

June 2025

2026 Minnesota Air Monitoring Network Planning and Public Comments

2026 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.

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Acronyms, abbreviations, and definitions

Air toxics – suite of parameters that includes VOCs, carbonyls, and metals

AQS – Air Quality System: EPA's repository of ambient air quality data

ARP – American Rescue Plan

BAM – Beta Attenuation Monitor

CAA – Clean Air Act

CFR – Code of Federal Regulations

CO – carbon monoxide

Criteria pollutants – the six pollutants regulated by the 1970 Clean Air Act

CSN – Chemical Speciation Network

Design Value – a statistic that describes the air quality status of a given location relative to the level of the National Ambient Air Quality Standards (NAAQS)

DNR – Department of Natural Resources

EPA – U.S. Environmental Protection Agency

FEM – Federal Equivalent Method

FRM – Federal Reference Method

GC/MS – Gas Chromatography/Mass Spectrometry

H₂S – hydrogen sulfide

Hg – mercury

HPLC – High Pressure Liquid Chromatography

ICP/MS – Inductively Coupled Plasma/Mass Spectrometry

IMPROVE – Interagency Monitoring of Protected Visual Environments

LADCO – Lake Michigan Air Directors Consortium

MAAQs – Minnesota Ambient Air Quality Standard

MDH – Minnesota Department of Health

MPCA – Minnesota Pollution Control Agency

NAAQS – National Ambient Air Quality Standard

NADP – National Atmospheric Deposition Program

NCore – National Core Monitoring Network

NO – nitric oxide

NO₂ – nitrogen dioxide

NO_x – oxides of nitrogen

NO_y – total reactive nitrogen

O₃ – ozone

PAMS – Photochemical Assessment Monitoring Stations

Pb – lead

PM_{2.5} – particulate matter less than 2.5 microns in diameter (fine particulate matter)

PM_{10-2.5} – particulate matter between 2.5 and 10 microns in diameter (coarse particulate matter)

PM₁₀ – particulate matter less than 10 microns in diameter

PQAO – Primary Quality Assurance Organization

SLAMS – State and Local Air Monitoring Stations

SO₂ – sulfur dioxide

SPM – special purpose monitoring

TO-11A – EPA method for analyzing carbonyls utilizing HPLC

TO-15 – EPA method for analyzing VOCs utilizing GC/MS

TRS – total reduced sulfur

TSP – total suspended particulate matter

U of M – University of Minnesota

VOC – volatile organic compound

Introduction

This part of the 2026 Minnesota Air Monitoring Network Plan includes details on which parameters are measured at each location and what equipment is used. It also details changes proposed for the 18 months following its publication. There is also an opportunity for the public to comment on air monitoring activities conducted by the Minnesota Pollution Control Agency (MPCA) and the changes that are being proposed.

The MPCA monitors different types of measurable air properties, called parameters. The group of sites where a parameter is monitored is referred to as a parameter network. Generally, parameters refer to pollutants such as fine particles or air toxics, but parameters also include non-concentration data such as wind speed and temperature. There are currently 63 sites across Minnesota that are being monitored for various parameters (Table 1 and Table 2), using appropriate methods and equipment (Table 4).

The MPCA monitors the six criteria pollutants established by the 1970 CAA to show compliance with the NAAQS. The criteria pollutants are particulate matter (PM_{2.5} and PM₁₀), lead (Pb), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and carbon monoxide (CO).

Other types of particulate matter are also collected in Minnesota. Total suspended particulate matter (TSP) is monitored to show compliance with Minnesota Ambient Air Quality Standards (MAAQS). Chemical speciation of PM_{2.5} is currently monitored at five sites in Minnesota through the IMPROVE network and CSN. Speciation data are used for trends analysis and to better understand the sources of fine particles.

The MPCA also monitors pollutants that pose a potential risk to human health and the environment but are not regulated by national standards. These pollutants include air toxics, such as volatile organic compounds (VOCs), carbonyls, and metals; acid rain; and mercury (Hg). Acid rain and mercury are monitored across Minnesota through the NADP network.

Compounds containing sulfur are monitored, as they may cause irritation to the eyes, nose, and throat. Hydrogen sulfide (H₂S) is monitored to show compliance with the MAAQS. Total reduced sulfur (TRS), which contains H₂S, is monitored near industrial sources. TRS is used as a conservative measurement to demonstrate compliance with the H₂S MAAQS.

Temperature, wind speed, wind direction, barometric pressure, and relative humidity strongly influence the concentrations and transport of pollutants. Meteorological data are collected at seven sites in the Twin Cities metropolitan area. Meteorological data from other sources near air monitoring stations can also be used to help interpret air quality monitoring data.

Generally, parameters are monitored either continuously or as integrated data, using various methods and equipment (Table 4). Continuous data give incremental readings on a real-time basis, such as every 5 or 15 minutes or every hour. Integrated samples are usually 24-hour averages, collected midnight to midnight once every three days, once every six days, or once every twelve days. Continuous data are collected and analyzed at the site. For integrated data, samples are collected at sites and transported to the MPCA lab for further analysis.

