TOWN CLERK'S OFFICE
BRISTOL, RHODE ISLAND

2025 MAY -2 PM 2:20

DATE RECEIVED

PETITION TO THE TOWN COUNCIL

To the Honorable Town Council of the Town of Bristol: The undersigned hereby respectfully requested of your Honorable Body that:

Safeguard Public Health and Restore Quality of Life through Restrictions on Gas-Powered Leaf Blowers in Bristol.

- See attached document outlining the Problem and suggested Solution
- Additional letters from Healthcare Professionals are included.

PLEASE NOTE:

Please ensure that your petition is submitted by 4:00 PM, two (2) Wednesdays before the Town Council meeting scheduled for May 28th 7:00 *in order to be included on the docket. According to Council policy, petitions cannot*

SIGNATURE: George Voutes

NAME: George Voutes

For: Bristol Town Council

May 1, 2025

Safeguard Public Health and Restore Quality of Life through Restrictions on Gas-Powered Leaf Blowers

The Problem:

The unrestricted use of Gas-powered leaf blowers in Bristol RI has exploded over the years. This unabated widespread usage is severely degrading and endangering the health, wellbeing, livelihoods, and quality of life for residents, wildlife and the natural world here in our town. Gas-powered leaf blower use in Bristol is *completely out of control* with nearly continuous operation of these machine occurring year-round. Residents are left to suffer with the dangerous noise and pollution levels these machines emit without any town restrictions or ordinances in place to leverage or help provide remedy. Residents have the right to use and enjoy their property without being constantly (and to no end) assaulted from the dangerous effects of gas-powered leaf blowers. We are all living with industrial levels of noise and toxic emissions in our yards, neighborhoods, parks, schools, everywhere from gas-powered leaf blowers.

The negative effects from gas-powered leaf blowers (especially the horrifically dangerous 2-stroke engine type most used today) are profound. The 2-stroke engine has been called the *dirtiest engine in use today* and doesn't follow EPA Clean Air Act requirements. Therefore, the responsibility for restricting usage of gas-powered leaf blowers is left up to villages, towns, cities, counties and states. Hundreds of towns and cities across the country have instituted responsible restrictions on gas-powered leaf blowers, and this trend is growing! There is no evidence landscapers have gone out of business due to new restrictions going into effect, and customers are not paying more for service using battery electric technology. Gas-powered leaf blowers may seem like a niche concern or a first world problem, but this equipment represents a significant and growing public health emergency.

Here are some of the most alarming and harmful issues to understand about the gas leaf blower:

1. **Gas-Powered Leaf Blowers (GPLBs) are super-polluters**: A study conducted at the American Automobile Association's Automotive Research Center commissioned by Edmunds Inc., found that a typical two stroke gas leaf blower emits hundreds of times more hydrocarbons than the Ford F-150 SVT Raptor Pickup truck that was used as a control. "The hydrocarbon emissions from a half-hour of yard work with the two-stroke leaf blower are about the same as a 3,900-mile drive from Texas to Alaska in a Raptor." Worse, this pollution is highly concentrated into a very small area (yards and neighborhoods) when gas-powered leaf blowers are used. Using a gas leaf blower for 1 hour produces as much smog forming pollution as driving a car 1,100 miles, the distance from Boston to St. Louis MO, or over 15 hours of driving (source: CARB).

2. **GPLB engines emit huge amounts of fine particulate matter ($PM_{2.5}$), which is dangerous carcinogenic**. When we breathe $PM_{2.5}$, which is invisible, it can pass through our lung tissue and directly into our bloodstreams. $PM_{2.5}$ is also implicated in Alzheimer's & other life threatening diseases, including cancer. **There is no safe threshold of $PM_{2.5}$ once inside the body**. $PM_{2.5}$ is extremely dangerous and something we are all ingesting without even knowing it!

3. **GPLB engines emit benzene, formaldehyde, and 1,3 butadiene** (three potent human carcinogenic compounds) into the air, where we either inhale them as aerosols or where they settle and contaminate our yards, plants, crops, waterways, and eventually groundwater.

4. **GPLB engines emit two of the 6 major greenhouse gases:** GPLB emit Carbon Dioxide (CO2) and Nitrous Oxide (N2O). Roughly 25 pounds of CO2 are emitted per gallon of gasoline burned. Exchanging a GPLB for a battery-operated leaf blower is an immediate reduction in the emission of greenhouse gases.

