



CLEAN AIR HAMILTON 2017 PROGRESS REPORT

December 10, 2018
Hamilton Board of Health



Clean Air Hamilton
2017 Air Quality Progress Report
December 2018

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Chair
Clean Air Hamilton

www.cleanairhamilton.ca

Clean Air Hamilton

Members:

Local Citizens

Ontario MECP

Health Canada

Environment Canada

ArcelorMittal Dofasco

Stelco

Lung Association

Green Venture

McMaster University

Mohawk College

MIEH

Environment Hamilton

City of Hamilton

Public Health

Planning

Public Works



- **Science based / Diverse / Inclusive / Facilitated Consensus**
- **CAH established as an implementation committee to act on recommendations contained in 1997 HAQI Reports**
- **Community based initiatives**
- **Internationally recognized**

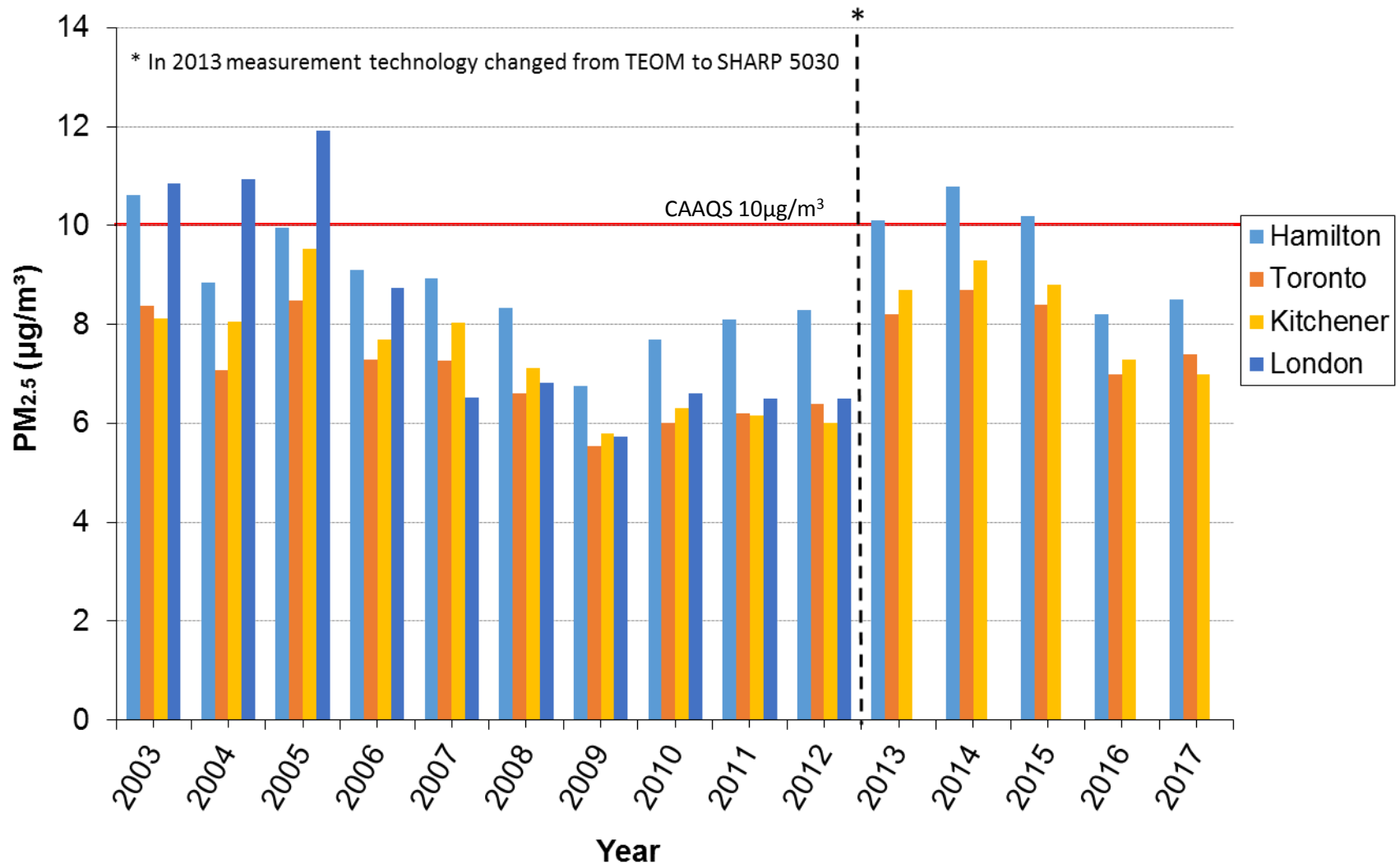
Hamilton's Air Quality Trends

- Total suspended particulate (TSP) – 57% total reduction over 20 years