1. 2025 Site parameter networks

Site parameter networks are groups of sites across the state that monitor the same parameter. Tables 1 and 2 list which parameters are measured at sites across Minnesota in 2025. Table 3 summarizes how many sites are in each parameter network.

Table 1. 2025 Site Parameters – Greater Minnesota.

Site ID	City name	Site name	PM _{2.5} FRM	PM _{2.5} FEM	PM _{2.5} Speciation	PM ₁₀	TSP/Metals/Pb	Ozone	Nitrogen oxides	Sulfur dioxide	Carbon monoxide	VOCs	Carbonyls	Other parameters
27-005-2013	Detroit Lakes	FWS Wetland Management District		X				X						
27-007-2304***	Red Lake	Red Lake Nation - Hospital		X										
27-007-2305***	Red Lake	Red Lake Nation – DNR						X						
27-013-5510	Mankato	Rosa Parks Elementary		X				X						
27-017-7417***	Cloquet	Fond du Lac Band		X				X						
27-021-3410***	Cass Lake	Leech Lake Nation: Cass Lake		X										
27-031-7810***	Grand Portage	Grand Portage Band		X										
27-035-3204	Brainerd	Brainerd Lakes Regional Airport		X				X						
27-049-5302	Stanton	Stanton Airfield						X						
27-075-0005 MN18* BOWA1**	Ely	Boundary Waters		X	X			X						Acid and Hg Deposition, IMPROVE
27-083-4210	Marshall	Southwest Minnesota Regional Airport		X		X ^c		X						T640X
27-095-3051***	Mille Lacs	Mille Lacs Band						X						
27-109-5008	Rochester	Ben Franklin School		X				X						
27-109-5009	Rochester	Folwell School					X					X	X	
27-115-3061***	Hinckley	Lake Lena		X										
27-137-0032	Duluth	Oneota Street				X								Collocated PM ₁₀
27-137-0034 MN32* VOYA2**	International Falls	Voyageurs NP – Sullivan Bay			X			X						Acid Deposition, IMPROVE
27-137-7001	Virginia	Virginia City Hall		X		X ^c	X	X	X					T640X
27-137-7550	Duluth	U of M – Duluth		X				X						
27-137-7554	Duluth	Laura MacArthur School		X										
27-137-7555	Duluth	Waseca Road					X							Collocated TSP/Metals
27-145-3052	Saint Cloud	Talahi School		X				X						
27-171-3201	Saint Michael	Saint Michael		X				X						
GRR1**	Winona	Great River Bluffs			X									IMPROVE
MN02*	Red Lake	Red Lake												Hg Deposition, Hg Litterfall
MN06*	Not in a city	Leech Lake												Hg Deposition
MN08*	Hovland	Hovland												Acid Deposition
MN16*	Balsam Lake	Marcell Experimental Forest												Acid and Hg Deposition
MN23*	Pillager	Camp Ripley												Acid and Hg Deposition
MN27*	Lamberton	Lamberton												Acid and Hg Deposition
MN99*	Finland	Wolf Ridge												Acid Deposition

* NADP Site ID ** IMPROVE Site *** Tribal monitor ^cPM₁₀ Continuous

Table 2. 2025 Site parameters – Twin Cities metropolitan area.