5. **GPLBs are so loud that they cause hearing damage**, even to bystanders, who may not realize their hearing is being damaged until years later. The noise is especially dangerous for landscape workers, and children because their ear canals are smaller, which creates more internal ear pressure.

6. **GPLBs produce low frequency noise** which travels farther and penetrates walls and windows in a way that the noise from battery blowers cannot; even when the same number of decibels. GPLB noise, from 50 feet away, is

typically four times louder than the maximum level or outdoor noise (55dB) recommended by the World Health Organization. Working or resting at home becomes impossible when GPLB are in use. There is no escape from GPLB noise, except leaving the area.

7. **GPLB noise causes or contributes to health issues** such as cardiovascular diseases (hypertension, strokes, and heart attacks), metabolic disturbances, anxiety, depression and loss of concentration. Noise is especially dangerous for the elderly and children (especially when trying to learn).

8. **GPLB engines are extremely inefficient and more expensive to operate** than battery-powered leaf blowers. One-third of GPLB fuel mixture is not burned, but emitted as an aerosol exhaust directly into the air. Maintenance costs with battery electric blowers are virtually non-existent. According to Consumer Reports, "electric is the clear winner".

9. **Landscape employees prefer battery operated leaf blowers.** The people most exposed to the noise, toxic emissions, and vibrations of the GPLB are the landscape employees (mainly minorities). Interviews of landscape employees confirms they prefer the battery-operated tool. "No pull starts & no gas & oil refilling required." "It's quieter with less vibration." "I don't smell like gasoline when I come home." "I'm less tired at the end of the day".

10. **GPLBs are not needed for most of the year:** blowing grass clippings off walkways and driveways is a cosmetic practice, and can be done easily with quieter/cleaner battery electric powered blowers.

The Solution: ***Achieve balance between the right for quieter/safer yards and neighborhoods, and the landscape maintenance of public and personal property.*** **Putting the interests of landscape business owners ahead of town residents and tax paying property owners is no longer acceptable. Landscaping practices need to adjust to the new way of life that has settled in over the past few years (work from home). This problem is not going away and is getting worse; not better in Bristol.**

A. Limit hours of use of any type of leaf blower (fossil fuel or battery/electric).
    a. Hours of operation permitted:
        i. Monday through Friday: 7:30am-6:00pm
        ii. Weekends & Major Holidays: 8am-4pm

B. Seasonal restrictions on gas-powered leaf blowers. Allows use of GPLBs during Spring and Fall clean up periods only.
    a. Seasonal restrictions in effect from May 15 through September 30, and from December 15 through March 15 annually. No seasonal restrictions on battery-powered or electric corded powered leaf blowers. GPLB seasonal restrictions apply to all residential, commercial, and town government operations.

C. Maximum of (2) leaf blowers of any type operational on any property at any time. Higher numbers may be permitted in public parks if approved by town government.

D. Provide health information on the dangers of gas-leaf blowers and alternatives to GPLBs. Post this info to the town website. Create and distribute a leaflet about the dangers of gas-leaf blowers and alternatives to them.

E. Host annual information and demonstration sessions in town on alternatives to gas-powered lawn equipment.

F. Maintain a list of landscape contractors that provide battery electric lawncare and post this information on the Town's website. This is a benefit to town residents who want quieter/cleaner lawncare and landscaping service.

Icahn School of Medicine at Mount Sinai
Children's Environmental Health Center

March 2025

To Whom it May Concern:

The Children's Environmental Health Center at the Icahn School of Medicine at Mount Sinai recommends against the use of gas-powered leaf blowers (GLBs) to protect the health of residents and lawn care workers from the air and noise pollutants they produce.

