

Summary

Community Air Monitoring Project Phillips Neighborhood Greenway Trail-28th Avenue Intersection



What we monitored

We monitored air quality for fine particles (PM_{2.5}) and air toxics (carbonyls, metals and volatile organic compounds-VOCs) at the Minneapolis Greenway Trail - 28th Avenue intersection.

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 & key findings

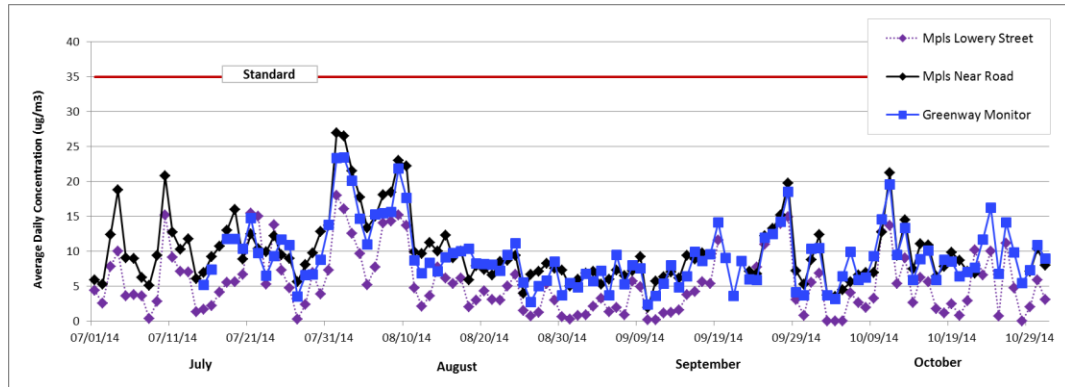
- A monitoring station was located in the Phillips Community at the Minneapolis Greenway Trail - 28th Avenue intersection.
- This station monitored air quality for over three months from July 15, 2014 to October 31, 2014.
- We compared the monitored data with air quality health standards and compared the data with other air data collected during the same time period at other monitors.
- All average daily PM_{2.5} values were below the daily PM_{2.5} standard of 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).
- Average daily PM_{2.5} values measured at the Greenway monitor followed a similar daily trend as other Minneapolis sites.
- Of the 72 air toxic chemicals currently analyzed for this project, the levels of 42 chemicals were either not detected by the monitor or had too few detects to be analyzed.
- All average air toxic chemical values were below health benchmarks except formaldehyde. The average daily values of formaldehyde at all metro sites were slightly above health benchmarks.

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 Greenway community monitor and other Minneapolis air monitors. The average daily PM_{2.5} trends were similar across these monitors.

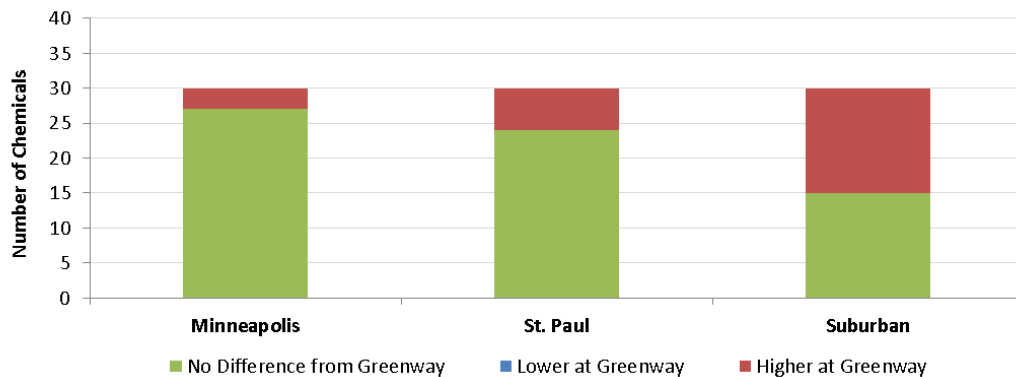


Air toxics

Of the 72 air toxics measured, 30 were detected at the Greenway monitor.

The majority of air toxics measured were not significantly* different from levels measured at other Twin Cities monitoring sites. With the exception of formaldehyde, all reported air toxics chemicals were at or below established health benchmark values. The three-month average formaldehyde concentration at this monitor ($3 \mu\text{g}/\text{m}^3$) and for most other metro air monitors were above the long-term health benchmark ($2 \mu\text{g}/\text{m}^3$). The MPCA is working to better understand the sources of formaldehyde in Twin Cities' air.

The graph below shows the number of air toxics that differed between the Greenway monitor and other Twin Cities 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/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>.