

May 24, 2022

**RE: ITEM EC30.4, REPORT ON OUTSTANDING NOISE DIRECTIVES, MAY 30 ECONOMIC COMMUNITY DEVELOPMENT COMMITTEE (ECDC) MEETING**

**Attention: Chair Michael Thompson and Members of the Economic and Community Development Committee (ECDC)**

Please ban 2 stroke gas powered leaf blowers (GLBs) and other small engines and reject the MLS Report on Outstanding Noise Directives for the reasons below:

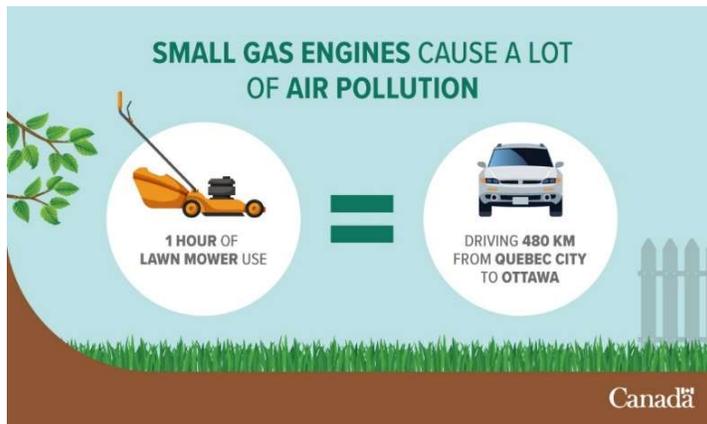
**1. City Council's Motion 20, TransformTO - Critical Steps for Net Zero by 2040**

The report ignores City Council's motion 20: "[support for a ban on use of two-stroke engine leaf blowers, lawnmowers and other small engine equipment and vehicles.](#)".

**2. Small Engine Pollution is Significant.**

Small engine pollution is significant. 2 cycle garden equipment like gas leaf blowers and mowers are the dirtiest. Environment Canada states:

*"1 hour of lawn more use equals driving 480 km from Ottawa to Quebec City."* and,



*"Small gasoline-powered engines like the ones found on lawn mowers and hedge trimmers haven't changed much in recent decades and lack advanced technologies to keep emissions low."* and

*"While new Canadian regulations help, we can further reduce emissions by moving toward electric options. These offer comparable performance to gasoline-powered engines at a competitive price."*

<https://www.facebook.com/EnvironmentandClimateChange/>

The California Air Resources Board (CARB) states:

*"Gas-powered lawn and garden equipment can contribute heavily to local and regional air pollution. There are many options available for electric lawn and garden equipment, as well as landscapers and lawn maintenance companies that use all electric*

equipment.” and “By 2031, small engine emissions will be more than twice those from passenger cars.”<sup>1</sup>

The US EPA considers small engines (small engines and tools, lawnmowers, etc.) as one of the “Mobile sources of air pollution”.

<https://www.epa.gov/mobile-source-pollution/how-mobile-source-pollution-affects-your-health#mobile%20sources>

In 2011, GLGE (gas powered lawn & garden equip.) emitted approximately 26.7 million tons of pollutants (VOC=461,800; CO=5,793,200; NOx=68,500, PM<sup>2</sup><sub>10</sub>=20,700; CO<sub>2</sub>=20,382,400), accounting for 24%–45% of all nonroad gasoline emissions. Gasoline-powered landscape maintenance equipment (GLME; leaf blowers/vacuums, and trimmers, edgers, brush cutters) accounted for 43% of VOCs and around 50% of fine PM. Two-stroke engines were responsible for the vast majority of fine PM from GLME<sup>3</sup>

### 3. Economics

Mark Carney, Former Governor Bank of Canada and Bank of England, Vice Chair, Brookfield stated:<sup>4</sup>

*“An accelerated transition to a net zero economy (is) imperative for climate sustainability and one of the greatest commercial opportunities of our time,”*

Noise and pollution are public health issues like smoking, cancer SARS or AIDS; not economic development ones. Toronto’s regulatory regime allows a wealth transfer from the public (health care costs, lost productivity, declined well-being) to noisy polluting businesses who resist adapting to quieter cleaner quieter equipment.

