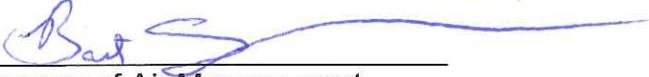




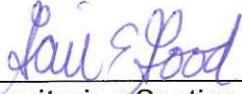
## 2014 Wisconsin Air Monitoring Network Plan

### Signature page

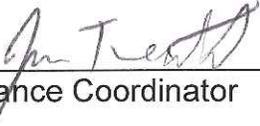
By the signatures below, the Wisconsin Department of Natural Resources/Air Monitoring certifies that the information contained in this Network document for sampling year 2014 is complete and accurate at the time of submittal to US EPA Region 5. However, due to circumstances that may arise during the sampling year, some network information may change. A notification of change and a request for approval will be submitted to US EPA Region 5 at that time.

Signature   
Director, Bureau of Air Management

Date 6/25/2013

Signature   
Chief, Air Monitoring Section

Date 6/25/2013

Signature   
Quality Assurance Coordinator

Date 6/25/13

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## Public Notification and Comment Period

Pursuant to federal requirements, the Department of Natural Resources will provide a 30 day public comment period for review of this ambient air quality monitoring network plan.

Written comments on this monitoring network plan document may be submitted directly to

Ms. Gail Good,  
c/o Air Monitoring Section, Bureau of Air Management,  
P.O. Box 7921,  
Madison, WI 53707,

no later than June 11, 2013. Written comments will have the same weight and effect as oral comments presented at the meeting. A copy of the proposed revision to the Monitoring Plan is available for public inspection at the Bureau of Air Management, 7th Floor, 101 S. Webster Street, Madison, Wisconsin, on the following web address: <http://dnr.wi.gov/air/aq/monitor/netreview.htm> or by mail (at no charge) from Ms. Gail Good at the address noted above.

In accordance with 40 C.F.R. 58.10(a)(1), the Wisconsin Department of Natural Resources, Air Monitoring shall make the annual monitoring network plan available for public inspection for at least 30 days prior to submission to the US EPA. The annual monitoring network plan details the operation and location of ambient air monitors operated by the Wisconsin Department of Natural Resources Air Monitoring Section.

## **Disclaimer**

The network design proposed in this document represents a balance between the desired number of monitors and monitoring frequency and expected funding levels. The desired network configuration considers monitoring history, population distribution, federal monitoring requirements under the Clean Air Act, 40 Code of Federal Regulations (CFR) Part 58 and expected staffing levels.

US EPA proposed a number of rule changes that could have a significant effect on Wisconsin's network design in 2013 and 2014.

Recommended changes to this network will be implemented during the 2013 and 2014 calendar years, contingent upon adequate funding levels. The federal grant funding for the fine particulate matter (PM<sub>2.5</sub>) program is changing to require that states provide 40 percent (%) matching funds. If this occurs, Wisconsin may not be able to provide such a match and will likely have to discontinue various monitoring, perhaps extending beyond the PM<sub>2.5</sub> program.

Network operations may change during the years without public notice based on unexpected circumstances. Examples of unexpected circumstances include catastrophic equipment failure, construction or demolition activities, loss of site access, or monitor obstructions.

## Acronyms and Abbreviations

AMS: Air Monitoring Section  
AQCR: Air Quality Control Region  
AQI: Air Quality Index  
BAM/AM: Bureau of Air Management  
CBSA: Core-Based Statistical Area  
CMSA: Consolidated Metropolitan Statistical Area  
DEQ: Division of Environmental Quality  
DQA: Data Quality Assessment  
DQO: Data Quality Objectives  
ETV: Environmental Technology Verification Program  
EOM: Enhanced Ozone Monitoring  
FEM: Federal Alternate Method  
FDMS: Filter Dynamic Measurement System  
FRM: Federal Reference Method  
MSA: Metropolitan Statistical Area  
NAAQS: National Ambient Air Quality Standards  
NATTS: National Ambient Toxic Trend Sites  
PAMS: Photochemical Assessment Monitoring Site  
PM<sub>10</sub>: Particulate Matter 10 micron or smaller in size  
PM<sub>2.5</sub>: Particulate Matter 2.5 micron or smaller in size  
PM<sub>crs</sub>: Particulate Matter 2.5 to 10 micron in size  
QAPP: Quality Assurance Project Plan  
R&P: Ruprecht & Pataschnick (now part of Thermo.)  
SCC: Sharp Cut Cyclone  
SLAMS: State and Local Air Monitoring Sites  
SPM: Special Purpose Monitors  
TEOM: Tapered Element Oscillating Method  
UATM: Urban Air Toxics Monitor  
US EPA: United States Environmental Protection Agency  
UV: Ultra Violet  
VOC: Volatile Organic compounds  
VSCC: Very Sharp Cut Cyclone  
WDNR: Wisconsin Department of Natural Resources

## Monitor (Parameter) Abbreviations

CO – Carbon Monoxide  
Hg - Mercury  
NO<sub>2</sub> – Nitrogen Dioxide  
NO<sub>y</sub> – Reactive Oxides of Nitrogen  
O<sub>3</sub> - Ozone  
Pb – Lead  
SO<sub>2</sub> – Sulfur Dioxide  
T – Temperature  
WD - Wind Direction  
WS – Wind Speed

## 2014 Wisconsin Air Monitoring Network Plan

### Summary of Significant Network Changes

AQS Site ID	COUNTY	CITY	SITE NAME	SITE ADDRESS	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM-crs	SO <sub>2</sub>	NO <sub>2</sub>	CO	MET	Pb-TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	PAH	VOC Carbonyl	NTN	Hg	Comment	
55-087-0009	Outagamie	Appleton	Appleton AAL	4432 N. Meade St	S	C, F & Y															
55-003-0010	Ashland	Odanah	Bad River Tribal School – Odanah	Bad River Tribal School	Y	C, F & Fc						Y								Discontinued 4/03/2013	
55-079-0085	Milwaukee	Bayside	Bayside	601 E. Ellsworth Ln.	S																
55-105-0024	Rock	Beloit	Beloit-Cunningham	1948 Merrill St.	S															Site will close in Summer 2013.	
55-105-XXXX	Rock	Beloit	Unknown	Unknown	S															Site will open in Summer 2013.	
-	Douglas	-	Brule River															Y	MD		
55-059-0019	Kenosha	Pleasant Prairie	Chiwaukee Prairie Stateline	11838 First Court	S	C & F						Y & RF									
55-021-0015	Columbia	Columbus	Columbus	Wendt Rd.	S							S & RF									
55-111-0007	Sauk	Baraboo	Devils Lake Park	E12886 Tower Rd.	S	C, F Cc & Fc	Cc	C				Y						Y	MD		
55-035-0014	Eau Claire	Eau Claire	Eau Claire-DOT Sign Shop	5509 Highway 53 South	S	C & F						Y									
55-039-0006	Fond du Lac	-	Fond du Lac	N3996 Kelly Rd, Town of Byron	S																
55-089-0008	Ozaukee	Grafton	Grafton	N. Port Washington Rd. (East side of Hwy 32 and I43)	S							S & RF									
55-009-0005	Brown	Green Bay	Green Bay East High	1415 E. Walnut	S	C, Fc, M & Y			Y												
55-009-0026	Brown	Green Bay	Green Bay UW	Hwys 54 & 57	S																
55-089-0009	Ozaukee	Belgium	Harrington Beach	Harrington Beach State Park, 531 Hwy D	S	C & F						Y									
55-027-0001	Dodge	Horicon	Horicon Wildlife Area	1210 N. Palmatory St.	Y	C, F & M	C & F	C	HS		HS	Y & RF		Y	HS	Y			T (GEM, GOM & PBM)		
55-055-0002	Jefferson	Jefferson	Jefferson	Willow Dr.	S							RF								Closed 10/16/12	
55-055-0009	Jefferson	Jefferson	Jefferson	N4440 Laatsch Lane	S															Established 4/8/13.	
55-059-XXXX	Kenosha	Kenosha	Kenosha-Water Tower	4504 64th Ave.	S							S								Established 5/15/13.	
55-061-0002	Kewaunee	Kewaunee	Kewaunee	Route 1, Hwy 42	S																
55-117-0008	Sheboygan	Kohler	Kohler	444 Highland Dr.									Yc								
55-063-0012	La Crosse	La Crosse	La Crosse-DOT	3550 Mormon Coulee Rd.	S	C & F						Y									
55-073-0012	Marathon	-	Lake DuBay	1780 Bergen Rd.	S							Y						Y			
55-127-0005	Walworth	Lake Geneva	Lake Geneva	RR4 Elgin Club Rd.	S							Y								Met operated year round beginning Winter 2012.	
			c – Collocated monitor	C – Continuous																	
			D – Discontinued	F – Federal Reference Method																	
			HS – High Sensitivity	M – Fine Particle Speciation – Cation/Anion/Carbon																	
			MD – Mercury Deposition Network	RF – Precipitation for National Weather Service																	
			P – PAMS	S – Seasonal monitoring																	
			T – Tekran	Y – Year round monitoring																	

2014 Wisconsin Air Monitoring Network Plan

Summary of Significant Network Changes (cont.)

AQS Site ID	COUNTY	CITY	SITE NAME	SITE ADDRESS	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM-crs	SO <sub>2</sub>	NO <sub>2</sub>	CO	MET	Pb-TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	PAH	VOC Carbonyl	NTN	Hg	Comment	
55-025-0047	Dane	Madison	Madison University Ave. Well #6	2757 University Ave.		F	F														
55-025-0041	Dane	Madison	Madison-East	2302 Hoard St.	S	C & F			Y			Y								Added SO <sub>2</sub> 1/2/13.	
55-071-0007	Manitowoc	Two Rivers	Manitowoc Woodland Dunes	2315 Goodwin Rd.	S					S		S			S						
55-079-0058	Milwaukee	Milwaukee	Milwaukee-College Ave. Park & Ride	1550 W. College Ave.		C & F	F							Y							
55-079-0099	Milwaukee	Milwaukee	Milwaukee-Fire Dept. HQ	744 W. Wells St.		F															
55-079-0026	Milwaukee	Milwaukee	Milwaukee-SER DNR HDQRS	2300 N. Martin Luther King Jr. Dr.	Y	C, F, Fc & M	C	C	Y	Y		Y			S		P				
55-079-0010	Milwaukee	Milwaukee	Milwaukee-Sixteenth St. Health Center	1337 S. 16th St.	S	C & F	F					Y		Y			Y			Added cont PM <sub>2.5</sub> on 10/17/2012.	
55-079-0041	Milwaukee	Milwaukee	Milwaukee-UWM North	2114 E. Kenwood Blvd.								Y							MD & T(GEM)	Closing in Fall 2013	
55-029-0004	Door	-	Newport Park	475 CTH NP	S							S									
55-119-8001	Taylor	-	Perkinstown	W10746 Cty Rd. M		C, F & M															
55-085-0001	Florence	Florence	Poppo River	Fire Station #565														Y	MD		
55-041-0007	Forest	Crandon	Potawatomi	Fire Tower Rd.	Y	C & F			Y	Y		Y								T(GEM)	
55-043-0009	Grant		Potosi	128 Hwy 61, Potosi Township		C & F						Y									
55-101-0017	Racine	Racine	Racine	1519 Washington Ave.	S							S									
55-085-0996	Oneida	Rhineland	Rhineland Tower	434 High St.					Y			Y									
55-117-0006	Sheboygan	-	Sheboygan Kohler Andre	1520 Beach Park Rd.	S							S									
-	Washburn	-	Spooner	Highway 70															Y		
55-031-0019	Douglas	Superior	Superior STP	E. Avenue East								Y									
-	Oconto		Suring	10360 Big Eddie Ln.															Y		
55-125-0001	Vilas	Boulder Junction	Trout Lake	10810 County Hwy M	S	F														MD	
55-079-XXXX	Milwaukee	Milwaukee	Unknown - Near-road site	1550 W. College Ave.		F				Y	HS										Planned by 1/1/14
55-133-0027	Waukesha	Waukesha	Waukesha-Cleveland Ave.	1310 Cleveland Ave.	S	C, F & M						Y									
55-123-0008	Vernon	Ontario	Wildcat Mountain	Hwy 33																MD	
			c - Collocated monitor	C - Continuous																	Indicates a site where a change occurred or will occur in 2013.
			D - Discontinued	F - Federal Reference Method																	Indicates a site where a change is planned for 2014.
			HS - High Sensitivity	M - Fine Particle Speciation - Cation/Anion/Carbon																	
			MD - Mercury Deposition Network	RF - Precipitation for National Weather Service																	
			P - PAMS	S - Seasonal monitoring																	
			T - Tekran	Y - Year round monitoring																	

## **Introduction and Background**

### **Federal Regulatory History**

In October 1975, the United State Environmental Protection Agency (US EPA) established a work group to critically review and evaluate current air monitoring activities. This group was named the Standing Air Monitoring Working Group (SAMWG). The review by the SAMWG indicated several areas, nationally, where monitoring deficiencies existed which needed correction. The principal areas needing correction were: (1) an excess of monitoring sites in some areas to assess air quality (2) existing regulations did not allow for flexibility to conduct special purpose monitoring studies (3) data reporting was untimely and incomplete, caused by a lack of uniformity in site location and probe siting, sampling methodology, quality assurance practices, and data handling procedures.

In August 1978, recommendations developed by SAMWG, to remedy the deficiencies in the existing monitoring activities, were combined with the new requirements of Section 319 of the Clean Air Act. Section 319 provided for: (1) the development of uniform air quality monitoring criteria and methodology (2) reporting of a uniform air quality index in major urban areas and (3) the establishment of a nationwide air quality monitoring system, which utilizes uniform monitoring criteria and provides for monitoring sites in major urban areas that supplement State monitoring. The combination of the recommendations and requirements were included in a proposed revision to the federal air monitoring regulations.

### **Monitoring Networks**

In 1981, the U.S. Environmental Protection Agency (U.S. EPA) approved a portion of the Wisconsin State Implementation Plan (SIP) for the Clean Air Act monitoring plan dealing with air quality surveillance, which is required by [Parts 53 and 58](#) of Title 40 of the Code of Federal Regulations. That monitoring plan presented a detailed scheme for ambient air quality monitoring, including a detailed proposal for a comprehensive network of ambient monitors throughout Wisconsin. The Department proposed to conduct an annual review of the monitoring network and to notify the public of significant changes in the network by conducting a public informational meeting. In addition to the networks prescribed by EPA, WDNR operates sites within the Mercury Deposition (MDN) National Trends Network (NTN), and assists with other networks.

### **State and Local Air Monitoring Stations (SLAMS)**

State and Local Air Monitoring Stations or SLAMS consist of a network of monitoring stations whose size and distribution is largely determined by the monitoring requirements for NAAQS comparison and the needs of monitoring organizations to meet their respective tribal/state implementation plan (TIP/SIP) requirements. SLAMS exclude special purpose monitor (SPM) stations and include NCore, PAMS, and all other State or locally operated stations that have not been designated as SPM stations.

## **Special Purpose Monitor Stations (SPM)**

An SPM station means a monitor designated as a special purpose monitor station in its monitoring network plan and in the Air Quality System (AQS), and which the agency does not count when showing compliance with the minimum monitoring requirements for the number and siting of monitors of various types. SPMs provide for special studies needed by the monitoring organizations to support TIPs/SIPs and other air program activities. These monitors are not counted towards the monitoring organizations minimum requirements established in CFR for monitoring certain pollutants. Federal rules ([40 CFR Part 58.20](#)) limit the length of time an SPM can operate, without counting toward compliance.

## **PM<sub>2.5</sub> Chemical Speciation Network (CSN)**

As part of the effort to monitor particulate matter, EPA monitors and gathers data on the chemical makeup of particles. These sites are placed at various SLAMS across the Nation. Fifty-four of these CSN sites, the Speciation Trends Network (STN), are used to determine, over a period of several years, trends in concentration levels of selected ions, metals, carbon species, and organic compounds in PM<sub>2.5</sub>. Further breakdown on the location or placement of the trends sites requires that approximately 20 of the monitoring sites be placed at existing Photochemical Assessment Monitoring Stations (PAMS). There are five speciation sites in Wisconsin.

## **Photochemical Assessment Monitoring Stations (PAMS)**

Section 182(c)(1) of the 1990 CAA requires the enhanced monitoring of ozone, oxides of nitrogen (NO<sub>x</sub>), and volatile organic compounds (VOC). Revisions to 40 CFR 58 required states to establish Photochemical Assessment Monitoring Stations (PAMS) as part of their SIP monitoring networks in ozone nonattainment areas classified as serious, severe, or extreme.

The chief objective of the enhanced ozone monitoring revisions is to provide an air quality database that assists air pollution control agencies in evaluating, tracking the progress of, and, if necessary, refining control strategies for attaining the ozone NAAQS. Ambient concentrations of ozone and ozone precursors are used to make attainment/nonattainment decisions, aid in tracking VOC and NO<sub>x</sub> emission inventory reductions, better characterize the nature and extent of the ozone problem, and to evaluate air quality trends. In addition, data from the PAMS provides an improved database for evaluating photochemical model performance, especially for future control strategy mid-course corrections as part of the continuing air quality management process. The data helps ensure the implementation of the most effective regulatory controls.

The Wisconsin PAMS Network includes three monitoring sites. One urban source region site located in Milwaukee and two rural downwind sites, located at Harrington Beach State Park and in the Woodland Dunes conservancy near Manitowoc. The three sites are a subset of 29 fixed ozone sites located throughout Wisconsin.

## **National Air Toxics Trends Stations (NATTS)**

There are currently 187 hazardous air pollutants (HAPs) or Air Toxics (AT) regulated under the CAA. These pollutants have been associated with a wide variety of adverse health and ecosystem effects. In 1999, EPA finalized the Urban Air Toxics Strategy (UATS). The UATS states that emissions data are needed to quantify the sources of air toxics impacts and aid in the development of control strategies, while ambient monitoring data are needed to understand the behavior and concentration of air toxics in the atmosphere after they are emitted. Part of this strategy included the development of the National Air Toxics Trends Stations (NATTS). The NATTS programs measures core air toxics pollutants including VOCs, carbonyl, metals, hexavalent chromium, and PAHs. Specific data quality objectives are set for monitoring sites in the NATTS network. At NATTS sites, EPA has established a goal to be able to detect a 15% concentration change between two 3-year annual mean concentrations within acceptable error. It is also anticipated that the NATTS data will be used for:

- Tracking trends in ambient levels to evaluate progress toward emission and risk reduction goals;
- Evaluating directly public exposure & environmental impacts in the vicinity of monitors;
- Providing quality assured data for risk characterization;
- Assessing the effectiveness of specific emission reduction activities; and
- Evaluating and subsequently improving air toxics emission inventories and model performance.

Nationally the NATTS program is made up of 22 monitoring sites; 15 representing urban communities and 7 representing rural communities. Wisconsin operates one NATTS sites at the state's super site in Dodge County. This is supplemented by a site in Milwaukee which is state-operated.

## **National Core Monitoring Network (NCore)**

The NCore multi-pollutant stations are part of an overall strategy to integrate multiple monitoring networks and measurements. Each state (i.e., the fifty states, District of Columbia, Puerto Rico, and the Virgin Islands) and some local government entities are required to operate at least one NCore site. Monitors at NCore multi-pollutant sites measure particles ( $PM_{2.5}$ , speciated  $PM_{2.5}$ ,  $PM_{crs}$ , speciated  $PM_{crs}$ ),  $O_3$ ,  $SO_2$ ,  $CO$ , nitrogen oxides ( $NO/NO_2/NO_y$ ), and basic meteorology. In addition, a number of NCore sites may be selected to measure lead (Pb).

The objective is to locate sites in broadly representative urban (about 55 sites) and rural (about 20 sites) locations throughout the country to help characterize regional and urban patterns of air pollution. The NCore network needed to be fully operational by 2011. In many cases, monitoring organizations collocate these new stations with STN sites measuring speciated  $PM_{2.5}$  components, PAMS sites already measuring  $O_3$  precursors, and/or NATTS sites measuring air toxics. By combining these monitoring programs at a single location, EPA and its partners maximize the multi-pollutant information available. This greatly enhances the foundation for future health studies, NAAQS revisions, validation of air quality models, assessment of emission reduction programs, and studies of ecosystem impacts of air pollution.

Wisconsin's NCore site is located in Dodge County, representing a rural area. High sensitivity nitrogen oxides, carbon monoxide and sulfur dioxide began operating at that site in 2005 and 2006.

### **National Atmospheric Deposition Program (NTN)**

This program measures atmospheric pollutants deposited to land and surface water in wet and dry form. This is a cooperative effort between federal, state, tribal and local governmental agencies, educational institutions, private companies, and non-governmental agencies. The network's official name is NADP National Trends Network (NTN). The network may change significantly in 2014 due to diminishing funding. Wisconsin operates seven monitoring station located throughout the state. Site operators follow standard procedures to ensure NTN data comparability and representativeness. They collect samples weekly on Tuesday morning and send samples to the Central Analytical Laboratory (CAL) at the Illinois State Water Survey. The CAL reviews field and laboratory data and delivers all data and information to the NADP Program office, which applies a final set of checks and resolves remaining discrepancies. Data are made available on the NADP website: <http://nadp.sws.uiuc.edu/NADP/>.

### **Mercury Deposition Monitoring Network (MDN)**

This national network measures atmospheric mercury deposition to land and surface water in the form of precipitation. The network may change significantly in 2014 due to diminishing funding. All MDN sites follow standard procedures and have uniform precipitation chemistry collectors and gages. Eight MDN site are located in Wisconsin. Six sites are directly operated by Wisconsin DNR staff. Site operators collect samples Tuesday morning or daily within 24 hours of the start of precipitation. Samples are sent to the designated laboratory, currently the Mercury Analytical Laboratory (HAL) at Frontier Geosciences, Inc. in Seattle, Washington. The HAL delivers all data and information to the NADP Program Office for final checks and resolution of remaining discrepancies. Data are made available on the NADP web site: <http://nadp.sws.uiuc.edu/MDN/mdndata.aspx>.

### **BioWatch**

BioWatch, operated through the Department of Homeland Security, is an early warning system designed to detect the release of biological agents in the air through a comprehensive protocol of monitoring and laboratory analysis. The program was designed to demonstrate the effectiveness of new technology in protecting public health. Given the nature of the program, few details are available publicly.

The goals of BioWatch are to:

- Provide early warning of a biological attack by expeditiously identifying the bio-agent, thereby minimizing casualties in the affected area;
- Assist in establishing forensic evidence on the source, nature, and extent of biological attack to aid law enforcement agents in identifying the perpetrators; and
- Determine a preliminary spatial distribution of biological contamination, including what populations may have been exposed.

## **Data Processing and Reporting**

With the exception of the NADP, fine particle speciation and BioWatch data; ambient air quality data are stored in a centralized server located at the Wisconsin Department of Administration. For the continuous pollutant monitoring, data are retrieved hourly and posted to the DNR Air Quality website and sent to US EPA's AIRNow web site. Particulate data collected over 24 hours (filter-based method) is made available on the Air Quality website as it is processed.

After data has passed all quality assurance checks, data are transmitted via the Exchange Network Node to US EPA's national data storage system known as AQS.

The federal contract laboratory for fine particle speciation is responsible for reporting the results directly to US EPA.

## Network Review

### Regulatory Requirements for the Network Plan

Requirements for an annual monitoring network description are provided for in 40 CFR Part 58.10, annual monitoring network plan and periodic network assessment. Beginning July 1, 2007, State agencies are required to submit an annual network plan of SLAMS, NCore, STN stations, State speciation stations, SPM stations and PAMS stations, if they exist in the State. The plan must include a statement of the purposes for each monitor and evidence that siting and operation of each monitor meets the requirements of 40 CFR Part 58 Appendices A, C, D, and E. In additions, the plan must be made available to the public for at least 30 days prior to its submission to US EPA.

The annual monitoring network plan must contain the following information for each existing and proposed site:

- 1) The AQS site identification number.
- 2) The location, including street address and geographical coordinates.
- 3) The sampling and analysis method(s) for each measured parameter.
- 4) The operating schedules for each monitor.
- 5) Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
- 6) The monitoring objective and spatial scale of representativeness for each monitor
- 7) The identification of any sites that are suitable and not suitable for comparison against the annual PM<sub>2.5</sub> NAAQS.
- 8) The MSA, CBSA, CSA or other area represented by the monitor.
- 9) The designation of any Pb monitors as either source-oriented or non-source-oriented.
- 10) Any source-oriented monitors for which a waiver has been requested or granted by the EPA Regional Administrator
- 11) Any source-oriented or non-source-oriented site for which a waiver has been requested or granted by the EPA Regional Administrator for the use of Pb-PM<sub>10</sub> monitoring in lieu of Pb-TSP.

### Plan Organization

Wisconsin's ambient air monitoring network review plan is organized into four main parts.

1) **Summary of Changes:** The summary of changes includes a discussion of regulatory changes or other significant factors that affect the network design. These factors may include but are not limited to availability of resources, site access considerations, local or regional concerns (e.g. significant construction), population or source information or a data quality assessment (value of site in the network). Those assessments result in changes to the pollutant network design or schedule, which are summarized in this section of the report.

2) **Network Summary Reports.** This section contains summary reports of the network. EPA Air Quality Control Regions are used as a means to group similar areas and

incorporate interstate influences in an air shed. For each region, there is a description of the air shed, a table listing the sites in that region and their location information, and a table that identifies the monitors for those sites. In addition to this section, two additional reports are included:

- Monitoring Sites by Pollutant
- Monitoring Sites by County

3) **Air Monitoring Site Descriptions:** Each air monitor site is described in detail with the following information for each monitoring site in the network:

- Air Quality System (AQS) site identification number for existing sites.
- Site name.
- Location including the street address and geographical ordinates for each monitoring site.
- Core-Based Statistical Area designation (CBSA).
- Sampling and analysis method used for each measured parameter.
- Operating schedule for each monitor.
- Monitoring objective.
- Spatial scale for each monitor.
- Area of Representativeness.
- GIS map of the site location.
- Pictures from the site.

4) **Supporting Documentation:** This section contains relevant supporting documentation that network design and reporting requirements are being met. Any waivers granted by US EPA will be presented here. Other pertinent documentation may also be included in this section.

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### **Regulatory Changes Affecting Network Operations**

Over the last few years, US EPA proposed or adopted revisions to several NAAQS and monitoring rules that involve establishing new monitors at existing sites, setting up additional sites, or changing existing monitoring. Most of the proposals will not affect the Wisconsin network until January 1, 2014.

A brief discussion of adopted and proposed revisions to NAAQS monitoring requirements follows.

### **Revised Carbon Monoxide Monitoring Network Design Requirements**

On August 31, 2011 US EPA finalized a rule to retain the existing National Ambient Air Quality Standards for carbon monoxide (CO) and revise the monitoring requirements for CO. CO monitors need to be sited near highly trafficked roads in certain urban areas having a population of 1 million or more. US EPA requires co-location of these CO monitors with NO<sub>2</sub> near-road monitors, resulting in the requirement of one CO monitor at the required NO<sub>2</sub> near-road monitoring site in Milwaukee. The co-located CO monitor will be in

operation by January 1, 2014 to meet the near-road site requirements.

The CO rule finalized on August 31, 2011 also gives EPA Regional Administrators the authority to require additional monitoring in case-by-case circumstances, such as in areas impacted by major stationary CO sources, in urban downtown areas or urban street canyons, or in areas adversely impacted by meteorological and/or topographical influences. Should US EPA require additional monitoring based on this provision, WDNR will address the new requirement.

## **Revised Fine Particle Monitoring Network Design Requirements**

On January 15, 2013, US EPA finalized the health-based National Ambient Air Quality Standard (NAAQS) for particle pollution. The annual NAAQS for fine particles (PM<sub>2.5</sub>) was lowered from 15 micrograms per cubic meter to 12 micrograms per cubic meter. US EPA also retained the existing standards for coarse particle pollution (PM<sub>10</sub>). US EPA will also require near roadway PM<sub>2.5</sub> monitoring at one location in each CBSA with a population of 1 million or more. This monitoring will be phased in beginning January 2015.

The new requirements would obligate Wisconsin to locate a near-road PM<sub>2.5</sub> monitor in Milwaukee. The near-road site selected to meet the 1-hour NO<sub>2</sub> requirement will likely serve as the location for the near-road PM<sub>2.5</sub> site. US EPA will not be providing additional funding for the near-road PM<sub>2.5</sub> site and has directed that WDNR relocate an existing monitor. Future network plans will address the relocation of one PM<sub>2.5</sub> monitor to the near-road site.

## **Revised Nitrogen Dioxide Monitoring Network Design Requirements**

On January 22, 2010, US EPA finalized the health-based National Ambient Air Quality Standard (NAAQS) for nitrogen dioxide (NO<sub>2</sub>) to 100 ppb over a 1 hour averaging period and established new ambient air monitoring and reporting requirements. In urban areas, monitors are required near major roads as well as in other locations where maximum concentrations are expected. Additional monitors are required in large urban areas to measure the highest concentrations of NO<sub>2</sub> that occur more broadly across communities. Working with the states, US EPA will site a subset of monitors in locations to help protect communities that are susceptible and vulnerable to NO<sub>2</sub>-related health effects. The new monitoring network is being implemented in phases. Monitors in the first and second phases must be deployed by January 1, 2014.

The new requirements would obligate Wisconsin to locate a near-road NO<sub>2</sub> monitor in Milwaukee, to be operational by January 1, 2014. WDNR has selected a site meeting the siting requirements identified by US EPA. The site has been approved by US EPA Region V. A community wide population-oriented monitor will be required in Milwaukee as well. The existing NO<sub>2</sub> monitor at the Milwaukee SER HQ site may fulfill this monitoring requirement.

## **Revised Sulfur Dioxide Monitoring Network Design Requirements**

On June 2, 2010 US EPA finalized the NAAQS for sulfur dioxide (SO<sub>2</sub>) at 75 ppb over a 1 hour averaging period and established new ambient air monitoring and reporting requirements. In addition to the existing source-oriented SO<sub>2</sub> monitor in Rhinelander, the

Green Bay SO<sub>2</sub> monitor, and the high sensitivity (background) SO<sub>2</sub> monitor at the NCore site in Horicon, two additional community-wide population oriented monitors were required to begin monitoring. One was already in operation at the Milwaukee Southeast Region Headquarters and the other required monitor began operation in the Madison CBSA prior to January 1, 2013. Under the PWEI regulations, the Regional Administrator may require additional SO<sub>2</sub> monitors where there is potential to have concentrations that violate the SO<sub>2</sub> standard. US EPA Region V is in the process of determining if such areas exist in Wisconsin. If such an area is identified, WDNR will work to address additional monitoring requirements.

### **Proposed Ozone Monitoring Network Design Requirements**

On July 16, 2009 (74 FR 34525), US EPA proposed changing the monitoring season in Wisconsin from April 15 – October 15 to April 1 – October 31 with implementation no later than the season following final rule promulgation. WDNR provided comments and data to support limiting the season to April 1 – September 30. The final rule was expected in June 2010 with implementation in the 2011 monitoring season. On December 8, 2010, US EPA delayed promulgation and requested the Agency's science advisors for more input prior to selecting final ozone standards.

US EPA also proposed additional monitoring requirements in non-urban areas. States would be required to operate a minimum of three ozone monitors in non-urban areas, to allow for:

- Assessment of ozone concentrations in areas such as federal, state, or tribal lands, including wilderness areas that have ozone-sensitive natural vegetation and/or ecosystems, to determine compliance with the revised secondary NAAQS.
- Assessment of at least one smaller population center of between 10,000 and 50,000 people that is expected to have ozone concentrations of at least 85 percent of the NAAQS level of 0.075 ppm averaged over an 8-hour period.
- Monitoring in the location of expected maximum ozone concentration outside of any urban area, potentially including the far-downwind transport zones of currently well-monitored urban areas.

An assessment of Wisconsin's network indicated that the existing monitors are sufficient to meet the requirements of the first and third bullets above. Two Wisconsin communities, Eau Claire and Oshkosh, met the population threshold described in the second bullet above and may require new monitors. On March 9, 2011, an Eau Claire site was established. As of May 2013, final ozone monitoring network design requirements were still being evaluated by the Office of Management and Budget and that the date of rule promulgation is unknown.

### **Future Revisions to Monitoring Network Design Requirements**

US EPA anticipates promulgating revisions to the ozone NAAQS in 2013. As a result, the Department may be required to perform additional related monitoring related to a revised ozone NAAQS.

### **Summary of Proposed Network Changes for Criteria Pollutants**

## Fine Particle Network

Wisconsin Air Monitoring Program's fine particle network has two primary goals:

- To deploy Federal Reference Method (FRM) non-continuous instruments to provide an air quality database for comparison with the NAAQS that will assist in evaluating, tracking the progress of and refining control strategies.
- To deploy non-Federal Equivalent Method (FEM) continuous fine particle instruments to maximize geographic coverage and support forecasting efforts, where possible and as resources permit.

In 2011 and 2012, all TEOM-FDMS PM<sub>2.5</sub> instruments were replaced by Met One Beta Attenuation Monitors (BAM) to create a more reliable and cost effective continuous fine particle network. The network of BAMs includes Appleton AAL, Chiswaukee, Devil's Lake, Eau Claire-DOT Sign Shop, Green Bay East, Harrington Beach, Horicon Wildlife Area, La Crosse DOT, Madison-East, Milwaukee-College Ave. Park & Ride, Milwaukee-SSHC, Milwaukee-SER, Perkinstown, Potosi and Waukesha. In addition, the Forest County Potawatomi community operates a BAM.

On 1/1/12, a FRM was reinstalled at Milwaukee-Fire Dept HQ.