AIRBORNE POLLUTANTS: GLBs are a major source of air pollutants that affect health both directly when inhaled and indirectly through acceleration of climate change. GLB combustion engines are extremely low efficiency; 30% of the gas and oil that they use is unburned and released directly to the atmosphere. GLBs emit and expose users to significant quantities of pollutants known to cause cancer or serious health problems including carbon monoxide, formaldehyde, benzene, nitrogen oxides, hydrocarbons, and fine particulate matter (PM2.5). The California Air Resources Board (CARB) estimates that emissions released during the operation of a GLB for one hour are equivalent to driving a car for 15 hours or 1100 miles.[1] A 2011 study found gas-powered lawn and garden equipment collectively emit **27 million tons of pollutants** of VOCs, nitrogen oxides, carbon monoxide, and PM2.5 per year.[2] In addition to affecting respiratory health and increasing asthma risk and severity, these pollutants are associated with numerous health outcomes including **autism, cancer, heart disease, dementia, and shortened lifespan.**[3]

The handful of studies that have examined worker exposures to harmful emissions from GLBs and other small 2-stroke engines demonstrate unnecessary risk associated with the use of this equipment. Of 100,000 deaths estimated to result from human-generated PM2.5 each year, 1,400 are attributed to lawn and garden equipment use.[4] Direct measurement of worker exposure through personal air monitoring during operation of GLBs finds exposures above EPA National Ambient Air Quality Standards (NAAQS) for both PM2.5 and carbon monoxide.[5] Lastly, workers using 2-stroke engine chain saws with similar emissions to GLBs experience exposure to carcinogens at levels that increase cancer risk.[6]

GLBs are also a significant contributor to ground level ozone, an air pollutant linked to asthma and poor respiratory health that is frequently elevated particularly in suburban or urban environments.[7] A recent study

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[1] https://ww2.arb.ca.gov/resources/fact-sheets/sore-small-engine-fact-sheet

[2] Banks and McConnell 2015 National Emissions from Lawn and Garden Equipment https://www.epa.gov/sites/default/files/2015-09/documents/banks.pdf.

[3] Flanagan et al. 2023 Exposure to local, source-specific ambient air pollution during pregnancy and autism in children: a cohort study from southern Sweden. Scientific Reports 13:3848 https://doi.org/10.1038/s41598-023-30877-5

[4] Thakrar et al. 2020 Reducing Mortality from Air Pollution in the United States by Targeting Specific Emission Sources. Environ. Sci. Technol. Lett. 2020, 7, 639−645.

[5] Baldauf et al. 2006 Air contaminant exposures during the operation of lawn and garden equipment. J. Exp. Sci. and Environ. Epi (2006) 16, 362–370.

[6] Frank N. Dost. Toxicology and potential health risk of chemicals that may be encountered by workers using forest vegetation management options. Part I, Risk to workers associated with exposure to emissions from power saws. ISBN 0-7726-4985-5

[7] https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution

of Colorado ozone sources conducted by the Public Interest Research Group (PIRG) estimated that gas-powered leaf blowers and other lawn maintenance equipment contribute to the production of almost half as much ozone as all automobiles in the state.[8] **Restricting the use of this equipment would have a measurable impact on air pollution levels and positively affect health outcomes.**

In addition to direct emissions from fuel combustion, air released from GLBs can reach speeds of 200 mph, sending dust, pollen, pesticides, mold, and heavy metals in soil into the air where they can be breathed in. For the reasons highlighted above, the **American Lung Association Policy Position on Healthy Air** *"...supports measures to reduce the air pollution impacts of combustion-based, fossil fuel-powered lawn mowers, leaf blowers and other small equipment, which contribute a significant share of the air pollution burden in parts of the U.S. The American Lung Association supports the transition to electric small equipment".*[9]

NOISE: GLBs can expose users to greater than 100 decibels (dB), the equivalent to a jackhammer or a jet taking off, and well above the level at which chronic noise exposure leads to irreparable hearing loss. In fact, the Centers for Disease Control and Prevention guidance on noise utilizes GLBs to exemplify the noise level at which hearing loss can occur (see figure below). Risks are not limited to operators; manufacturer data and independent studies show that bystanders as far as 50 feet from an operating GLB may be exposed to 70 dB, higher than the World Health Organization (WHO) recommended guideline for general daytime outdoor noise levels of 55 dB or less.[11] Further, the low frequency sound produced by GLBs travels long distances and can penetrate walls and windows.[10,11]

In addition to damaging hearing, noise exposure is linked to cardiovascular disease and dementia and affects quality of life by impairing communication and learning, reducing ability to accurately complete complex tasks, and increasing stress.[12,13,14] For these reasons, the **American Public Health Association, WHO, and American Academy of Pediatrics consider noise a public health hazard.**[15,16,17]