- Inhalable particulate matter (PM₁₀) – 37% total reduction over 20 years
- Respirable particulate matter (PM_{2.5}) – 26% total reduction over 18 years
- Nitrogen dioxide (NO₂) – 54% total reduction over 20 years
- Sulphur dioxide (SO₂) – 46% total reduction over 20 years
- Total reduced sulphur odours – 98% total reduction over 20 years*
- Benzene – 89% total reduction over 20 years**
- Polycyclic aromatic hydrocarbons (PAH) measured as benzo[a]pyrene – 78% total reduction over 20 years.**

- ✓ **90% improvement in major pollutants (risk factors) since 1970s**
- ✓ **GHG emission reduction targets (2020) met**
- ✓ **PM_{2.5} Canadian Ambient Air Quality Standards (CAAQS) met in 2016**

Hamilton's Air Quality Trends

14-Year Trends for PM_{2.5} (Four Ontario Cities)

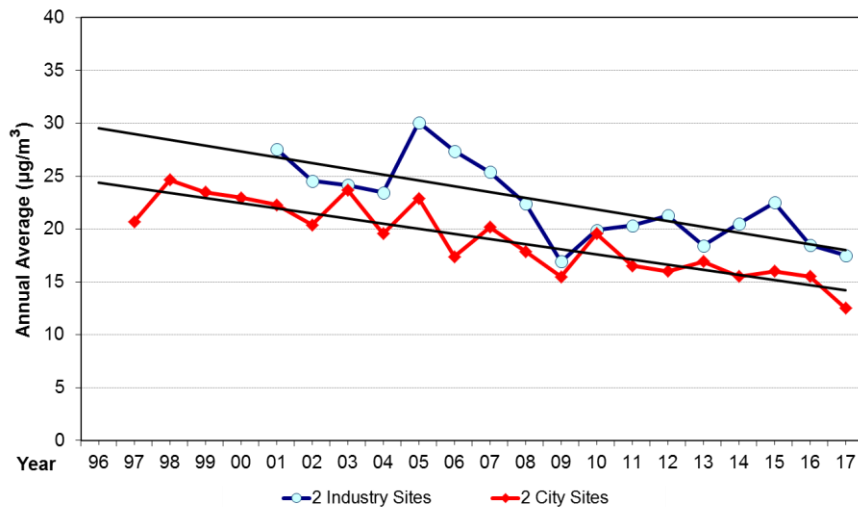


Hamilton's Air Quality Trends

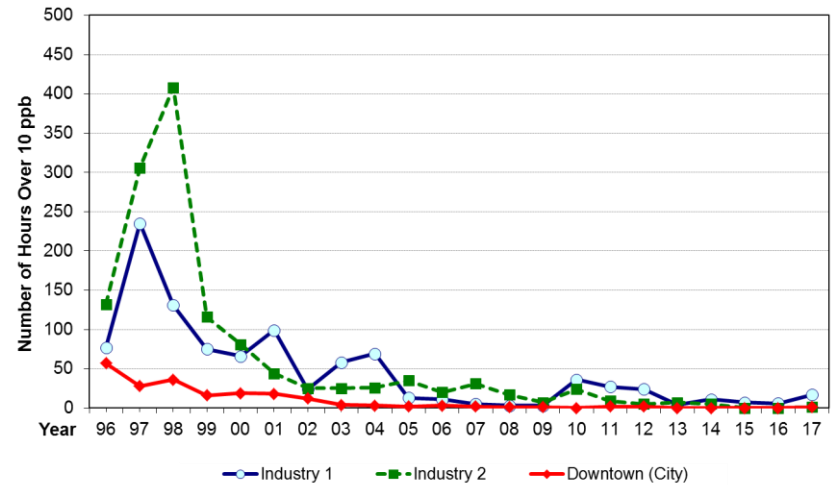
Particulate Matter (TSP, PM₁₀, PM_{2.5})



