

Minneapolis Air Quality

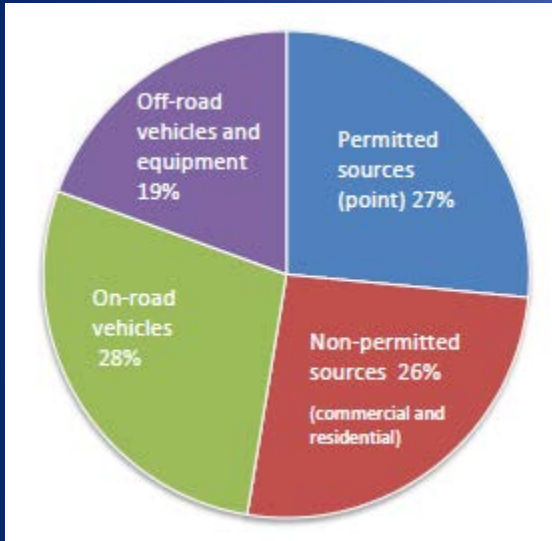
Using data to focus our inspections, maintain compliance, and engage the community



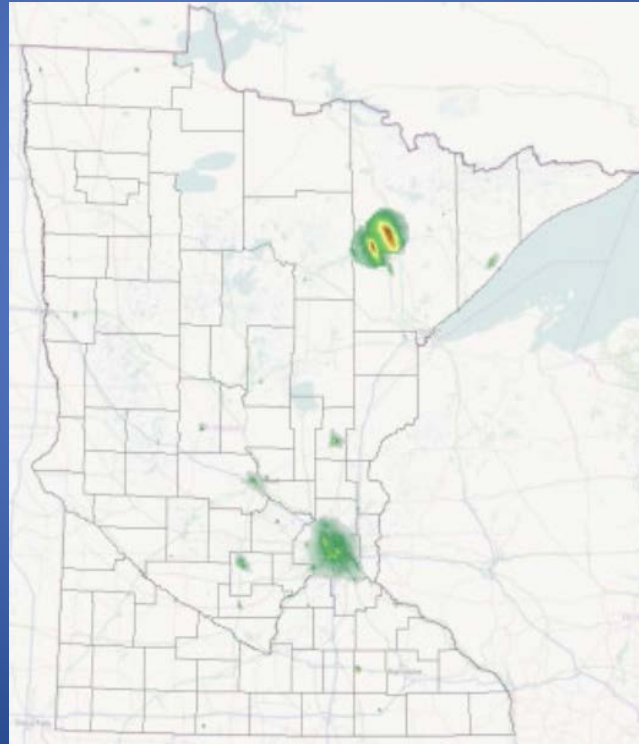
Katie Koelfgen

Manager, Land and Air Compliance

Air Pollution Point Sources in MN



3,729 Permitted Facilities

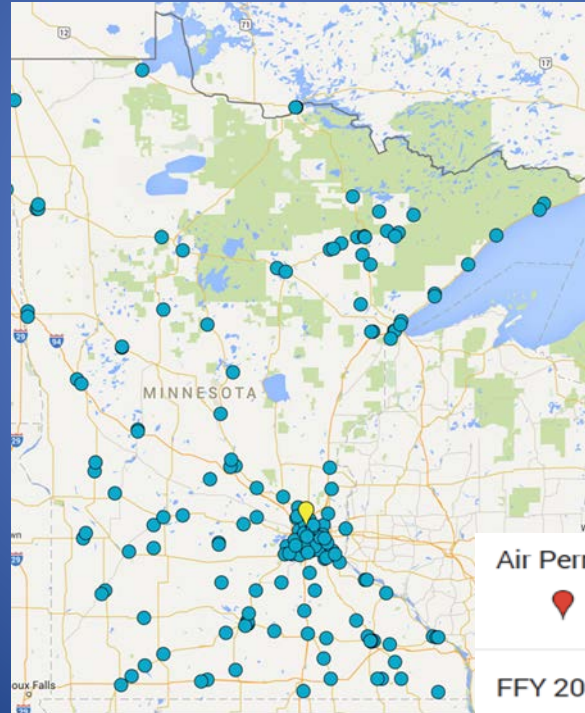
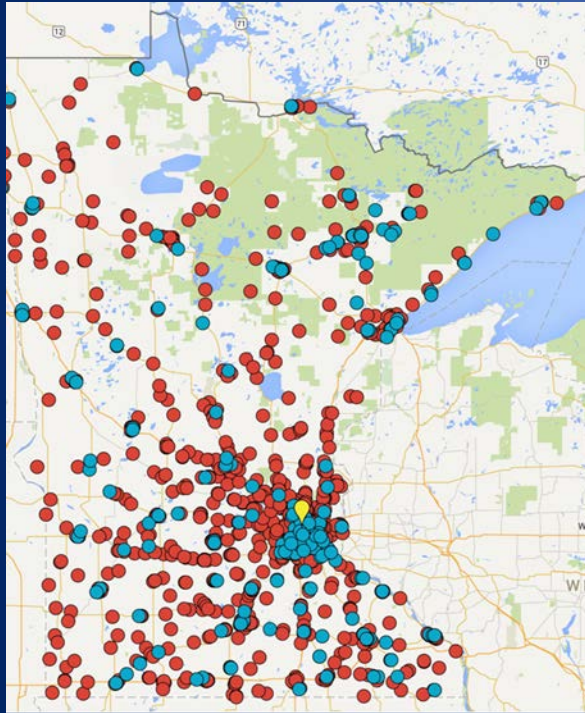


