

May 2026

2026 Minnesota Air Monitoring Site Descriptions

Draft 2027 Minnesota Air Monitoring Network Plan

2026 Minnesota Air Monitoring Site Descriptions

Draft 2027 Minnesota Air Monitoring Network Plan

Federal Regulation

40 CFR § 58.10 Annual monitoring network plan and periodic network assessment.

(a)(1) Beginning July 1, 2007, the state, or where applicable local, agency shall submit to the Regional Administrator an annual monitoring network plan which shall provide for the documentation of the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations that can include FRM, FEM, and ARM monitors that are part of SLAMS, NCore, CSN, PAMS, and SPM stations. The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement. The annual monitoring network plan must be made available for public inspection and comment for at least 30 days prior to submission to the EPA and the submitted plan shall include and address, as appropriate, any received comments.

Authors

Kurt Anderson
Jerrod Eppen
Kellie Gavin
Sanna Mairet
Chloe Meyer
Nate Niebeling
Binh Nguyen
Luke Salisbury
Owen Seltz
David Wischnack

Contributors/acknowledgements

Yong Cai
Jacob Nelson
Ashley Olson
Sydney Schultz
Joseph Smith

Editing

Jennifer Holstad

Minnesota Pollution Control Agency

520 Lafayette Road North | Saint Paul, MN 55155-4194 |

651-296-6300 | 800-657-3864 | Or use your preferred relay service. | Info.pca@state.mn.us

This report is available in alternative formats upon request, and online at www.pca.state.mn.us.

Introduction

The following pages are descriptions of Minnesota Pollution Control Agency (MPCA) Air Quality Monitoring Sites. Each site has its own page and each page is listed in the Table of contents.

At the top of each page is the city where the site is located and the site name. Below the heading there is identification information for each site, including the Air Quality System site identification number, MPCA site identification number, address, city, county, location setting, latitude, longitude, elevation, and year established.

The next section of the page has a table of possible monitoring parameters and a map of Minnesota. Parameters that are monitored at the site are indicated in the table. The Minnesota map portrays the approximate location of the site within the state.

Next, there is a smaller scale map of the site. This map indicates the major roadways or other geographic features that are near the site. It is followed by a recent picture of the monitors in their current location.

The final section of the page contains a short site description, a list of monitoring objectives, and any changes proposed for the site

Table of contents

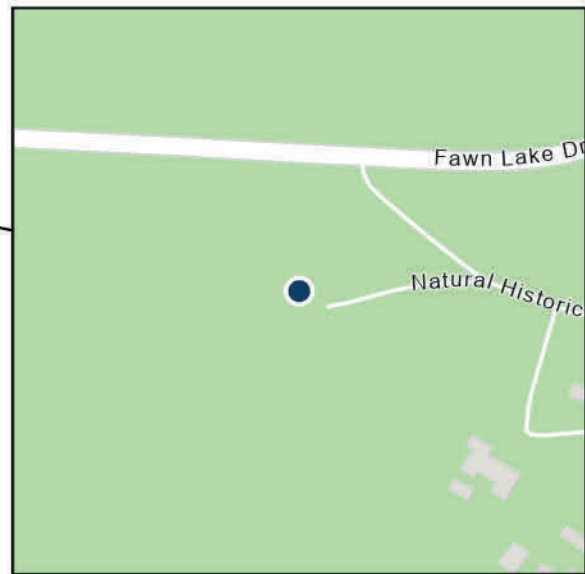
Site 27-003-1001: East Bethel – Cedar Creek (NADP site MN01)	1
Site 27-003-1002: Blaine – Anoka Airport (NCore)	2
Site 27-003-6021: Anoka – Federal Ammunition.....	3
Site 27-005-2013: Detroit Lakes – FWS Wetland Management District.....	4
Site 27-007-2304: Red Lake Nation Hospital	5
Site 27-003-2305: Red Lake Nation DNR	6
Site 27-013-5510: Mankato – Rosa Parks Elementary.....	7
Site 27-017-7417: Fond du Lac Band	8
Site 27-021-3410: Leech Lake Nation: Cass Lake	9
Site 27-031-7810: Grand Portage Band	10
Site 27-035-3204: Brainerd Lakes Regional Airport.....	11
Site 27-037-0020: Rosemount – Flint Hills Refinery 0020	12
Site 27-037-0423: Rosemount – Flint Hills Refinery 0423	13
Site 27-037-0443: Rosemount – Flint Hills Refinery 0443	14
Site 27-037-0465: Eagan – Gopher Resources.....	15
Site 27-037-0470: Apple Valley – Westview School	16
Site 27-037-0480: Lakeville – Near Road I-35	17
Site 27-049-5302: Stanton Airfield.....	18
Site 27-053-0909: Minneapolis – Lowry Avenue	19
Site 27-053-0910: Minneapolis – Pacific Street.....	20
Site 27-053-0915: Minneapolis Public School Maintenance	21
Site 27-053-0954: Minneapolis – Arts Center.....	22
Site 27-053-0961: Richfield Intermediate School	23
Site 27-053-0962: Minneapolis – Near Road I-35/I-94	24
Site 27-053-0963: Minneapolis – Andersen United Middle School.....	25
Site 27-053-0966: Minneapolis – City of Lakes Building	26
Site 27-053-1007: Minneapolis – Humboldt Avenue.....	27

Site 27-053-1904: Minneapolis – East Phillips Community	28
Site 27-053-1909: Bottineau / Marshall Terrace	29
Site 27-053-2006: St. Louis Park City Hall	30
Site 27-075-0005: Ely – Boundary Waters (NADP site MN18).....	31
Site 27-083-4210: Marshall – Southwest Minnesota Regional Airport	32
Site 27-095-3051: Mille Lacs Band	33
Site 27-109-5008: Rochester – Ben Franklin School	34
Site 27-109-5009: Rochester – Folwell School.....	35
Site 27-115-3061: Lake Lena	36
Site 27-123-0866: St. Paul – Red Rock Road	37
Site 27-123-0868: St. Paul – Ramsey Health Center	38
Site 27-123-0871: St. Paul – Harding High School	39
Site 27-123-0875: St Paul – West Side	40
Site 27-123-0880: St. Paul – Frogtown	41
Site 27-123-0890: St. Paul – Northern Iron.....	42
Site 27-137-0032: Duluth – Oneota Street	43
Site 27-137-0034: Voyageurs National Park (NADP site MN32).....	44
Site 27-137-7001: Virginia City Hall	45
Site 27-137-7550: Duluth – U of M.....	46
Site 27-137-7554: Duluth – Laura MacArthur School.....	47
Site 27-137-7555: Duluth – Waseca Road	48
Site 27-139-0505: Shakopee – B.F. Pearson School.....	49
Site 27-145-3052: Saint Cloud – Talahi School	50
Site 27-163-0436: St. Paul Park Refinery	51
Site 27-163-0437: City of Newport Building	52
Site 27-163-6016: St. Croix Watershed Research Station.....	53
Site 27-171-3201: St. Michael Elementary School.....	54
IMPROVE Site GRR11: Great River Bluffs.....	55
NADP Site MN02: Red Lake.....	56
NADP Site MN05: Fond du Lac.....	57
NADP Site MN06: Leech Lake	58
NADP Site MN08: Hovland.....	59
NADP Site MN16: Marcell Experimental Forest.....	60
NADP Site MN23: Camp Ripley	61
NADP Site MN27: Lamberton	62
NADP Site MN99: Wolf Ridge	63

27-003-1001: Cedar Creek

Site information:

- Address: 2660 Fawn Lake Drive NE
- City: East Bethel
- County: Anoka
- Land use: Forest
- Location setting: Rural
- Coordinates: 45.4019, -93.2031
- Elevation: 280
- Year established: 1979



Site description:

This monitoring site is located at the University of Minnesota (U of M) Cedar Creek Ecosystem Science Reserve near East Bethel, approximately 30 miles north of the Twin Cities. Cedar Creek is one of 26 Long Term Ecological Research Sites in the country. It consists of 5,400 acres of wooded uplands, abandoned fields, lowland wooded swamps, and open fens and marshes. Land use surrounding Cedar Creek is rapidly being developed from agricultural to large-lot residential and commercial use.

Monitoring objectives:

- Demonstrate compliance with ozone National Ambient Air Quality Standards (NAAQS).
- Support Air Quality Index (AQI) forecasting and reporting for ozone.
- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ emissions reduction programs.
- Demonstrate compliance with the Minnesota Wet Sulfate Deposition Standard (Minn. R. 7005.4010 to 7005.4050).

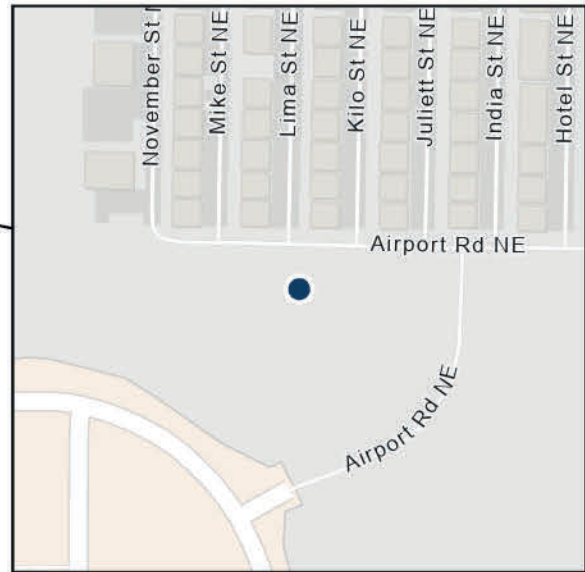
Pollutants monitored:

- Ozone
- Acid deposition

27-003-1002: Anoka Airport

Site information:

- Address: South End of Lima St.
- City: Blaine
- County: Anoka
- Land use: Commercial
- Location setting: Suburban
- Coordinates: 45.1407, -93.2221
- Elevation: 280
- Year established: 1979



AQI

Site description:

This monitoring site is located at the Anoka County Airport in Blaine, approximately 12 miles northwest of St. Paul. The Anoka County Airport is characterized as a reliever airport in the metropolitan air traffic system and has a low traffic volume with no commercial service. The area surrounding the airport contains a mix of residential, office parks, commercial, light industrial, and recreational use.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5}, PM₁₀, lead, CO, ozone, SO₂, and NO₂ NAAQS.
- Support AQI reporting and forecasting for PM_{2.5}, ozone, and SO₂.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Characterize PM_{2.5} chemical composition.
- Support NCore and PAMS monitoring objectives.

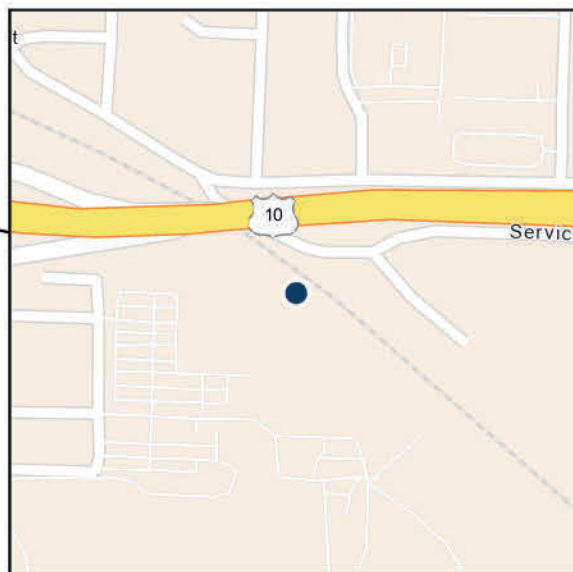
Pollutants monitored:

- PM_{2.5} - filter and continuous
- PM₁₀ - continuous
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls
- Carbon monoxide - trace
- Ozone
- Sulfur dioxide - trace
- Oxides of nitrogen - trace NO_x and NO_y
- PM_{10-2.5}, meteorological data, CSN, PAMS

27-003-6021: Federal Ammunition

Site information:

- Address: 900 Bob Ehlen Dr
- City: Anoka
- County: Anoka
- Land use: Industrial
- Location setting: Suburban
- Coordinates: 45.2035, -93.3724
- Elevation: 393
- Year established: 2022



Site description:

This monitoring site is located in Anoka at the Federal Ammunition Company facility approximately 22 miles northwest of St. Paul. The air monitoring site is located at the fence line of this ammunition manufacturing facility. This is one of the MPCA source-orientated lead monitoring sites, however a full scan of metals is performed on all TSP samples. The area surrounding site contains a mix of residential, commercial, and light industrial use.

Monitoring objectives:

- Demonstrate compliance with the lead NAAQS.
- Demonstrate compliance with the TSP MAAQS.
- Characterize metals concentrations.

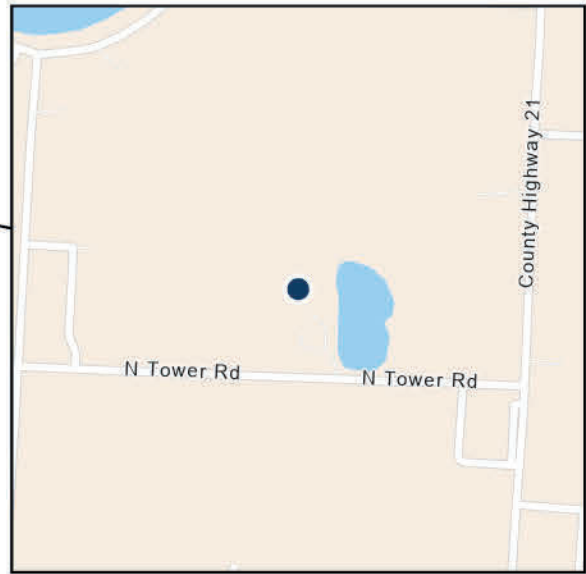
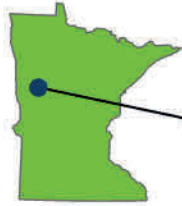
Pollutants monitored:

- TSP and metals - every 3 days
- Meteorological data

27-005-2013: FWS Wetland Management District

Site information:

- Address: 26624 N Tower Rd
- City: Detroit Lakes
- County: Becker
- Land use: Forest
- Location setting: Rural
- Coordinates: 46.8499, -95.8462
- Elevation: 425
- Year established: 2004



Site description:

This monitoring site is located at the U.S. Fish and Wildlife Service Wetland Management District office near Detroit Lakes in west central Minnesota. It is approximately two miles north of downtown Detroit Lakes. Land use near this site is a mix of residential and agricultural activities.

Monitoring objectives:

- Demonstrate compliance with PM2.5 and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

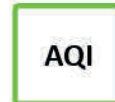
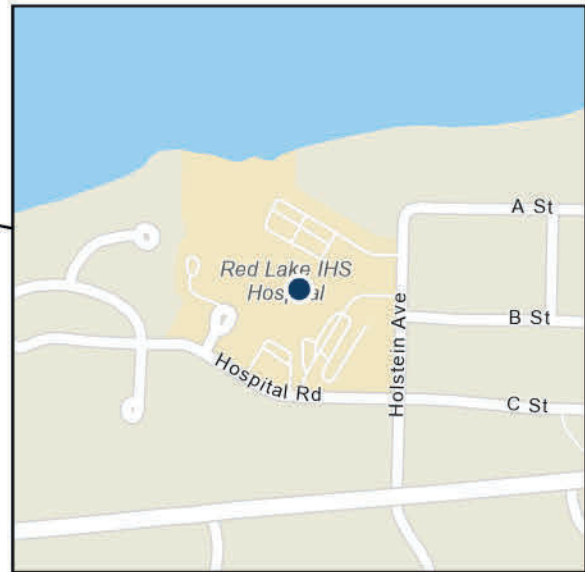
Pollutants monitored:

- PM2.5 - continuous
- Ozone

27-007-2304: Red Lake Nation Hospital

Site information:

- Address: 24760 Hospital Drive
- City: Red Lake
- County: Beltrami
- Land use: Residential
- Location setting: Rural
- Coordinates: 47.8781, -95.0292
- Elevation: 369
- Year established: 2014



Site description:

This monitoring site is operated by the Red Lake Band of Chippewa Indians and is supported, in part, by the MPCA. This Tribal monitoring site is located on the roof of the Red Lake Indian Health Service Hospital. The site is located along the south shore of Lower Red Lake. Land use surrounding the hospital is primarily residential.