Based on current design values and the anticipated funding, FRM sampling frequency will be adjusted as follows:

<u>Site</u>	<u>2013 and 2014 Freq.</u>
Appleton	Daily
Bad River Tribal School - Odanah	1 in 6
Bad River Tribal School (collocated)	1 in 6
Chiswaukee Prairie Stateline	1 in 3
Devils Lake Park	1 in 6
Devils Lake Park (collocated)	1 in 12
Eau Claire-DOT Sign Shop	1 in 6
Green Bay East	Daily
Green Bay East (collocated)	1 in 12
Harrington Beach	1 in 6
Horicon Wildlife Area	1 in 3
La Crosse DOT	1 in 3
Madison-East	1 in 6
Madison University Ave. Well #6	Daily
Milwaukee 16 <sup>th</sup> St.	1 in 3
Milwaukee-College Ave. Park & Ride	1 in 3
Milwaukee Fire Dept HQ	1 in 3
Milwaukee SER	1 in 6
Milwaukee SER (collocated)	1 in 12
Perkinstown	1 in 6
Potawatomi	1 in 6
Potosi	1 in 3
Trout Lake	1 in 6
Waukesha	1 in 3

Also, WDNR will continue supporting FRM PM<sub>2.5</sub> monitoring at the Forest County Potawatomi community and Bad River tribal sites.

## **PM<sub>10</sub> – PM Coarse Network**

Continuous PM Coarse systems are located at the Devil's Lake, Horicon and Milwaukee SER sites. A PM Coarse system consists of a continuous PM<sub>10</sub> BAM and continuous PM<sub>2.5</sub> BAM placed side-by-side. Currently, there are no plans to purchase additional PM Coarse or PM<sub>10</sub> instruments in 2013.

## **Gases Monitoring**

On July 16, 2009, US EPA proposed to revise the monitoring network design requirements for ozone to assist with implementation of the ozone NAAQS. On September 16, 2009, US EPA announced it would reconsider its 2008 decision setting the NAAQS for ground-level ozone. US EPA delayed implementation of the ozone monitoring requirements until the revised ozone standard is promulgated. As of May 2013, the ozone monitoring requirements have not been finalized. As currently proposed, the required ozone monitoring season would be extended by a month, beginning on April 1 and ending on October 31; currently the season is April 15 through October 15. As requested by US EPA Region V, the Chiwaukee ozone site will continue monitoring April 1 through October 31. As of May 2013, the final ozone monitoring network design requirements are still being evaluated by the Office of Management and Budget and the date of rule promulgation is unknown.

Additional changes and potential changes in the ozone network include:

- After a public participation process, a second ozone site in Kenosha County that is more indicative of population exposure has been set up as a Special Purpose Monitor. The monitor is located just east of Green Bay Road and north of the City of Kenosha. The second ozone monitor is scheduled to begin operation on May 15, 2013 and will operate for a period of less than 24 months.
- Depending on the results of an investigation, the establishment of a new ozone site in Sheboygan County that is more indicative of population exposure by the beginning of the 2014 ozone season.

## **PAMS**

The AutoGC has failed at Milwaukee-SER, ending continuous VOC monitoring. This monitoring won't resume until federal funds are available to replace the instrument. However, canister and carbonyl sampling on every sixth day continues at Milwaukee-SER.

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## **Network Summary Reports**

To aid in understanding the monitoring network overall design, three network summary reports are presented here. Two of the reports group the monitoring geographically and the third details the network by the type of monitoring or in the case of non-EPA monitoring, by program. The report groupings are:

- Site and Monitors by Air Quality Control Region

- Monitoring Sites by Pollutant
- Sites and Monitors by County

## Sites and Monitors by Air Quality Control Region

### Lake Michigan Intra-State Air Quality Control Region

This air region is characterized by its variety in land use. The region varies from farmland in the south to wooded land in the north. Industry and population centers are located along the lower Fox River between Green Bay and northern Lake Winnebago, as well as along the northwest shore of Lake Winnebago; this area is referred to as the Fox River Valley. The Fox River Valley has many closely spaced cities which include the largest concentration of paper manufacturing facilities in the world. The area running from Oshkosh through Kaukauna is considered a major urbanized area. Besides the paper industry, this region is important for metal products, and food processing. The eastern boundary of the region is Lake Michigan. Fishing and shipping industries are concentrated in the towns on the lakefront. Large coal-fired power plants are located in Sheboygan and in Green Bay. Green Bay also has a wide variety of other industry, including a cement plant, large coal unloading and storage facilities, petroleum product storage and transshipment, etc.



### Current Lake Michigan Monitoring Sites

AQS #	Site Name	CBSA or MSA	Latitude Longitude	Address	City	County	Site Est.
55-087-0009	Appleton AAL	Appleton-Neenah, WI	44.30738 -88.39509	4432 N. Meade St	Appleton	Outagamie	4/14/95
55-039-0006	Fond du Lac	Fond du Lac, WI	43.6874 -88.4220	N3996 Kelly Rd., Town of Byron		Fond du Lac	4/22/94
55-009-0005	Green Bay East High	Green Bay, WI	44.50729 -87.99344	1415 E. Walnut	Green Bay	Brown	7/24/80
55-009-0026	Green Bay UW	Green Bay, WI	44.53 -87.90889	UW-Green Bay, Hwys 54 & 57	Green Bay	Brown	4/15/94
55-061-0002	Kewaunee		44.44312 -87.50524	Route 1, Hwy 42	Kewaunee	Kewaunee	4/6/94
55-117-0008	Kohler		43.74395 -87.7763	444 Highland Dr.	Kohler	Sheboygan	12/15/09
55-071-0007	Manitowoc Woodland Dunes		44.138619 -87.6161	2315 Goodwin Rd.	Two Rivers	Manitowoc	4/5/94
55-029-0004	Newport Park		45.237 -86.993	475 CTH NP		Door	4/15/89
55-117-0006	Sheboygan Kohler Andre	Sheboygan, WI	43.679 -87.716	Kohler Andre Park, 1520 Beach Park Rd.		Sheboygan	6/26/97
NA	Suring		45.053 -88.372	10360 Big Eddie Ln.	Suring	Oconto	1/23/85

**Current Lake Michigan Monitors**

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM crs	SO <sub>2</sub>	NO <sub>2</sub>	CO	M E T	Pb-TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	PAH	VOC-Carbonyl	NTN	Hg
55-087-0009	Appleton AAL	S	C, F & Y													
55-039-0006	Fond du Lac	S														
55-009-0005	Green Bay East High		C, Fc, M & Y			Y					Y					
55-009-0026	Green Bay UW	S														
55-061-0002	Kewaunee	S														
55-117-0008	Kohler									Yc						
55-071-0007	Manitowoc Woodland Dunes	S					S		S			S				
55-029-0004	Newport Park	S							S							
55-117-0006	Sheboygan Kohler Andre	S							S							
NA	Suring														Y	

c – Collocated monitor

D – Discontinued

HS – High Sensitivity

MD – Mercury Deposition Network

RF – Precipitation for National Weather Service

T – Tekran

C – Continuous

F – Federal Reference Method

M - Fine Particle Speciation – Cation/Anion/Carbon

P – PAMS

S – Seasonal monitoring

Y – Year round monitoring

**Southeastern Wisconsin Intra-State AQCR**

The topography of this air region is generally flat to rolling. One terrestrial feature of special interest is the Menomonee River Valley which enters Milwaukee Harbor through the center of Milwaukee. Lake Michigan exerts a strong effect, on the local weather, especially along the shoreline.

The population center of the southeast region is Milwaukee. The population extends outward toward the Milwaukee-Ozaukee County line and south through Kenosha into the Chicago area. This pattern extends westward into the eastern portion of Waukesha County.



The highly diversified industrial patterns of the region reflect the population distribution (i.e., centered at Milwaukee and decreasing in density to the north, west, and south). The western portion of Ozaukee, Waukesha, and Racine and Kenosha counties, and most of Washington and Walworth counties are primarily agricultural.

2014 Wisconsin Air Monitoring Network Plan

**Current Southeastern Wisconsin Monitoring Sites**

<b>AQS #</b>	<b>Site Name</b>	<b>CBSA or MSA</b>	<b>Latitude Longitude</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Site Est.</b>
55-079-0085	Bayside	Milwaukee-Waukesha, WI	43.18111 -87.90056	601 E. Ellsworth Ln.	Bayside	Milwaukee	5/1/84
55-059-0019	Chiwaukee Prairie Stateline	Kenosha, WI	42.504722 -87.80930	Chiwaukee Prairie, 11838 First Court	Pleasant Prairie	Kenosha	7/15/87
55-089-0008	Grafton	Milwaukee-Waukesha, WI	43.3430 -87.9200	N. Port Washington Rd. (East side of Hwy 32 and I43)	Grafton	Ozaukee	4/15/91
55-089-0009	Harrington Beach	Milwaukee-Waukesha, WI	43.498 -87.81	Harrington Beach State Park, 531 Hwy D	Belgium	Ozaukee	6/15/94
55-059-XXXX	Kenosha-Water Tower	Kenosha, WI	Unknown	4504 64 <sup>th</sup> Ave.	Kenosha	Kenosha	5/15/2013
55-127-0005	Lake Geneva		42.58 -88.49917	RR4 Elgin Club Rd.	Lake Geneva	Walworth	2/27/91
55-079-0052	Milwaukee-Havenwoods	Milwaukee-Waukesha, WI	43.128889 -87.970833	6141 N. Hopkins St.	Milwaukee	Milwaukee	Discontinued February 2012
55-079-0058	Milwaukee-College Ave. Park and Ride	Milwaukee-Waukesha, WI	42.9305685 -87.932104	1550 W. College Ave.	Milwaukee	Milwaukee	11/1/09
55-079-0099	Milw – Fire Dept HQ	Milwaukee-Waukesha, WI	43.041 -87.925	744 W. Wells St.	Milwaukee	Milwaukee	1/1/70
55-079-0026	Milw SER DNR HQ	Milwaukee-Waukesha, WI	43.06111 -87.9125	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	12/23/98
55-079-0010	Milw Sixteenth St.	Milwaukee-Waukesha, WI	43.01667 -87.93333	Health Center, 1337 S. 16th St.	Milwaukee	Milwaukee	4/4/97
55-079-0041	Milw UWM	Milwaukee-Waukesha, WI	43.075 -87.884	UWM North Campus, 2114 E Kenwood Blvd	Milwaukee	Milwaukee	1/1/73
55-101-0017	Racine	Racine, WI	42.71389 -87.798611	1519 Washington Ave.	Racine	Racine	1/1/97
55-133-0027	Wauk-Cleveland	Milwaukee-Waukesha, WI	43.02028 -88.215	1310 Cleveland Ave.	Waukesha	Waukesha	2/3/1989
55-079-XXXX	New near-road NO <sub>2</sub> site	Milwaukee-Waukesha, WI	Unknown	1550 W. College Ave.	Milwaukee	Milwaukee	Estimated – 1/1/14

2014 Wisconsin Air Monitoring Network Plan

Current Southeastern Wisconsin Monitors

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>10</sub> c r s	SO <sub>2</sub>	NO <sub>2</sub>	CO	ME T	Pb-TSP	Metals (PM <sub>10</sub> )	N Oy	P A H	VOC-Carbonyl	N T N	Hg
55-079-0085	Bayside	S														
55-059-0019	Chiwaukee Prairie Stateline	S	C & F						Y & R F							
55-089-0008	Grafton	S							S & R F							
55-089-0009	Harrington Beach	S	C & F						Y							
55-059-XXX X	Kenosha-Water Tower	S							S							
55-127-0005	Lake Geneva	S							Y							MD
55-079-0058	Milwaukee-College Ave. Park & Ride		C & F	F							Y					
55-079-0099	Milw – Fire Dept HQ		F													
55-079-0026	Milw SER DNR HQ	Y	C,F, Fc & M	C	C	Y	Y		Y			S		P		
55-079-0010	Milw Sixteenth St.	S	F	C & F					Y		Y			Y		
55-079-0041	Milw UWM								Y							MD, T(G EM)
55-101-0017	Racine	S							S							
55-133-0027	Wauk-Cleveland	S	C, F & M	F					Y							

c – Collocated monitor  
 D – Discontinued  
 HS – High Sensitivity  
 MD – Mercury Deposition Network  
 RF – Precipitation for National Weather Service  
 T – Tekran

C – Continuous  
 F –Federal Reference Method  
 M - Fine Particle Speciation – Cation/Anion/Carbon  
 P – PAMS  
 S – Seasonal monitoring  
 Y – Year round monitoring

### Southern Wisconsin AQCR

The majority of the land in this air region is gently rolling farmland. In Lafayette county, for example, 93 % of the land is in farms. In the Dane county, Madison had a 2012 population of 234,625. As a whole, Dane county had a population of 491,555. (Population figures are final estimates from the Wisconsin Dept. of Administration.) There were 552 manufacturing establishments (2009) in Dane county. Outside of Madison, industry is scattered and is mainly electrical power generation, an occasional foundry, or quarry.



### Current Southern Wisconsin Monitoring Sites

AQS #	Site Name	CSA or UA	Latitude Longitude	Address	City	County	Site Est.
55-021-0015	Columbus	Madison, WI	43.3156 -89.1089	Wendt Rd.	Columbus	Columbia	8/11/88
55-111-0007	Devils Lake Park		43.4351 -89.6797	Devils Lake State Park, E12886 Tower Rd.		Sauk	8/9/96
55-027-0001	Horicon Wildlife Area		43.466111 -88.621111	1210 N. Palmatory St.	Horicon	Dodge	6/24/82
55-055-0002	Jefferson		43.00208 -88.81869	Jefferson High School, Willow Dr.	Jefferson	Jefferson	Est. 4/15/88. Closed 10/16/12.
55-055-0009	Jefferson-Laatsch		43.0034 -88.8263	N4440 Laatsch Lane	Jefferson	Jefferson	4/15/13
55-025-0041	Madison-East	Madison, WI	43.10083 -89.35722	2302 Hoard St.	Madison	Dane	4/15/92
55-025-0047	Madison University Ave. Well #6	Madison, WI	43.07377 -89.4358	2757 University Ave.	Madison	Dane	3/1/99

**Current Southern Wisconsin Monitors**

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	P M c r s	SO <sub>2</sub>	NO <sub>2</sub>	CO	M E T	Pb- TSP	Metals (PM <sub>10</sub> )	N O y	P A H	VOC- Carbonyl	N T N	Hg
55-021-0015	Columbus	S							S & R F							
55-111-0007	Devils Lake Park	S	C, F Cc & Fc	Cc	C				Y						Y	MD T (GE M, GO M & PBM )
55-027-0001	Horicon Wildlife Area	Y	C, F & M	C & F	C	HS		HS	Y & R F		Y	H S	Y	Y		
55-055-0002	Jefferson – Closed 10/16/12.	S							R F							
55-055-0009	Jefferson-Laatsch	S														
55-025-0041	Madison-East	S	C & F			Y			Y							
55-025-0047	Madison University Ave. Well #6		F	F												

- c – Collocated monitor
- D – Discontinued
- HS – High Sensitivity
- MD – Mercury Deposition Network
- RF – Precipitation for National Weather Service
- T – Tekran
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- F – Federal Reference Method
- M - Fine Particle Speciation – Cation/Anion/Carbon
- P – PAMS
- S – Seasonal monitoring
- Y – Year round monitoring

**Rockford-Janesville-Beloit Interstate AQCR**

The Rockford-Janesville-Beloit air region combines agricultural activities with the Beloit Janesville, Wisconsin and Rockford, Illinois urban-industrial areas. The Wisconsin portion of the air region, Rock county, is mostly flat farmland which becomes gently rolling farmland near the Rock River. Industry in the region consists of manufacturing, foundry operations and electrical power plants.



**Current Rockford – Janesville – Beloit Monitoring Sites**

AQS #	Site Name	CBSA or MSA	Latitude Longitude	Address	City	County	Site Est.
55-105-0024	Beloit-Cunningham	Janesville-Beloit, WI	42.50908 -89.06281	1948 Merrill St.	Beloit	Rock	4/6/94. Will close Summer 2013.
55-105-XXXX	Unknown	Janesville-Beloit, WI	Unknown	Unknown	Beloit	Rock	Will open Summer 2013.

**Current Rockford – Janesville – Beloit Monitors**

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	P M c r s	SO <sub>2</sub>	NO <sub>2</sub>	C O	M E T	Pb-TSP	Metals (PM <sub>10</sub> )	N O y	P A H	VOC-Carbonyl	N T N	Hg
55-105-0024	Beloit-Cunningham	S														

- c – Collocated monitor
- D – Discontinued
- HS – High Sensitivity
- MD – Mercury Deposition Network
- RF – Precipitation for National Weather Service
- T – Tekran
- C – Continuous
- F – Federal Reference Method
- M - Fine Particle Speciation – Cation/Anion/Carbon
- P – PAMS
- S – Seasonal monitoring
- Y – Year round monitoring

**Southwestern Wisconsin - Metropolitan Dubuque, Iowa Interstate AQCR**

This air region is primarily agricultural and covers one county in Wisconsin and several in Iowa. Grant County in Wisconsin consists of gently rolling farmland and is bordered by the Mississippi River. The only major city - Dubuque, Iowa - is across the Mississippi River and to the southwest of the Wisconsin portion of the region. Industry in Dubuque is mainly farm related chemical and equipment manufacturing.



**Current Metropolitan Dubuque Monitoring Sites**

AQS #	Site Name	CBSA or MSA	Latitude Longitude	Address	City	County	Site Est.
55-043-0009	Potosi		42.693 -90.698	128 Hwy 61, Potosi Township		Grant	1/6/99

**Current Metropolitan Dubuque Monitors**

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM crs	SO <sub>2</sub>	NO <sub>2</sub>	CO	M E T	Pb-TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	P A H	VOC-Carbonyl	N T N	Hg
55-043-0009	Potosi		C & F						Y							

c – Collocated monitor  
 D – Discontinued  
 HS – High Sensitivity  
 MD – Mercury Deposition Network  
 RF – Precipitation for National Weather Service  
 T – Tekran  
 C – Continuous  
 F – Federal Reference Method  
 M – Fine Particle Speciation – Cation/Anion/Carbon  
 P – PAMS  
 S – Seasonal monitoring  
 Y – Year round monitoring

**Southeast Minnesota – La Crosse (West Central Wisconsin) Interstate AQCR**

This air region ranges from un-glaciated rolling hills and farmland in the south to extensive wooded areas and lakes in the north. The Wisconsin portion of the Southeast Minnesota-La Crosse air region has a varied topography. The northwestern part (i.e., north of La Crosse) is rugged and characterized by ridge crests, in contrast to the broad flat-topped divides of the region lying between the La Crosse and Wisconsin Rivers. The Mississippi gorge runs along the western edge of Wisconsin. The top of the gorge is over 400 feet above the river on both the Wisconsin and Minnesota sides.



Current Southeast Minnesota – La Crosse Monitoring Sites

AQS #	Site Name	CSA or UA	Latitude Longitude	Address	City	County	Site Est.
55-035-0014	Eau Claire-DOT Sign Shop	Eau Claire-Menominee, WI	44.761 -91.413	5509 Highway 53 South	Eau Claire	Eau Claire	1/1/2011
55-063-0012	La Crosse-DOT	La Crosse, WI-MN	43.7775 -91.2269	3550 Mormon Coulee Rd.	La Crosse	La Crosse	10/13/2005
55-123-0008	Wildcat Mountain		43.70222 -90.56833	Hwy 33	Ontario	Vernon	3/20/90

**Current Southeast Minnesota – La Crosse Monitors**

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM crs	SO <sub>2</sub>	NO <sub>2</sub>	CO	M E T	Pb-TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	P A H	VOC-Carbonyl	N T N	Hg
55-035-0014	Eau Claire-DOT Sign Shop	S	C & F						Y							
55-063-	La Crosse-	S	C & F						Y							



**Current Northwest Wisconsin – Duluth Minnesota Monitors**

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM c r s	SO <sub>2</sub>	NO <sub>2</sub>	C O	M E T	Pb- TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	P A H	VOC- Carbonyl	N T N	Hg
55-003-0010	Bad River Tribal School - Odanah	Y	C, F & Fc						Y							Discontinued 04/03/2013..
55-119-8001	Perkinstown		C, F & M													
NA	Brule River														Y	MD
NA	Spooner														Y	
55-031-0019	Superior STP								Y							

c – Collocated monitor

D – Discontinued

HS – High Sensitivity

MD – Mercury Deposition Network

RF – Precipitation for National Weather Service

T – Tekran

C – Continuous

F – Federal Reference Method

M - Fine Particle Speciation – Cation/Anion/Carbon

P – PAMS

S – Seasonal monitoring

Y – Year round monitoring

**North Central Wisconsin Intra-State Air Quality Control Region**

The North Central Wisconsin air region extends from the Northern Highland south through the Central Plain. The flat surface of the Northern Highland slopes from elevations as high as 1,700 feet on the north to 1,000 feet on the south and is interrupted by numerous hills. In the northern counties, most of the land is forested. For example, in Vilas County, 80% of the land area is in forests. South of Marathon county, most of the land is agricultural generally flat with less than 100 feet of relief. Population and industry are concentrated along the Wisconsin River Valley in the Wausau, Stevens Point and Wisconsin Rapids area. Major industrial activity consists of paper mills and electrical power generation.



**Current North Central Wisconsin Monitoring Sites**

AQS #	Site Name	CSA or MSA	Latitude Longitude	Address	City	County	Site Est.
55-073-0012	Lake DuBay	Wausau, WI	44.70722 -89.76972	1780 Bergen Rd.		Marathon	9/25/91
55-085-0001	Popple River		45.79556 -88.40056	Fire Station #565	Florence	Florence	5/8/87
55-041-0007	Potawatomi		45.56498 -88.80859	Fire Tower Rd.	Crandon	Forest	1/15/04

## 2014 Wisconsin Air Monitoring Network Plan

AQS #	Site Name	CSA or MSA	Latitude Longitude	Address	City	County	Site Est.
55-085-0996	Rhineland Tower		45.64505 -89.41848	434 High St.	Rhineland	Oneida	4/13/91
55-125-0001	Trout Lake		46.052 -89.653	10810 County Hwy M	Boulder Junction	Vilas	1/1/73

### Current North Central Wisconsin Monitors

AQS #	Site Name	O <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	P M c r s	SO <sub>2</sub>	NO <sub>2</sub>	C O	M E T	Pb- TSP	Metals (PM <sub>10</sub> )	NO <sub>y</sub>	P A H	VOC- Carbonyl	N T N	Hg
55-073-0012	Lake DuBay	S								Y					Y	
55-037-0001	Popple River														Y	MD
55-041-0007	Potawatomi	Y	C & F			Y	Y		Y							T(G EM )
55-085-0996	Rhineland Tower					Y			Y							
55-125-0001	Trout Lake	S	F													MD

c – Collocated monitor  
 D – Discontinued  
 HS – High Sensitivity  
 MD – Mercury Deposition Network  
 RF – Precipitation for National Weather Service  
 T – Tekran

C – Continuous  
 F – Federal Reference Method  
 M - Fine Particle Speciation – Cation/Anion/Carbon  
 P – PAMS  
 S – Seasonal monitoring  
 Y – Year round monitoring

## Monitoring Sites by Pollutant

### Nitrogen Dioxide (NO<sub>2</sub>) Network Map



### Sulfur Dioxide (SO<sub>2</sub>) Network Map



### Ozone Network Map



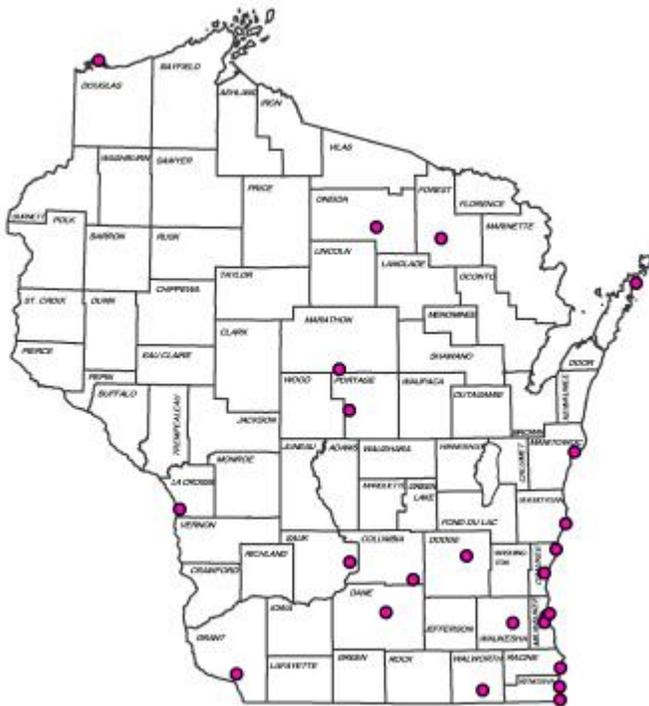
### PM<sub>2.5</sub> Continuous and Filter Based (FRM) Network Map



### PM<sub>10</sub> Continuous and Filter Based (FRM) Network Map



### Meteorology Network Map



## Report of Monitoring Sites by Pollutant

<b>Carbon Monoxide (CO)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	High Sensitivity NCore
<b>Enhanced Ozone Monitoring (EOM – PAMS)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Harrington Beach Park	Milwaukee-Waukesha, WI	55-089-0009	Harrington Beach State Park, 531 Hwy D	Belgium	Ozaukee	Ozone, MET
Manitowoc Woodland Dunes		55-071-0007	2315 Goodwin Rd.	Two Rivers	Manitowoc	Ozone, MET, NOx and NOy
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	Ozone, MET, NOx, NOy, PAMS VOCs & Carbonyls
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Manitowoc Woodland Dunes		55-071-0007	2315 Goodwin Rd.	Two Rivers	Manitowoc	PAMS – High Sensitivity
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	PAMS
Potawatomi		55-041-0007	Fire Tower Rd.	Crandon	Forest	Tribal
<b>Nitrogen, Reactive Oxides (NOy)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	High Sensitivity NCore
Manitowoc Woodland Dunes		55-071-0007	2315 Goodwin Rd.	Two Rivers	Manitowoc	PAMS
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr	Milwaukee	Milwaukee	PAMS
<b>NADP NTN - MDN</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Brule River					Douglas	MDN
Devils Lake Park		55-111-0007	Devils Lake State Park, E12886 Tower Rd.	Baraboo	Sauk	MDN (Event Sampling)
Lake DuBay		55-073-0012	1780 Bergen Rd.		Marathon	NTN
Lake Geneva		55-127-0005	RR4 Elgin Club Rd.	Lake Geneva	Walworth	NTN MDN

## 2014 Wisconsin Air Monitoring Network Plan

Milwaukee – UWM North	Milwaukee-Waukesha, WI	55-079-0041				MDN
Perkinstown		55-119-8001	W10746 CTY Rd. M		Taylor	NTN
Popple River		55-037-0001	Fire Station #565	Florence	Florence	NTN MDN
Potawatomi		55-041-0007	Fire Tower Rd.	Crandon	Forest	Tribal, NTN, MDN
Spooner			Highway 70		Washburn	NTN
Suring					Oconto	NTN
Trout Lake		55-073-0012	10810 County Hwy M	Boulder Junction		NTN MDN
Wildcat Mountain		55-123-0008	Hwy 33	Ontario	Vernon	NTN
<b>Ozone (O<sub>3</sub>)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Appleton AAL	Appleton - Neenah, WI	55-087-0009	4432 N. Meade St.	Appleton	Outagamie	
Bad River Tribal School-Odanah		55-003-0010	Bad River Tribal School - Odanah	Odanah	Ashland	Tribal - Year Round
Bayside	Milwaukee - Waukesha, WI	55-079-0085	601 E. Ellsworth Ln.	Bayside	Milwaukee	
Beloit-Cunningham	Janesville-Beloit, WI	55-105-0024	1948 Merrill St.	Beloit	Rock	Site will be replaced in 2013. April 1 – October 31
Chiwaukee Prairie Staline	Kenosha, WI	55-059-0019	Chiwaukee Prairie, 11838 First Court	Pleasant Prairie	Kenosha	Chicago CSA
Columbus		55-021-0015	Wendt Rd.	Columbus	Columbia	Madison CSA – maximum downwind
Devils Lake Park		55-111-0007	Devils Lake State Park, E12886 Tower Rd.		Sauk	
Eau Claire–DOT Sign Shop	Eau Claire	55-035-0014	5509 Highway 53 South	Eau Claire	Eau Claire	
Fond du Lac		55-039-0006	N3996 Kelly Rd.	Town of Byron	Fond du Lac	
Grafton	Milwaukee - Waukesha, WI	55-089-0008	N. Port Washington Rd. (East side of Hwy 32 and I43)	Grafton	Ozaukee	
Green Bay UW	Green Bay, WI	55-009-0026	UW-Green Bay, Hwys 54 & 57	Green Bay	Brown	
Harrington Beach Park	Milwaukee - Waukesha, WI	55-089-0009	Harrington Beach State Park, 531 Hwy D		Ozaukee	
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	Year-round; NCore and National Air Toxics Trends site
Jefferson		55-055-	Jefferson High School, Willow Dr.	Jefferson	Jefferson	Closed 10/16/12.