Site ID	City name	Site name	PM _{2.5} FRM	PM _{2.5} FEM	PM _{2.5} Speciation	PM ₁₀	TSP/ Metals/ Pb	Ozone	Nitrogen oxides	Sulfur dioxide	Carbon monoxide	VOCs	Carbonyls	Other parameters
27-003-1001 MN01*	East Bethel	Cedar Creek						X						Acid Deposition
27-003-1002	Blaine	Anoka Airport	X	X	X	X ^C	X	X	X ^T	X ^T	X ^T	X	X	^T NCORE trace level gases, PM _{10-2.5} , Meteorological Data, CSN, PAMS, T640X
27-003-6021	Anoka	Federal Ammunition					X ^L							Meteorological Data, 1 in 3 day sampling
27-037-0020	Rosemount	Flint Hills Refinery 0020					X ^L		X	X	X	X	X	Collocated TSP and Metals, TRS, Meteorological Data
27-037-0423	Rosemount	Flint Hills Refinery 0423					X ^L		X	X	X	X	X	TRS, Meteorological Data
27-037-0443	Rosemount	Flint Hills Refinery 0443								X				
27-037-0465	Eagan	Gopher Resources					X ^L							Collocated TSP and Metals
27-037-0470	Apple Valley	Apple Valley		X										Collocated PM _{2.5} FEM
27-037-0480	Lakeville	Near Road I35		X					X		X			Meteorological Data
27-053-0909	Minneapolis	Lowry Avenue				X ^C	X ^L					X	X	Meteorological Data
27-053-0910	Minneapolis	Pacific Street		X		X ^C	X ^L							T640X
27-053-0954	Minneapolis	Arts Center								X	X			
27-053-0961	Richfield	Richfield Intermediate School										X	X	
27-053-0962	Minneapolis	Near Road I35/I94		X			X ^L	X	X		X	X	X	Meteorological Data, Collocated VOCs and Carbonyls
27-053-0963	Minneapolis	H.C. Andersen School	X	X	X		X					X	X	CSN
27-053-0966	Minneapolis	City of Lakes				X	X					X	X	
27-053-1007	Minneapolis	Humboldt Avenue					X					X	X	
27-053-xxxx	Minneapolis	Minneapolis Public School Maintenance					X					X	X	
27-053-1904	Minneapolis	East Phillips Community		X			X							Meteorological Data
27-053-1909	Minneapolis	Bottineau / Marshall Terrace		X		X ^C	X					X	X	T640X
27-053-2006	St. Louis Park	St. Louis Park	X											Collocated PM _{2.5} FRM
27-123-0866	St. Paul	Red Rock Road				X								Collocated PM ₁₀
27-123-0868	St. Paul	Ramsey Health Center	X			X ^C						X	X	
27-123-0871	St. Paul	Harding High School	X	X			X					X	X	Collocated PM _{2.5} FRM
27-123-0875	St. Paul	West Side					X							
27-123-0890	St. Paul	Northern Iron					X					X	X	Meteorological Data
27-123-0880	St. Paul	Frogtown					X					X	X	
27-139-0505	Shakopee	Shakopee		X				X						
27-163-0437	Newport	City of Newport					X					X	X	
27-163-0436	St. Paul Park	St. Paul Park Refinery								X		X	X	TRS, Collocated VOCs and Carbonyls
27-163-6016	Marine on St. Croix	Marine on St. Croix						X						

*NADP Site ID ^LSource-oriented Lead ^CPM₁₀ Continuous xxxx – site number TBD

Table 3. Number of sites per parameter network in 2025.

	Number of sites in greater Minnesota	Number of sites in the Twin Cities metro area	Total number of sites in Minnesota
All Sites	31	31	62
PM_{2.5} FRM	0	5	5
Continuous PM_{2.5}	16	10	26
PM_{2.5} Speciation	3	2	5
PM₁₀ Daily	1	2	3
PM₁₀ Continuous	2	5	7
TSP and Metals	3	19	22
Ozone	14	5	19
Oxides of Nitrogen	1	5	6
Sulfur Dioxide	1	6	7
Carbon Monoxide	0	6	6
VOCs	1	17	18
Carbonyls	1	17	18
NADP	9	1	10

2. Methods and equipment

Table 4 lists current methods and equipment used by MPCA. Appendix B of this plan provides tables that describe each monitor's method, scale, objective, and collocation, where required.

Table 4. Methods and equipment used for parameter networks in Minnesota.

Parameter	Methods and equipment	Analyzing agency
Acid Deposition	Weekly wet-only precipitation collection	NADP
Carbonyls	HPLC from DNPH tubes collected using ATEC Model 2200 sampler	MPCA
Carbonyls - PAMS	HPLC from DNPH tubes collected using ATEC Model 8000 sampler	MPCA
CO	Infrared Absorption – Teledyne API Models 300E/T300	MPCA
CO trace level	Infrared Absorption – Teledyne API Model T300U	MPCA
H ₂ S	Honeywell Analytics SPM Flex	MPCA
Mercury Deposition	Weekly wet-only precipitation collection	NADP
Metals	ICP/MS from TSP filters	MPCA
Meteorological Data	Various meteorological sensors	MPCA
NO/NO _y trace level	Chemiluminescence – Teledyne API Model T200U	MPCA
NO _x	Chemiluminescence – Teledyne API Models 200A/T200	MPCA
NO ₂	Cavity Attenuated Phase Shift (CAPS) - Teledyne API Model T500U	MPCA
O ₃	Ultraviolet Absorption – Teledyne API Models 400E/ T400	MPCA
PM ₁₀	Gravimetric – Andersen Hi-Vol samplers	MPCA
PM ₁₀ Continuous	Beta Attenuation – MetOne Instruments BAM-1020 Broadband spectroscopy – Teledyne T640X	MPCA
PM _{10-2.5}	Broadband spectroscopy – Teledyne T640X	MPCA
PM _{2.5} FEM	Broadband spectroscopy – Teledyne T640 and T640X	MPCA
PM _{2.5} FRM	Gravimetric – Thermo Partisol-Plus Model 2025 / 2025i PM _{2.5} Sequential Air Sampler	MPCA
PM _{2.5} Speciation - CSN	MetOne Instruments SAAS Speciation Sampler; URG3000N Carbon Samplers	EPA
PM _{2.5} Speciation	IMPROVE Sampler	IMPROVE
SO ₂	Pulsed Fluorescence – Teledyne API Models 100E/T100	MPCA
SO ₂ trace level	Pulsed Fluorescence – Teledyne API Model T100U	MPCA
TRS	SO ₂ analyzer (pulsed fluorescence) with thermal oxidizer	MPCA
TSP	Gravimetric – High Volume samplers	MPCA
VOCs (24-hour)	GC/MS analysis of samples collected using a ATEC Model 2200 sampler	MPCA
VOCs (hourly)	CAS/Chromatatec Auto GC	MPCA

