



CLEAN AIR HAMILTON 2021 PROGRESS REPORT

March 20, 2023

Hamilton Board of Health



**Clean Air Hamilton
2021 Air Quality Progress Report
January 2023**

Bruce Newbold, Ph.D.
Chair
Clean Air Hamilton

www.cleanairhamilton.ca

*Photo courtesy of Tourism and Culture
Division, City of Hamilton*

Clean Air Hamilton

Members:

Local Citizens

Ontario Ministry of
Environment,
Conservation, and Parks

Health Canada

Environment Canada

ArcelorMittal Dofasco

Stelco

Friendly Streets

Green Venture

McMaster University

McMaster Institute for
Health Equity

Mohawk College

Environment Hamilton

City of Hamilton

Public Health

Planning

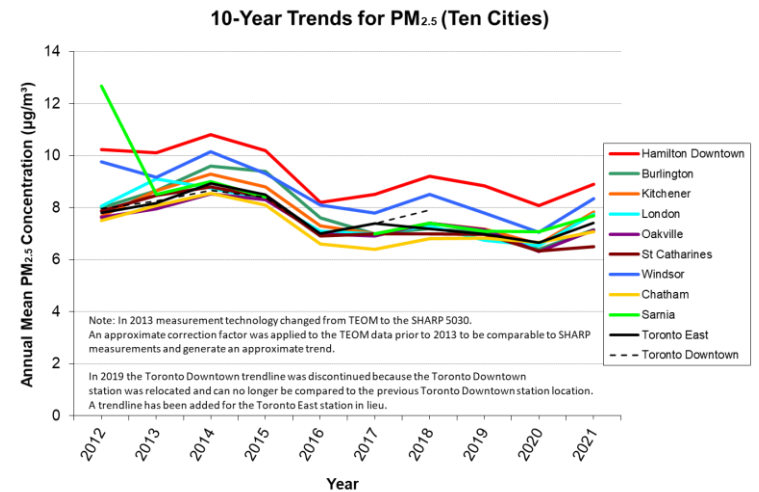
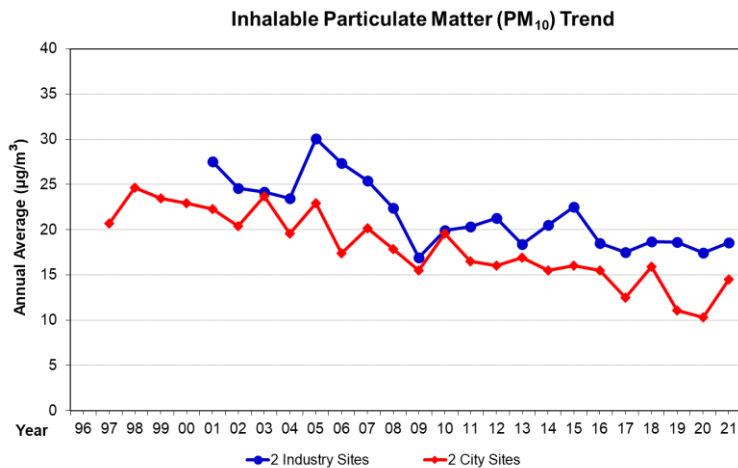
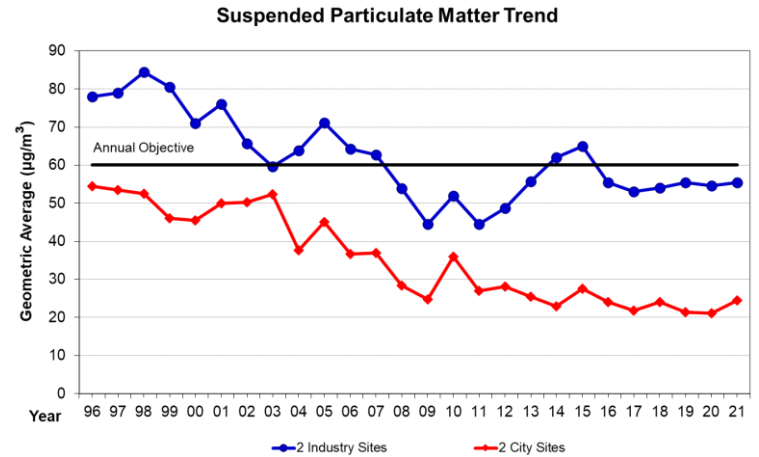
Public Works