Estimated exposure to air pollutants by facilities with permits



Less risk-----More risk

Air Quality Point Source Inspection Strategy



New, risk-based approach based on data

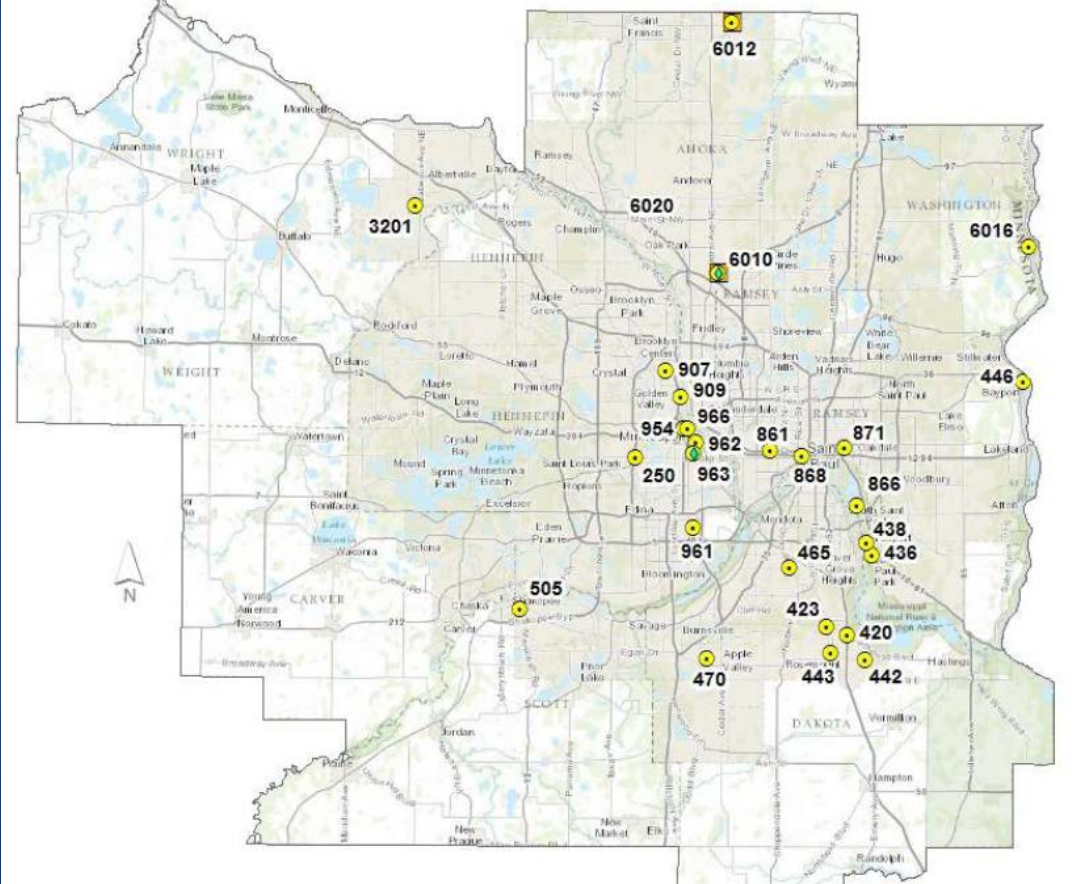
Air Permitted Facilities in MN

Permitted Facilities

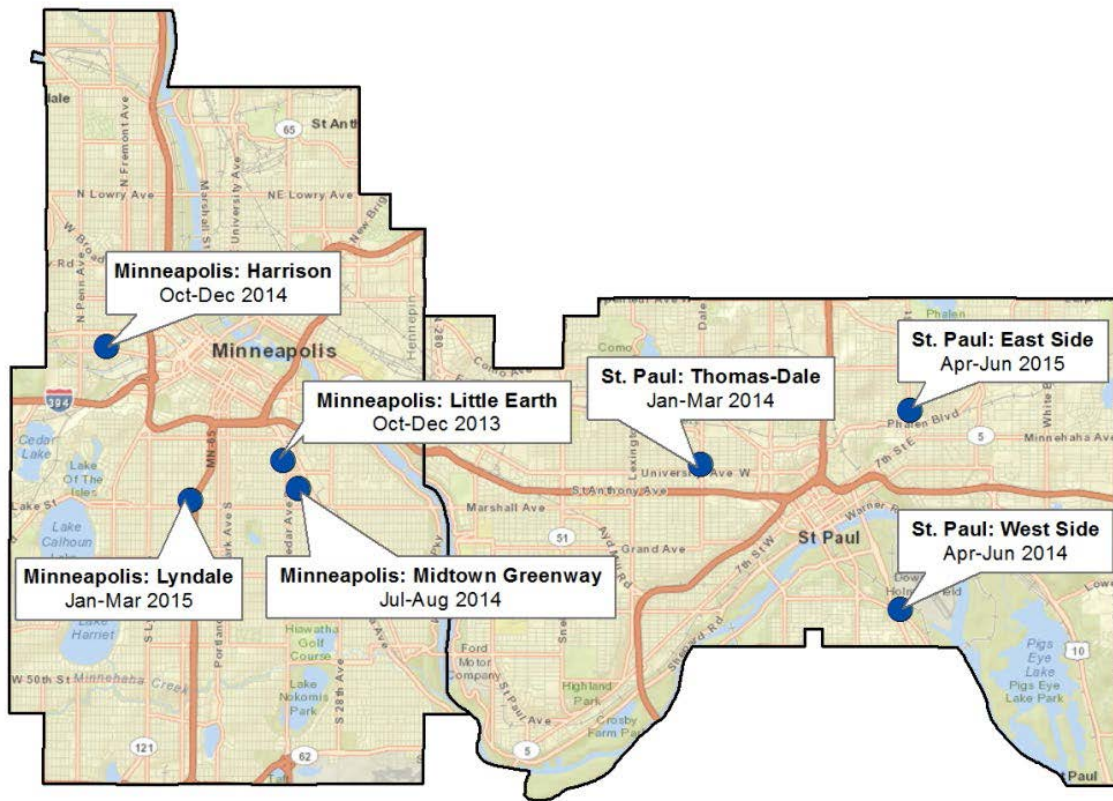
FFY 2015 Inspections

2015 Inspections

Air Quality Monitoring Sites in Metro Area

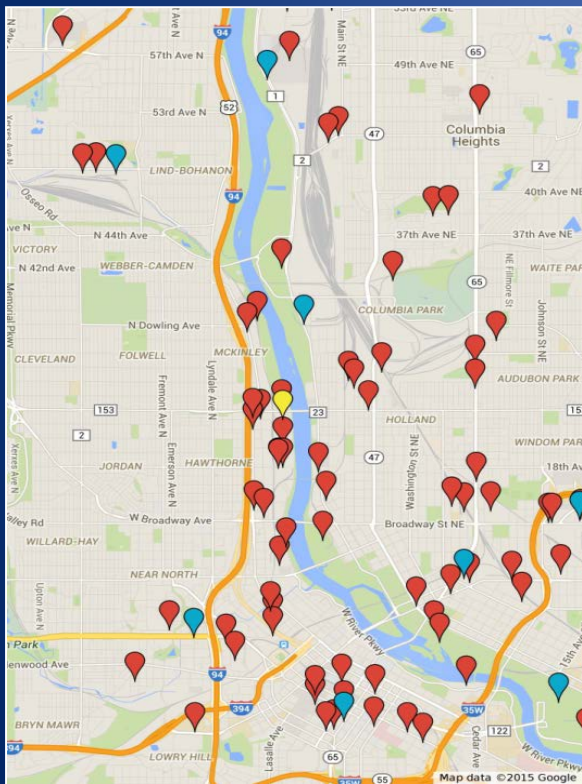


Minneapolis Community Air Monitoring Project



North Minneapolis Air Monitoring Project

Multi-year monitoring study for fine particle pollution



Air Permitted Facilities in MN

 Permitted Facilities

FFY 2015 Inspections

 2015 Inspections

Lowry Monitor

 Lowry Monitor

North Minneapolis Air Monitoring Project



Background on the TSP standards

In Minnesota, TSP levels in the air are regulated through the Minnesota Ambient Air Quality Standards (MAAQs), which are defined in Minnesota Administrative Rules 7009.0080. The MAAQS includes four distinct standards for TSP. These standards include:

