Summary

Community Air Monitoring Project Minneapolis-Lyndale Neighborhood

What we monitored

We monitored air quality for fine particles ($PM_{2.5}$) and air toxics (carbonyls, metals and volatile organic compounds) in the Minneapolis Lyndale 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 attacks, 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

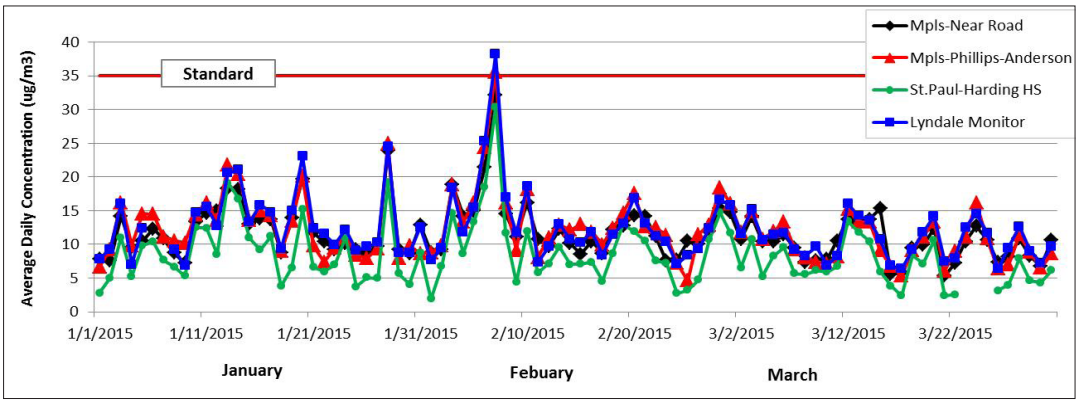
- We put an air monitoring station in the Minneapolis-Lyndale neighborhood and monitored air quality for three months from January 1, 2015 to March 31, 2015.
- For comparison purposes, we compared the monitored data with annual air quality health standards. We also compared the data with other air data collected during the same time period at other monitors.
- All average daily $PM_{2.5}$ values except one were below the daily $PM_{2.5}$ standard of 35 micrograms per cubic meter ($\mu g/m^3$). On February 7, 2015, the average daily $PM_{2.5}$ value was 38 $\mu g/m^3$ at the Lyndale monitor. On this day, the average daily $PM_{2.5}$ value was high at all Twin Cities' monitors due to a local winter time stagnation event.
- Of the 70 air toxic chemicals measured for this project, the levels of 39 chemicals were so low that they were not detected by this monitor.
- Of those chemicals detected, average values were at or below any associated health benchmark values.

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.

Fine particles ($PM_{2.5}$)

This graph shows the average daily $PM_{2.5}$ values at the Lyndale monitor and other Twin cities air monitors. The daily trends were similar across the monitors. Average daily $PM_{2.5}$ values at the Lyndale monitor were below the daily standard of 35 µg/m^3, for all days except one-February 7, 2015, with a value of 38 µg/m^3. On this day, the average daily $PM_{2.5}$ value was high at all Twin Cities' monitors due to a local winter time stagnation event.

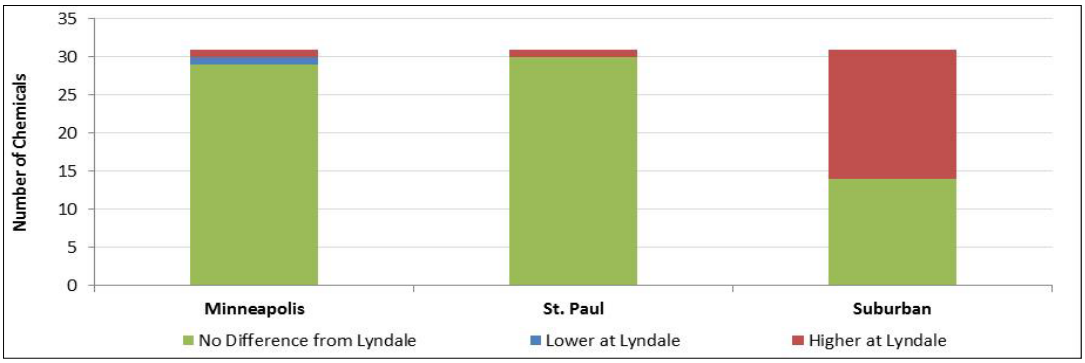


Air toxics

Of the 70 air toxics measured, 31 were detected at the Lyndale monitor.

The majority of air toxics measured at Lyndale monitor were not significantly* different from levels measured at other Twin cities monitoring sites. All air toxics measured at the Lyndale monitor were below established standards and health benchmark values.

This graph shows the number of detected air toxics that differed* between the Lyndale monitor and other Twin Cities monitors. Air toxics were similar to levels measured at most other monitors.



*Kaplan-Meier non-parametric non-detects data analysis

Project website

For more information on the Community Air Monitoring Project, please visit www.pca.state.mn.us/air/community-air-monitoring project 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/air/air-pollution-monitoring.