- Science based / Diverse / Inclusive / Facilitated Consensus
- Clean Air Hamilton established as an implementation committee to act on recommendations contained in 1997 Hamilton Air Quality Initiative (HAQI) Reports
- Community based initiatives
- Internationally recognized
- Meet second Monday of each month

Hamilton's Air Quality Trends

Particulate Matter (TSP, PM₁₀, PM_{2.5})

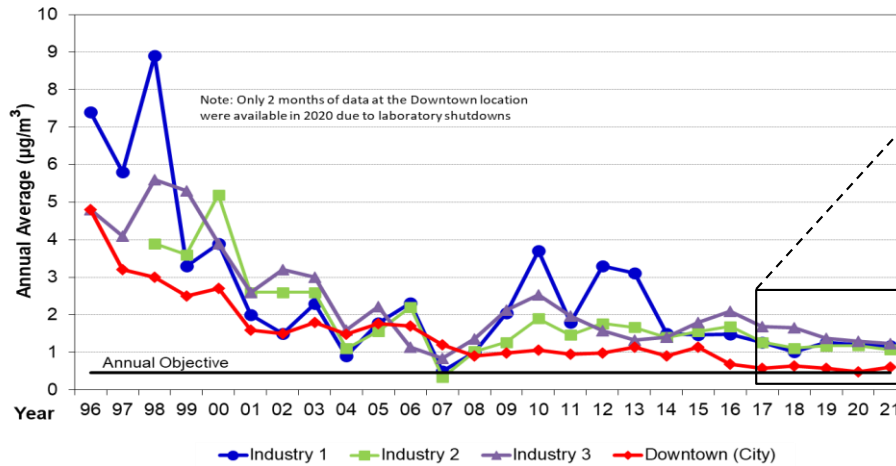


Acronyms: Total Suspended Particulate (TSP); Inhalable Particulate matter (PM₁₀); Fine Particulate Matter (PM_{2.5})