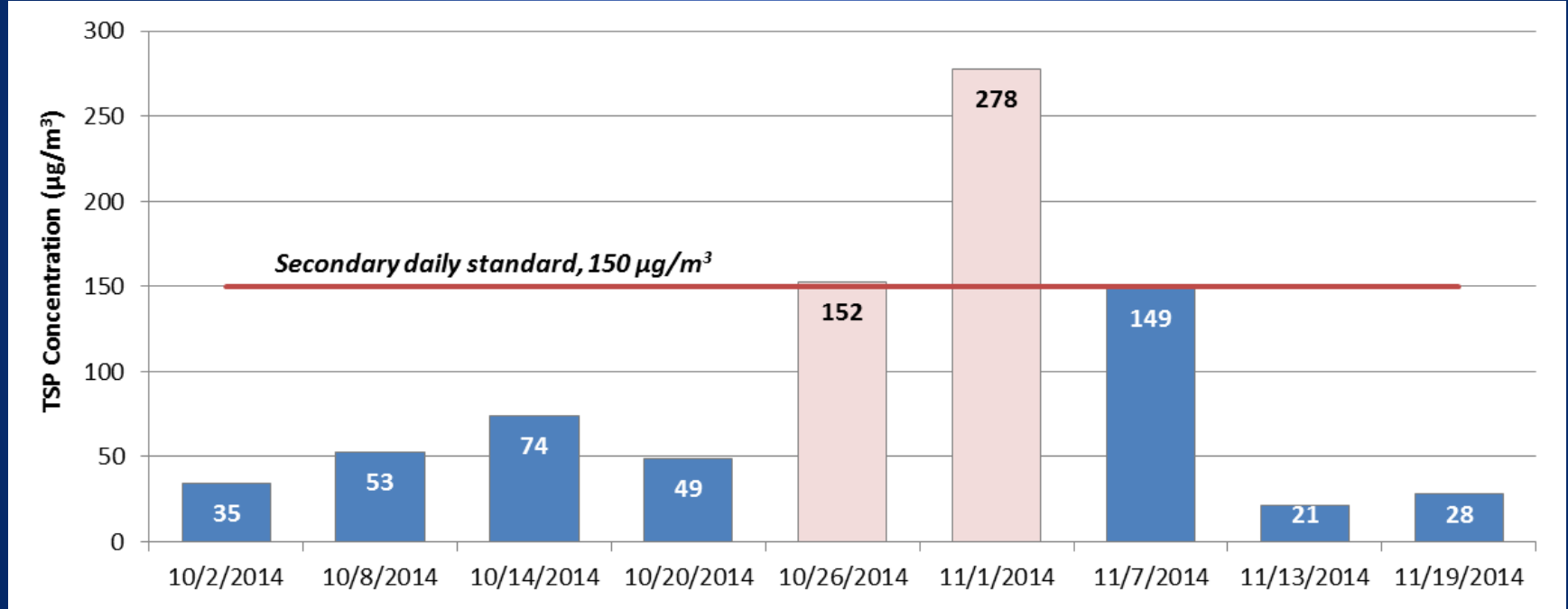
Minnesota Ambient Air Quality Standards for TSP

Standard Type	Time Interval	Level of Standard	A monitoring site meets the standard if...
Primary ¹	Daily (24-hour)	260 micrograms per cubic meter	...the annual 2 nd highest daily TSP concentration is less than or equal to 260 $\mu\text{g}/\text{m}^3$
	Annual	75 micrograms per cubic meter	...the annual geometric mean is less than or equal to 75 $\mu\text{g}/\text{m}^3$
Secondary ²	Daily (24-hour)	150 micrograms per cubic meter	...the annual 2 nd highest daily TSP concentration is less than or equal to 150 $\mu\text{g}/\text{m}^3$
	Annual	60 micrograms per cubic meter	...the annual geometric mean is less than or equal to 60 $\mu\text{g}/\text{m}^3$

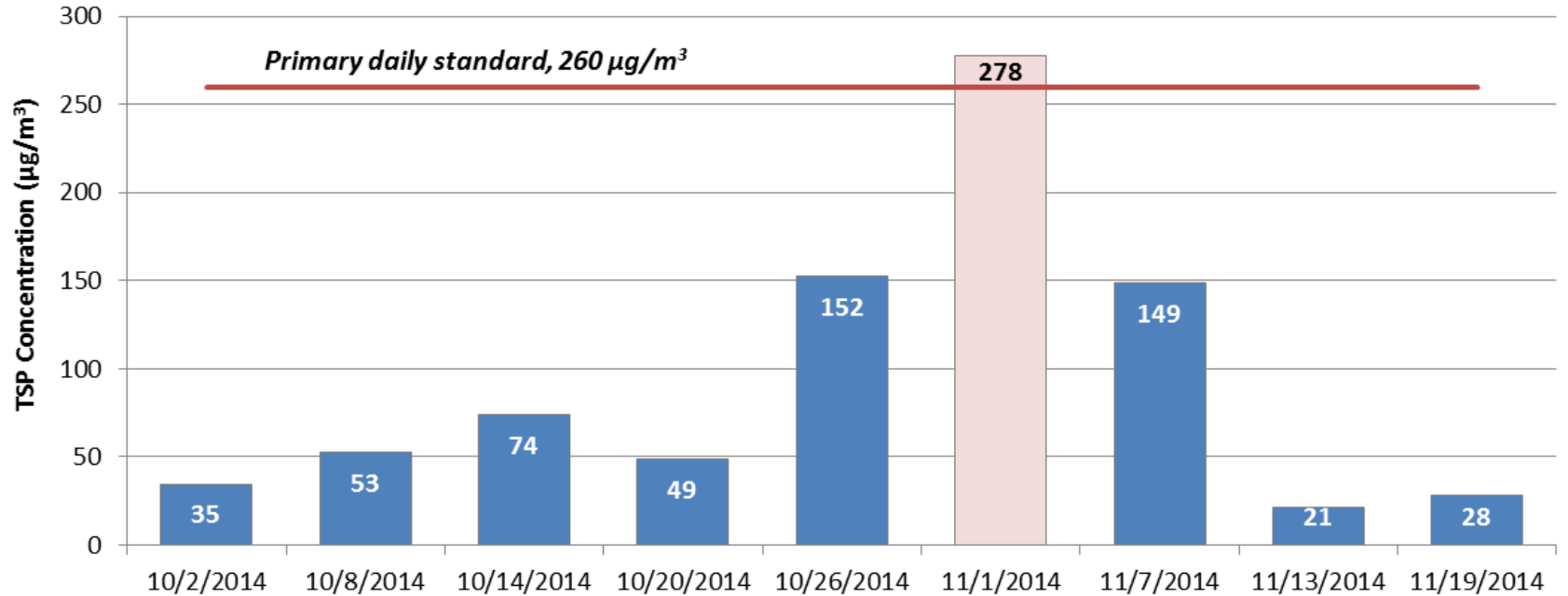
¹A primary standard is set to protect against human health effects associated with exposure to an air pollutant.

