

INVESTIGATING SUSTAINABLE SOLUTIONS FOR GASOLINE-POWERED LEAF BLOWERS (GLBs)

Executive Summary

GLBs have a two-stroke motor and are a common garden tool used to collect fallen leaves, grassing clips, and other debris (Costa-Gomez, 2020). Not many are aware of the adverse effects GLBs have on human health and the environment.

Specifically, in the City of Toronto, GLBs are a concern as heavy reliance has begun to threaten air quality, ecosystem services, and human health (Watkins, 2019). The City of Toronto has done little to investigate this unsustainable practice and if trends prevail, GLBs have the potential to cause serious damage (City of Toronto, 2021a).



One Hour of Leaf Blowing

=



Emissions of 1800 km Drive

#BanGLBs
#LEAVELEAVES

Environmental Implications

Unsurprisingly, many of the chemicals that GLBs emit including, hydrocarbons and carbon monoxide, can be extremely harmful to human health and largely contribute to air pollution (Watkins, 2019).

GLBs predispose individuals to respiratory illnesses, lung cancer, hearing loss, hypertension, and negatively impacts cognitive development in children (Costa-Gómez et al., 2020).

Through the process of blasting the leaves off the ground, the user is destroying crucial animal habitats and eliminating the potential for a natural fertilizer (Haines, 2019).

Social Implications

In an urban environment, bystanders cannot maintain safe distances from GLBs. This creates tensions and conflict between citizens and GLB operators (Cardoza, 2021).

While homeowners in suburban neighbourhoods occasionally use GLBs, those that are heavily exposed to GLBs include landscapers who have been shown to be of lower socioeconomic status (Boykoff, 2011). Furthermore, research has illustrated racial and labour implications associated with GLBs and describes the segregation between migrant labour involved in landscaping and the suburban affluence (Boykoff, 2011).

Economic Implications

The profit from landscaping services in Canada accumulates to 13.3 billion yearly (IbisWorld, 2021). Furthermore, many actors in these industries want consumers to continue to use mechanical instruments to meticulously care for their lawns.

Similar to cars, GLBs are becoming increasingly electric as it is a more environmentally-friendly alternative form of energy. However, this shift is quite expensive as electric GLBs require frequent charging, charging outlets, and sufficient electricity to charge the batteries which comes at an added cost for landscapers (Walters, 2021).

Phasing Out GLBs in Toronto

- Encourage property owners to leave their leaves on their ground.
- Implement subsidies and incentives for electric-powered leaf blower manufacturers and landscaping companies.
- Motivate citizens through social media campaigns to ‘take back autumn’ by getting outside.
- Ban GLBs, and if necessary, increasingly rely on electric-powered leaf blowers.



References

- Boykoff, J. (2011). The Leaf Blower, Capitalism, and the Atomization of Everyday Life. *Capitalism Nature Socialism*, 22(3), 95–113. <https://doi.org/10.1080/10455752.2011.593896>
- Cardoza, M. (2021). Why Cities are Taking Action to Limit Loud and Polluting Lawn Care. *Audubon*. <https://www.audubon.org/magazine/spring-2021/why-cities-are-taking-action-limit-loud-and>
- Carroll, S. (2019). Petitions: Support the Phase Out of Leaf Blowers. City Councillor Shelley Carroll Ward 17 Don Valley North, Retrieved 2021, https://shelleycarroll.ca/leafblowers?fbclid=IwAR3jcN93QEvnzDgPsfjFjsHyA7GtVYLwvphXjnGyhWgt5auuTxDFMOF_tU
- City of Toronto. (2021a). Member Motion 23.3 - City Council. Retrieved 2021, from <https://www.toronto.ca/legdocs/mmis/2020/mm/bgrd/backgroundfile-152694.pdf>
- Costa-Gómez, I., Bañón, D., Moreno-Grau, S., Revuelta, R., Elvira-Rendueles, B., & Moreno, J. (2020). Using a low-cost monitor to assess the impact of leaf blowers on particle pollution during street cleaning. *Air Quality, Atmosphere & Health*, 13(1), 15–23. <https://doi.org/10.1007/s11869-019-00768-8>
- Haines, B. (2019). Leave the leaves on the ground: Nature Conservancy says to stop raking your lawn. *Global News*. Retrieved 2021, from <https://globalnews.ca/news/6060276/dont-rake-your-leaves/>.
- Landscaping Services in Canada- Market Size 2005-2027. (2021). IBISWorld. Retrieved 2021, <https://www.ibisworld.com/canada/market-size/landscaping-services/?fbclid=IwAR1gR4VvsJEWhoI5FbqwwiuK5bgLWS2bN1kMbeHSFAe0p8cysjX97JHQSDY>

United Nations. (2015). The Sustainable Development Goals. Department of Economic and Social Affairs. Retrieved 2021, from <https://sdgs.un.org/goals>

Walters, Dan. (2021). *California's gas lawn equipment ban hits the little guys*. Retrieved 2021, from <https://www.ocregister.com/2021/10/18/californias-gas-lawn-equipment-ban-hits-the-little-guys/>

Watkins, R. G. (2018). *Particulate Matter (Pm) And Ultrafine Particle (Ufp) Measured On Pedestrian Walkways During And After The Nearby Use Of Leaf Blowers* (thesis). Retrieved 2021, from <https://www.proquest.com/docview/2314065413?pq-origsite=gscholar&fromopenview=true>.