



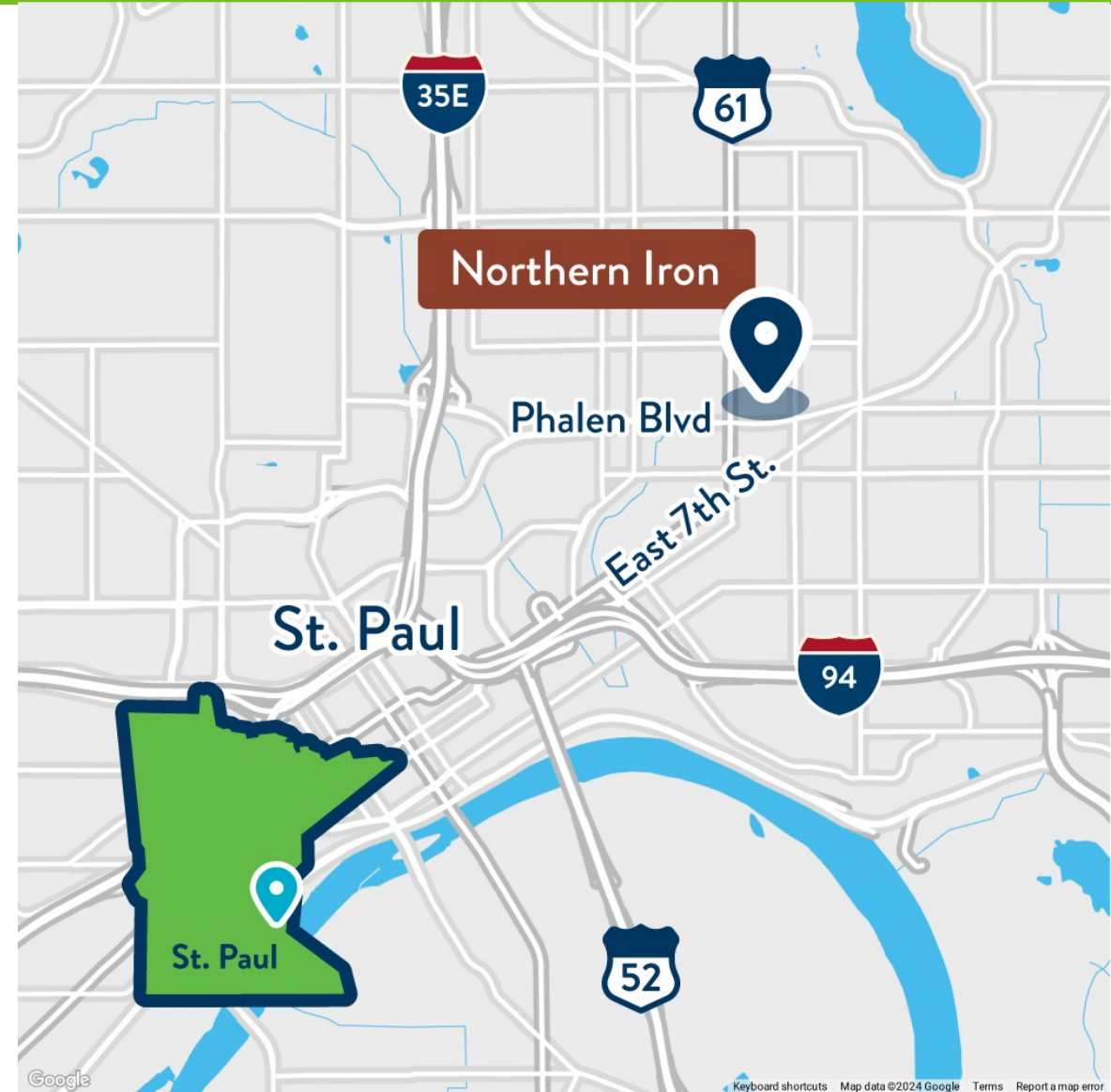
Welcome

Northern Iron overview

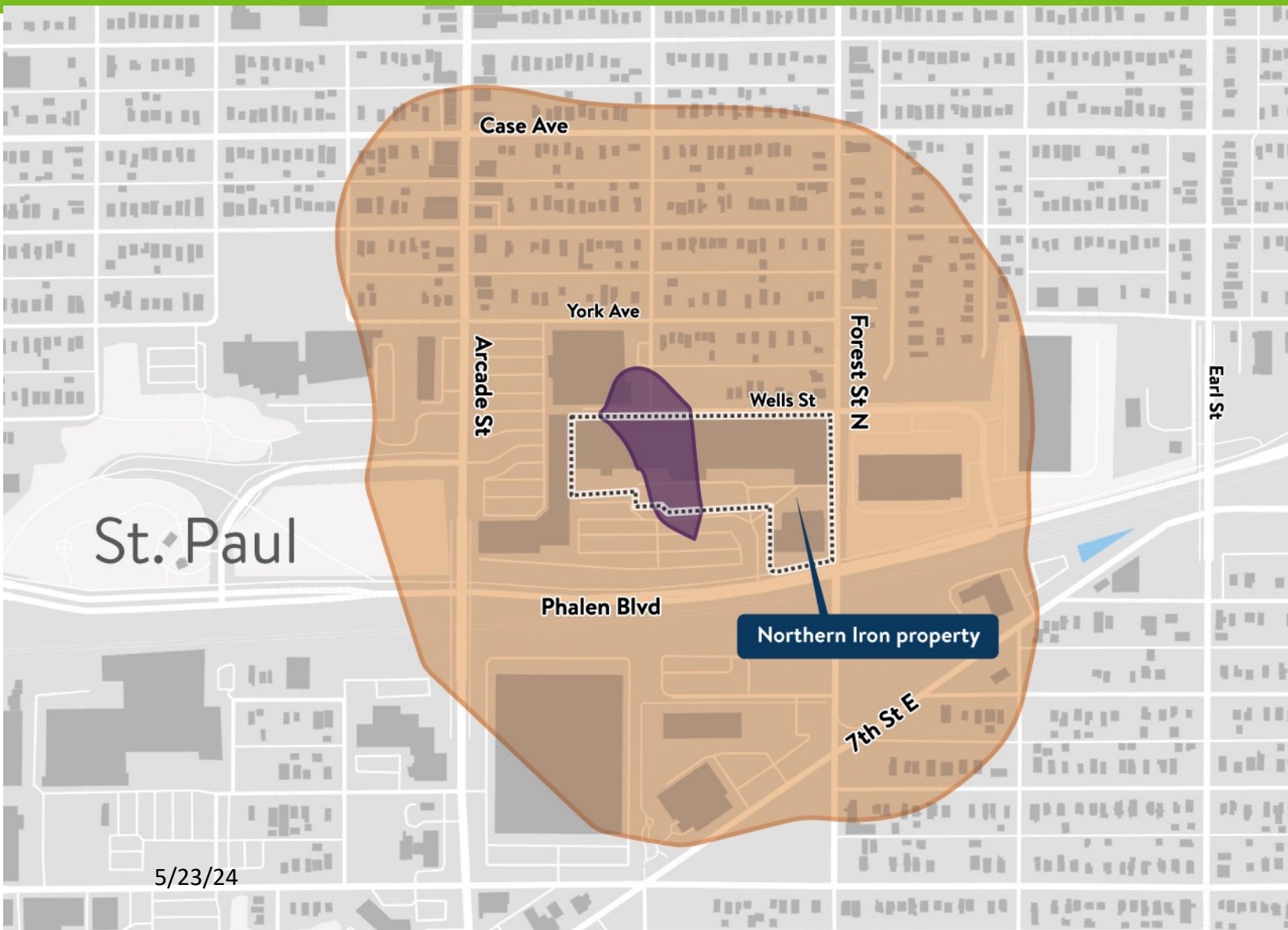
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Overview

- Northern Iron, LLC is a scrap iron foundry.
 - Individual State Air Permit
- MPCA is taking action on elevated lead and particulate matter emissions at Northern Iron.
- Noncompliance impacts the facility and the community.
- We are sharing what we know today.






Lead & particulate matter modeling



Estimated air emissions near Northern Iron

Computer air dispersion modeling predicts this area may have experienced emissions above national standards.