Monitoring objectives:

- Demonstrate compliance with PM2.5 NAAQS.
- Support AQI reporting and forecasting for PM2.5.
- Support Tribal monitoring objectives.

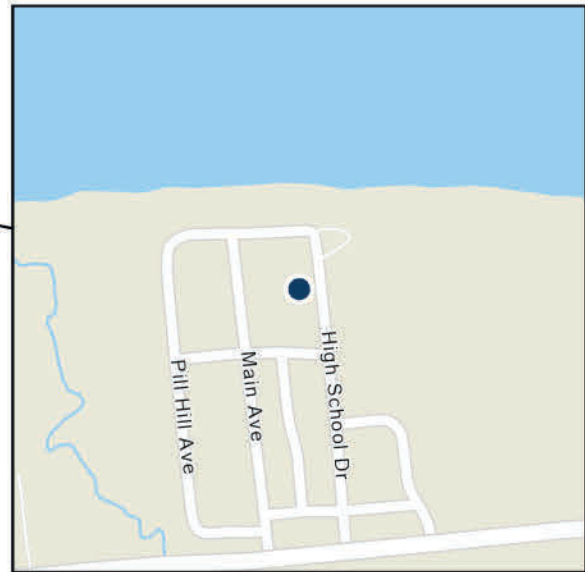
Pollutants monitored:

- PM2.5 - continuous

27-007-2305: Red Lake Nation DNR

Site information:

- Address: 15761 High School Drive
- City: Red Lake
- County: Beltrami
- Land use: Residential
- Location setting: Rural
- Coordinates: 47.8796, -95.0166
- Elevation: 369
- Year established: 2024



AQI

EJ

Site description:

This Tribal monitoring site is located inside the DNR building, along the south shore of Lower Red Lake. Land use surrounding the site is a mix of residential and commercial.

Monitoring objectives:

- Demonstrate compliance with Ozone NAAQS.
- Support AQI reporting and forecasting for Ozone.
- Support Tribal monitoring objectives.

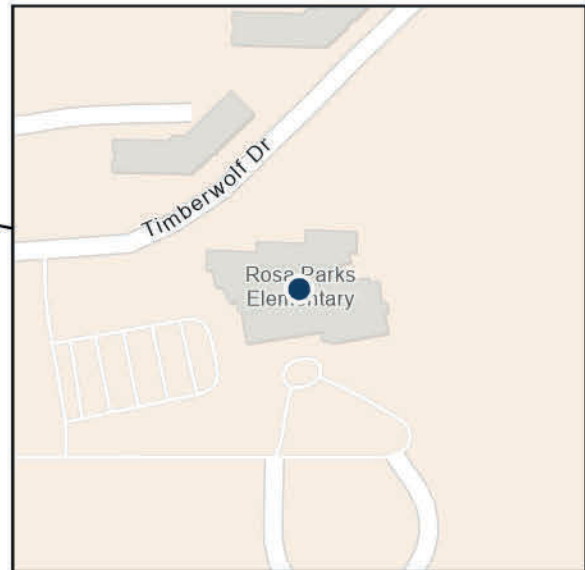
Pollutants monitored:

- Ozone

27-013-5510: Rosa Parks Elementary

Site information:

- Address: 1001 Heron Drive
- City: Mankato
- County: Blue Earth
- Land use: Residential
- Location setting: Suburban
- Coordinates: 44.1364, -93.9813
- Elevation: 311
- Year established: 2024



AQI



Site description:

This monitoring site is located on the roof of Rosa Parks Elementary School, on the south side of Mankato, approximately two miles from the city center. The areas west and north of Rosa Parks School are residential. South of the school is an athletic field, while east and further south of the school are open fields.

Monitoring objectives:

- Demonstrate compliance with PM2.5 and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

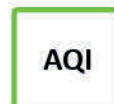
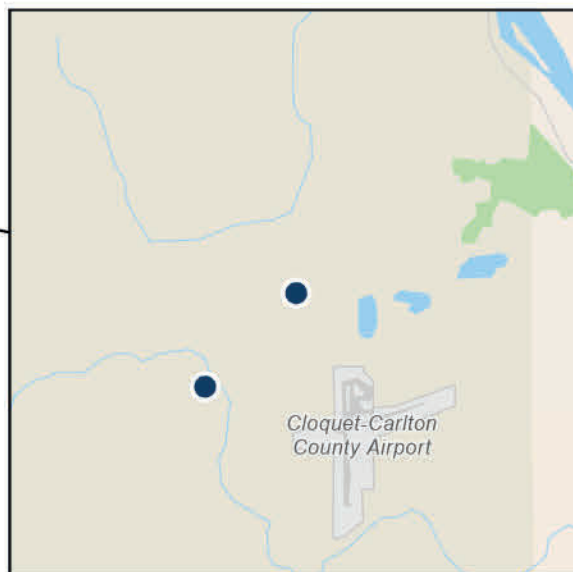
Pollutants monitored:

- PM2.5 - continuous
- Ozone

27-017-7417: Fond du Lac Band*

Site information:

- Address: Co Hwy 5
- City: Cloquet
- County: Carlton
- Land use: Commercial
- Location setting: Rural
- Coordinates: 46.7136, -92.5117
- Elevation: 433
- Year established: 2015



Site description:

This Tribal monitoring station is located at the Fond du Lac Resource Management and Tribal Court Building, approximately two miles west of Cloquet. The Fond du Lac Environmental Program relocated their long-term air monitoring site to this new location in April 2015. Land use in the surrounding area includes a Tribal government campus, community center, and school. Low-density residential neighborhoods and undeveloped forestlands surround the Tribal campus to the south, west, and north. The Cloquet Carlton County Airport is located to the southeast of the campus. The city of Cloquet is approximately two miles to the east and is the home of several large forest products industries.

*This monitoring site is operated by the Fond du Lac Band of Lake Superior Chippewa and is supported, in part, by the MPCA.

Monitoring objectives:

- Demonstrate compliance with ozone and PM2.5 NAAQS.
- Support AQI reporting and forecasting for ozone and PM2.5.
- Support Tribal monitoring objectives.

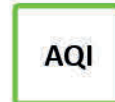
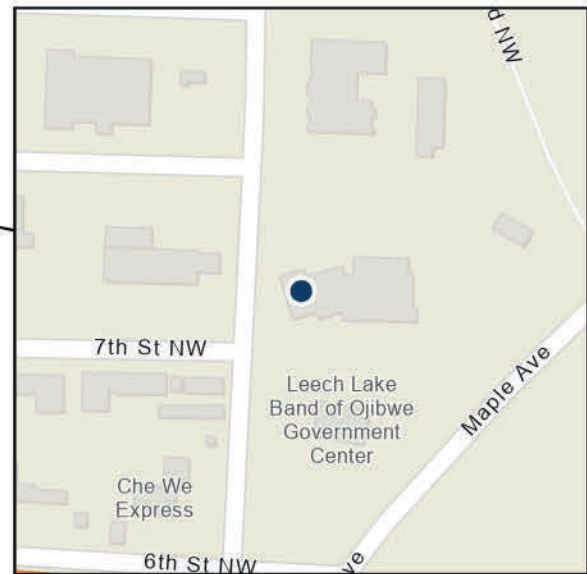
Pollutants monitored:

- PM2.5 - continuous
- Ozone

27-021-3410: Leech Lake Nation: Cass Lake

Site information:

- Address: 200 Sailstar Dr
- City: Cass Lake
- County: Cass
- Land use: Residential
- Location setting: Suburban
- Coordinates: 47.3844, -94.6017
- Elevation: 408
- Year established: 2018



Site description:

This Tribal monitoring site is located on the roof of the Leech Lake Nation Tribal Justice Center in the City of Cass Lake. The Leech Lake Tribal Justice Center is on the north side of Hwy 2 and 7 mile west of Cass Lake. Land use surrounding the station is a mix of government buildings, a school, residential, and commercial use.

Monitoring objectives:

- Demonstrate compliance with PM2.5 NAAQS.
- Support AQI reporting and forecasting for PM2.5.
- Support Tribal monitoring objectives.

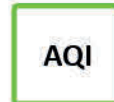
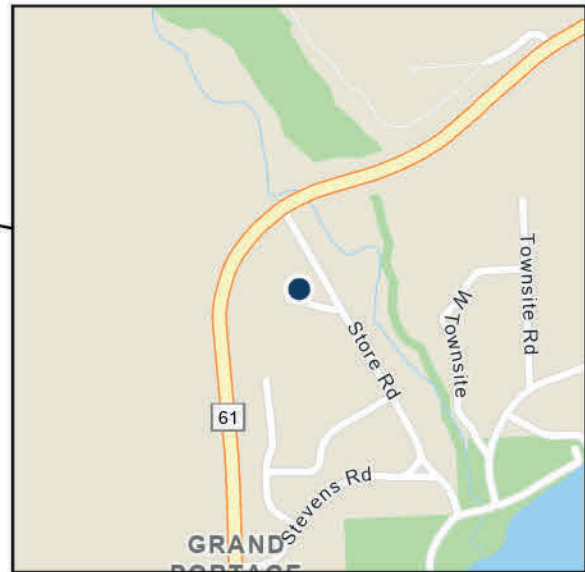
Pollutants monitored:

- PM2.5 - continuous

27-031-7810: Grand Portage Band

Site information:

- Address: 27 Store Rd
- City: Grand Portage
- County: Cook
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.9701, -89.691
- Elevation: 125
- Year established: 2005



Site description:

This Tribal monitoring site is located at the Grand Portage Band offices in Grand Portage in northeastern Minnesota. This site is less than one mile south of U.S. Highway 61 and less than one mile north of the Lake Superior shoreline. A small residential neighborhood surrounds the monitor. Land use outside of the Grand Portage community is undeveloped forests.

Monitoring objectives:

- Support AQI reporting and forecasting for PM_{2.5}.
- Support Tribal monitoring objectives.

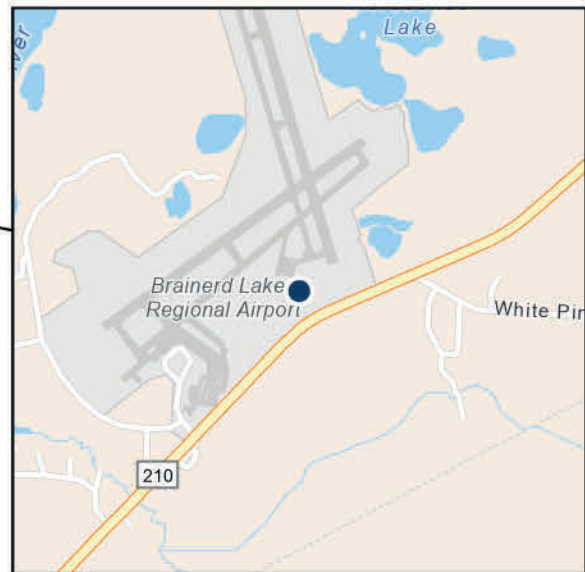
Pollutants monitored:

- PM_{2.5} - continuous

27-035-3204: Brainerd Lakes Regional Airport

Site information:

- Address: 16384 Airport Rd
- City: Brainerd
- County: Crow Wing
- Land use: Forest
- Location setting: Rural
- Coordinates: 46.3967, -94.1303
- Elevation: 381
- Year established: 2004



AQI



Site description:

This monitoring site is located in an open field on the east side of the Brainerd Regional Airport. The airport is less than one mile northwest of State Highway 210 and about three miles northeast of the Brainerd business district. Land use surrounding the airport is primarily residential and forest cover.

Monitoring objectives:

- Demonstrate compliance with PM2.5 and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

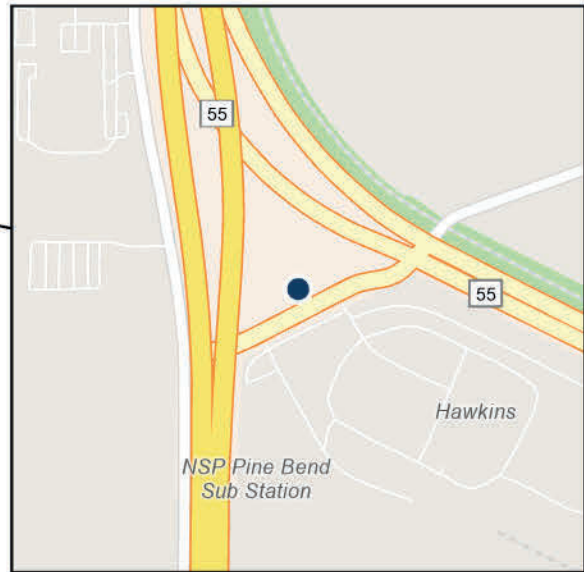
Pollutants monitored:

- PM2.5 - continuous
- Ozone

27-037-0020: Flint Hills Refinery 0020

Site information:

- Address: 12821 Pine Bend Tr
- City: Rosemount
- County: Dakota
- Land use: Industrial
- Location setting: Rural
- Coordinates: 44.7632, -93.0325
- Elevation: 288
- Year established: 1972



Site description:

This monitoring site is located in Rosemount and is one of three sites in the Flint Hills Resources Pine Bend air quality monitoring network. This site is located in the highway median created by the split of State Highways 55 and 52, less than one mile east of the refinery complex. In addition to the refinery, several air emission sources are located to the north, east, and southeast of this site. These include household waste and demo landfills, truck terminals, sand and gravel operations, waste food recycling, aluminum smelting, and a fertilizer plant.

Monitoring objectives:

- Demonstrate compliance with SO₂, NO₂, CO NAAQS.
- Demonstrate compliance with TSP and H₂S MAAQS.
- Characterize air toxics (VOCs, carbonyls, PAHs, and metals).
- Support modeling and source separation by collecting meteorological data.

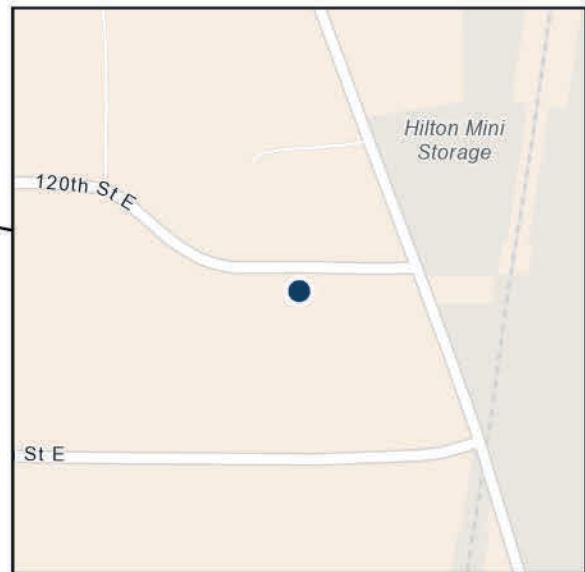
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls
- Carbon monoxide
- Sulfur dioxide
- Oxides of nitrogen
- Total reduced sulfur, meteorological data

27-037-0423: Flint Hills Refinery 0423

Site information:

- Address: 2142 120th St E
- City: Rosemount
- County: Dakota
- Land use: Industrial
- Location setting: Rural
- Coordinates: 44.7754, -93.0627
- Elevation: 272
- Year established: 1990



Site description:

This monitoring site is located in Rosemount and is one of three sites in the Flint Hills Resources Pine Bend air quality monitoring network. This site is located on the west side of the refinery less than one mile west of U.S. Highway 52 on 120th Street. Large municipal waste and demo landfills are located to the northeast of this site.

Monitoring objectives:

- Demonstrate compliance with SO₂, NO₂, and CO NAAQS.
- Demonstrate compliance with TSP and H₂S MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Support modeling and source separation by collecting meteorological data.

