

## **Ohio Air Monitoring Network 2010-2011**

### **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, 2010 is included in the accompanying table.

### **Changes**

The plan for Ohio's Air Monitoring Network for 2010-2011 is to make changes as required or necessary for the air monitoring network. The most significant change made for January 1, 2010 was the addition of lead sampling sites to adjust to the change made in the National Ambient Air Quality Standard for lead. There may be other additions to the lead monitoring network if facilities with emissions of a half ton of lead emissions are also required to install samplers. The locations of the new lead samplers for 2010 are included in the new network plans.

For other pollutant parameters the portion of the network including very fine particulate matter or PM2.5, Ohio EPA expects to continue with monitoring or sampling at the existing PM2.5 Federal Reference Method at most of the sites where they existed at the beginning of 2010. The ozone monitoring sites will have only a few changes for 2011. While we anticipate that the NAAQS for ozone will be lowered in changes made this year an analysis of ozone sites made by the Lakes Area Director's Consortium has shown that overall Ohio already has more than enough ozone monitoring sites to cover current requirements. For the 2011 ozone season there could be changes made in some locations of ozone sites based on that LADCO analysis.

Changes occur to the network occur each year that are unplanned. Changes 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. Some changes that are planned may not actually happen because a new site cannot be secured or because of budget constraints.

The Federal requirements for monitoring for sulfur dioxide, nitrogen dioxide and carbon monoxide air pollutants were changed in late 2006 to no longer require minimum numbers of monitors for those parameters. The National Ambient Air Quality Standards(NAAQS) still exist for those parameters and Ohio will still maintain sites and monitors for those air pollutants. There may be some reductions in numbers of sites and monitors or movement of sites for those pollutants but a monitoring effort will still be maintained. Changes to the NAAQS and to the requirements for numbers and placement of monitoring sites will be happening over the next few years.

Three new 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 levels of pollutants. They will add lead monitoring in the future.

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 parameters have sites for all of these categories.

This year the Air Directors in the Region 5 states of Ohio, Michigan, Indiana, Illinois, Wisconsin and Minnesota have 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 analysis and for data collection and reporting. An important funding change coming for very fine particulates or PM<sub>2.5</sub> is that the funding is changing from a Section 103 grant that is fully federally funded to a Section 105 grant that requires a state local matching amount. This change may limit the types and numbers of PM<sub>2.5</sub> sampling that the state is able to support.

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 PM<sub>2.5</sub> sites, Hamco, Cleveland, MTAPCA  
3 ozone sites, all moved, 1 Portsmouth, 1 Hamco, 1 Canton  
5 TSP for lead/metals sites, 3 SWDO, 1 Cleveland, 1 NWDO

Ohio EPA plans to move or has already moved sites and instruments for:

4 PM<sub>2.5</sub> sites, 1 Portsmouth, 1 Lake, 1 MTAPCA, 1 Toledo  
1 PM<sub>2.5</sub> chemical speciation site, Portsmouth

2 PM10 sites, Portsmouth, NEDO  
2 sulfur dioxide sites, NWDO, Portsmouth  
3 ozone sites, Canton, Hamco, NWDO, Portsmouth  
TSP for metals site - see lead monitoring plan

Ohio EPA plans to add sites or has added sites/monitors for:

1 site with CO,SO2,NO2, O3, continuous PM2.5, continuous PM10-2.5,  
meteorological, Akron  
1 rural NCore site for trace SO2, CO and NOy, RAPCA  
7 TSP for lead/metals sites

US EPA revised the lead standard in 2008 to a lower concentration. Ohio will add several new lead sites that will begin operation by January 1, 2010. There will be approximately 7 new lead sites to its network of sampling sites. Details may be found in the separate Lead Monitoring Plan.

All of the plans are subject to approval by US EPA.

For questions about the Ohio Air Monitoring Network please contact:  
Gary Engler at 614-644-3623.