## 2014 Wisconsin Air Monitoring Network Plan

		0002				
Jefferson-Laatsch		55-055-0009	N4440 Laatsch Ln.	Jefferson	Jefferson	Established 4/15/13.
Kenosha-Water Tower	Kenosha, WI	55-059-XXXX	4504 64 <sup>th</sup> Ave.	Kenosha	Kenosha	Established 5/15/13
Kewaunee		55-061-0002	Route 1, Hwy 42	Kewaunee	Kewaunee	
La Crosse-DOT Building	La Crosse, WI-MN	55-063-0012	3550 Mormon Coulee Rd.	La Crosse	La Crosse	
Lake DuBay		55-073-0012	1780 Bergen Rd.		Marathon	
Lake Geneva		55-127-0005	RR4 Elgin Club Rd.	Lake Geneva	Walworth	
Madison-East	Madison, WI	55-025-0041	2302 Hoard St.	Madison	Dane	
Manitowoc Woodland Dunes		55-071-0007	2315 Goodwin Rd.	Two Rivers	Manitowoc	
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	Year Round
Milwaukee Sixteenth Street Health Center	Milwaukee-Waukesha, WI	55-079-0010	1337 So 16th St.	Milwaukee	Milwaukee	Environmental Justice
Newport Park		55-029-0004	475 CTH NP)		Door	Maximum downwind
Potawatomi		55-041-0007	Fire Tower Rd.	Crandon	Forest	Tribal – Year Road
Racine	Racine, WI	55-101-0017	1519 Washington Ave.	Racine	Racine	
Sheboygan Kohler Andre	Sheboygan, WI	55-117-0006	1520 Beach Park Road		Sheboygan	
Trout Lake		55-125-0001	10810 County Hwy M	Boulder Junction	Vilas	
Waukesha-Cleveland Ave.	Milwaukee-Waukesha, WI	55-133-0027	1310 Cleveland Ave.	Waukesha	Waukesha	
<b>Lead (Pb)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Kohler	Sheboygan	55-117-0008		Kohler	Sheboygan	Source Oriented
<b>Metals (Toxics)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Horicon Wildlife Area		55-027-0001	Mayville, Near N6705 Madison Rd.		Dodge	National Air Toxics Trends Site
Milwaukee Sixteenth Street Health Center	Milwaukee-Waukesha, WI	55-079-0010	Health Center, 1337 So 16th St..	Milwaukee	Milwaukee	

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<b>PAMS VOCs and Carbonyls</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	1 in 6; autoGC not functioning halted the monitoring
<b>PM<sub>crs</sub></b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	NCore - Continuous
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	Continuous
Devils Lake Park		55-111-0007	Devils Lake State Park, E12886 Tower Rd.		Sauk	Continuous
<b>PM<sub>10</sub></b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Madison University Ave. Well #6	Madison, WI	55-025-0047	2557 University Ave.	Madison	Dane	
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	NCore - Continuous
Milwaukee-College Ave. Park & Ride	Milwaukee-Waukesha, WI	55-079-0058	1550 W College Ave.	Milwaukee	Milwaukee	
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	Continuous
Milwaukee Sixteenth Street Health Center	Milwaukee-Waukesha, WI	55-079-0010	Health Center, 1337 So 16th St.	Milwaukee	Milwaukee	Toxics – Not for NAAQS
Devils Lake Park		55-111-0007	Devils Lake State Park, E12886 Tower Rd.		Sauk	Collocated & Continuous
Waukesha-Cleveland Ave.	Milwaukee-Waukesha, WI	55-133-0027	1310 Cleveland Ave.	Waukesha	Waukesha	SIP Area

<b>PM<sub>2.5</sub></b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Appleton AAL	Appleton-Neenah, WI	55-087-0009	4432 N. Meade St.	Appleton	Outagamie	FRM daily; Continuous BAM
Bad River Tribal School-Odanah		55-003-0010	Bad River Tribal School - Odanah	Odanah	Ashland	Tribal FRM every 6 days; Collocated FRM every 6 days
Chiwaukee Prairie Staline	Kenosha, WI	55-059-0019	Chiwaukee Prairie, 11838 First Court	Pleasant Prairie	Kenosha	FRM every 3 days; Continuous BAM
Devils Lake Park		55-111-0007	Devils Lake State Park, E12886 Tower Rd.		Sauk	FRM every 6 days; Collocated FRM every 12 days; 2 collocated BAMs
Eau Claire-DOT Sign Shop		55-035-	5509 Highway 53 South	Eau Claire	Eau Claire	FRM every 6 days; Continuous BAM

## 2014 Wisconsin Air Monitoring Network Plan

		0014				
Green Bay East High	Green Bay, WI	55-009-0005	1415 E. Walnut	Green Bay	Brown	Speciation , FRM daily; Collocated FRM every 12 days; Continuous BAM
Harrington Beach Park	Milwaukee- Waukesha, WI	55-089-0009	Harrington Beach State Park, 531 Hwy D	Belgium	Ozaukee	FRM every 6 days; Continuous BAM
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	NCORE; Speciation FRM every 3 days; Continuous BAM
La Crosse-DOT Building	La Crosse, WI- MN	55-063-0012	3550 Mormon Coulee Rd.	La Crosse	La Crosse	FRM every 3 days; Continuous BAM
Madison-East	Madison, WI	55-025-0041	2302 Hoard St.	Madison	Dane	FRM every 6 days; Continuous BAM
Madison University Ave. Well #6	Madison, WI	55-025-0047	2557 University Ave.	Madison	Dane	FRM daily
Milwaukee College- Avenue Park & Ride	Milwaukee- Waukesha, WI	55-079-0058	1550 W College Ave.	Milwaukee	Milwaukee	FRM every 3 days; Continuous BAM
Milwaukee Fire Dept HQ	Milwaukee- Waukesha, WI	55-079-0099	744 W. Wells St.	Milwaukee	Milwaukee	FRM every 3 days
Milwaukee SER DNR HDQRS	Milwaukee- Waukesha, WI	55-079-0026	DNR SER Hdqtrs, 2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	Speciation FRM every 6 days; Collocated FRM every 12 days; Continuous BAM
Milwaukee Sixteenth Street Health Center	Milwaukee- Waukesha, WI	55-079-0010	Health Center, 1337 So 16th St.	Milwaukee	Milwaukee	FRM every 3 days
Perkinstown		55-119-8001	W10746 CTY Rd. M		Taylor	Speciation FRM every 6 days; Continuous BAM
Potawatomi		55-041-0007	Fire Tower Rd.	Crandon	Forest	Tribal FRM every 6 days; Continuous BAM
Potosi		55-043-0009	128 Hwy 61, Potosi Township		Grant	FRM every 3 days; Continuous BAM
Trout Lake		55-125-0001	County Hwy M	Boulder Junction	Vilas	FRM every 6 days
Waukesha-Cleveland Ave.	Milwaukee- Waukesha, WI	55-133-0027	1310 Cleveland Ave.	Waukesha	Waukesha	Speciation FRM every 3 days; Continuous BAM
<b>PM<sub>2.5</sub> Speciation</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Green Bay East High	Green Bay, WI	55-009-0005	1415 E. Walnut	Green Bay	Brown	
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	NCORE
Milwaukee SER DNR HDQRS	Milwaukee- Waukesha, WI	55-079-0026	DNR SER Hdqtrs, 2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	
Perkinstown		55-119-8001	W10746 CTY Rd. M		Taylor	

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Waukesha-Cleveland Ave.	Milwaukee-Waukesha, WI	55-133-0027	1310 Cleveland Ave.	Waukesha	Waukesha	
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Green Bay East High	Green Bay, WI	55-009-0005	1415 E. Walnut	Green Bay	Brown	SIP-required Source Influenced
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	NCore – High Sensitivity
Madison-East	Madison, WI	55-025-0041	2302 Hoard St.	Madison	Dane	
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	DNR SER Hdqtrs, 2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	
Potawatomi		55-041-0007	Fire Tower Rd.	Crandon	Forest	Tribal
Rhinelander Tower		55-085-0996	434 High St.	Rhinelander	Oneida	Source oriented; SIP Requirement
<b>Toxics</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Horicon Wildlife Area		55-027-0001	1210 N. Palmatory St.	Horicon	Dodge	
Milwaukee Sixteenth Street Health Center	Milwaukee-Waukesha, WI	55-079-0010	1337 So 16th St.	Milwaukee	Milwaukee	Environmental Justice Area
<b>Meteorology (MET)</b>						
<b>Site Name</b>	<b>Urban Area</b>	<b>AQS</b>	<b>Address</b>	<b>City</b>	<b>County</b>	<b>Comments</b>
Bad River Tribal School-Odanah		55-003-0010	Bad River Tribal School - Odanah	Odanah	Ashland	
Chiwaukee Prairie Stateline	Kenosha, WI	55-059-0019	Chiwaukee Prairie, 11838 First Court	Pleasant Prairie	Kenosha	
Columbus		55-021-0015	Wendt Rd.	Columbus	Columbia	
Devils Lake Park		55-111-0007	Devils Lake State Park, E12886 Tower Rd.		Sauk	
Eau Claire-DOT Sign Shop		55-035-0014	5509 Highway 53 South	Eau Claire	Eau Claire	
Grafton	Milwaukee-Waukesha, WI	55-089-0008	N. Port Washington Rd. (East side of Hwy 32 and I43)	Grafton	Ozaukee	
Harrington Beach Park	Milwaukee-Waukesha, WI	55-089-0009	531 Hwy D	Belguim	Ozaukee	
Horicon Wildlife Area		55-	1210 N. Palmatory St.	Horicon	Dodge	NCore

## 2014 Wisconsin Air Monitoring Network Plan

		027-0001				
Kenosha-Water Tower	Kenosha, WI	55-059-XXXX	4504 64 <sup>th</sup> Ave.	Kenosha	Kenosha	Established 5/15/13
La Crosse-DOT Building	La Crosse, WI-MN	55-063-0012	3550 Mormon Coulee Rd.	La Crosse	La Crosse	
Lake DuBay		55-073-0012	1780 Bergen Rd.		Marathon	
Lake Geneva		55-127-0005	RR4 Elgin Club Rd.	Lake Geneva	Walworth	
Madison-East	Madison, WI	55-025-0041	2302 Hoard St.	Madison	Dane	
Manitowoc Woodland Dunes		55-071-0007	2315 Goodwin Rd.	Two Rivers	Manitowoc	
Milwaukee SER DNR HDQRS	Milwaukee-Waukesha, WI	55-079-0026	DNR Ser Hdqrts, 2300 N M. L. King Jr. Dr.	Milwaukee	Milwaukee	
Milwaukee Sixteenth Street Health Center	Milwaukee-Waukesha, WI	55-079-0010	1337 So 16th St.	Milwaukee	Milwaukee	Planned to close in Fall 2013.
Milwaukee – UWM North	Milwaukee-Waukesha, WI	55-079-0041	2114 E Kenwood Ave.	Milwaukee	Milwaukee	
Newport Park		55-029-0004	475 CTH NP (Near Ellison Bay)		Door	
Potawatomi		55-041-0007	Fire Tower Rd.	Crandon	Forest	
Potosi		55-043-0009	128 Hwy 61, Potosi Township		Grant	
Racine	Racine, WI	55-101-0017	1519 Washington Ave.	Racine	Racine	
Rhineland Tower		55-085-0996	434 High St.	Rhineland	Oneida	Source oriented; SIP Requirement
Sheboygan Kohler Andre	Sheboygan, WI	55-117-0006	1520 Beach Park Road		Sheboygan	
Superior STP	Duluth-Superior	55-031-0019	E. Avenue East	Superior	Douglas	Supports industrial monitoring
Waukesha-Cleveland Ave.	Milwaukee-Waukesha, WI	55-133-0027	1310 Cleveland Ave.	Waukesha	Waukesha	

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## 2014 Wisconsin Air Monitoring Network Plan

### Monitoring sites by County

Note: NADP National Trends and Mercury Deposition Network sites are not indicated on this list.

Site Name	AQS	Pollutants	Address	Site Began
<b>County: Ashland</b>				
Bad River Tribal School - Odanah	55-003-0010	O3, PM <sub>2.5</sub> , MET	Bad River Tribal School	25-Jul-2002
<b>County: Brown</b>				
Green Bay East High	55-009-0005	SO <sub>2</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , Speciation	1415 E. Walnut	24-Jul-1980
Green Bay UW	55-009-0026	O3	UW-Green Bay, Hwys 54 & 57	15-Apr-1994
<b>County: Columbia</b>				
Columbus	55-021-0015	O3, MET, Precip	Wendt Rd.	11-Aug-1988
<b>County: Dane</b>				
Madison-East	55-025-0041	O3, Cont. PM <sub>2.5</sub> , SO <sub>2</sub> , MET	2302 Hoard St.	15-Apr-1992
Madison University Ave. Well #6	55-025-0047	PM <sub>10</sub> , PM <sub>2.5</sub>	2557 University Ave.	01-Mar-1999
<b>County: Dodge</b>				
Horicon Wildlife Area	55-027-0001	CO, SO <sub>2</sub> , NO <sub>y</sub> , O3, Cont. PM <sub>10</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , Speciation PMCoarse, Toxic Metals, VOCs, Carbonyls, PAHs, MET	1210 N. Palmatory St.	18-Dec-2009
<b>County: Door</b>				
Newport Park	55-029-0004	O3, MET	475 CTH NP	15-Apr-1989
<b>County: Douglas</b>				
Superior STP	55-031-0019	MET	E. Avenue East	24-Nov-1984
<b>County: Eau Claire</b>				
Eau Claire-DOT Sign Shop	55-035-0014	O3, PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , MET	5509 HWY 53 South	01-Jan-2011
<b>County: Fond du Lac</b>				
Fond du Lac	55-039-0006	O3	N3996 Kelly Rd., Town of Byron	22-Apr-1994
<b>County: Forest</b>				
Potawatomi	55-041-0007	SO <sub>2</sub> , O3, NO <sub>2</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , MET	Fire Tower Rd.	15-Jan-2004
<b>County: Grant</b>				
Potosi	55-043-0009	PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , MET	128 Hwy 61, Potosi Township	06-Jan-1999
<b>County: Jefferson</b>				
Jefferson	55-055-0002	O3, Precip	Jefferson High School, Willow Dr.	Closed 16-Oct-2012.
Jefferson-Laatsch	55-055-0009	O3	N4440 Laatsch Ln.	15-Apr-2013
<b>County: Kenosha</b>				
Chiwaukee Prairie Staline	55-059-0019	O3, PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , MET, Precip	Chiwaukee Prairie, 11838 First St.	15-Jul-1987
Kenosha-Water Tower	55-059-XXXX	O3	4504 64 <sup>th</sup> Ave.	15-May-2013
<b>County:</b>				

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Kewaunee				
Kewaunee	55-061-0002	O3	Kewaunee, Route 1, Hwy 42	06-Apr-1994
County: La Crosse				
La Crosse-DOT	55-063-0012	O3, PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , MET	3550 Mormon Coulee Rd.	13-Oct-2005
County: Manitowoc				
Manitowoc Woodland Dunes	55-071-0007	NO <sub>2</sub> , NO <sub>y</sub> , O <sub>3</sub> , MET	2315 Goodwin Rd.	05-Apr-1994
County: Marathon				
Lake DuBay	55-073-0012	O <sub>3</sub> , MET	1780 Bergen Rd.	25-Sep-1991
County: Milwaukee				
Milw Sixteenth St.	55-079-0010	O <sub>3</sub> , PCBs, PM <sub>10</sub> , PM <sub>2.5</sub> , Cont PM <sub>2.5</sub> , VOCs, Carbonyls, Toxic metals, MET	Health Center, 1337 So 16th St.	04-Apr-1997
Milw SER DNR HQ	55-079-0026	NO <sub>2</sub> , NO <sub>y</sub> , O <sub>3</sub> , SO <sub>2</sub> , Cont PM <sub>10</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , Cont. PM crs, Speciation, PAMS VOCs and Carbonyls, MET	DNR SER HQ, 2300 N M. L. King Jr. D. UWM North Campus, 2114 E Kenwood Blvd	31-Dec-1998
Milw UWM	55-079-0041	MET		01-Jan-1973
Milwaukee-College Ave. Park & Ride	55-079-0058	PM <sub>10</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub>		01-Nov-2009
Bayside	55-079-0085	O <sub>3</sub>	601 E. Ellsworth Lane	01-May-1984
Milw – Fire Dept. HQ	55-079-0099	PM <sub>2.5</sub>	744 W. Wells St.	01-Jan-1970
County: Oneida				
Rhineland	55-085-0996-42401- 1	SO <sub>2</sub> , MET	434 High St.	13-Apr-1991
County: Outagamie				
Appleton AAL	55-087-0009	O <sub>3</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub>	4432 N. Meade St.	14-Apr-1995
County: Ozaukee				
Grafton	55-089-0008	O <sub>3</sub> , Precip	N. Port Washington Rd. (East side of Hwy 32 and I43)	05-Jun-1991
Harrington Beach	55-089-0009	O <sub>3</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , MET	Harrington Beach State Park, 531 Hwy D	15-Jun-1994
County: Racine				
Racine	55-101-0017	O <sub>3</sub> , MET	1519 Washington Ave.	01-Jan-1997
County: Rock				
Beloit-Cunningham	55-105-0024	O <sub>3</sub>	1948 Merrill St.	06-Apr-1994
County: Sauk				
Devils Lake Park	55-111-0007	O <sub>3</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , Cont. PM <sub>10</sub> , PM <sub>crs</sub> , MET	Devils Lake State Park, E12886 Tower Rd.	09-Aug-1996
County: Sheboygan				
Sheboygan Kohler Andre	55-117-0006	O <sub>3</sub> , MET	1520 Beach Park Rd.	26-Jun-1996
County: Taylor				
Perkinstown	55-119-8001	PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , Speciation	W10746 CTY Rd. M	01-Jan-1988
County: Vilas				

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Trout Lake	55-125-0001	O3, PM <sub>2.5</sub>	10810 County Hwy M	01-Jan-1973
County: Walworth				
Lake Geneva	55-127-0005	O3, MET	RR4 Elgin Club Rd.	27-Feb-1991
County: Waukesha				
Wauk-Cleveland	55-133-0027	O3, PM <sub>10</sub> , PM <sub>2.5</sub> , Cont. PM <sub>2.5</sub> , Speciation, MET	1310 Cleveland Ave.	31-Jan-1989

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## Site Descriptions

Each active site contains a standard set of information. Sites that have been discontinued in the recent past are retained in the report for at least one year following shut down. However, detailed site information with parameters and methods may not be presented. Sites with NADP monitors only are listed with location information with other details considered to be irrelevant.

### Network Site Description Format

The network site descriptions contained in this document include the following information:

1. **Site Description**

Specific information is provided to show the location of the monitoring equipment at the site, the CBSA (if appropriate), the AQS identification number, the GPS coordinates, and whether monitors and monitor probes conform to the siting criteria.

2. **Date established**

The date each existing monitoring site was established.

3. **Site Approval Status**

Whether a monitoring site meets all design criteria for inclusion in the State and Local Air Monitoring Stations (SLAMS) network. Sites that do not meet the criteria will either be relocated in the immediate area or when possible, re-sited at the present location.

4. **Monitoring Objectives**

The monitoring network was designed to provide information to be used as a basis for the following actions:

- To determine compliance with ambient air quality standards and to plan control measures to attain these standards.
- To activate emergency control procedures in the event of an impending air pollution episode.
- To observe pollution trends throughout a region, including rural areas.
- To report progress made toward meeting ambient air quality standards.
- To provide a database for the evaluation of the effects of population, land use and transportation planning on air quality.
- To provide a database for the development and evaluation of air dispersion models.
- To provide the Air Quality Index (AQI) to the public.

## 5. Monitoring Sites' Designations

Most sites described in the monitoring network are designated as State and Local Air Monitoring Sites (SLAMS). In addition, some of these sites fulfill other requirements, which must be identified. In this description of the network, designations are also made for National Core Multi-pollutant Monitoring Stations (NCORE), Special Purpose Monitors (SPM), Emergency Episode Monitoring sites and AQI sites. The following are the criteria used for each of these designations.

**SLAMS:** Requirements for monitoring necessitate the establishment of a network of monitoring sites designated as SLAMS that measure ambient concentrations of those pollutants for which federal ambient air quality standards have been established. These sites must meet requirements that relate to four major areas: quality assurance, monitoring methodology, sampling interval and siting of instruments and instrument probes.

**AQI:** Certain sites in the SLAMS network provide data for daily index reporting. Index reporting is required for all urban areas with a population exceeding 350,000. The AQI is a method of reporting that converts concentration levels of pollution to a simple number scale of 0-500. Intervals on the AQI scale are related to potential health effects of the daily measured concentrations of the major pollutants. AQI values are updated with every hourly data polling to the public web site and to the Wisconsin Air Monitoring toll free hotline, 1-866-DailyAir .

**SPM:** Not all monitors and monitoring sites in the air quality surveillance network are included in the SLAMS network. In order to allow the capability of providing monitoring for complaint studies, modeling verification, and compliance status, certain monitors are reserved for short-term studies and designated as Special Purpose Monitors (SPM). These monitors are not committed to any one location or for any specified time period. They may be located as separate monitoring sites or be included at SLAMS locations. Monitoring data may be reported to US EPA, provided that the monitors and sites conform to all requirements of the SLAMS network.

**NCORE:** In October 2006, the US EPA issued final amendments to the ambient air monitoring regulations for criteria pollutants. These amendments are codified in 40 CFR parts 53 and 58. The purpose of the amendments was to enhance ambient air quality monitoring to better serve current and future air quality needs. One of the most significant changes in the regulations was the requirement to establish National Core (NCORE) multi-pollutant monitoring stations. These stations will provide data on several pollutants at lower detection limits and replace the National Air Monitoring Station (NAMS) networks that have existed for several years. Final network plan were submitted to US EPA by July 1, 2009 and the stations were operational by January 1, 2011.

The Wisconsin Department of Natural Resources operated a monitoring site near Mayville from 1994 to 2009. The Mayville site represented a rural location with relatively uniform land use and ambient air concentrations. By April 2007, WDNR began performing high sensitivity continuous gaseous, ozone, filter-based fine

particle, continuous fine particle, speciated fine particle and meteorological monitoring at this location. To assure long-term siting, in December 2009, WDNR moved the monitoring at Mayville to the Horicon Wildlife Area (a state-owned property).

## 6. Monitoring Methods

All sampling and analytical procedures used in the air monitoring network for determining compliance with regulatory standards conform to Federal reference (FRM), alternate (FAM) or equivalent (FEM) methods. Wisconsin's network includes monitors that use accepted methodologies that are not approved for comparison with the NAAQS for the pollutant e.g., non-FEM continuous PM<sub>2.5</sub> instruments.

**Fine Particles:** Currently, Wisconsin operates one type of continuous PM<sub>2.5</sub> instrument, a Beta Attenuation Monitors (BAMs). Thermo Tapered Element Oscillating Microbalances (TEOM) with FDMS units continuous PM<sub>2.5</sub> instruments were operated in the past. However, they were completely phased out in 2012. All of the continuous PM<sub>2.5</sub> BAM monitors in Wisconsin's network measure "Acceptable PM10-2.5 AQI & Speciation Mass" that provides data that are neither equivalent to the reference method nor appropriate for direct comparison with the NAAQS. None of the BAMs are set-up as FEMs.

Results from these monitors are used for public health-oriented ambient air monitoring and are the basis for issuing air quality advisories.

**Lead:** Wisconsin monitors lead for two primary reasons. The first is to compare source-oriented lead concentrations to the federal lead NAAQS. The collocated monitors at Kohler are Hi-volume TSP samplers and data are compared to the NAAQS. The remaining lead monitors in Wisconsin's network are high volume PM<sub>10</sub> samplers. These instruments are used for the air toxics monitoring program and the methods are consistent with those in the National Air Toxics Trends program. The lead determination is performed using inductively coupled plasma mass spectroscopy (ICP-MS) that is consistent with the method developed by Pima County, Arizona, which has FEM status. US EPA approved Wisconsin's analytical method in November 2009.

**Continuous PM<sub>10</sub>:** At the Horicon NCore, Devil's Lake and Milwaukee-SER sites; a dual Met One Beta Attenuation Monitor measures PM<sub>10</sub> and calculates concentrations in both local conditions (LC) and at Standard Temperature and Pressure (STP). The LC measurements are appropriate for calculating coarse particle concentrations but are not appropriate for comparison with the NAAQS. The method for the PM<sub>10</sub> STP is a federal equivalent method (FEM) and is appropriate for NAAQS comparison.

## 7. Quality Assurance Status

The WDNR Air Monitoring Section has an extensive quality assurance program to ensure that all air monitoring data collected and reported to US EPA's AQS data system is accurate and precise. Staff members audit air monitors on a scheduled basis to ensure that each instrument is calibrated and operating

properly. Data validation is performed monthly by verifying that the data reported by each instrument is recorded accurately in the computerized database.

### *Exceptions*

**Meteorology:** At special purpose or air toxics monitoring sites, siting for meteorological monitors may not meet the requirements in federal rules. Relative humidity, barometric pressure, and solar radiation may be measured at some sites to aid in instrument maintenance and data interpretation. Equipment calibration and audits for these monitors may not meet federal requirements so the data are not reported to US EPA's AQS data system. At some locations, the National Weather Service (NWS) has provided mechanical tipping buckets for determining hourly precipitation values that are reported to the public website. With the exception of the device at the Horicon site, these devices are not equipped with heaters so they operate in the warmer months (April through October). NWS monitors the results and is responsible for assuring calibration and performing any necessary maintenance. The Air Monitoring Program does no quality assurance of these monitors. Consequently, these results are not reported to US EPA's AQS data system.

**Air Toxics:** Monitoring schedules, calibrations, audits and collocation frequencies in the NATTS program are not consistent with the federal requirements for criteria pollutants. The data are quality assured before reporting. However, they are not held to the same specifications as the criteria pollutants.

## **8. Area of Representativeness**

Each site in the monitoring network must be described in terms of the physical dimensions of the air parcel nearest the monitoring site throughout which actual pollutant concentrations are reasonably similar. Area dimensions or scales of representativeness used in the network description are:

- (a) Micro scale - defines the concentration in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- (b) Middle scale - defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometers (500 meters).
- (c) Neighborhood scale - defines concentrations within an extended area of a city that has relatively uniform land use with dimensions in the 0.5 to 4 kilometers.
- (d) Urban scale - defines an overall citywide condition with dimensions on the order of 4 to 50 kilometers.
- (e) Regional scale - defines air quality level over areas having dimensions of 50 to hundreds of kilometers.

Closely associated with the area around the monitoring site where pollutant concentrations are reasonably similar are the basic monitoring exposures of the site. There are four basic exposures included in this description:

- (a) To determine the highest concentrations expected to occur in the area covered by the network.
- (b) To determine representative concentrations in areas of high population

density.

- (c) To determine the impact on ambient pollution levels of significant sources or source categories.
- (d) To determine general background concentration levels.

<b>Monitoring Exposures</b>	<b>Siting Area Scale</b>
Highest concentration	Micro, Middle, Neighborhood
Population	Neighborhood, Urban
Source impact	Micro, Middle, Neighborhood
General/background	Neighborhood, Regional

The design intent in locating sites is to correctly match the area dimensions represented by the sample of monitored air with the area dimensions most appropriate for the monitoring objective of the site.

## Appleton AAL

AQS Site ID: 55-087-0009  
Location: 4432 N. Meade St., Appleton  
County: Outagamie  
Coordinates: 44.307,  
 -88.395  
Date Established: 04/14/1995



CBSA: Appleton  
CSA: Appleton-Oshkosh-Neenah, WI  
UA: Appleton-Neenah  
AQCR: Lake Michigan Intra-State

Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located in a neighborhood in Appleton. The sample inlets are about 5 meters above ground level and 10 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of ozone and PM<sub>2.5</sub> and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is "Population Exposure" for all monitors.

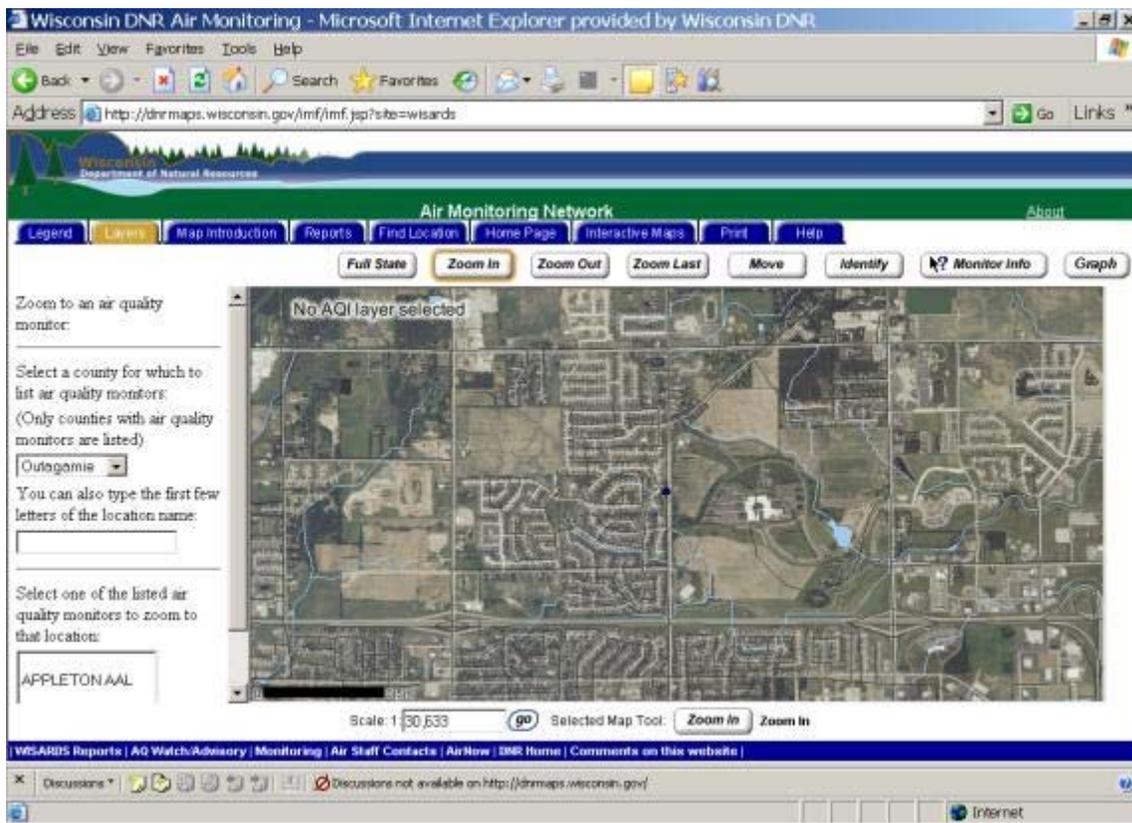
### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/15/1995
PM <sub>2.5</sub>	R&P FRM2025	SLAMS	Gravimetric	Daily	01/01/1999
PM <sub>2.5</sub> Total Atmospheric	Met One BAM	SPM & Non-Regulatory	Beta Attenuation	Continuous	08/18/2011

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on an urban scale for PM<sub>2.5</sub> and Ozone.

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## Bad River Tribal School– Odanah

AQS Site ID: 55-003-0010  
Location: Bad River Tribal School,  
 Odanah  
County: Ashland  
GPS Coordinates: 46.602,  
 -90.656  
Date Established: 07/25/2002

CBSA: None – Rural site  
AQCR: Northwest Wisconsin -  
 Duluth, Minnesota  
 Interstate



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located on the Bad River Reservation adjacent to the Tribal School. The sample inlets are 220 m from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of PM<sub>2.5</sub> and to provide pollutant levels for daily air quality index reporting. For the mercury monitors, the monitoring objective type is “Other”. For the remaining monitors, the monitoring objective type is “General Background”.

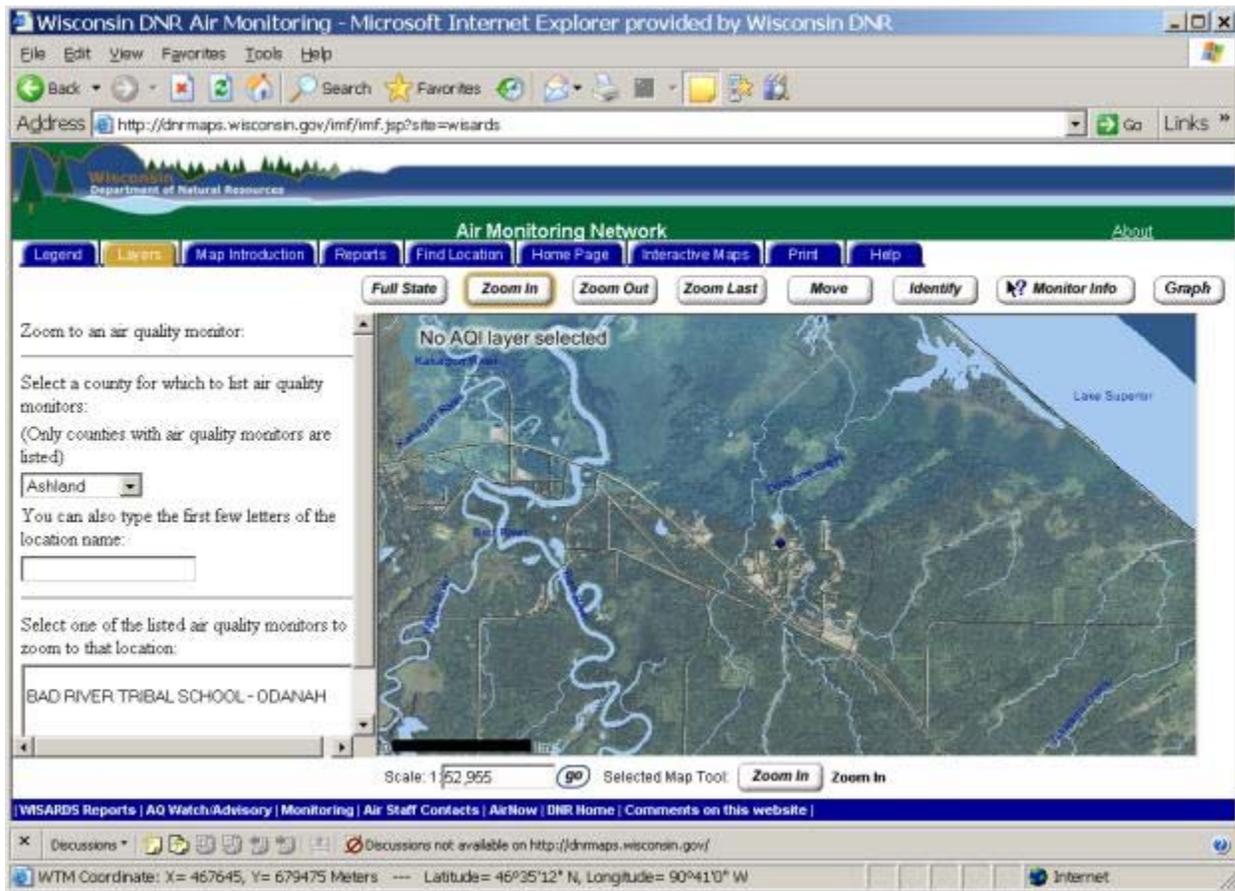
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Mercury (elemental)	Tekran	SPM	Tekran mercury analysis system	Continuous - 5 minutes	03/27/2012, Discontinued 04/03/2013.
Mercury (speciation)	Tekran	SPM	Tekran mercury speciation analysis system	Continuous - 5 minutes	03/27/2012, Discontinued 04/03/2013.
Ozone	Teledyne API	Tribal	UV Photometry	Continuous	07/30/2004
PM <sub>2.5</sub>	R&P FRM2000	Tribal	Gravimetric	1 in 6 - collocated	07/25/2002
Wind Speed/Direction, Temperature	Met One Meteorological	Tribal	Mechanical	Continuous	07/26/2004

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

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Area of Representativeness: This site represents general background levels on a regional scale for PM<sub>2.5</sub> and ozone.



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## Bayside

AQS Site ID: 55-079-0085  
Location: 601 E. Ellsworth Ln.,  
 Bayside

County: Milwaukee  
GPS coordinates: 43.181,  
 -87.901

Date Established: 05/01/1984

CBSA: Milwaukee/Waukesha  
CSA: Milwaukee-Racine-Waukesha, WI  
UA: Milwaukee, WI  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

This site is located inside the Bayside Middle School, in the boiler room. The sample inlet is about 6 meters above ground level and 258 m from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.



Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of ozone and to provide pollutant levels for regular air quality index reporting. The monitoring objective type is population exposure.