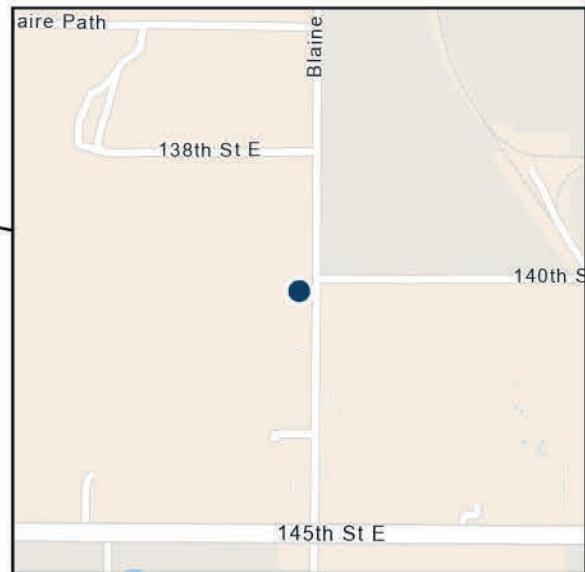
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls
- Carbon monoxide
- Sulfur dioxide
- Oxides of nitrogen
- Total reduced sulfur, meteorological data

27-037-0443: Flint Hills Refinery 0443

Site information:

- Address: 14035 Blaine Ave E
- City: Rosemount
- County: Dakota
- Land use: Industrial
- Location setting: Rural
- Coordinates: 44.7459, -93.0555
- Elevation: 265
- Year established: 2008



Site description:

This monitoring site is located in Rosemount and is one of three sites in the Flint Hills Resources Pine Bend air quality monitoring network. The site is located approximately one mile west of U.S. Highway 52 and one mile southwest of the refinery complex.

Monitoring objectives:

- Demonstrate compliance with SO₂ NAAQS.

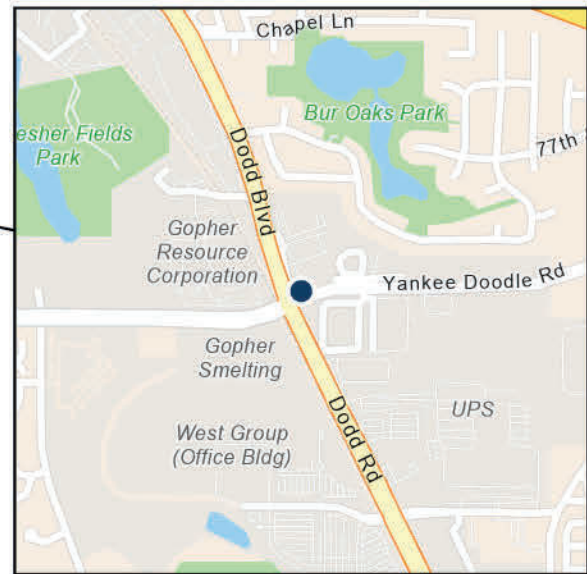
Pollutants monitored:

- Sulfur dioxide

27-037-0465: Gopher Resources

Site information:

- Address: Hwy 149 & Yankee Doodle Rd
- City: Eagan
- County: Dakota
- Land use: Industrial
- Location setting: Suburban
- Coordinates: 44.8342, -93.1161
- Elevation: 281
- Year established: 2006



Site description:

This monitoring site is located in Eagan, near the northeast corner of State Highway 149 and Yankee Doodle Road. The site is approximately 100 meters east of Gopher Resources Corporation, a lead recycling, smelting, and refining facility. This is one of the MPCA's source-oriented lead monitoring sites; however, a full scan of metals is performed on all TSP samples. More detailed information about this site can be found in the 2011 Source-oriented Lead Monitoring Plan on the MPCA website, at <https://www.pca.state.mn.us/air/state-implementation-plan-lead>.

Monitoring objectives:

- Demonstrate compliance with the lead NAAQS.
- Demonstrate compliance with the TSP MAAQS.
- Characterize metals concentrations.

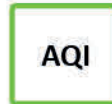
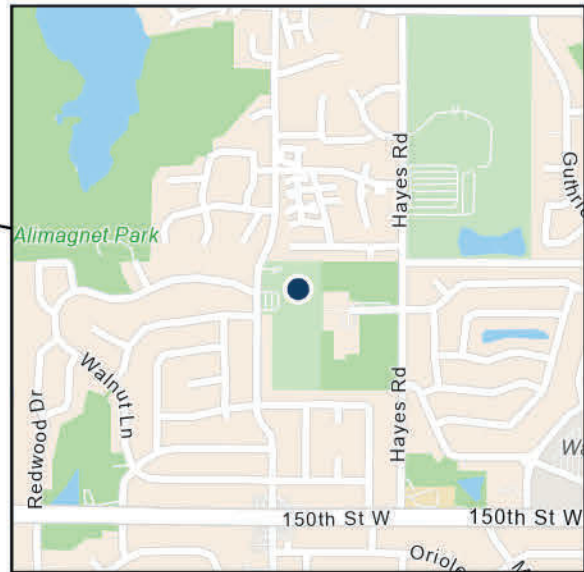
Pollutants monitored:

- TSP and metals - every 3 days - collocated

27-037-0470: Westview School

Site information:

- Address: 225 Garden View Dr
- City: Apple Valley
- County: Dakota
- Land use: Residential
- Location setting: Suburban
- Coordinates: 44.7384, -93.2372
- Elevation: 306
- Year established: 2000



Site description:

This monitoring site is located on the roof of Westview Elementary School in Apple Valley. This location provides air quality data representative of suburban neighborhoods, which are dominated by residential areas, light commercial zones, retail zones, and roadways. The school is located less than one mile north of County Road 42.

Monitoring objectives:

- Demonstrate compliance with the PM_{2.5} NAAQS.
- Support AQI reporting and forecasting for PM_{2.5}.

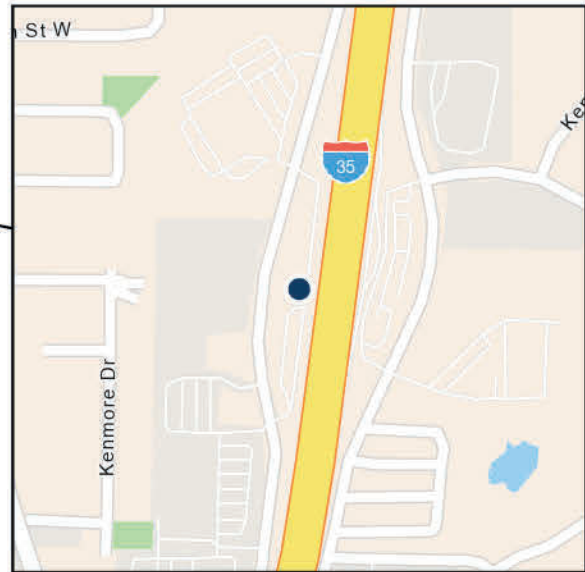
Pollutants monitored:

- PM_{2.5} - continuous - collocated

27-037-0480: Near Road I-35

Site information:

- Address: 16750 Kenyon Ave
- City: Lakeville
- County: Dakota
- Land use: Commercial
- Location setting: Suburban
- Coordinates: 44.7061, -93.2858
- Elevation: 312
- Year established: 2015



AQI



Site description:

This monitoring site is located on the west side of I-35, approximately one mile south of Buck Hill in Lakeville. The surrounding area is predominantly residential, with commercial and retail businesses along the interstate frontage roads. This is the second near-road monitor required in the Twin Cities to assess air pollution levels in the near-road environment. This traffic segment had an Annual Average Daily Traffic (AADT) count of approximately 84,500 vehicles per day in 2023.

Monitoring objectives:

- Demonstrate compliance with the NO₂, CO, and PM_{2.5} NAAQS.
- Support modeling and source separation by collecting meteorological data.
- Support AQI reporting and forecasting for PM_{2.5}, NO₂, and CO.

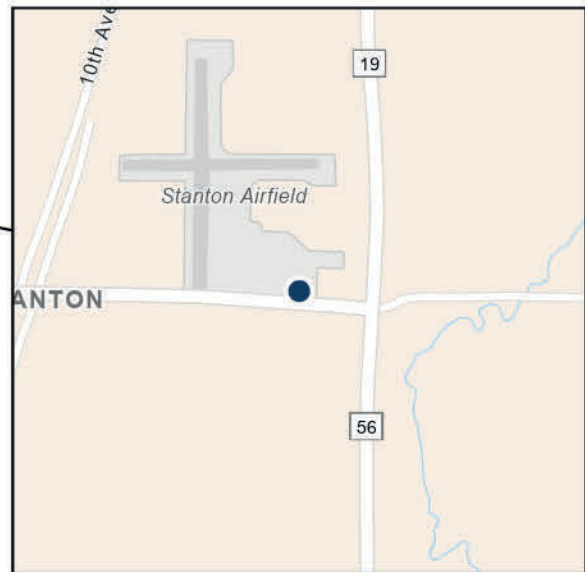
Pollutants monitored:

- PM_{2.5} - continuous
- Carbon monoxide
- Oxides of nitrogen
- Meteorological data

27-049-5302: Stanton Airfield

Site information:

- Address: 1235 Highway 19
- City: Stanton
- County: Goodhue
- Land use: Agricultural
- Location setting: Rural
- Coordinates: 44.4719, -93.0126
- Elevation: 300
- Year established: 2003



AQI



Site description:

This monitoring site is located at the Stanton Air Field in Goodhue County. The site is located approximately 10 miles east of Northfield and 36 miles south of St. Paul. This privately owned airfield supports a flight school and is open to the public, with no commercial services and low traffic volume. The surrounding land use is predominantly agricultural.

Monitoring objectives:

- Demonstrate compliance with ozone NAAQS.
- Support AQI reporting and forecasting for ozone.

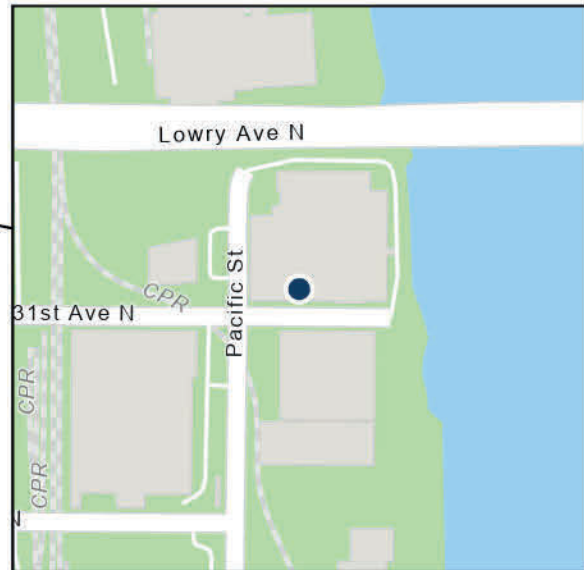
Pollutants monitored:

- Ozone

27-053-0909: Lowry Avenue

Site information:

- Address: 3104 N Pacific St
- City: Minneapolis
- County: Hennepin
- Land use: Industrial
- Location setting: Urban and center city
- Coordinates: 45.0121, -93.2767
- Elevation: 249
- Year established: 2013



AQI

EJ

Site description:

This monitoring site is located on the roof of a commercial building near the west bank of the Mississippi River, east of I-94, in an industrial area of North Minneapolis. The surrounding area contains a mix of land use activities, including highway corridors, manufacturing facilities, aggregate and ready-mix concrete supply, commercial warehousing, office buildings, and retail businesses, with adjacent residential neighborhoods. In 2019, Northern Metals moved their metal shredding operations to Becker, and the metal recycling operations remain.

Monitoring objectives:

- Demonstrate compliance with PM10 NAAQS and TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, PAHs, and metals).
- Assess neighborhood exposure to air emissions.
- Support modeling and source separation by collecting meteorological data.
- Identify sources contributing to the exceedance of TSP standards.

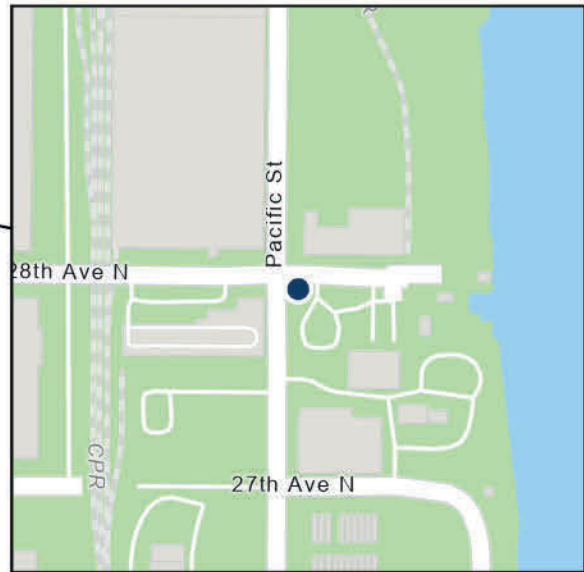
Pollutants monitored:

- PM2.5 - continuous
- PM10 - continuous
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls
- Meteorological data

27-053-0910: Pacific Street

Site information:

- Address: 2710 N Pacific St
- City: Minneapolis
- County: Hennepin
- Land use: Industrial
- Location setting: Urban and center city
- Coordinates: 45.0083, -93.277
- Elevation: 249
- Year established: 2015



AQI

EJ

Site description:

This monitoring site is located on the ground at a City of Minneapolis Public Works facility near the west bank of the Mississippi River, east of I-94, in an industrial area of North Minneapolis. The surrounding area contains a mix of land uses including manufacturing facilities, aggregate and ready-mix concrete supply, commercial warehousing, office buildings, and retail businesses, with residential neighborhoods to the east and west. In 2019, Northern Metals moved their metal shredding operations to Becker.

Monitoring objectives:

- Demonstrate compliance with PM10 NAAQS and TSP MAAQS.
- Identify sources contributing to the exceedance of TSP standards.

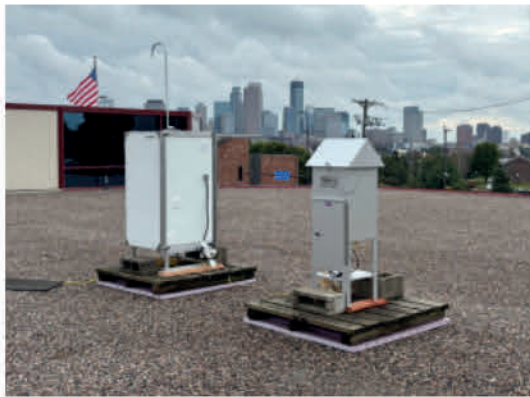
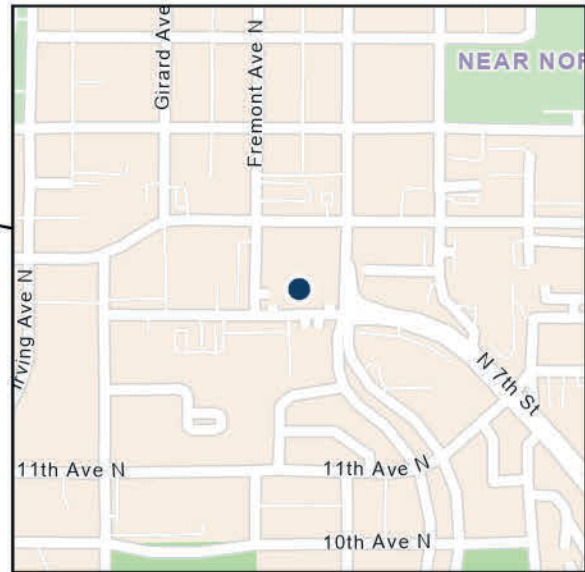
Pollutants monitored:

- PM2.5 - continuous
- PM10 - continuous
- TSP and metals - every 6 days

27-053-0915: Minneapolis Public School Maintenance

Site information:

- Address: 1225 N 7th St
- City: Minneapolis
- County: Hennepin
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.9912, -93.2949
- Elevation: 260
- Year established: 2025



Site description:

This monitoring site is located on the north side of Minneapolis on the roof of the Minneapolis Public School Plant Maintenance & Operations Center. The building is situated approximately 650 meters west of I-94 in a mixed-use production zone with high traffic volume. The surrounding area has commercial activity primarily operating to the east and west, with residential areas located to the north and south. This site provides air quality data representative of urban neighborhoods located in close proximity to commercial, production, and warehousing land use.

Monitoring objectives:

- Demonstrate compliance with the TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Assess neighborhood exposure to air emissions.

