Parks and Environment Committee

Local Air Quality Study of Ward 5 and Ward 6

City Council Decision
City Council on April 1, 2 and 3, 2014, referred Item PE26.2 to the Board of Health for further consideration.

Committee Recommendations
The Parks and Environment Committee recommends that:

1. City Council direct the Director of the Environment and Energy Division, in collaboration with the Medical Officer of Health, to investigate and undertake appropriate actions to encourage a reduction in truck emissions, such as seeking federal support for improved truck emissions standards across North America.

2. City Council direct the Chief Corporate Officer to report to City Council in 2015 on the results of additional local air quality studies and such report discuss the initiatives of appropriate City Divisions, Agencies and Corporations taken to support local residents in improving their local air quality and natural environment.

3. City Council request the Ontario Ministry of the Environment to:
   a. further measure, assess, verify and address the findings of the study especially for the compounds identified to exceed the Ministry’s Ambient Air Quality Criteria; and
   b. install and locate air monitors in proximity to major highways in Toronto and publish all such relevant data.

4. City Council forward this report to the Board of Health for information purposes.

Committee Decision Advice and Other Information
The Parks and Environment Committee requested the Chief Corporate Officer to report to the Parks and Environment Committee on the dust monitoring requirements contained in the Certificates of Approval for concrete batching plants within the boundaries of the City of Toronto and any issues associated with compliance.

Origin
(February 14, 2014) Report from the Chief Corporate Officer

Summary
On January 15th, 2014 the results of a City-initiated study of local air quality in Wards 5 and 6 (Etobicoke-Lakeshore) were presented to local residents at a public open house. Using established air quality models approved by the Ontario Ministry of Environment and verified against monitored data from the Ministry's four monitoring stations located in Toronto, the study identified expected concentrations of 30 contaminants using average and worst case 24-hour conditions. Analysis was also conducted to estimate the relative contributions of contaminants from sources in northeastern United States, southern Ontario and Toronto and by source type, including industrial, vehicular, residential and commercial sources.

Assessment of the 30 contaminants showed four substances to be of concern when compared to ambient air benchmarks from the Ministry of Environment and other similar benchmarks. The four contaminants of most concern are: oxides of nitrogen, benzene, particulate matter less than 10 microns, and particulate matter less than 2.5 microns. A fifth contaminant, benzo(a) pyrene may also be of concern, but further research is still required and being undertaken.

All five of these contaminants are produced from a variety of sources, but in Wards 5 and 6, the most significant source of concern is that of motor vehicles, in particular the emissions tied to the volume and type of motor vehicle traffic travelling Highway 427 and the Gardiner Expressway.

Utilizing the results of the local air quality study, Toronto Public Health assessed the cumulative health impacts of three sub groups of the 30 contaminants. These three groups are:

- non-carcinogens (toxic, non-cancerous contaminants);
- carcinogens (cancerous contaminants); and
- criteria air contaminants.

Based on the findings of the air quality study, Toronto Public Health prepared a health assessment estimating the cumulative health impacts of air pollution in the area. The health assessment (as summarized in Appendix A) found that most of the 30 air contaminants selected for this study, mainly the non-carcinogenic ones, occur below levels of concern to health in Wards 5 and 6 even when the combined exposure is taken into account. However, it is possible that some carcinogens are present at levels above the one in one million excess cancer risk benchmark. Other pollutants such as nitrogen dioxide and particulate matter are also found at levels that are known to have an adverse impact on health. These findings suggest that further actions are needed to reduce local air pollution and improve health for Torontonians.

Background Information (Committee)
(February 14, 2014) Report and Appendix A from the Chief Corporate Officer on Local Air Quality Study of Ward 5 and Ward 6
(http://www.toronto.ca/legdocs/mmis/2014/pe/bgrd/backgroundfile-67003.pdf)
(February 14, 2014) Appendix A - Cumulative Health Impact Assessment of Air Quality
(http://www.toronto.ca/legdocs/mmis/2014/pe/bgrd/backgroundfile-67066.pdf)

Speakers
Heather Marshall, DeTOx Toronto Campaigner, Toronto Environmental Alliance