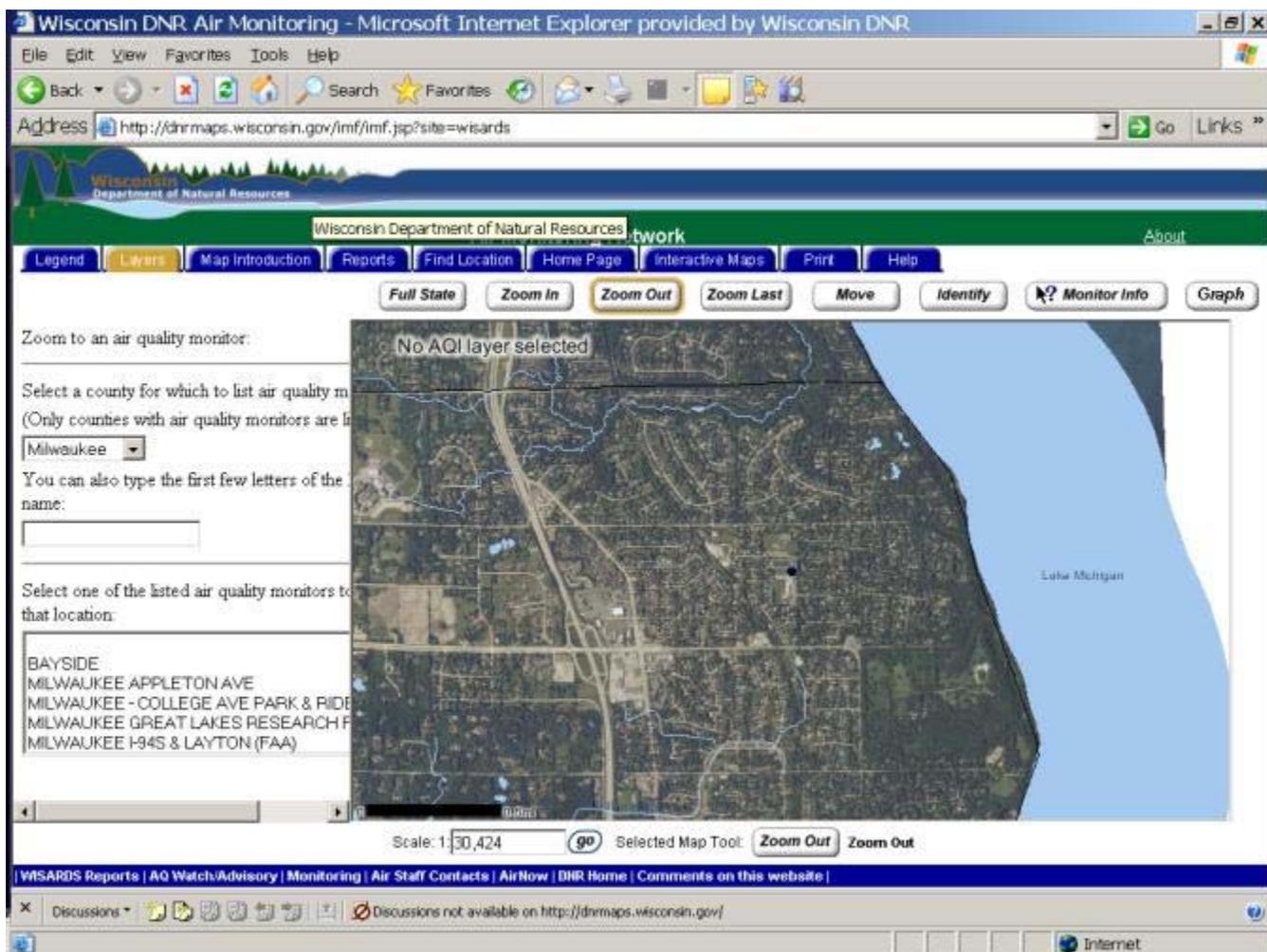
### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	05/01/1984

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents population exposure on a neighborhood scale for ozone.

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**Beloit-Cunningham (Site will be replaced in 2013.)**

AQS Site ID: 55-105-0024  
Location: 1948 Merrill St., Beloit  
County: Rock  
GPS coordinates: 42.509,  
 -89.063  
Date Established: 04/06/1994

CBSA: Janesville, WI  
CSA: None  
UA: Beloit, WI-IL  
AQCR: Rockford-Janesville-  
 Beloit Interstate



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located in a fenced area at the Cunningham School in Beloit. The sample inlet is 5 meters above ground level and 15 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/15/1994

Area of Representativeness: This site represents population exposure on an urban scale for ozone.

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Wisconsin DNR Air Monitoring - Microsoft Internet Explorer provided by Wisconsin DNR

Address: <http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=wisards>

Wisconsin Department of Natural Resources

### Air Monitoring Network

Legend Layers Map Introduction Reports Find Location Home Page Interactive Maps Print Help

Full State Zoom In Zoom Out Zoom Last Move Identify Monitor Info Graph

Zoom to an air quality monitor:

Select a county for which to list air quality monitors:  
(Only counties with air quality monitors are listed)

Rock

You can also type the first few letters of the location name:

Select one of the listed air quality monitors to zoom to that location:

BELOIT-CUNNINGHAM

No AQI layer selected

Scale: 1:30,424 Selected Map Tool: Zoom Out Zoom Out

WISARDS Reports | AQ Watch/Advisory | Monitoring | Air Staff Contacts | Air Now | DNR Home | Comments on this website |

WTM Coordinate: X= 600772, Y= 228350 Meters --- Latitude= 42°31'24" N, Longitude= 89°0'50" W

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## Brule River

AQS Site ID: None  
Location: Brule River State Park  
County: Douglas  
GPS coordinates: 46.746,  
-91.605  
Date Established: 03/05/1996

CBSA: None  
AQCR: North Central Wisconsin Intra-State



Site Approval Status: Site and monitor meet all NADP design criteria for the MDN monitoring network.

Locational Setting: This site is located in a field at the end of Brule River Rd. on the east side of the road. This site monitors atmospheric mercury deposition. The mercury deposition sampler is located 500 feet from the nearest road.

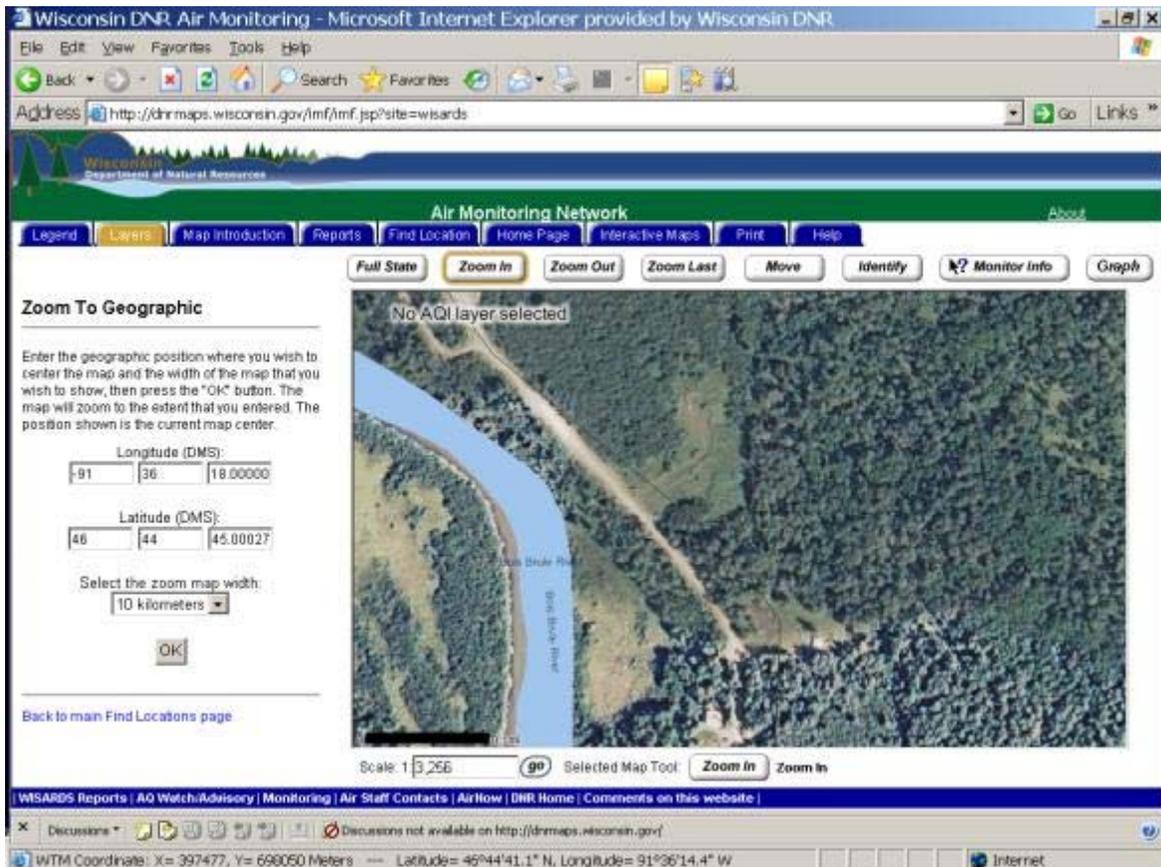
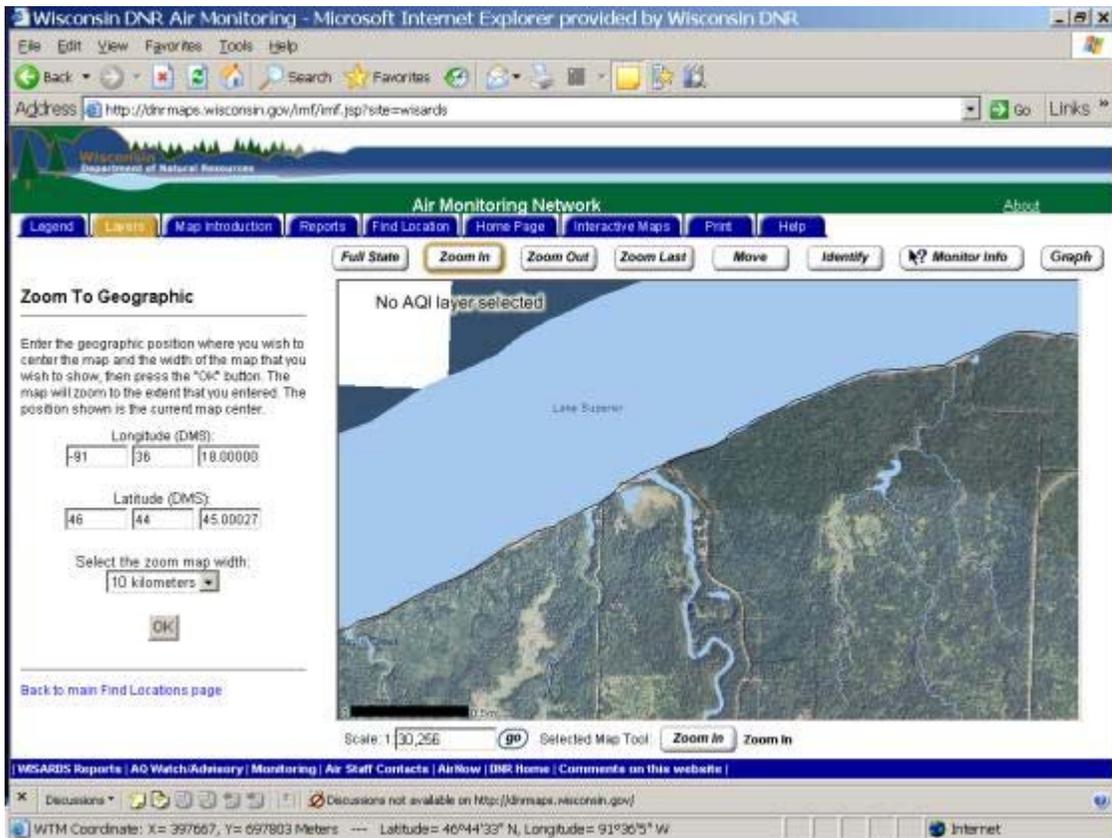
Monitoring Objective: The objective of the mercury deposition network (MDN) is to develop a national database of weekly concentrations of total mercury in precipitation and the seasonal and annual flux of total mercury in wet deposition. The data is used to develop information on spatial and seasonal trends in mercury deposited to surface waters, forested watersheds, and other sensitive receptors.

Monitors: Wet deposition of mercury

Quality Assurance Status: This site meets National Atmospheric Deposition Program Mercury Deposition Network quality assurance requirements.

Area of Representativeness: This site is representative of regional mercury deposition.

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## Chiwaukee Prairie

AQS Site ID: 55-059-0019  
Location: 11838 First Court, Pleasant Prairie  
County: Kenosha  
GPS coordinates: 42.505,  
-87.809  
Date Established: 07/15/1987

CBSA: Chicago-Naperville-Joliet, IL-IN-WI  
CSA: Chicago-Naperville-Michigan City,  
IL-IN-WI  
UA: Kenosha, WI  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located in the Chiwaukee Prairie, a rural area near the Wisconsin-Illinois border. The sample inlet is 5 meters above ground level and 24 feet from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G. This site also has a rain gauge as part of a special project with the National Weather Service.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and PM<sub>2.5</sub>, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

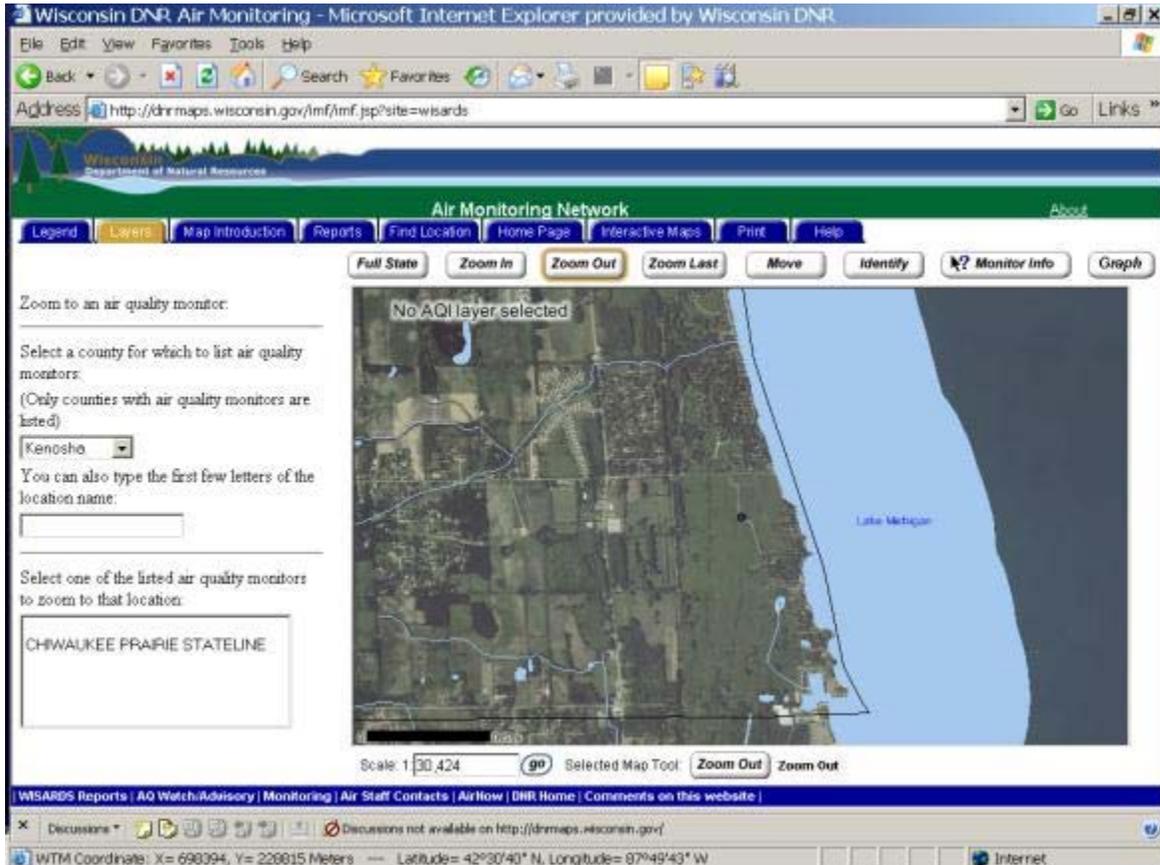
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/15/1988
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS-SCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous	09/08/2011 Discontinued 3/20/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	03/20/2012
PM <sub>2.5</sub>	R&P 2025 FRM	SLAMS	Gravimetric	1 in 3	09/01/2011
Wind Speed/Direction & Temperature	Met-One Meteorological	SLAMS	Mechanical	Continuous	05/23/1988 06/17/1999
Precipitation	Texas Electronics	National Weather Service	Mechanical	Continuous	

## 2014 Wisconsin Air Monitoring Network Plan

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A. The National Weather Service is responsible for all quality control and quality assurance associated with the precipitation monitor.

Area of Representativeness: This site represents regional transport on a regional scale for ozone and PM<sub>2.5</sub>.



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## Columbus

AQS Site ID: 55-021-0015

Location: Wendt Road, Columbus  
Township

County: Columbia

GPS coordinates: 43.314,  
-89.109

Date Established: 8/10/88

CBSA: Madison, WI

CSA: Madison-Baraboo, WI

UA: Not in an urban area

AQCR: Southern Wisconsin



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located in rural Columbia County on Wendt Road. The sample inlet is 5 meters above ground level and 10 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G. This site also has a rain gauge as part of a special project with the National Weather Service.

Monitoring Objective: Regional transport. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of ozone and to provide pollutant levels for daily air quality index reporting. The ozone monitor serves as the downwind ozone instrument in the Madison CSA. The monitoring objective type is population exposure.

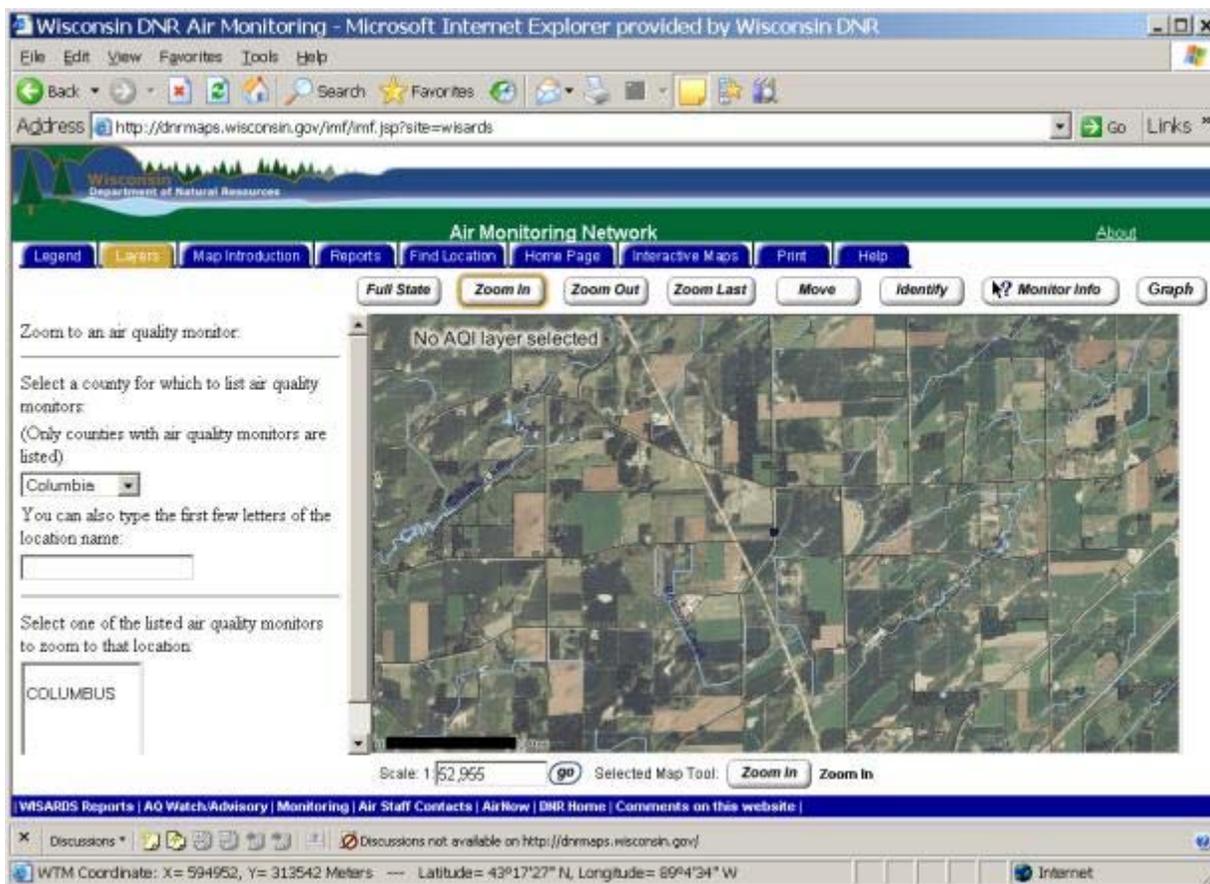
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	08/10/1988
Wind Speed/ Direction. Temperature	Met One	Other	Mechanical	Continuous	08/10/1988 04/30/2010
Precipitation	Texas Electronics	National Weather Service	Mechanical	Continuous	07/01/2009

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: Regional. This site represents population exposure on a regional scale for ozone.

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## Devils Lake Park

AQS Site ID: 55-111-0007  
Location: E12886 Tower Road, Devils Lake State Park  
County: Sauk  
GPS coordinates: 43.435, -89.679  
Date Established: 05/11/1995

CBSA: Baraboo, WI  
CSA: Madison-Baraboo, WI  
UA: Not in an urban area  
AQCR: Southern Wisconsin



Site Approval Status: Site and monitors meet all design criteria for the monitoring network

Locational Setting: This site is located at Devils Lake State Park. The sample inlet is 200 feet from the nearest rural road and 1,380 meters from the nearest state road. This site is also part of the Mercury Deposition Network. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and PM<sub>2.5</sub>, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is general/background.

### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	05/11/1995
PM <sub>10</sub>	Met One BAM	SPM & Non-Regulatory	Beta Attenuation	Continuous Collocated	11/14/2011
PM <sub>2.5</sub>	R&P FRM2025	SLAMS	Gravimetric	1 in 6 Collocated – 1 in 12	05/09/2003 05/09/2003
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS VSCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous Collocated	11/03/2003 Discontinued 3/12/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous Collocated	03/02/2012
PM Coarse	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous Collocated	11/14/2011

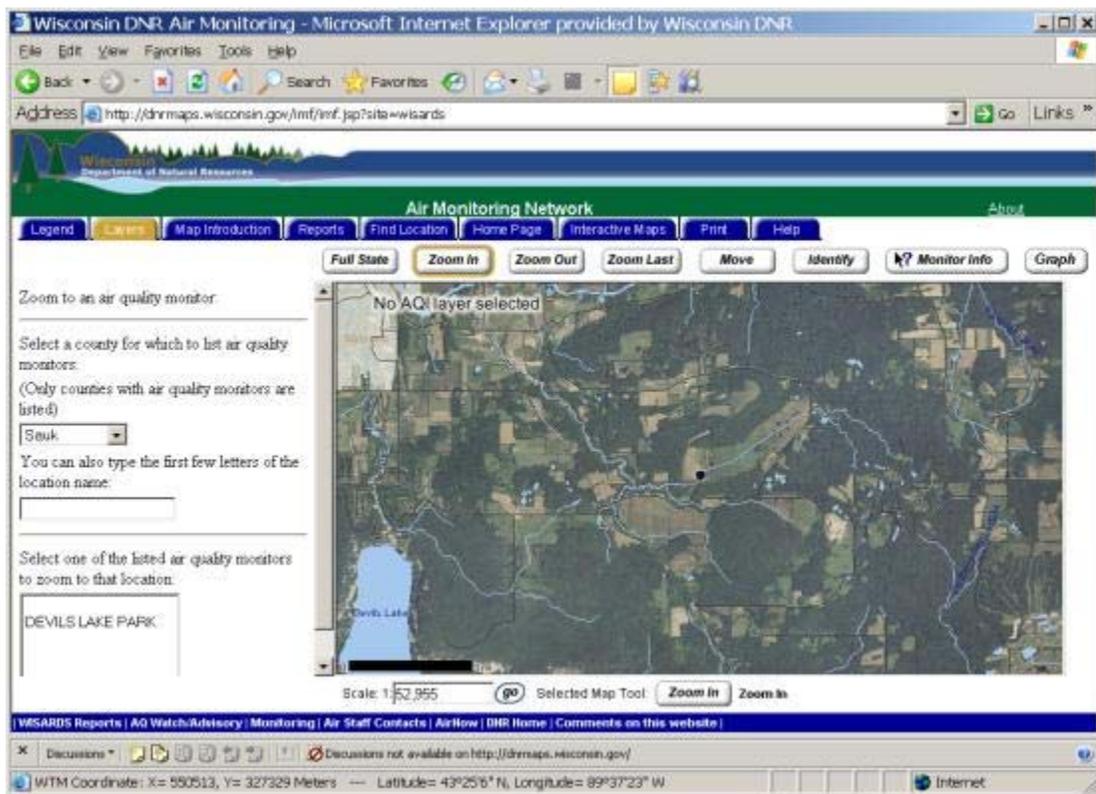
## 2014 Wisconsin Air Monitoring Network Plan

Wind Speed/Direction. Temperature	Met One	SLAMS	Mechanical	Continuous	07/03/1996
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Atmospheric Deposition Network  
Mercury Deposition Network

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents general background on a regional background scale for PM<sub>2.5</sub> and ozone.



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## Eau Claire-DOT Sign Shop

AQS Site ID: 55-035-0014  
Location: 5509 Highway 53 South  
County: Eau Claire  
GPS coordinates: 44.761  
 -91.413  
Date Established: 03/09/11

CBSA: Eau Claire, WI  
CSA: Eau Claire-Menomonie, WI  
UA: Eau Claire, WI  
AQCR: Southeast Minnesota – La Crosse



Site Approval Status: Site and monitor meet all design criteria for the monitoring network. Operation of this site is a cooperative effort between the WDNR and the Eau Claire Health Department.

Locational Setting: This site is located in a grassy clearing near a Wisconsin DOT facility. The PM<sub>2.5</sub> sample inlet is 7.8 meters above ground level and the ozone sample inlet is 6.2 meter above ground level. The distance to the nearest roadway is 149 meters. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of PM<sub>2.5</sub>. The monitoring objective type is population exposure.

### Monitors:

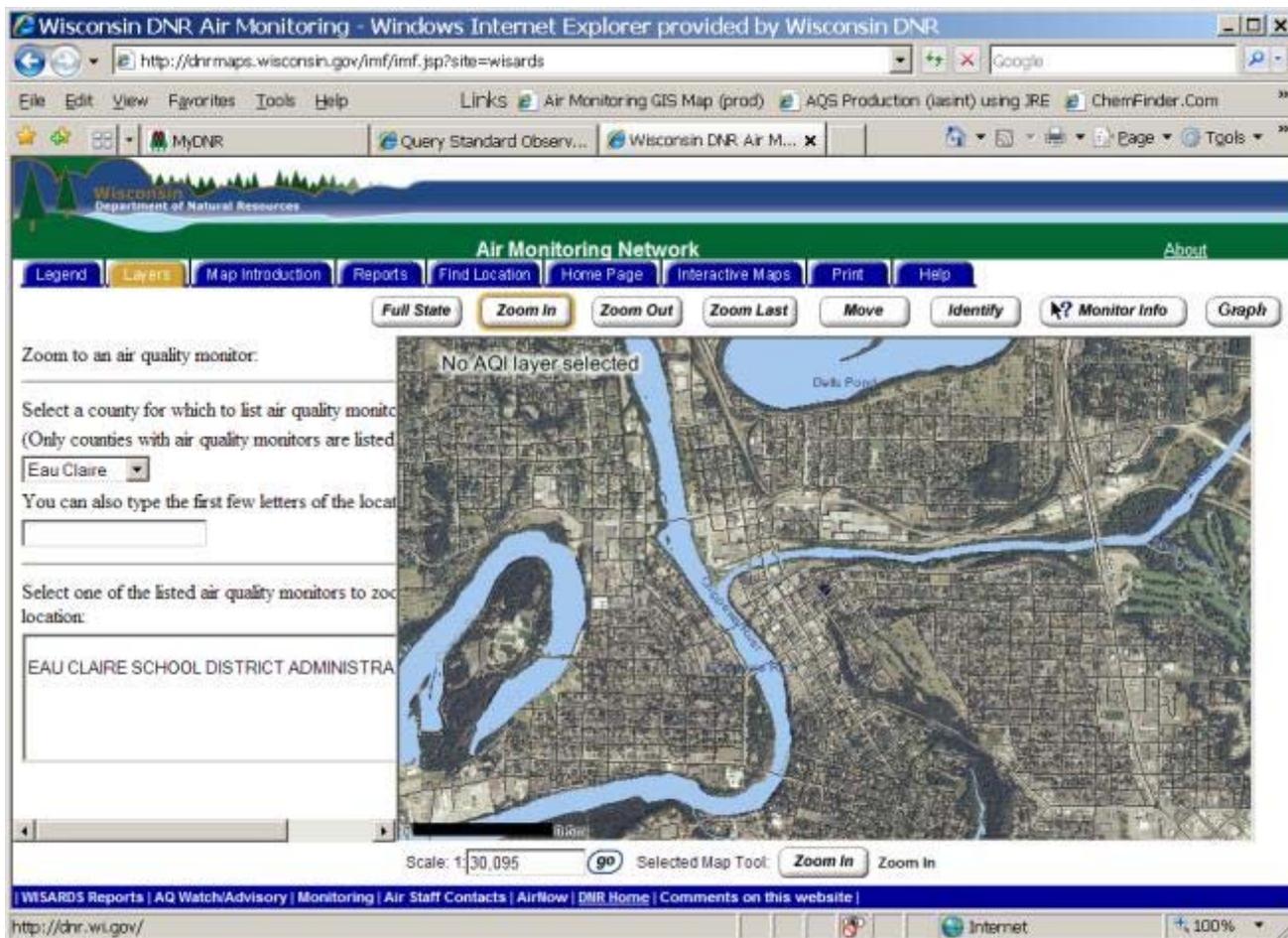
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/01/2011
PM <sub>2.5</sub>	R&P FRM 2025	SLAMS	Gravimetric	1 in 6	04/01/2011
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS-VSCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous	03/16/2011 Discontinued 05/02/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	05/02/2012
Wind Speed/Direction	Met One	SLAMS	Mechanical	Continuous	05/17/2011

Quality Assurance Status: All Quality Assurance procedures have been implemented in

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accordance with 40 CFR 58,  
Appendix A

Area of Representativeness: This site represents population exposure on a regional scale for ozone and PM<sub>2.5</sub>.



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## Fond du Lac

AQS Site ID: 55-039-0006  
Location: N3996 Kelly Road, Town of Byron  
County: Fond du Lac  
GPS coordinates: 43.6874, -88.4220  
Date Established: 04/22/1994

CBSA: Fond du Lac, WI  
CSA: Fond du Lac – Beaver Dam, WI  
UA: Not in an urban area  
AQCR: Lake Michigan Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located in a farm field in the rural town of Byron. The sample inlet is 5 meters above ground level and 32.5 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population Exposure. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

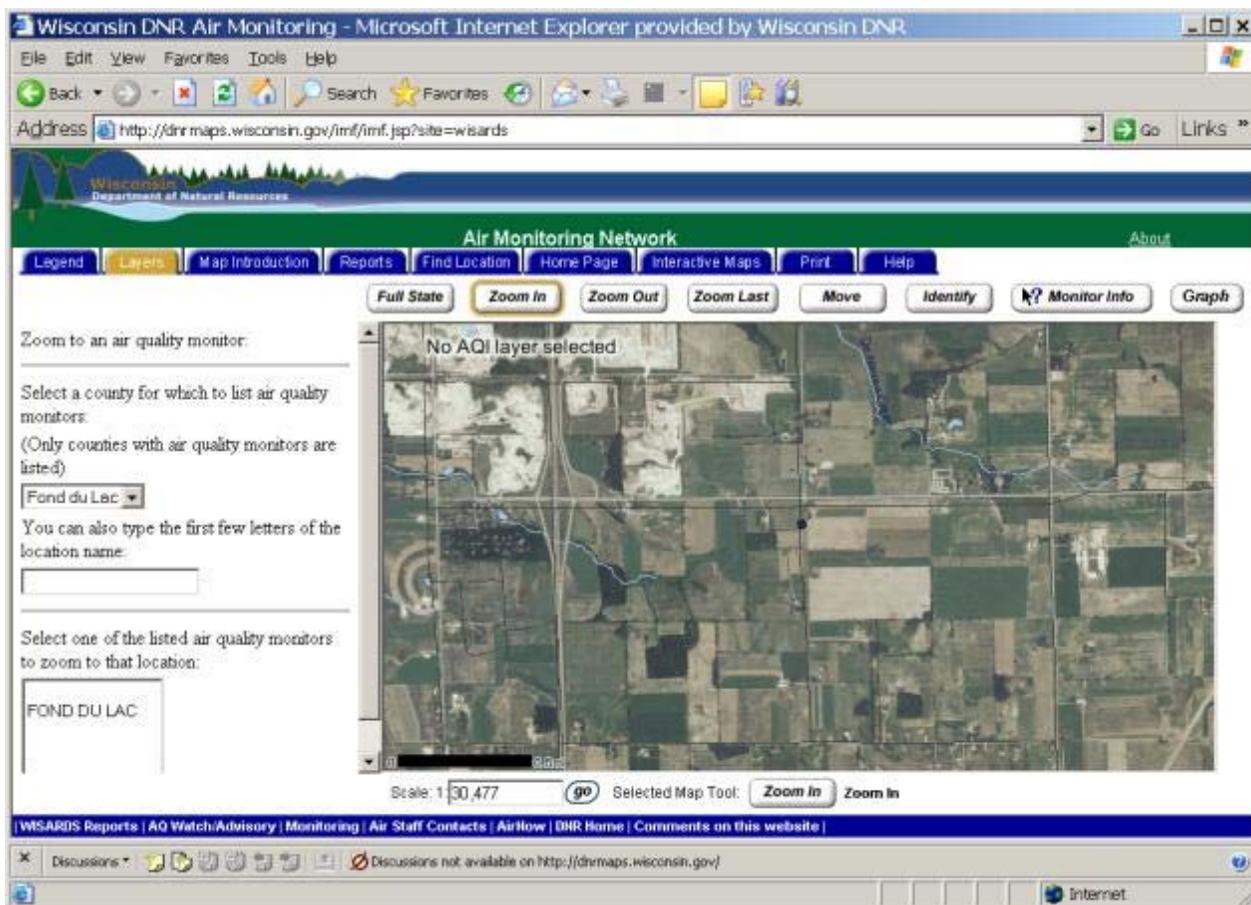
### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/22/1994

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents population exposure on a regional scale for ozone.