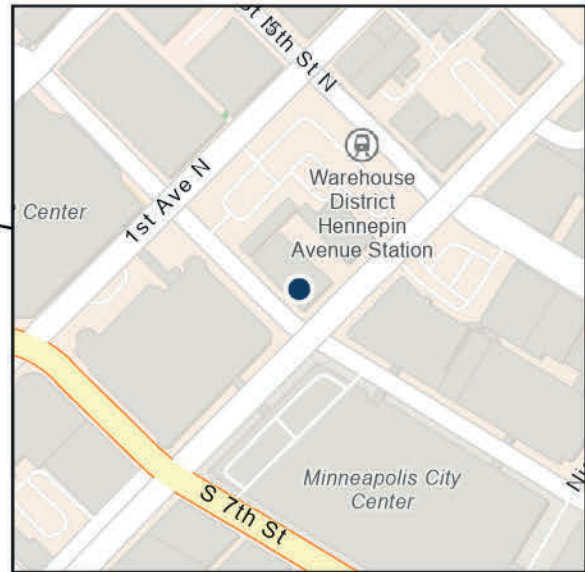
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-053-0954: Arts Center

Site information:

- Address: 528 Hennepin Ave
- City: Minneapolis
- County: Hennepin
- Land use: Commercial
- Location setting: Urban and center city
- Coordinates: 44.9791, -93.2737
- Elevation: 259
- Year established: 1966



Site description:

This monitoring site is located at the Cowles Center for Dance and the Performing Arts in downtown Minneapolis. This center city location is characterized by a mix of commercial and residential land use, with high traffic volume and street canyons created by tall buildings that restrict air dispersion.

Monitoring objectives:

- Demonstrate compliance with CO and SO₂ NAAQS.
- Support AQI reporting for CO and SO₂.

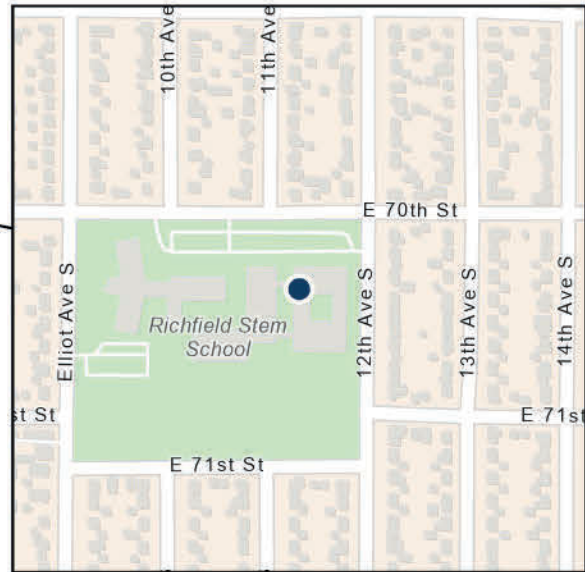
Pollutants monitored:

- Carbon monoxide
- Sulfur dioxide

27-053-0961: Richfield Intermediate School

Site information:

- Address: 7020 12th Ave S
- City: Richfield
- County: Hennepin
- Land use: Residential
- Location setting: Suburban
- Coordinates: 44.8756, -93.2588
- Elevation: 262
- Year established: 1989



Site description:

This monitoring site is located on the roof of the Richfield Intermediate School in Richfield. The school is approximately one mile west of Cedar Avenue (State Highway 77) and the Minneapolis-St. Paul International Airport. Air toxics monitoring was added to this site in 2006 at the request of the City of Richfield to address concerns regarding the impact of airport operations on air quality in the surrounding residential neighborhoods. This area is predominantly residential with commercial and retail businesses along the main corridors of Cedar Avenue, I-494, and 66th Street East (Richfield City Center).

Monitoring objectives:

- Characterize air toxics (VOCs and carbonyls).

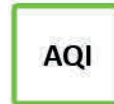
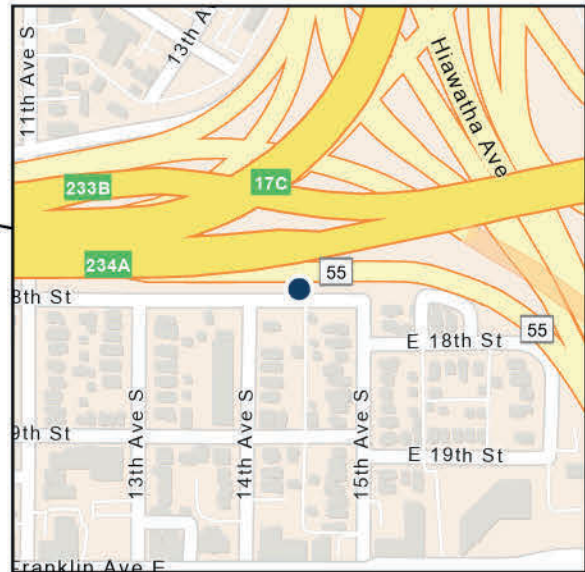
Pollutants monitored:

- Volatile organic compounds (VOCs)
- Carbonyls

27-053-0962: Near Road I-35/I-94

Site information:

- Address: 1444 18th St E
- City: Minneapolis
- County: Hennepin
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.9653, -93.2548
- Elevation: 259
- Year established: 1999



Site description:

This monitoring site is located along the I-94/I-35W commons near downtown Minneapolis. This area is mostly residential, with some commercial and retail businesses nearby. It is part of the near-road monitoring network, which was established to assess air pollution levels in the near-road environment. This traffic segment had an Annual Average Daily Traffic (AADT) count of approximately 208,700 vehicles per day in 2023.

Monitoring objectives:

- Demonstrate compliance with NO₂, ozone, PM_{2.5}, PM₁₀, and CO NAAQS.
- Support modeling and source separation by collecting meteorological data.
- Demonstrate compliance with TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).

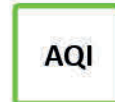
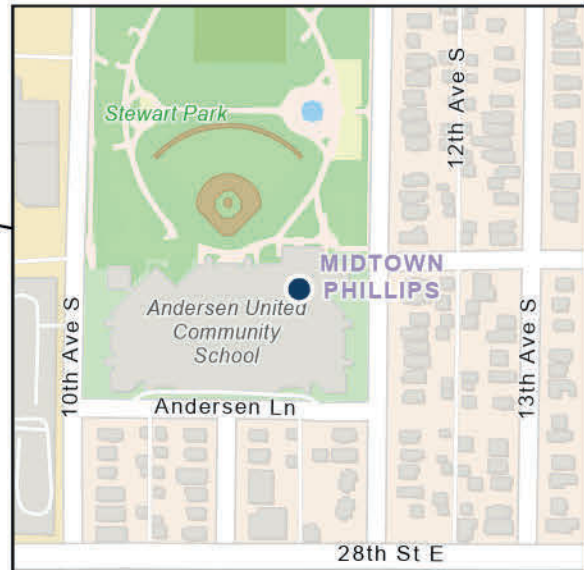
Pollutants monitored:

- PM_{2.5} - filter and continuous
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs) - collocated
- Carbonyls - collocated
- Carbon monoxide
- Ozone
- Oxides of nitrogen
- Meteorological data

27-053-0963: Andersen United Middle School

Site information:

- Address: 2727 10th Ave S
- City: Minneapolis
- County: Hennepin
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.9536, -93.2582
- Elevation: 270
- Year established: 2013



Site description:

This monitoring site is located on the roof of the Hans Christian Andersen School in the Phillips Neighborhood of Minneapolis. It is approximately two miles south of downtown Minneapolis, bordered by major roadways. This location provides air quality data representative of urban neighborhoods, which are dominated by residential and commercial land use.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5} NAAQS.
- Demonstrate compliance with TSP MAAQS.
- Support AQI reporting and forecasting for PM_{2.5}.
- Characterize air toxics (VOCs, carbonyls, PAHs, and metals).
- Characterize PM_{2.5} chemical composition.

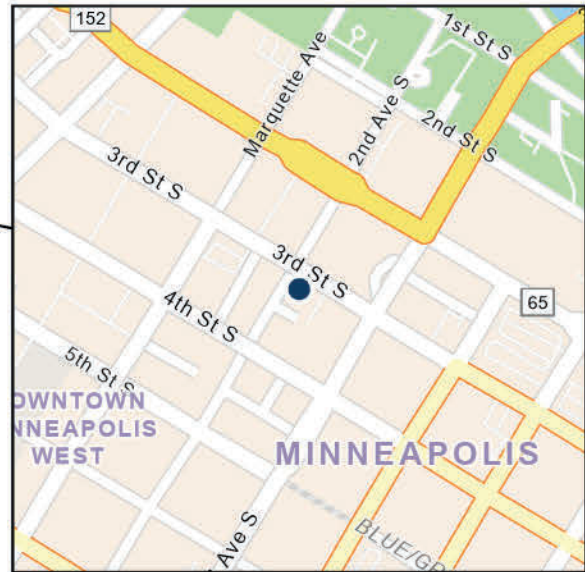
Pollutants monitored:

- PM_{2.5} - filter and continuous
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls
- CSN

27-053-0966: City of Lakes Building

Site information:

- Address: 309 2nd Ave S
- City: Minneapolis
- County: Hennepin
- Land use: Commercial
- Location setting: Urban and center city
- Coordinates: 44.9793, -93.2662
- Elevation: 267
- Year established: 2001



Site description:

This monitoring site is located on the roof of the City of Lakes Building, at the corner of 3rd Street and 2nd Avenue South in downtown Minneapolis. This center city location is characterized by a mix of commercial and residential land use, with high traffic volume and street canyons created by tall buildings that restrict air dispersion.

Monitoring objectives:

- Demonstrate compliance with PM10 NAAQS.
- Demonstrate compliance with TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).

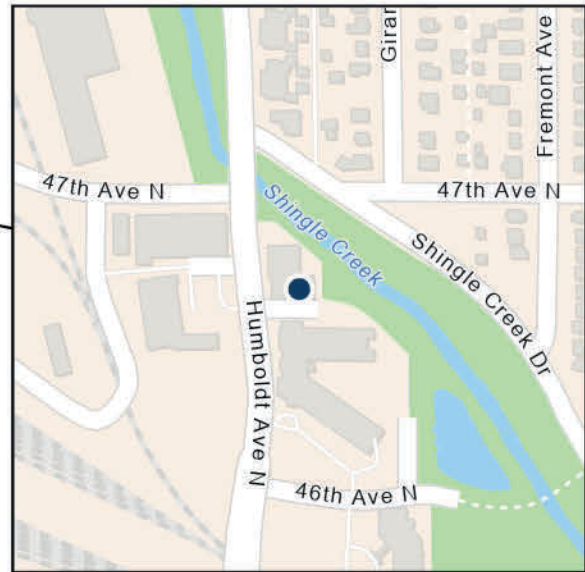
Pollutants monitored:

- PM10 - filter
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-053-1007: Humboldt Avenue

Site information:

- Address: 4646 N Humboldt Ave
- City: Minneapolis
- County: Hennepin
- Land use: Residential
- Location setting: Suburban
- Coordinates: 45.0397, -93.2986
- Elevation: 263
- Year established: 2002



EJ



Site description:

This monitoring site is located on the roof of Fire Station No. 22 in North Minneapolis. The surrounding area contains a mix of land uses, including truck terminals, railroad yards, and manufacturing facilities to the west and northwest, and residential neighborhoods to the north, east, and south. This location provides air quality data representative of urban neighborhoods, which, though predominantly residential, are adjacent to or near significant industrial air emission sources.

Monitoring objectives:

- Demonstrate compliance with TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, PAHs, and metals).

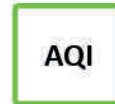
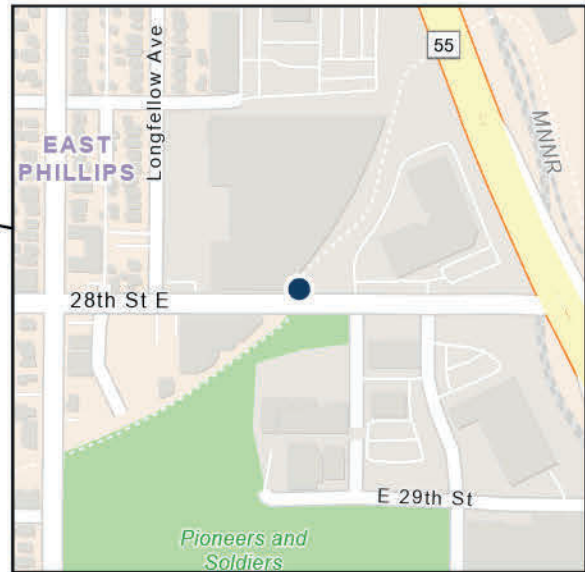
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-053-1904: East Phillips Community

Site information:

- Address: 1860 E 28th St
- City: Minneapolis
- County: Hennepin
- Land use: Industrial
- Location setting: Urban and center city
- Coordinates: 44.9521, -93.2443
- Elevation: 259
- Year established: 2024



Site description:

This monitoring site is located just northeast of the Smith Foundry on 28th Street E. The area surrounding the site is a mix of residential and commercial. This site originated from the Community Air Monitoring Project with the purpose of source-oriented lead monitoring since Smith Foundry produced iron castings; however, the foundry shut down operations in August of 2024. A full metal scan is also performed on all TSP samples.

Monitoring objectives:

- Demonstrate compliance with PM2.5 and lead NAAQS.
- Support AQI reporting and forecasting for PM2.5.
- Demonstrate compliance with the TSP MAAQS.
- Characterize metals concentrations.

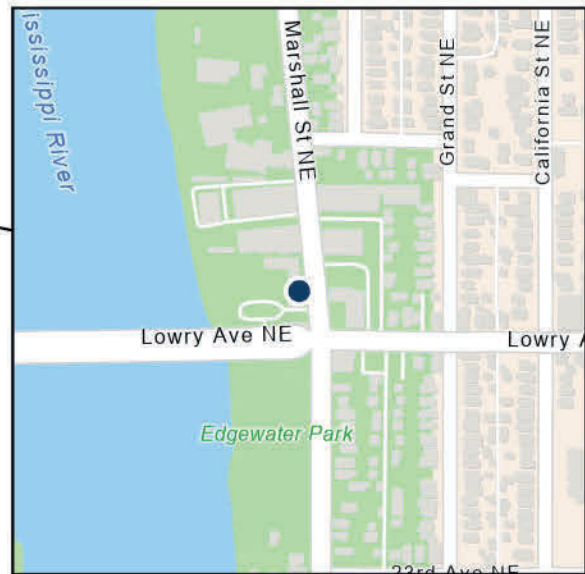
Pollutants monitored:

- PM2.5 - continuous
- TSP and metals - every 6 days
- Meteorological data

27-053-1909: Bottineau / Marshall Terrace

Site information:

- Address: 2522 Marshall St NE
- City: Minneapolis
- County: Hennepin
- Land use: Commercial
- Location setting: Urban and center city
- Coordinates: 45.0136, -93.272
- Elevation: 253
- Year established: 2017



AQI

Site description:

This monitoring site is located in the Bottineau/Marshall Terrace neighborhood. It is on the roof of the Mississippi Watershed Management Organization building near the east bank of the Mississippi River, east of I-94 in an industrial area of North Minneapolis. The surrounding area contains a mix of land use activities including highway corridors, metal recycling, manufacturing facilities, aggregate and ready-mix concrete supply, commercial warehousing, office buildings, and retail businesses, with adjacent residential neighborhoods. This site originated from the Community Air Monitoring Project and was chosen to assess air quality in a neighborhood impacted by a variety of commercial and mobile sources.

Monitoring objectives:

- Assess air quality impacts from mobile sources.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Support AQI reporting and forecasting for PM_{2.5}.

