

Is It Time to Reduce Our Use of Gas-Powered Leaf Blowers in Lewisboro?

Seventeen Westchester County towns already have limitations on the use of gas-powered leaf blowers that range from summer and mid-winter bans to decibel level restrictions.

As leaf blower emissions and noise are not just environmental problems, but have been deemed public health issues as well, it's time to take a look at some facts about the environmental and health effects of their use.

Emissions and Health Effects

While automobile engines have slashed emissions, there has been no equivalent clean-up of lawn equipment. According to the NYS Department of Environmental Conservation (DEC), these exhaust emissions consist of hydrocarbons, carbon monoxide (CO), and fine particulate matter. The amount of CO emitted from a typical leaf blower for just 1 hour is equal to CO coming from the tailpipe of a current year automobile operating for over 8 hours.¹ These hydrocarbons combine with sunlight and other emissions to form smog, which includes ozone, a greenhouse gas.

Leaf blowers generate dust so fine it is easily inhaled by humans. The DEC notes leaf blowers push 300 to 700 cubic feet of air per minute at 150 to 280 mph. The dust can contain fine microscopic particles including pollen, mold, animal feces, and chemicals from pesticides. The smaller the particle, the deeper it can be inhaled into the lungs, and the more likely to cause problems such as asthma and other respiratory ailments.² A recent California air sampling study showed that emissions from leaf blowers increased the concentration of microscopic particles 50 times higher than normal air.³

Long Term Particulate Exposure and the Corona Virus

A recent nation-wide Harvard University Study found that even a small increase in long-term exposure to microscopic particles leads to a large increase in the COVID-19 death

¹ <https://www.dec.ny.gov/chemical/109428.html>

² Jo Kay Ghosh, epidemiologist; See https://www.salon.com/2017/10/08/noisy-but-that-is-not-all_partner

³ FairWarning is a non-profit news organization reporting on public health, consumer and environmental issues. See <https://www.fairwarning.org/2017/09/leaf-blower>

rate in certain areas of the country. According to the researchers, breathing in such microscopic pollutants, inflames and damages the lining of the lungs over time, weakening the body's ability to fend off respiratory infections.⁴ This is not to say that blowers contribute to the spread of the COVID-19 virus; rather this study shows that long term exposure to particulates will predispose individuals to dying if they do become infected.

Effects on Lawn and Garden Health

In a statement by one nearby town, gas leaf blowers can spread plant disease, damage plants and destroy habitats. They destroy new plant growth, blow topsoil away and cause soil compaction, making it harder for air and water to permeate. Additionally, the high winds generated by the blowers spread disease spores, weeds and insect eggs, kill beneficial insects such as earthworms and pollinators, destroy bird nests and drive birds and other wildlife away.⁵ These hurricane-strength winds stress plants, slow the growth of developing flowers and diminish overall plant health.^{6, 7}

Noise Factor

According to the CDC, the loud noise of a leaf blower can cause permanent hearing loss.⁸ Some leaf blowers generate noise levels of 90 decibels and exceed the CDC's level of 85 decibels at which point hearing damage might occur.⁹ The ears of infants and young children are especially vulnerable to high intensity sound.¹⁰

Conclusion and Recommendation

The NYS DEC recommendations:

- (1) Use a mulching mower to reduce the need for using blowers.

⁴ Exposure to air pollution and COVID-19 mortality in the United States. Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici. medRxiv 2020.04.05.20054502; doi: <https://doi.org/10.1101/2020.04.05.20054502>

⁵ <https://bedfordny.gov/wp-content/uploads/2018/04/Gas-powered-Leaf-Blowers-Time-to-rethink-1.pdf>

⁶ https://www.townofchevy Chase.org/DocumentCenter/View/2286/LAWNGARDEN_Leaf-Blower-Resources?bidId=

⁷ <https://www.nonoise.org/quietnet/cqs/leafblow.htm#opinion>

⁸ See <https://www.cdc.gov/vitalsigns/pdf/2017-02-vitalsigns.pdf>

⁹ <https://www.cdc.gov/vitalsigns/pdf/2017-02-vitalsigns.pdf>

¹⁰ <https://bedfordny.gov/wp-content/uploads/2018/04/Gas-powered-Leaf-Blowers-Time-to-rethink-1.pdf>

- (2) Rake or sweep leaves and dirt.
- (3) Use a battery operated or plug-in leaf blower. Electric blowers do not generate ground-level exhaust emissions.
- (4) To clean an excessively dusty area, use a shovel to pick up the large debris.
- (5) Do not use leaf blowers to move large debris piles.

Leaf blowers, along with leaf mulching, have a rightful place in landscaping during the fall leaf season. However, action is long overdue in this town to diminish their use during other times of the year in order to reduce air pollution, soil and garden damage, and lung and noise-related injuries. It is time to act now.

This article written at the request of the Lewisboro Sustainability Advisory Committee as a basis for legislation pertaining to leaf blower use in Lewisboro.

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