²A secondary standard is set to protect against environmental or public welfare effects associated with exposure to an air pollutant.

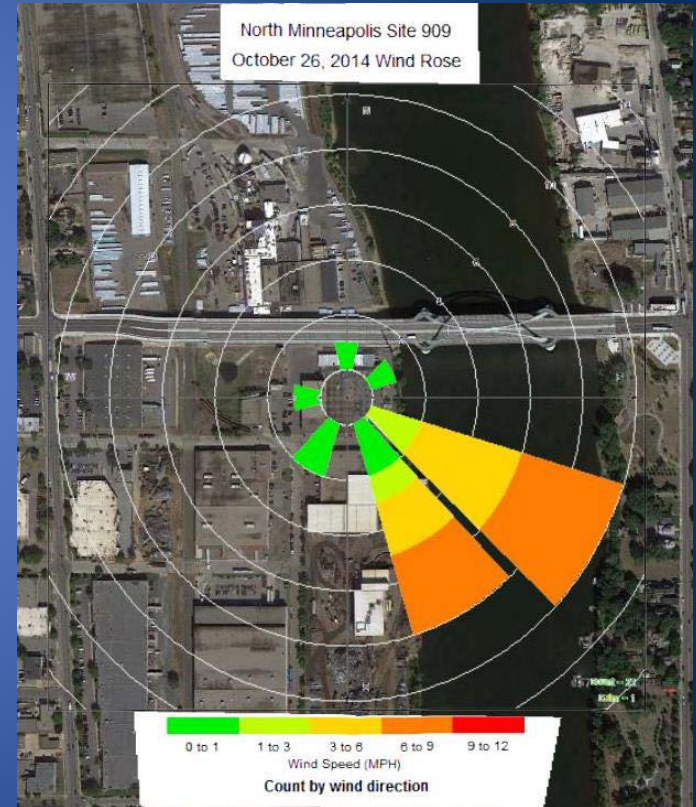
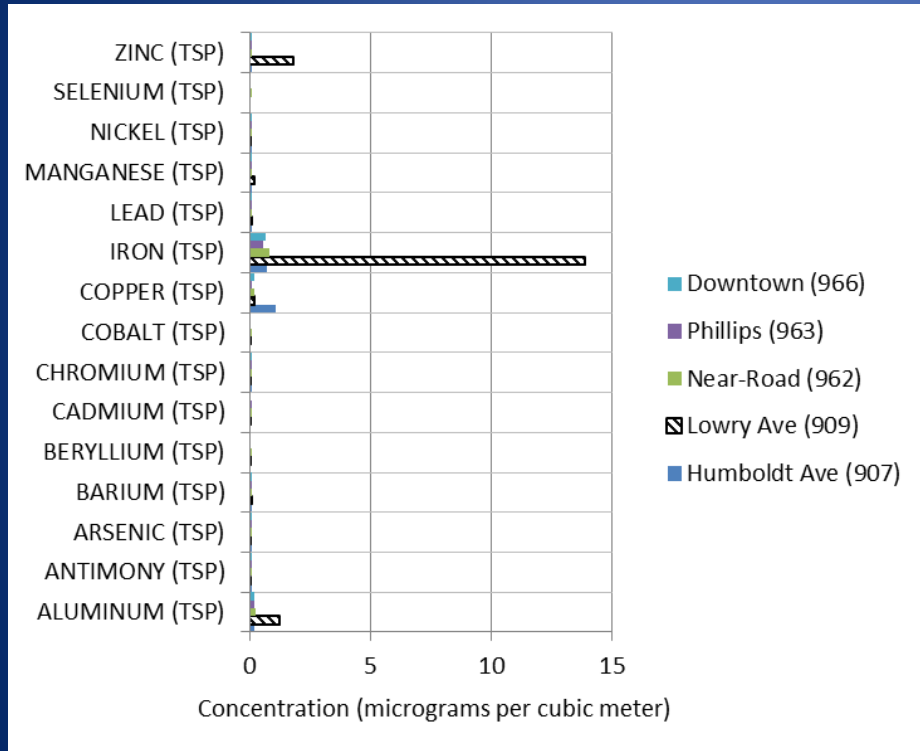
Violation of the Secondary Daily TSP Standard