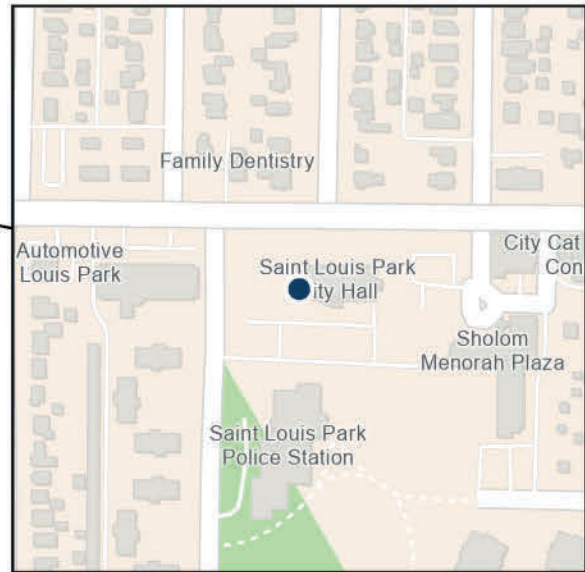
Pollutants monitored:

- PM₁₀ - continuous
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-053-2006: St. Louis Park City Hall

Site information:

- Address: 5005 Minnetonka Blvd
- City: St. Louis Park
- County: Hennepin
- Land use: Residential
- Location setting: Suburban
- Coordinates: 44.948, -93.3432
- Elevation: 272
- Year established: 1972



AQI

Site description:

This monitoring site is located on the roof of the St. Louis Park City Hall. This location provides air quality data representative of suburban neighborhoods, which are dominated by residential areas, commercial zones, and high-volume roadways. It is approximately three blocks east of State Highway 100 and half a mile north of State Highway 7.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5} NAAQS.

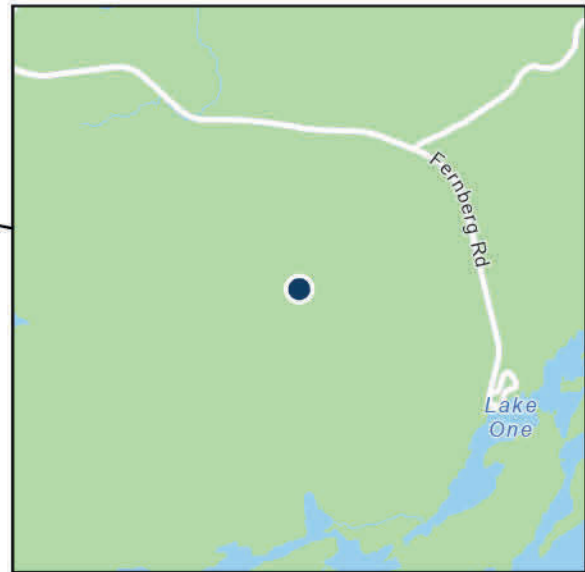
Pollutants monitored:

- PM_{2.5} - continuous

27-075-0005: Boundary Waters

Site information:

- AKA: MN18 and BOWA1
- Address: Fernberg Rd
- City: Ely
- County: Lake
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.9466, -91.4955
- Elevation: 528
- Year established: 1977



Site description:

This monitoring site is located in a remote hilltop clearing approximately 19 miles east of Ely, adjacent to the Boundary Waters Canoe Area Wilderness. Land use surrounding this site is managed forests, recreation, and wilderness. This site is operated and maintained by the Superior National Forest, with support from the MPCA.

Monitoring objectives:

- Demonstrate compliance with ozone and PM2.5 NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.
- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess effectiveness of State and Federal SO₂ and mercury emissions reduction programs.
- Provide a long-term record of total mercury concentrations and deposition in precipitation.
- Characterize fine particle chemistry to quantify existing

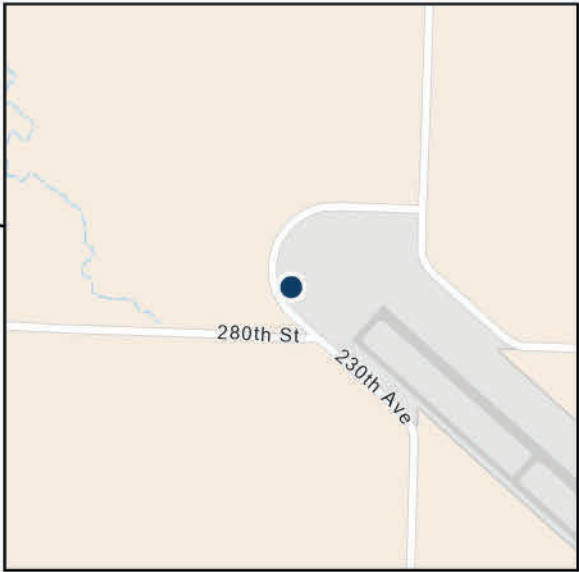
Pollutants monitored:

- PM2.5 - continuous
- Ozone
- Acid and Hg deposition, IMPROVE

27-083-4210: Southwest Minnesota Regional Airport

Site information:

- Address: West Highway 19
- City: Marshall
- County: Lyon
- Land use: Agricultural
- Location setting: Rural
- Coordinates: 44.4591, -95.8417
- Elevation: 361
- Year established: 2004



Site description:

This monitoring site is located in an open field at the Marshall Regional Airport near Marshall in southwest Minnesota. The monitor is located approximately one mile west of the central business district. Land use surrounding the airport and the City of Marshall is predominantly agricultural, with a mix of commercial and light industrial.

Monitoring objectives:

- Demonstrate compliance with PM2.5, PM10, and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

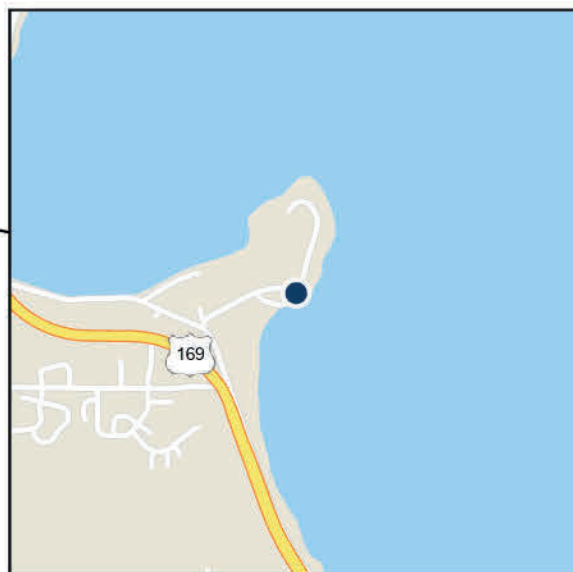
Pollutants monitored:

- PM2.5 - continuous
- PM10 - continuous
- Ozone

27-095-3051: Mille Lacs Band

Site information:

- Address: 43408 Oodena Dr
- City: Mille Lacs
- County: Mille Lacs
- Land use: Forest
- Location setting: Rural
- Coordinates: 46.2054, -93.7593
- Elevation: 393
- Year established: 1997



AQI

EJ

Site description:

This tribal monitoring site is located one mile north of the Mille Lacs Band of Ojibwe Government Center located on the western shore of Mille Lacs Lake. This site is approximately 12 miles north of Onamia on Highway 169. Land use to the south and west of the monitoring site is a mix of residential and heavy forest cover. This site was established in 1997 to characterize and assess transport of pollutants from the Twin Cities metropolitan area, located approximately 90 miles to the southeast.

Monitoring objectives:

- Demonstrate compliance with ozone NAAQS.
- Support AQI reporting and forecasting for ozone.
- Support Tribal monitoring objectives.

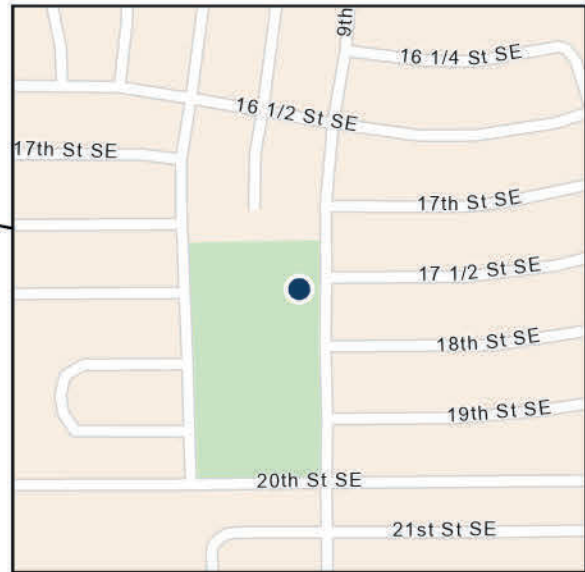
Pollutants monitored:

- Ozone

27-109-5008: Ben Franklin School

Site information:

- Address: 1801 9th Ave SE
- City: Rochester
- County: Olmsted
- Land use: Residential
- Location setting: Suburban
- Coordinates: 43.995, -92.4501
- Elevation: 400
- Year established: 1997



AQI



Site description:

This monitoring site is located on the roof of the Ben Franklin Elementary School in southeast Rochester. The school is located in a residential neighborhood approximately two miles south of the central business district. Some commercial and light industrial activity is located to the south and west of the site. This location provides air quality data representative of suburban neighborhoods, which are dominated by residential land use.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5}, ozone, and SO₂ NAAQS.
- Support AQI reporting and forecasting for PM_{2.5} and ozone.

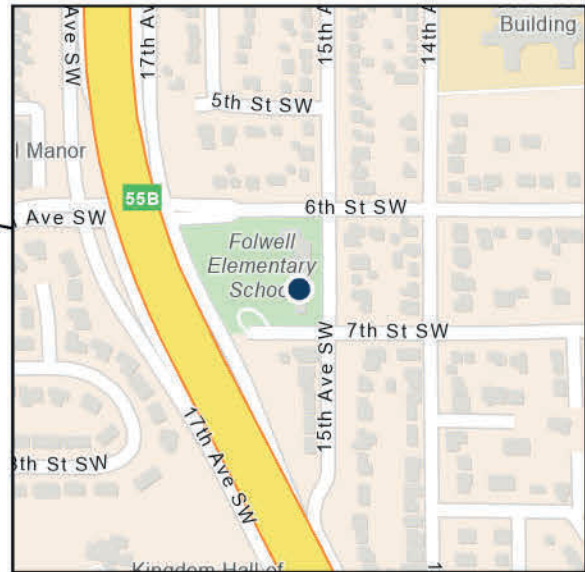
Pollutants monitored:

- PM_{2.5} - continuous
- Ozone

27-109-5009: Folwell School

Site information:

- Address: 603 15th Ave SW
- City: Rochester
- County: Olmsted
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.0164, -92.4857
- Elevation: 330
- Year established: 2025



Site description:

This monitoring site is located in Rochester on the roof of Folwell Elementary School less than a mile and a half from the city center. The school can be found approximately 80 meters east of Highway 52 and about 350 meters southwest of the Mayo Clinic Hospital - St. Mary's Campus. The surrounding land use is dominantly residential in all directions, with dispersed commercial usage. This site provides air quality data representative of suburban neighborhoods near medical land use and in close proximity to major roadways.

Monitoring objectives:

- Demonstrate compliance with the TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Assess neighborhood exposure to air emissions.

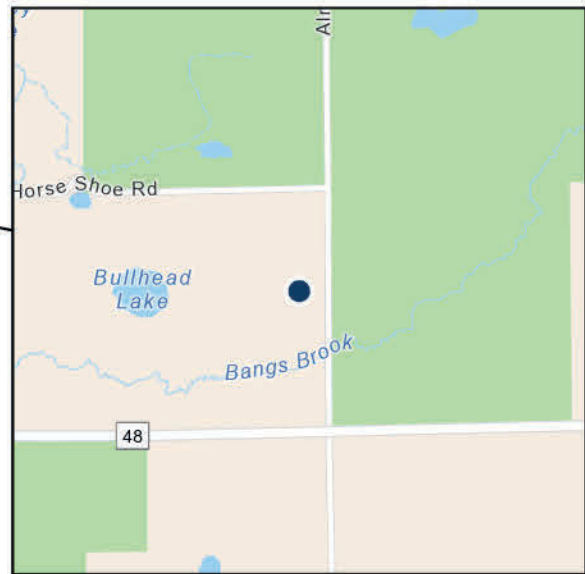
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-115-3061: Lake Lena

Site information:

- Address: 63144 MN-48
- City: Hinckley
- County: Pine
- Land use: Agricultural
- Location setting: Rural
- Coordinates: 46.0207, -92.4907
- Elevation: 300
- Year established: 2024



AQI

EJ



Site description:

This monitoring site is located on the ground, just south of the Crossroads Convenience Store, 63144 MN-48, Hinckley, MN. The site is surrounded by wooded area to the north and farm fields to the south, west and east. Lake Lena is about 2 miles to the north. This site is about halfway between the Twin Cities and Duluth. It is established to assess transport of pollutants from the Twin Cities metropolitan area.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5} NAAQS.
- Support AQI reporting and forecasting for PM_{2.5}.

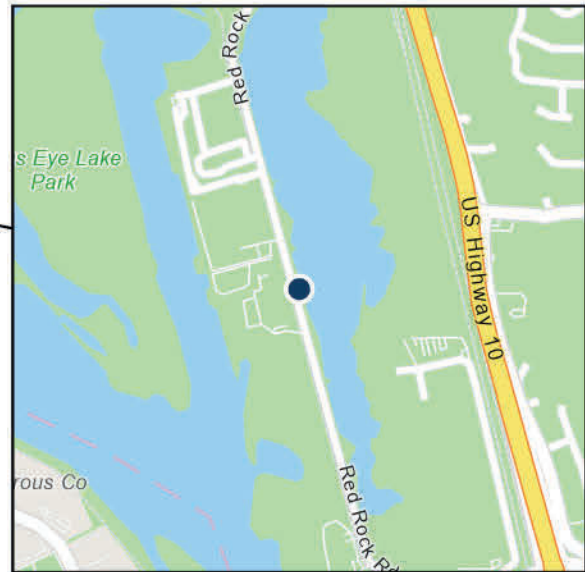
Pollutants monitored:

- PM_{2.5} - continuous

27-123-0866: Red Rock Road

Site information:

- Address: 1450 Red Rock Rd
- City: St. Paul
- County: Ramsey
- Land use: Industrial
- Location setting: Suburban
- Coordinates: 44.8992, -93.0171
- Elevation: 232
- Year established: 1997



Site description:

This monitoring site is located along Red Rock Road in St. Paul. This area was a non-attainment area for PM10 in the 1990s due to high particulate emissions from area sources and roadways. The site is located in an industrialized corridor along the Mississippi River. The surrounding area contains a mix of industrial and commercial activities, including a steel recycling mill, a municipal waste sorting plant, railroad yards, and barge operations for river transport of grain, aggregate, and coal. Diesel truck traffic is heavy as materials are transported to and from the various facilities. Residential neighborhoods border this area to the east and to the southwest across the river. The nearest residential neighborhoods are approximately half of a mile to the east.

Monitoring objectives:

- Demonstrate compliance with PM10 NAAQS.

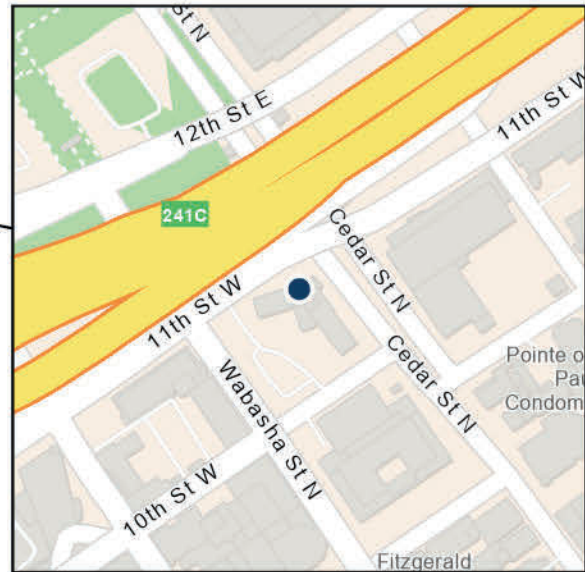
Pollutants monitored:

- PM10 - filter collocated

27-123-0868: Ramsey Health Center

Site information:

- Address: 555 Cedar St
- City: St. Paul
- County: Ramsey
- Land use: Commercial
- Location setting: Urban and center city
- Coordinates: 44.9507, -93.0983
- Elevation: 251
- Year established: 1998



Site description:

This monitoring site is located at the intersection of Cedar and 10th Street on the roof of the Ramsey County Health Center in St. Paul. The monitors are positioned on the north side of the building, approximately 60 meters south of the I-94 corridor and interchange with I-35E. The Central Corridor Light Rail Transit line, which runs along Cedar Avenue, began operating in June 2014. Redevelopment is expected in the area. The location was selected to demonstrate NAAQS compliance in areas where commercial and residential land uses are in close proximity to major roadways.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5} and PM₁₀ NAAQS.
- Characterize air toxics (VOCs and carbonyls).
- Support AQI reporting and forecasting for PM₁₀.