Comments about the Ohio Air Monitoring Network may be emailed to:

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**Ohio Air Monitoring Network – 2009-2010**

<b>AQS ID # Air Agency</b>	<b>County Address</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Sampling Method</b>	<b>Analysis</b>	<b>Schedule</b>	<b>Monitoring Objective</b>	<b>Spatial Scale</b>	<b>Comments</b>
<b>Akron</b>	Medina Co.								
39-103-0003	Deerview Ln Layfayette Twp	41.102778	-81.911667	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Urban	
				PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Population	Urban	
				Ozone	U.V. Photometric	Continuous	Population	Regional	
39-103-0004	Ballash Rd.	41.0604	-81.9239	Carbon monoxide	Infrared	Continuous			New site August 2009
				Sulfur dioxide	Pulsed Floreence	Continuous			
				Nitrogen dioxide	Chemiluminescence	Continuous			
				Ozone	U.V. Photometric	Continuous			
				PM2.5	TEOM/FDMS	Continuous			
				PM10-2.5 Coarse	TEOM/FDMS	Continuous			
				Wind speed/wind dir.		Continuous			
	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 TEOMFDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				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		
<b>Canton</b>	Stark Co.								
39-151-0016	515 25 <sup>th</sup> 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		From 151-0020
				TSP – lead	ICP	1 in 6 day	Source-oriented		New required lead site
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	245 West Fifth St., Brewster	40.708685	-81.601256	Ozone	U.V. Photometric	Continuous	Background	Urban	Reestablished Apr. 2010
39-151-0023	Wilderness Center, Wilmot	40.67176	-81.64091	Ozone	U.V. Photometric	Continuous	Background	Urban	Discontinued Oct. 2009
39-151-4005	1175 W. Vine St. Alliance	40.930833	-81.123611	Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
<b>Toledo</b>	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			
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 131 <sup>st</sup> 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	
<b>Hamco DES</b>	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	
				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
39-017-1004	Hook Field Airport	39.530000	-84.392500	PM2.5 BAMS	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	
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
				Wind speed/wind dir.	Sonic				
	Hamilton Co.								
39-061-0001	Public Library, Vine St.	39.1047	-84.5136	TSP metals	ICP	1 in 6 day	Population	Neighborhood	
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	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
39-061-0010	6950 Ripple Rd. Colerain	39.216389	-84.699722	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	NCORE trace SO2
				Ozone	U.V. Photometric	Continuous	Population	Urban	
				Carbon monoxide	Infared	Continuous	Population	Middle	NCORE trace CO
				NOy	Chemiluminescence	Continuous			NCORE NOy
				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.5 <sup>th</sup> St.Cinti	39.101944	-84.509722	Carbon monoxide	Infared	Continuous	Highest conc.	Microscale	

39-061-0040	250 Taft Rd. Cincinnati	39.128611	-84.504167	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM10 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	
				PM2.5 SC FRM	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					
39-061-0042	Lower Price Hill, 8 <sup>th</sup> 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	
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
				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	
				PM2.5 TEOM	Oscillating crystal	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Max ozone	Urban	
				Wind speed/wind dir.					
<b>Cleveland</b>	Cuyahoga Co.								
39-035-0027	Dunbar Elem., 2200 28 <sup>th</sup> St.	41.477500	-81.703056	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	Discontinued 7/6/2009
				PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	Discontinued 7/6/2009
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 3 day	Population	Neighborhood	
				PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				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		
				Chem speciation	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. 56 <sup>th</sup> St.	41.446667	-81.651111	TSP-leadmetals Colo	ICP	1 in 6 day	Highest conc.	Neighborhood	
39-035-0050	Fortran Printing, Grant Ave.	41.442500	-81.649167	TSP-lead-metals	ICP	1 in 6 day	Highest conc.	Neighborhood	Discontinued
39-035-0051	Galleria, E. Ninth & St. Clair	41.504444	-81.690278	Carbon monoxide	Infared	Continuous	Highest conc.	Microscale	
39-035-0053	4160 Pearl Rd. ,Broadview	41.441667	-81.703889	Carbon monoxide	Infared	Continuous	Highest conc.	Microscale	
39-035-0060	GT Craig, E. 14 <sup>th</sup> & Orange	41.491944	-81.678333	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
				PM10 TEOM	Oscillating crystal	Continuous		Neighborhood	
				PM2.5 Seq.FRMColo	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
				NO2	Chemiluminescence	Continuous	Population	Neighborhood	
				PM2.5 speciat Colo	Ion Chromatograph	1 in 3 day	SIP info		
				VOCs	GC MS	1 in 12 day			
				SO2, CO, NOy					NCORE instruments
				Wind speed/wind dir.	Sonic				
39-035-0061	South side W. 3 <sup>rd</sup> 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	
				NO2	Chemiluminescence	Continuous			Discontinued 11/30/08
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			
39-035-0070	13013 Corlett Ave.	41.456941	-81.592226	Carbon monoxide	Infared	Continuous	Population	Neighborhood	Still operating