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**Grafton**

AQS Site ID: 55-089-0008  
Location: N. Port Washington Rd. (East side of Hwy 32 and I43), Grafton  
County: Ozaukee  
GPS coordinates: 43.343, -87.920  
Date Established: 06/05/1991  
CBSA: Milwaukee-Waukesha- West Allis, WI  
CSA: Milwaukee-Racine-Waukesha, WI  
UA: Not in an urban area  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located just off the Highway I-43, next to the WE Energies landfill. The sample inlet is 5 meters above ground level and 19.5 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G. This site also has a rain gauge as part of a special project with the National Weather Service.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

Monitors:

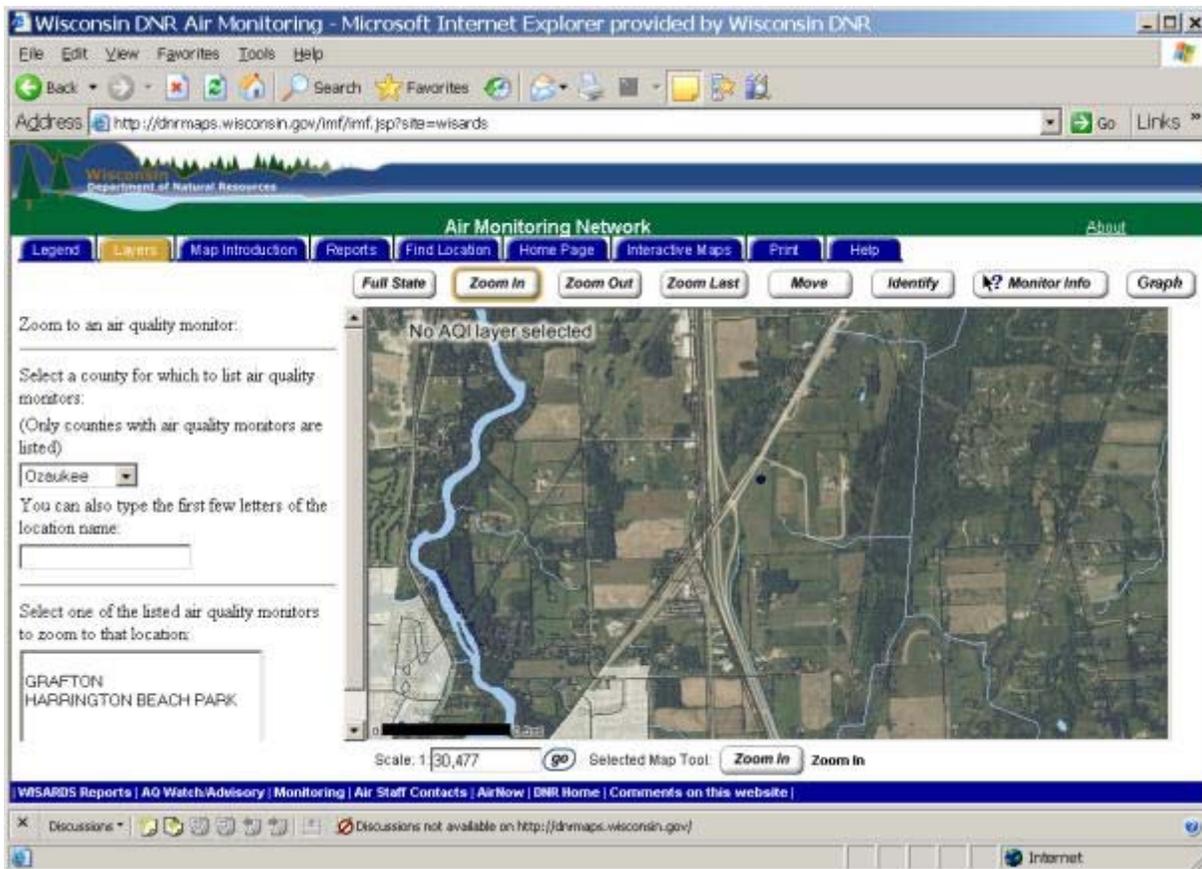
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	06/05/1991
Wind Speed/Direction. Temperature	Met One Meteorological	Other	Mechanical	Continuous	06/05/1991
Precipitation	Texas Electronics	National Weather Service	Mechanical	Continuous	10/08/2008

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A. The National Weather Service is responsible for all quality control and quality assurance associated with the precipitation monitor.

Area of Representativeness: This site represents population exposure on an urban scale for

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ozone.



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## Green Bay East High

AQS Site ID: 55-009-0005  
Location: 1415 E. Walnut St. Green Bay  
County: Brown  
GPS coordinates: 44.507,  
 -87.993  
Date Established: 01/01/1971



CBSA: Green Bay, WI  
CSA:  
UA: Green Bay, WI  
AQCR: Lake Michigan Intra-State

Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located inside the Green Bay East High School. The sample inlets are 75 feet from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.



Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of PM<sub>2.5</sub> and SO<sub>2</sub>, and to provide pollutant levels for daily air quality index reporting. Continuous PM<sub>2.5</sub> began in December 2004 to measure PM<sub>2.5</sub> continuously in the Fox Valley/NE Wisconsin area for AIRNow and AQS data submittals. The monitoring objective types for hourly and 5-min SO<sub>2</sub> are source oriented and population exposure respectively. For PM<sub>2.5</sub>, the monitoring objective type is population exposure.

### Monitors:

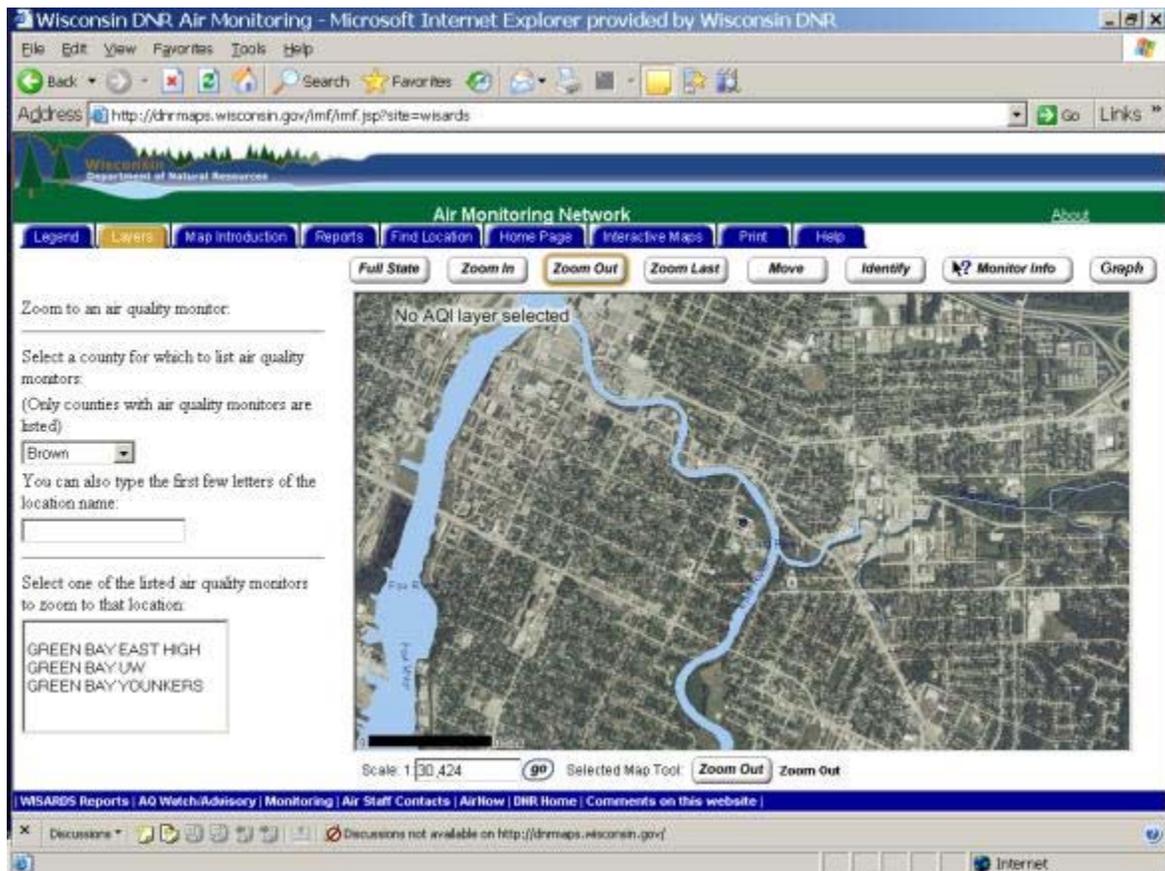
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Sulfur dioxide	API SO2	SLAMS	UV fluorescence	Continuous	07/24/1980
Sulfur dioxide	API SO2	SLAMS	UV fluorescence	Continuous – 5 min	08/01/2010
PM <sub>2.5</sub>	R&P FRM 2025	SLAMS	Gravimetric	Daily	01/01/1999
PM <sub>2.5</sub> Species	R&P FRM 2025	SLAMS	Gravimetric	1 in 12	04/01/2004
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS-SCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous	12/21/2004 Discontinued 03/08/2012

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Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	03/08/2012
Fine Particle Species	Met-One Speciation	Regional	Gravimetric	1 in 6	10/12/2011
Fine Particle Species	URG 3000N	Regional	Gravimetric	1 in 6	10/12/2011

**Quality Assurance Status:** All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area of Representativeness:** For hourly SO<sub>2</sub>, this site is source oriented on a neighborhood scale. For 5-min SO<sub>2</sub>, this site represents population exposure on a neighborhood scale. For intermittent PM<sub>2.5</sub>, this site represents population exposure on a neighborhood scale. For continuous PM<sub>2.5</sub>, this site represents population exposure on a regional scale.



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## Green Bay UW

AQS Site ID: 55-009-0026  
Location University of Wisconsin property, Green Bay  
County: Brown  
GPS coordinates: 44.53, -87.908  
Date Established: 04/15/1994

CBSA: Green Bay, WI  
CSA:  
UA: Green Bay, WI  
AQCR: Lake Michigan Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located behind the University of Wisconsin in Green Bay. The sample inlet is 5 meters above ground level and 600 feet from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

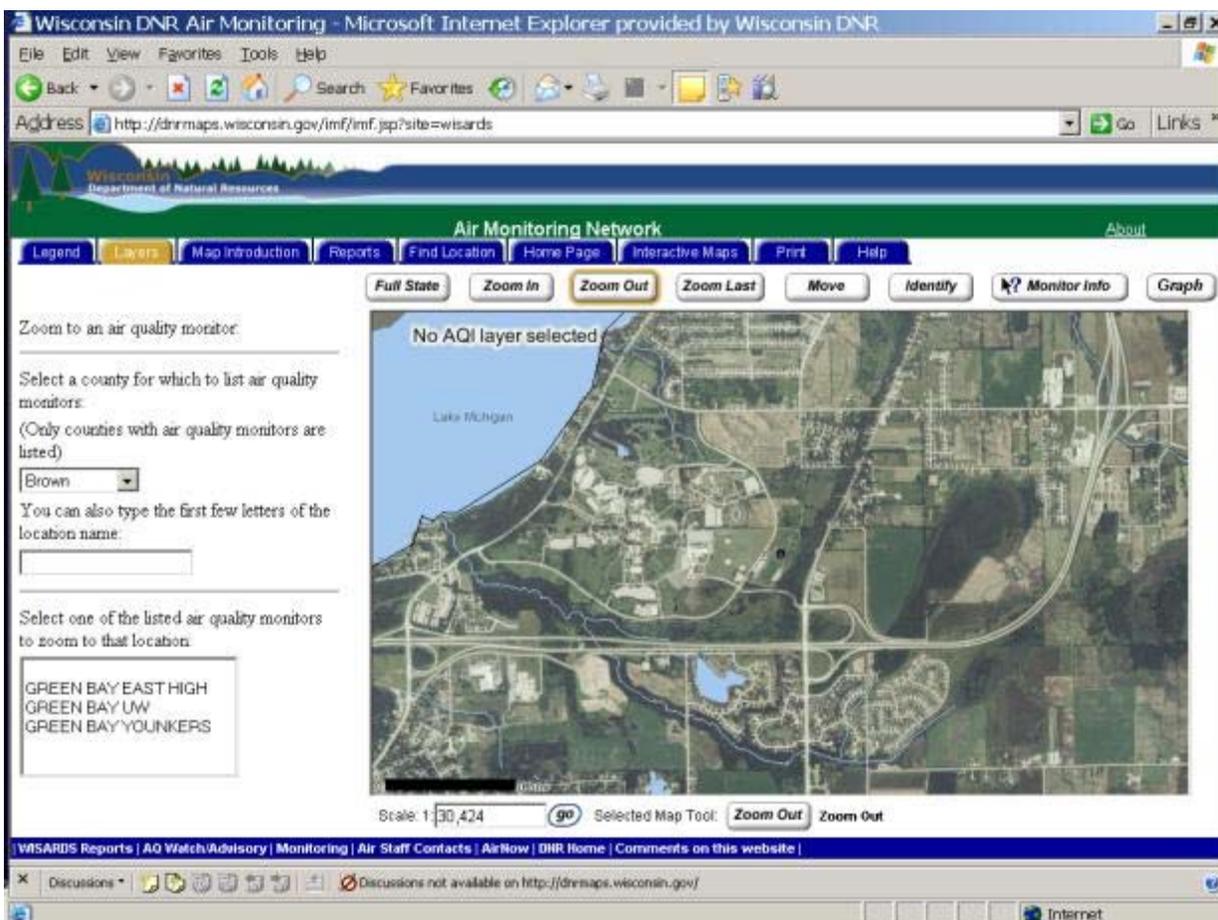
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/18/1994

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58 Appendix A.

Area of Representativeness: This site represents population exposure on an urban scale for ozone.

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## Harrington Beach

AQS Site ID: 55-089-0009  
Location: Harrington Beach State Park,  
 531 Hwy D, Belgium  
County: Ozaukee  
GPS coordinates: 43.498,  
 -87.81  
Date Established: 06/15/1994

CBSA: Milwaukee-Waukesha-West  
 Allis, WI  
CSA: Milwaukee-Racine-Waukesha, WI  
UA: Not in an urban area  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located at the Harrington Beach State Park. The sample inlets are 142 meters from nearest state road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and fine particles, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is max ozone concentration.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	06/08/1994
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM- SCC	SPM & Non- Regulatory	Beta Attenuation	Continuous	12/01/2011
PM <sub>2.5</sub>	R & P 2025 FRM	SLAMS	Gravimetric	1 in 6	06/23/2003
Wind Speed/Direction Temperature Barometric pressure	Met-One Meteorological	SLAMS	Mechanical	Continuous	06/08/1994  08/05/1994  01/01/1995

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

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Area of Representativeness: This site represents population exposure on an urban scale. on an urban transport scale for PM<sub>2.5</sub> & ozone.

Wisconsin DNR Air Monitoring - Microsoft Internet Explorer provided by Wisconsin DNR

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Address <http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=wisards> Go Links

Wisconsin Department of Natural Resources

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Full State Zoom In Zoom Out Zoom Last Move Identify Monitor Info Graph

Zoom to an air quality monitor:

Select a county for which to list air quality monitors:  
(Only counties with air quality monitors are listed)

Ozaukee

You can also type the first few letters of the location name:

Select one of the listed air quality monitors to zoom to that location:

GRAFTON  
HARRINGTON BEACH PARK

No AQI layer selected

Lake Michigan

Scale: 1:30,424 go Selected Map Tool: Zoom Out Zoom Out

WISARDS Reports | AQ Watch/Advisory | Monitoring | Air Staff Contacts | Air Now | DNR Home | Comments on this website |

Discussions Discussions not available on <http://dnrmaps.wisconsin.gov/>

Internet

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**Horicon Wildlife Area**

AQS Site ID: 55-027-0001  
Location: 1210 N. Palmatory St.  
County: Dodge  
GPS coordinates: 43.466  
 -88.621  
Date Established: 06/24/1982

CBSA: Beaver Dam, WI  
CSA: Fond du Lac – Beaver Dam, WI  
UA: Not in an urban area  
AQCR: Southern Wisconsin



Locational Setting: The sample inlet is 42 meters from a rural road, Palmatory St..

Quality Assurance Status: The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to meet NCore multi pollutant network objectives, to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is general background.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Ozone	Teledyne API	NCore	UV Absorption	Continuous	01/22/2010
PM <sub>2.5</sub>	R&P FRM2025	NCore	Gravimetric	1 in 3	12/18/2009
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met-One BAM-SCC	Proposed NCore	Beta Attenuation	Continuous	08/26/2011
PM <sub>10</sub> Total 0-10 µm STP	Met-One BAM – (02/03/2010 – 08/26/2011), (08/26/2011 -)	Proposed NCore	Beta Attenuation	Continuous	02/03/2010
PM Coarse	Met-One BAM – VSCC (02/03/2010 – 08/26/2011), SCC (08/26/2011 -)	NCore	Beta Attenuation	Continuous	02/03/2010
Fine Particle Species	Met-One Speciation	Regional	Gravimetric	1 in 3	12/18/2009

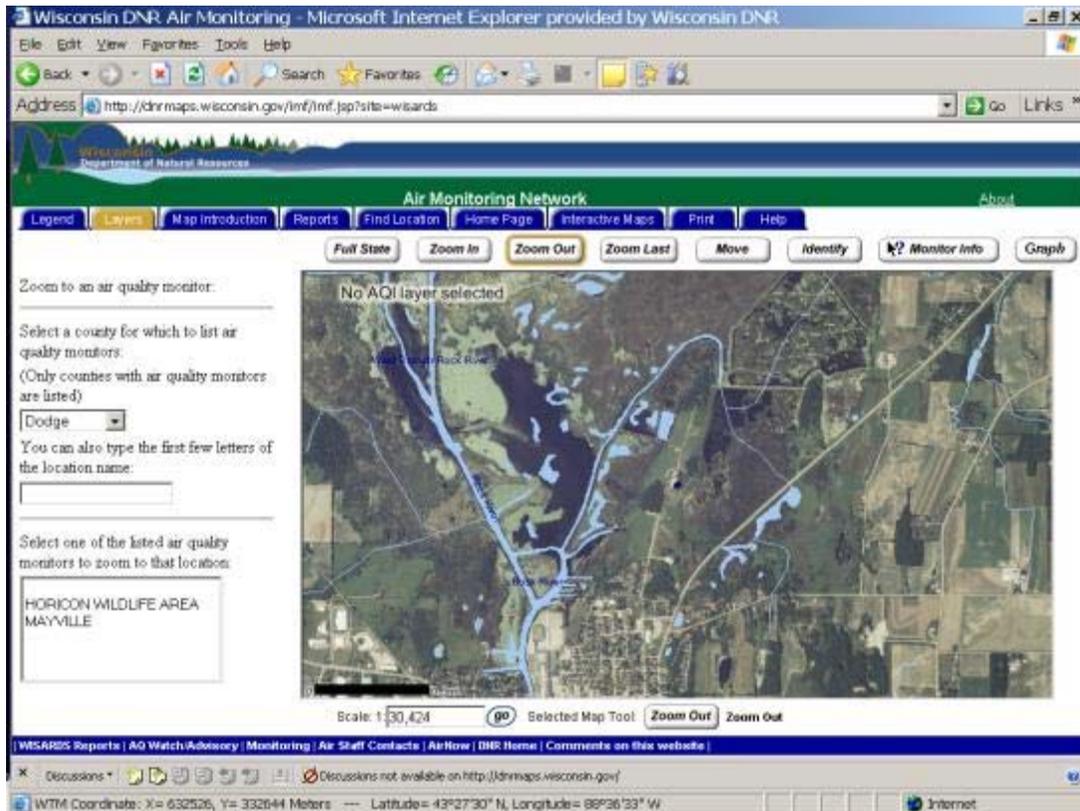
2014 Wisconsin Air Monitoring Network Plan

Fine Particle Species	URG 3000N	Regional	Gravimetric	1 in 3	10/1/2009
PM10/toxic metals	High volume PM <sub>10</sub>	NATTS	Gravimetric Inductively Coupled Plasma (ICP)- Mass Spectrometry (MS)	1 in 6 Collocated – 1 in 90	12/21/2009 01/26/2009
Hexavalent chromium	High volume TSP	NATTS	IC	1 in 6	12/21/2009
Polyaromatic hydrocarbons	PUF Sampler	NATTS	Gas Chromatography (GC) – MS	1 in 6 Collocated – 1 in 90	07/01/2010
Wind Speed/ Direction. Temperature, Barometric Pressure, Relative Humidity	Met One- Meteorological	Proposed NCore	Mechanical	Continuous	01/20/2010  01/01/2012  01/20/2012
Sulfur Dioxide	SO <sub>2</sub> , High Sensitivity	NCore	UV fluorescence	Continuous - hourly	01/26/2010
Sulfur Dioxide	SO <sub>2</sub> , High Sensitivity	NCore	UV fluorescence	Continuous – 5 min	08/23/2010
Nitric Oxide (NO)	NO <sub>y</sub> High Sensitivity	NCore	Chemiluminescence	Continuous	01/28/2010
Reactive Oxides of Nitrogen (NO <sub>y</sub> )	NO <sub>y</sub> High Sensitivity	NCore	Chemiluminescence	Continuous	01/28/2010
NO <sub>y</sub> -NO	NO <sub>y</sub> High Sensitivity	Proposed NCore	Chemiluminescence	Continuous	01/28/2010
Carbon Monoxide	CO High Sensitivity	NCore	Gas Filter Correlation	Continuous	01/25/2010
Volatile Organics and Carbonyls	Canister and Cartridge	NATTS	GC-MS	1 in 6	12/18/2009
Mercury	Tekran speciated mercury	State Toxics	Tekran speciation mercury analysis system	Continuous - 5 minutes	09/15/2010
Precipitation	Texas Electronics (Heated)	National Weather Service	Mechanical, heated	Continuous	02/09/2010

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A. The National Weather Service is responsible for all quality control and quality assurance associated with the precipitation monitor.

## 2014 Wisconsin Air Monitoring Network Plan

Area of Representativeness: This site represents general background on a regional scale for PM<sub>2.5</sub> & ozone. This is an NCORE rural background site.



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**Jefferson – Site discontinued in October 2012.**

AQS Site ID: 55-055-0002  
Location: Jefferson High School, Willow Drive  
County: Jefferson  
GPS coordinates: 43.002,  
 -88.818  
Date Established: 4/13/1988



CBSA: Watertown-Fort Atkinson, WI  
CSA:  
UA: Not in an urban area  
AQCR: Southern Wisconsin

Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located next to the Jefferson High School sports field. The sample inlet is 4 meters above ground level and 10 meters from nearest road.

Quality Assurance Status: The site meets the requirement of 40 CFR 58, Appendices C, D, E and G. This site also has a rain gauge as part of a special project with the National Weather Service.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

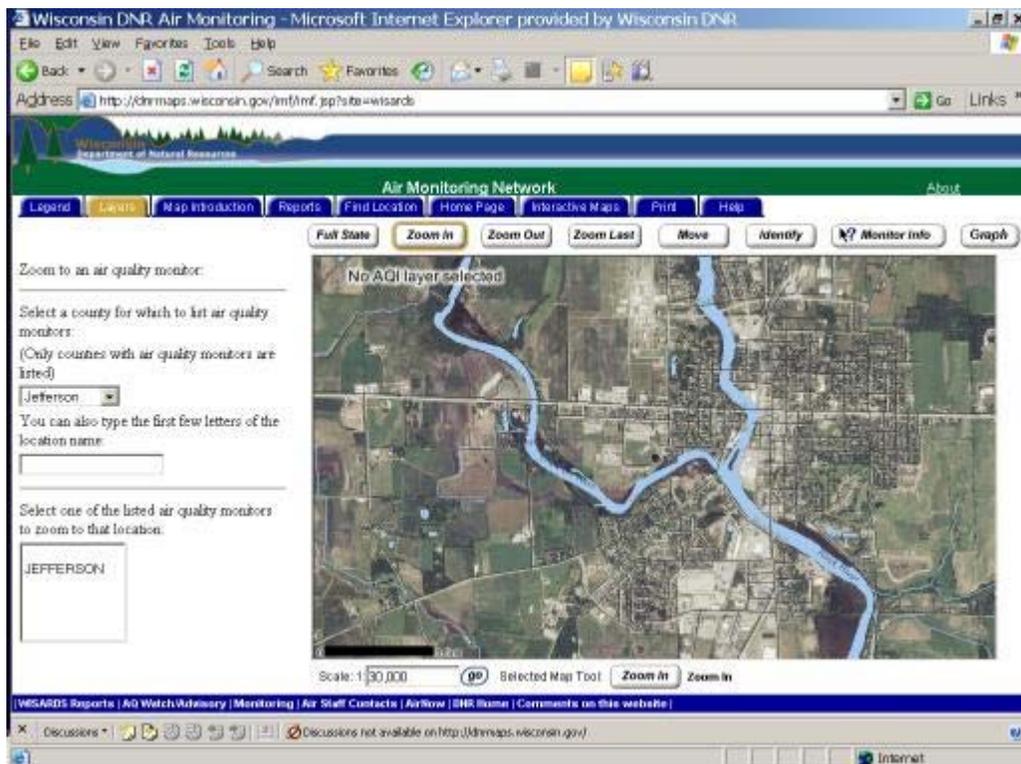
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Frequency of Sampling	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/13/1988 Discontinued 10/16/2012

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A. The National Weather Service is responsible for all quality control and quality assurance associated with the precipitation monitor.

Area of Representativeness: Regional. This site represents population exposure on a regional scale for ozone.

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**Jefferson – Laatsch (New in 2013)**

AQS Site ID: 55-055-0009

Location: N4440 Laatsch Ln.

County: Jefferson

GPS coordinates: 43.003, -88.828

Date Established: 4/08/2013

CBSA: Watertown-Fort Atkinson, WI

CSA:

UA: Not in an urban area

AQCR: Southern Wisconsin



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is at the end of Laatsch Ln. and west of Jefferson Elementary School. The sample inlet is on the top of a trailer and 90 meters from nearest road.

Quality Assurance Status: The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population Exposure. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

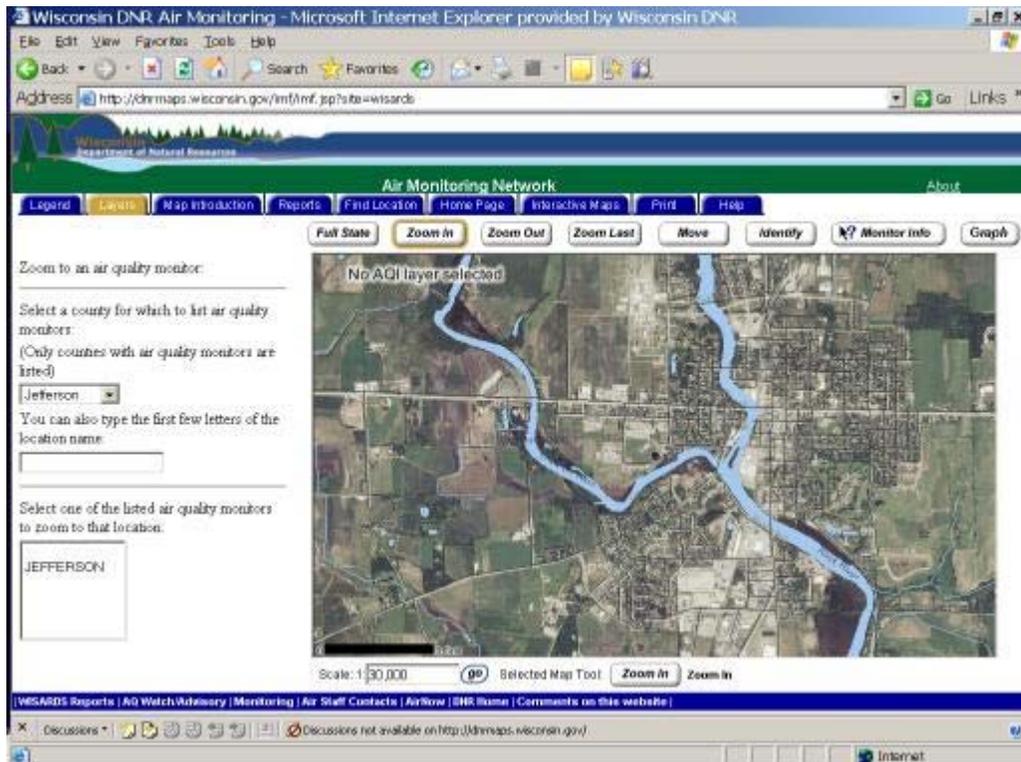
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Frequency of Sampling	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/15/2013

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents population exposure on a regional scale for ozone.

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## Kenosha-Water Tower

AQS Site ID: 55-059-XXXX  
Location: 4504 64<sup>th</sup> Ave.  
County: Kenosha  
GPS coordinates: Unknown  
Date Established: 05/15/2013

CBSA: Chicago-Naperville-Joliet, IL-IN-WI  
CSA: Chicago-Naperville-Michigan City, IL-IN-WI  
UA: Kenosha, WI  
AQCR: Southeastern Wisconsin Intra-State

Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: The monitor is located just east of Green Bay Road and north of the City of Kenosha. The monitor began operation on May 15, 2013 and will operate for a period of less than 24 months.

Monitoring Objective: The monitoring objectives are to detect elevated pollutant levels of ozone and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est
Ozone	Teledyne API	SPM	UV Photometry	Continuous	05/15/2013
Wind Speed/Direction & Temperature	Met-One Meteorological	SLAMS	Mechanical	Continuous	05/15/2013

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents regional transport on a regional scale for ozone.

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**Kewaunee**

AQS Site ID: 55-061-0002  
Location: Route 1, Hwy 42, Kewaunee  
County: Kewaunee  
GPS coordinates: 44.443,  
 -87.505  
Date Established: 04/06/1994  
  
CBSA: Green Bay, WI  
CSA:  
UA: Not in an urban area  
AQCR: Lake Michigan Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located on a bluff over Lake Michigan next to ATV/ lawn tractor dealer. The sample inlet is 6 meters above ground level and 83 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/06/1994

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents regional transport on an urban scale for ozone.

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Wisconsin DNR Air Monitoring - Microsoft Internet Explorer provided by Wisconsin DNR

Address: <http://dnr.maps.wisconsin.gov/imf/imf.jsp?site=wisards>

Wisconsin Department of Natural Resources

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[Full State](#) [Zoom In](#) [Zoom Out](#) [Zoom Last](#) [Move](#) [Identify](#) [Monitor info](#) [Graph](#)

Zoom to an air quality monitor:

Select a county for which to list air quality monitors:  
(Only counties with air quality monitors are listed)

Kewaunee

You can also type the first few letters of the location name:

Select one of the listed air quality monitors to zoom to that location:

KEWAUNEE

No AQI layer selected

Lake Michigan

Scale: 1:30,424 Selected Map Tool: [Zoom Out](#) [Zoom Out](#)

[WISARDS Reports](#) | [AQ Watch/Advisory](#) | [Monitoring](#) | [Air Staff Contacts](#) | [Air Now](#) | [DNR Home](#) | [Comments on this website](#)

Discussions not available on <http://dnr.maps.wisconsin.gov/>

WTM Coordinate: X= 716147, Y= 442452 Meters --- Latitude= 44°25'44" N, Longitude= 87°32'9" W

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**Kohler**

AQS Site ID: 55-117-0008  
Location: 444 Highland Dr. fence line  
County: Sheboygan  
GPS coordinates: 43.743  
 -87.776  
Date Established: 12/15/2009

CBSA: Sheboygan, WI  
CSA:  
UA: Sheboygan, WI  
AQCR: Lake Michigan Intra-State



Site Approval Status: The site and monitor meet all design criteria for the monitoring network.

Locational Setting: This source-oriented site is located at the Kohler Company fence line. The sample inlet is 2.4 meters above ground level and 213 meters from nearest road. This site monitors for TSP-lead and the associated meteorology parameters.

It meets the requirements of 40 CFR 58, Appendices C, D, E and G.