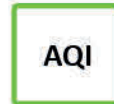
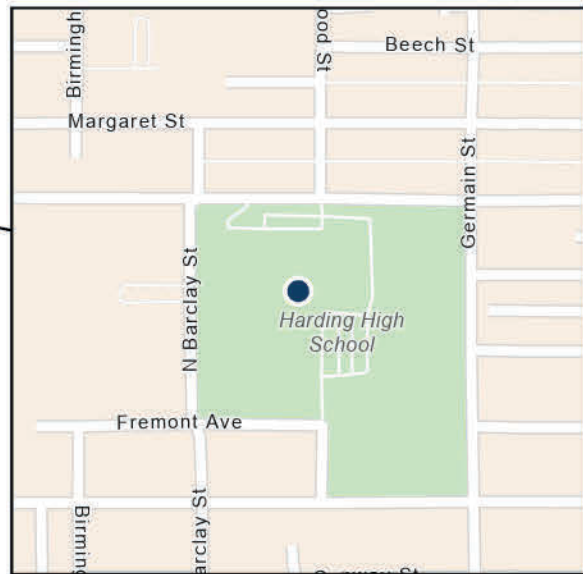
Pollutants monitored:

- PM_{2.5}- filter
- PM₁₀ - continuous
- Volatile organic compounds (VOCs)
- Carbonyls

27-123-0871: Harding High School

Site information:

- Address: 1540 East 6th St
- City: St. Paul
- County: Ramsey
- Land use: Residential
- Location setting: Suburban
- Coordinates: 44.9593, -93.0359
- Elevation: 296
- Year established: 1998



Site description:

This monitoring site is located on the roof of Harding High School on the east side of St. Paul. The surrounding area is predominantly residential neighborhoods, with some commercial and retail activity. This location provides air quality data representative of urban neighborhoods, which are dominated by residential land use.

Monitoring objectives:

- Demonstrate compliance with PM2.5 NAAQS.
- Support AQI reporting and forecasting for PM2.5.
- Demonstrate compliance with TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).

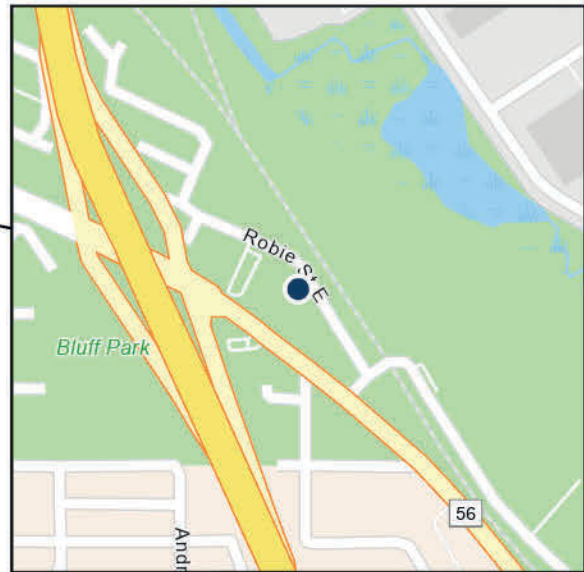
Pollutants monitored:

- PM2.5 - filter and continuous
- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-123-0875: West Side

Site information:

- Address: 515 Concord St
- City: St. Paul
- County: Ramsey
- Land use: Industrial
- Location setting: Urban and center city
- Coordinates: 44.927, -93.067
- Elevation: 296
- Year established: 2020



EJ

Site description:

This monitoring site is located on the east side of the St. Paul West-Side neighborhood. The surrounding area is predominantly residential neighborhoods, with the St Paul Downtown Holman Field Airport to the east and the Southport Industrial District to the south. The purpose of this monitoring is to further investigate the findings from the St. Paul Westside Community Air Monitoring Project conducted in the spring of 2014 that showed elevated metals concentrations.

Monitoring objectives:

- Monitor metals concentrations and determine the need for further monitoring.

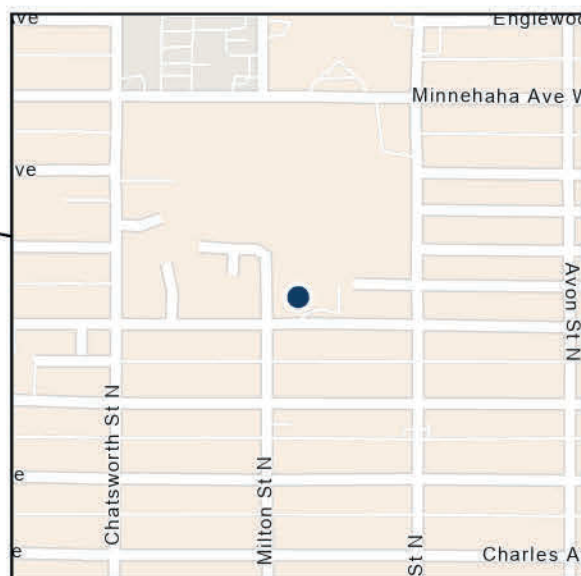
Pollutants monitored:

- TSP and metals - every 6 days

27-123-0880: Frogtown

Site information:

- Address: 911 Lafond Ave
- City: St. Paul
- County: Ramsey
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.9606, -93.1385
- Elevation: 281
- Year established: 2024



EJ



Site description:

This monitoring site is located on the roof of the Wilder Child Development Center, approximately 250 meters southeast of the St. Paul Brass Foundry and around 0.65 miles north of I-94. Majority of the surrounding area is residential, with a community park and farm lying directly north of the site. Light industrial activity can also be found less than half a mile north of this location, with St. Paul Brass being a point of focus due to the foundries production of brass, bronze and aluminum castings. This site provides air quality data representative of metal manufacturing located in primarily residential areas.

Monitoring objectives:

- Demonstrate compliance with lead NAAQS.
- Demonstrate compliance with the TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Assess neighborhood exposure to air emissions.
- Support modeling and source separation by collecting meteorological data.

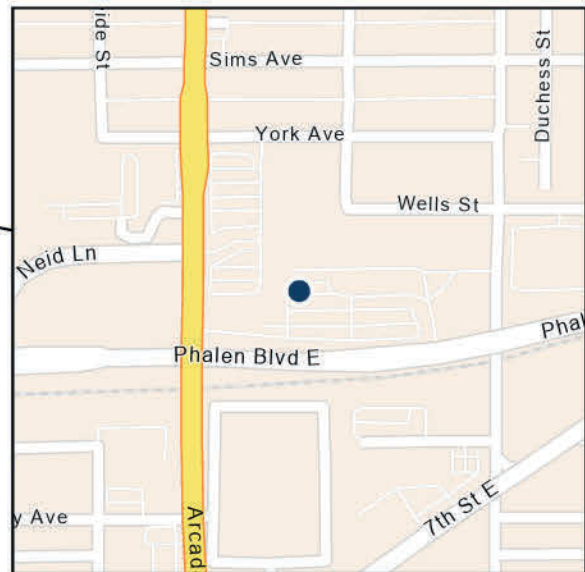
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-123-0890: Northern Iron

Site information:

- Address: 842 Mendota Circle
- City: St. Paul
- County: Ramsey
- Land use: Industrial
- Location setting: Suburban
- Coordinates: 44.9667, -93.0642
- Elevation: 256
- Year established: 2025



Site description:

This monitoring site is located within 20 meters from Northern Iron & Machine property fence line, just south of the facility. The surrounding area is predominantly residential neighborhoods, with commercial business to the west and east. South of the site is Minnehaha Ave. The purpose of the site is source-oriented lead monitoring since Northern Iron & Machine is a full-service iron foundry. A full metal scan is also performed on all TSP samples. This site began monitoring for air toxins in 2025.

Monitoring objectives:

- Demonstrate compliance with the TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Assess neighborhood exposure to air emissions.

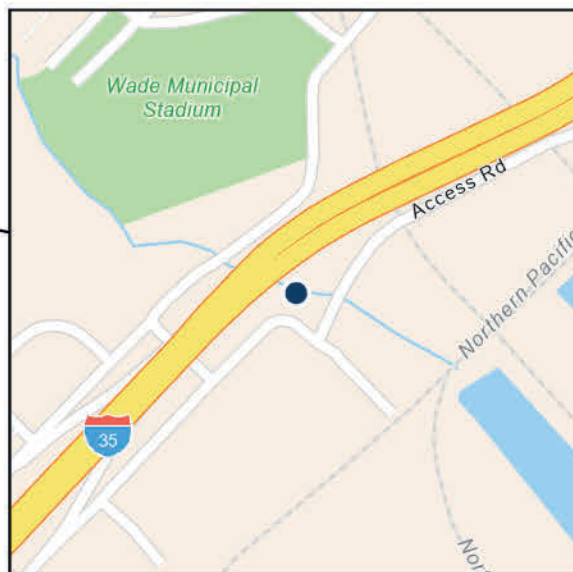
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls
- Meteorological data

27-137-0032: Oneota Street

Site information:

- Address: 37th Ave W & Oneota St
- City: Duluth
- County: Saint Louis
- Land use: Industrial
- Location setting: Urban and center city
- Coordinates: 46.7516, -92.1413
- Elevation: 193



Site description:

This monitoring site is located in west central Duluth, between I-35 and the Duluth-Superior Harbor. This site was established to monitor fugitive emissions from a variety of facilities and harbor operations that handle and ship materials including taconite pellets, aggregate, and coal. Other air emissions sources in the harbor area include scrap metal yards, railroad yards, wastewater treatment, power generation, and the I-35 corridor. Commercial land use changes to residential neighborhoods approximately 400 meters northwest of the site.

Monitoring objectives:

- Demonstrate compliance with PM10 NAAQS.

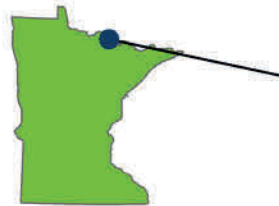
Pollutants monitored:

- PM10 - filter - collocated

27-137-0034: Voyageurs National Park

Site information:

- AKA: MN32 and VOYA2
- Address: Voyageurs National Park - Sullivan Bay
- City: International Falls
- County: Saint Louis
- Land use: Forest
- Location setting: Rural
- Coordinates: 48.4128, -92.8292
- Elevation: 427



AQI



Site description:

This monitoring site is located on a rocky outcrop near the Ash River Interpretive Center, on the southeast side of Voyageurs National Park. Land use in this area is primarily forest managed for recreation, timber, and wilderness. Pulp and paper mills in International Falls and Fort Frances, Ontario are located approximately 20 miles northwest of the site. The National Park Service operates this site.

Monitoring objectives:

- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ emissions reduction programs.
- Characterize fine particle chemistry to quantify existing conditions, track trends, and develop plans to protect visibility in Class 1 wilderness areas.

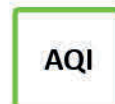
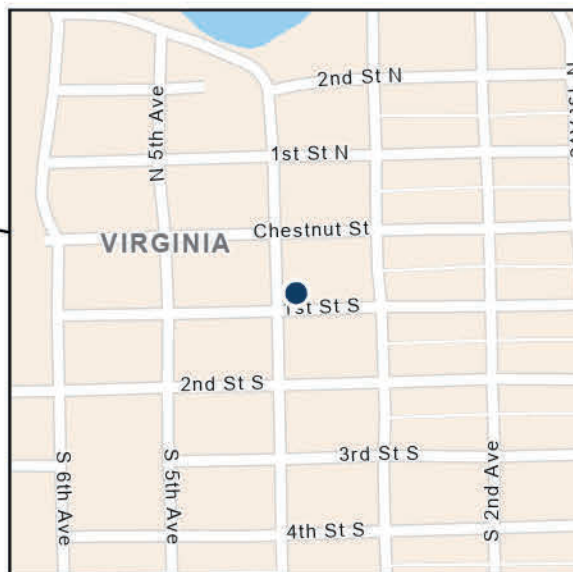
Pollutants monitored:

- Ozone
- Acid Deposition, IMPROVE

27-137-7001: Virginia City Hall

Site information:

- Address: 327 First St S
- City: Virginia
- County: Saint Louis
- Land use: Commercial
- Location setting: Urban and center city
- Coordinates: 47.5225, -92.5364
- Elevation: 455
- Year established: 1968



Site description:

This monitoring site is located on the roof of the City Hall Building in Virginia, a mid-sized city surrounded by open-pit mining and iron-ore processing plants. The site is approximately one mile northeast of U.S. Highway 53 in the downtown business district. Land use in the surrounding area is a mix of residential, commercial, and industrial activities.

Monitoring objectives:

- Demonstrate compliance with NO₂, SO₂, PM_{2.5} and PM₁₀ NAAQS.
- Demonstrate compliance with TSP MAAQS.
- Support AQI reporting and forecasting for PM_{2.5}.
- Characterize metals concentrations.

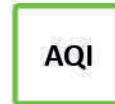
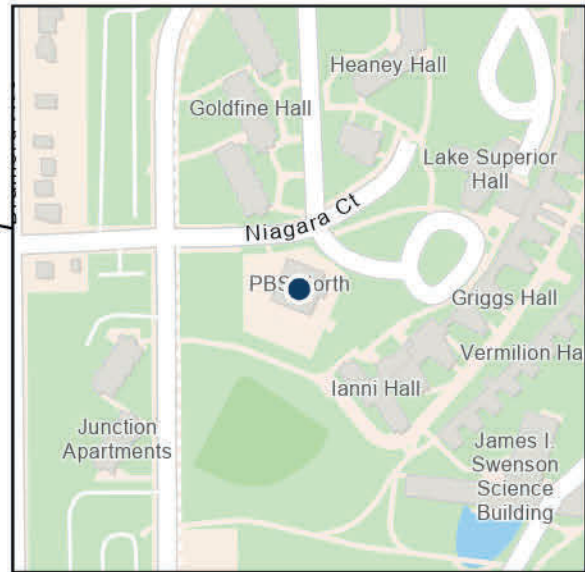
Pollutants monitored:

- PM_{2.5} - continuous
- PM₁₀ - continuous
- TSP and metals - every 6 days
- Sulfur dioxide
- Oxides of nitrogen

27-137-7550: U of M – Duluth

Site information:

- Address: 1202 East University Circle
- City: Duluth
- County: Saint Louis
- Land use: Residential
- Location setting: Suburban
- Coordinates: 46.8182, -92.0894
- Elevation: 351
- Year established: 1998



Site description:

This monitoring site is located on the roof of the WDSE television studios in northern Duluth, on the University of Minnesota – Duluth campus. The site is less than one mile west of Woodland Avenue, 500 meters south of Saint Marie Street, and 500 meters north of College Street. The area surrounding the campus is predominantly residential, with some commercial and retail businesses. WDSE was selected as a site representative of urban neighborhoods that are located at higher elevations in Duluth.

Monitoring objectives:

- Demonstrate compliance with PM_{2.5} and ozone NAAQS.
- Support AQI reporting and forecasting for ozone.

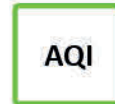
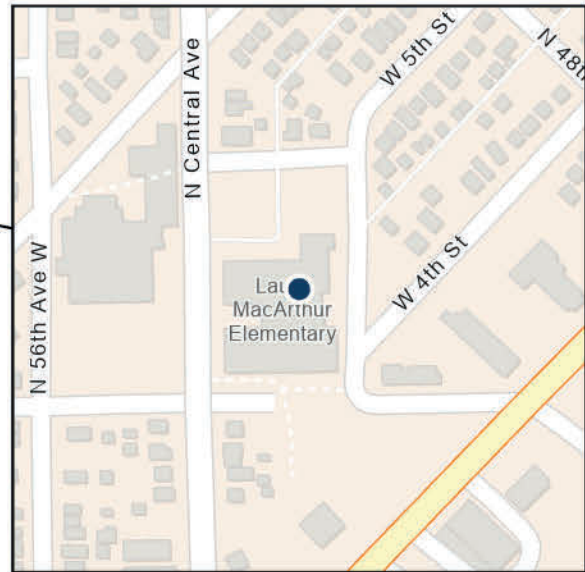
Pollutants monitored:

- PM_{2.5} - continuous
- Ozone

27-137-7554: Laura MacArthur School

Site information:

- Address: 720 N Central Ave
- City: Duluth
- County: Saint Louis
- Land use: Residential
- Location setting: Suburban
- Coordinates: 46.7436, -92.1656
- Elevation: 197
- Year established: 2012



Site description:

This monitoring site is located on the roof of the Laura MacArthur elementary school in west central Duluth. It is located in a neighborhood with mixed commercial and residential land use, approximately ½ mile north of the I-35 corridor and the industrial area bordering the Duluth-Superior Harbor.