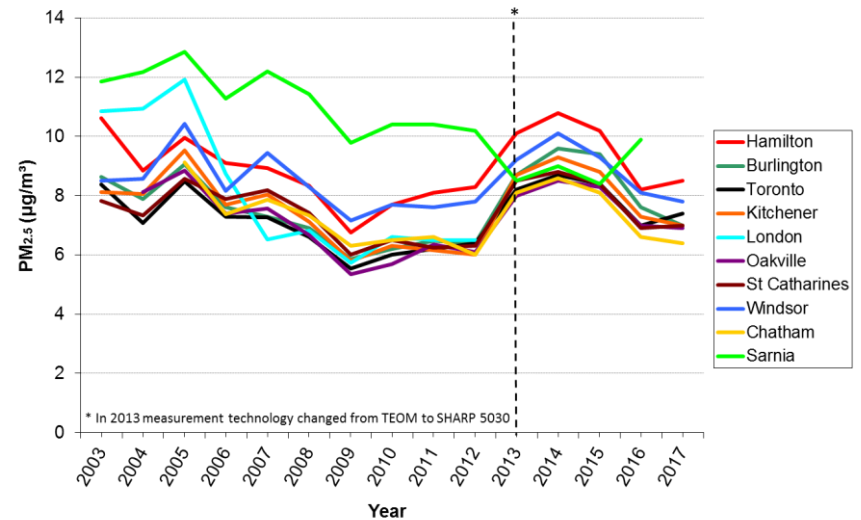
Inhalable Particulate (PM₁₀) Trend



Total Reduced Sulphur Trend



14-Year Trends for PM_{2.5} (Ten Ontario Cities)



Hamilton's Air Quality Trends

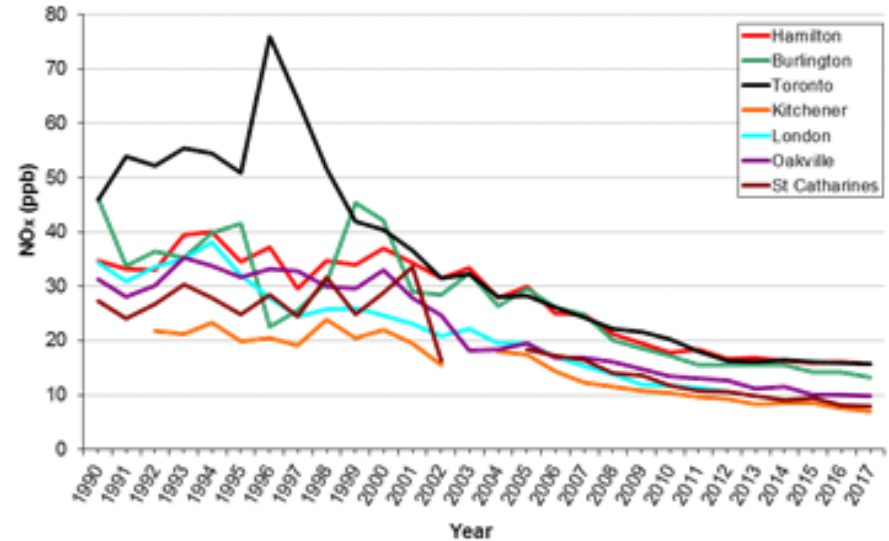
Nitrogen Oxides (NO_x)

Nitrogen Dioxide (NO_2)

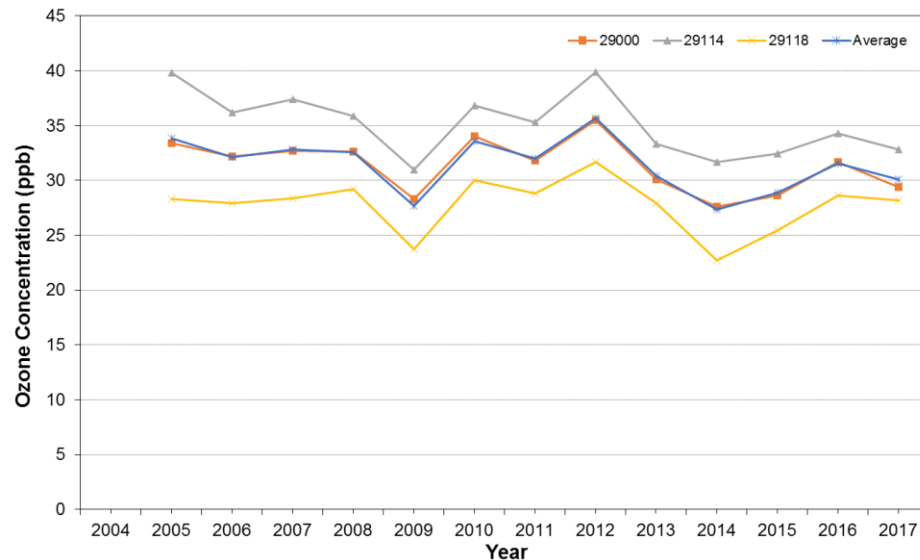
Ozone (O_3)