-
-  Fine particle (PM_{2.5}) pollution risk area
 -  Lead pollution risk area
 -  Northern Iron property



Many individuals with elevated blood lead levels have no apparent signs or symptoms

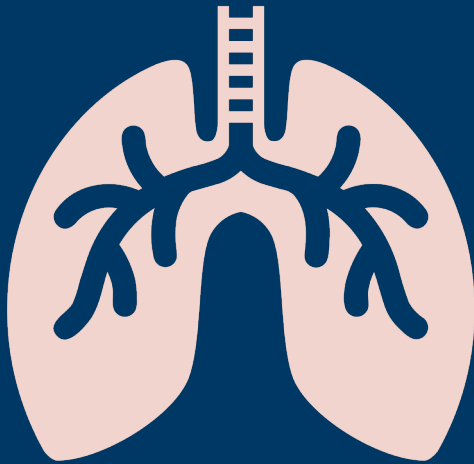
Health effects of lead

- Lower IQ
- Memory loss
- Behavior problems
- Headaches
- Fatigue
- Muscle pain
- Decreased kidney function
- High blood pressure
- Anemia
- Decreased fertility
- Increased risk of miscarriage

Ways lead exposure can happen from industrial sites

Inhalation

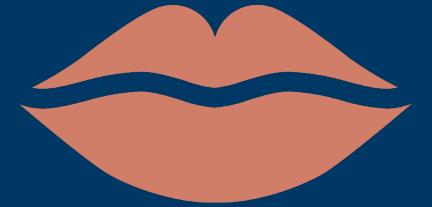
Breathing in lead that is in the air.



Ingestion

Touching lead dust that has settled out of the air, then touching food or items placed in mouth.

Eating food that was grown in contaminated soil.