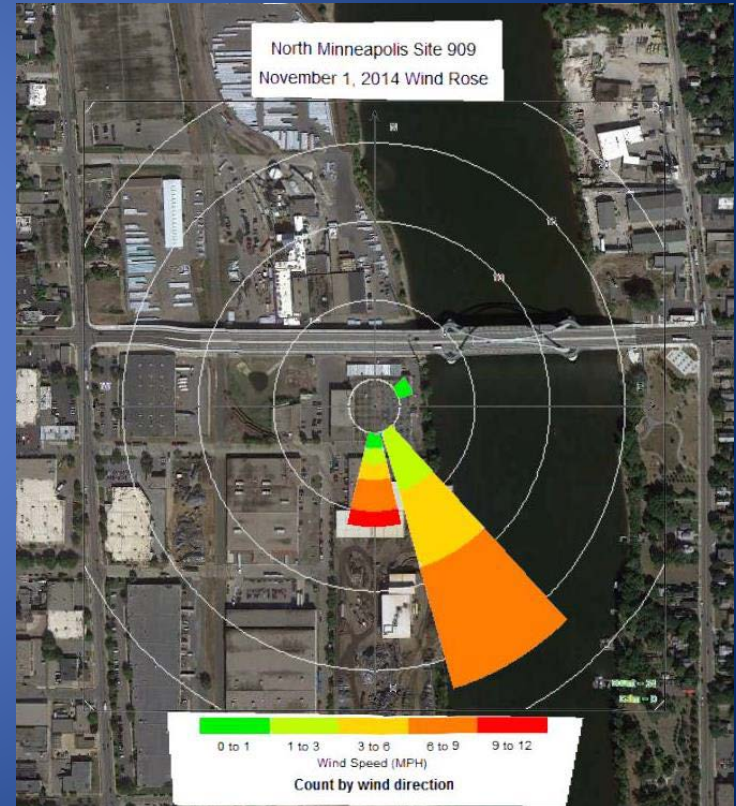
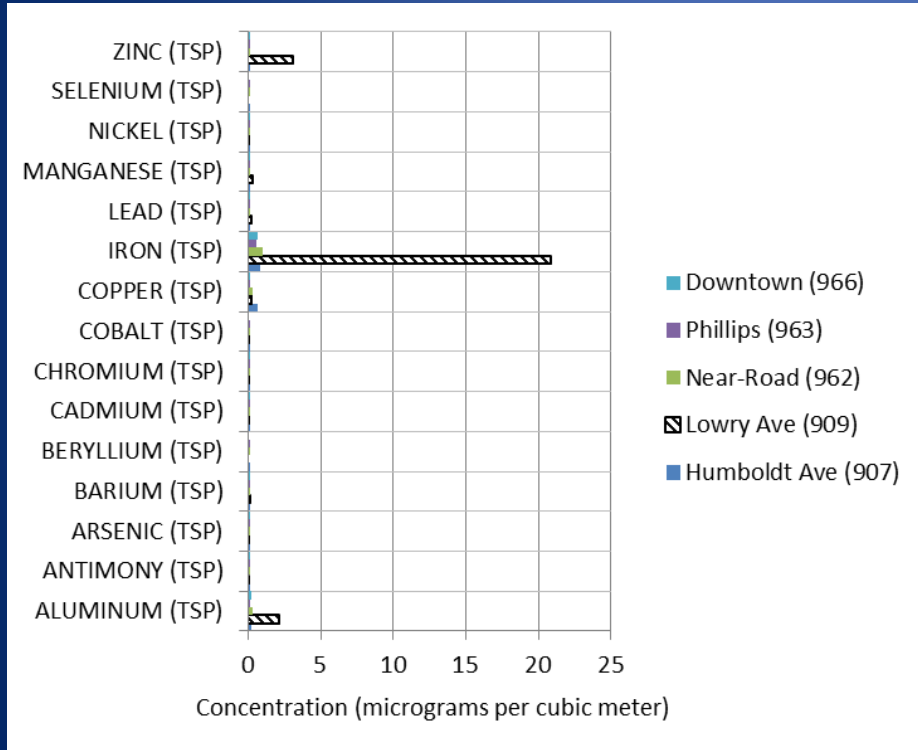
Violation of the Primary Daily TSP Standard