39-035-0071	Community College AveCleve.	41.494325	-81.670003	VOCs	GC MS	1 in 12 day			Discontinued 2/12/09
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 6 day	Population	Neighborhood	
39-035-5002	6116 Wilson Road, Mayfield	41.536667	-81.459167	Ozone	U.V. Photometric	Continuous	Population	Urban	
<b>RAPCA</b>	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 BAMS	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	1 in 3 day	Population	Neighborhood	
				PM2.5 TA BAMS	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	Infared	Continuous	Population	Neighborhood	
39-113-0032	215 E. 3 <sup>rd</sup> St., Dayton Library	39.760278	-84.187778	PM2.5 FRM -Colo	Gravimetric	1 in 3 day	Population	Neighborhood	
				PM2.5 TA BAM	Beta attenuation	Continuous	Population	Neighborhood	
				PM2.5 speciation	Ion Chromatograph	1 in 6 day	SIP information		
				Chem speciation	Carbon speciation				URG-3000
				VOCs	GC MS	1 in 12 day			
39-113-0034	117 S. Main St., Dayton	39.757778	-84.191667	Carbon monoxide	Infared	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	



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	
				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
39-085-3002	Lake Hospital, Painesville	41.722500	-81.241944	PM2.5SeqFRMColo	Gravimetric	1 in 3 day	Highest conc.	Urban	Discontinued 12/31/08
				PM2.5 TEOM	Oscillating crystal	Continuous	Highest conc.	Urban	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Source-oriented	Middle	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Urban	
<b>Portsmouth</b>	Adams Co.								
39-001-0001	Adams Cnty Hospital, W.Union	38.795000	-83.535278	PM2.5 TA-BAM	Beta attenuation	Continuous	Population	Neighborhood	
				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
39-087-0010	Lawrence Co. Hospital, Ironton	38.519722	-82.665556	PM2.5 Seq. FRM	Gravimetric	1 in 3 day	Population	Neighborhood	Moved to 087-0012
				Chem Spec	Ion Chromatograph	1 in 6 day			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	
				Chem Spec	Ion Chromatograph	1 in 6 day			
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Population	Neighborhood	
	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
<b>CDO</b>	Delaware Co.								
39-041-0002	359 Main Rd., Delaware Franklin Co.	40.356944	-83.063889	Ozone	U.V. Photometric	Continuous	Population	Urban	
39-049-0005	1585 Morse Rd., Columbus	40.060000	-82.976944	Carbon Monoxide	Infared	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	Better location preferred
39-049-0029	New Albany HS, New Albany	40.086667	-82.815556	PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				Ozone	U.V. Photometric	Continuous	Highest conc.	Neighborhood	
39-049-0034	State Fairgrounds, Korbelt Ave.	40.002500	-82.994444	PM2.5 TEOMFDMS	Oscillating crystal	Continuous	Population	Neighborhood	
				Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	Discontinued 6/30/09
				VOCs	GC MS	1 in 12 day			
				Carbonyl sampler		1 in 6 day			
39-049-0036	Lazarus GC, FrontSt,Columbus	39.959444	-83.001944	Carbon monoxide	Infared	Continuous	Highest conc.	Microscale	Not replaced yet.
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	
				Chemical speciation	Ion Chromatograph	1 in 6 day	SIP information		
				Chemical speciation	Carbon speciation				URG-3000
	Knox Co.								
39-083-0002	Fire Station , Centerburg Licking Co.	40.309722	-82.691944	Ozone	U.V. Photometric	Continuous	Population	Urban	