2.1 American Rescue Plan (ARP)

In April of 2022, the MPCA was notified that the EPA was planning to award ARP direct funding to the MPCA to purchase air monitoring equipment. Utilizing one-time funding provided under the American Rescue Plan (ARP) Act, the primary objective of this project is to enhance monitoring of PM_{2.5} or other National Ambient Air Quality Standard (NAAQS) pollutants in and near communities with environmental justice concerns who face disproportionate exposure to these pollutants and health risks which are also associated with increased vulnerability to COVID-19.

The funds may be used to address other considerations in and near communities with environmental justice concerns including upgrading other NAAQS pollutant monitoring sites, upgrading certain NAAQS gas monitors and/or equipment not meeting performance or completeness goals, and other possible PM monitoring investments. Table 13 describes what the MPCA intends to do with the ARP funding. The MPCA has received the ARP funds and is currently in the process of purchasing and deploying the equipment.

Table 5: Equipment purchased with ARP funding in Minnesota

AQS Site ID	Site name	City	Parameter	Upgrade proposed
27-013-5510	Mankato	Mankato	Ozone, Continuous PM _{2.5}	TAPI T400, T640
27-145-3052	Talahi School	St. Cloud	Ozone	TAPI T400
27-035-3204	Brainerd Lakes Regional Airport	Brainerd	Ozone	TAPI T400
27-137-7550	Duluth U of M	Duluth	Ozone	TAPI T400
27-053-0910	Pacific Street	Minneapolis	Continuous PM _{2.5}	TAPI T640X
27-003-1002	Anoka County Airport	Anoka	NO ₂	ESC 8872, T700U
27-037-0480	Near Road I-35	Lakeville	NO ₂	ESC 8872
27-053-0962	Near Road I-35/I-94	Minneapolis	NO ₂	ESC 8872, TAPI T700
27-037-0020	Flint Hills Refinery 420	Rosemount	NO ₂	ESC 8872
27-037-0423	Flint Hills Refinery 423	Rosemount	NO ₂	ESC 8872
27-137-7001	Virginia City Hall	Virginia	NO ₂	ESC 8872, TAPI T700
Statewide	Statewide	Statewide	All Parameters	In house Flow device certification

The MPCA also supports our tribal partners on new FEM PM_{2.5} projects funded with ARP awards, including serving as their Primary Quality Assurance Organization (PQAO). These projects provide tribal communities fine particulate data of the same quality and allow them to compare continuous data streams in nearby areas. In addition, the MPCA is supporting a new ozone site operated by the Red Lake Nation.

Our tribal partners include:

- Fond Du Lac Band of Lake Superior Chippewa
- Grand Portage Band of Lake Superior Chippewa
- Leech Lake Band of Ojibwe
- Mille Lacs Band of Ojibwe
- Red Lake Nation

3. Environmental Justice

The Minnesota Pollution Control Agency (MPCA) defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This will be achieved when everyone benefits from the same degree of environmental protection and has equal access to the decision-making processes that contribute to a healthy environment.

The MPCA is striving to understand how air pollution may disproportionately affect some communities. Current and continuing efforts to involve and inform communities include issuing several reports and community focused websites with data portals.

- [“Air We Breathe” report \(https://www.pca.state.mn.us/air/air-we-breathe\)](https://www.pca.state.mn.us/air/air-we-breathe)
- [“Life and Breath” report \(https://www.pca.state.mn.us/air/life-and-breath-report\)](https://www.pca.state.mn.us/air/life-and-breath-report)
- [East Phillips Community/ Smith Foundry \(https://www.pca.state.mn.us/local-sites-and-projects/minneapolis-smith-foundry\)](https://www.pca.state.mn.us/local-sites-and-projects/minneapolis-smith-foundry)
- [Anoka/Federal Ammunition \(https://www.pca.state.mn.us/local-sites-and-projects/anoka-federal-ammunition\)](https://www.pca.state.mn.us/local-sites-and-projects/anoka-federal-ammunition)
- [North Minneapolis air monitoring project webpage \(https://www.pca.state.mn.us/air/north-minneapolis-air-monitoring-project\)](https://www.pca.state.mn.us/air/north-minneapolis-air-monitoring-project)

The [MPCA’s Environmental justice website\(https://www.pca.state.mn.us/about-mpca/mpca-and-environmental-justice\)](https://www.pca.state.mn.us/about-mpca/mpca-and-environmental-justice) shares additional information on MPCA’s efforts around environmental justice.