Monitors:

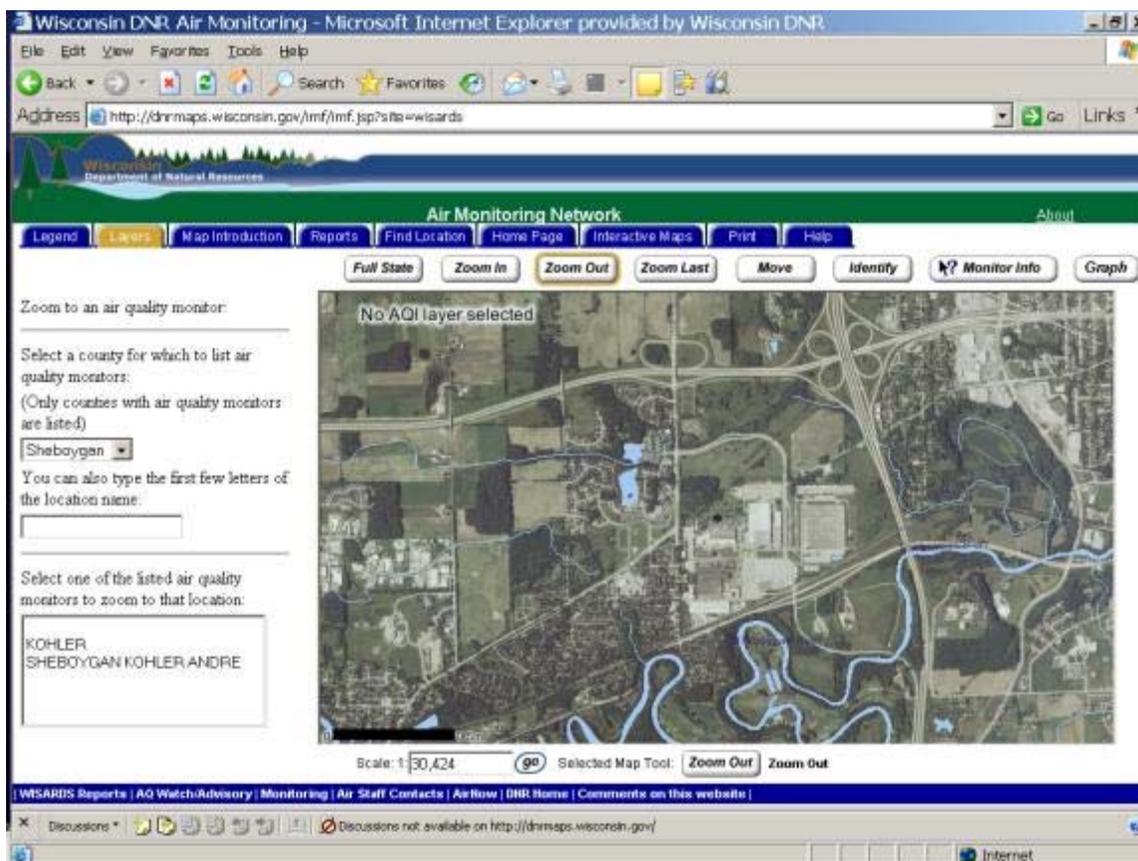
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
TSP, Lead Average	TSP with meteorological attachment	SLAMS	Inductively Coupled Plasma (ICP) - Mass Spectrometry (MS)	1 in 6 Collocated – 1 in 12	01/01/2010

Monitoring Objective: The monitoring objective type is source oriented.

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents source oriented monitoring on a middle scale for lead.

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## La Crosse DOT

AQS Site ID: 55-063-0012  
Location: 3550 Mormon Coulee Rd.  
County: La Crosse  
GPS coordinates: 43.778  
 -91.225  
Date Established: 10/13/2005



CBSA: La Crosse, WI-MN  
CSA:  
UA: La Crosse, WI-MN  
AQCR: Southeast Minnesota-La Crosse (Western Wisconsin)

Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located on a Wisconsin Department of Transportation lot near an apartment complex. The sample inlet is 113 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population Exposure. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and fine particles, and to provide pollutant levels for daily air quality index reporting. The monitoring objective type is population exposure.

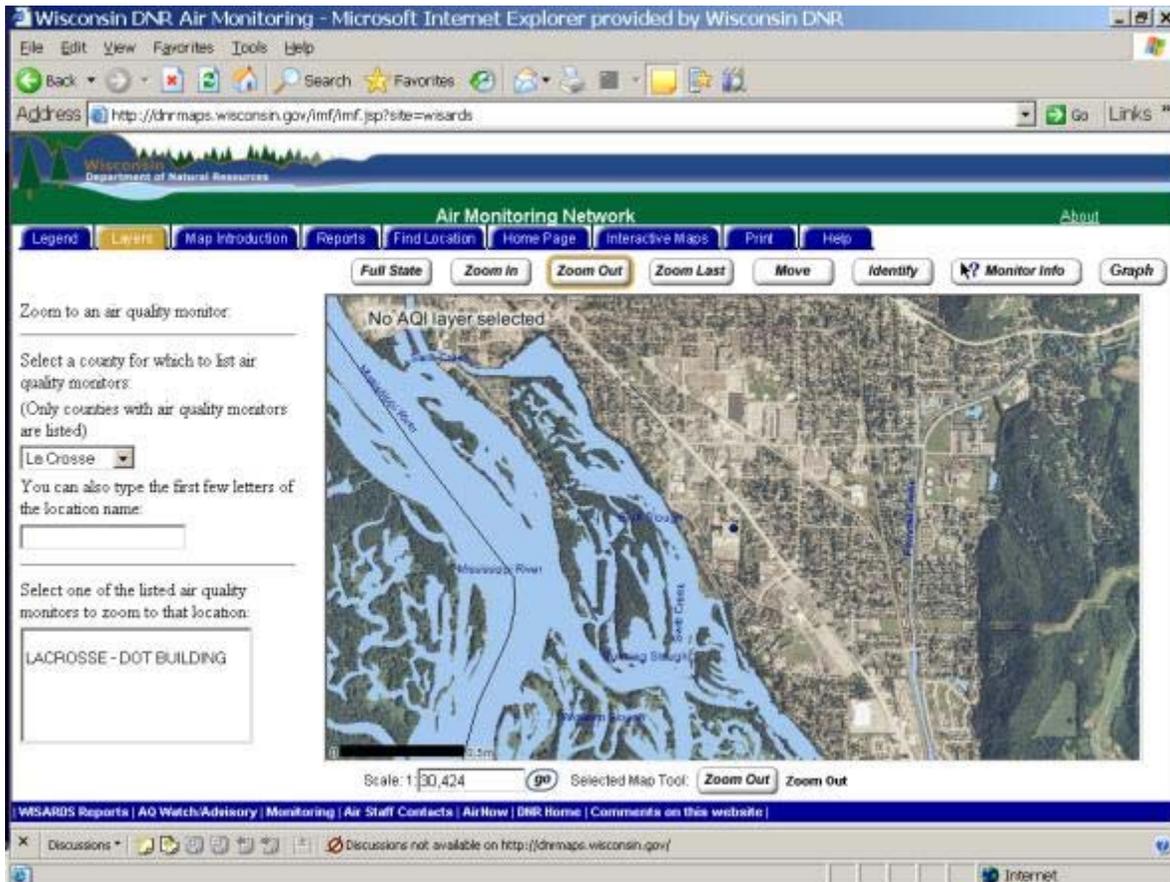
### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	02/27/2008
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS-SCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous	02/13/2008-12/08/2010 and 08/26/2011-05/17/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	05/17/2012
PM <sub>2.5</sub>	R&P 2025 FRM	SLAMS	Gravimetric	1 in 3	12/07/2005
Wind Speed/Direction Temperature	Met One	Other	Mechanical	Continuous	04/08/2008 05/24/2012

## 2014 Wisconsin Air Monitoring Network Plan

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents population exposure on a neighborhood scale for ozone. This site represents population exposure on a regional scale for fine particles.



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## Lake DuBay

AQS Site ID: 55-073-0012  
Location: 1780 Bergen Road, Bergen  
 Township  
County: Marathon  
GPS coordinates: 44.707,  
 -89.770  
Date Established: 09/25/1991



CBSA: Wausau, WI  
CSA: Wausau-Merrill, WI  
UA: Not in an urban area  
AQCR: North Central Wisconsin Intra-State

Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located near Lake DuBay in Marathon County. The sample inlet is 5.4 meters above ground level and 61 feet from nearest road. This is an Atmospheric Deposition Monitoring Site, National Trends Network. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting.

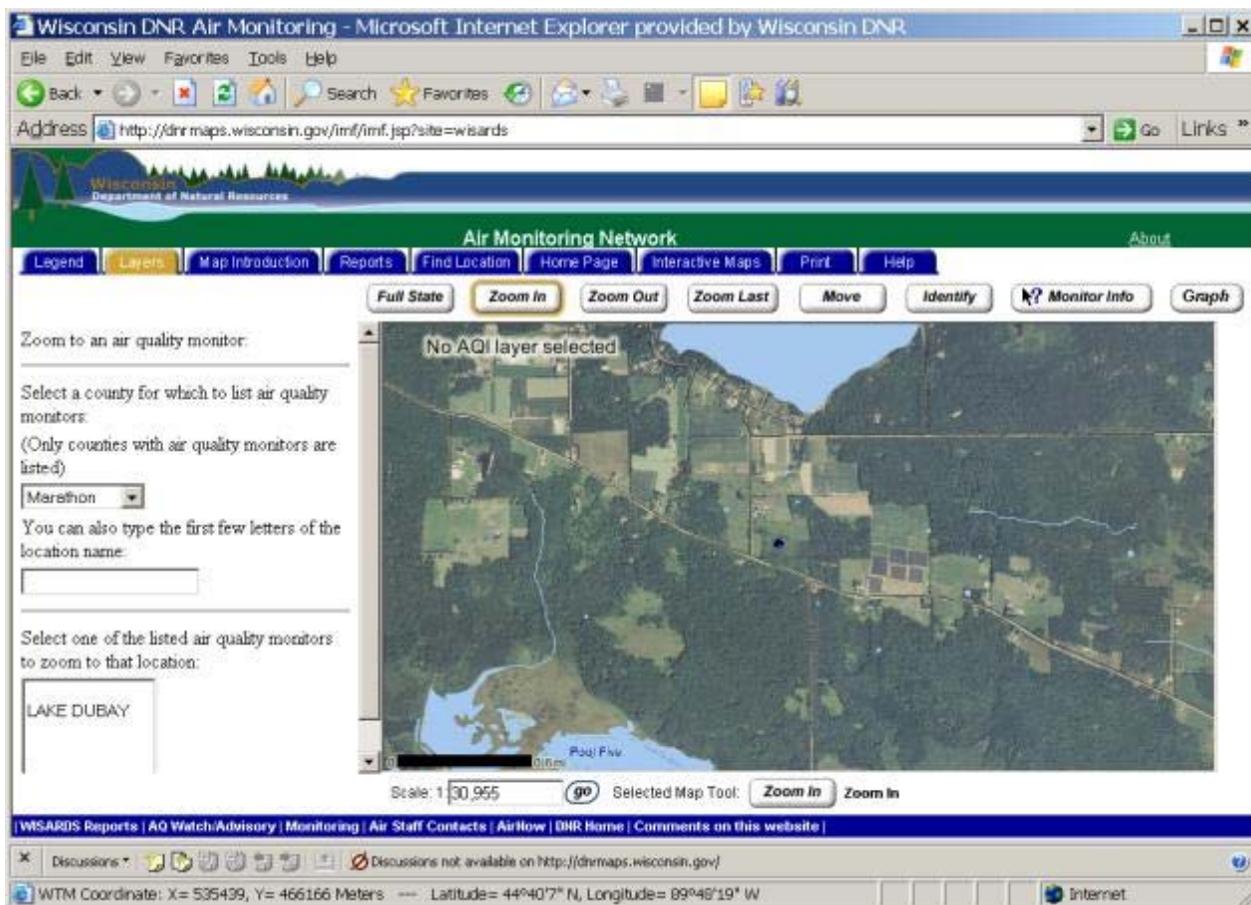
### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	09/25/1991
Wind speed/ direction. Temperature	Met One	SLAMS	Mechanical	continuous	10/08/1991

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents general/background on a regional scale for ozone.

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## Lake Geneva

AQS Site ID: 55-127-0005  
Location: RR4 Elgin Club Rd., Lake Geneva  
County: Walworth  
GPS coordinates: 42.580,  
 -88.499  
Date Established: 02/27/1987



CBSA: Whitewater, WI  
CSA:  
UA: Not in an urban area  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located on rural private property on the outskirts of the City of Lake Geneva. The sample inlet is 6 meters above ground level and 120 meters from nearest road. This is an Atmospheric Deposition monitoring site, National Trends Network, and Mercury Deposition Network site. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting.

### Monitors:

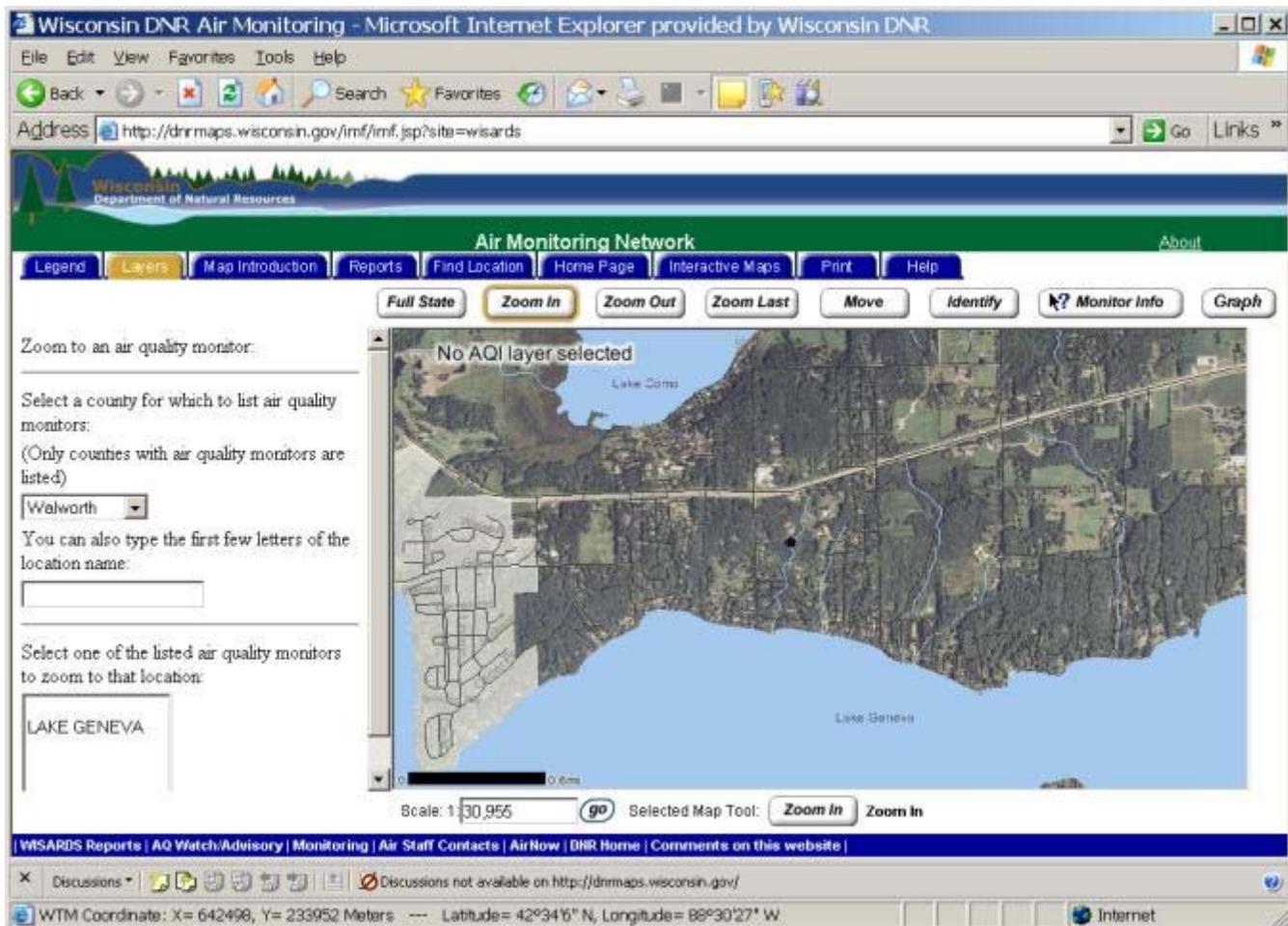
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	07/10/1987
Wind Speed/Direction. Temperature	Met One Meteorological	SLAMS	Mechanical	continuous	07/10/1987

NADP Site

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents population exposure on a regional scale for ozone.

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**Madison-East**

AQS Site ID: 55-025-0041  
Location: 2302 N Hoard St.,  
 Madison  
County: Dane  
GPS coordinates: 43.101,  
 -89.357  
Date Established: 4/15/1992

CBSA: Madison, WI  
CSA: Madison – Baraboo, WI  
UA: Madison, WI  
AQCR: Southern Wisconsin



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located next to the Madison East High School Sports Field. The sample inlet is 43 meters from nearest public road. (The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.)

Monitoring Objective: Population Exposure. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone and PM<sub>2.5</sub>, and to provide pollutant levels for daily air quality index reporting.

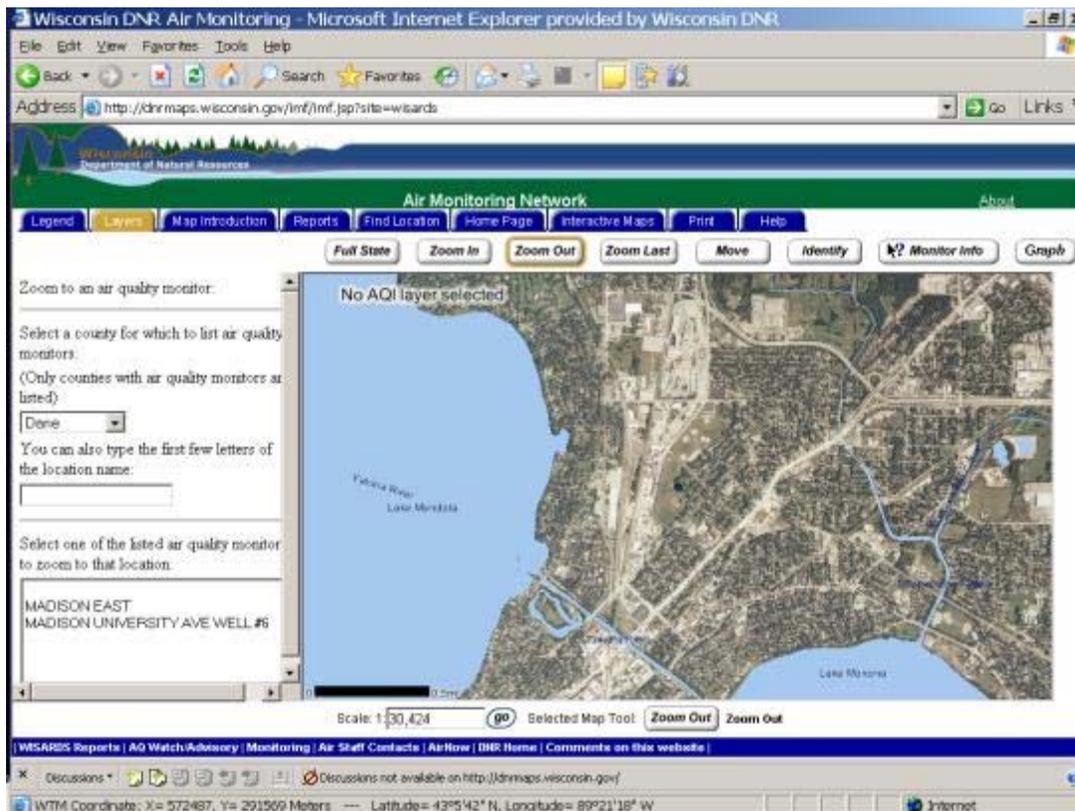
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/15/1992
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS-SCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous	08/15/2011 Discontinued 04/23/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	04/23/2012
PM <sub>2.5</sub>	R&P 2025 FRM	SLAMS	Gravimetric	1 in 6	04/02/2010
Met One	Qualimetrics Meteorological	SLAMS	Mechanical	continuous	02/01/2008

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

## 2014 Wisconsin Air Monitoring Network Plan

Area of Representativeness: This site represents population exposure on a neighborhood scale for ozone and PM<sub>2.5</sub>.



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**Madison University Ave. Well #6**

AQS Site ID: 55-025-0047  
Location: 2757 University Ave.,  
 Madison  
County: Dane  
GPS coordinates: 43.073,  
 -89.436  
Date Established: 03/01/1999  
  
CBSA: Madison, WI  
CSA: Madison – Baraboo, WI  
UA: Madison, WI  
AQCR: Southern Wisconsin



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located on top a City of Madison building. The sampler inlets are 12 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure. The monitoring objectives are to determine compliance with NAAQS and to detect elevated pollutant levels of PM<sub>2.5</sub> in a high population, high vehicle traffic area.

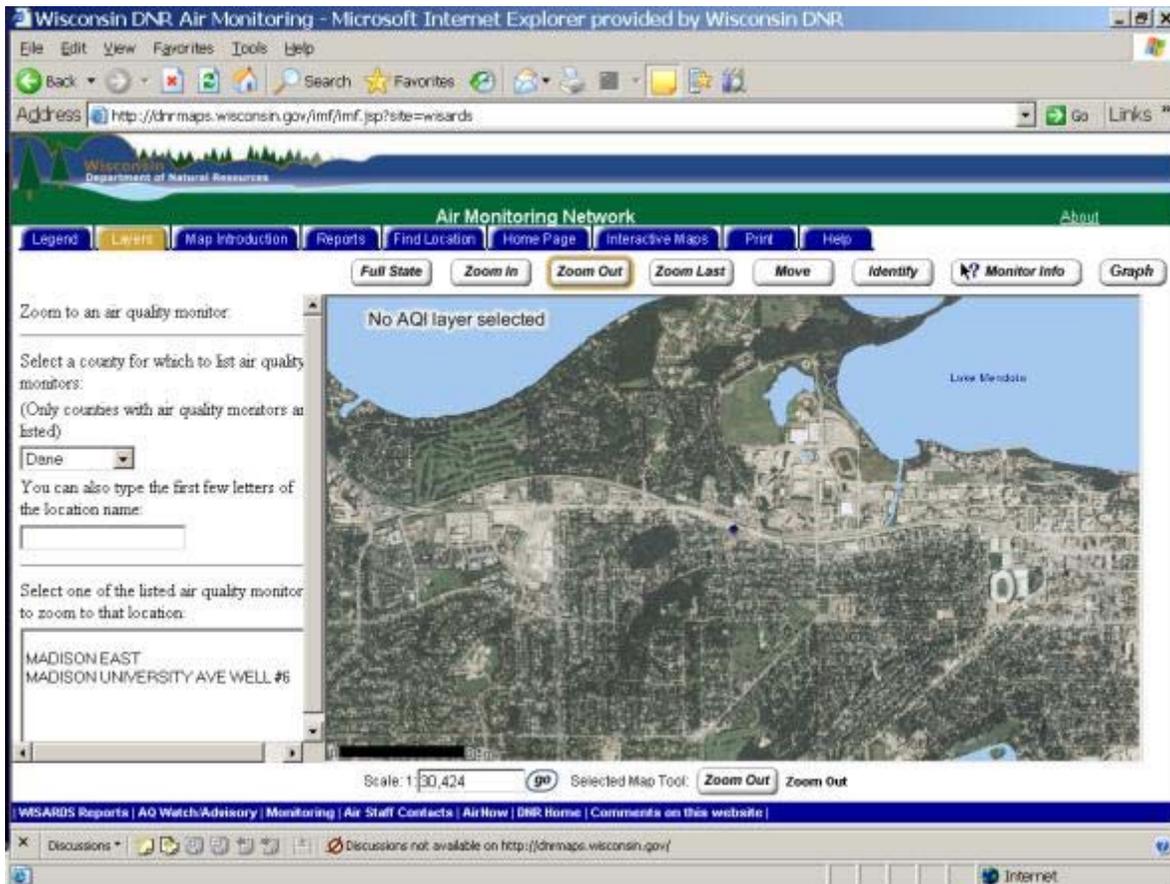
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
PM <sub>2.5</sub>	R&P FRM2025	SLAMS	Gravimetric	Daily	01/03/1999
PM <sub>10</sub>	Tisch High Volume PM <sub>10</sub>	SLAMS	Gravimetric	1 in 6	01/01/2008

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on a neighborhood scale for fine particles.

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## Manitowoc Woodland Dunes

AQS Site ID: 55-071-0007  
Location: 2315 Goodwin Road,  
 Two Rivers  
County: Manitowoc  
GPS coordinates: 44.138,  
 -87.616  
Date Established: 04/05/1994



CBSA: Manitowoc, WI  
CSA:  
UA: Not in an urban area  
AQCR: Lake Michigan Intra-State

Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located at the Woodland Dunes Nature Center & Preserve in Two Rivers. The sample inlet is 6 meters above ground level and 20 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Regional transport. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, NO<sub>y</sub>, NO<sub>2</sub>, and PM<sub>2.5</sub> and to provide pollutant levels for daily air quality index reporting. High Sensitivity NO<sub>y</sub> and NO<sub>2</sub> monitors only operate from June-August.

### Monitors:

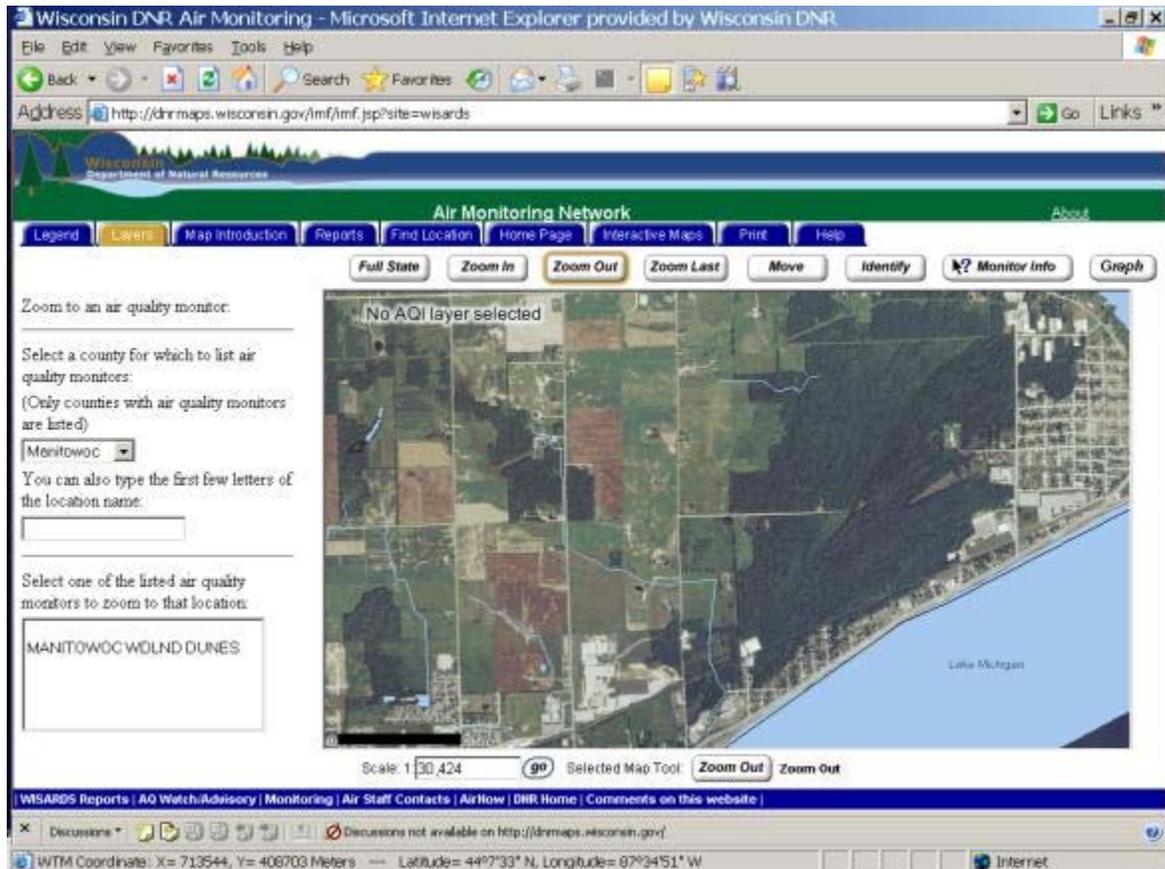
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Nitric Oxide (NO)	Teledyne API 200E	SLAMS, PAMS	Chemiluminescence	Continuous June - August	04/28/1995
	Teledyne API 200E			Collocated	06/01/2004
Nitrogen Dioxide (NO <sub>2</sub> )	Teledyne API 200E	SLAMS	Chemiluminescence	Continuous June - August	04/28/1995
Oxides of Nitrogen (NO <sub>x</sub> )	Teledyne API 200E	SLAMS, PAMS	Chemiluminescence	Continuous June - August	04/28/1995
Reactive Oxides of Nitrogen (NO <sub>y</sub> )	Teledyne API T200U	SLAMS, PAMS	Chemiluminescence	Continuous June - August	06/01/2004
NO <sub>y</sub> -NO	Teledyne API T200U	SLAMS, PAMS	Chemiluminescence	Continuous June - August	05/31/2011

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Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/05/1994
Wind Speed and Direction. Temperature	Met One	PAMS	Mechanical	Continuous	05/10/1995

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: This site represents regional transport on a regional scale for ozone, NO<sub>2</sub>, NO<sub>y</sub> and PM<sub>2.5</sub>.



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**Milwaukee–College Ave. Park & Ride**

AQS Site ID: 55-079-0058  
Location: 1550 W College Ave.  
County: Milwaukee  
GPS coordinates: 42.931  
 -87.932  
Date Established: 11/1/2009



CBSA: Milwaukee-Waukesha-West  
 Allis, WI  
CSA: Milwaukee-Racine-Waukesha,  
 WI  
UA: Milwaukee, WI

AQCR: Southeastern Wisconsin Intra-State

Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located near the I-94 exit ramp at College Avenue in the Park and Ride area. The trailer is 30 meters from nearest road. Given its proximity to a major interstate, this site is influenced by transportation pollution sources. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
PM <sub>2.5</sub>	R&P FRM2025	SLAMS	Gravimetric	1 in 3	11/03/2009
PM <sub>10</sub>	Tisch PM <sub>10</sub>	SLAMS	Gravimetric	1 in 6 Collocated 1 in 6	11/03/2009
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non- Regulatory	Beta Attenuation	Continuous	03/23/2010

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on a neighborhood scale.

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## Milwaukee – Fire Department HQ

AQS Site ID: 55-079-0099  
Location: 711 W. Wells St.  
County: Milwaukee  
GPS coordinates: 43.041  
 -87.925  
Date Established: 01/01/1970

CBSA: Milwaukee-Waukesha-  
 West Allis, WI  
CSA: Milwaukee-Racine-  
 Waukesha, WI  
UA: Milwaukee, WI

AQCR: Southeastern Wisconsin  
 Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network.

Locational Setting: This site is located on the top of a fire department. The monitor is 36.6 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
PM <sub>2.5</sub>	R&P FRM2025	SLAMS	Gravimetric	1 in 3	02/05/1999 Temporarily shutdown on 12/31/2009. Restarted 01/01/2012.

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on a neighborhood scale.

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**Milwaukee-Havenwoods – Site  
Discontinued February 2012**

AQS Site ID: 55-079-0052  
Location: 6141 N. Hopkins St.  
County: Milwaukee  
GPS coordinates: 43.129,  
 -87.971  
Date Established: 10/20/2006

CBSA: Milwaukee-Waukesha-West Allis, WI  
CSA: Milwaukee-Racine-Waukesha, WI  
UA: Milwaukee, WI  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located at the Havenwoods State Forest. The meteorological sensors are 143 feet from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: The monitoring objective is to provide meteorological data for educational purposes at the environmental center.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Wind Speed/Direction, Temperature	Met-One Meteorological	Non-Regulatory	Sonic	Continuous	11/06/2006 Discontinued 02/14/2012

Quality Assurance Status: All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: N/A

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**Milwaukee - Sixteenth St. Health Center**

AQS Site ID: 55-079-0010  
Location: Health Center, 1337 S. 16th St.  
County: Milwaukee  
GPS coordinates: 43.017, -87.933  
Date Established: 04/04/1997

CBSA: Milwaukee-Waukesha-West Allis, WI  
CSA: Milwaukee-Racine-Waukesha, WI  
UA: Milwaukee, WI  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located inside the Health Center Building on 16th and Greenfield. Sample inlets are 10 meters above ground level and 15 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population Exposure, Environmental Justice site. Monitoring site was requested by Health Care Center for Ozone Monitor to Study effects of ozone on Asthmatic Patients (children) in Area. Metals are also monitored with PM<sub>10</sub>. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting.