Lead exposure adds up from all sources

Dust from paint

Water

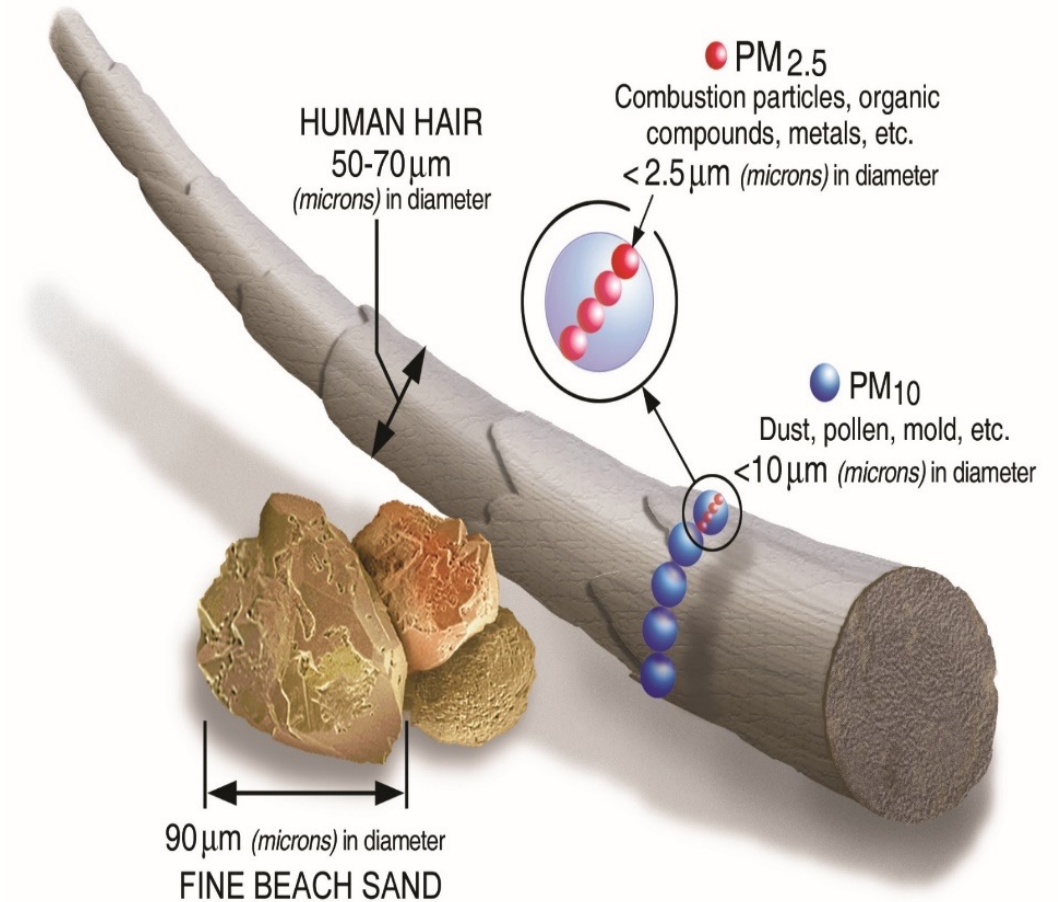
Soil

Lead in products

Air

Particulate matter (PM) air pollution

- Mixture of solid particles and liquid droplets in air.
- Can be made up of hundreds of different chemicals.
- Dust, dirt, soot, or smoke are visible examples with other types of particulate matter only detectable using laboratory techniques.



Groups of people we are concerned about

People who may be more sensitive to particulate matter

- People who have asthma or other breathing conditions.
- People who have heart disease, high blood pressure, or diabetes.
- Pregnant women.
- Children and older adults.

People who may be more exposed to particulate matter

- People who work outdoors, especially those who do heavy manual labor.
- People who exercise or play sports outdoors, including children.
- People who don't have air conditioning.
- People in housing not tight enough to keep unhealthy air out, or who do not have permanent shelter.



Exposure to PM2.5 and health

- May cause or worsen existing respiratory diseases.
For example - asthma, bronchitis, chronic obstructive pulmonary disease
 - Leads to reduced lung function and impaired lung growth in children
 - May increase risk for developing lung cancer
- May worsen symptoms of existing cardiovascular disease
 - Contributes to atherosclerosis (narrowing of arteries)
 - Increases risk of heart attacks, strokes, and other cardiovascular diseases



Timeline

2008-2020	MPCA inspected Northern Iron seven times. As a result of these inspections, the MPCA issued three notices for minor violations.
Feb. 2022	MPCA conducted an inspection.
July 2023	MPCA fined Northern Iron for air permit violations. The company was required to conduct updated air quality modeling.
Feb. 2024	MPCA received air modeling data from Northern Iron indicating likelihood of air emissions exceeding air quality standards.
April 2024	MPCA orders Northern Iron to achieve compliance with the national ambient air quality standard (NAAQS).

Administrative order

1. Within 10-days
 - Building capture – seal vents and windows – complete
 - Public entry prohibited - complete
2. Within 30-days
 - Lead content testing of scrap
 - Operational limits – 10 tons per day melt
 - Operate between 4 a.m. and 2 p.m., 5 days a week
3. Reporting requirements for testing and operations



Administrative order summary

- Order drives Northern Iron towards proposing control equipment and updating their permit to achieve compliance with NAAQS.



Compliance & enforcement

- Update/where we are today
 - Northern Iron requested the MPCA to stay the administrative order, which the MPCA denied.
 - Last week, Northern Iron petitioned Ramsey County District Court for review of the MPCA administrative order.
 - Last week, Northern Iron requested a temporary injunction against the MPCA in Ramsey County District Court.
 - Yesterday, the Court ordered Northern Iron and MPCA to mediation before a neutral third-party to be completed by May 31 and ordered that Northern Iron comply with the administrative order throughout mediation.



Definitions

National ambient air quality standard (NAAQS)

- Levels set by U.S. EPA for pollutants that can be harmful to public health and the environment.
- Lead standard is a rolling 3-month average of 0.15 ug/m³.
(micrograms per cubic meter)