Current efforts

Along with new census data, the MPCA update the criteria for census tracts to be considered environmental justice areas of concern. The MPCA now considers tribal areas and census tracts with higher concentrations of low-income residents, people of color, and people of limited English proficiency as areas of increased concern for environmental justice. The four criteria that are currently used to define environmental justice areas of concern are Federally recognized tribal areas and census tracts where:

- At least 40% of residents are people of color
- At least 35% of people reported income less than 200% of the federal poverty level
- At least 40% of people have limited English proficiency
- Located within Indian Country, which is defined as federally recognized reservations and other Indigenous lands

Using this definition, out of 59 statewide monitors, 14 are within one area of environmental concern, 9 are within two overlapping areas, and 6 fall within the boundaries of three types of environmental justice concern areas (Figure 1 and Figure 2). None of the census tracts in Minnesota meet all four environmental justice criteria, therefore none of the monitors are in an area that meet all four criteria. Overall, 29 of the 59 monitors are in environmental justice areas.

Figure 1: MPCA 2025 monitor locations and environmental justice areas of concern of Minnesota.

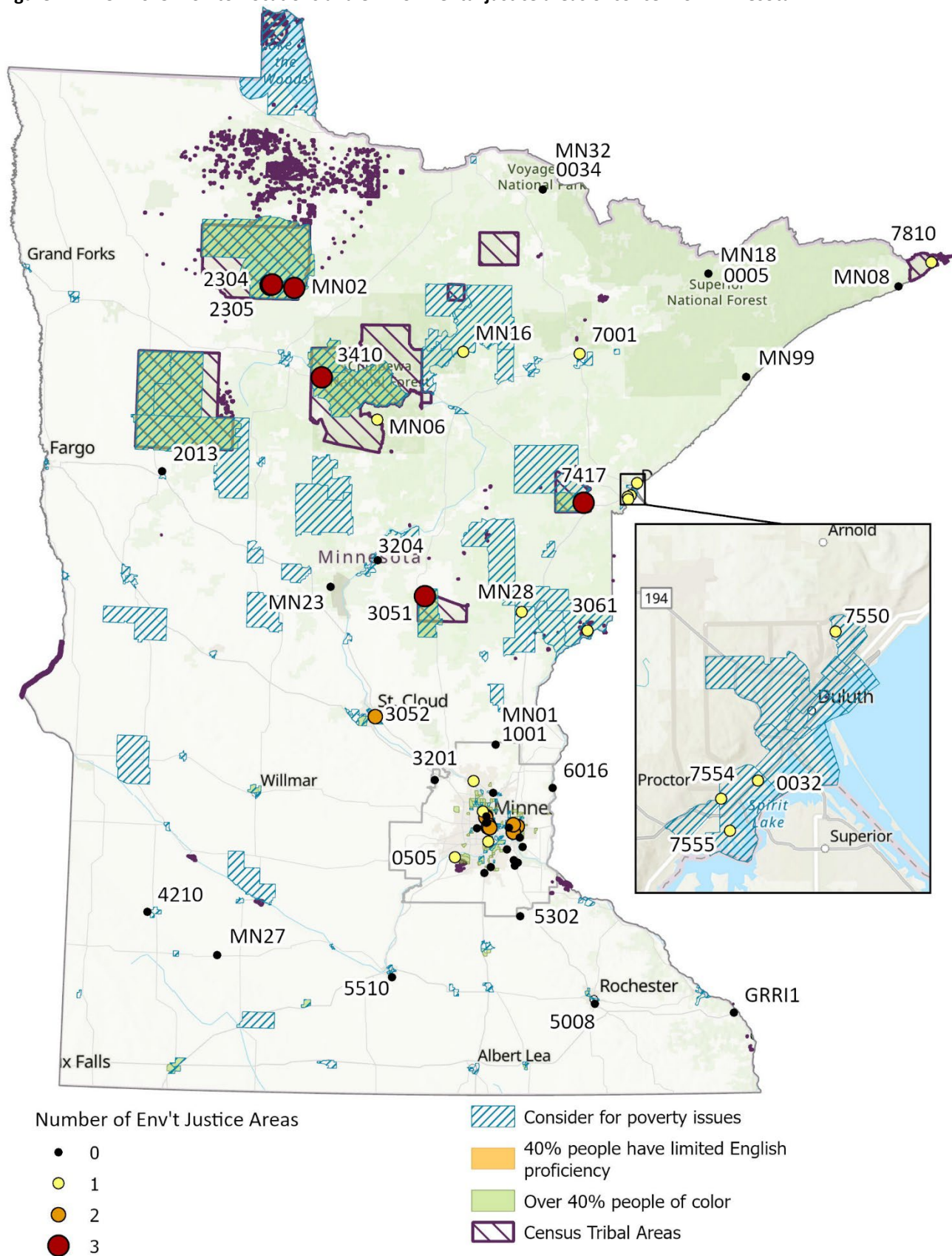
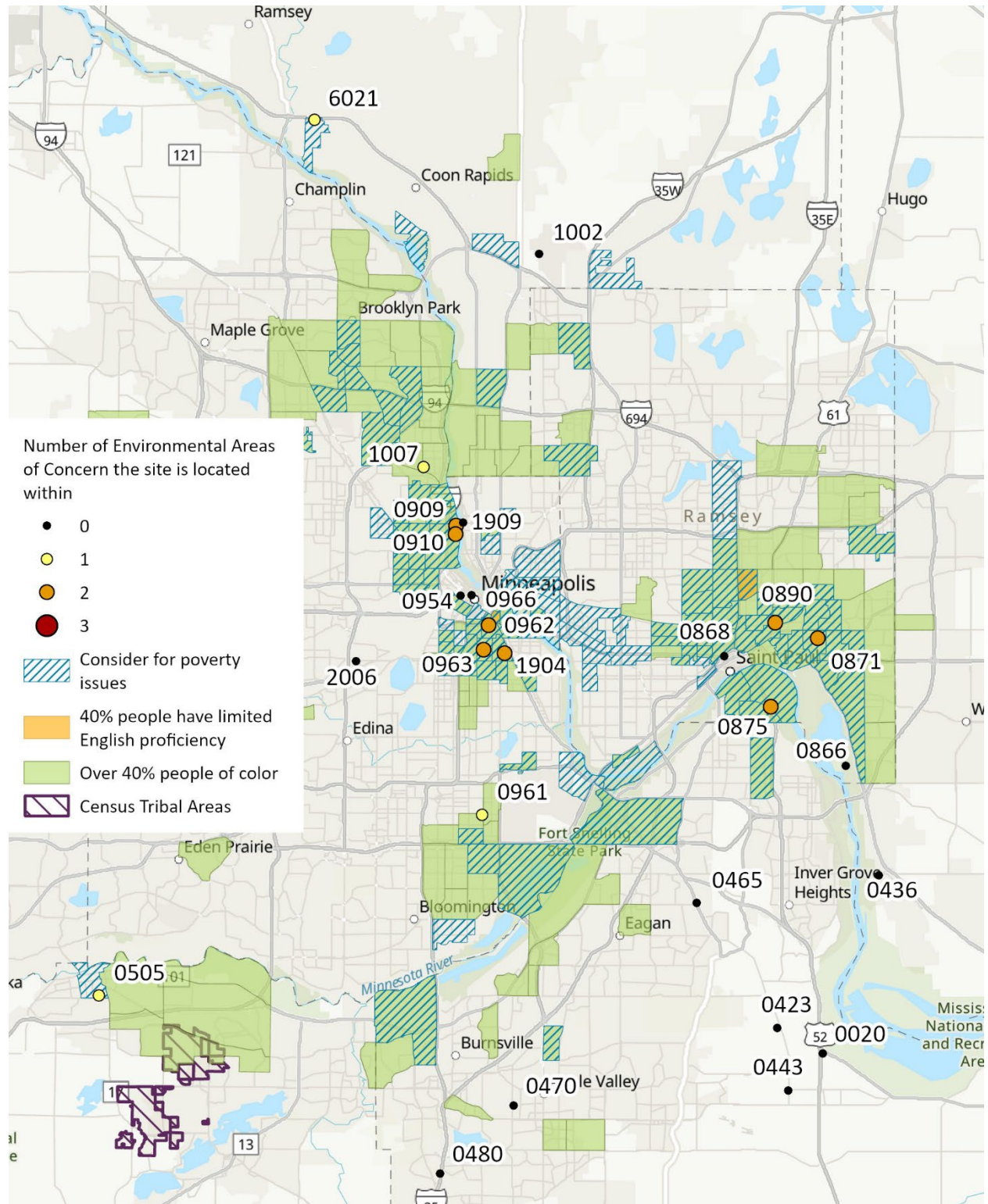


Figure 2: MPCA 2025 monitor locations and environmental justice areas of concern in Twin Cities metro.



Future work

The MPCA continues to look for partnerships to continue to use networks of air sensor such as AQMESH and Purple Air sensors to determine hot spots of air pollution and to potentially place SENSIT SPOD VOC sensors to better determine the VOC pollution in the Metro area. More information on how sensors are being use can be found in section 6.3 Air Sensor Program. Additionally, MNRISKS, MPCA’s risk-screening tool was used in the most recent Air Toxics Network Assessment’s suitability analysis to determine if the current placement of air toxics monitors is represented in environmental justice areas of concern. More information can be found in Section 5.2 of this report. MNRISKS will continue to be referenced when assessing monitoring networks to ensure environmental justice factors are considered when removing or adding monitors.