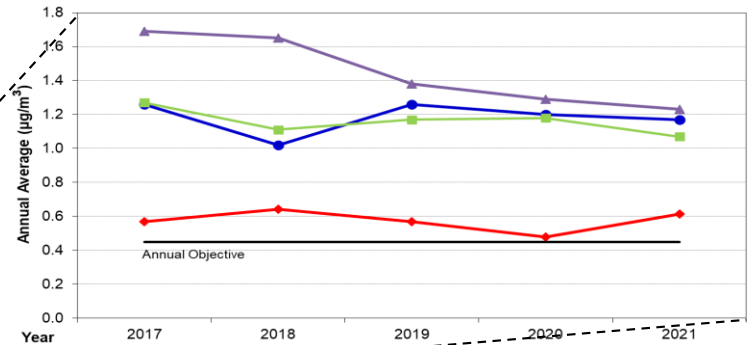
Hamilton's Air Quality Trends

Benzene and Benzo[a]pyrene

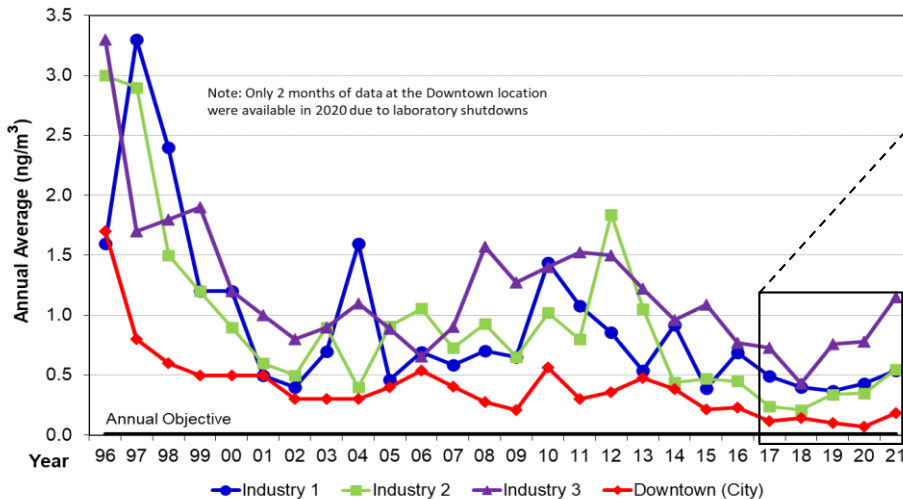
26-year Trends for Benzene



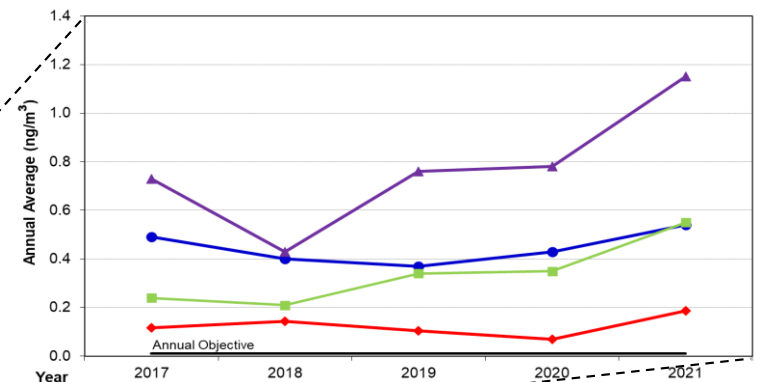
5-Year Trends for Benzene



26-year Trends for Benzo[a]pyrene



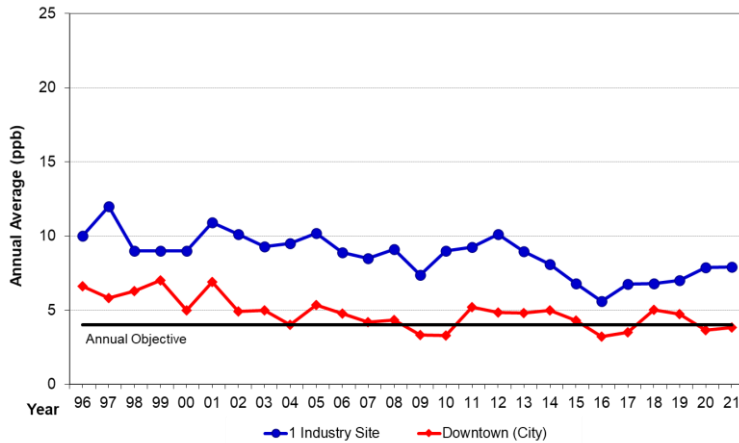
5-Year Trends for Benzo[a]pyrene



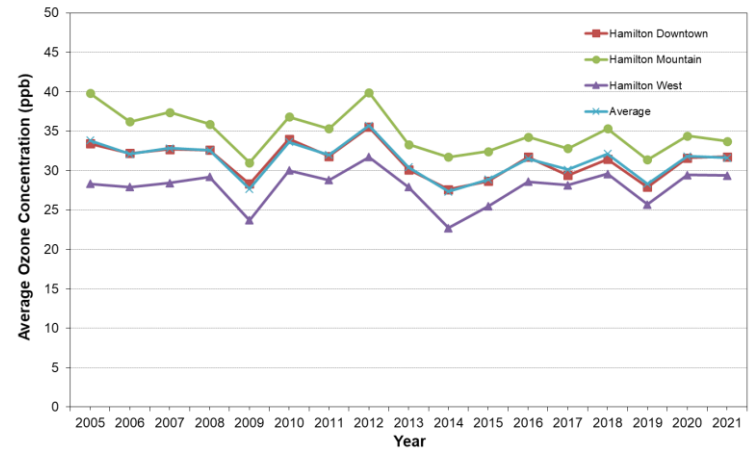
Hamilton's Air Quality Trends

Nitrogen Oxides (NO_x), Nitrogen Dioxide (NO₂), Sulphur Dioxide (SO₂), Ozone (O₃)