Monitors:

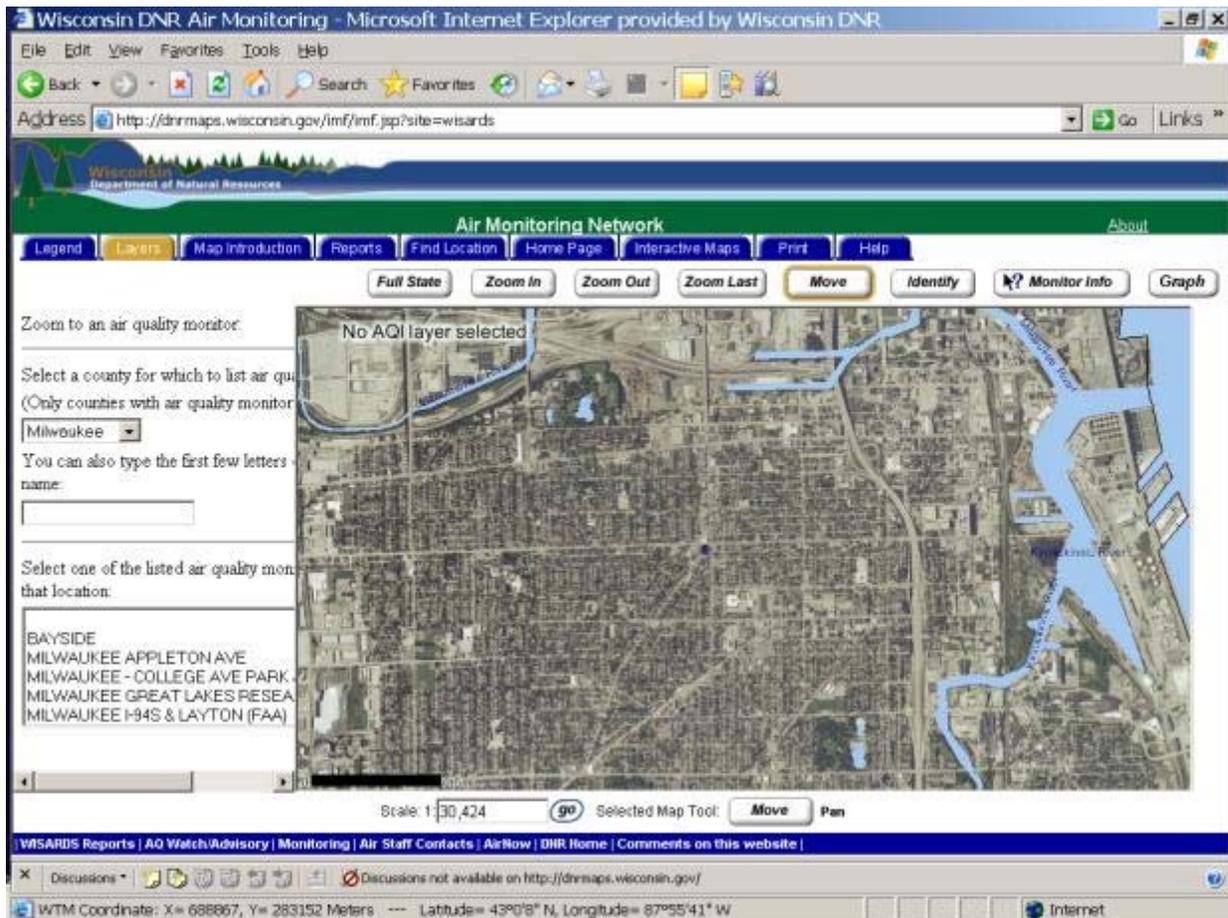
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	06/24/2003
Wind Speed/Direction . Temperature	Met One Meteorologica I	SLAMS	Mechanical	Continuous	06/24/2003
PM <sub>2.5</sub>	R&P 2025 FRM	SLAMS	Gravimetric	1 in 3	01/01/1999
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM -SCC	SLAMS	Beta Attenuation	Continuous	10/17/2012
PM <sub>10</sub>	Tisch PM <sub>10</sub>	UATM	Gravimetric	1 in 12	04/04/1997

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PM10/toxic metals	Tisch PM <sub>10</sub>	UATM	Inductively Coupled Plasma (ICP)-Mass Spectrometry (MS)	1 in 12	07/17/2007
VOCs and Carbonyls	Canister and Cartridge	UATM	Gas Chromatography (GC) – MS	1 in 12	02/01/2000
Polychlorinated Biphenyls (PCBs)	PUF Sampler	UATM	Gas Chromatography (GC) – ECD (Electron Capture Detector)	1 in 12 Collocated – 1 in 90	07/01/2010

**Quality Assurance Status:** All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

**Area of Representativeness:** This site represents population exposure on a neighborhood scale for ozone and PM<sub>2.5</sub>.



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## Milwaukee Southeast Region Headquarters (SER HQ)

AQS Site ID: 55-079-0026  
Location: DNR Southeast Region  
 Headquarters  
 2300 N. Martin Luther King  
 Blvd.,

County: Milwaukee  
GPS coordinates: 43.061,  
 -87.912

Date Established: 6/1/1999

CBSA: Milwaukee-Waukesha-West  
 Allis, WI

CSA: Milwaukee-Racine-Waukesha, WI

UA: Milwaukee, WI

AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located in the secured lot at the DNR Southeast Region headquarters building. Sample inlets are located 4 – 10 meters above ground level and 39 meters from nearest road. Standard NOX operates all year, High Sensitivity NOY began in 2001 operates only Jun-August. This is a PAMS site. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population Exposure, Maximum Precursor Emissions,  
 The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting.

### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	06/01/1999
Nitric Oxide (NO)	API NOX	SLAMS	Chemiluminescence	Continuous	06/24/1999
	TECO NOy 42			Collocated June-August	05/01/2004
Nitrogen Dioxide (NO2)	API NOX	SLAMS	Chemiluminescence	Continuous	06/24/1999
Oxides of Nitrogen (NOx)	API NOX	SLAMS	Chemiluminescence	Continuous	06/24/1999
Reactive Oxides of Nitrogen (NOy)	TECO NOy 42	SLAMS	Chemiluminescence	Continuous June - August	05/01/2004

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NO <sub>y</sub> -NO	TECO NO <sub>y</sub> 42	SLAMS	Chemiluminescence	Continuous June - August	05/24/2011
PM <sub>2.5</sub> Total Atmospheric	Met One Dual BAM -SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	08/19/2011
PM <sub>10</sub>	Met-One BAM	SLAMS	Beta Attenuation	Continuous	10/14/2010
PM Coarse	Met-One BAM – VSCC (10/14/2010 – 08/19/2011), SCC (08/19/2011 -)	SLAMS	Beta Attenuation	Continuous	10/14/2010
PM <sub>2.5</sub>	R&P 2025 FRM	SLAMS	Gravimetric	1 in 6 Collocated 1 in 12	01/01/1999 04/01/2004
Sulfur Dioxide (SO <sub>2</sub> )	SO <sub>2</sub> , High Sensitivity	SLAMS	UV fluorescence	Continuous - hourly	06/01/1996
Sulfur Dioxide (SO <sub>2</sub> )	SO <sub>2</sub> , High Sensitivity	SLAMS	UV fluorescence	Continuous – 5 min	01/01/2010
Volatiles & Carbonyls	Canisters & Cartridges	Unofficial PAMS	Gas Chromatography (GC) - Mass Spectrometry (MS)	1 in 6	01/01/1999
Wind Speed/Direction Temperature	Met One Metrological	SLAMS	Mechanical	Continuous	06/11/2002
PM <sub>2.5</sub> Species	Met-One Speciation	Urban	Gravimetric	1 in 3	12/13/2000

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on a neighborhood scale for ozone and PM<sub>2.5</sub>.

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**Milwaukee - UWM North (Planned to close in Fall 2013)**

AQS Site ID: 55-079-0041  
Location: UWM North Campus, 2114 E Kenwood Blvd., Milwaukee  
County: Milwaukee  
GPS coordinates: 43.075,  
 -87.884  
Date Established: 01/01/1973

CBSA: Milwaukee-Waukesha-West Allis, WI  
CSA: Milwaukee-Racine-Waukesha, WI  
UA: Milwaukee, WI  
AQCR: Southeastern Wisconsin Intra-State



Site Approval Status Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located inside the day care center at the University of Wisconsin, Milwaukee. This is also a Mercury Deposition Network site. The sample inlet is 7 meters above ground level and 76 feet from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure. The monitoring objectives are to measure mercury continuously in an urban setting as well as collect data on the chemistry of precipitation for monitoring of geographical and temporal long-term trends. Ozone was measured at this site previously.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Mercury	Tekran	State Toxics	Cold vapor atomic fluorescence spectrometry	Continuous	01/29/2004
Wind Speed/Direction Temperature	Met One Meteorological	SPM	Mechanical	Continuous	01/01/1974

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents a neighborhood scale.

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**Newport Park**

AQS Site ID: 55-029-0004  
Location: 475 CTH NP, Newport  
 State Park Ellison Bay  
County: Door  
GPS coordinates: 45.237  
 -86.993  
Date Established: 04/15/1989  
  
CBSA: None  
CSA:  
UA: Not in an urban area  
AQCR: Lake Michigan Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located inside the Newport State Park. The sample inlet is 12 meters above ground level and 400 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Regional Transport. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/15/1989
Wind Speed/ Direction Temperature	Met One	SLAMS	Mechanical	continuous	04/15/1989

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents regional transport on a regional scale for ozone.

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## Perkinstown

AQS Site ID: 55-119-8001  
Location: W10746 CTY Rd. M  
County: Taylor  
GPS coordinates: 45.207  
 -90.597  
Date Established: 01/01/1988

CBSA: None – Rural site  
AQCR: Northwest Wisconsin Duluth,  
 Minnesota Interstate



Site Approval Status Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located on private property 1 mile east of the town of Perkinstown. The PM<sub>2.5</sub> Speciation site (1 in 6) was est. in Dec. 2001, with continuous PM<sub>2.5</sub> in Nov. 2003 to fill a gap in north-central WI for regional PM<sub>2.5</sub> mapping effort. Also, this site is a NTN site. The sample inlet is 3 meters above ground level and 100 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

This is also a CASTnet monitoring site with the US EPA as the sponsoring agency as well as a National Atmospheric Deposition and National Trends Network.

Monitoring Objective: Welfare related. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of PM<sub>2.5</sub> and to provide pollutant levels for daily air quality index reporting.

### Monitors:

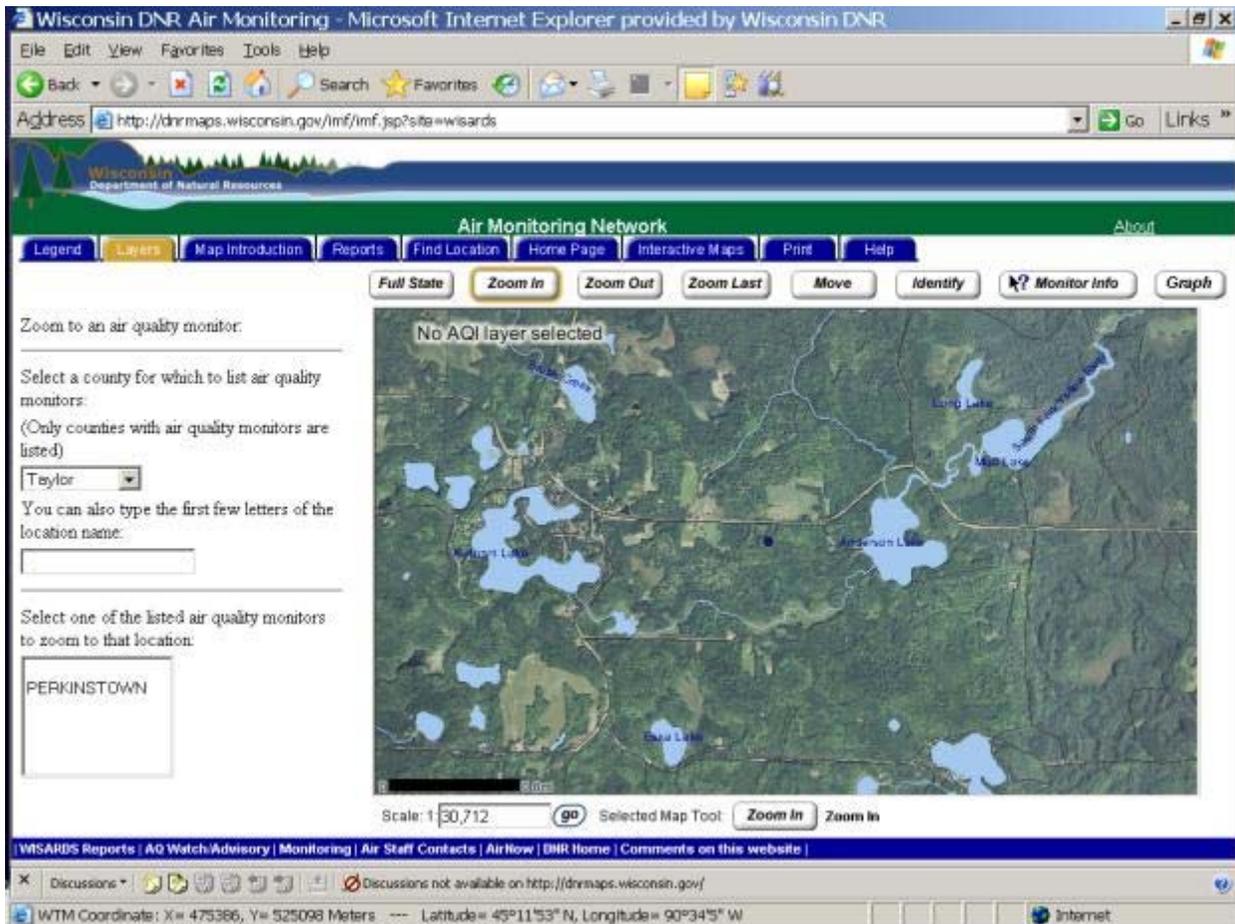
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
PM <sub>2.5</sub>	R&P FRM2025	SLAMS	Gravimetric	1 in 6	05/03/2003
PM <sub>2.5</sub> Total Atmospheric	R&P TEOM/FDMS-VSCC	SPM & Non-Regulatory	Tapered Element Oscillating Microbalance	Continuous	11/21/2003 Discontinued 02/22/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met-One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	02/22/2012
PM <sub>2.5</sub> Species	Met-One Speciation	SPM	Gravimetric	1 in 6	12/01/2001

Quality Assurance Status: All Quality Assurance procedures have been implemented in

## 2014 Wisconsin Air Monitoring Network Plan

accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents welfare related on a regional scale for PM<sub>2.5</sub>.



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## Popple River

AQS Site ID: 55-037-0001  
Location: Highway 101, Florence  
County: Florence  
GPS coordinates: 45.796  
-88.401  
Date Established: 05/08/1987

CBSA: Iron Mountain, MI-WI  
AQCR North Central Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located at the fire site #565 on highway 101 in Florence. The sample inlet is 5 meters above ground level and 215 feet from nearest road. This is an Atmospheric Deposition Monitoring Site, National Trends Network and Mercury Deposition Network. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

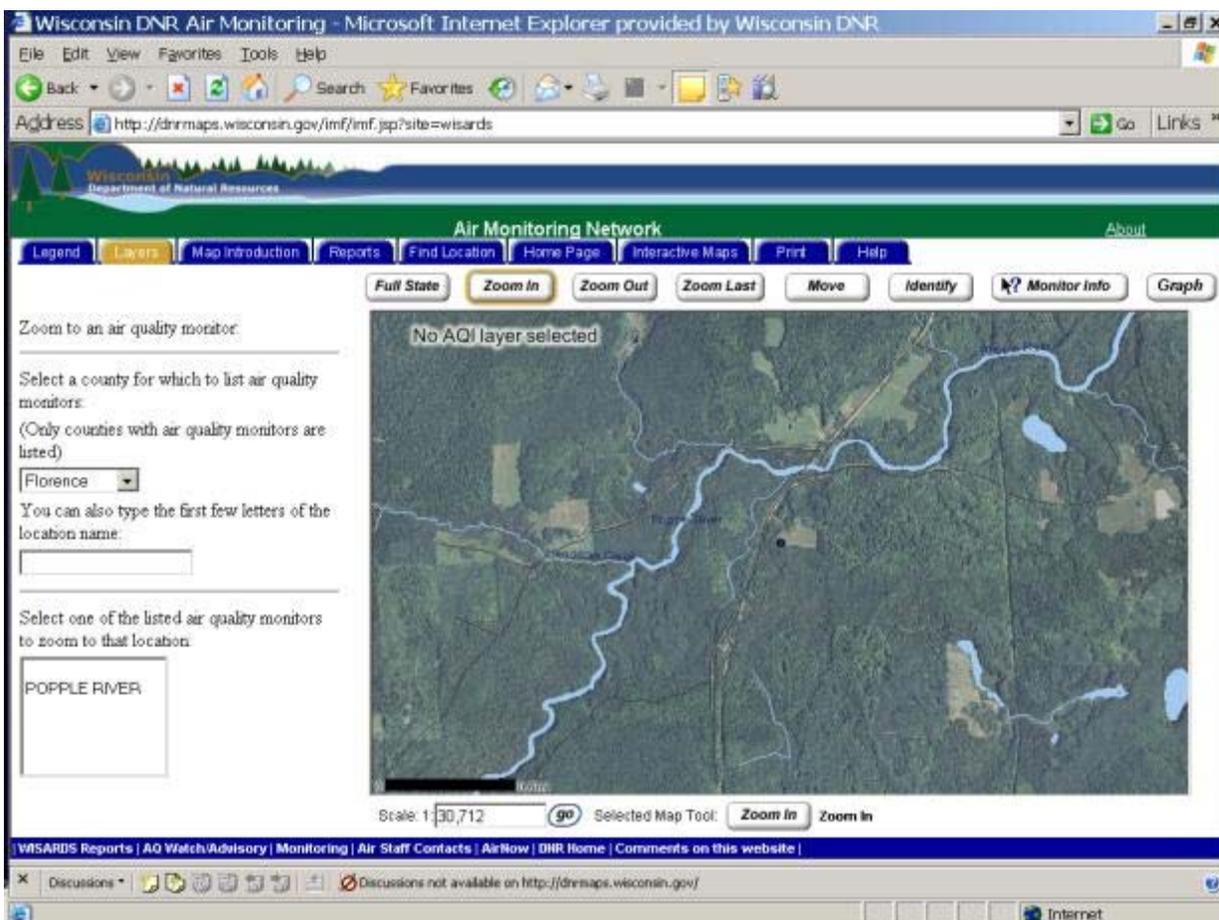
Monitoring Objective: The purpose of the network is to collect data on the chemistry of precipitation for monitoring of geographical and temporal long-term trends.

Monitors: Wet Deposition

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on a regional scale for ozone

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## Potawatomi

AQS Site ID: 55-041-0007  
Location: Fire Tower Rd.  
County: Forest  
GPS coordinates: 45.565  
 -88.809  
Date Established: 01/15/2004

CBSA: None  
CSA:  
UA: Not in an urban area  
AQCR: North Central Wisconsin Intra-State



Site Approval Status: Site and monitor meets all design criteria for the monitoring network.

Locational Setting: This tribal site is located on the Forest County Potawatomi community reservation. The sample inlet is 215 feet from nearest road. This site monitors Atmospheric Deposition, National Trends Network and Mercury Deposition. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: General Background. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and to provide pollutant levels for daily air quality index reporting.

### Monitors:

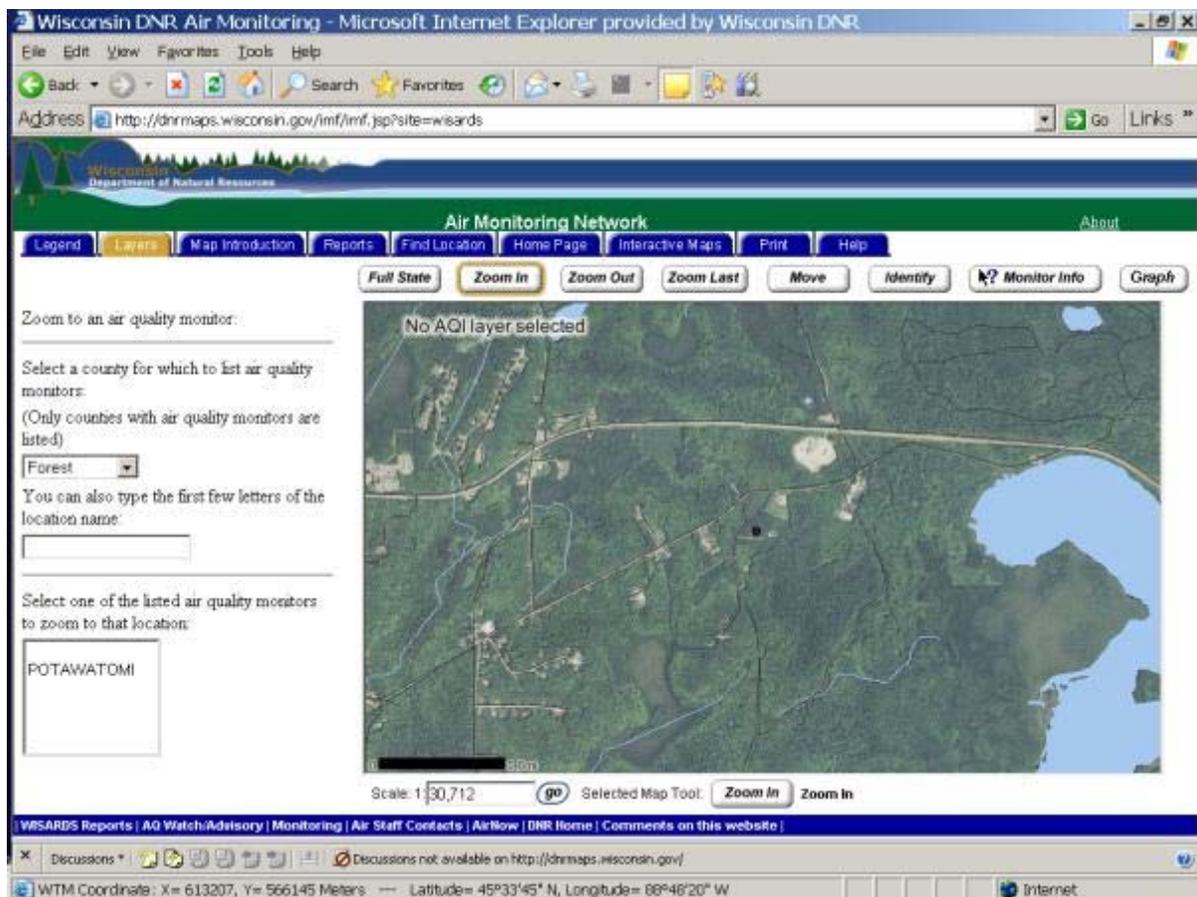
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	Tribal	UV Photometry	Continuous	01/07/2004
Sulfur Dioxide	API SO2	Tribal	UV Photometry	Continuous	01/07/2004
Sulfur Dioxide	API SO2	Tribal	UV Photometry	Continuous – 5 min	01/01/2010
PM <sub>2.5</sub>	R&P 2000	Tribal	Gravimetric	1 in 6 Collocated	02/01/2004 Discontinued 06/30/2010
PM <sub>2.5</sub>	Met One BAM-VSCC	Tribal	Beta Attenuation	Continuous	01/31/2011 Discontinued 02/09/2012
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	Tribal	Beta Attenuation	Continuous	02/09/2012
Nitric Oxide (NO)	API NOX	Tribal	Chemiluminescence	Continuous	02/23/2010

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Nitrogen Dioxide (NO <sub>2</sub> )	API NOX	Tribal	Chemiluminescence	Continuous	02/23/2010
Oxides of Nitrogen (NO <sub>x</sub> )	API NOX	Tribal	Chemiluminescence	Continuous	02/23/2010
Wind Speed,/Direction, Temperature, Solar Radiation, Relative Humidity	Qualimetrics	Tribal	Mechanical	Continuous	05/07/2008
Mercury	Tekran	Tribal	Cold Vapor Atomic Fluorescence	Continuous	01/01/2007

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents general background on a regional scale for ozone and PM<sub>2.5</sub>.



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**Potosi**

AQS Site ID: 55-043-0009  
Location: 128 Hwy 61, Potosi Township  
County: Grant  
GPS coordinates: 42.693  
 -90.698  
Date Established: 01/06/1999

CBSA: None – Rural site  
CSA:  
UA: Not in an urban area  
AQCR: Southwestern Wisconsin  
 Metropolitan Dubuque, Iowa  
 Interstate



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located in Tennyson at the Potosi High School grounds. The sample inlet is 5 meters above ground level and 100 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Regional transport. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of PM<sub>2.5</sub>.

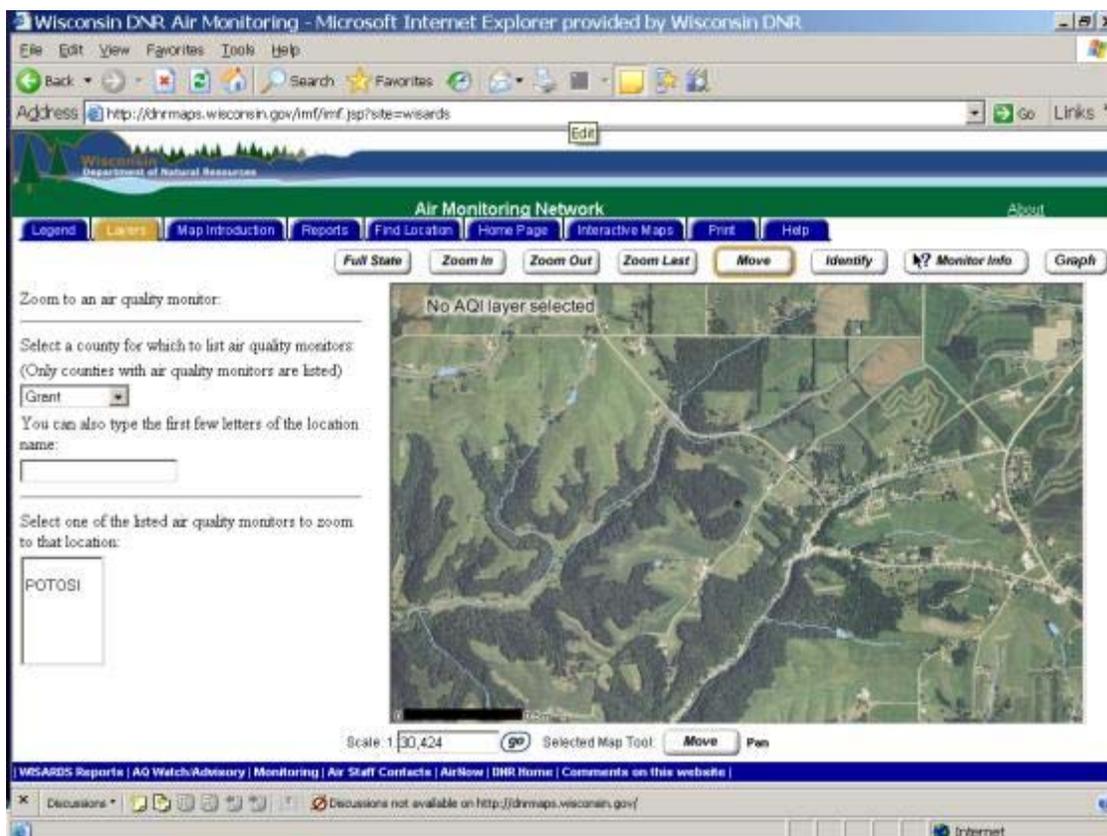
Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
PM <sub>2.5</sub>	R&P FRM 2025	SLAMS	Gravimetric	1 in 3	01/06/1999
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	11/01/2011
Wind Speed/Direction. Temperature	Met-One Meteorological	SLAMS	Mechanical	Continuous	09/26/2011

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents regional transport on a regional scale for PM<sub>2.5</sub>.

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**Racine**

AQS Site ID: 55-101-0017  
Location 1519 Washington Ave.  
County: Racine  
GPS coordinates: 42.714  
 -87.799  
Date Established: 01/01/1977



CBSA: Racine, WI  
CSA: Milwaukee-Racine-Waukesha  
UA: Racine, WI  
AQCR: Southeastern Wisconsin Intra-State

Site Approval Status Site and monitor meet all design criteria for the monitoring network



Locational Setting: This site is located inside a local business. The sample inlet is 11 meters above ground level and 48 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting.

Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Frequency of Sampling	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	08/26/1977
Wind Speed/Direction. Temperature	Met One Meteorological	SLAMS	Mechanical	Continuous	09/01/1977

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents population exposure on a neighborhood scale for ozone.

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## Rhineland Tower

AQS Site ID: 55-085-0996  
Location: 434 High St.  
County: Oneida  
GPS coordinates: 45.645  
 -89.418  
Date Established: 04/13/1981

CBSA: None  
CSA:  
UA: Not in an urban area  
AQCR: North Central Wisconsin  
 Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located next to the Rhineland Water Tower on Lake & High Streets. The sample inlet is 5 meters above ground level and 30.5 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Source Oriented. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of SO<sub>2</sub>, is a SIP requirement and to provide pollutant levels for daily air quality index reporting.

### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Sulfur Dioxide	API SO2	SLAMS	UV fluorescence	Continuous	04/14/1981
Sulfur Dioxide	API SO2	SLAMS	UV fluorescence	Continuous – 5 min	01/01/2010
Wind Direction/ Speed	Qualimetrics Meteorological	SLAMS	Mechanical.	Continuous	04/26/1981

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents source oriented monitoring on a neighborhood scale for SO<sub>2</sub>.

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The screenshot shows a web browser window titled "Wisconsin DNR Air Monitoring - Microsoft Internet Explorer provided by Wisconsin DNR". The address bar contains the URL <http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=wisards>. The page features a green header with the "Air Monitoring Network" title and navigation tabs for Legend, Layers, Map Introduction, Reports, Find Location, Home Page, Interactive Maps, Print, and Help. Below the header are several interactive buttons: Full State, Zoom In, Zoom Out, Zoom Last, Move, Identify, Monitor Info, and Graph. On the left side, there are form fields for user interaction: "Zoom to an air quality monitor:", "Select a county for which to list air quality monitors: (Only counties with air quality monitors are listed)" with a dropdown menu showing "Oneida", "You can also type the first few letters of the location name:" with a text input field, and "Select one of the listed air quality monitors to zoom to that location:" with a list box containing "HARSHAW FARM" and "RHINELANDER TOWER". The main area is a satellite map of a region in Wisconsin, showing a river and several lakes. A text overlay on the map reads "No AQI layer selected". At the bottom of the map, it shows "Scale: 1:30,424" and "Selected Map Tool: Move Pan". The footer of the browser window includes a navigation menu with links like "WISARDS Reports", "AQ Watch/Advisory", "Monitoring", "Air Staff Contacts", "Airflow", "DNR Home", and "Comments on this website". The status bar at the very bottom displays "WTM Coordinate: X= 558750, Y= 569705 Meters" and "Latitude= 45°35'59" N, Longitude= 89°30'11" W".

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## Sheboygan Kohler-Andre State Park

AQS Site ID: 55-117-0006  
Location: Nature Center of Kohler-Andre State Park, 1520 Beach Park Rd.  
County: Sheboygan  
GPS coordinates: 43.679,  
 -87.716  
Date Established: 06/26/1996



CBSA: Sheboygan, WI  
CSA:  
UA: Sheboygan, WI  
AQCR: Lake Michigan Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located inside the nature center along the shore of Lake Michigan at the Kohler-Andre State Park. The sample inlet is 6.4 meters above ground level and 482 meters from nearest service road and 747 meters from nearest public road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Regional transport. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of Ozone and to provide pollutant levels for daily air quality index reporting.

### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	06/26/1997
Wind Direction/ Speed, Temperature	Meteorological Met-One	SLAMS	Mechanical	Continuous	04/14/2001

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents regional transport on a regional scale for ozone.

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## Spoooner

AQS Site ID: None  
Location: Spooner Agricultural Research Station, Highway 70  
County: Washburn  
GPS coordinates: 45.822  
-91.874  
Date Established: 06/03/1980  
  
CBSA: None  
AQCR: North Central Wisconsin Intra-State



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site monitors National Atmospheric Deposition Program, National Trends Network.

Monitoring Objective: National Atmospheric Deposition Program, National Trends Network

Monitors: Wet Deposition

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with specifications of NADP.

Area of Representativeness: Regional background

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Wisconsin DNR Air Monitoring - Microsoft Internet Explorer provided by Wisconsin DNR

Address: <http://dnr.maps.wisconsin.gov/mf/mf.jsp?site=wisards>

Wisconsin Department of Natural Resources

**Air Monitoring Network**

Legend Layers Map Introduction Reports Find Location Home Page Interactive Maps Print Help

Full State Zoom In Zoom Out Zoom Last Move Identify Monitor Info Graph

**Zoom To Geographic**

Enter the geographic position where you wish to center the map and the width of the map that you wish to show, then press the "OK" button. The map will zoom to the extent that you entered. The position shown is the current map center.

Longitude (DMS):  
-91 52 26.00011

Latitude (DMS):  
45 49 19.00005

Select the zoom map width:  
10 kilometers

OK

Apr 20, 2010 4:00:00 PM OZONE and PM25

Scale: 1:30,054 Selected Map Tool: Zoom In Zoom In

WISARDS Reports | AQ Watch/Advisory | Monitoring | Air Staff Contacts | AirNow | DNR Home | Comments on this website

Discussions \* Discussions not available on <http://dnr.maps.wisconsin.gov/>

Done Internet

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## Superior STP

AQS Site ID: 55-031-0019  
Location: E. Avenue East  
County: Douglas  
GPS coordinates: 46.727  
 -92.072  
Date Established: 10/02/1980

CBSA: Duluth, MN-WI  
AQCR: Northwest Wisconsin-Duluth,  
 Minnesota Interstate



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site is located in a field at the Sewage Treatment Plant along the St. Louis River waterfront. Meteorology is measured at 17 meters above ground level. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

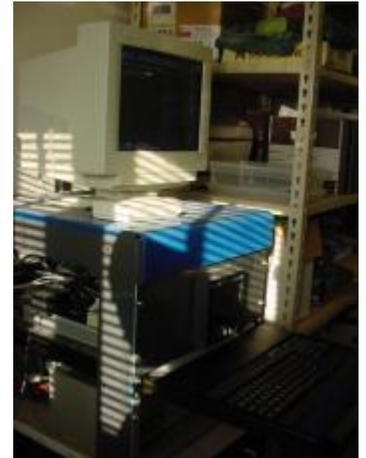
Monitoring Objective: Source oriented. This site supports permit-required monitoring for particles for multiple sites in the waterfront area.