Conclusion

The effects of historical and current structural inequities are made clear through the disparities of air pollution health impacts. The MPCA is committed to reducing these disparities and reducing air pollution in areas of environmental justice concern. Through strengthening and fully utilizing our community relationships, increasing our outreach and communication, and being present in these communities, the MPCA continues to work towards the meaningful involvement of those most impacted by air pollution. Through our efforts to incorporate environmental justice in our air monitoring decisions, the MPCA continues to strive for the fair treatment of all people. To explore the MPCA’s resources on environmental justice and air pollution, visit the [Environmental justice and air webpage\(https://www.pca.state.mn.us/air/environmental-justice-and-air\)](https://www.pca.state.mn.us/air/environmental-justice-and-air).

4. Network assessments

4.1 Regional network assessment

In addition to this air monitoring network plan, the EPA requires states to complete a network assessment every five years. Under the direction of the Lake Michigan Air Directors Consortium (LADCO), Minnesota has collaborated with Illinois, Indiana, Michigan, Ohio and Wisconsin to develop network assessments in 2010, 2015, 2020 and 2025. The results of the Network Assessments can be found on [LADCO’s website \(https://www.ladco.org/reports/monitoring-reports/\)](https://www.ladco.org/reports/monitoring-reports/).

The assessment was performed to provide state and local networks information on whether their networks meet monitoring objectives, whether new sites are needed, whether existing sites are no longer needed, and whether new technologies are appropriate for incorporation into the network. The network assessment provides an interactive tool to examine the regional air monitoring network, including network history, types of pollutants monitored, attainment status, concentration trends, and gridded emissions. The layered maps in this assessment tool provide further information with pop-up boxes for each monitor or feature, offering details such as location, site IDs, design values, and other associated information.

Beyond the primary requirements of this assessment, the StoryMap associated with this assessment also provides the following:

- Pros, cons, and best practices for the use of low-cost air quality sensors
- Visualization tool to plot air toxics data over time for selected monitors
- Template to help guide monitoring agencies through decisions about whether to shut down, relocate, or add monitors

- Risks to monitoring networks from extreme weather events

Some key findings of the 2025 Network Assessment include:

- Criteria pollutant monitoring networks are adequate to meet EPA’s minimum monitoring criteria.
- Monitoring networks are not at fine enough spatial scale to answer all important air quality questions. Low-cost air quality sensors can provide better spatial coverage and can be used in tandem with regulatory monitors. Minnesota’s criteria pollutant monitoring network is not dense enough to measure neighborhood level disparities in air quality, but we are increasing our use of small air quality sensors to cover gaps in our air monitoring network, especially in areas of environmental justice concern.
- New monitoring sites should only be added with additional permanent sources of funding.
- Some monitors could be shut down without losing crucial information about regional-scale pollution.
 - No ozone monitors meet EPA’s criteria for shutting down a monitor.
 - Only 17 PM_{2.5} monitors meet the shut-down criteria for both the annual and PM_{2.5} NAAQS, of which 9 are in Minnesota. All of the PM_{2.5} monitors eligible for disinvestment are outside of Twin Cities. While these monitors are eligible for disinvestment from legal standpoint, they provide important spatial and temporal coverage, therefore there is not plan to shut down these monitors at this time.
- With extreme weather events becoming more prevalent, air monitoring agencies should have plans to make networks more resilient.
- Minnesota’s air toxics network is concentrated in the Twin Cities and Duluth due to logistical challenges with transporting samples. Within those areas, the air toxics network is generally representative of the air quality experienced in different neighborhoods.

4.2 Statewide network assessment

Although not required by the EPA or federal regulations, in the 2022 Ambient Air Monitoring Network Plan, the MPCA committed to re-evaluating Minnesota’s air monitoring network. This re-evaluation aimed to establish an in-house methodology to quantify monitor values and assess whether there are obvious recommendations (removal, move, and addition) to the existing network.

In 2021, the criteria pollutant network was briefly examined using data available from the 2020 Regional Network Assessment. Most important factor in this assessment was looking at the probability of exceedance based on design values relative to NAAQS. From late 2022 to early 2024, the air toxics network was assessed with the goal to keep the network purposeful, manageable, and defensible. This network has been in establishment since the early 2000 following the legislative studies done around the Twin Cities to measure and understand the risk posed by metals, VOC and carbonyls. Unlike the criteria pollutants, there are no federal requirements to monitor for VOC and carbonyl.

In the initial phase of the air toxics network assessment, members found the workload required to process data in a timely fashion is greater than the workforce capacity available, deeming unmanageable. This meant the MPCA would have to reduce the samples collected at the network scale, either by reducing the frequency of collection or discontinuing sites. As part of this assessment, the Agency performed two distinct analyses: Suitability and site-by-site analysis.

Suitability analysis confirmed that the current monitoring sites within the network as of 2023 are located in many of the “hot spots” based on the internally set priorities, which are indicated by air pollution scores from MnRISks and EJ scores. This meant that the existing sites are already located in

areas predicted to have highest risks. The site-by-site analysis provided a ranking from highest to lowest value sites based on criteria matrix that weighed risk to health; EJ scores; redundancy based on proximity to other monitoring sites; and logistical concerns.