Banning gas leaf blowers will help boost quiet, non-polluting Green Technology job opportunities and educational programs in land care that cover advanced battery technologies. It will also providing profitable business opportunities to innovative landscapers providing sustainable emission-free gardening services and design.

Refer the AGZA (American Green Zone Alliance) testimonials appended to this submission.

### 4. Public Health

Toronto Public Health’s (TPH) statement in Attachment F Small Engine Lawn and Garden Equipment trivializes 2-stroke gas engine health issues by stating:

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<sup>1</sup> <https://ww2.arb.ca.gov/our-work/programs/zero-emission-landscaping-equipment>

<sup>2</sup> “PM” represents fine particulate matter

<sup>3</sup> National Emissions from Lawn and Garden Equipment, Jaime Banks PhD, Robert McConnell, Environmental Engineer, Quiet Communities, Inc.,

<sup>4</sup> Ex-BoE Governor Carney to head green investments at Canadian asset manager Brookfield, David Milliken, Reuters, Aug 26, 2020

*“.. noise, dust, and air pollution resulting from the use of small engines (leaf blowers) constitutes a nuisance that can be addressed through municipal bylaws but not a public health harm.....”*

It contradicts reputed medical/scientific opinion and research including its own [July 3 2001 Staff Report](#), warning of serious health risks from gas powered leaf blowers, mowers, etc. TPH’s current ambivalence about this health threat is unsettling. 21 years later, Toronto’s gas powered garden equipment usage has expanded significantly with no meaningful regulations to end its toxic & GHG emissions and unspeakable noise. While Toronto becomes louder from increasing construction, mechanized gardening, traffic and pollution, noise regulations have stagnated. City Hall already knows noise is dangerous as per TPH’s May 29/17 report below:

#### Health Impacts

A growing body of evidence indicates that environmental noise at levels that are common in urban environments have an impact not only on quality of life issues and hearing loss, but also on health. Building on the 2009 and 2011 reports of the World Health Organization, TPH reviewed the current evidence on the health impacts of environmental noise. The health impacts included in this review were:

- Cardiovascular Effects: myocardial infarction, hypertensive heart disease, ischemic heart disease, high blood pressure, cerebrovascular disease (stroke), coronary heart disease
- Cognitive Impacts: impairment (attention, memory adults, errors upon testing in children)
- Sleep Disturbance: increased arousals, changes to sleep structure
- Mental Health: annoyance, depression, quality of life
- Pulmonary Effects: chronic obstructive pulmonary disease, pneumonia
- Other Effects: diabetes, behaviour in children

The TPH review confirmed that adverse health impacts are observed at low levels ranging between 42 and 60 dBA. This is lower than what was concluded in the TPH 2000 review, which identified 70 dBA as protective to health. The recent available evidence therefore suggests that environmental noise in Toronto occurs at levels that could be detrimental to health.

The World Health Organization (2009) established health-protective guidelines of 55 dBA (Leq 16 hours) average outdoor levels through the day and evening (Leq 16 hours) and an average outdoor night-noise exposure guidelines of 40 dBA (Leq 8 hours) to keep an indoor average of 30 dBA. This means that the noise levels can vary through the day or night and at times be above these values. Given that 40 dBA is often difficult to achieve in urban centres, the WHO also set an interim average nighttime limit of 55 dBA. The Ontario Ministry of Environment and Climate Change has recommendations for road-related noise thresholds: for sensitive land uses, such as residential uses, mitigation measures are required if average outdoor levels at the centre of a window or

According to a recent Harvard study: *“....long-term exposure to the type of pollution that GLBs (gas powered leaf blowers) produce may significantly raise the risk of death from COVID-19. .... researchers found that a one microgram increase in concentration of fine particulates was associated with a 15% increase in risk of COVID-19 related death. Even short-term elevations in particulate matter, both fine and coarse, have been linked to acute respiratory infections, asthma, COPD, heart attacks, heart failure, and mortality.”*<sup>5</sup> Gas-powered lawn and garden equipment including GLBs emit millions of tons of toxic, carcinogenic air pollution into our air each year. The pollution is generated in high levels and close to the ground where it is easily inhaled by workers and people nearby.