Steady decrease in all major air pollutants except Ozone

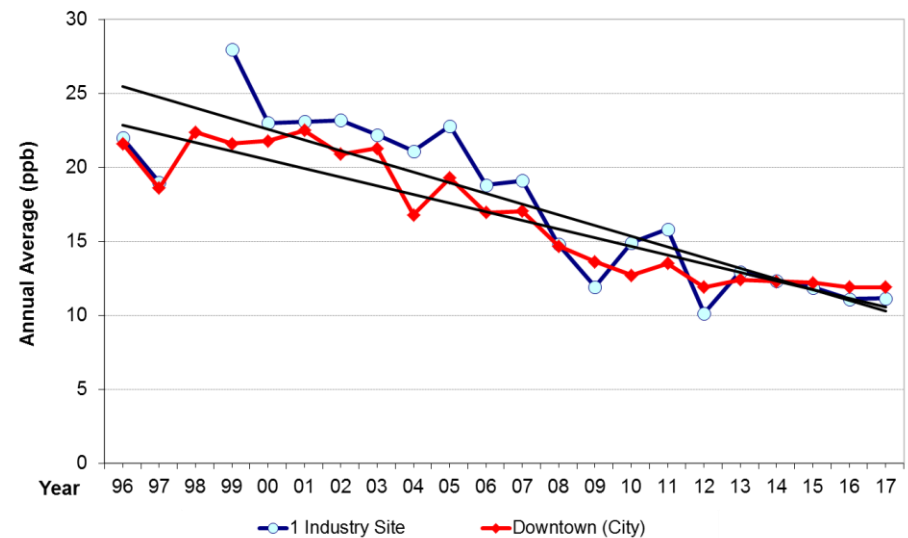
27-Year Trends for Nitrogen Oxides (Seven Cities)



Ground Level Summer Ozone Trend



Nitrogen Dioxide Trend



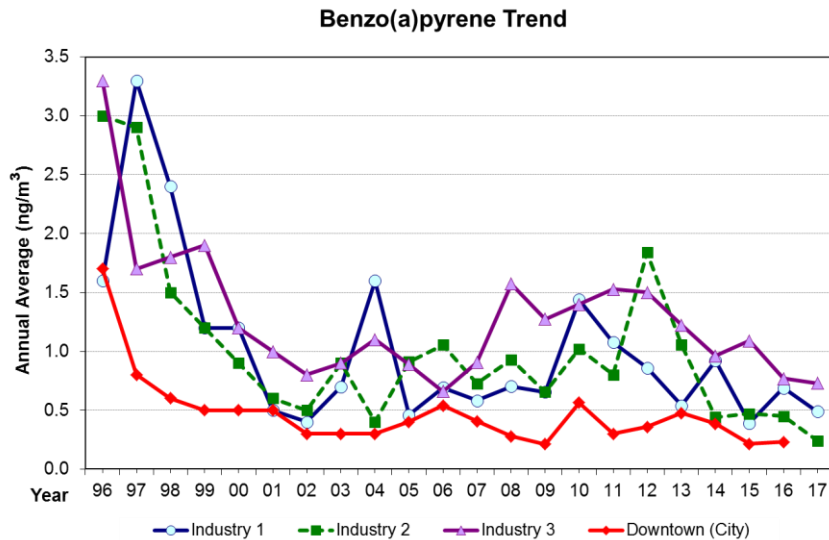
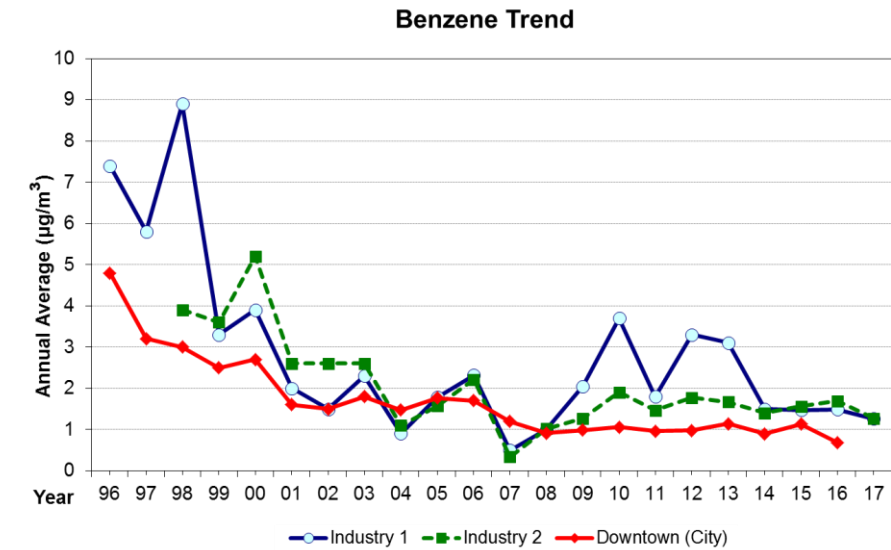
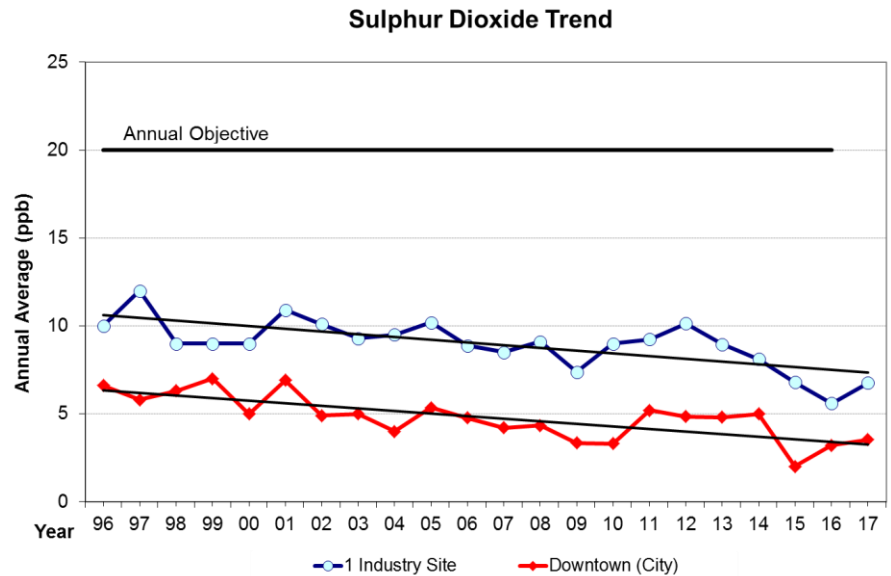
Hamilton's Air Quality Trends