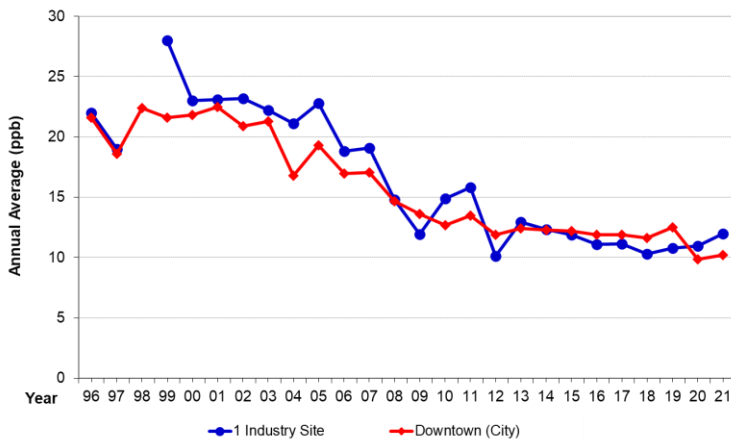
Sulphur Dioxide Trend



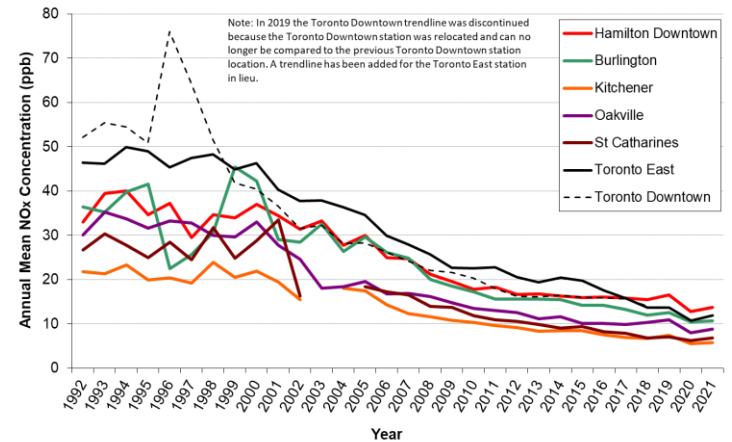
Ground Level Ozone Trend (Summer Months)



Nitrogen Dioxide Trend



30-Year Trends for Nitrogen Oxides (Six Cities)



2021 Community Projects Supported Through Clean Air Hamilton

- **Fresh Air for Kids** (Green Venture and Corr Research)
 - Fresh Air for Kids program with anti-idling engagement and campaign at participating schools.
- **Modelling Local NO₂ Across Hamilton on a Ward Level During the COVID-19 Pandemic**
 - Conducted to understand changes in NO₂ concentrations on a ward level from 2019 to 2020.
 - During the 2020 COVID-19 state of emergency, the central wards had the greatest reduction in NO₂.

2022 Community Projects Supported Through Clean Air Hamilton

Approved 2020 Projects through Healthy Environment Division's Operating Budget

- **Fresh Air for Kids** (Green Venture and Corr Research)
 - Mobile air monitoring around four schools across Hamilton, virtual class presentations on results and importance of Air Quality Health Index.
- **Trees Please** (Environment Hamilton)
 - Tree Giveaways, Particulate Matter Monitoring, and introduction of heat sensors in Ward 4 and lower City neighbourhoods.



Future Actions

- Continue to support education and outreach
- Continue to expand air quality monitoring activities by undertaking projects with community organizations and academic institutions in the City of Hamilton to better understand air pollution concentrations at the neighbourhood level
- Use a Land Use Compatibility lens for future research and decision making

Why?

To ensure the health and well-being of the citizens of Hamilton.





Thank you,
On behalf of
Clean Air Hamilton