Monitoring objectives:

- Demonstrate compliance with PM2.5 NAAQS.
- Support AQI reporting and forecasting for PM2.5.

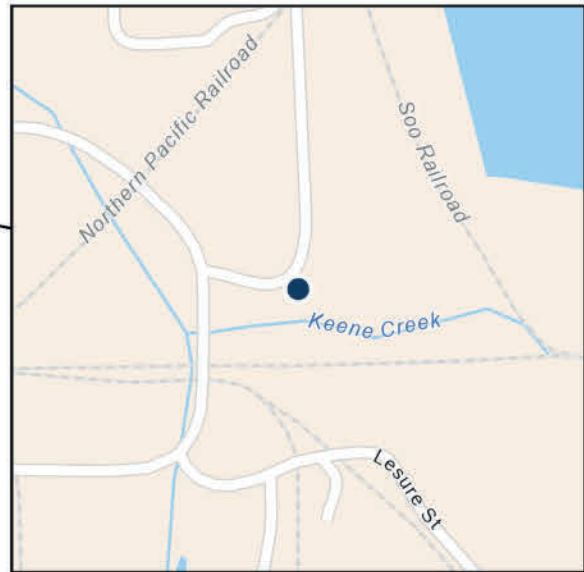
Pollutants monitored:

- PM2.5 - continuous

27-137-7555: Waseca Road

Site information:

- Address: Waseca Industrial Rd
- City: Duluth
- County: Saint Louis
- Land use: Industrial
- Location setting: Urban and center city
- Coordinates: 46.7293, -92.1599
- Elevation: 194
- Year established: 2001



EJ



Site description:

This monitoring site is located in western Duluth, between a residential neighborhood and several facilities along the Duluth-Superior Harbor. This site was established to monitor fugitive emissions from a variety of facilities that handle and ship materials including aggregate, bentonite clay, and coal. Other air emissions sources in this area include a paper mill and power plant. Residential neighborhoods are located approximately 400 meters west of the site.

Monitoring objectives:

- Demonstrate compliance with TSP MAAQS.
- Characterize metals.

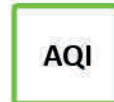
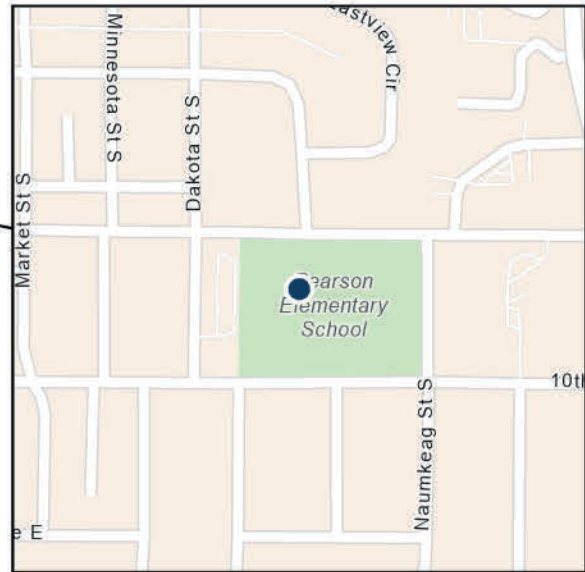
Pollutants monitored:

- TSP and metals - every 6 days - collocated

27-139-0505: B.F. Pearson School

Site information:

- Address: 917 Dakota St
- City: Shakopee
- County: Scott
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.7894, -93.5125
- Elevation: 285
- Year established: 2000



Site description:

This monitoring site is located on the roof of B.F. Pearson Elementary School in Shakopee. This location provides air quality data representative of suburban neighborhoods, which are dominated by residential areas, light commercial zones, retail zones, and roadways.

Monitoring objectives:

- Demonstrate compliance with PM2.5 and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

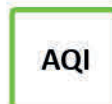
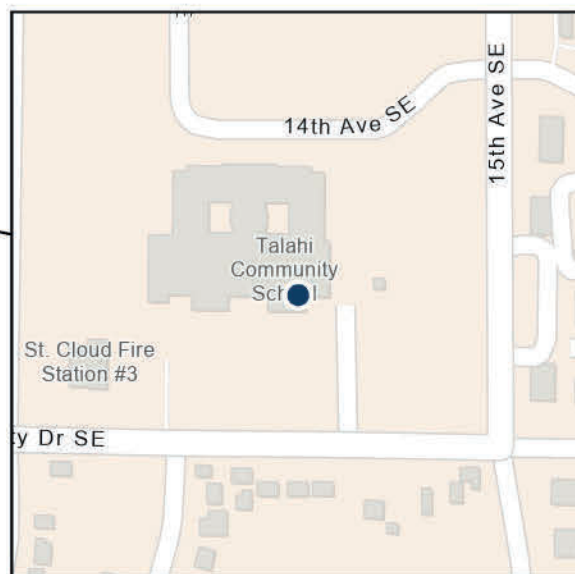
Pollutants monitored:

- PM2.5 - continuous
- Ozone

27-145-3052: Talahi School

Site information:

- Address: 1321 University Ave SE
- City: Saint Cloud
- County: Stearns
- Land use: Residential
- Location setting: Suburban
- Coordinates: 45.5497, -94.1334
- Elevation: 320
- Year established: 1998



Site description:

This monitoring site is located on the roof of the Talahi Elementary School at the corner of 15th Avenue Southeast and University Avenue Southeast in Saint Cloud. The site is approximately three miles east of the Saint Cloud City Center and less than one mile southwest of U.S. Highway 10. The surrounding area is predominantly residential, with commercial and retail businesses located to the north along U.S. Highway 10.

Monitoring objectives:

- Demonstrate compliance with PM2.5 and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

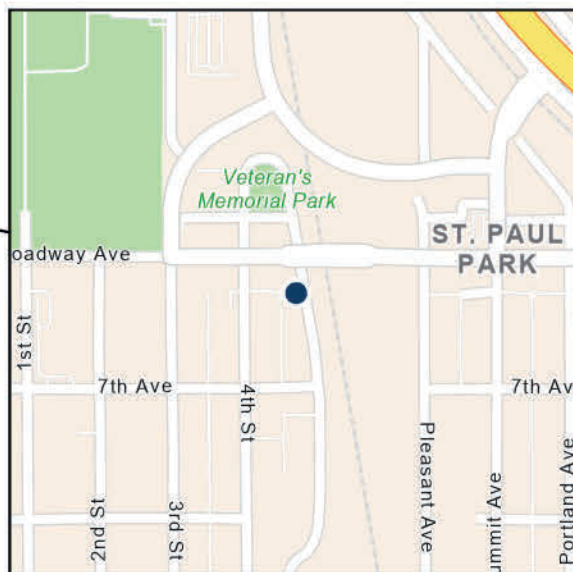
Pollutants monitored:

- PM2.5 - continuous
- Ozone

27-163-0436: St. Paul Park Refinery

Site information:

- Address: 649 5th St
- City: St. Paul Park
- County: Washington
- Land use: Industrial
- Location setting: Suburban
- Coordinates: 44.8473, -92.9955
- Elevation: 245
- Year established: 1989



Site description:

This monitoring site is located in St. Paul Park and is one of two sites in the St. Paul Park Refining Company air quality monitoring network. The monitoring shelter is located in an alley corridor just off 5th Street. The alley corridor runs along the north boundary of the maintenance garage. The refinery complex is located four blocks northeast of the monitoring site. A commercial freight railroad line is located 200 meters west of the site.

Monitoring objectives:

- Demonstrate compliance with SO₂ NAAQS.
- Demonstrate compliance with H₂S MAAQS.
- Characterize air toxics (VOCs and carbonyls).

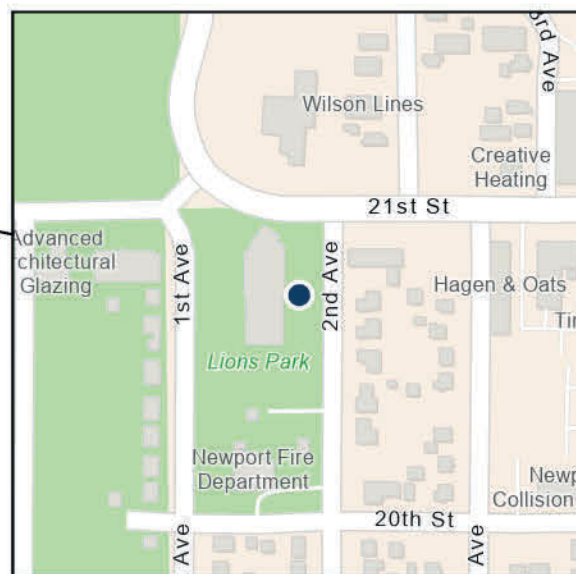
Pollutants monitored:

- Volatile organic compounds (VOCs) - collocated
- Carbonyls - collocated
- Sulfur dioxide
- Total reduced sulfur

27-163-0437: City of Newport Building

Site information:

- Address: 2060 1st Ave
- City: Newport
- County: Washington
- Land use: Residential
- Location setting: Urban and center city
- Coordinates: 44.8794, -93.0072
- Elevation: 225
- Year established: 2025



Site description:

This monitoring site is located on the roof of the City of Newport building on the northern side of the city. This site sits approximately 420 meters east of the Mississippi River, 500 meters south of I-494, and 360 meters west of U.S. Highway 10. To the north, east and west of the building, the surrounding land use is primarily made up of industrial and commercial activity. This includes fuel supply terminals, commercial warehousing, and ready-mix concrete supply. On the south side, there are low-density residential neighborhoods. This site provides air quality data representative of industrial and residential areas in proximity of major roadways and waterbodies.

Monitoring objectives:

- Demonstrate compliance with the TSP MAAQS.
- Characterize air toxics (VOCs, carbonyls, and metals).
- Assess neighborhood exposure to air emissions.

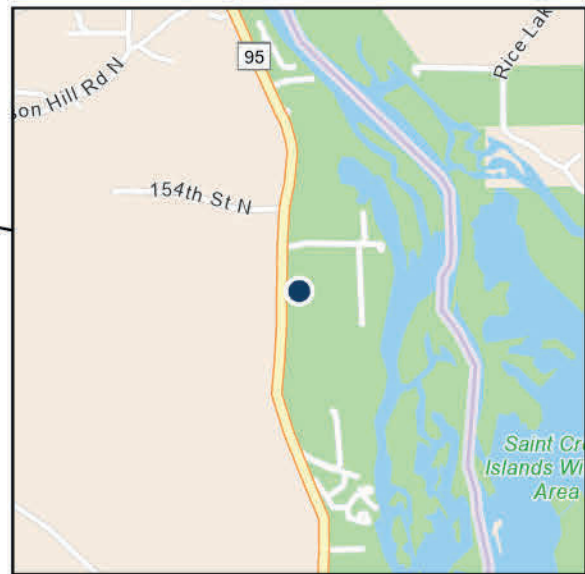
Pollutants monitored:

- TSP and metals - every 6 days
- Volatile organic compounds (VOCs)
- Carbonyls

27-163-6016: St. Croix Watershed Research Station

Site information:

- Address: St. Croix Trail N
- City: Marine on St. Croix
- County: Washington
- Land use: Agricultural
- Location setting: Rural
- Coordinates: 45.168, -92.7651
- Elevation: 234
- Year established: 2012



AQI



Site description:

This site is located at the Science Museum of Minnesota's St. Croix Watershed Research Station. The St. Croix Watershed Research station is located two miles south of Marine on St. Croix, Minnesota, approximately 35 miles from St. Paul. Land use surrounding the station is a mix of agricultural and residential.

Monitoring objectives:

- Demonstrate compliance with ozone NAAQS.
- Support AQI reporting and forecasting for ozone.

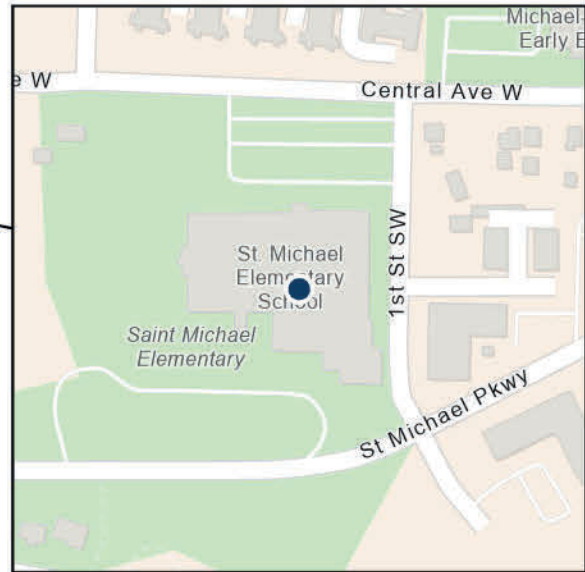
Pollutants monitored:

- Ozone

27-171-3201: Saint Michael Elementary School

Site information:

- Address: 101 Central Ave W
- City: Saint Michael
- County: Wright
- Land use: Residential
- Location setting: Suburban
- Coordinates: 45.209, -93.6685
- Elevation: 288
- Year established: 2002



AQI



Site description:

This monitoring site is located on the roof of the St. Michael Elementary School in St. Michael. The school is located approximately two miles south of I-94, in a residential neighborhood with nearby commercial and retail businesses. This site provides representative data for areas undergoing rapid development from rural to suburban residential land use.

Monitoring objectives:

- Demonstrate compliance with for PM2.5 and ozone NAAQS.
- Support AQI reporting and forecasting for PM2.5 and ozone.

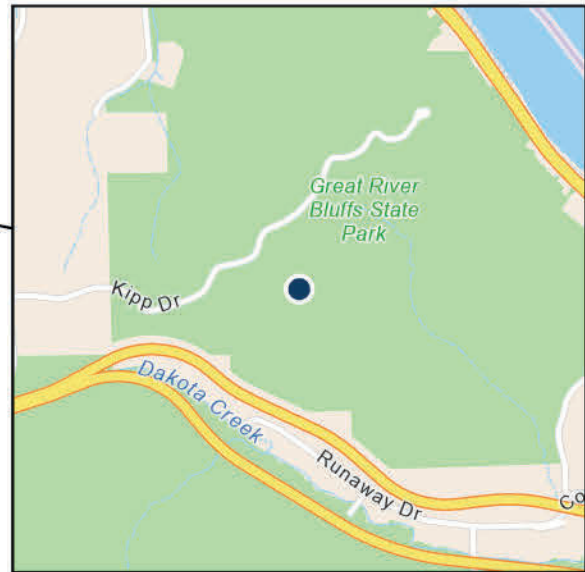
Pollutants monitored:

- PM2.5 - continuous
- Ozone

GRR1: Great River Bluffs

Site information:

- AKA: 27-169-9000
- Address: 43605 Kipp Dr
- City: Winona
- County: Winona
- Land use: Forest
- Location setting: Rural
- Coordinates: 43.9374, -91.4052
- Elevation: 366
- Year established: 2003



Site description:

This regional-scale monitoring site is located at Great River Bluffs State Park, which runs along the Mississippi River in southeast Minnesota. Land uses surrounding the 3,000-acre state park are primarily agriculture and managed forests. The site is operated by park personnel, with support from MPCA, under an interagency agreement.

Monitoring objectives:

- Characterize fine particle chemistry to quantify existing conditions, track trends, and develop plans to protect visibility in Class 1 wilderness areas.