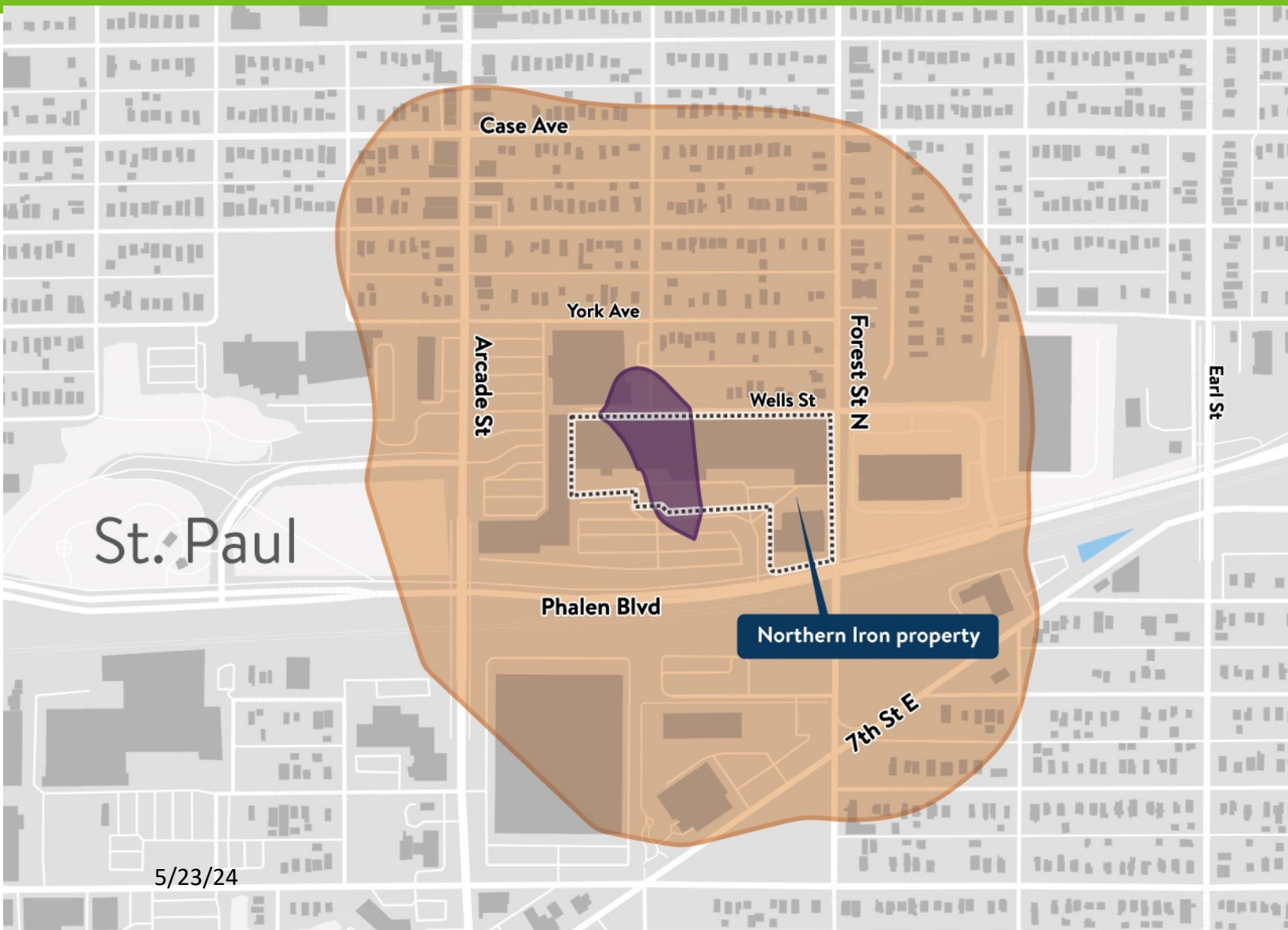
Air monitoring

- Data gathered by air monitors.
- Actual level of pollutant (lead) in the air.

Air modeling




- Projected level of pollutants.
- Uses facility emission data and weather patterns.