After reviewing the ranking, the project team drafted a recommendation, which included a list of sites to discontinue air toxics monitoring. Table 6 lists the sites where the monitoring of VOC, Carbonyl and TSP/Metals (if applicable) discontinued. At all the sites that were discontinued, measured VOC/Carbonyl data showed very low risk to human health. Three of the five sites also discontinued monitoring for metals, including lead. As a result of this discontinuation, two sites were removed: Point Road (446) and Michigan Street (7549).

Table 6. List of air toxics monitoring discontinued

Site ID	Site name	City	VOCs and carbonyls	TSP/ Metals/Pb	Reasoning for discontinuing
27-037-0443	Flint Hills Refinery 443	Rosemount	X		The refinery is moving out of the property; logistics for relocation for SO2 monitoring is pending at the time of this publication. Additionally, not identified as EJ area. Flint Hills (420) and Flint Hills (423) are located nearby.
27-037-0470	Westview School	Apple Valley	X	X	Not identified as EJ area.
27-053-2006	St. Louis Park City Hall	St. Louis Park	X		Not identified as EJ area. Redundant with the Richfield monitoring site near the airport.
27-137-7549	Michigan Street	Duluth	X	X	This site was established to characterize air toxics from a variety of emission sources along the I-35 corridor and Duluth/Superior Harbor. Currently our only air toxics (VOCs and carbonyls) monitoring location outside the Twin Cities MSP.
27-163-0446	Point Road	Bayport	X	X	Not identified as EJ area and have long track record of low risk. Originally established as response to citizen concern in 2007.

5. Network changes

Changes to the MPCA Air Monitoring Network are intended to improve the effectiveness of monitoring efforts and to ensure compliance with the EPA National Ambient Air Monitoring Strategy. Some changes are planned well in advance and are detailed in the Network Plan each year. Other changes are a result of legislation, administrative directives, land-use changes, loss of funding, enforcement actions, or are in response to complaints, and cannot be foreseen when this report is created. This section of the document contains all changes that were made in 2025 and the changes that are planned for 2026.

5.1 2025 network changes

The proposed changes from the 2025 Network Plan are listed in Table 7. All of these proposed changes have been implemented.

Table 7. Proposed changes for 2025

Site ID	City name	Site name	PM ₁₀ (1-in-6 day)	PM ₁₀ (hourly)	TSP/ Metals/Pb	VOCs and Carbonyls	Site closed?
27-037-0443	Rosemount	Flint Hills Refinery 443				R	no
27-037-0470	Apple Valley	Westview School			R	R	no
27-053-2006	St. Louis Park	St. Louis Park				R	no
27-137-7001	Virginia	Virginia City Hall	R	A			no
27-137-7549	Duluth	Michigan Street			R	R	yes
27-163-0446	Bayport	Point Road			R	R	yes

R = removed
A = added

Additional changes to the air toxics network were made in 2025 as the result of legislation passed during the 2024 legislative session. The Minnesota State Legislature has appropriated funds for hazardous air pollutants monitoring to be performed in Hennepin, Ramsey, Washington and Olmsted Counties. This can be found in the [Chapter 116, Section 2, Subd 123 of the Regular Legislative session \(https://www.revisor.mn.gov/laws/2024/0/Session+Law/Chapter/116/\)](https://www.revisor.mn.gov/laws/2024/0/Session+Law/Chapter/116/).

Table 8. Additional changes for 2025

Site ID	City name	Site name	TSP and metals	VOCs and carbonyls
27-053-xxxx	Minneapolis	Minneapolis Public School Maintenance	A	A
27-109-5009	Rochester	Folwell School	A	A
27-123-0890	St. Paul	Northern Iron	A	A
27-123-0880	St. Paul	Frogtown	A	A
27-163-0437	Newport	City of Newport	A	A

xxxx = site numbers to be determined

A = added

5.2 2026 Proposed changes

In 2026, the 1-in-6 day PM_{2.5} FRM sampler in St. Louis Park (27-053-2006) will be replaced by an hourly FEM monitor. Since this site is currently host to collocated PM_{2.5} FRM samplers, the following steps will be taken to maintain collocation requirements for PM_{2.5}:

- An FRM sampler will be added to site 27-053-0962 so it will be collocated for FRM-FEM
- The collocation at 27-123-0871 will be switched from FRM-FEM to FRM-FRM

Table 9. Proposed 2026 network changes

Site ID	City name	Site name	PM _{2.5} FRM (1-in-6 day)	PM _{2.5} continuous
27-053-2006	St. Louis Park	St. Louis Park	R	A

R = plan to remove
A = plan to add

6. Public inspection period

This plan was available for public inspection and comment from May 23, 2025 through June 24, 2025. No public comments were received during the inspection period.

The public is welcome to comment on our air monitoring activities at any time throughout the year.