The American Lung Association, Children’s Environmental Health Center and the US EPA warn explicitly against gas-powered lawn and garden equipment.

<sup>5</sup> <https://www.silencity.com/2020/04/15/leaf-blowers-pollution-and-covid-19/>

The American Lung Association advises:

*“Ditch the gas-powered lawn mower. Use hand-powered or electric lawn care equipment rather than gasoline-powered. Old two-stroke engines like lawnmowers and leaf or snow blowers often have no pollution control devices. They can pollute the air even more than cars, though engines sold since 2011 are cleaner.”*<sup>6</sup>

There is broad agreement amongst leading medical organizations that even short term exposure to these types of pollution can cause or contribute to cancer, early death, attack, strokes, congestive heart failure, asthma, chronic obstructive pulmonary disease, and other serious conditions. A recent study by Harvard School of Public Health researchers mentions increasing evidence linking fine particulate pollution exposure to autism in children.<sup>7</sup>

Exposure to these forms of pollution is especially hazardous to children, seniors, people with chronic illness, and unprotected workers. Even short term exposure can be dangerous according to the US Environmental Protection Agency.

Major medical organizations, including the US Centers for Disease Control and Prevention, the American Lung Association, the National Institutes of Health, various medical societies including physician groups in California, New York, Massachusetts and Utah, etc. warn against their use and/or the use of gas-powered lawn and garden equipment. The Medical Society of New York State and the Massachusetts Medical Society passed resolutions discouraging the use of GLBs because of their detrimental effects on workers and public health.<sup>8</sup>

## **5. Enforcement**

MLS investigates a week or so after complaints when work is often completed. It shrunk inspection levels and streamlined regulations so much to simplify enforcement that it compromised its effectiveness. Enforcement must respond quickly to catch lawbreakers. Toronto must look at effective examples used elsewhere instead of repeating ineffective methods. Suggested strategies are fining workers with gas leaf blowers in their vehicles, using time stamped emailed photos as evidence and stationing inspectors in where crews frequent.

## **6. Social Equity**

Gas powered lawn and garden equipment health risks are highest for workers operating this equipment regularly who are exposed to high levels of toxic pollutants, fine particulates and noise. Workers have little influence in the equipment they use. Toronto Public Health reported that:

*“There is a risk of hearing loss for commercial leaf blower operators due to the high sound levels and the likelihood that few (less than 10%) wear hearing protection”*<sup>9</sup>

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<sup>6</sup> <https://www.lung.org/blog/earth-day-checklist>

<sup>7</sup> <https://www.quietcommunities.org/air-pollution/>, Jaimie Banks, PhD

<sup>8</sup> [https://www.quietcommunities.org/wp-content/uploads/2020/05/FINAL-QC\\_White-Paper\\_GLBs-COVID\\_v1.2\\_2020.05.03.pdf](https://www.quietcommunities.org/wp-content/uploads/2020/05/FINAL-QC_White-Paper_GLBs-COVID_v1.2_2020.05.03.pdf) Jaimie Banks, PhD

<sup>9</sup> [Leaf Blowers and other Lawn/Garden Equipment: Noise, Air Pollution and Regulation](#), Staff report Dr. Sheela V. Basrur, Medical Officer of Health, July 3, 2001

And workers lack any breathing protection. No one will benefit more from the elimination of gas-powered leaf blowers etc. than these workers.

