

# Summary

## Community Air Monitoring Project Thomas-Dale Neighborhood, St. Paul



### What we monitored

We monitored air quality for fine particles (PM<sub>2.5</sub>) and air toxics (carbonyls, metals and volatile organic compounds) in the St. Paul Thomas-Dale neighborhood.

### Why is it important?

People exposed to air pollution are at increased risk for adverse health effects. This can include shortness of breath, asthma, heart attacks or stroke. Studies show that low-income communities might be unfairly affected by pollution from industrial, highway or air traffic sources.

Monitoring in these communities can help us to better understand the community's air quality and how it compares to other monitoring sites.

### Highlights and key findings

#### About this study

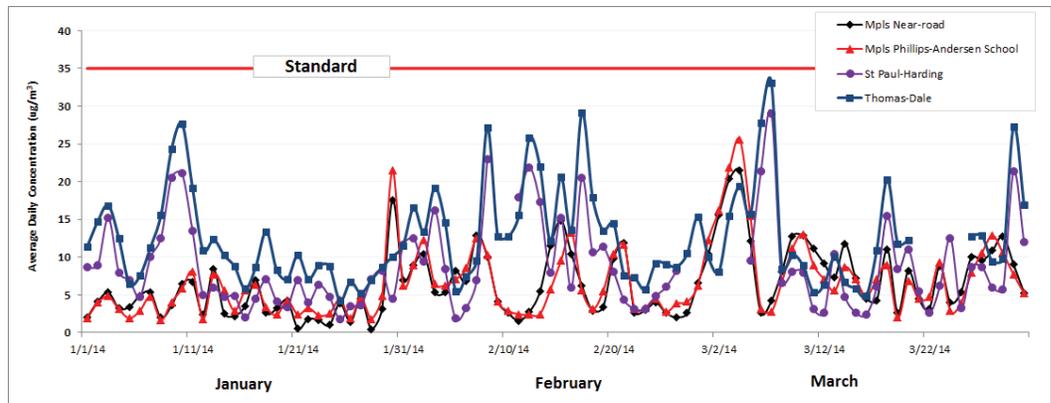
In 2013, the Minnesota Legislature provided funding for a two-year air monitoring study to measure air quality in Minnesota communities where low income communities might be disproportionately impacted by pollution from highway traffic, air traffic, and industrial sources.

- We put an air monitoring station in the St. Paul Thomas-Dale neighborhood. This station monitored air quality for three months from January 1, 2014 to March 31, 2014.
- We compared the monitored data with air quality health standards and compared the data with other air data collected during the same time period at other monitors.
- All average daily PM<sub>2.5</sub> values were below the daily PM<sub>2.5</sub> standard of 35 micrograms per cubic meter (µg/m<sup>3</sup>).
- Average daily PM<sub>2.5</sub> values measured at the Thomas-Dale monitor were generally higher than the values seen at most other sites for a majority of the monitoring days but followed a similar daily trend as other metro sites. We continue to examine metro area PM<sub>2.5</sub> values to better understand values and trends.
- Of the 74 air toxic chemicals measured for this project, the levels of 42 chemicals were so low that they were not detected by the monitor. In general, average air toxics values and trends over time were similar between the Thomas-Dale monitor and other MPCA air monitors.
- Air toxic values were all below health benchmarks except formaldehyde. The average daily value of formaldehyde at this site and other fixed monitoring sites in the metro sites were slightly above health benchmarks.



## Fine particles (PM<sub>2.5</sub>)

This graph shows the average daily PM<sub>2.5</sub> values at the Thomas-Dale and other metro air monitors. The average daily trends were similar across the monitors. While all average daily PM<sub>2.5</sub> values were below the daily PM<sub>2.5</sub> standard of 35 µg/m<sup>3</sup>, average daily values measured at the Thomas-Dale monitor were generally higher than those seen at most other sites for a majority of the monitoring days.

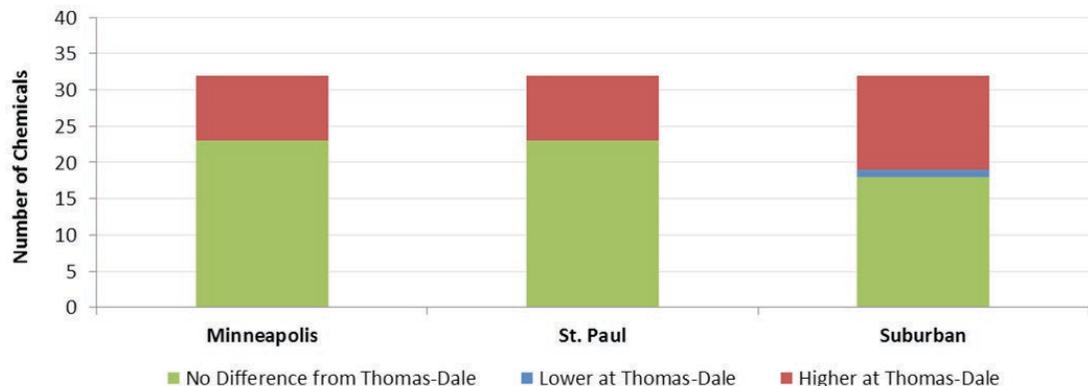


## Air toxics

Of the 74 air toxics measured, 32 were detected at the Thomas-Dale monitor.

The majority of air toxics measured at Thomas-Dale were not different from levels measured at other Twin Cities monitoring sites. With the exception of formaldehyde, all other measured values were at or below the established health benchmark values. The three-month formaldehyde average for this monitor (2.5 µg/m<sup>3</sup>) and for most other metro air monitors were above the long-term health benchmark (2 µg/m<sup>3</sup>). The MPCA is working to better understand the sources of formaldehyde in Twin Cities air.

This graph shows the number of air toxics that differed between the Thomas-Dale monitor and other Twin Cities monitors.



## Project website

For more information on the Community Air Monitoring Project, please visit [www.pca.state.mn.us/9xc4ahc](http://www.pca.state.mn.us/9xc4ahc) or call either 651-296-6300 or 1-800-657-3864 and ask for Air Data Analysis staff.

More information about the MPCA's Air Monitoring Program is available on the web at <http://www.pca.state.mn.us/ruu6fhw>.