Exceedance Report for October 26, 2014

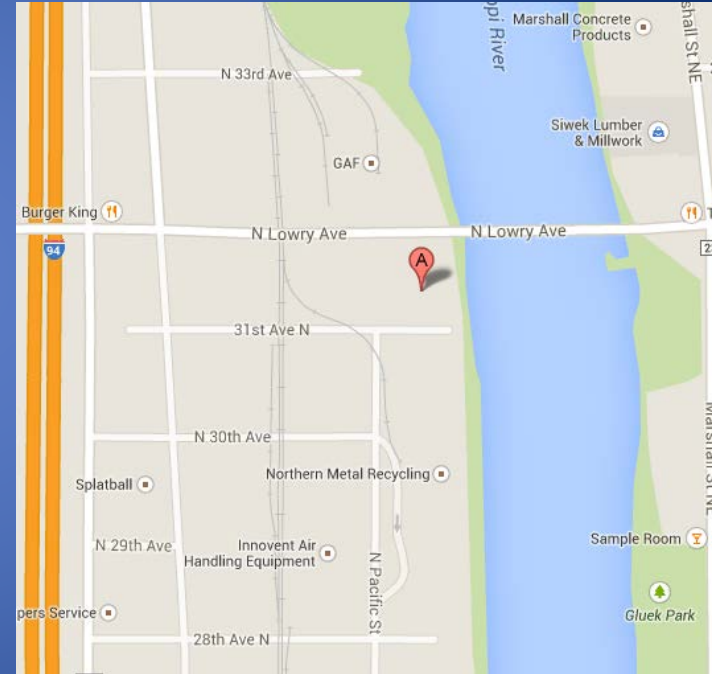


Exceedance Report for November 1, 2014



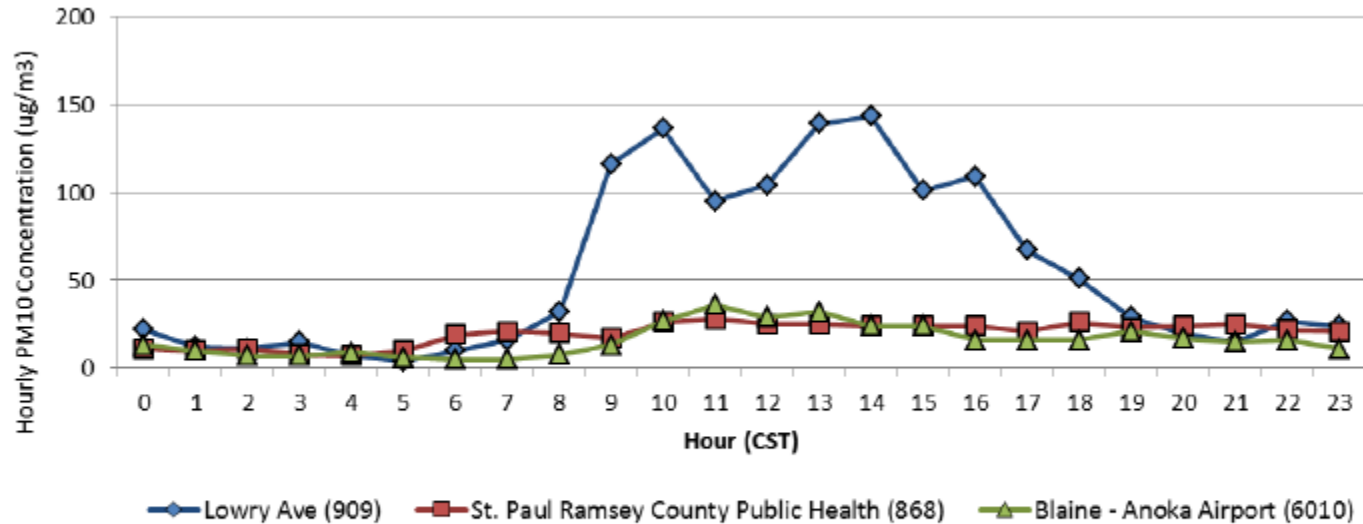
MPCA Investigation

- Identify cause or contributors
- Coordinate with city
- RFI



PM₁₀ Monitoring

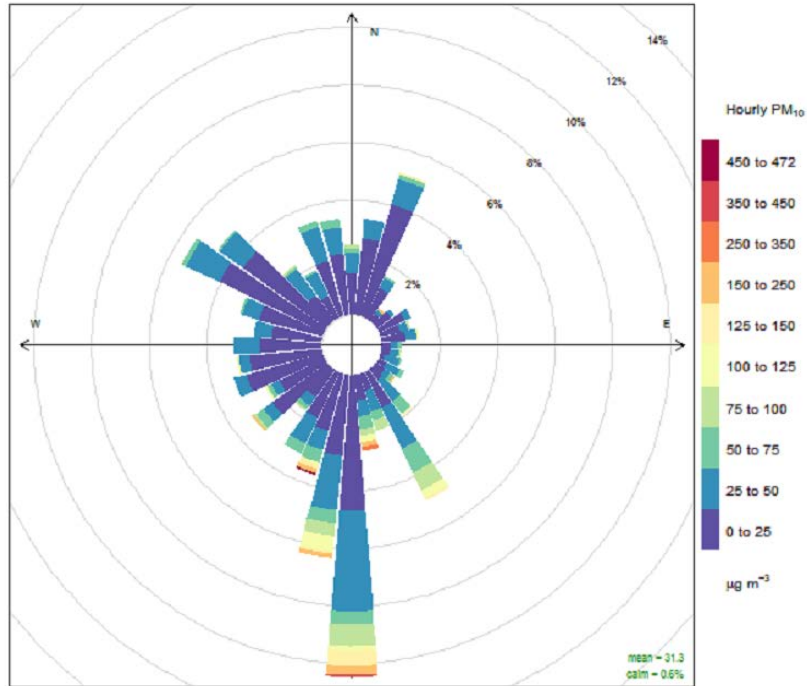
Hourly PM₁₀ concentrations at the Lowry Ave monitor: January 30, 2015



Hourly monitoring results are useful for identifying periods of the day when air pollution levels are elevated. Hourly results are not available for TSP, but are available for PM₁₀. On January 30, 2015, PM₁₀ concentrations were elevated at the Lowry Avenue monitoring site between 9:00 am and 6:00 pm.

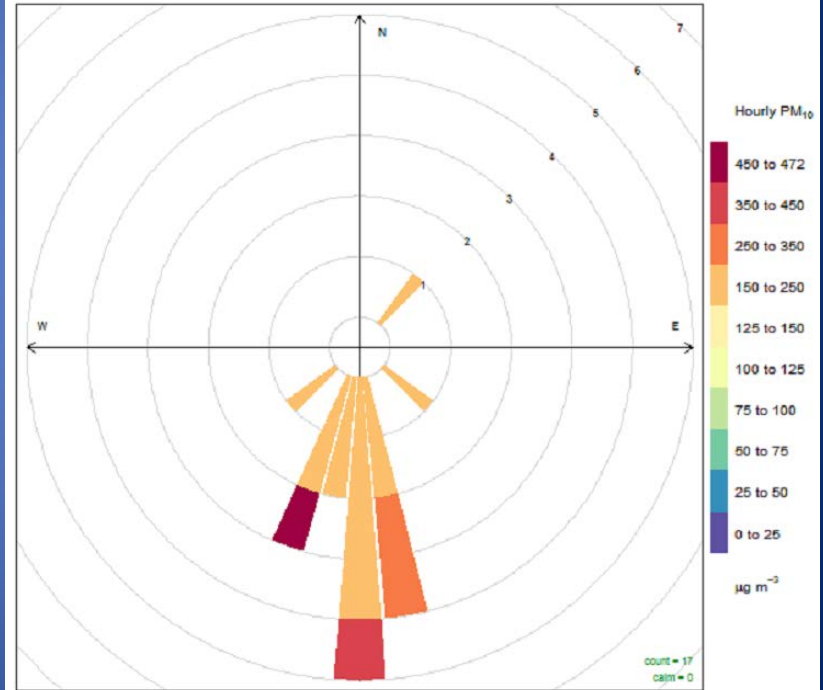
PM₁₀ Pollution Roses

Lowry Ave Hourly PM₁₀ Pollution Rose
January 6, 2015 - March 3, 2015



Frequency of counts by wind direction (%)

Lowry Ave Hourly PM₁₀ Pollution Rose ($\geq 150 \mu\text{g m}^{-3}$)
January 6, 2015 - March 3, 2015



Count by wind direction

Communication & Transparency

- News release
- Gov delivery
- Emails to interested community parties
- AirMail

Disclosure Challenge



- Minn. Stat. § 13.39 CIVIL INVESTIGATION
- "pending civil legal action" includes but is not limited to judicial, administrative or arbitration proceedings.
- ...data collected by a government entity as part of an active investigation undertaken for the purpose of the commencement or defense of a pending civil legal action... are classified as protected nonpublic data...

Media Coverage



Monitor finds particle violation on upper riverfront

MPCA narrows search for firms adding to Mpls riverfront particles



MPCA narrows riverfront particle search



Air quality violation found in North Minneapolis

Current Status

- Additional exceedances
- Questions and communication continue
- Investigation continues
 - Both broadens and narrows
- Monitoring will continue indefinitely...



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Minnesota
Pollution
Control
Agency