Monitors:

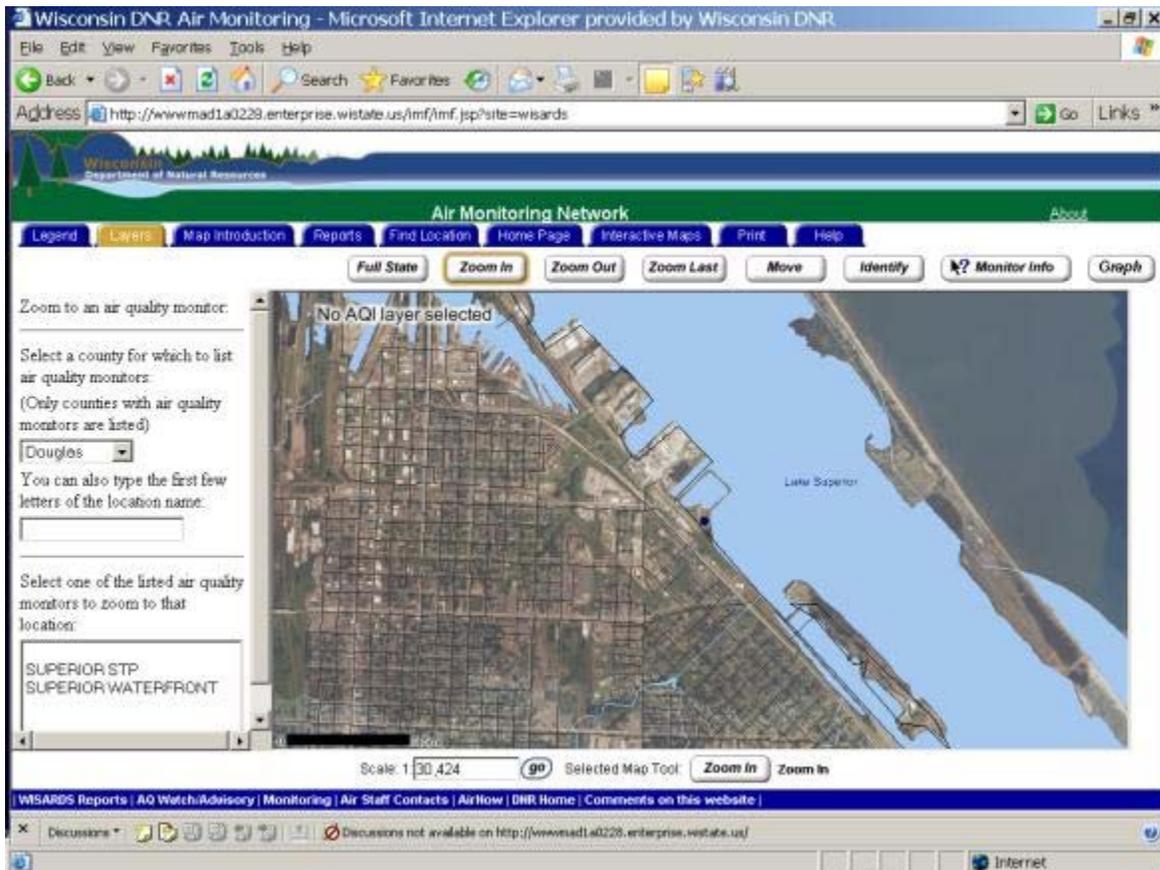
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Wind Direction/Speed Temperature	Met One	SPM	Mechanical	Continuous	10/02/1980

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

Area of Representativeness: Source on a neighborhood scale.



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## Suring

AQS Site ID: None  
Location: 10360 Big Eddie Ln.  
County: Oconto  
GPS coordinates: 45.053  
-88.372  
Date Established: 1/23/85

CBSA: none  
AQCR: Lake Michigan Intra-state



Site Approval Status: Site and monitor meet all design criteria for the monitoring network

Locational Setting: This site monitors National Atmospheric Deposition. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

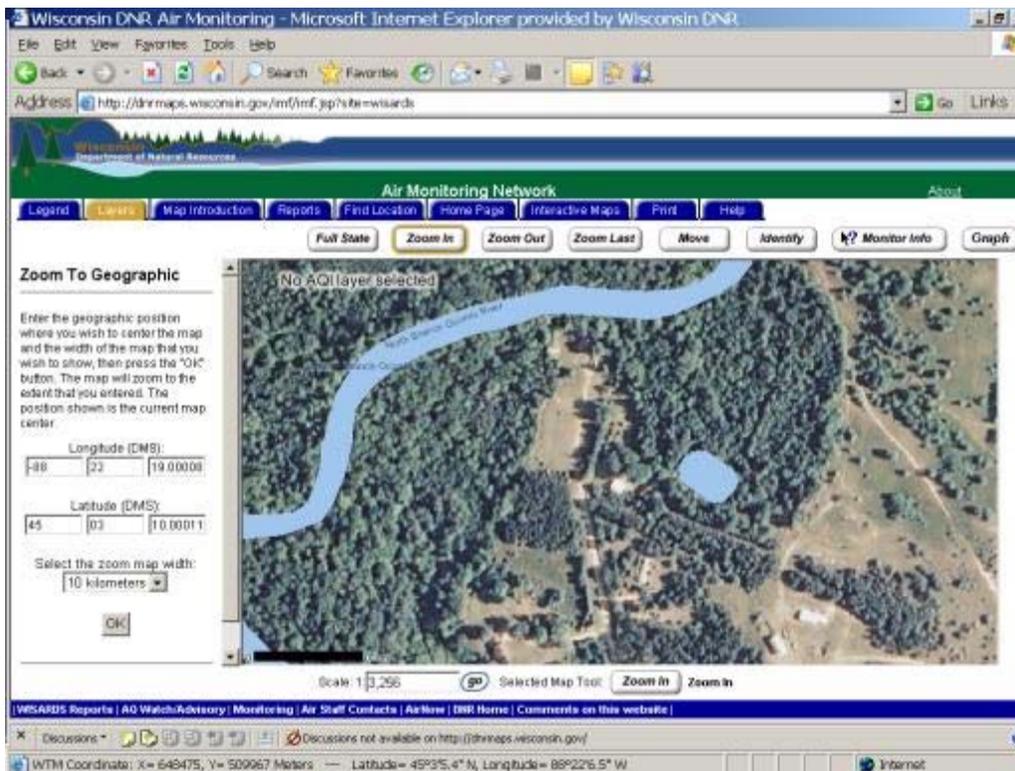
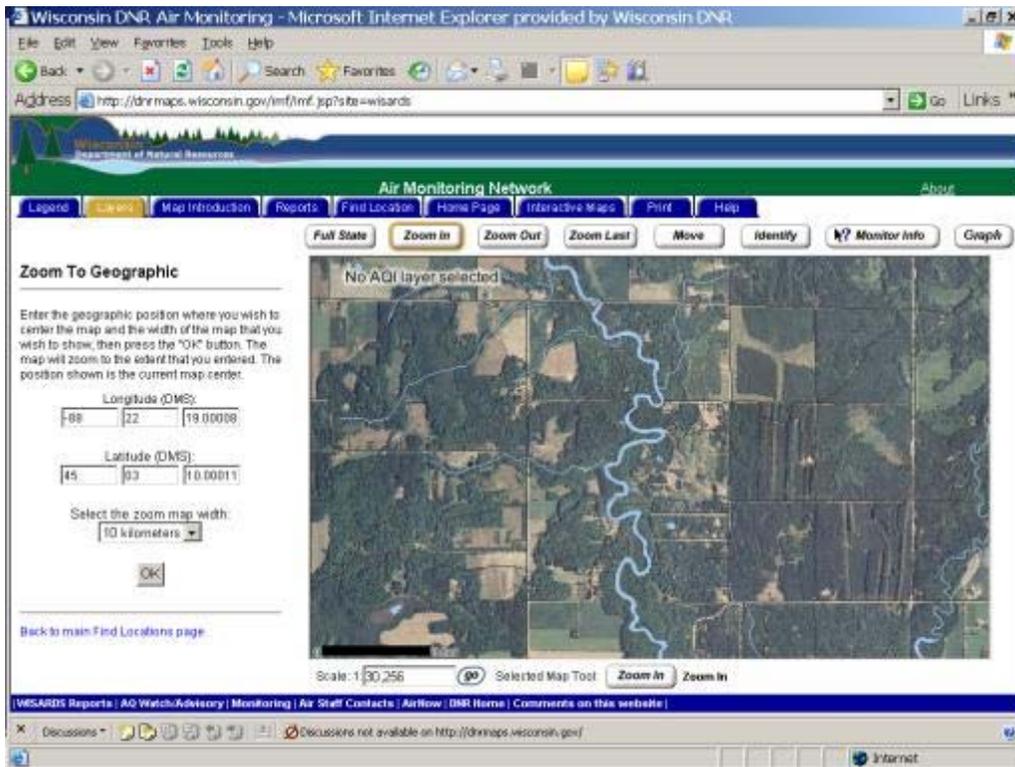
Monitoring Objective: The purpose of the network is to collect data on the chemistry of precipitation for monitoring of geographical and temporal long-term trends.

Monitors: Wet Deposition

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: Regional background

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## Trout Lake

AQS Site ID: 55-125-0001  
Location: 10810 County Hwy M  
County: Vilas  
GPS coordinates: 46.052  
 -89.653  
Date Established: 01/01/1973

CBSA: None – Rural Site  
AQCR: North Central Wisconsin Intra-State

Site Approval Status: Site and monitor does not meet all design criteria for the monitoring network due to probe height above 60 feet

Locational Setting: This site is located in a field at the DNR Forestry Site on County M, Boulder Junction. The sample inlets are 3.2 (PM<sub>2.5</sub>) and 116.8 (Ozone) meters above ground level and 122 meters from nearest road. This site monitors Atmospheric Deposition, National Trends Network and Mercury Deposition. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: General background. The monitoring objectives are to determine compliance with NAAQS to detect elevated pollutant levels of ozone and to provide pollutant levels for daily air quality index reporting.

Monitors:

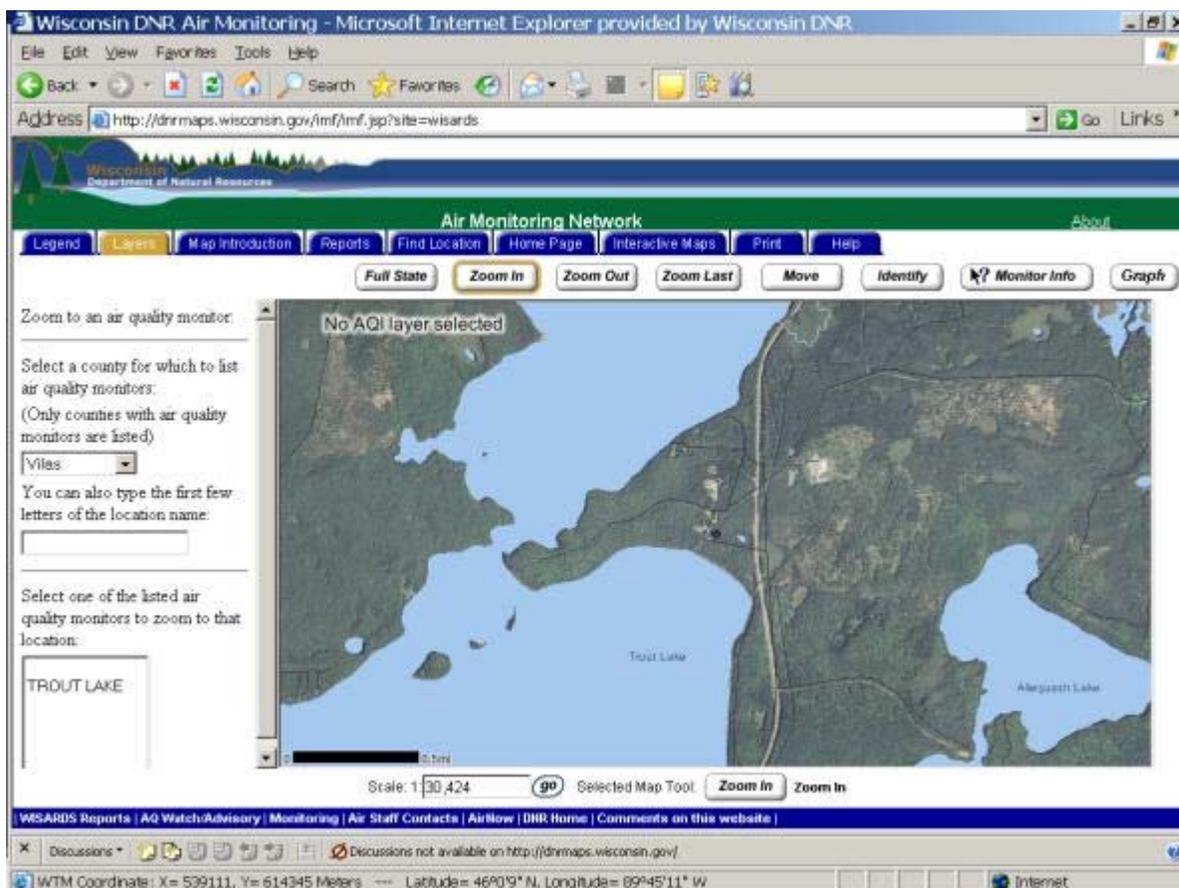
Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	12/16/1992
PM <sub>2.5</sub>	R&P 2025	SLAMS	Gravimetric	1 in 6	01/01/1999

Quality Assurance Status: All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: This site represents general/background on a regional scale for ozone and PM<sub>2.5</sub>.



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## Waukesha - Cleveland Avenue

AQS Site ID: 55-133-0027  
Location: 1310 Cleveland Ave. Waukesha  
County: Waukesha  
GPS coordinates: 43.020  
 -88.215  
Date Established: 02/03/1989

CBSA: Milwaukee-Waukesha-West Allis, WI

AQCR: Southeastern Wisconsin Intra-State



Site Approval Status: Site and monitors meet all design criteria for the monitoring network.

Locational Setting: This site is located in a fenced-in area on a city lot in Waukesha County. The sample inlets are 5 - 5.4 meters above ground level and 6 meters from nearest road. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

Monitoring Objective: Population exposure. The monitoring objectives are to determine compliance with NAAQS, to detect elevated pollutant levels of ozone, and PM<sub>2.5</sub> and to provide pollutant levels for daily air quality index reporting.

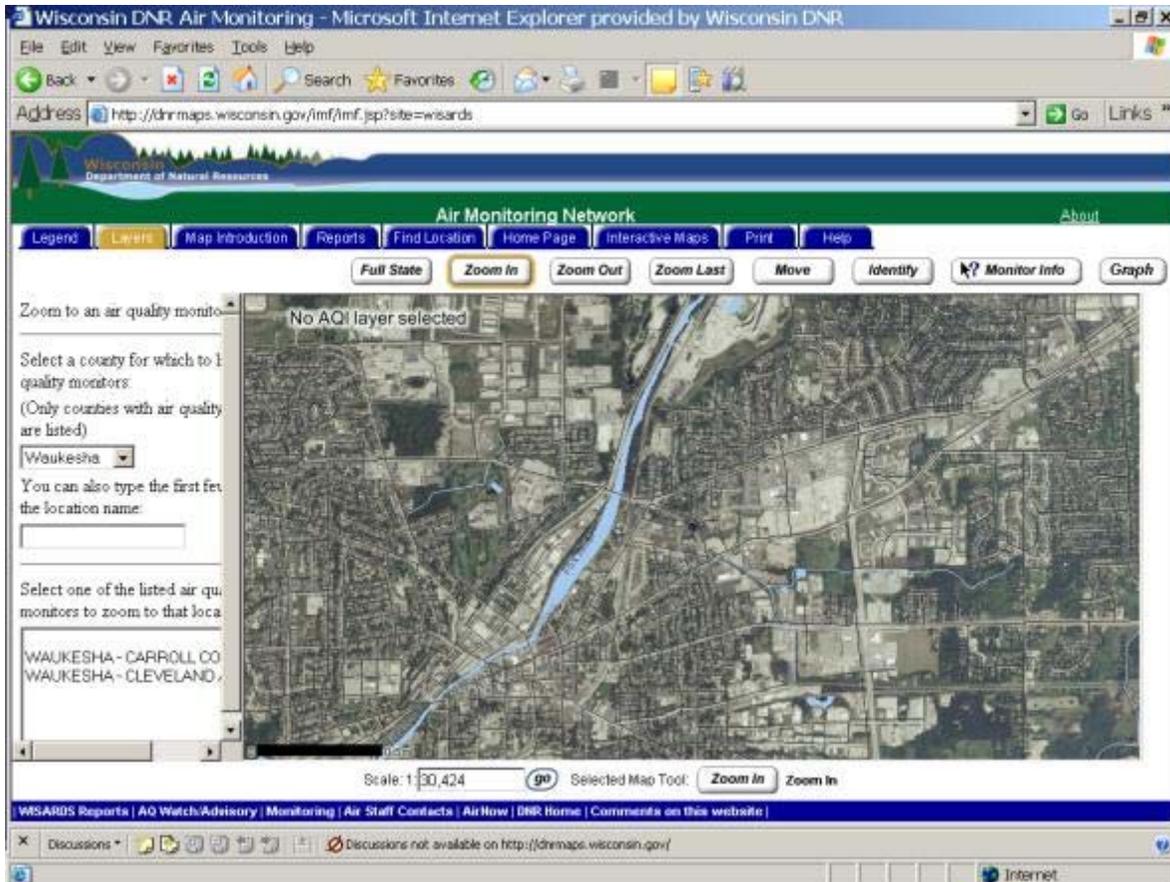
### Monitors:

Monitor	Monitor Equipment	Designation	Analysis Method	Sampling Frequency	Monitor Est.
Ozone	Teledyne API	SLAMS	UV Photometry	Continuous	04/27/2004
Acceptable PM <sub>2.5</sub> AQI & Speciation Mass	Met One BAM-SCC	SPM & Non-Regulatory	Beta Attenuation	Continuous	09/26/2011
PM <sub>2.5</sub>	R&P 2025 FRM	SLAMS	Gravimetric	1 in 3	01/01/1999
PM <sub>2.5</sub> Species	Met One Speciation	SLAMS	Gravimetric	1 in 6	01/01/1998
PM <sub>10</sub>	Anderson HI-VOL	Other	Gravimetric	1 in 6	02/03/1989
Wind Speed/Direction. Temperature	Met One Meteorological	SLAMS	Mechanical	Continuous	03/17/2004

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**Quality Assurance Status:** All quality assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area of Representativeness:** This site represents population exposure on a neighborhood scale for ozone and fine particles.



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## Wildcat Mountain State Park

AQS Site ID: 55-123-0008  
Location: Wildcat Mountain State Park , Hwy 33, Ontario  
County: Vernon  
GPS coordinates: 43.702  
-90.568  
Date Established: 3/20/1990  
  
CBSA: None – Rural Site  
AQCR: Southeast Minnesota-La Crosse

### Locational Setting:

This site monitors National Atmospheric Deposition. The site meets the requirement of 40 CFR 58, Appendices C, D, E and G.

### Monitoring Objective:

The purpose of the network is to collect data on the chemistry of precipitation for monitoring of geographical and temporal long-term trends.

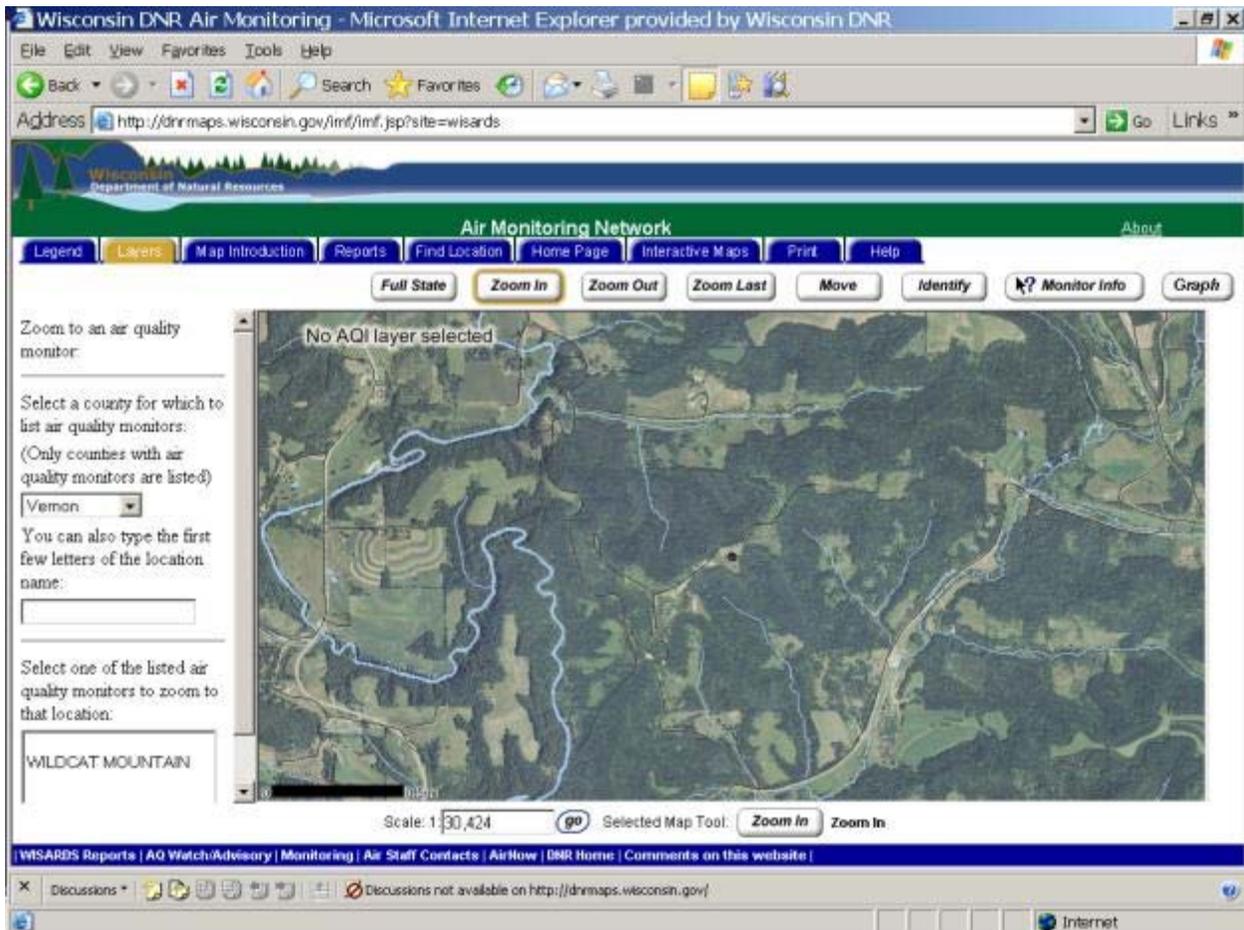
Monitors: Wet Deposition

### Quality Assurance Status:

All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A

Area of Representativeness: Regional background

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**Appendix A: Industrial Sites**

<b>AQS Site ID</b>	<b>County</b>	<b>Facility</b>	<b>Pollutants</b>
55-005-1001	Barron	Superior Silica Sands - New Auburn	PM <sub>10</sub>
55-005-1002	Barron	Great Northern Sand	PM <sub>10</sub>
55-005-1003	Barron	Superior Sand and Gravel - Barron	PM <sub>10</sub>
55-017-0100	Chippewa	EOG - Canadian Sands	PM <sub>10</sub>
55-017-1001	Chippewa	Chippewa Sand Co	PM <sub>10</sub>
55-021-0019	Columbia	Didion Milling	TSP
55-025-1005	Dane	Charter Street	PM <sub>10</sub> (continuous) & SO <sub>2</sub>
55-031-0011	Douglas	Midwest Energy	TSP
55-031-0014	Douglas	Midwest Energy	TSP
55-031-0023	Douglas	BNSF-Railroad	TSP
55-031-0027	Douglas	Midwest Energy	TSP
55-031-0035	Douglas	Cenex Harvest States	TSP
55-031-0036	Douglas	Cenex Harvest States	TSP
55-031-0037	Douglas	Hallet Dock	TSP
55-031-1038	Douglas	Midwest Energy	TSP
55-053-1001	Jefferson	Taylor Frac	PM <sub>10</sub>
55-081-1001	Monroe	Will Logisitcs dba Smart Sands	PM <sub>10</sub>
55-081-1002	Monroe	US Silica	PM <sub>10</sub>
55-081-1003	Monroe	Unimin - Curran Site #1	PM <sub>10</sub>
55-081-1004	Monroe	Unimin - Rouse Site #2	PM <sub>10</sub>
55-081-1005	Monroe	Unimin - Basin Site #3	PM <sub>10</sub>
55-133-0039	Waukesha	MetalTek International Wisconsin Centrifugal	PM <sub>10</sub>
55-005-1003	Barron	Superior Silica Sands - Almena	PM <sub>10</sub>
55-121-XXXX*	Trempealeau	Preferred Sands	PM <sub>10</sub>
55-005-XXXX*	Barron	Chieftain Sand and Propant	PM <sub>10</sub>

\* Site ID hasn't been assigned yet.

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## Appendix B: Methods Summaries

**Particulate Matter 10 microns in size, PM<sub>10</sub>** FRM samplers are operated according to the requirements set forth in 40 CFR 50 and 40 CFR 53. Filter-based samples are collected with a high-volume sampler followed by weighing in an analytical laboratory. Sample concentration is derived by the difference in weight in a laboratory under standard conditions. The Air Monitoring program operates four continuous monitors at three sites that determines hourly concentrations using a beta attenuation monitor.

**Particulate Matter 2.5 microns in size (PM<sub>2.5</sub>) Federal Reference Method (FRM)** With the exception of continuous samplers, all fine particle samplers operated by the Air Monitoring Section are certified as FRM samplers. All manual samplers are operated per the requirements set forth in 40 CFR 50; Appendix L. Samples are collected on 46.2mm PTFE filters over a 24-hour sampling period. Air flow through the filter is maintained at 16.7 liters per minute. The flow rate must not vary more than +/-5% for five minutes over a 24-hour sample period at actual ambient temperature and pressure. Samples must be retrieved within 177 hours of the end of the sample run and must be kept cool (4 °C or cooler) during transit to meet the thirty day limit for re-weighing. The PTFE filters are to be equilibrated before each weighing for minimum of 24 hours at a controlled atmosphere of 20-23 °C mean temperature and 30-40% mean relative humidity. Filters must be used within thirty days of initial weighing. Filters must be re-weighed within thirty days of the end of the sample run and must be kept at 4 °C or cooler. The gain in weight in relation to the volume of air sampled is calculated in micrograms per cubic meter (µg/m<sup>3</sup>).

**PM<sub>2.5</sub> Continuous Sampling (non-FEM)** Continuous PM<sub>2.5</sub> samplers provide hourly average sample concentrations for AQI reporting. The continuous fine particle samplers operated by the Air Monitoring Program are Beta Attenuation Monitors (BAMs). Data are transmitted by telemetry for entry into the automated central data acquisition system (WISARDS).

**PM<sub>2.5</sub> Speciation sampling and analysis** In addition to operating PM<sub>2.5</sub> samplers that determine only PM<sub>2.5</sub> mass values, WDNR also operates PM<sub>2.5</sub> speciation samplers that collect samples that are analyzed to determine the chemical composition of PM<sub>2.5</sub>. Samples are collected on a set of three filters over a calendar-day 24-hour sampling period. The individual filters are composed of different media in order to collect specific types of toxic pollutants. After collection, the samples are shipped in ice chests to an EPA contract laboratory for analysis. At the laboratory the samples are analyzed, using optical and electron microscopy, thermal optical analysis, ion chromatography and x-ray fluorescence to determine the presence and level of specific toxic compound. Sample results are entered in the AQS data system.

**Sulfur Dioxide** Instruments used to continuously monitor sulfur dioxide levels in the atmosphere employ the UV fluorescence method. The continuous data output from the instrument is transmitted by telemetry for entry into an automated central data system. Calibration of these instruments is done dynamically using certified gas mixtures containing a known concentration of sulfur dioxide gas. This gas is then diluted in a specially designed apparatus to give varying known concentrations of sulfur dioxide. These known

concentrations are supplied to the instruments, which are adjusted so that instrument output corresponds with the specific concentrations. Calibration curves are prepared for each instrument and each data point is automatically compared to this curve before entry into the data acquisition system.

**Carbon Monoxide** Continuous monitoring for carbon monoxide is performed by use of the non-dispersive infrared correlation method. Data is transmitted by telemetry for entry in an automated central data acquisition System. Calibration of the instrument is performed periodically by using nitrogen, or zero air, to establish the zero baseline and NIST or NIST-traceable gas mixtures of carbon monoxide in air. The span is checked daily at 4.5 ppm using a gas standard and dilution system.

**Ozone** Ozone is monitored using the UV photometry method. The continuous data output from the instrument is transmitted by telemetry for entry into an automated central data acquisition system. Monitors are verified routinely using an ozone transfer standard, which is calibrated using the ultra violet photometry reference method. Calibration curves are prepared for each instrument and each data point is automatically compared to this curve before entry into the data acquisition system.

**Nitrogen Dioxide** The chemiluminescence method is used in monitoring the nitrogen dioxide level in the ambient air. The continuous data output from the instrument is transmitted by telemetry for entry into an automated central data acquisition system. Calibration of these instruments is done dynamically using NIST certified gas mixtures of nitric oxide. Through the use of dilution apparatus, varying concentrations are produced and supplied to the monitors, thus producing a specific calibration curve for each instrument. Each data point is automatically compared to this curve before entry into the data acquisition system.

**Lead** In 2008, US EPA finalized changes to the sampling and analysis methods for the Pb monitoring network. Specifically, US EPA (1) continued using the current Pb-TSP Federal Reference Method (FRM, 40 CFR part 50 Appendix G), (2) finalized a new Federal Reference Method (FRM) for monitoring Pb in PM<sub>10</sub> (Pb-PM<sub>10</sub>) low-volume for limited situations where it will be permitted, (3) lowered the Pb concentration range required during Pb-TSP and Pb-PM<sub>10</sub> candidate Federal Equivalent Method (FEM) comparability testing, and (4) finalized changes to the quality assurance requirements for Pb monitoring.

**Mercury Ambient Air Monitoring** Cold vapor atomic fluorescence spectrometry is used to determine elemental gaseous mercury in ambient air at sub-nanogram per cubic meter levels. The analyzer uses a dual, ultra pure gold absorbent cartridge design that allows alternating desorption and sampling. The dual cartridge design results in continuous mercury sampling of the air stream. The continuous data output from the instrument is transmitted by telemetry for entry into a data acquisition system.

**Mercury and Atmospheric Deposition Monitoring Wet Deposition** Also known as NADP/MDN and NTN (National Atmospheric Deposition Program/ Mercury Deposition Network and National Trends Network), the objective of the MDN is to develop a national database of weekly concentrations of total mercury in precipitation and the seasonal and annual flux of total mercury in wet deposition. The data are used to develop information on spatial and seasonal trends in mercury deposited to surface waters, forested watersheds,

and other sensitive receptors.

Acid precipitation monitoring sites operate on a weekly sampling schedule. Cumulative precipitation events occurring during a seven-day period are collected in one container to represent a one-week sample. An Aerochem precipitation sampler and NN samplers are used to collect the sample. The principle of operation of the samplers is based on the use of a moisture sensor that activates an electrically driven movable container lid covering the “wet” container during dry periods and then is moved to uncover the “wet” container when precipitation occurs. The opening and closing of the lid for each precipitation event is indicated on a data logger providing the time and date of each event. At the end of each weekly sampling period, the sample bag/bottle in the “wet” container is removed and a new sample bag/bottle is installed.

Analysis of precipitation samples for total mercury and methylmercury is performed by Frontier Geosciences, Inc., Seattle WA. And the data are available on the web site <http://NADP.sws.uiuc.edu/sites/>. The national MDN began a transition network of 13 sites in 1995. Beginning in 1996, MDN became an official network in NADP with 26 sites in operation. Currently, over 350 sites are in operation nationwide.

**Air Toxics** Air toxic pollutants are determined in four categories: metals, volatile organic compound (VOC), semi volatile organic compounds (SVOC) and carbonyls.

- Metal samples are collected as either PM10 or TSP using high volume air sampling methods. Filter used include quartz (PM10) and glass fiber filters (TSP). The entire 8” by 10” filter is weighed before and after the sample run. The gain in weight in relation to the volume of air sampled is used to calculate the concentration in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). After weighing the filter is sectioned and a 1/24<sup>th</sup> piece is digested and then analyzed by inductively coupled plasma/mass spectrometer analysis to determine the concentration of metals in  $\text{ng}/\text{m}^3$ .
- Volatile organic Compounds (VOC) are collected as whole air samples in passivated stainless steel canisters. At the laboratory, an aliquot is removed from the canister, concentrated and then analyzed by gas chromatography with mass selective detection. VOCs are typically reported in units of ppb (parts per billion).
- Semivolatile organic Compounds (SVOC) are collected using high volume air sampling on a PS-1 sampler. The sampling media include a 100mm circular quartz filter backed by polyurethane foam plug. The plug may also be split to sandwich a layer of adsorbent resin. At the laboratory the media is solvent extracted with a soxhlet apparatus. The extract is cleaned and concentrated and analyzed by gas chromatography. Detection is with either a mass selection detector or with an electron capture detector. SVOCs are typically reported in units of  $\text{ng}/\text{m}^3$ .
- Carbonyls are collected on commercially prepared silica gel cartridges impregnated with diphenylhydrazine (DNPH). At the laboratory the cartridges are solvent extracted with acetonitrile and the extract is analyzed by high performance liquid chromatography. Detection is with UV spectrophotometry. Carbonyls are typically reported in units of  $\text{ug}/\text{m}^3$ .

Wisconsin State Laboratory of Hygiene Division for Environmental Services (DES) is the main analysis laboratory for Wisconsin’s air toxics monitoring program.

**Enhanced Ozone Monitoring (EOM) – Photochemical Assessment Monitoring (PAMS)**

Twenty-four hour canister and cartridge samples will be collected following the procedures in OP.11.0 of the Wisconsin Air Monitoring Handbook, Operation of the Automated Combination Canister and Cartridge Sampler. Three hour canister and cartridge samples will be collected following the procedures in OP.11.1 of the Wisconsin Air Monitoring Handbook, Operation of the Automated Multi-Port Canister and Cartridge Sampler. Copies of both operating procedures are included in the PAMS handbook.

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