## 7. Environmental Goals

Today lawn maintenance crews disperse unlimited noise and pollution regardless of the harm to people, beneficial insects including pollinators. Toronto must stop treating gas powered lawn equipment esp. leaf blowers as sacred cows. South Pasadena is light years ahead of Toronto as the First US AGZA Green Zone city:

*“In keeping with our pledge to become a more sustainable city, South Pasadena worked with AGZA to transition municipal grounds maintenance from fossil fuel based operations to advanced cordless battery equipment, manual tools, and ecologically friendly landscape practices. As a result, the city has been able to eliminate all fossil fuel consumption and toxic emissions, and has reduced noise by half.”<sup>10</sup>*

Banning GLBs reduces fuel consumption and spillage, exhaust emissions, noise, toxic maintenance solvents, and dirty engine parts and non-recyclable containers that wind up in landfills. Workers benefit from reduced exposure to toxic pollutants and noise. The public benefits from quieter, cleaner, and healthier environments in their neighborhoods, schools, businesses and communities and a better quality of life.

## 8. Battery Equipment Use Is a Growing Trend

Mariusz Maj, Horticulturalist at Manulife for 25 years, uses an electric lawn mower in order to trim down a section of grass of the Manulife building in Toronto, on Monday, August 26, 2019. – see below<sup>11</sup>



The above photo shows battery equipment used on a large commercial lawn. Battery Garden equipment manufacturers include Green Machine, HUSQVARNA, ECO, Haaga’s Mechanical Sweeping Machine, etc.

## 9 Education

Toronto needs a robust information program informing residents and industry about the health and environmental risks with gas powered equipment and reasons for the ban to increase acceptance. It must advise residents why educing lawns for pollinator friendly native plants increases biodiversity and aligns with Toronto’s Pollinator Protection Plan, Biodiversity and Ravine Strategies and greenhouse gas reduction targets.

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<sup>10</sup> <https://agza.net/> American Green Zone Alliance

<sup>11</sup> Is it time to decolonize your lawn? Christopher Katsarov/The Globe & Mail, Sept 5/20  
<https://www.theglobeandmail.com/canada/article-is-it-time-to-decolonize-your-lawn/>

## 10. Many Jurisdictions Have Meaningful Leaf Blower Regulations

For Toronto to fulfill its health, environmental and climate aspirations, it must join the [Hundreds of authorities](#) banning and or severely restricting this equipment including [California](#), the [National Capital Commission \(NCC\)](#), Beaconsfield, Valleyfield, Sherbrooke, Westmount, [Vancouver](#), Washington DC, Miami Beach, Naples FL, Burlington VT, San Francisco R & P and Ann Arbor MI. New York State ([in the Senate Health Committee](#)) is on track to follow. Even Markham is switching to battery power to maintain city land while Toronto hesitates. The NCC's website states:

*"As the first jurisdiction in Canada to enact a blanket ban on the use of gas-powered small tools, the NCC is committed to climate change leadership and creating a greener and more sustainable National Capital Region."*

## 11. Conclusions:

To be truly livable, Toronto must improve our environment, ambient noise levels, air quality, biodiversity and climate goals. Two hundred cities/towns across the U.S. and several in Canada have already enacted some form of legislation to restrict or ban the use of GLBs. Toronto should join them.

Sincerely,

Harold Smith, B. Arch, MBA, LEED AP,  
Director Lytton Park Residents Org. Inc.  
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cc Mayor Tory, Councillor Mike Colle, Josh Matlow, Lytton Park Residents Org. Inc.,  
Bedford Park Residents Organization, SAHRA, FoNTRA

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**AGZA Verified EGO Testimonials**

AGZA verified testimonials are entirely independent of tool manufacturers and ensure accurate unbiased information is available for the public. AGZA works hands on with these companies verifying their physical fleet of tools, batteries and chargers. AGZA confirms their workloads and hourly use of tools to understand battery cycles and how the tools stand up to wear and tear. All of these companies are AGZA certified and have been trained in the use and care of electric tools for longevity and ROI.