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[8] https://pirg.org/colorado/foundation/resources/small-machines-big-pollution/

[9] https://www.lung.org/policy-advocacy/public-policy-positions/public-policy-position-healthy-air

[10] Walker & Banks 2017 Characteristics of Lawn and Garden Equipment Sound: A Community Pilot Study J Environ Toxicol Stud. Nov 3;1(1):10.16966/2576-6430.106. doi: 10.16966/2576-6430.106

[11] Pollock C et al. 2018. Lawn and Garden Equipment Sound: A Comparison of Gas and Battery Electric Equipment. J Environ Toxicol Stud. 3(1):dx.doi.org/10.16966/2576-6430.118

[12] Tortorella et al. 2022. New determinants of mental health: the role of noise pollution. A narrative review. International Review of Psychiatry, 34:7-8, 783-796, DOI:10.1080/09540261.2022.2095200

[13] Hadad et al. 2018 Annoyance to difference noise sources is associated with atrial fibrillation in the Gutenberg Health Study. Int. J. of Cardiology. 264:79-84. https://doi.org/10.1016/j.ijcard.2018.03.126

[14] Meng et al. Chronic Noise Exposure and Risk of Dementia: A Systematic Review and Dose-Response Meta-Analysis. Front Public Health. 2022; 10: 832881.doi: 10.3389/fpubh.

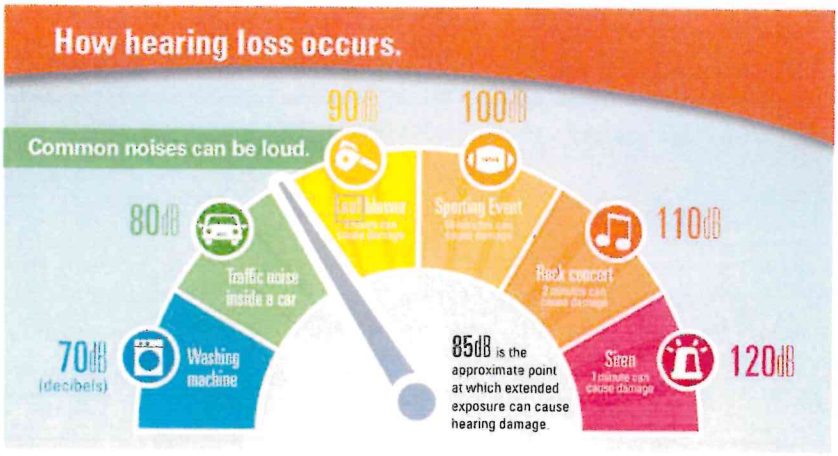
[15] https://apha.org/policies-and-advocacy/public-health-policy-statements/policy database/2022/01/07/noise-as-a-public-health-hazard

[16] https://www.who.int/publications/i/item/burden-of-disease-from-environmental-noise-quantification-of-healthy-life-years-lost-in-europe

[17] Balk et al. 2023. American Academy of Pediatrics Policy Statement: Preventing Excessive Noise Exposure in Infants, Children, and Adolescents. Pediatrics 152 (5): e2023063752. https://doi.org/10.1542/peds.2023-063752.

Icahn School of Medicine at Mount Sinai

Children's Environmental Health Center



Noise emitted from gas-powered leaf blowers reach levels that can damage hearing.
From CDC Vital Signs "Too Loud for Too Long", February 2017.[18]

Children's vulnerability to GLBs: As pediatric environmental health researchers and clinicians, we are particularly concerned about the impacts of pollution produced by GLBs on children's health. Children's rapidly developing lungs, ears, eyes, brains, and other organ systems are inherently more sensitive to environmental hazards than adults.[19] Children breathe more air per pound of body weight per day than adults and thus inhale more pollutants that are emitted by this equipment. Fine particulates produced by high-powered GLBs penetrate deep into the lungs to exacerbate asthma and can enter the bloodstream to affect a wide range of bodily systems.[20] The American Academy of Pediatrics Policy Statement on Noise highlights the susceptibility of children to noise and urges policy-level action to reduce environmental noise.[18]

The burning of fossil fuels is associated with over 5 million excess deaths worldwide each year and an estimated tens of millions of Americans suffer negative health impacts of noise exposure including heart disease and hearing loss.[21,22] Restricting the use of gas-powered leaf blowers is a major step towards protecting the health of children, families, and workers.