Lead & particulate matter modeling



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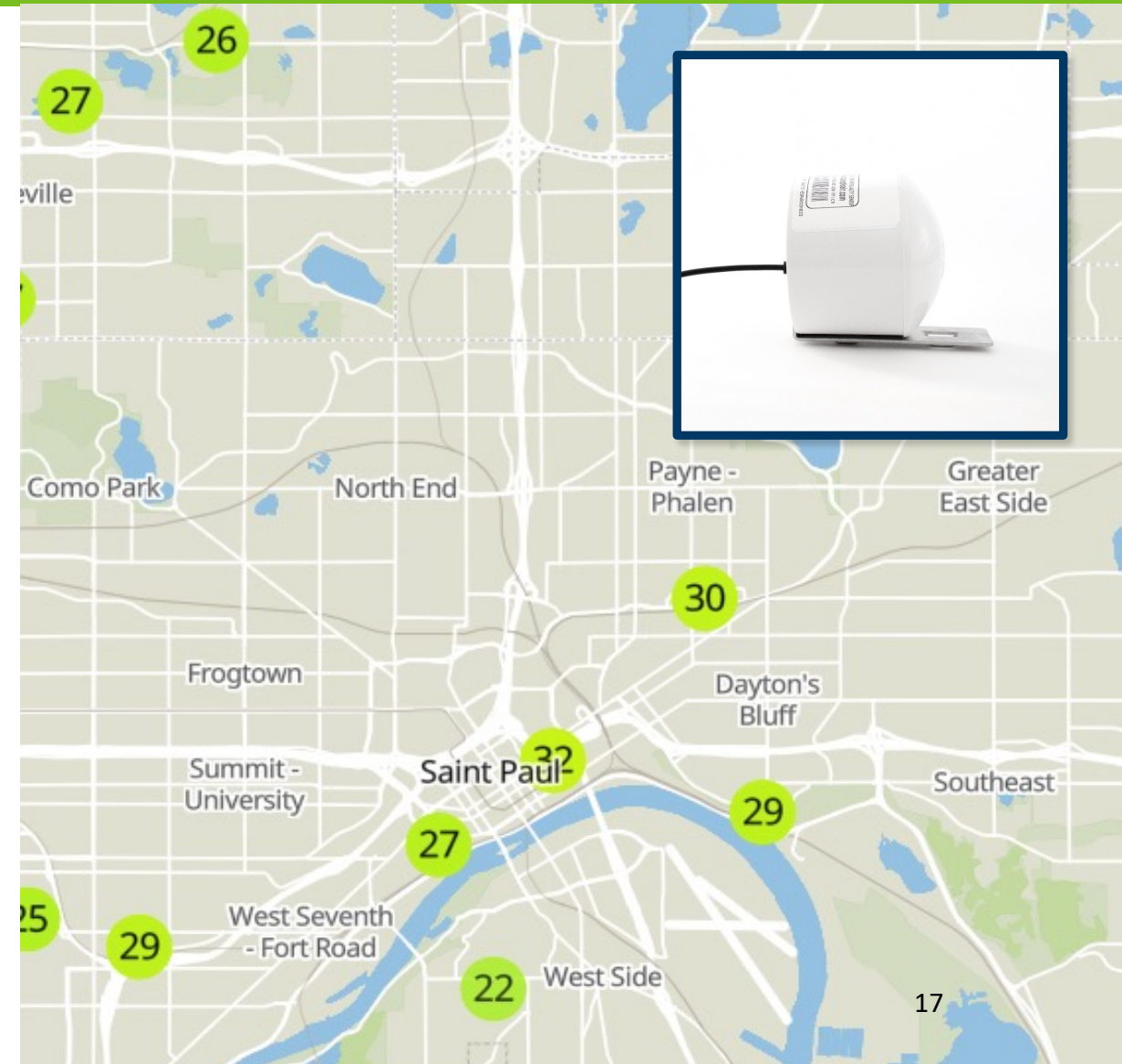
Ambient air monitoring

- Monitoring for lead started in April 2024.
- Monitor was placed at the current location to meet EPA siting criteria.
- Monitor captures a 24-hour sample once every six days, per EPA sampling schedule.
- The lead three-month rolling average must stay below the $0.15 \mu\text{g}/\text{m}^3$ (micrograms per meter cubed) standard to show compliance.
- MPCA has seven lead data points from April, all showing lower than $0.15 \mu\text{g}/\text{m}^3$. Data is available on the MPCA website.
- Preliminary EPA lead monitoring, April 20-24 also identified lead values lower than $0.15 \mu\text{g}/\text{m}^3$.



Purple Air Sensor

- Current conditions available online (<https://map.purpleair.com>).
- Measures particulate matter (dust, fine particles).
- Investigating additional sensor placement.
- Data are non-regulatory, recognized by the EPA as frequently over-estimating actual concentrations, but may be able to help understand regional trends.



Air permit

- Northern Iron is operating within an administrative order, stipulation agreement, and their current operating permit.
- They will need a new air permit.
- A new permit will have new requirements ensuring compliance with NAAQS and is likely to include new pollution control measures.
- There will be a public comment period and a community meeting to review the draft permit.

