

CITY OF HAMILTON

NOTICE OF MOTION

Public Health Committee: November 4, 2024

MOVED BY COUNCILLOR T. HWANG.....

Public Health Impacts of Black Soot Residue in Lower City

WHEREAS, Wards 3 and 4 residents have raised concerns about their mental and physiological health due to black soot residue deposits on their properties and on city properties and assets such as local parks and play structures;

WHEREAS, children and pets are coming in contact with this black soot residue when playing outside, putting them at risk of exposure through inhalation, absorption, and ingestion, and acting as vectors by inadvertently bringing the residue indoors;

WHEREAS, the black soot residue is affecting residents' enjoyment of their properties because they must clean their outdoor furniture before every use, keep their windows closed at all times to prevent the residue from entering their homes, and clean indoor surfaces like carpets, window sills and counters when the residue gets inside;

WHEREAS, the black soot residue is affecting residents' enjoyment of City properties and assets;

WHEREAS, the residents of Hamilton reported the black soot residue to the environmental pollution regulator (Ministry of Environment, Conservation and Parks (MECP)), who in turn, in some cases, took samples of the residue and tested these;

WHEREAS, Wards 3 and 4 are receiving an increasing number of complaints, therefore referring an increasing number of complaints to MECP, but with no improvement to quality of life for residents nor indication from MECP that they are addressing the issue, and this gap in MECP's response to the issue is why we need Public Health to intervene;

WHEREAS, soot is usually black carbon. It is a component of fine particulate air pollution (PM_{2.5}). It comes from the incomplete combustion of wood and fossil fuels (a process that also creates carbon dioxide (CO₂), carbon monoxide (CO), and volatile organic compounds). Black carbon warms the atmosphere because it is very good at absorbing light. It warms the air and surfaces in regions where it is concentrated and can cause weather patterns and ecosystem cycles to change. Even though black carbon can stay in the atmosphere from days to weeks, it has significant direct and indirect impacts on the climate, snow and ice, agriculture, and human health.

WHEREAS, according to Health Canada, fine particulate matter is associated with negative health outcomes, including eye, nose, throat and lung irritation, decreased lung

function, and aggravated lung and heart conditions, and according to a 2024 study of airborne nanoparticles in Toronto and Montreal by Marshall Lloyd et al., “long-term exposure to outdoor ultrafine particles was associated with increased risk of mortality;” and

WHEREAS, investigating and addressing, within municipal jurisdiction, the health impacts of this black soot residue aligns with this Council’s priority 2 of “Safe and Thriving Neighbourhoods,” including vibrant parks, recreation, and public spaces.

THEREFORE, BE IT RESOLVED:

- (a) That staff be directed to request the Ministry of Environment, Conservation, and Parks provide the results of samples taken in 2024 of the black soot residue in the lower city to the City of Hamilton and report back to the Public Health Committee with a description of the composition of the residue, with the goal of promoting information-sharing across governmental jurisdictions and interacting directly with the public through transparency and while maintaining privacy requirements;
- (b) That staff be directed to report back to the Public Health Committee by Q2 2025 with the following:
 - (i) The City of Hamilton’s responsibility to its residents for addressing air quality impacts;
 - (ii) The impact of the black soot residue on public health (i.e. mental, physiological, and environmental health) and other associated impacts experienced by residents (i.e. safety outdoors, food growing gardens);
 - (iii) The impact of the black soot residue on climate change and environmental health; and
 - (iv) The financial and other impacts of the black soot residue on the City of Hamilton, including its public assets (e.g. playground structures, Tim Horton Field Stadium).
- (c) That staff bring forward recommendations on sampling and testing black soot residue on the City’s assets, including associated costs.

Reference:

Lloyd, M., Olaniyan, T., Ganji, A., Junshi, X., Venuta, A., Simon, L., Zhang, M., Saeedi, M., Yamanouchi, S., Wang, A., Schmidt, A., Chen, H., Villeneuve, P., Apte, J., Lavigne, E., Burnett, R. T., Tjepkema, M., Hatzopoulou, M., Wichenthal, S. (2024). Airborne Nanoparticle Concentrations Are Associated with Increased Mortality Risk in Canada’s Two Largest Cities. *American Journal of Respiratory and Critical Care*. Advance online publication. <https://doi.org/10.1164/rccm.202311-2013OC>