Thank you for your attention to this issue,

The Pediatric Environmental Health team
Department of Environmental Medicine, Icahn School of Medicine at Mount Sinai, New York, NY

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[18] https://www.cdc.gov/vitalsigns/hearingloss/infographic.html

[19] Bearer, CF. Neurotoxicology 21:925-934, 2000.

[20] Aithal et al. Air quality and respiratory health in children. Breathe. 2023 Jun 13;19(2):230040. doi: 10.1183/20734735.0040-2023.

[21] Lelieveld et al. 2023. Air pollution deaths attributable to fossil fuels: observational and modelling study BMJ 2023; 383 doi: https://doi.org/10.1136/bmj-2023-077784.

[22] Hammer et al. 2013. Environmental Noise Pollution in the United States: Developing an Effective Public Health Response. Environ Health Perspect. Dec 5;122(2):115–119. doi: 10.1289/ehp.1307272

American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

Rhode Island Chapter

Rhode Island House of Representatives
Members of the Environment and Natural Resources Committee
Representative David, A Bennett, Chair.

March 9, 2023

In Support of H5549, the "Zero-Emission Lawn Care Devices Act"

Dear Chair Bennett and Committee Members:

The RI Chapter of the American College of Emergency Physicians, Climate Change and Health Committee and its members endorse H5549, the Zero Emission Lawn Care device act introduced by Reps. Koalas and Ajello.

Lawn care devices such as leaf blowers/vacuums, lawn mowers, and edgers/trimmers powered by fossil fuels are deleterious to the health and safety of persons who use them as well as the society at large. The amount of exhaust generated by these engines is proportionally very high. Specifically two stroke engines were responsible for the vast majority of fine particulate matter (PM), for which there is ***no safe level of exposure***. Approximately 800 million gallons per year of fossil fuel is used, and spilled fuel - estimated at 17 million gallons per year - pollutes soil and groundwater. A consumer grade leaf blower releases more hydrocarbons than a pickup truck.

As physicians, we feel strongly that the health implications of such exposures are numerous and substantial both to the lawn care professionals using this equipment, and the community at large through the release of carbon into the atmosphere. Operators are exposed to high levels of emissions for many hours a day; placing them at risk for development and exacerbation of lung disease, cardiovascular disease such as stroke or heart attack, as well as cancers and psychiatric disease. Additionally, the noise produced by these machines is damaging to hearing and a generalized nuisance. Operators are often persons of color and seasonal workers, bringing environmental justice to the forefront.

In keeping with the Act on Climate law, Rhode Island must achieve mandatory carbon emission reduction that lead to net zero emissions by 2050. Lawn care devices contribute significantly to carbon emission, and are a "low hanging fruit" in the work to reduce the burning of fossil fuels. There are powerful electric alternatives available for both commercial and individual use. H5549 will speed the transition away from fossil fuel machines to their safer and quieter alternatives, bringing with it health benefits to lawn care professionals and the entire community.

We urge you to pass H5549 for the health and safety of the community through promoting the rapid transition away from fossil fuels.

Sincerely,
Victoria Leytin, MD; Alison Hayward, MD; Katelyn Moretti, MD
American College of Emergency Physicians, Rhode Island Chapter

TOWN CLERK'S OFFICE

Melissa Cordeiro, Town Clerk

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Bristol, RI 02809
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MEMORANDUM

TO: Steven Contente
TOWN ADMINISTRATOR

FROM: Melissa Cordeiro
TOWN CLERK

DATE: May 5, 2025

RE: George Voutes, 17 Shore Road re Safeguard Public Health through Restrictions on Gas-Powered Leaf Blowers in Bristol

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May we please have your recommendation or the recommendation of the department head you deem appropriate in order for the Council to review the request at the Town Council Meeting to be held on **May 28, 2025**.

All items for this docket must be received in the Clerk's office by Wednesday, May 21, 2025. All and any items received after the deadline will be held until the next council agenda.

Thank you for your cooperation and prompt reply.

Attachments