39-089-0005	Heath School, Heath Madison Co.	40.025833	-82.432778	Ozone	U.V. Photometric	Continuous	Population	Urban	
39-097-0007	Madison School, London	39.788611	-83.475833	Ozone	U.V. Photometric	Continuous	Population	Urban	
<b>NEDO</b>	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 Port Authority, 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	Still have this 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. FRM Colo	Gravimetric	1 in 3 day	Source-oriented	Neighborhood	
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	Source-oriented	Neighborhood	
				Chemical speciation	Ion Chromatograph				
				Chemical speciation	Carbon speciation				URG-3000
<b>NWDO</b>	Allen Co.								
39-003-0002	Bath High. School, Lima	40.772222	-84.051944	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Urban	New shelter site
				Ozone	U.V. Photometric	Continuous	Population	Urban	needs electric service
				PM2.5 FRM	Gravimetric	1 in 6 day	Population	Neighborhood	To go in new shelter
				PM2.5 TEOM FDMS	Oscillating crystal	Continuous	AQI	Neighborhood	To go in new shelter
39-003-0006	Nat.Lime/Stone, Findly Rd Lima	40.752500	-84.085556	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-003-0007	Nat.Lime/Stone, Rouch Rd Lima	40.752500	-84.070000	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-003-0008	Nat.Lime/Stone, North St Lima	40.744167	-84.093889	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
	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, CR313 Findlay	41.010556	-83.688056	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-063-0003	Nat.Lime/Stone, CR313 Findlay	41.012778	-83.696944	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-063-0004	Nat.Lime/Stone, CR144 Findlay	41.023611	-83.685556	PM10	Gravimetric	1 in 6 day	Population	Neighborhood	
39-101-0003	Nucor Steel, Hawthorne Ave.	42.57141	-83.13556	TSP-lead	ICP	1 in 6 day	Source-oriented	Neighborhood	New required site

39-123-0014	Brush Wellman, Elmore Sandusky Co.			TSP – beryllium	ICP	7daysample			
36-143-0019	Clyde Wood Co.	41.30556	-82.97961	TSP-lead/metals	ICP	1 in 6 day	Population	Neighborhood	Special children study
39-173-0003	NWDO Office,Bowling Green	41.378056	-83.611667	Ozone	U.V. Photometric	Continuous	Other	Urban	
<b>SEDO</b>	Athens Co.								
39-009-0003	St. Rt. 377, Gifford Forest Belmont Co.	39.442500	-81.908611	PM2.5 Seq. FRM	Gravimetric	1 in 6 day	Background	Regional	Background site
39-013-3002	E. 40 <sup>th</sup> St. Shadyside Treatment Jefferson Co.	39.968056	-80.747500	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
39-081-0001	1004 3 <sup>rd</sup> 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	
				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			
	Meigs Co.								
39-105-1001	Veterans Hospital, Pomeroy Morgan Co.	39.037778	-82.045556	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Urban	
39-115-0004	St. Rt. 83, Hackney School Tuscarawas Co.	39.634221	-81.670038	Sulfur dioxide	Pulsed Fluorescence	Continuous	Source-oriented	Urban	Muskingum PowerPlant
39-157-0006	527 Crescent Drive, Sugarcreek Washington Co.	40.511416	-81.639149	Sulfur dioxide	Pulsed Fluorescence	Continuous	Population	Neighborhood	
39-167-0004	2000 4 <sup>th</sup> 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	In place not sampling
39-167-0010	Education Center, Harnar	39.413694	-81.475089	TSP-leadmetals-colo	Gravimetric	I in 6 day	Population	Neighborhood	
<b>SWDO</b>	Clinton Co.								

