

September 16, 2020

Re: IE15.8 Request to Study the Environmental Impact of Two-Stroke Engine Garden Equipment

The Toronto Environmental Alliance (TEA) strongly encourages you to support Motion IE 15.8 requesting the City Manager to report on the environmental and health impacts of gasoline-powered two-stroke engine leaf blowers and other garden equipment, and to explore the feasibility of a year-round ban on such equipment.

Gasoline powered two-stroke engines produce significant emissions which are harmful to air quality and human health. Furthermore, these engines contribute to climate change due to their greenhouse gas emissions and the landscaping industry should begin the transition to low- and zero-carbon alternatives.

We recognize that these industries play an important role in creating and maintaining green infrastructure in our city, which in turn increases our resilience to climate-related extreme weather conditions like heat waves and flooding. When the cosmetic pesticide ban was passed in Toronto, the landscaping and lawn care industries adapted by offering more environmentally friendly alternatives. We believe that now is a critical time to explore how these industries can play a role in meeting the City of Toronto's TransformTO climate action commitments by adapting to low-carbon alternatives.

Over 100 cities across North America have banned or limited the use of these gas powered engines.

Please consider the following facts as you deliberate on this motion:

- In 2017, gas powered lawn and garden equipment was recommended by the City of Toronto's Parks and Environment Committee for consideration as an additional TransformTO climate action.¹
- Leaf blowers create large volumes of airborne particulates, including hydrocarbons (HC), oxides of nitrogen (NO_x), carbon monoxide (CO), and fine particulate matter (PM), which are associated with respiratory and central nervous system health effects.²
- Inhalation of small airborne particles can provoke asthma and other respiratory diseases in children and can increase the severity of chronic lung disease in our elderly.³

¹<https://www.toronto.ca/wp-content/uploads/2017/10/9234-TransformTO-Evaluation-of-Potential-Additions-to-TransformTO-Report-1-Strategies.pdf>

² <https://www.dec.ny.gov/chemical/109428.html>

³ http://www.lincolntown.org/DocumentCenter/View/733/PEHSU_Eastchester_Letter_042210_1_?bidId=

- A 2011 study found that operating a two-stroke leaf blower for 30 minutes emitted the same amount of polluting hydrocarbons as driving a Ford F-150 3,900 miles (roughly the distance from Toronto to Calgary and back).⁴
- Two stroke engines also emit benzene, 1,3-butadiene, acetaldehyde, and formaldehyde — known carcinogens that Toronto Public Health has reported on in the past.⁵
- Leaf blowers generate wind speeds of over 200 kilometers an hour, propelling into the air potentially hazardous substances such as dirt, mold, pollen, animal feces, and pesticides. Exposure to these dust clouds, which take hours to settle, damages people’s respiratory systems and may cause irritation, allergies, and disease.⁶
- According to Greg Evans, a researcher at University of Toronto’s Faculty of Applied Science & Engineering⁷:
 - Evidence from the 2003 SARS outbreak suggests that wind increased its propagation while high air pollution doubled mortality. Recent evidence shows that death from COVID-19 is substantially higher in counties that had poorer air quality. Thus, worse air quality may make people more vulnerable once infected by this virus.
 - Preliminary data indicates that air quality has improved dramatically in Toronto since the pandemic shutdown started. Concentrations of traffic-related air pollutants, nitrogen oxides and ultra-fine particles, have decreased to almost half their concentrations prior to the shutdown. While it’s too early to know if improvements in air quality is reducing hospitalization from COVID, experts suggest that people should do what they can to further reduce emissions and exposure, including limiting use of gas-powered cars, barbecues, leaf blowers and lawn mowers.

Thank you for taking the negative health and environmental impacts of two-stroke engines seriously and for working to protect the health of Toronto children, adults and seniors.

Sincerely,

Michael Polanyi
Climate Change Campaigner, Toronto Environmental Alliance

⁴ <https://medium.com/age-of-awareness/the-gas-powered-leaf-blower-is-the-most-polluting-yard-tool-ever-invented-ca0a9857969e>

⁵ https://www.salon.com/2017/10/08/noisy-but-that-is-not-all_partner/

⁶ <https://www.theatlantic.com/magazine/archive/2019/04/james-fallows-leaf-blower-ban/583210/>

⁷ <https://www.utoronto.ca/news/what-role-are-emissions-playing-covid-19-pandemic-u-t-researcher-examines-evidence>