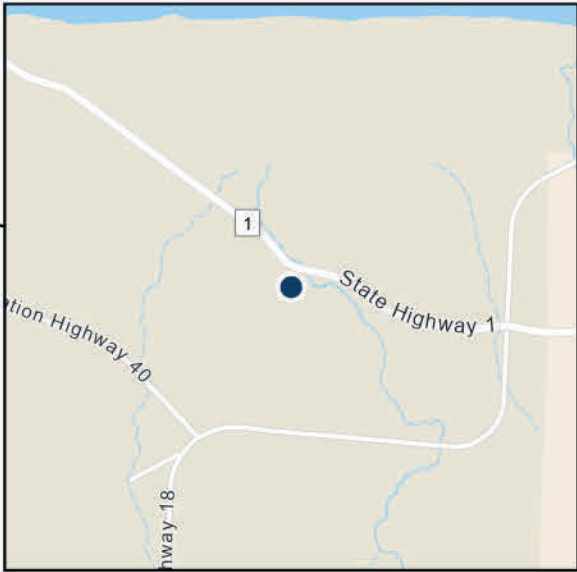
Pollutants monitored:

- IMPROVE

MN02: Red Lake

Site information:

- Address: State Hwy 1
- City: Red Lake
- County: Beltrami
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.8638, -94.8352
- Elevation: 358
- Year established: 2015



Site description:

This NADP monitoring site is located on the Red Lake Reservation, in Beltrami County in Northern Minnesota. Land use within multiple miles of the site is primarily forest and hunting grounds, surrounded by freshwater emergent wetland habitat and freshwater forested/shrub wetland habitat. This site is located about one and a half miles southeast of Lower Red Lake and fifty miles north of a nearby stream. MN02 is sponsored by the Red Lake Band of the Chippewa Nation.

Monitoring objectives:

- Obtain measurements that provide information on sources of mercury dry deposition.
- Measure NH3 concentrations to assess long-term trends in ambient air and deposition of reduced nitrogen species.

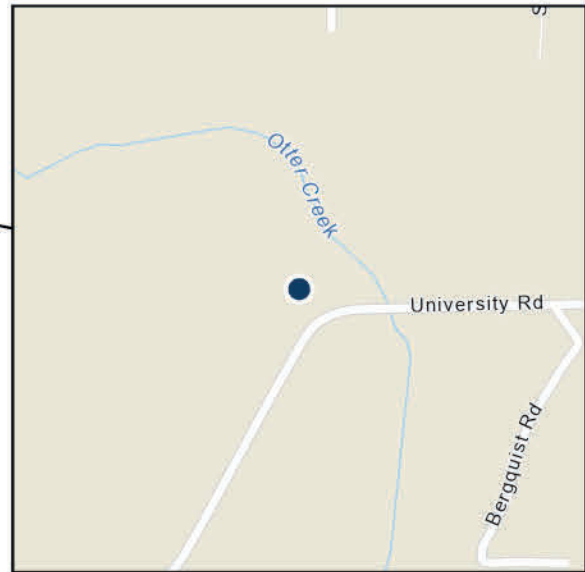
Pollutants monitored:

- Hg litterfall
- Ammonia (NH3)

MN05: Fond du Lac

Site information:

- Address: 175 University Road
- City: Cloquet
- County: Carlton
- Land use: Rural
- Location setting: Forest
- Coordinates: 46.7053, -92.5235
- Elevation: 389 m
- Year established: 2025



Site description:

This NADP monitoring site is located on the Fond du Lac Band of Lake Superior Chippewa in Carlton County, located on University Road. The site is in an opening encircled on 3 sides by tall pines as part of a research forest. There's a meteorological station and buildings to the west/southwest. Land use surrounding the site is primarily forested, with this MN05 site located in a clearing. MN05 is sponsored by the Fond du Lac Band of Lake Superior Chippewa.

Monitoring objectives:

- Provide a long-term record of total mercury concentrations and deposition in precipitation.

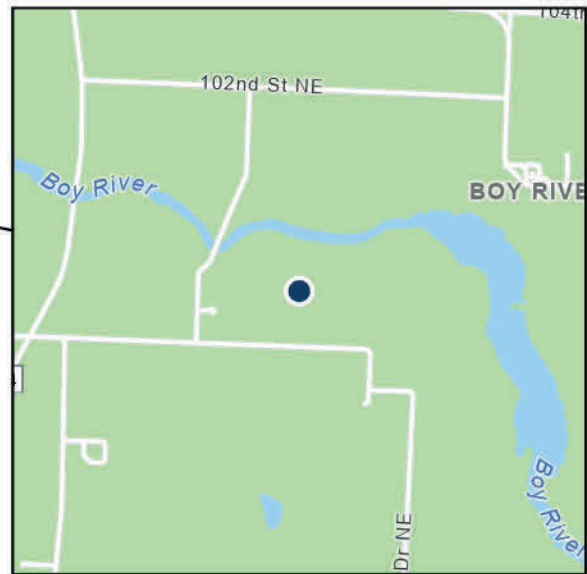
Pollutants monitored:

- Hg deposition

MN06: Leech Lake

Site information:

- Address: Boy Lake Dr NE
- City: Remer
- County: Cass
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.158, -94.1509
- Elevation: 399
- Year established: 2014



Site description:

This NADP monitoring site is located on the Leech Lake Reservation in Cass County, located on Boy Lake Drive NE. This site is located less than a half mile south of Boy River that steams from Leech Lake. Land use surrounding the site is primarily forested, with this MN06 site located in a clearing of fresh meadow. MN06 is sponsored by the Leech Lake Band of Ojibwe.

Monitoring objectives:

- Provide a long-term record of total mercury concentrations and deposition in precipitation.

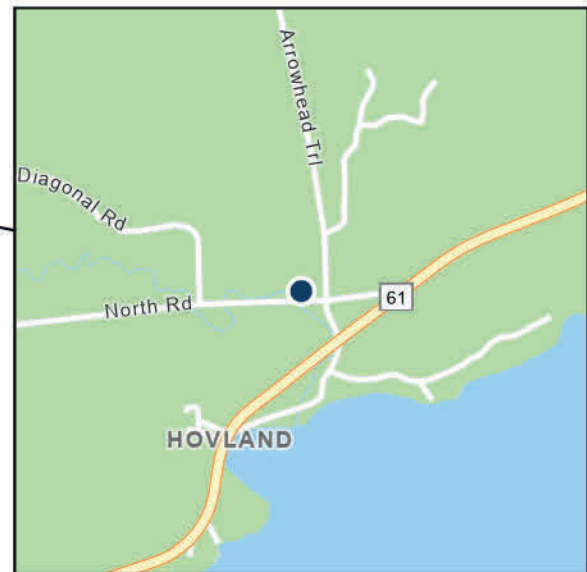
Pollutants monitored:

- Hg deposition

MN08: Hovland

Site information:

- Address: Arrowhead Trail
- City: Hovland
- County: Cook
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.8471, -89.9652
- Elevation: 183
- Year established: 1996



Site description:

This NADP monitoring site is located in Cook County, near the small community of Hovland, in northeastern Minnesota. The site is located in a two-acre clearing along County Road 69, a half mile north of State Highway 61 and Lake Superior. Land use within one mile of the site is a mix of residential along the Lake Superior shoreline and county, state, and federal forests inland along the Arrowhead Trail. Significant air emission sources are located more than 50 miles from the site and consist of pulp and paper mills, lumber mills, taconite-processing facilities, and a coal fired power plant. As of early 2023, all three units of this power plant ceased operations and were officially retired.

Monitoring objectives:

- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ and mercury emissions reduction programs.
- Provide data to evaluate the atmospheric transport and end point of PFAS compounds, allowing for local, regional, and national comparisons of PFAS concentrations and depositions.

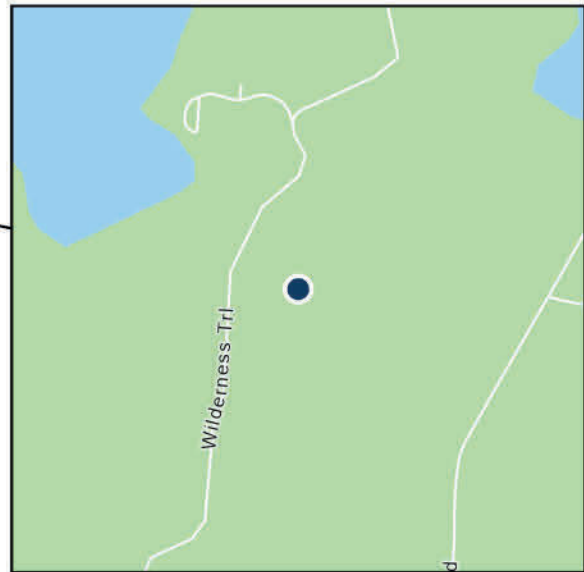
Pollutants monitored:

- Free acidity, calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, and ammonium.
- Per- and polyfluoroalkyl substances (PFAS)

MN16: Marcell Experimental Forest

Site information:

- Address: Wilderness Trail
- City: Balsam Lake
- County: Itaska
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.5309, -93.469
- Elevation: 407
- Year established: 1978



EJ



Site description:

This NADP monitoring site is located in Itaska County, approximately 20 miles north of Grand Rapids, in a two-acre clearing at the Marcell Experimental Forest. This area is within the Chippewa National Forest. U.S. Forest Service personnel operate and maintain this site with support from the MPCA. Land use within one mile of the site is dominated by managed forests and seasonal residences on the area lakes. Significant air emission sources are located more than 20 miles from the site, and consist of pulp and paper mills, lumber mills, and a coal-fired power plant.

Monitoring objectives:

- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ and mercury emissions reduction programs.
- Provide a long-term record of total mercury concentrations and deposition in precipitation.
- Obtain measurements that provide information on sources of mercury dry deposition.
- Provide data to evaluate the atmospheric transport and end point of PFAS compounds, allowing for local, regional, and national comparisons of PFAS

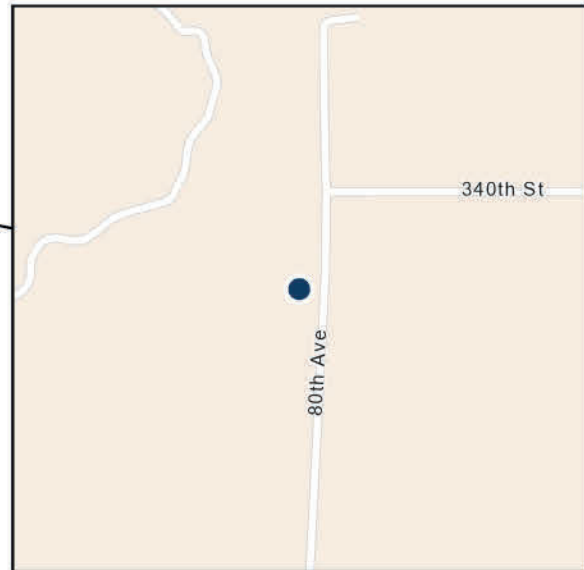
Pollutants monitored:

- Free acidity, calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, and ammonium.
- Hg deposition
- Hg litterfall
- Per- and polyfluoroalkyl substances (PFAS)

MN23: Camp Ripley

Site information:

- Address: 80th Ave
- City: Pillager
- County: Morrison
- Land use: Forest
- Location setting: Rural
- Coordinates: 46.2494, -94.4972
- Elevation: 401
- Year established: 1983



Site description:

This NADP monitoring site is located in Morrison County, south of Pillager, in a two-acre forest clearing. Land use within one mile of the site is primarily forest cover, with some agricultural activity. This site is located on the western boundary of the Camp Ripley Military Reservation. It is south of the Brainerd Lakes area, which is the nearest population center and a seasonal tourism destination in north central Minnesota. Significant air emission sources are located more than 20 miles from the site. The MPCA and the U.S. Geological Survey (USGS) sponsor operation and maintenance at this site.

Monitoring objectives:

- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ and mercury emissions reduction programs.
- Provide a long-term record of total mercury concentrations and deposition in precipitation.
- Provide data to evaluate the atmospheric transport and end point of PFAS compounds, allowing for local, regional, and national comparisons of PFAS concentrations and depositions.

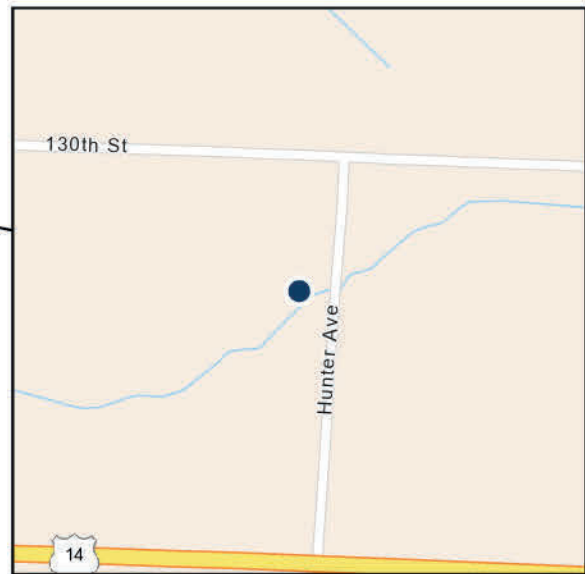
Pollutants monitored:

- Free acidity, calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, and ammonium.
- Hg deposition
- Per- and polyfluoroalkyl substances (PFAS)

MN27: Lamberton

Site information:

- Address: Wally Nelson Hwy
- City: Lamberton
- County: Redwood
- Land use: Agricultural
- Location setting: Rural
- Coordinates: 44.2369, -95.301
- Elevation: 340
- Year established: 1979



Site description:

This NADP monitoring site is located at the University of Minnesota Southwest Agricultural Research and Outreach Center just north of U.S. Highway 14, near Lamberton. The primary land use in the area is row-crop agriculture. University of Minnesota (U of M) personnel operate and maintain this site with support from the MPCA.

Monitoring objectives:

- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ and mercury emissions reduction programs.
- Provide a long-term record of total mercury concentrations and deposition in precipitation.

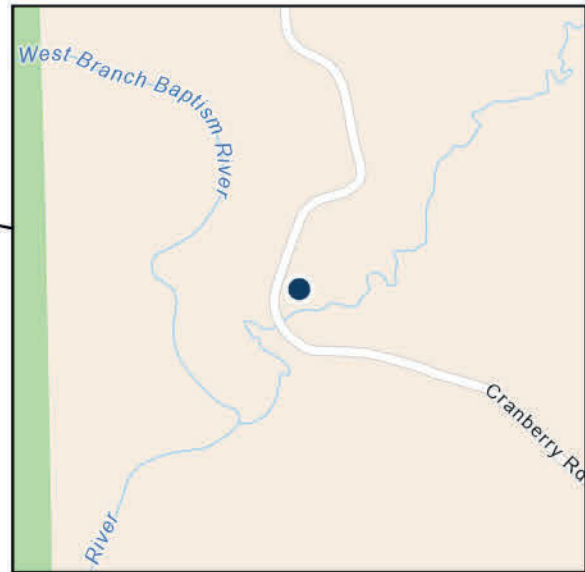
Pollutants monitored:

- Free acidity, calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, and ammonium.
- Hg deposition

MN99: Wolf Ridge

Site information:

- Address: 6282 Cranberry Rd
- City: Finland
- County: Lake
- Land use: Forest
- Location setting: Rural
- Coordinates: 47.3841, -91.2067
- Elevation: 381
- Year established: 1996



Site description:

This NADP monitoring site is located in Lake County, approximately two miles inland from Lake Superior. The site is located at Wolf Ridge Environmental Learning Center, which is approximately five miles east of Finland on County Road 6. Land use near the site is a mix of residential along Lake Superior and county, state, and federal forests managed for timber and recreation. Significant air emission sources include a taconite ore processing plant 15 miles southwest at Silver Bay and a coal-fired power plant 25 miles to the northeast at Schroeder (on track to close in 2018). Wolf Ridge Environmental Learning Center personnel operate and maintain the site with support from the MPCA.

Monitoring objectives:

- Characterize precipitation chemistry to track long-term spatial and temporal trends, support research, and assess the effectiveness of State and Federal SO₂ and mercury emissions reduction programs.
- Provide data to evaluate the atmospheric transport and end point of PFAS compounds, allowing for local, regional, and national comparisons of PFAS concentrations and depositions.

Pollutants monitored:

- Free acidity, calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, and ammonium.
- Per- and polyfluoroalkyl substances (PFAS)