 6 day	Population	Neighborhood	
39-167-0010	Ohio Valley Educa.. Center	39.413694	-81.475089	TSP-leadmetals-colo	ICP	I in 6 day	Population	Neighborhood	
SWDO	Clinton Co.								
39-027-1002	Laurel OaksSchool,Wilmington	39.430000	-83.788611	Ozone	U.V. Photometric	Continuous	Population	Urban	
	Logan Co.								
39-091-0006	Richard Ave., Bellefontaine	40.341111	-83.757778	TSP-lead-metals	ICP	1 in 6 day	Highest conc.	Neighborhood	Sampling continued

Notes/Explanations:

AQS is the Air Quality System maintained by US EPA for air quality data. In the AQS ID# the first 2 digits refer to the state. 39 is Ohio. The next 3 digits are the county within Ohio. The last 4 digits designate a specific site within the county.

All PM2.5 Seq. FRM sites, BGI FRM sites and BAMS sites are comparable to the PM2.5 NAAQS.

All Ozone sites are comparable to the NAAQS.

All sulfur dioxide, carbon monoxide and nitrogen dioxide sites are comparable to the NAAQS.

PM is Particulate Matter. PM10 means particulate matter of 10 microns in diameter or smaller. A micron is one millionth of a meter.

PM2.5 is particulate matter 2.5 millionths of a meter in diameter or smaller. PM10 is fine particulate matter and PM2.5 is very fine particulate matter.

Monitoring instruments used for comparing to the National Ambient Air Quality Standards are designated as Federal Reference Methods (FRM) or Equivalent Methods.

PM2.5 Seq. FRM are samplers that sample for PM2.5 can hold multiple samples for Sequential sampling and are Federal Reference Methods (FRM).

Colocated or colo indicates a site with duplicate samplers for Quality Assurance purposes. Data is statistically compared from the two samplers for the same days. Duplicate samplers may sample at a I in 6 day schedule or possibly at a 1 in 12 day schedule.

Chem. Speciation sites are sites and samplers that collect PM2.5 samples that are analyzed for the chemical speciation make-up of the PM2.5 particulate matter.

U.V. Photometric indicates ultra-violet photometric, a method of detection for ozone concentrations.

U.V. fluorescence indicates ultra-violet fluorescence, a method of detection for sulfur dioxide concentrations.

VOCs are Volatile Organic Compounds. The method of collecting and analyzing whole air samples for VOCs is in Ohio is TO-15. The collection utilizes a stainless steel canister for subsequent analysis by gas chromatograph -mass spectrometer. There are approximately 72 compounds scanned for in the analysis.

TSP – metals is the method of collecting Total Suspended Particulate by drawing an air sample through a filter media that is then analyzed at a laboratory for airborne metals including lead, arsenic, cadmium, chromium, nickel, zinc, manganese and beryllium and sometimes particulate mercury. Analysis is by ICP or Inductively Coupled Plasma Emission Spectroscopy or Graphic Furnace Atomic Absorption.

BAM indicates a Beta Attenuation Monitor, a method of detection for very fine particulates.

TEOM indicates a Tapered Element Oscillating Microbalance, a method of detection for very fine particulates.

SIP is State Implementation Plan that details how the state will implement controls that will bring the area into attainment status for a particular National Ambient Air Quality Standard. Chemical speciation sampling and analysis for PM2.5 aids helps to determine what control measures and plans will best control fine particulates.

Ohio Air Monitoring Agencies

The following organizations perform ambient air quality sampling in Ohio within specific areas of the state:

Akron Regional Air Quality Management District 146 South High St. Akron, Ohio 44308 (330) 375-2480 Medina, Portage, Summit counties	City of Toledo Division of Environmental Services 348 South Erie St. Toledo, Ohio 43604 (419) 936-3015 Lucas County
Air Pollution Control Division Canton City Health Department 420 Market Ave. North Canton, Ohio 44702-1544 (330) 489-3385 Stark County	Mahoning-Trumbull APC Agency 345 Oak Hill Ave. Youngstown, Ohio 44502 (330) 743-3333 Mahoning, Trumbull counties
Hamilton County Dept. of Environmental Services 250 William Howard Taft Road Cincinnati, Ohio 44702-1544 (330)-489-3385 Hamilton, Butler, Warren, Clermont counties	Ohio EPA Central District Office 50 West Town St. Columbus, Ohio 43604 (614) 728-3778
Cleveland Department of Public Health & Welfare Division of the Environment 1925 St. Clair Ave. Cleveland, Ohio 44114 (216) 664-2324 Cuyahoga County	Ohio EPA Southeast District Office 2195 Front St. Logan, Ohio 43138 (740) 385-8501
Regional Air Pollution Control Agency Montgomery County Health Department 117 South Main St. P.O. Box 972 Dayton, Ohio 45422-1280 (937) 225-4435 Montgomery, Preble, Darke, Miami, Clark, Greene	Ohio EPA Northeast District Office 2110 Aurora Rd. Twinsburg, Ohio 44087 (330) 425-9171

Air Pollution Unit Portsmouth City Health Department 605 Washington Street Portsmouth, Ohio 45662 (740) 353-5156 Brown, Adams, Scioto, Lawrence	Ohio EPA Southwest District Office 401 East Fifth St. Dayton, Ohio 45402-2911 (937) 285-6357