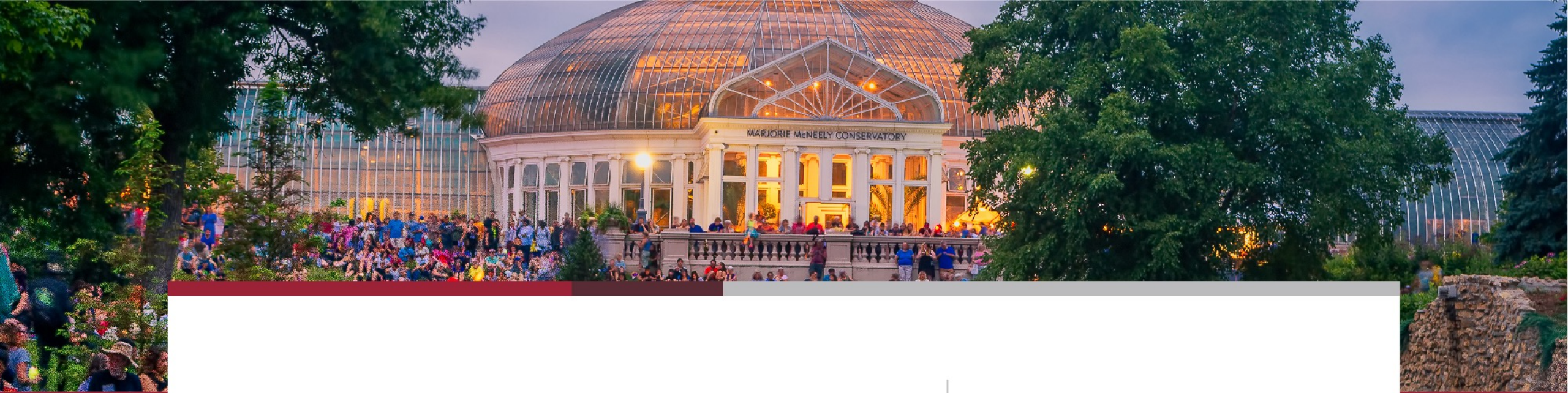


Next steps

- Ambient air data will be available on MPCA's website and will be updated continuously.
- Sign up for regular email updates: Take a photo of this QR code to be directed to the Northern Iron page on the MPCA website.

Email comments or questions to:
Northern.Iron@state.mn.us





Saint Paul - Ramsey County Public Health



Healthy homes program

- Is a resource for community members who have concerns about residential-based environmental hazards.
- Provides environmental assessments for all cases of childhood lead poisoning and works with the affected families to eliminate the source of exposure.
- Manages a lead remediation grant program to reduce childhood lead exposure by offering grant funding to conduct lead abatement and paint stabilization work.
- Provides an asthma home visiting program for children who are missing school days due to asthma or are hospitalized for asthma attacks.

East side neighborhood

- We recognize the cumulative impacts of lead that may exist in this community from other sources, such as:
 - Lead-based paint
 - Vehicle emissions from leaded gasoline
 - Industry source pollution, past and present
- If there are any businesses or facilities on the east side that may contribute to this neighborhood's lead burden, we support enforcement measures and want to protect our residents.

If you have concerns about lead...

1) Get yourself—and especially children—tested for lead.

- There are community partners joining us today who have information on free testing.

2) Test your soil

- Ramsey County Public Health & the Minnesota Department of Health are partnering to offer a free **SoilSHOP** testing event. **Wednesday, July 10. 3:00-7:00 p.m. Saint Paul Eastside YMCA.**

3) Test your paint

- Our healthy homes team can provide free testing and in-home consultation.

4) Test your water

- Saint Paul Regional Water Services (SPRWS) offers free testing for their service area.

If you have concerns about particulate matter (PM) impacting asthma symptoms...

- 1) Contact your primary care provider to assess your respiratory health
 - An asthma or respiratory specialist can evaluate your symptoms and decide if a controller or rescue medication would be beneficial to managing your symptoms.

- 2) Ask our healthy homes team about asthma home visits.
 - This free service provides a home assessment from an environmental health specialist and a public health nurse.
 - This service is available for children with asthma who live in Ramsey County.

Environmental health division manager (Interim):

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HEALTHY HOMES TEAM

Program Supervisor (Interim):

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Thank you

www.pca.state.mn.us

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