Sulphur Dioxide (SO₂)

Benzene

Benzo[a]pyrene

Comparisons of 'Downtown' sites and
'Industry' sites



2017 Community Projects Supported Through Clean Air Hamilton

➤ Enhanced Fresh Air for Kids with Anti-Idling

- Famous Fresh Air for Kids program with new anti-idling engagement and campaign at participating schools

➤ 'Building' Community Awareness & Action Regarding Respirable Particulate Pollution in Hamilton

- Engage network of volunteer teams across neighbourhoods to help build low cost fine air particulate sensors to become part of a pilot network of real-time monitors



Future 2018 Community Projects Supported Through Clean Air Hamilton

Approved at Board of Health meeting May 14, 2018 BOH (BOH18020)

- **Enhanced Fresh Air for Kids with Anti-Idling** (Green Venture and Corr Research)
 - Famous Fresh Air for Kids program with anti-idling engagement and campaign at participating schools.
- **Friendly Streets Hamilton** (Cycle Hamilton and Environment Hamilton)
 - Conducting street-level audits within a 1 km radius of the General hospital while educating the public about air quality challenges and measuring PM_{2.5}.
- **Bus For Brains** (Green Venture and Dr. Matthew Adams)
 - Air monitoring completed by students while traveling to school by school bus. Data will be analyzed by Dr. Matthew Adams and his students at UofT.



Future Actions

- ✓ Continue to support and undertake all the recommendations of the Air Quality Task Force (BOH1309) including activities relating to air monitoring, green infrastructure.
- ✓ Support initiatives aimed at reducing transportation related GHG emissions such as: LRT, expansion of HSR services, expansion of bike lanes.
- ✓ Support initiatives aimed at greater connectivity of active transportation such as Downtown Active Superhighway (DASH) and Mountain Active Superhighway (MASH).
- ✓ Support expansion of electric vehicle charging station infrastructure in Hamilton.
- ✓ Continue to support groups like Clean Air Hamilton aimed at improving air quality and public health across the City of Hamilton.

Why?

- ✓ To insure the health and well-being of the citizens of Hamilton.





Thank you,
On behalf of
Clean Air Hamilton