**Dan Delventhal MowGreen, LLC** - "The EGO power plus line has been a cornerstone of our zero emission lawn care practice. We use their mowers, blowers, hedgers, multi-head edgers, pole hedgers, pole saws, snow blowers, inverters, trimmers and chain saws. The common battery across the line has simplified things while making it easier to use all electric tools all day. We enjoy the long run times of the 5 amp and 7.5 amp batteries. The self-propelled 21 inch mulching mower from EGO is our standard for small units.

MowGreen has been able to grow 30% for 7 years straight and managing the growth has been easy with EGO, as it is readily available in variety from a local Home Depot or Amazon. We have been using EGO as a standard for 5 or 6 years. Our prior small mower standard Black and Decker was replaced by EGO back then, and EGO also replaced a prior standard of using Worx trimmers. Mow Green plans to continue standardizing on EGO gear, and is considering upgrading to the new commercial line EGO has recently released."



**Jeff K, 818 Land Maintenance** - "I am an independent operator servicing five to seven single family homes a day in Southern California. I was introduced to electric tools by the American Green Zone Alliance five years ago. One of the equipment choices introduced to me was the EGO Power Plus line of tools. I preferred the ergonomics of EGO compared to the other brands I was introduced to. I have since purchased two self-propelled and one push mowers, one backpack blower and two handheld blowers, one stick edger, and one string trimmer. I have replaced my string trimmer after three years of commercial service. Five out of my 7 batteries are going on five years old now. I was able to get almost four years out of the two batteries I replaced. With the cost savings on gas purchasing, replacement batteries are worth the cost so far. My clients who do not like gas are happy I have EGO tools on my truck."

**Kevin E, Kevin's gardening services** - "Time is money for my business. I hire two to three helpers and speed is the key to making a living. My guys are hard on gas tools so when considering electric I needed sound advice. I need tools that are durable, reliable, and affordable. EGO Power Plus and 56V Commercial has fit that bill so far with my specific business model. There is no doubt that I am saving money on gas and two-stroke oil mix. I will have to come clean and admit that my EGO Commercial string trimmer and hedge trimmer perform just as well as my gas ones. I have not lost any work productivity. I use the blower every day for hardscape surfaces mostly. I look forward to a commercial 21" walk behind mower from EGO soon."



**Brian Daugherty, grounds maintenance operations WU School District, Lancaster, CA** - "I have been using EGO's equipment for over a year and couldn't be happier. The equipment I use is very light and convenient and the batteries have been holding up for over a year now with no troubles. I could not imagine not having my ego equipment for my daily use in my profession. It has made my job as a groundskeeper a lot easier to handle. EGO has exceeded my expectations and is a great company and I hope to be using it for years to come."



**EGO BATTERIES - AGZA testing of EGO batteries over a five year span**



**TEMPERATURE EXPOSURES:**

**Heat** - EGO batteries were operated, charged, and stored in high heat conditions in desert communities where temperatures reach up to 116 degrees Fahrenheit. EGO batteries were purposely charged in a metal storage container subjected to extreme heat for a period of six months. There were no safety issues regarding thermal runaway, fires, or expanding cells.

**Cold** - EGO batteries were purposely charged and stored in temperatures less than 15 degrees Fahrenheit for a two month period. Batteries were used in blowers, chainsaws, and hedge trimmers on dead vegetation, and stick edgers with no negative effects on performance. Batteries were also used on EGO's snow blower with exceptional performance.

**ABUSE TESTING:**

**Drop tests** - 100 waist level drops of EGO 2.5, 5.0, 7.5, and backpack battery on asphalt (50), concrete (25), and turf grass (25). 100 drops off the back of a Ford F250 pick-up truck of EGO 2.5, 5.0, 7.5, and backpack battery on asphalt (50), concrete (25), and turf grass (25). There were no cracks or significant damage of the battery housings, and no battery failures as a result of the drop testing. In extreme abuse testing EGO batteries were slid inside the bed of a Ford F250 pickup truck from the tailgate and crashed into the front of the bed with robust force. This was repeated 125 times in a one week period. No cracks or damage to the housing resulting from this abuse. All of the batteries were still functional in all of the tools.