39-027-1002	Laurel Oaks School, Wilmington Logan Co.	39.430000	-83.788611	Ozone	U.V. Photometric	Continuous	Population	Urban	
39-091-0003	Superior Ave., Bellefontaine	40.343056	-83.755000	TSP-leadmetals-Colo	ICP	1 in 6 day	Population	Neighborhood	Sampling discontinued
39-091-0006	Richard Ave., Bellefontaine	40.341111	-83.757778	TSP-lead-metals	ICP	1 in 6 day	Highest conc.	Neighborhood	Sampling continued
39-091-0007	Superior Ave., Bellefontaine	40.344722	-83.754444	TSP-lead-metals	ICP	1 in 6 day	Highest conc.	Neighborhood	Sampling discontinued
39-091-0008	Greenwood Ave. Bellefontaine	40.343684	-83.759842	TSP-lead-metals	ICP	1 in 6 day	Population	Neighborhood	Sampling discontinued

**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 1 in 6 day schedule or possibly at a 1 in 12 day schedule.

Chem. Speciation sites are sites and samplers that collect PM<sub>2.5</sub> samples that are analyzed for the chemical speciation make-up of the PM<sub>2.5</sub> 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 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 Graphite 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 PM<sub>2.5</sub> 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:

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

Lake County Health Department Air Pollution Control 33 Mill St. Painesville, Ohio 44077 (440) 350-2543 Lake, Geauga counties	Ohio EPA Northwest District Office 347 North Dunbridge Rd. Bowling Green, Ohio 43402 (419) 352-8461
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

## **Ohio Lead Monitoring 2009-2010**

Ohio EPA and its contractual agencies will begin a new air monitoring sampling effort at 7 to 9 new sites beginning January 1, 2010. The newly revised lead National Ambient Air Quality Standard is now 0.15 micrograms of lead per cubic meter of air as a monthly average. The State Implementation Plan group of DAPC includes the air modeling staff for Ohio EPA. That group has analyzed emissions data for lead sources in Ohio and determined which of the lead sources will require lead monitoring. With their modeling work the modelers have also determined where the highest concentration of airborne lead is likely to occur at each facility.

Using the information provided by the modeling group now air monitoring staff will be visiting the lead source facilities that may have lead emissions that will exceed or be close to exceeding the NAAQS for lead. They will locate the potentially high concentration sites and attempt to secure at each facility a site to place a lead sampler. Should the high concentration site either not be in an area that would measure ambient air generally available to public access or they are unable to secure an agreement with the site owner they will search to find a suitable site in another high concentration area. Staff may begin searching for the suitable sites as soon as possible.

Ohio EPA DAPC staff will in the second half of 2009 order enough new lead samplers to site at least one sampler at the identified source facilities. There will be other lead samplers at some of those same sites to provide samples and data for adequate quality assurance of the lead sampling network. The lead samplers are to be funded by 105 Grant funds that come at least in part from community air toxics funds. Orders will be placed in time to take delivery of lead samplers by August or September to allow for sampler installation at the selected sites.

The sites that are selected will need adequate and safe electric service, adequate security of the samplers and any safety considerations such as ladders or safety railing will need to be installed. Safety devices, electrical service and security will be provided before installing the new samplers.

Another issue of vital importance to the new lead sampling network is the analysis to be provided by the Ohio Division of Environmental Services at their laboratory in Reynoldsburg, Ohio. At the time of publication the lead analysis method as currently employed by DES had not received US EPA approval. The current method is by Inductively Coupled Plasma or ICP. Other states are known to be in the same situation of using an unapproved method for lead analysis. US EPA is working with DES to secure an approved method for the lead analysis.

Besides the analytical method there is an issue with more samples that need analyzed. Ohio EPA has for many years used a method of compositing filter strips from a month of filter samples for an analysis of the average of the strips collected for a particular month.

This was performed as a composite analysis because the amount of lead deposited on an individual filter was so small as to be often non-detectable. The requirement now is for each filter to be analyzed. This requirement will mean that the number of lead analysis and the paperwork associated with submitting a lead sample to DES and of course the cost of the analysis will all increase by a factor of 5 when figuring a 1 in 6 day schedule.